Appendix C – Modeling

Attachment 2-1 – Storage and Elevation Results (CalSim II)

The following results of the CalSim II model are included for reservoir storage conditions for the following alternatives:

- Existing Conditions
- Proposed Project

Table 2-1.1. Storage and Elevation Results (CalSim II)

Title	Model Parameter	Table Numbers	Figure Numbers
San Luis Reservoir Storage	S11+S12	1a-1	1a-1 to 1a-18
San Luis Reservoir Elevation	Post-processed	1b-1	1b-1 to 1b-18
SWP San Luis Reservoir Storage	S12	1c-1	1c-1 to 1c-18

Report formats

- Monthly tables comparing two scenarios (exceedance values, long-term average, and average by water year type)
- Monthly exceedance charts (all months) including all scenarios

Table 1a-1. San Luis Storage (CVP and SWP), End of Month Storage

Existing

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	712	873	1,152	1,609	1,840	2,039	1,780	1,416	1,144	903	631	699
20%	599	734	1,065	1,375	1,637	1,930	1,724	1,284	958	712	515	607
30%	529	654	968	1,274	1,533	1,839	1,630	1,225	840	653	457	500
40%	485	618	902	1,198	1,492	1,712	1,496	1,148	810	597	398	449
50%	443	543	850	1,103	1,402	1,644	1,424	1,108	774	498	349	411
60%	362	463	762	1,022	1,291	1,507	1,347	1,021	708	469	322	353
70%	314	422	684	959	1,222	1,378	1,221	950	630	438	284	304
80%	255	393	574	884	1,124	1,306	1,173	860	567	398	215	240
90%	213	301	464	776	1,041	1,266	1,103	788	469	309	188	187
Long Term												
Full Simulation Period[a]	473	591	844	1,138	1,407	1,617	1,435	1,103	796	581	408	446
Water Year Types[b,c]												
Wet (32%)	546	675	896	1,223	1,521	1,790	1,576	1,207	909	707	564	639
Above Normal (15%)	479	599	912	1,200	1,471	1,682	1,443	1,034	689	482	390	489
Below Normal (17%)	416	542	803	1,076	1,367	1,587	1,378	1,013	664	523	409	418
Dry (22%)	448	572	844	1,130	1,359	1,546	1,400	1,102	801	586	280	293
Critical (15%)	410	489	711	976	1,212	1,316	1,244	1,057	807	469	276	246

Proposed Project

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	1,113	1,366	1,639	1,848	2,039	2,039	1,994	1,890	1,590	1,264	1,015	1,056
20%	911	1,120	1,386	1,638	1,865	2,028	1,932	1,813	1,402	1,079	757	803
30%	731	977	1,297	1,506	1,702	1,907	1,858	1,580	1,179	896	628	677
40%	628	831	1,167	1,401	1,586	1,744	1,736	1,517	1,047	732	545	566
50%	501	713	944	1,271	1,509	1,682	1,614	1,422	966	675	464	491
60%	450	564	852	1,094	1,404	1,546	1,487	1,269	902	577	387	401
70%	331	486	717	1,002	1,299	1,404	1,372	1,162	781	494	309	319
80%	249	398	615	882	1,143	1,239	1,226	1,038	732	436	244	229
90%	209	314	479	793	972	1,141	1,117	918	598	397	185	202
Long Term												
Full Simulation Period[a]	611	795	1,024	1,274	1,498	1,619	1,583	1,401	1,040	761	548	565
Water Year Types[b,c]												
Wet (32%)	756	961	1,153	1,397	1,623	1,796	1,802	1,662	1,316	1,054	865	909
Above Normal (15%)	595	791	1,072	1,338	1,562	1,669	1,630	1,425	991	726	571	633
Below Normal (17%)	596	795	1,027	1,264	1,516	1,594	1,542	1,338	923	680	512	507
Dry (22%)	538	708	986	1,253	1,457	1,562	1,494	1,274	924	620	275	269
Critical (15%)	440	570	746	988	1,203	1,303	1,244	1,072	805	466	291	261

Proposed Project minus Existing

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	401	494	487	239	199	0	214	474	447	361	384	357
20%	312	386	321	263	227	97	208	530	444	367	242	197
30%	202	323	328	233	168	68	229	355	339	243	171	177
40%	143	213	266	203	94	31	241	368	237	135	147	116
50%	59	170	94	168	107	38	190	315	192	177	115	80
60%	87	101	90	72	113	40	140	248	195	108	65	47
70%	16	65	32	43	77	26	150	212	151	56	25	15
80%	**-6**	5	42	**-2**	19	**-67**	53	178	164	38	29	**-11**
90%	**-4**	12	15	17	**-69**	**-125**	14	129	128	88	**-3**	15
Long Term												
Full Simulation Period[a]	138	203	180	136	91	3	148	297	244	179	140	118
Water Year Types[b,c]												
Wet (32%)	210	286	258	174	102	6	226	456	408	346	300	270
Above Normal (15%)	115	191	160	138	91	**-14**	187	391	302	243	181	144
Below Normal (17%)	180	252	223	188	149	7	164	326	258	157	103	88
Dry (22%)	90	136	142	122	98	15	94	172	123	34	**-5**	**-24**
Critical (15%)	30	81	35	12	**-10**	**-12**	0	15	**-2**	**-3**	15	15

a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

Figure 1a-7. San Luis Storage (CVP and SWP), End of October Storage

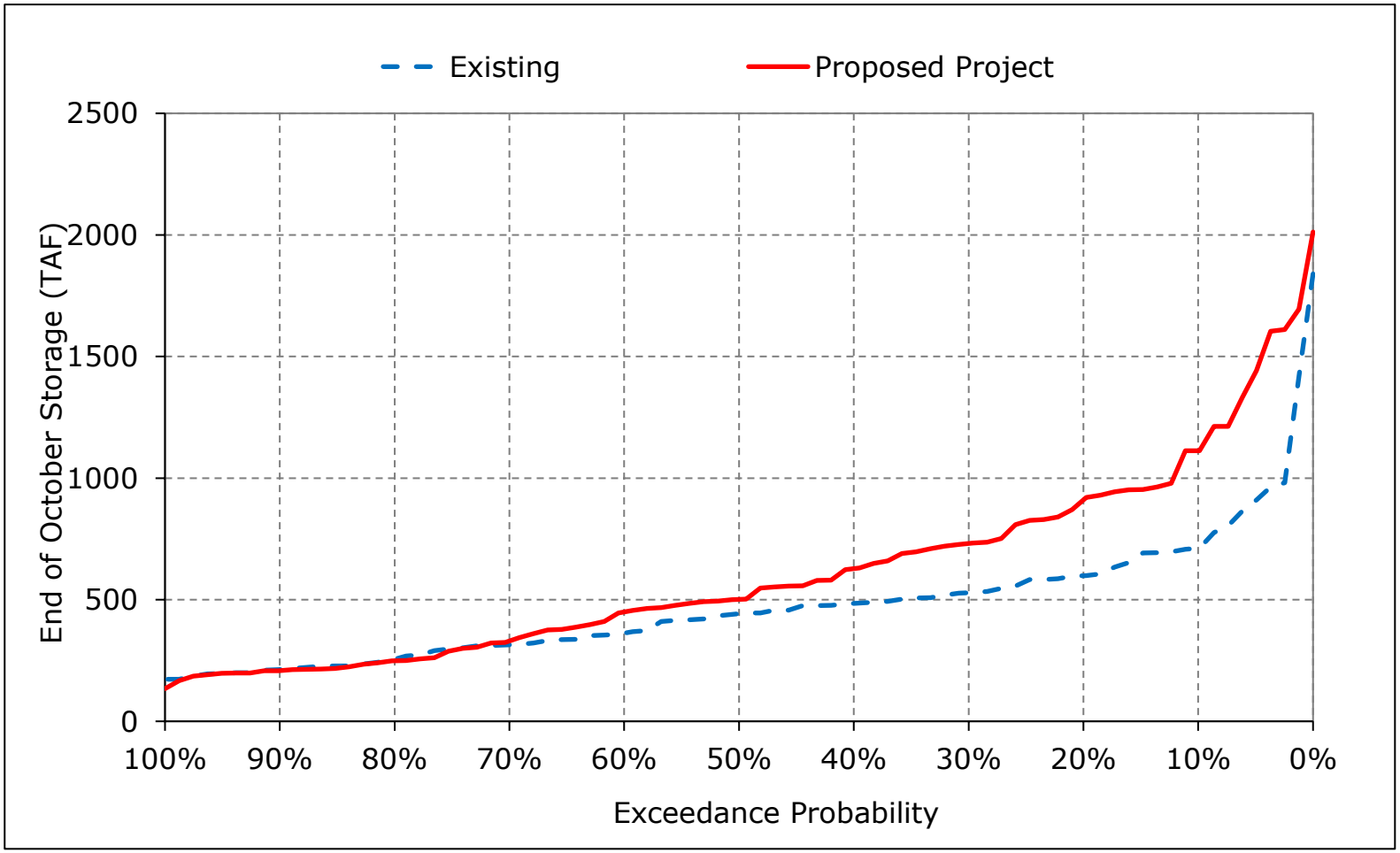


Figure 1a-8. San Luis Storage (CVP and SWP), End of November Storage

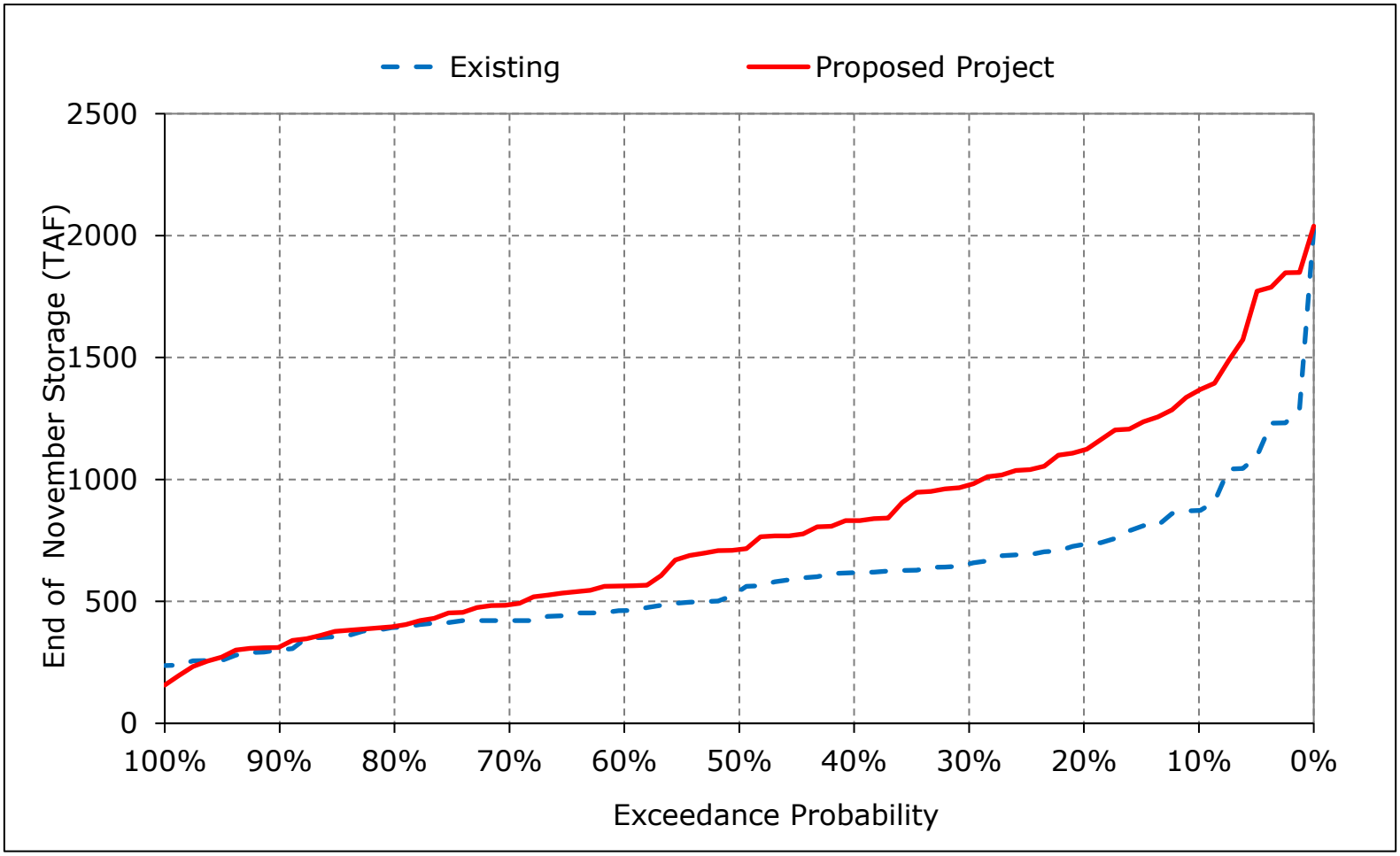


Figure 1a-9. San Luis Storage (CVP and SWP), End of December Storage

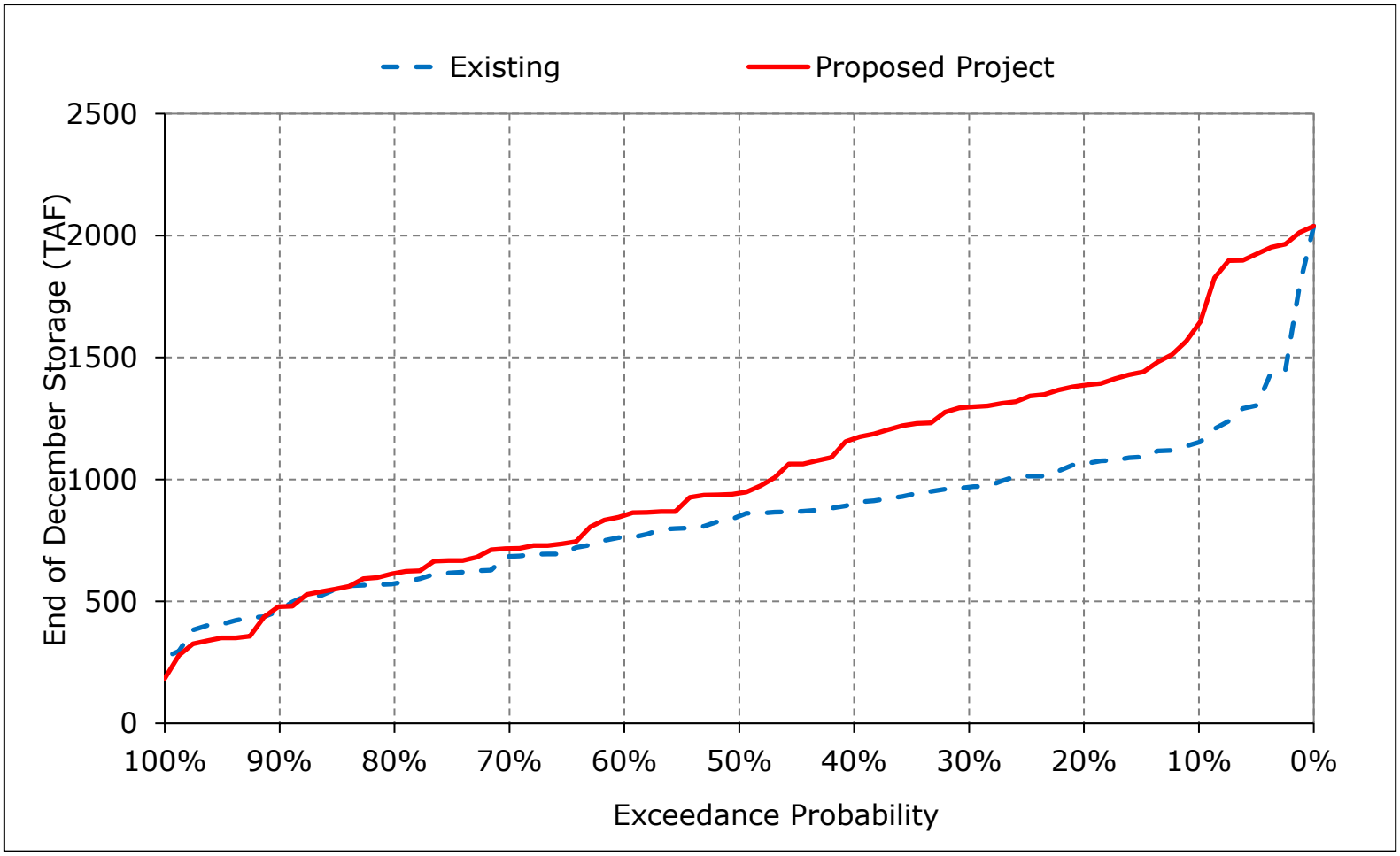


Figure 1a-10. San Luis Storage (CVP and SWP), End of January Storage

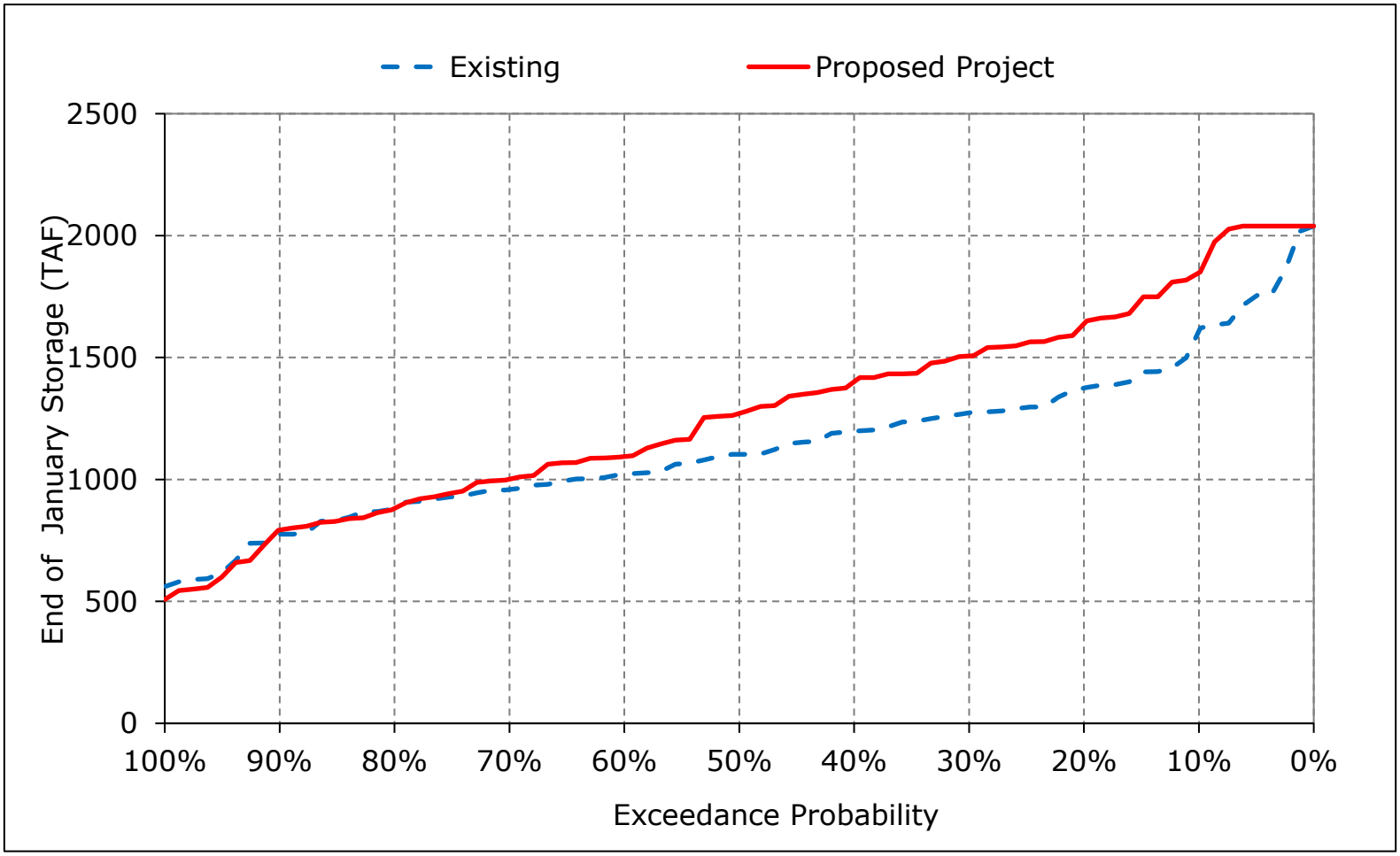


Figure 1a-11. San Luis Storage (CVP and SWP), End of February Storage

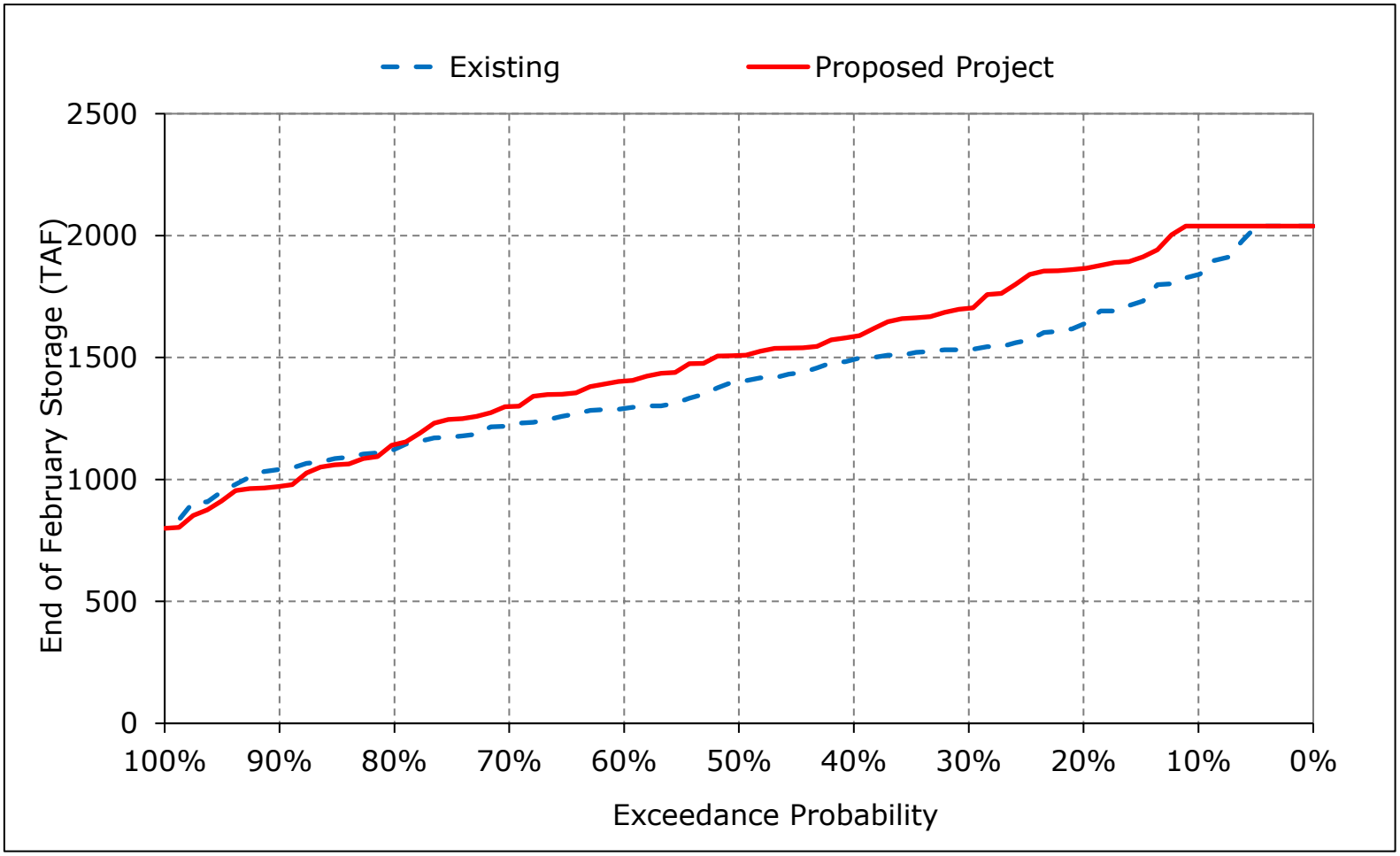


Figure 1a-12. San Luis Storage (CVP and SWP), End of March Storage

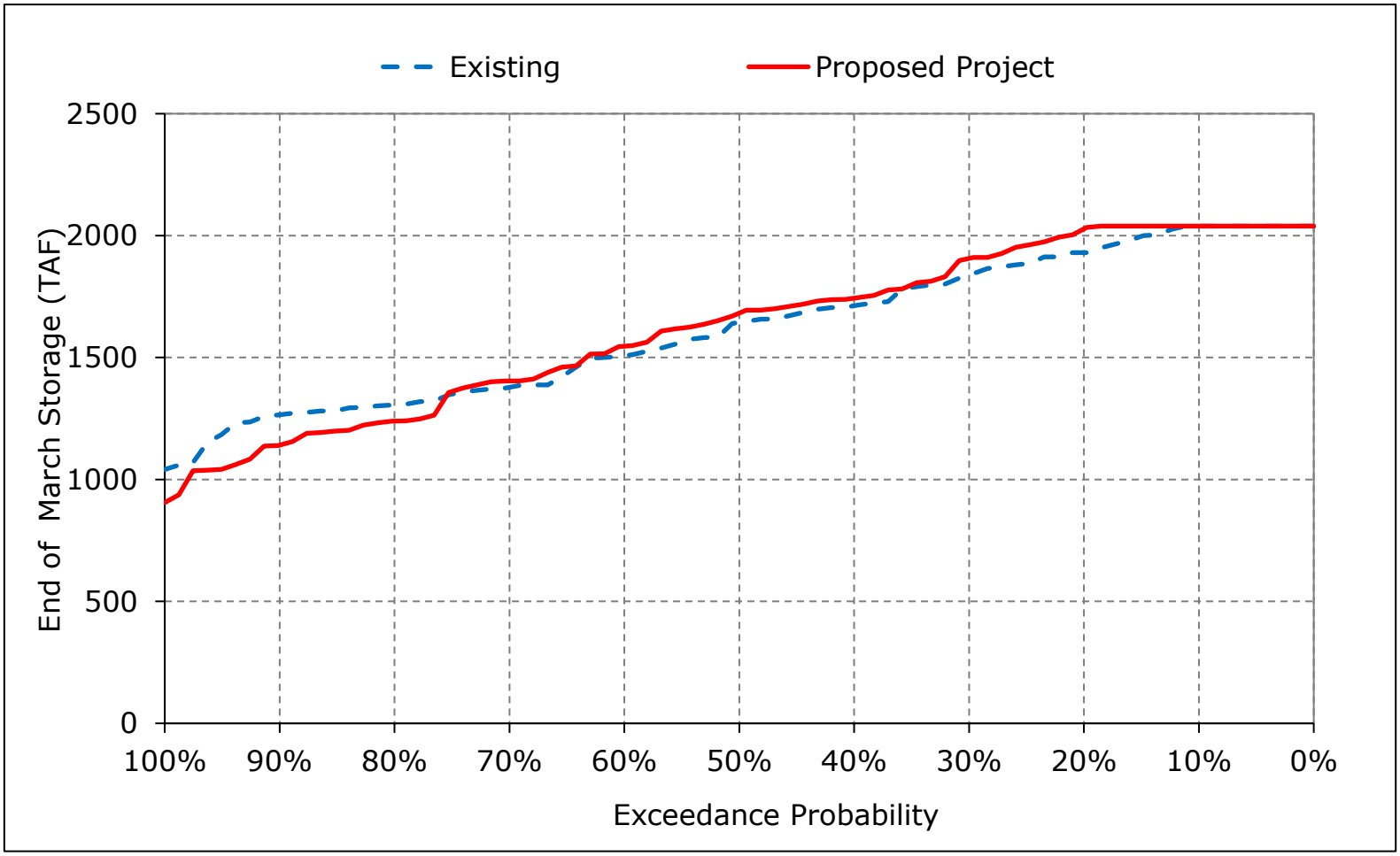


Figure 1a-13. San Luis Storage (CVP and SWP), End of April Storage

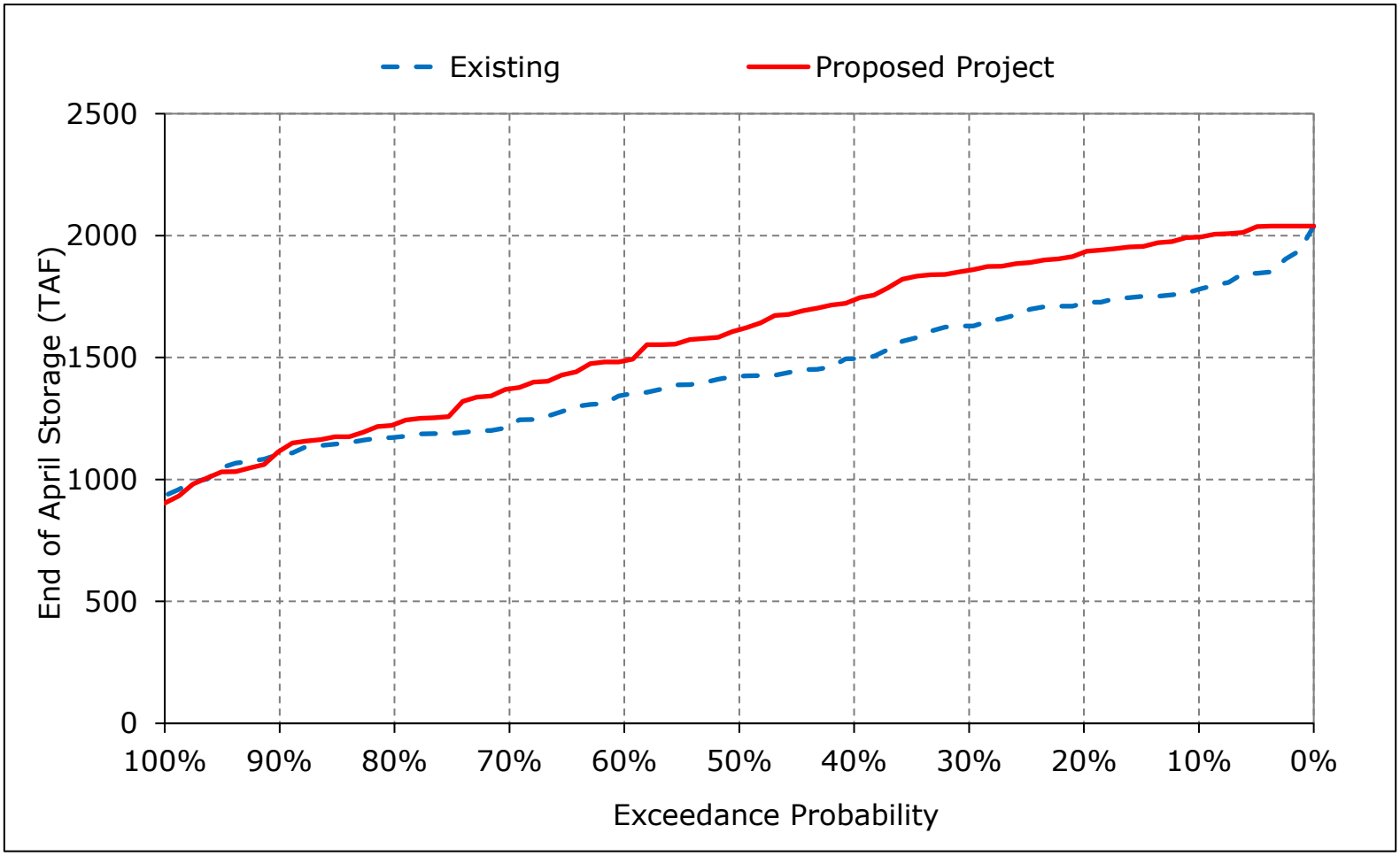


Figure 1a-14. San Luis Storage (CVP and SWP), End of May Storage

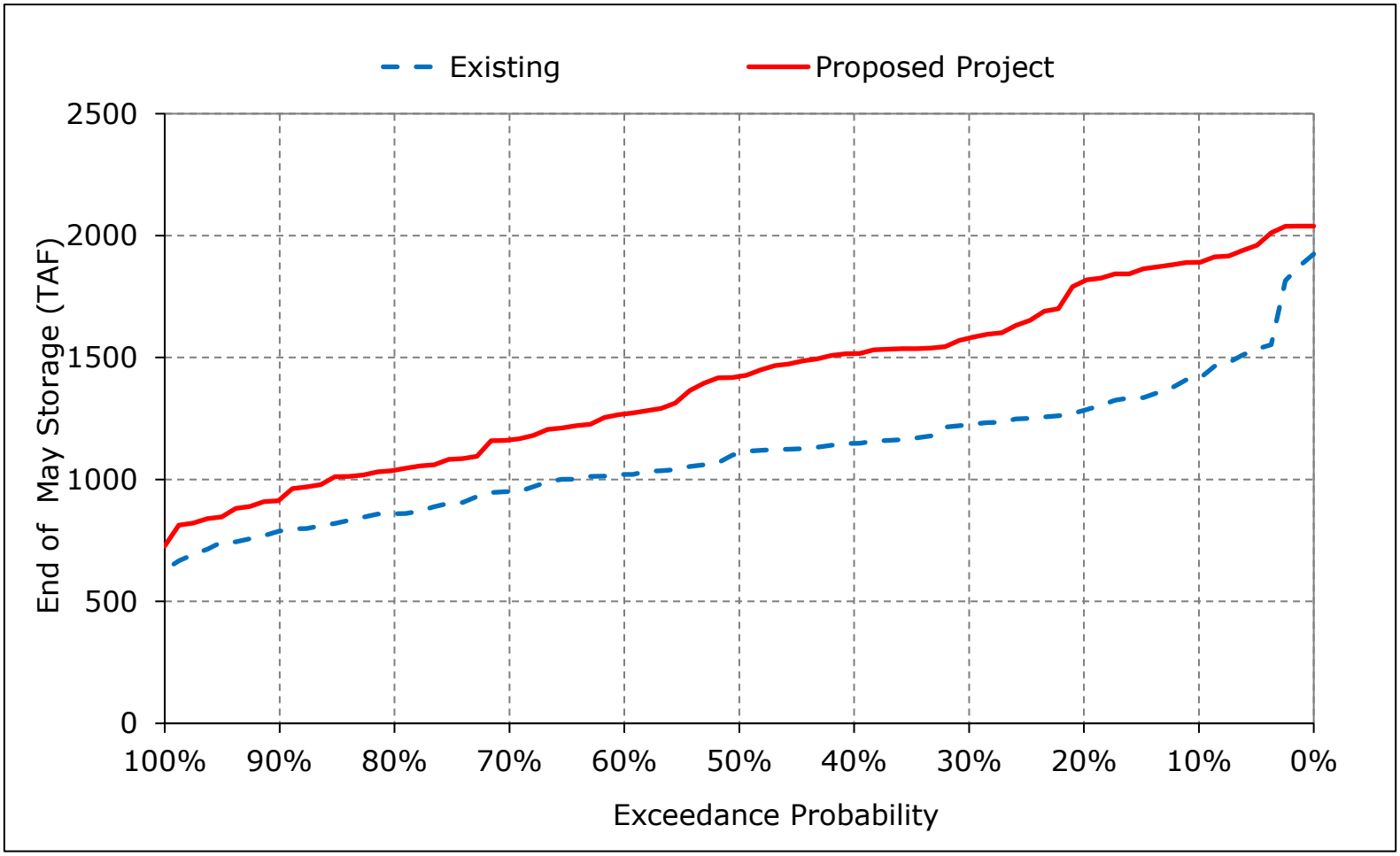


Figure 1a-15. San Luis Storage (CVP and SWP), End of June Storage

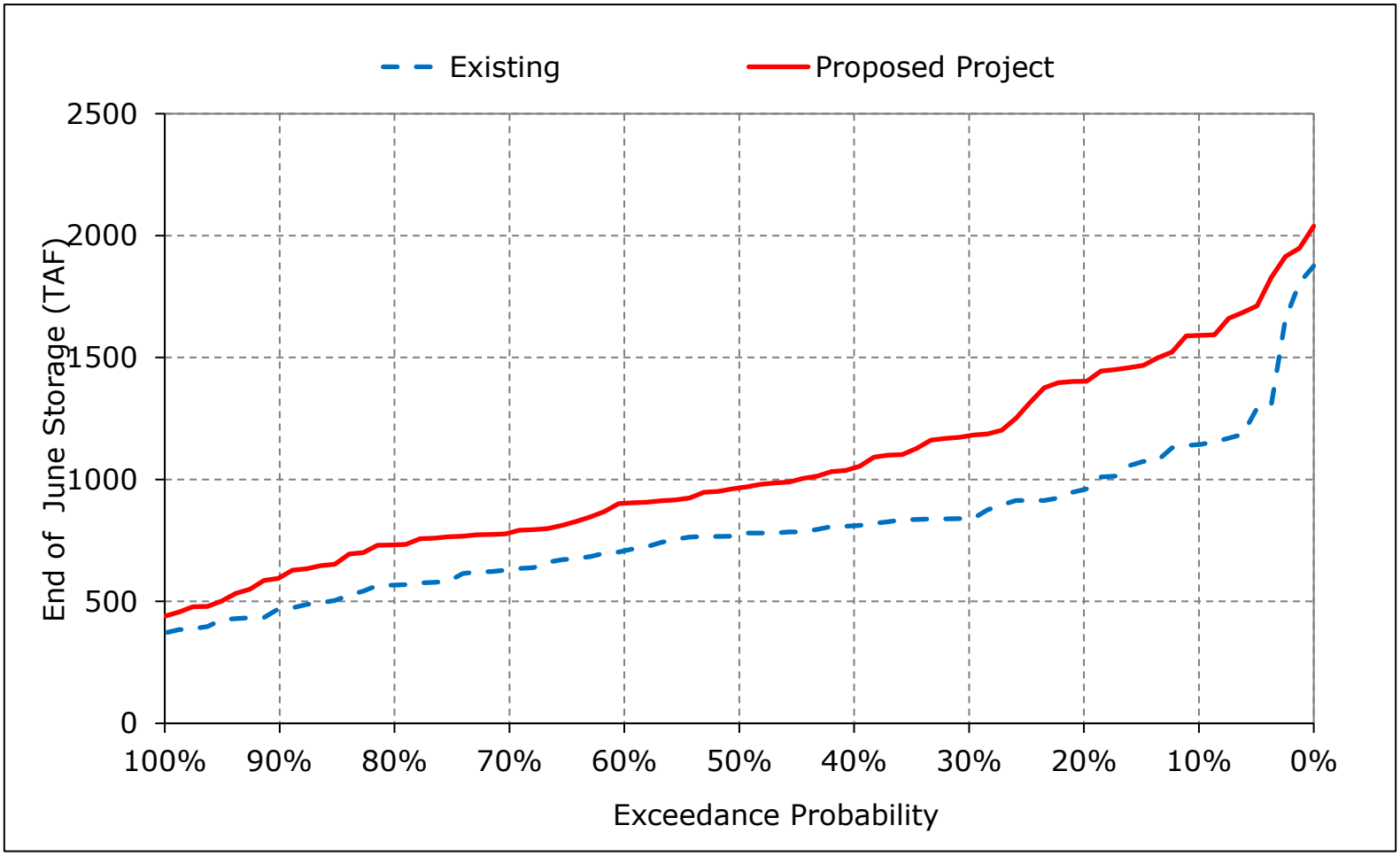


Figure 1a-16. San Luis Storage (CVP and SWP), End of July Storage

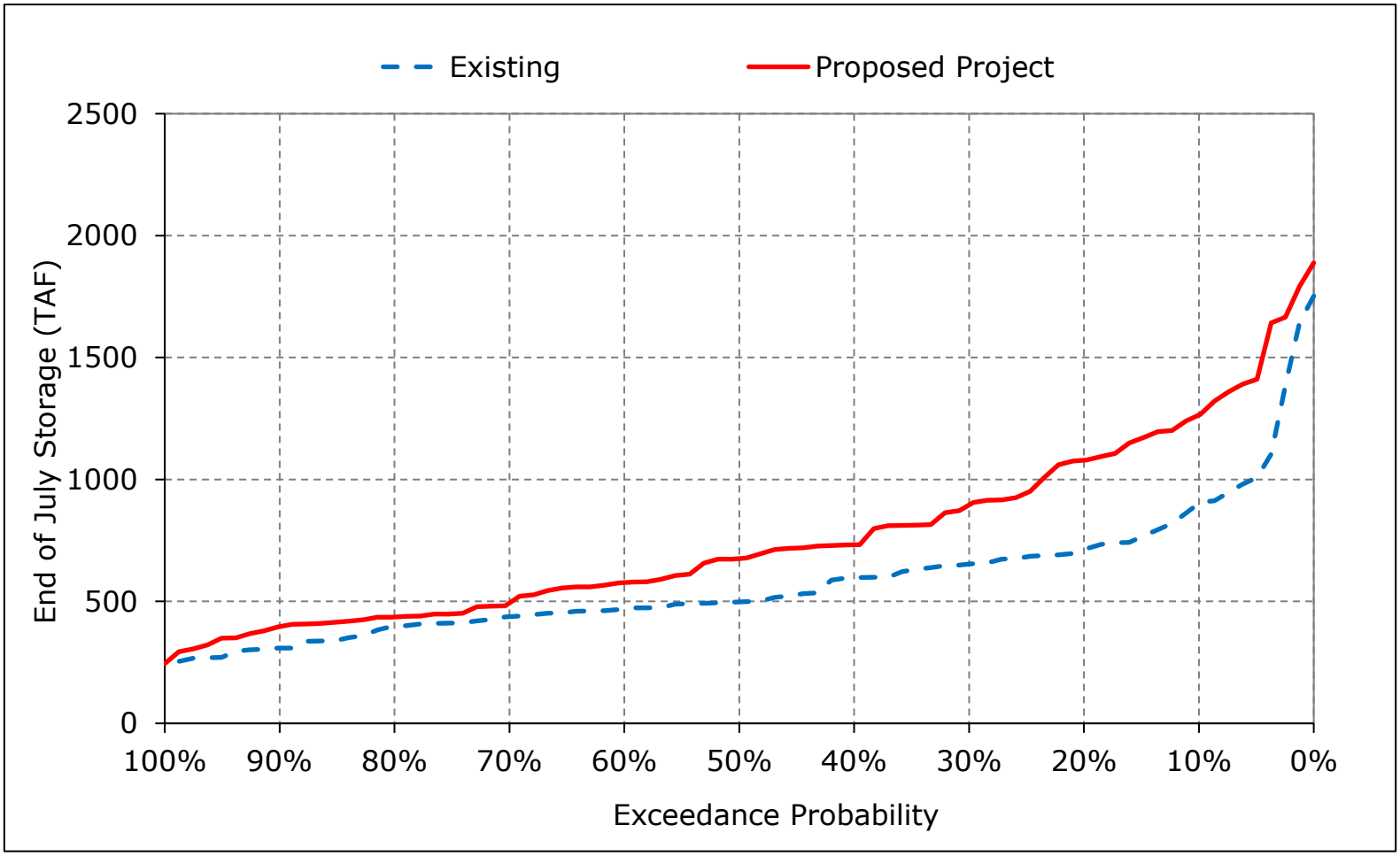


Figure 1a-17. San Luis Storage (CVP and SWP), End of August Storage

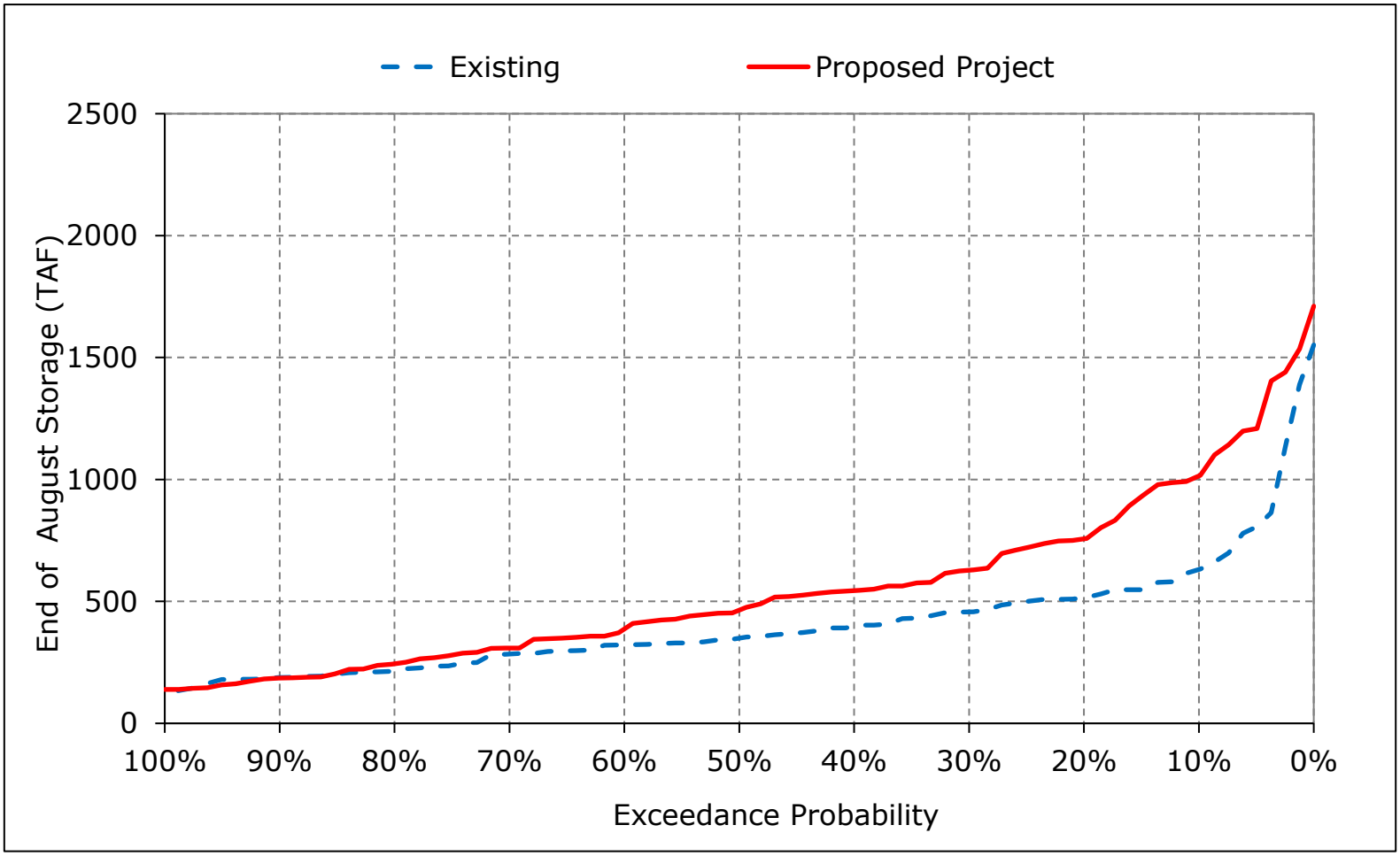


Figure 1a-18. San Luis Storage (CVP and SWP), End of September Storage

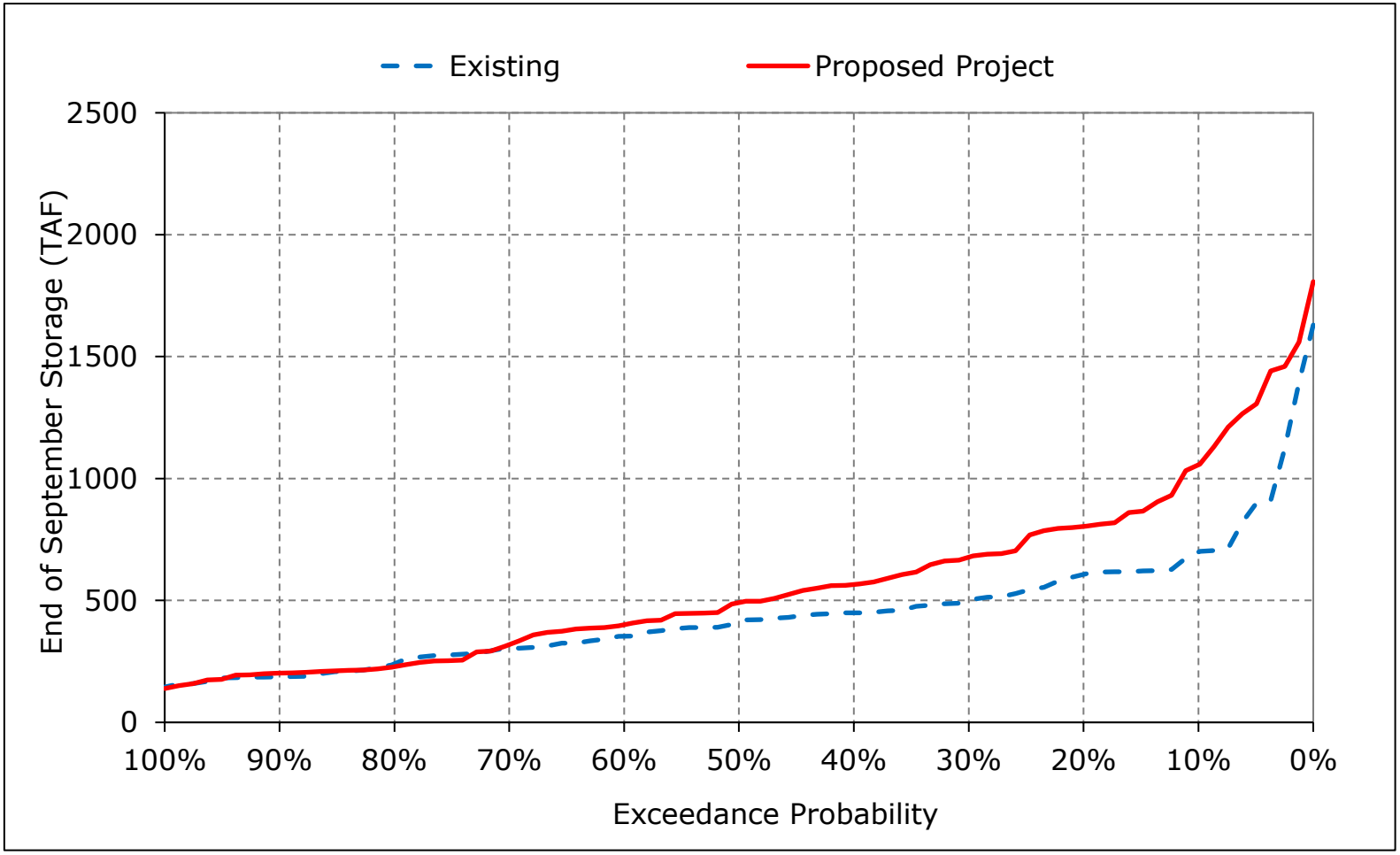


Table 1b-1. San Luis Reservoir (SWP and CVP), End of Month Elevation

Existing

Statistic	End of Month Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	428	442	484	517	544	544	537	514	494	436	401	407
20%	409	429	471	504	534	544	526	502	472	421	390	390
30%	396	429	468	502	526	544	523	493	457	406	374	384
40%	388	429	468	495	520	540	521	487	454	403	363	376
50%	383	427	466	493	513	534	517	481	444	400	360	372
60%	381	418	459	486	506	529	513	476	435	394	356	367
70%	379	412	453	484	502	523	506	469	432	389	352	364
80%	376	397	437	472	497	516	500	463	430	382	345	358
90%	371	382	422	445	477	498	481	456	420	377	339	353
Long Term												
Full Simulation Period[a]	392	420	458	488	512	528	513	482	450	404	368	378
Water Year Types[b,c]												
Wet (32%)	397	426	465	496	520	538	525	496	467	419	380	389
Above Normal (15%)	385	415	456	488	513	533	516	479	446	393	358	372
Below Normal (17%)	393	422	458	487	512	528	510	475	442	399	359	376
Dry (22%)	392	418	458	488	509	524	508	474	440	396	357	369
Critical (15%)	389	411	444	475	499	507	494	474	443	397	377	374

Proposed Project

Statistic	End of Month Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	448	474	508	542	544	544	544	544	524	468	426	431
20%	427	458	491	518	544	544	544	540	504	449	409	409
30%	409	444	480	506	533	544	542	532	488	430	391	396
40%	402	433	470	499	522	540	536	517	471	419	381	386
50%	391	429	467	496	516	533	531	508	462	408	375	382
60%	382	422	461	491	511	523	520	497	458	403	364	374
70%	379	414	453	477	503	518	511	493	451	397	357	371
80%	374	402	435	473	489	505	503	484	443	392	351	361
90%	369	384	414	447	474	488	482	467	431	386	340	349
Long Term												
Full Simulation Period[a]	402	430	465	493	514	525	522	507	471	418	380	387
Water Year Types[b,c]												
Wet (32%)	411	438	474	501	521	535	538	529	495	439	397	402
Above Normal (15%)	394	424	460	490	512	528	528	513	472	412	370	377
Below Normal (17%)	406	437	468	495	518	526	521	508	471	418	375	390
Dry (22%)	395	423	460	488	508	516	508	487	452	404	365	374
Critical (15%)	396	424	456	481	502	510	499	481	447	401	382	380

Proposed Project minus Existing

Statistic	End of Month Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	20	32	24	25	0	0	8	30	31	33	25	25
20%	18	29	20	13	10	0	18	38	32	28	19	19
30%	13	15	12	4	7	0	19	39	31	25	17	12
40%	14	4	2	4	2	0	14	30	17	17	18	10
50%	8	2	1	4	3	**0**	13	27	19	8	15	10
60%	1	4	2	5	5	**-6**	7	21	23	10	9	7
70%	**0**	2	**0**	**-7**	0	**-4**	5	24	20	8	5	6
80%	**-2**	5	**-2**	0	**-7**	**-12**	4	21	13	10	6	3
90%	**-1**	2	**-8**	2	**-2**	**-10**	1	11	11	9	1	**-4**
Long Term												
Full Simulation Period[a]	10	10	8	4	2	**-3**	9	25	21	15	12	9
Water Year Types[b,c]												
Wet (32%)	14	12	9	5	1	**-3**	13	32	28	20	17	13
Above Normal (15%)	9	9	5	2	**0**	**-5**	13	34	26	19	12	4
Below Normal (17%)	13	15	10	8	6	**-2**	11	32	29	19	16	14
Dry (22%)	3	4	2	0	**0**	**-8**	1	14	12	8	8	6
Critical (15%)	6	13	12	6	3	3	5	7	4	4	5	6

a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

Figure 1b-7. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, October

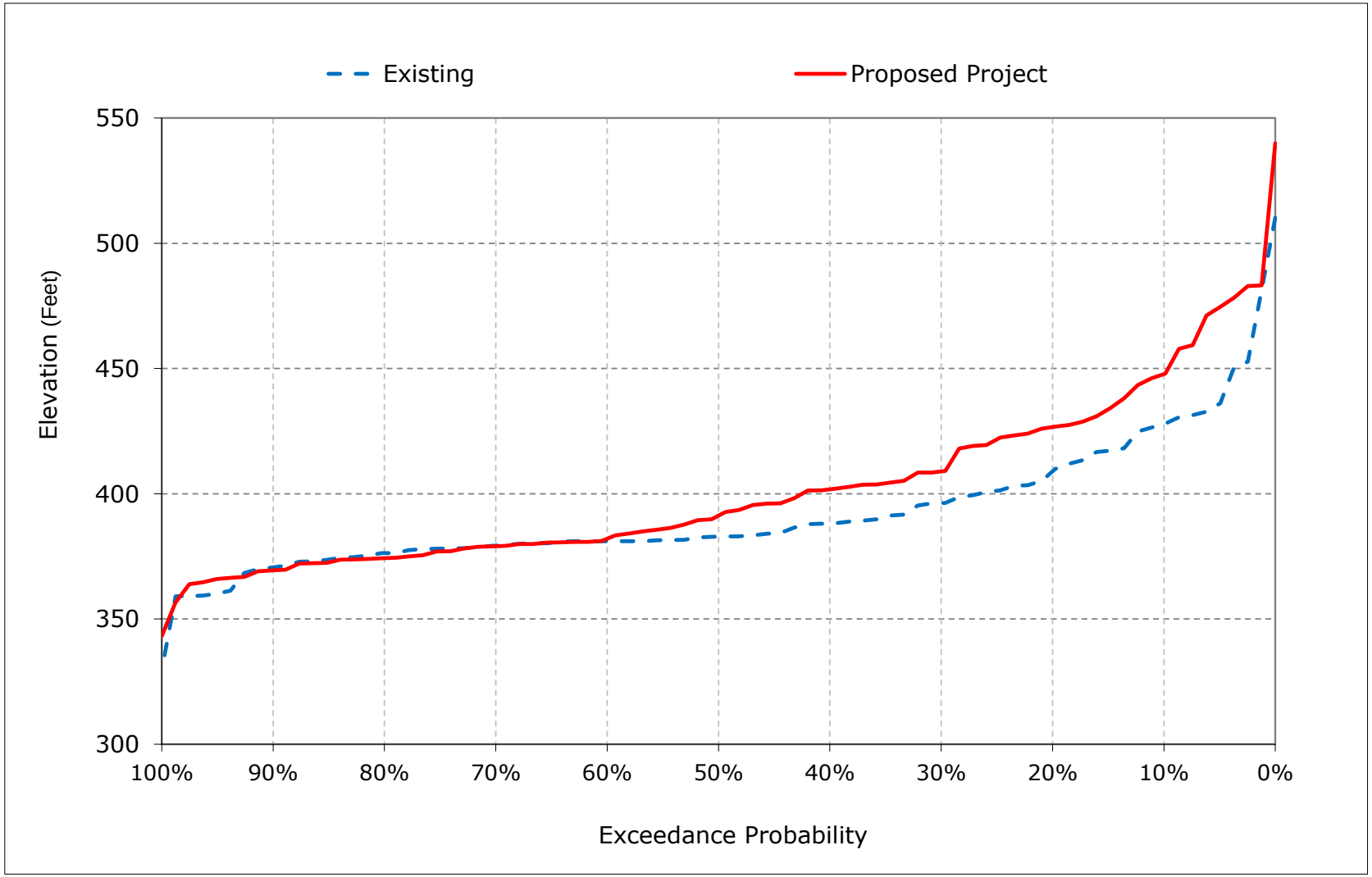


Figure 1b-8. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, November

Figure 1b-9. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, December

Figure 1b-10. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, January

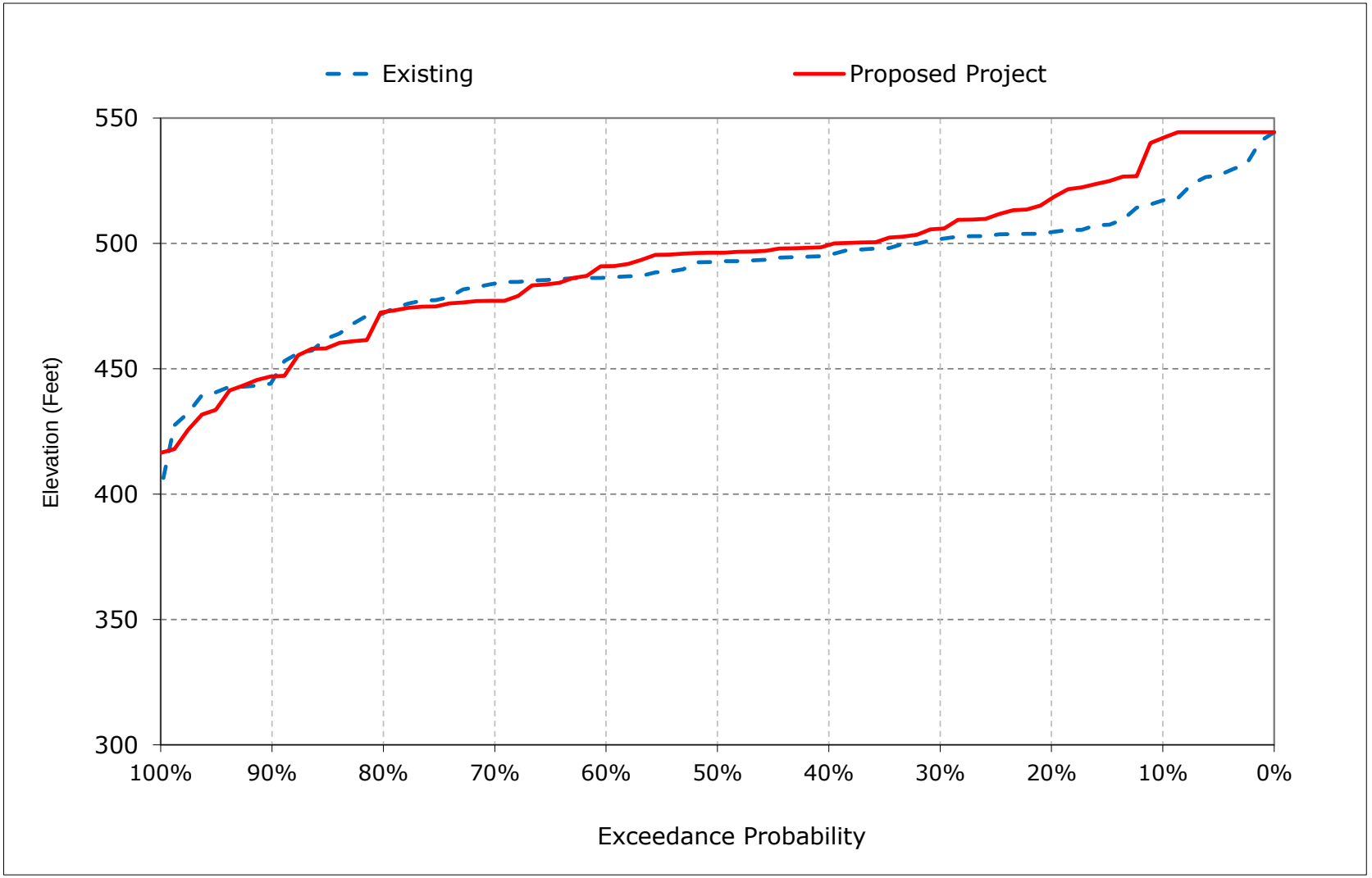


Figure 1b-11. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, February

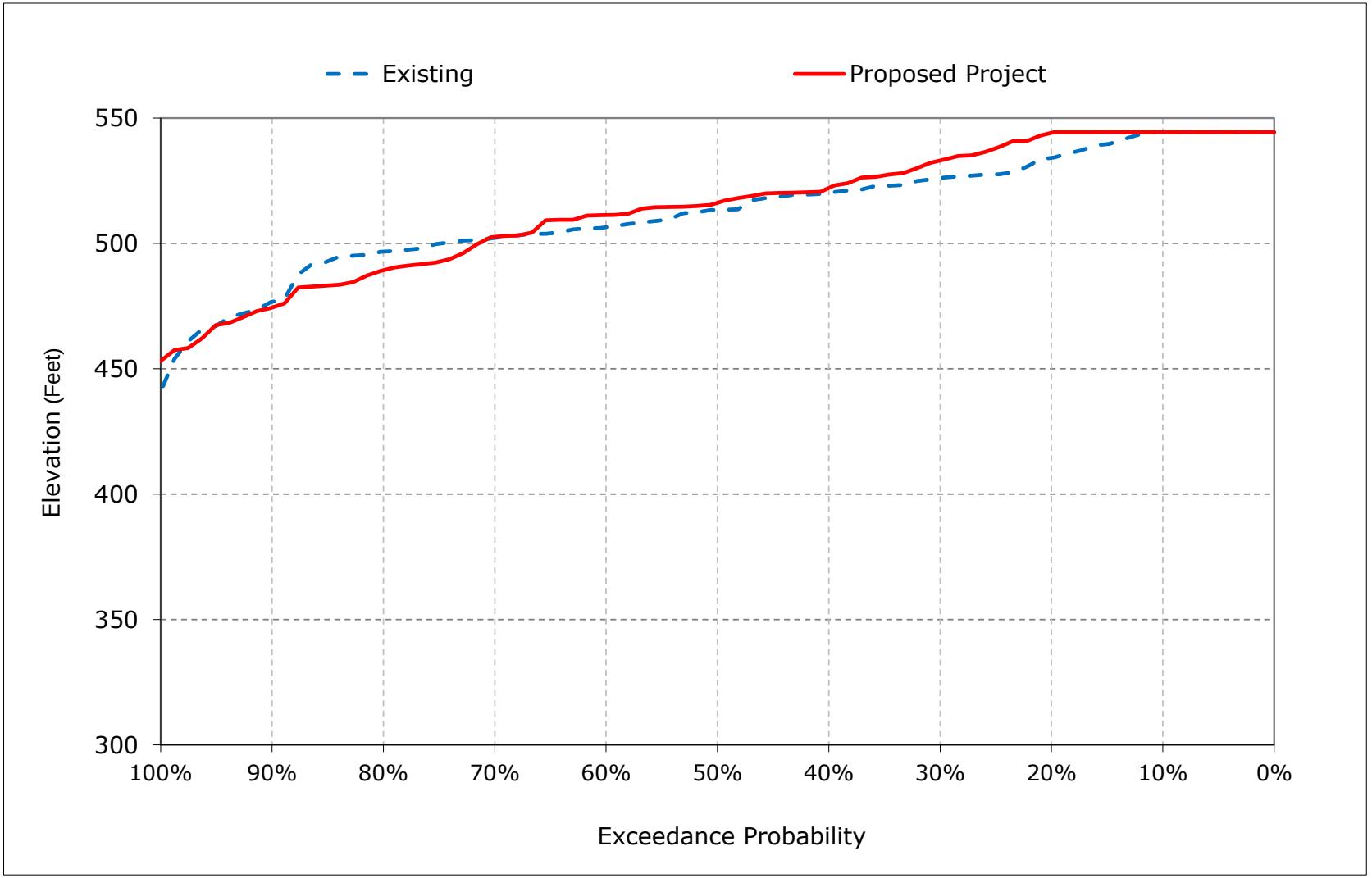


Figure 1b-12. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, March

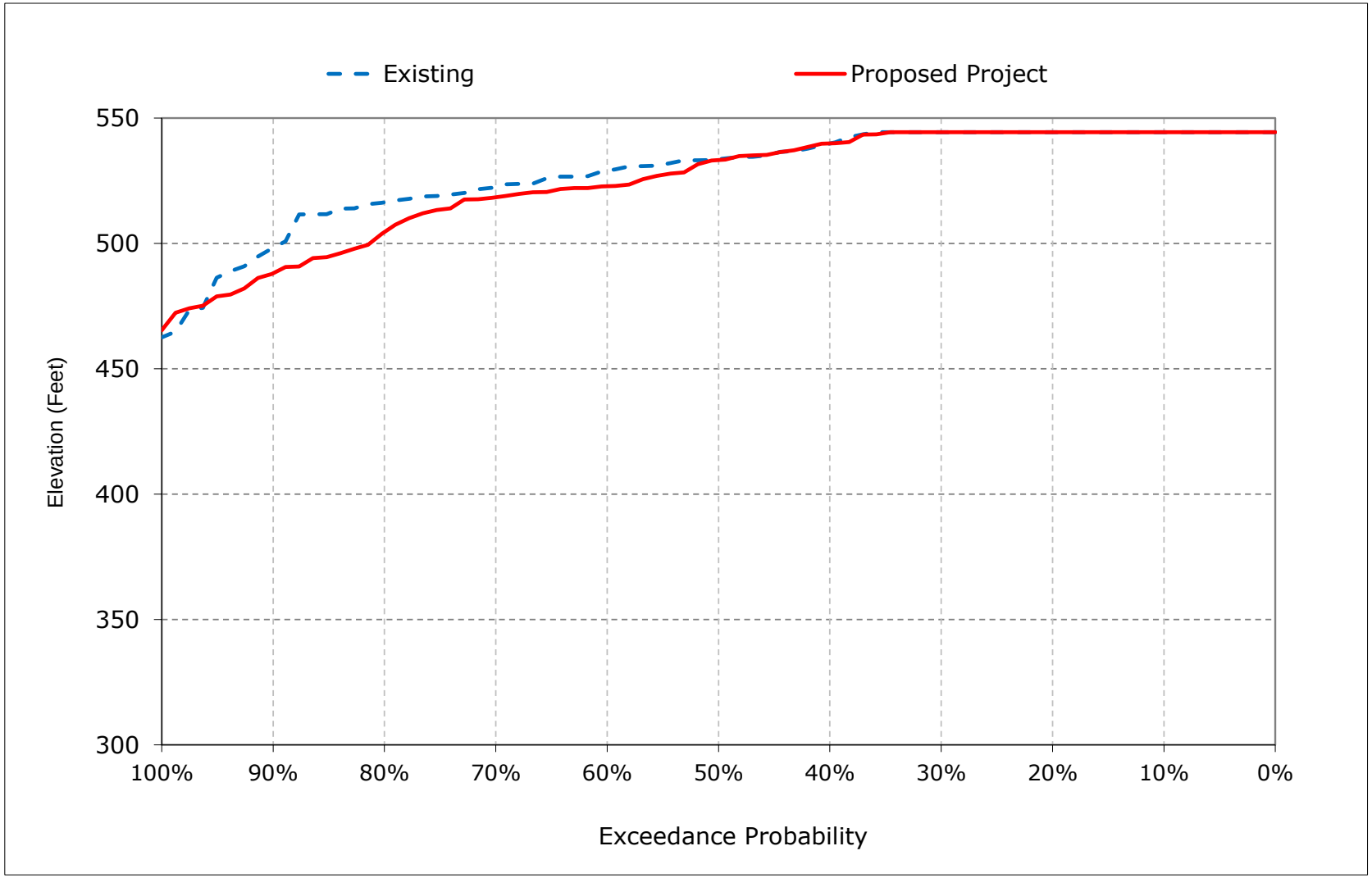


Figure 1b-13. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, April

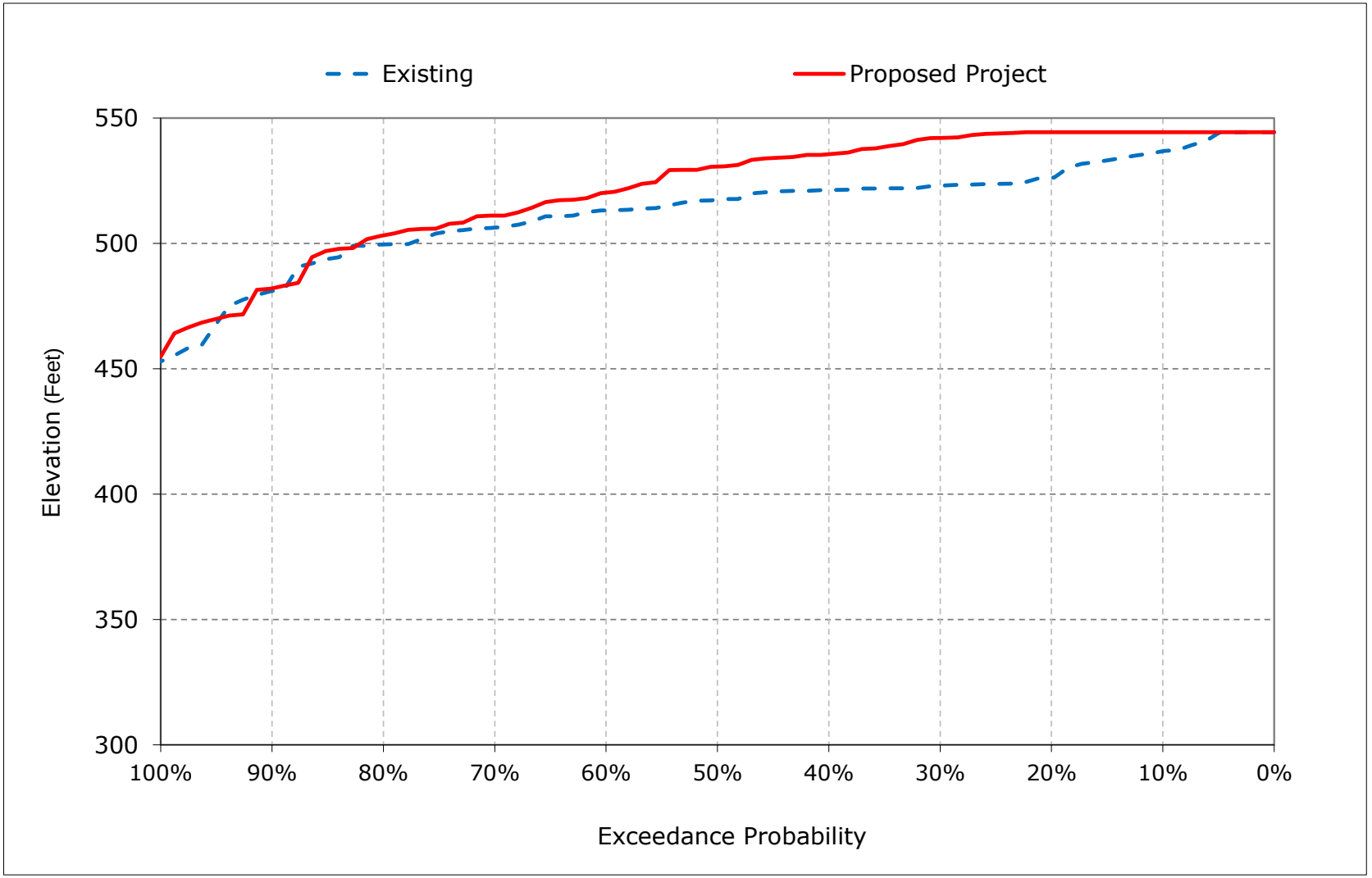


Figure 1b-14. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, May

Figure 1b-15. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, June

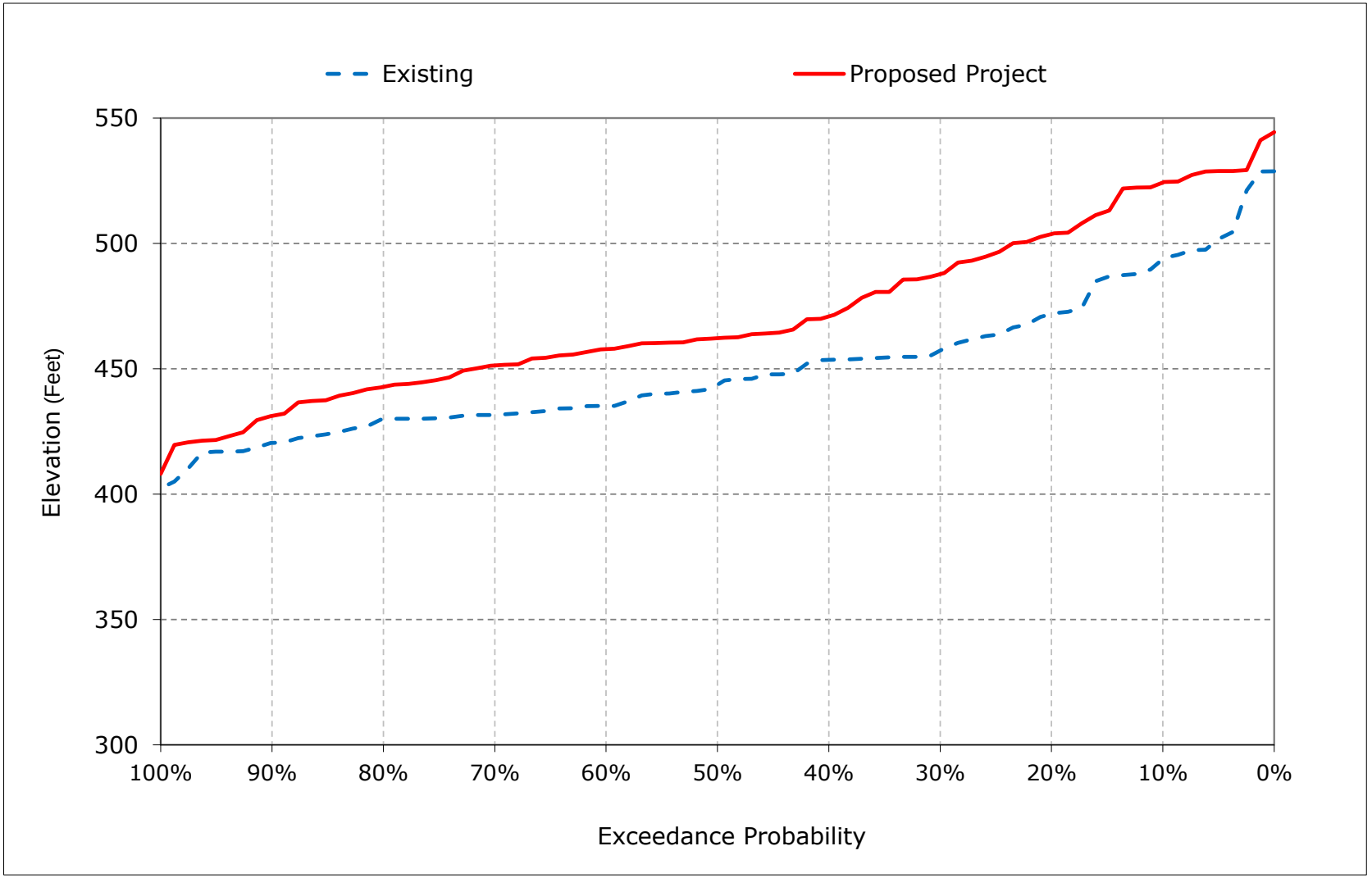


Figure 1b-16. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, July

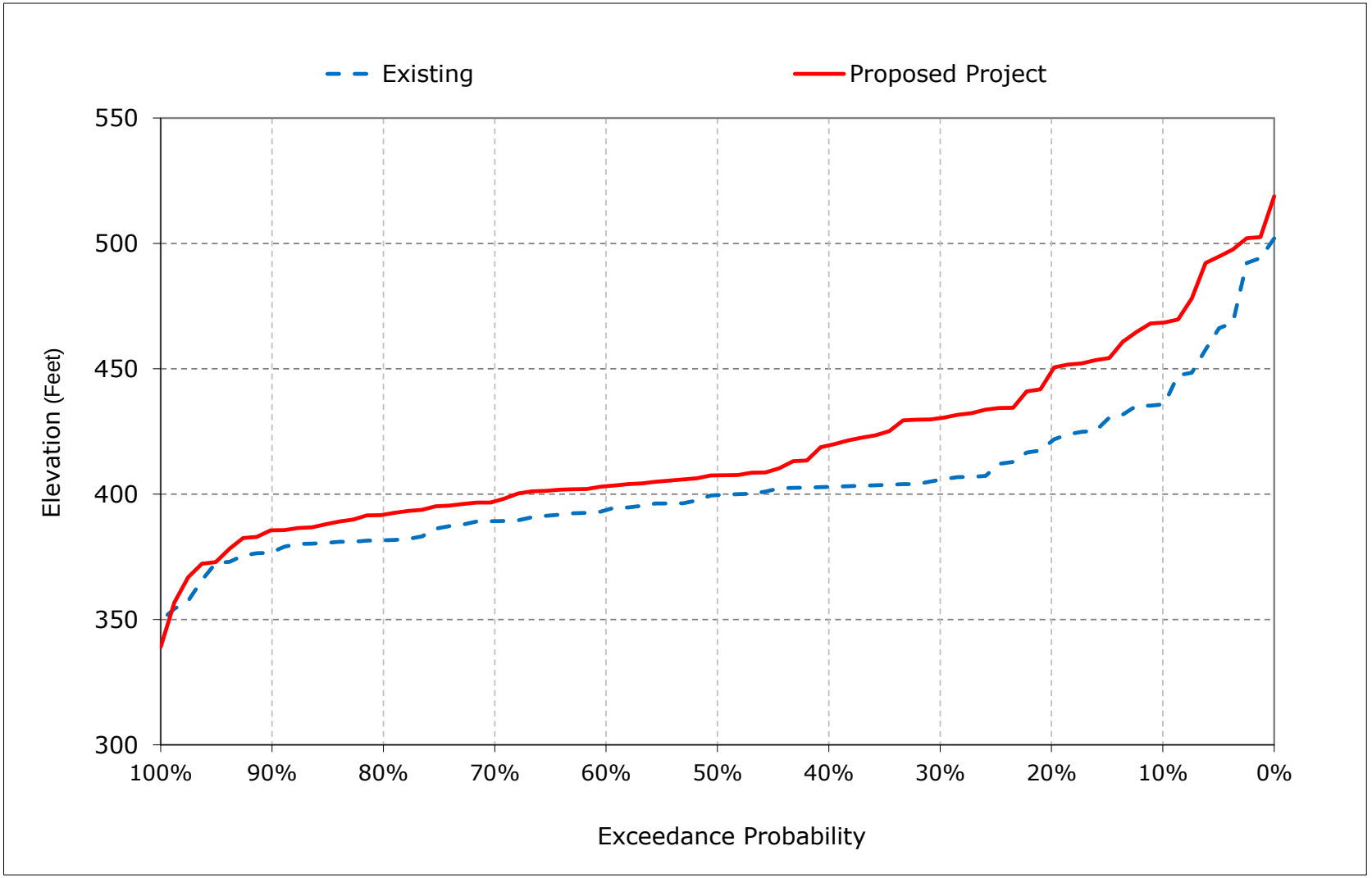


Figure 1b-17. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, August

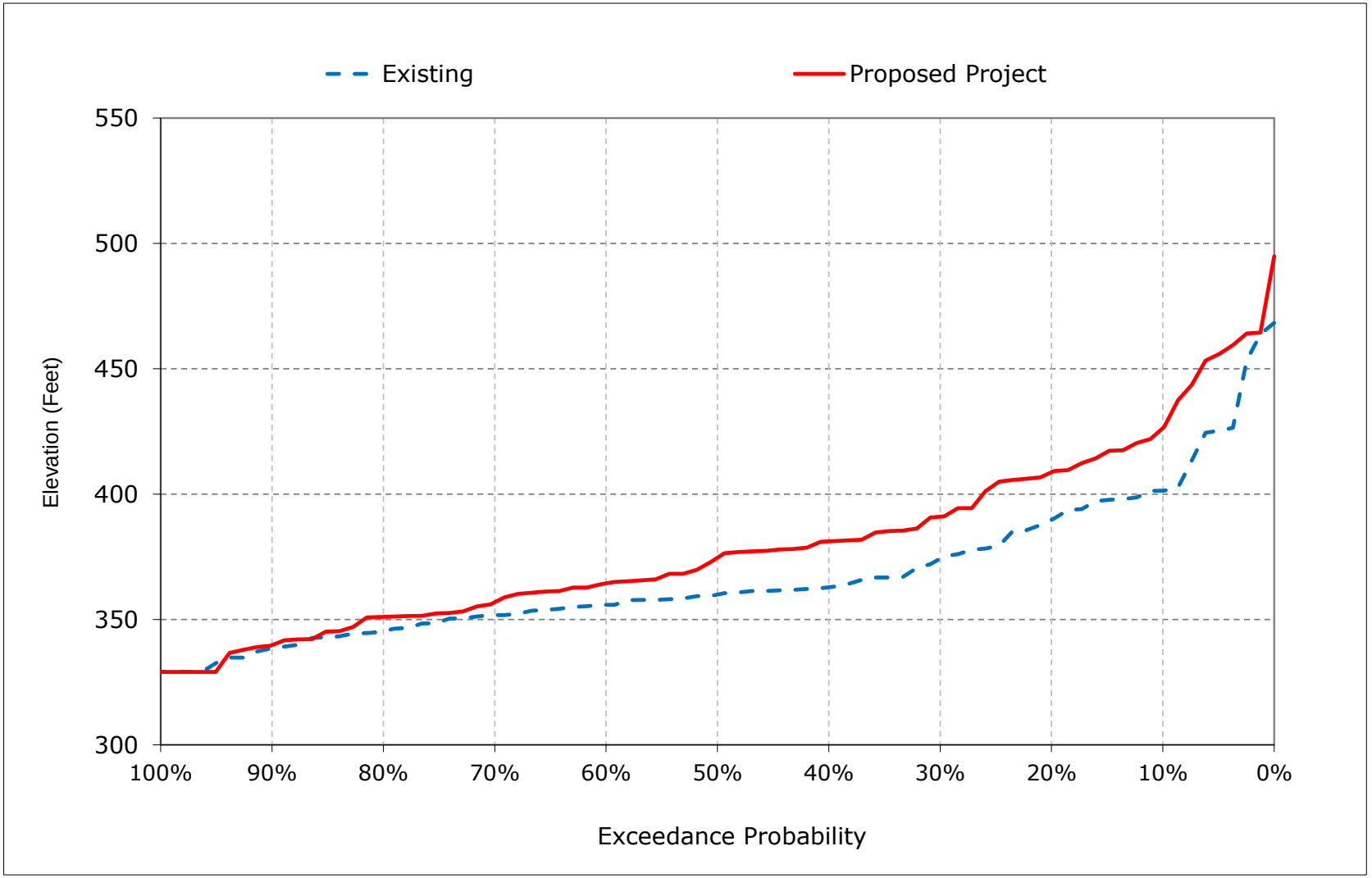


Figure 1b-18. San Luis Reservoir (SWP and CVP), Reservoir Pool Elevation, September

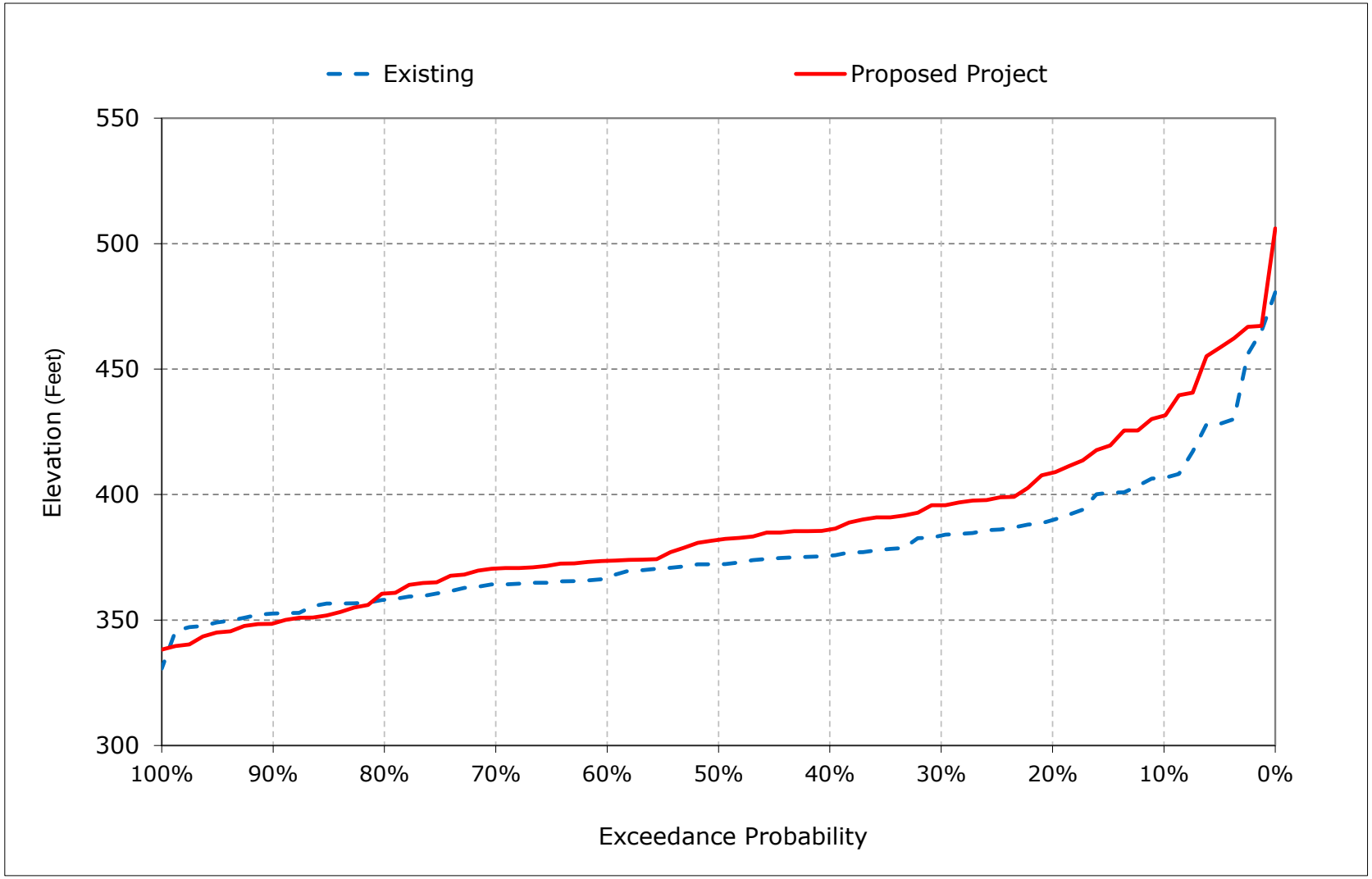


Table 1c-1. San Luis SWP Storage, End of Month Storage

Existing

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	508	498	626	794	1,008	1,067	904	668	547	554	462	532
20%	372	396	539	676	843	1,020	877	638	455	427	385	426
30%	316	329	433	566	694	921	810	590	392	373	317	332
40%	269	252	352	486	655	809	725	531	361	315	258	285
50%	211	196	328	439	596	716	583	480	323	272	223	237
60%	153	145	275	383	542	659	565	398	256	234	195	188
70%	85	97	186	313	455	565	521	347	206	207	130	129
80%	55	55	85	230	379	507	447	318	156	158	84	55
90%	55	55	55	199	345	444	378	267	95	100	55	55
Long Term												
Full Simulation Period[a]	244	255	339	479	619	740	645	478	326	309	255	266
Water Year Types[b,c]												
Wet (32%)	297	310	357	525	687	856	718	505	355	365	365	414
Above Normal (15%)	276	279	414	545	681	779	638	425	242	249	268	330
Below Normal (17%)	187	201	295	422	579	709	601	421	233	275	290	251
Dry (22%)	225	246	342	476	593	692	638	521	383	349	166	147
Critical (15%)	190	191	268	383	497	554	552	475	372	227	98	77

Proposed Project

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	704	841	972	1,042	1,067	1,067	1,023	944	748	712	660	689
20%	602	695	797	893	1,052	1,067	979	869	685	653	552	581
30%	512	568	686	811	889	973	940	807	606	555	518	540
40%	392	463	555	673	819	866	875	729	505	488	417	396
50%	298	361	448	559	702	805	783	636	431	422	330	311
60%	164	262	323	444	631	723	662	577	397	313	241	208
70%	92	170	233	340	475	555	593	476	320	237	138	121
80%	55	55	107	270	394	464	470	372	249	192	79	55
90%	55	55	55	199	321	420	400	328	158	156	55	55
Long Term												
Full Simulation Period[a]	342	409	476	590	701	761	742	641	467	426	353	349
Water Year Types[b,c]												
Wet (32%)	446	534	560	666	785	879	868	781	620	620	599	627
Above Normal (15%)	361	440	553	669	772	794	751	632	415	418	413	458
Below Normal (17%)	314	381	462	565	694	729	701	572	350	353	344	291
Dry (22%)	300	358	468	594	691	750	728	621	448	352	139	103
Critical (15%)	195	219	248	366	472	526	527	454	351	211	95	74

Proposed Project minus Existing

Statistic	End of Month Storage (TAF)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	196	343	347	249	59	0	118	277	202	158	198	156
20%	230	300	258	216	209	47	101	231	230	226	167	155
30%	196	239	254	245	195	51	130	217	214	182	200	207
40%	124	211	202	187	165	57	150	197	144	173	159	111
50%	87	166	120	120	106	89	200	156	109	150	107	73
60%	11	116	48	61	89	63	98	179	142	79	46	20
70%	8	73	47	26	20	**-10**	72	129	114	30	7	**-8**
80%	0	0	22	40	15	**-43**	23	54	93	34	**-5**	0
90%	0	0	0	**0**	**-24**	**-24**	22	62	63	56	0	0
Long Term												
Full Simulation Period[a]	99	154	138	111	82	22	97	163	140	117	98	83
Water Year Types[b,c]												
Wet (32%)	149	224	203	142	98	23	150	277	265	255	234	213
Above Normal (15%)	85	161	139	125	91	15	113	207	172	169	145	128
Below Normal (17%)	127	180	167	143	115	20	100	151	117	79	54	40
Dry (22%)	75	112	125	118	98	58	89	100	65	3	**-27**	**-44**
Critical (15%)	5	28	**-20**	**-17**	**-25**	**-28**	**-25**	**-21**	**-22**	**-16**	**-3**	**-2**

a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

Figure 1c-7. San Luis SWP Storage, End of October Storage

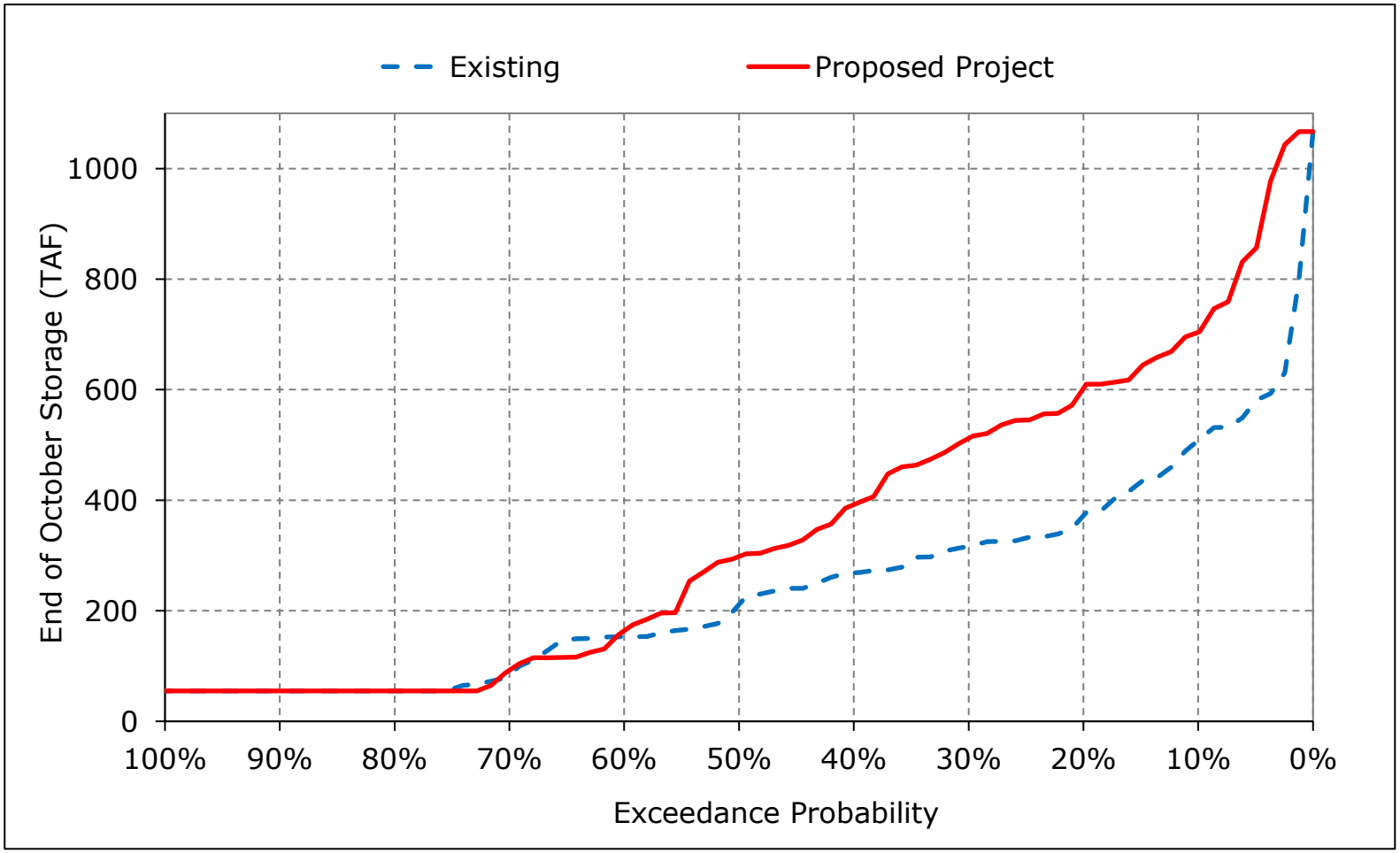


Figure 1c-8. San Luis SWP Storage, End of November Storage

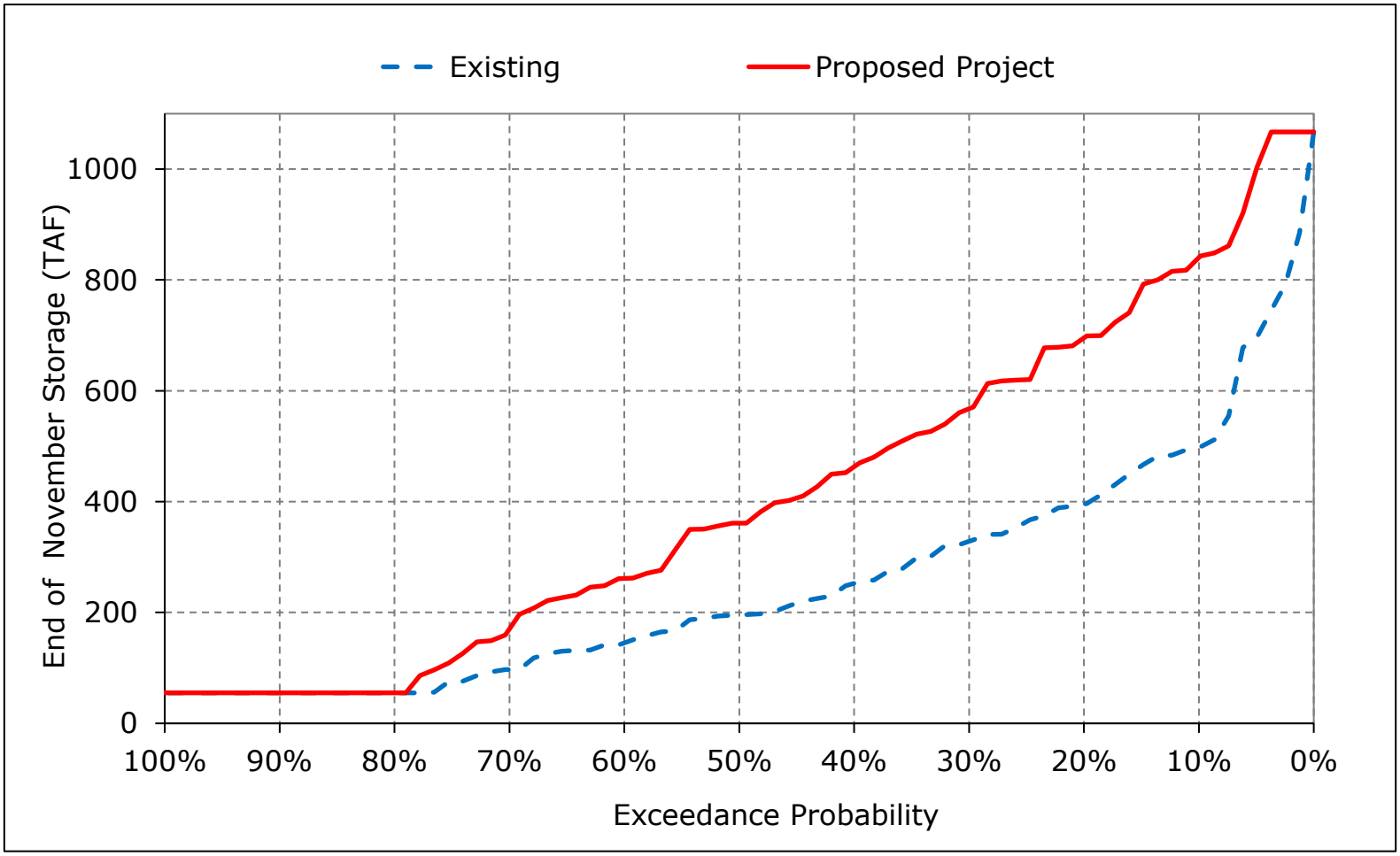


Figure 1c-9. San Luis SWP Storage, End of December Storage

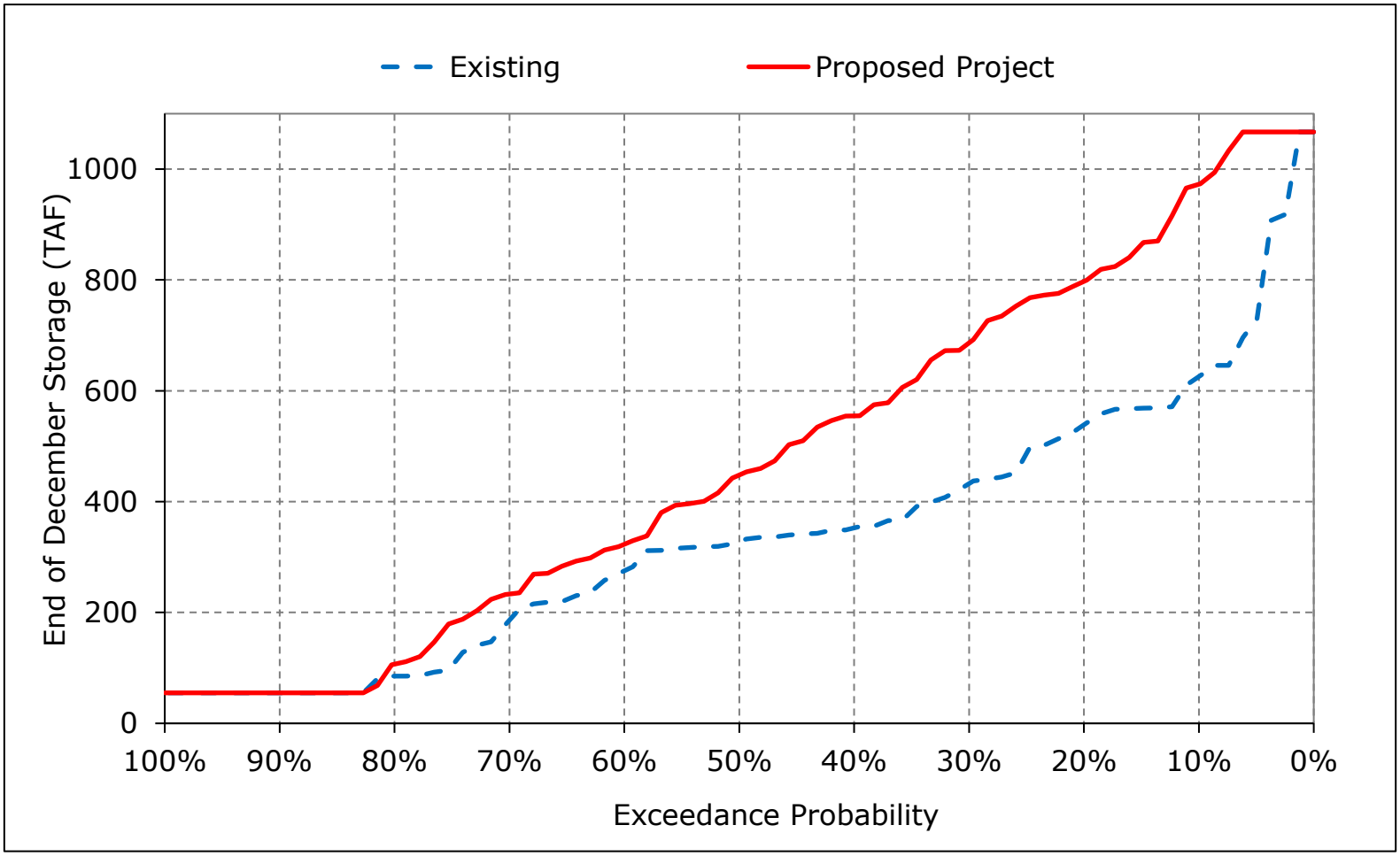


Figure 1c-10. San Luis SWP Storage, End of January Storage

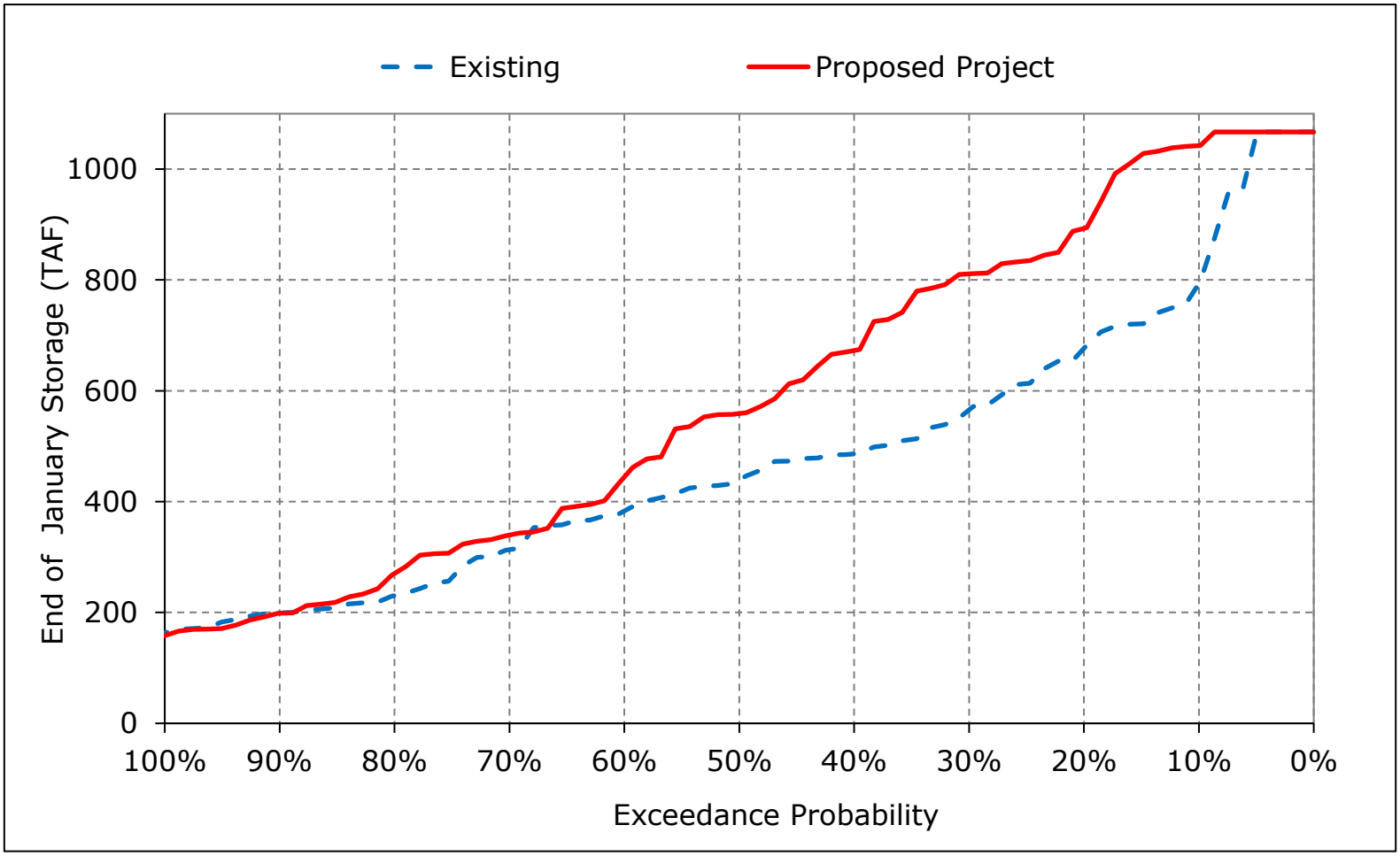


Figure 1c-11. San Luis SWP Storage, End of February Storage

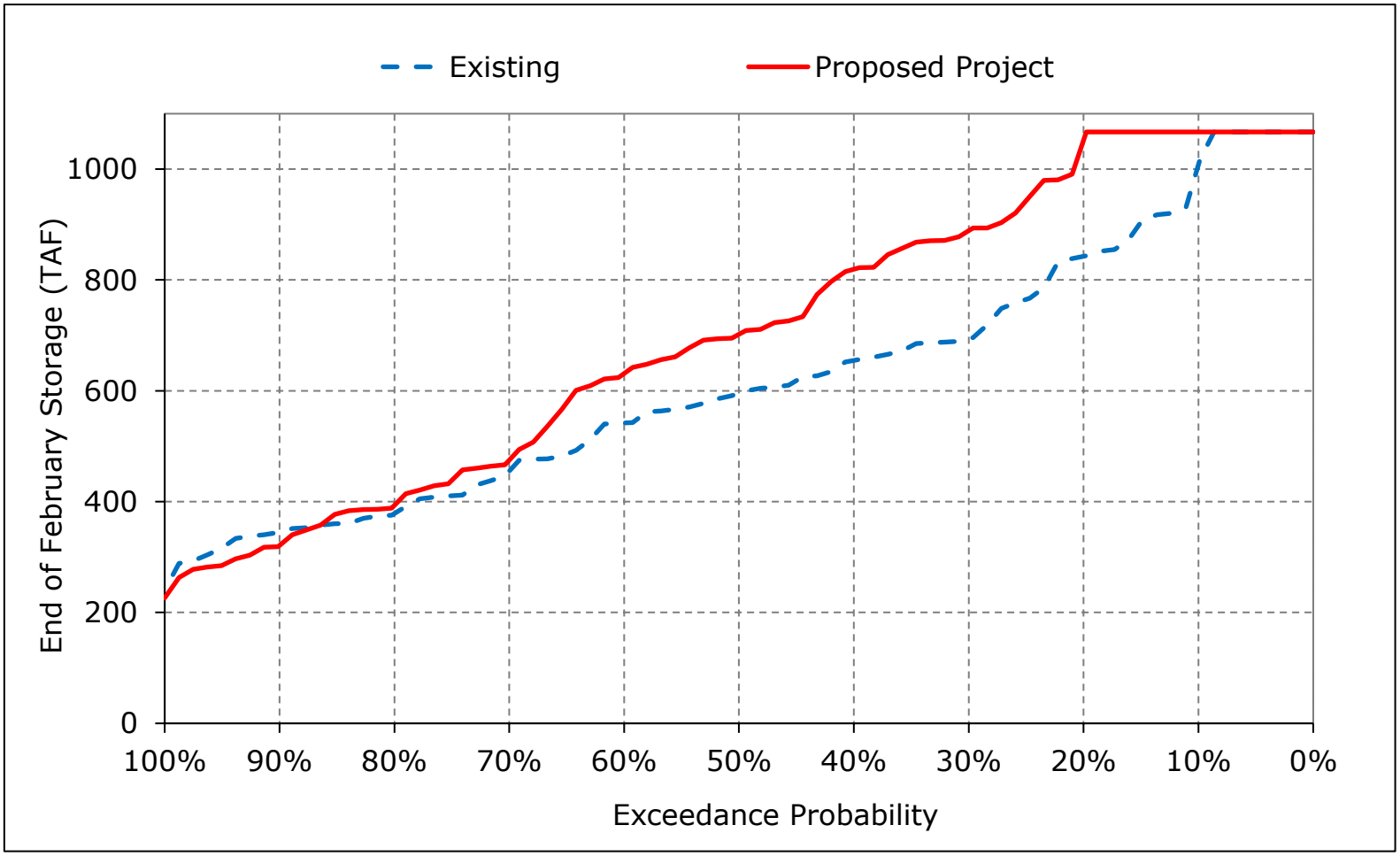


Figure 1c-12. San Luis SWP Storage, End of March Storage

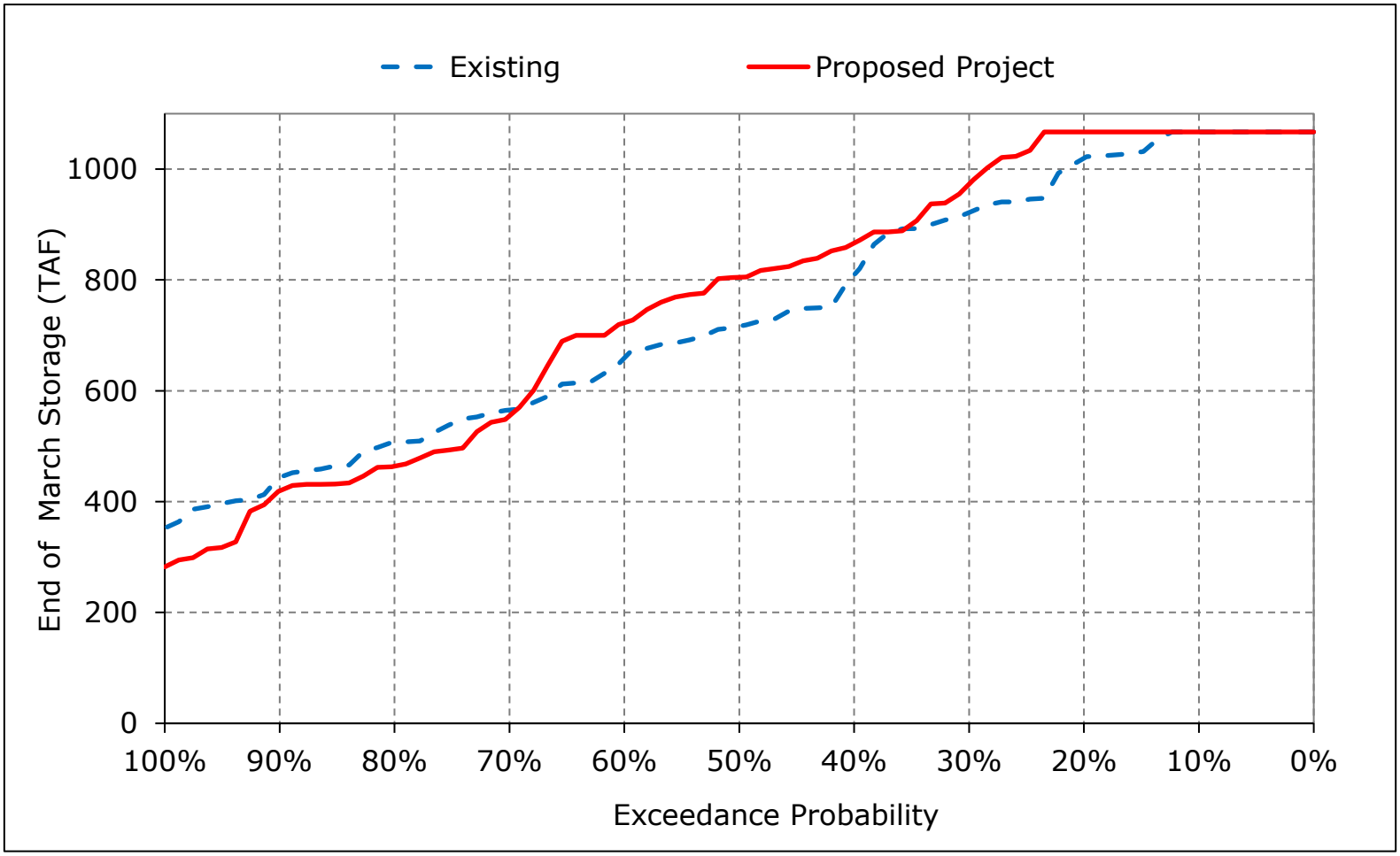


Figure 1c-13. San Luis SWP Storage, End of April Storage

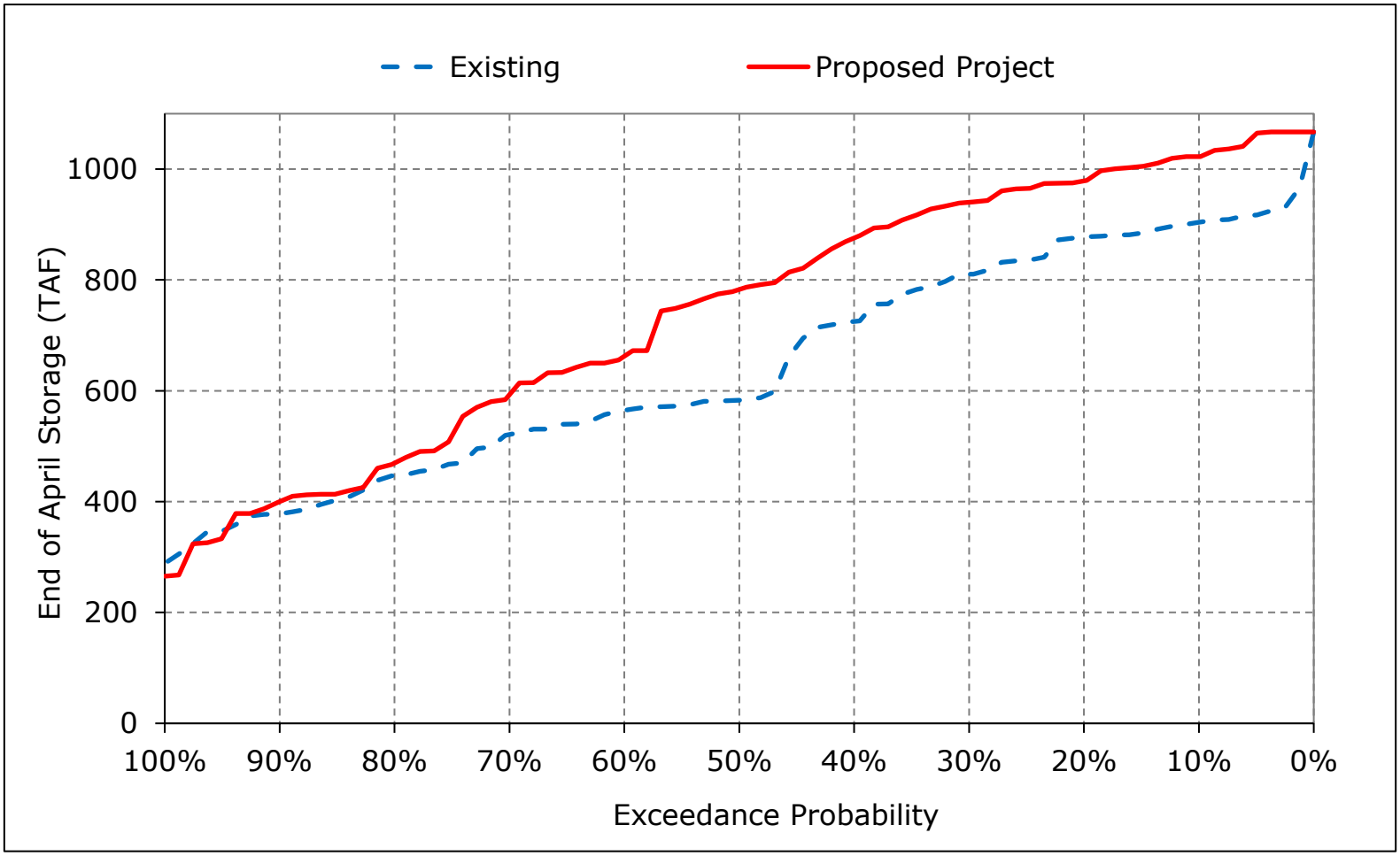


Figure 1c-14. San Luis SWP Storage, End of May Storage

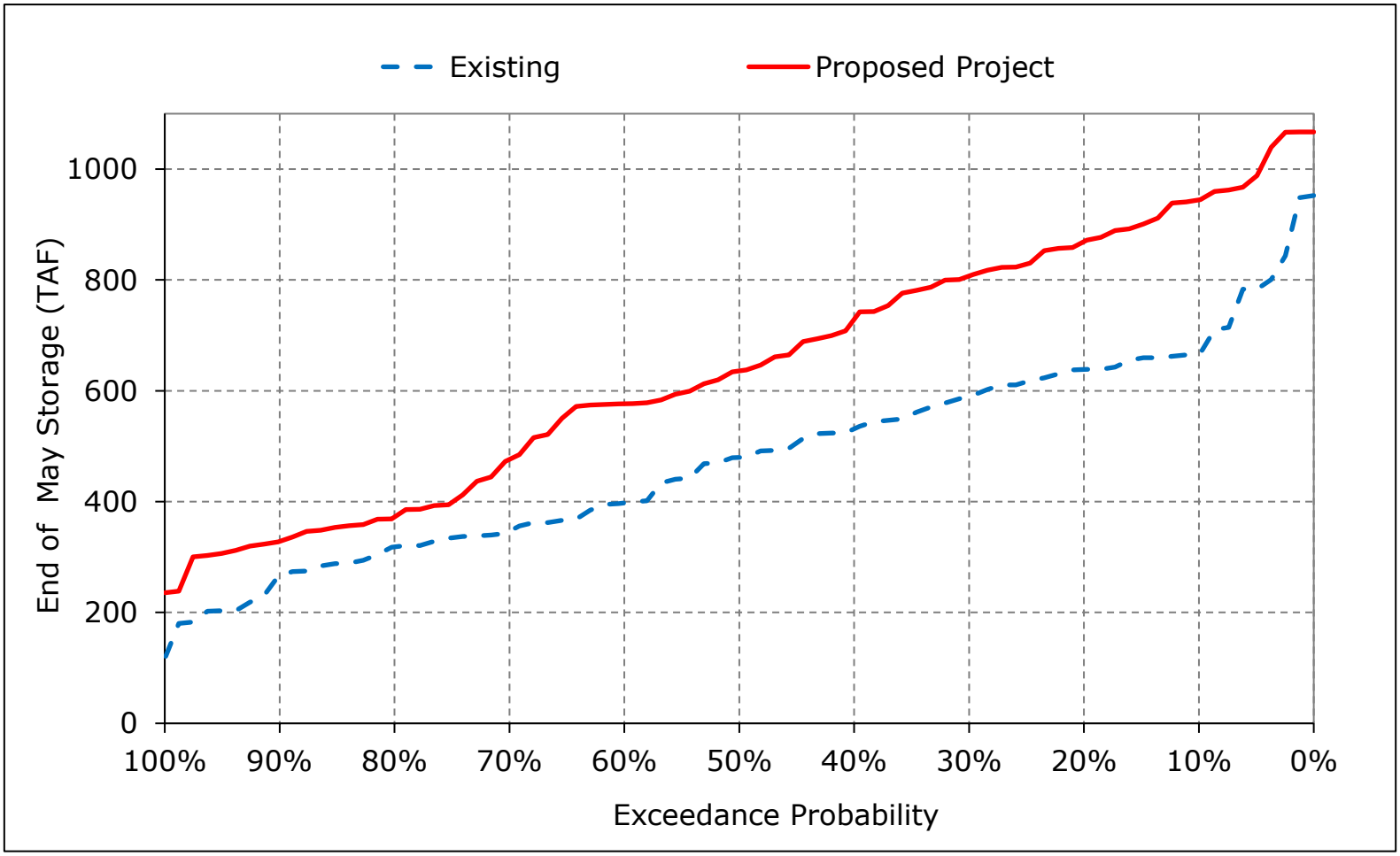


Figure 1c-15. San Luis SWP Storage, End of June Storage

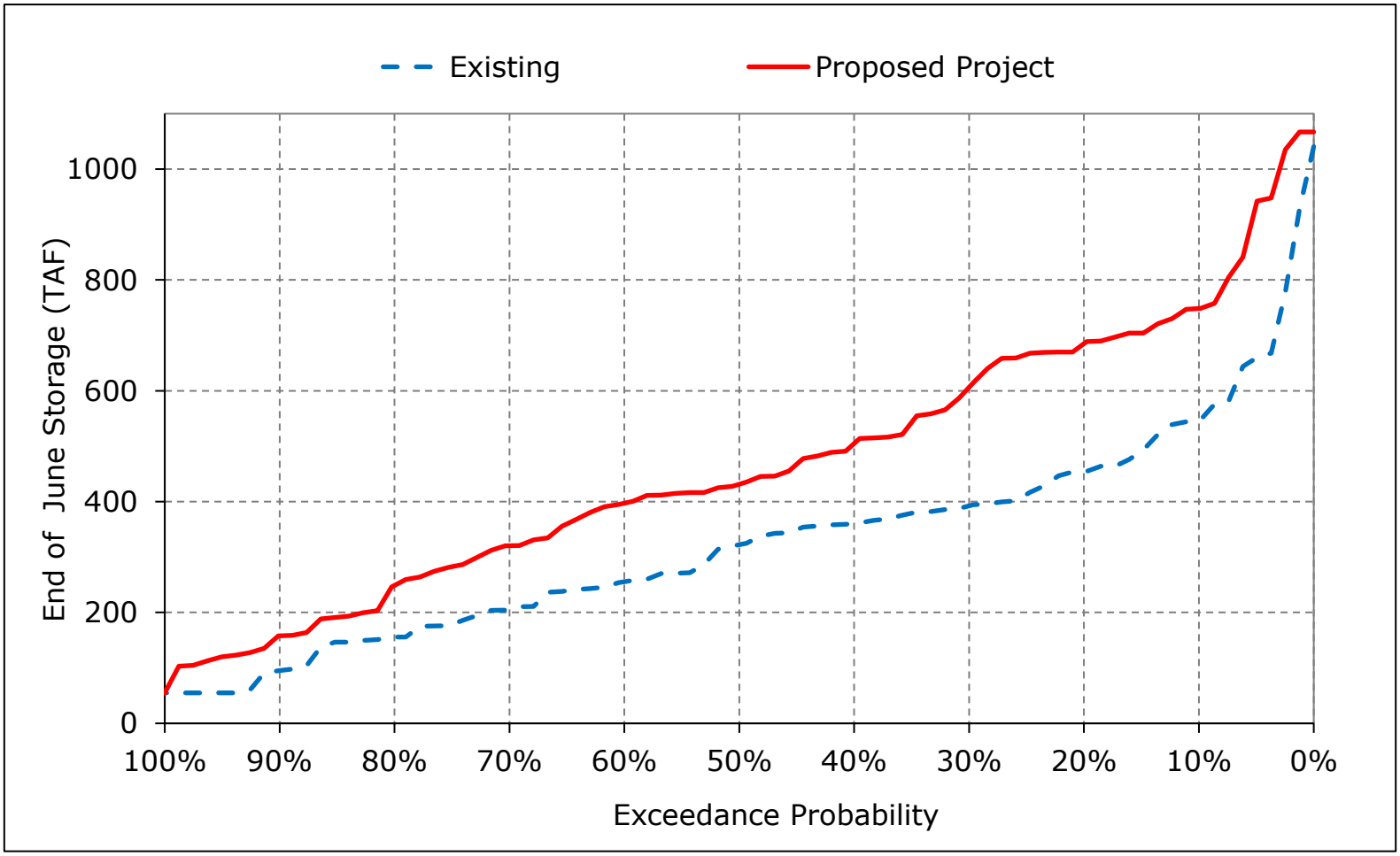


Figure 1c-16. San Luis SWP Storage, End of July Storage

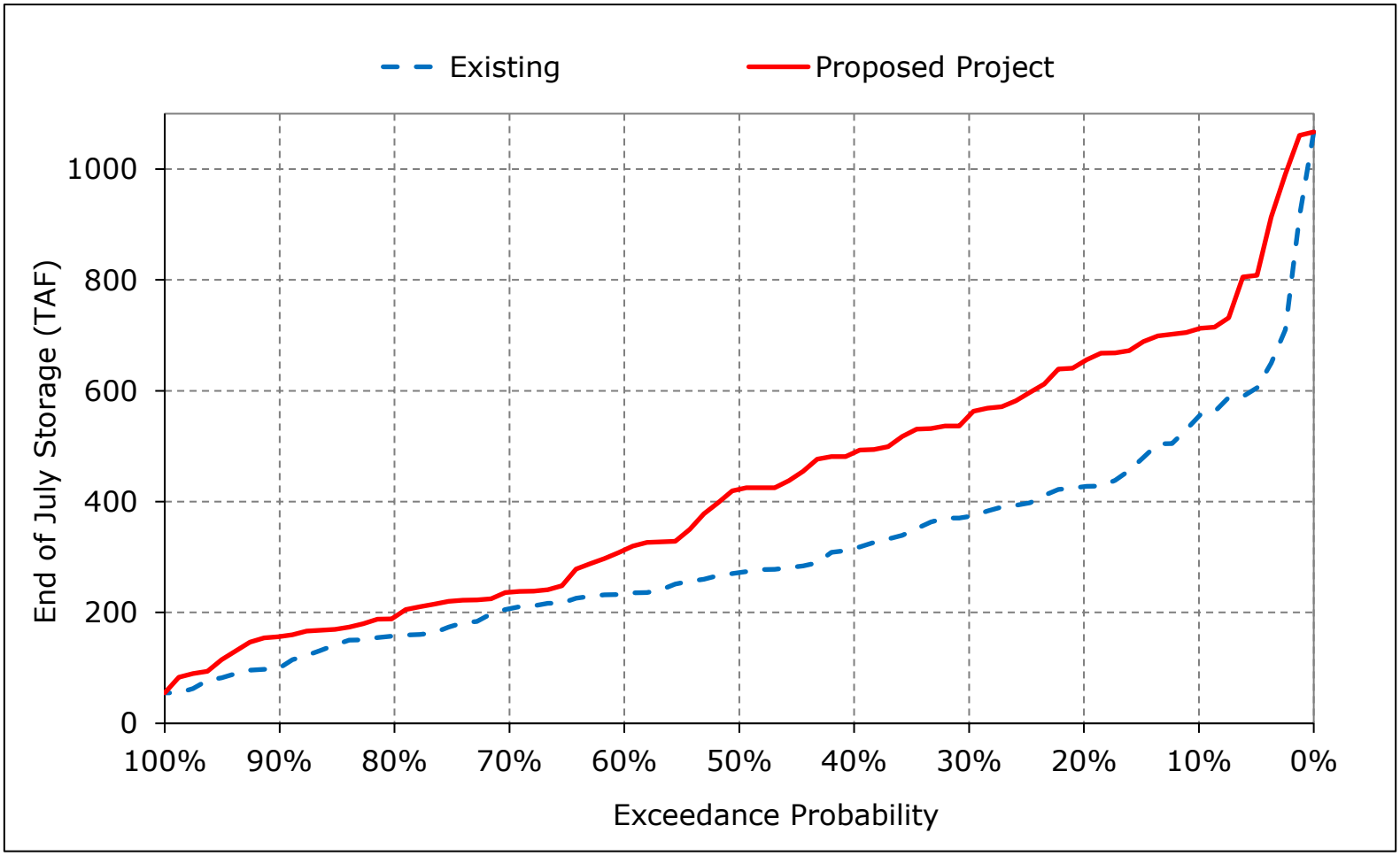


Figure 1c-17. San Luis SWP Storage, End of August Storage

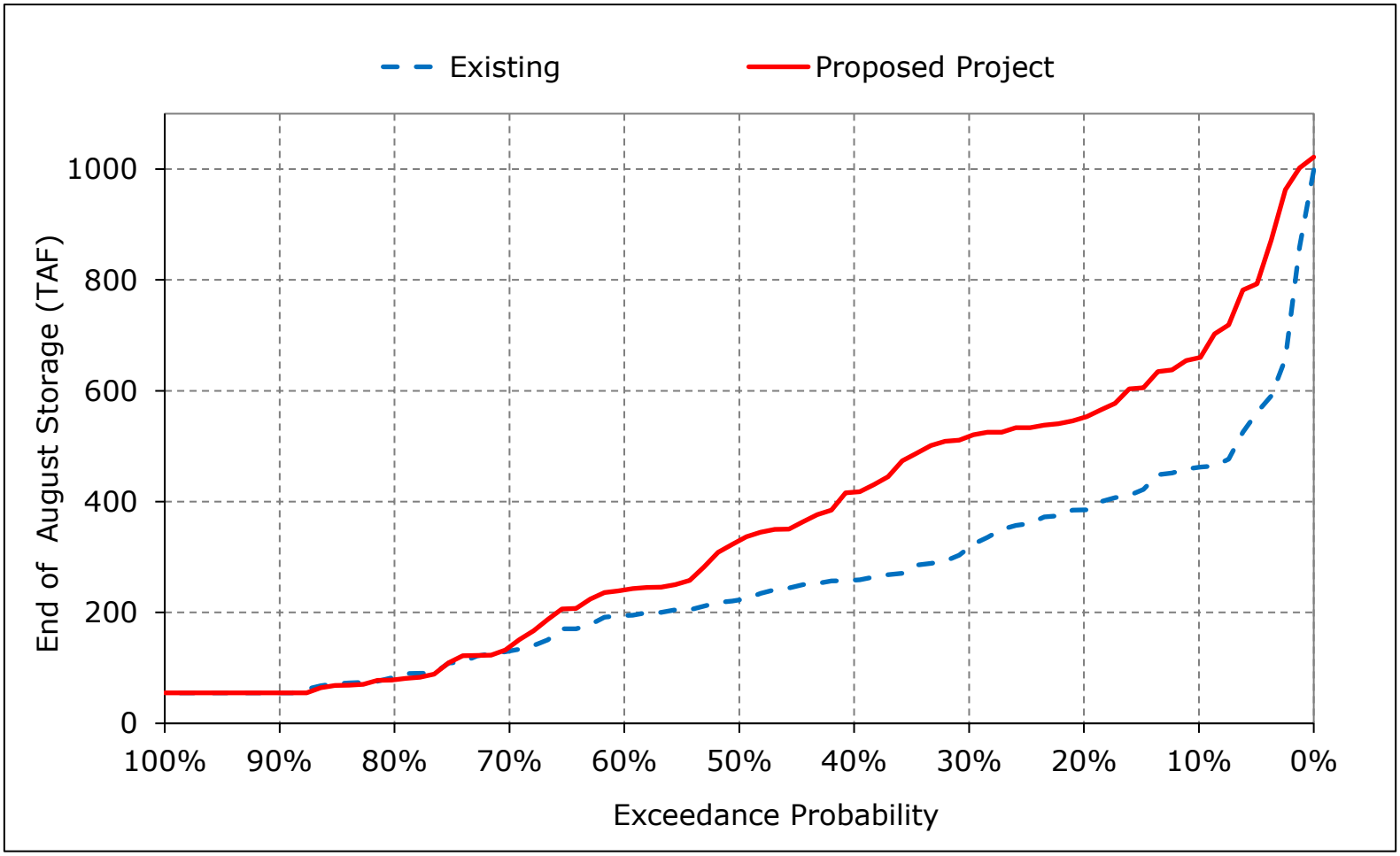
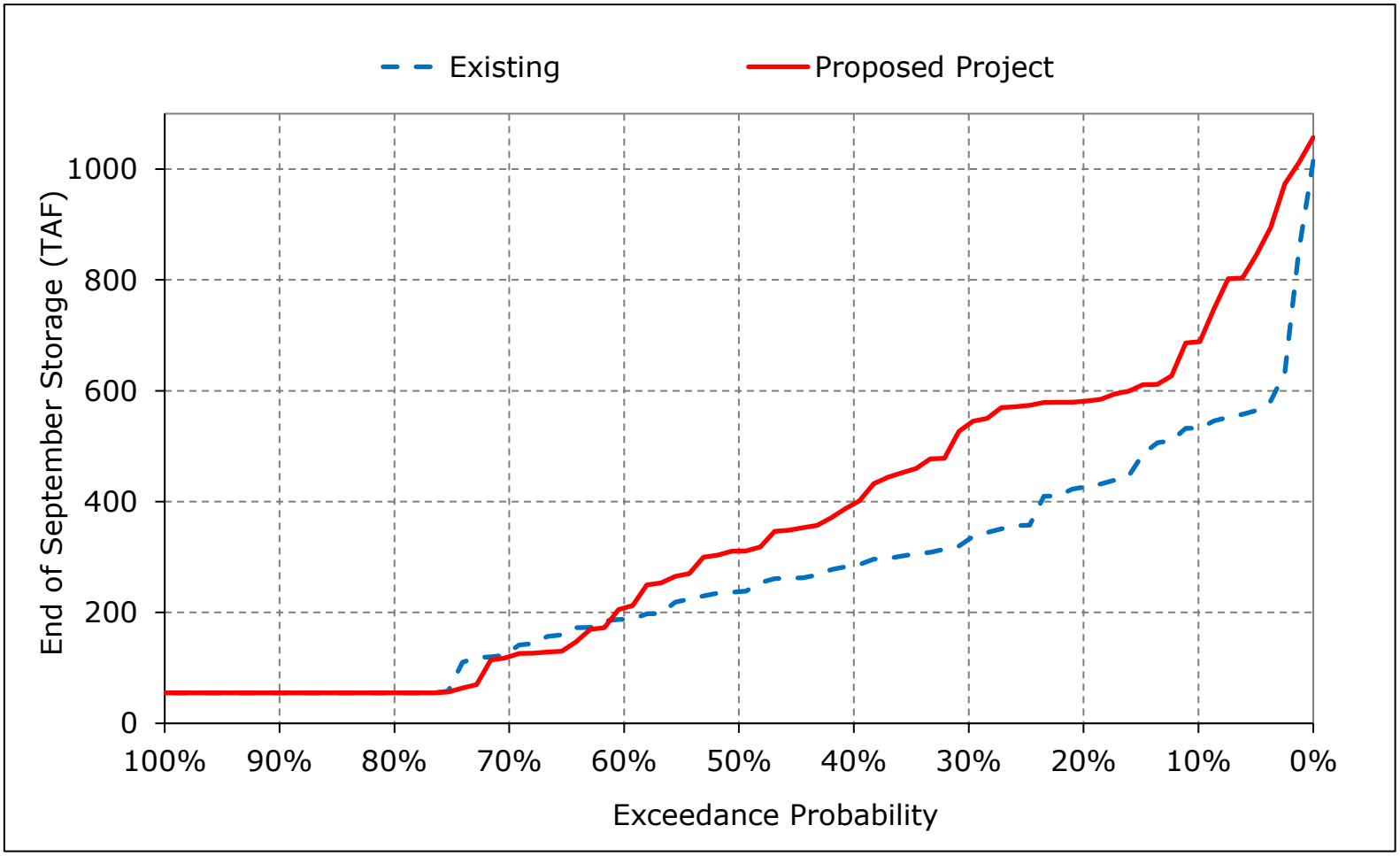


Figure 1c-18. San Luis SWP Storage, End of September Storage



Appendix C – Modeling

Attachment 2-2 – Flow Results (CalSim II)

The following results of the CalSim II model are included for river flow conditions for the following alternatives:

- Existing Conditions
- Proposed Project

Table 2-2.1. Flow Results (CalSim II)

Title	Model Parameter	Table Numbers	Figure Numbers
Sacramento River Flow at Freeport	C169	1-1	1-1 to 1-18
Georgiana Slough Flow	D401B_GEO	2-1	2-1 to 2-18
Yolo Bypass Flow	C157	3-1	3-1 to 3-18
Sacramento River Flow at Rio Vista	C405	4-1	4-1 to 4-18
San Joaquin River at Vernalis	C639	5-1	5-1 to 5-18
Mokelumne River Below Consumnes	C504	6-1	6-1 to 6-18
Old and Middle River Flow	C408	7-1	7-1 to 7-18
Qwest	C416A	8-1	8-1 to 8-18
Delta Outflow	C406	9-1	9-1 to 9-18

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 1-1. Sacramento River Flow at Freeport, Monthly Flow

Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	13,766	22,073	48,752	63,157	68,384	62,394	52,923	41,803	26,593	24,522	16,963	30,152
20%	13,332	19,621	32,185	55,411	60,806	52,865	40,600	29,832	19,988	22,968	16,238	29,429
30%	12,763	18,605	21,963	38,417	49,902	39,929	26,021	19,236	15,420	21,584	16,006	24,061
40%	11,546	16,220	18,343	26,706	45,009	33,941	23,119	14,886	14,831	19,917	15,770	21,992
50%	10,520	14,888	15,589	20,626	34,615	26,439	18,461	12,887	14,467	19,155	15,543	14,610
60%	9,213	12,135	15,117	18,712	26,295	21,695	15,302	11,820	14,035	17,518	14,469	11,310
70%	8,522	10,419	13,252	14,718	20,073	19,289	13,396	10,805	13,099	16,490	10,614	9,977
80%	8,051	9,021	10,982	13,213	16,888	15,732	11,576	10,231	12,322	14,778	9,349	9,445
90%	6,705	7,877	9,715	12,233	14,026	11,430	10,003	8,633	11,596	10,527	8,394	7,551
Long Term												
Full Simulation Period[a]	10,902	16,017	22,564	30,820	37,978	32,595	24,891	19,312	17,132	18,361	13,660	17,819
Water Year Types[b,c]												
Wet (32%)	12,658	21,062	36,113	50,121	57,672	49,926	40,193	31,908	23,827	20,207	16,271	28,817
Above Normal (15%)	10,615	16,983	22,363	37,320	45,427	43,052	27,490	21,850	16,431	21,886	16,401	22,366
Below Normal (17%)	10,453	14,106	16,596	21,953	32,254	22,985	19,573	14,371	14,588	20,870	15,568	12,979
Dry (22%)	10,048	13,410	15,147	16,518	23,267	20,656	14,489	10,764	14,050	16,782	9,809	9,645
Critical (15%)	9,190	10,263	11,497	14,298	16,601	13,704	10,947	8,065	10,921	10,281	8,813	7,354

Proposed Project

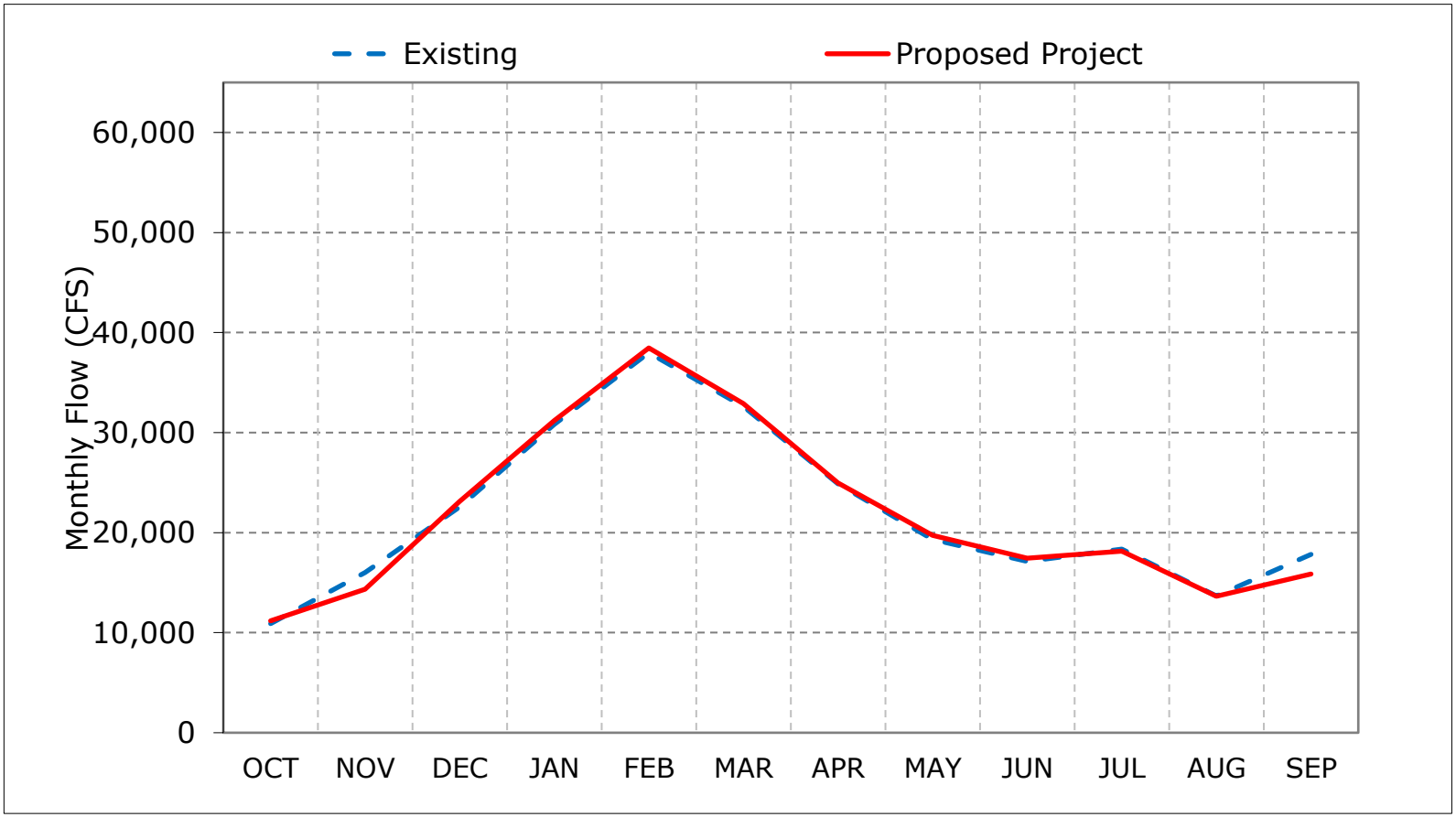
Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	14,579	21,983	50,342	63,821	68,500	62,720	52,922	41,633	26,579	24,388	16,949	23,785
20%	13,668	14,736	34,367	56,341	60,972	52,961	40,610	30,275	19,984	23,606	16,353	23,138
30%	12,876	13,914	22,492	40,731	51,407	41,411	25,847	19,232	15,561	21,872	16,088	22,442
40%	11,976	13,504	18,497	27,766	46,113	33,998	23,116	14,880	15,242	19,624	15,804	21,117
50%	11,366	12,870	15,651	24,206	34,576	26,432	18,443	14,135	14,912	18,583	15,099	14,655
60%	9,382	11,090	15,089	18,809	26,302	22,024	14,967	12,796	14,571	16,979	13,855	11,091
70%	8,393	10,514	13,953	15,191	21,628	19,329	13,279	11,520	13,743	15,871	10,684	9,899
80%	8,051	8,899	12,087	12,613	17,573	15,516	11,979	10,749	12,733	13,951	9,622	9,456
90%	6,939	7,611	9,698	11,643	14,471	11,722	10,428	9,369	11,311	10,603	9,031	7,600
Long Term												
Full Simulation Period[a]	11,184	14,330	23,129	31,210	38,462	32,897	24,958	19,719	17,441	18,162	13,655	15,851
Water Year Types[b,c]												
Wet (32%)	13,033	18,891	37,629	50,737	57,966	50,069	40,162	31,903	23,912	20,073	16,188	22,361
Above Normal (15%)	11,171	14,703	22,541	38,453	46,067	43,786	27,480	21,949	17,174	21,957	16,329	23,113
Below Normal (17%)	10,767	12,629	16,668	22,954	33,682	23,290	19,629	15,142	15,417	20,508	15,268	12,740
Dry (22%)	10,072	11,942	15,377	16,311	23,289	20,945	14,680	11,796	14,238	16,076	9,910	9,604
Critical (15%)	9,348	9,644	11,463	13,640	16,932	13,938	11,128	8,315	10,854	10,618	9,228	7,485

Proposed Project minus Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	812	**-91**	1,590	664	116	326	**-1**	**-169**	**-14**	**-134**	**-14**	**-6,367**
20%	336	**-4,885**	2,182	931	166	95	11	443	**-3**	638	115	**-6,291**
30%	112	**-4,691**	529	2,314	1,504	1,482	**-174**	**-4**	141	287	82	**-1,619**
40%	430	**-2,716**	154	1,061	1,105	57	**-3**	**-6**	410	**-293**	34	**-874**
50%	846	**-2,017**	62	3,581	**-39**	**-7**	**-18**	1,248	445	**-573**	**-444**	45
60%	169	**-1,045**	**-27**	97	7	329	**-335**	976	537	**-539**	**-613**	**-219**
70%	**-129**	95	701	473	1,555	40	**-117**	715	644	**-619**	70	**-78**
80%	0	**-123**	1,104	**-600**	684	**-216**	403	517	411	**-827**	273	11
90%	235	**-266**	**-17**	**-590**	445	292	426	736	**-286**	76	638	49
Long Term												
Full Simulation Period[a]	283	**-1,687**	564	391	484	302	67	407	308	**-199**	**-5**	**-1,968**
Water Year Types[b,c]												
Wet (32%)	375	**-2,171**	1,516	616	294	143	**-31**	**-5**	85	**-134**	**-83**	**-6,457**
Above Normal (15%)	556	**-2,280**	178	1,133	640	733	**-10**	98	743	71	**-73**	747
Below Normal (17%)	314	**-1,476**	72	1,002	1,427	305	56	771	829	**-362**	**-300**	**-239**
Dry (22%)	24	**-1,467**	230	**-206**	22	289	191	1,031	187	**-705**	101	**-41**
Critical (15%)	159	**-620**	**-34**	**-658**	331	234	181	249	**-67**	337	415	131

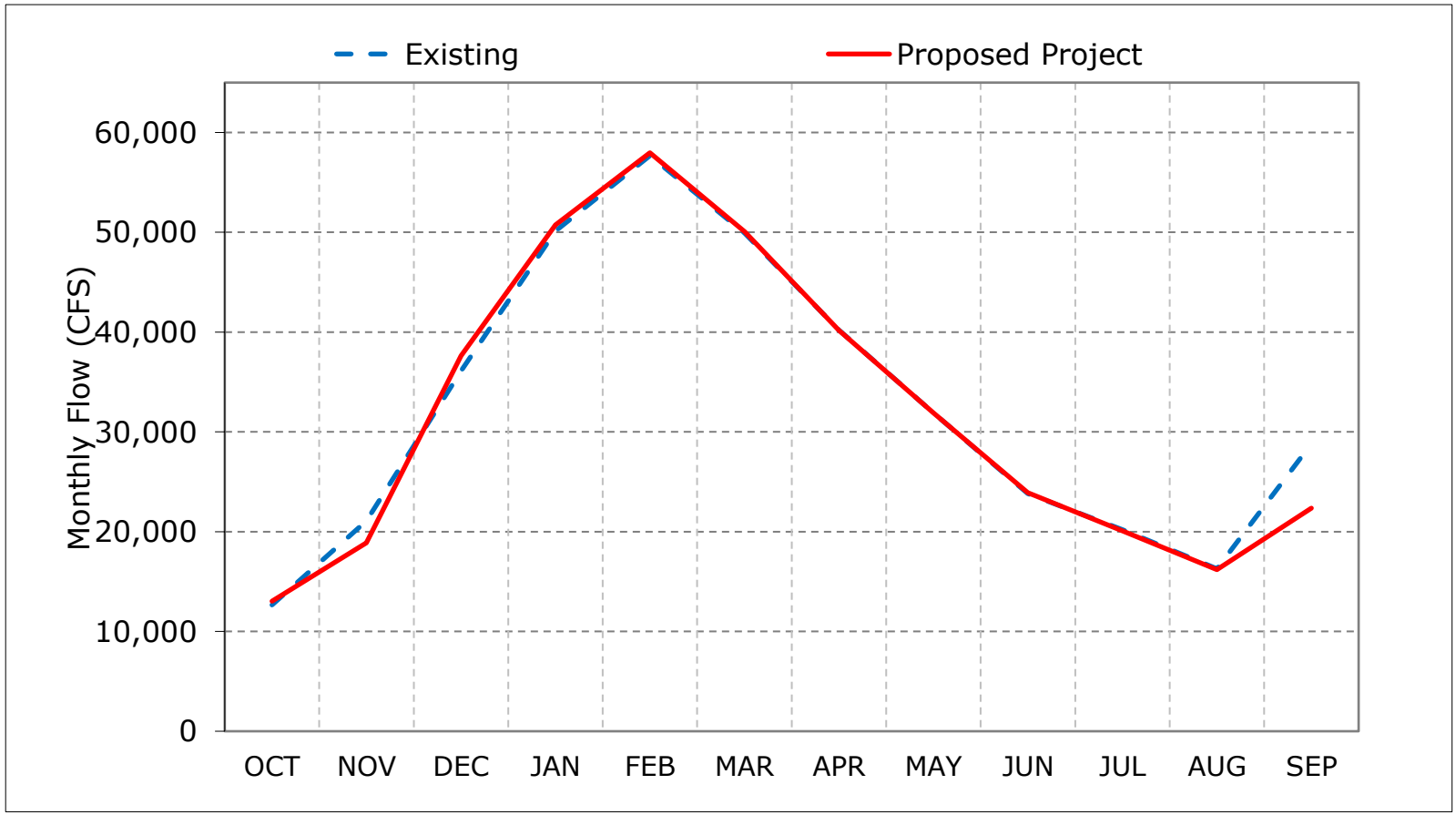
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

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



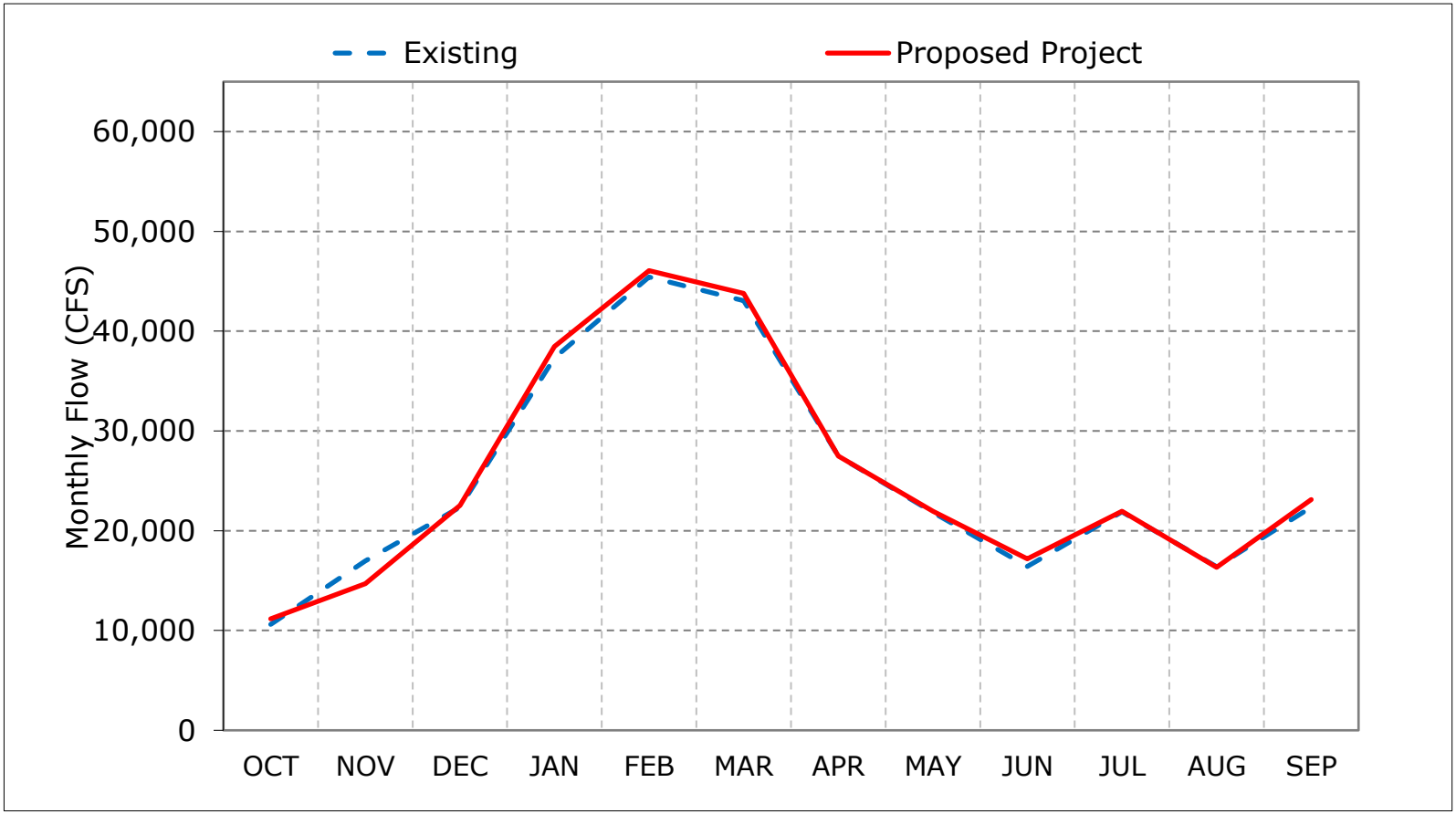
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



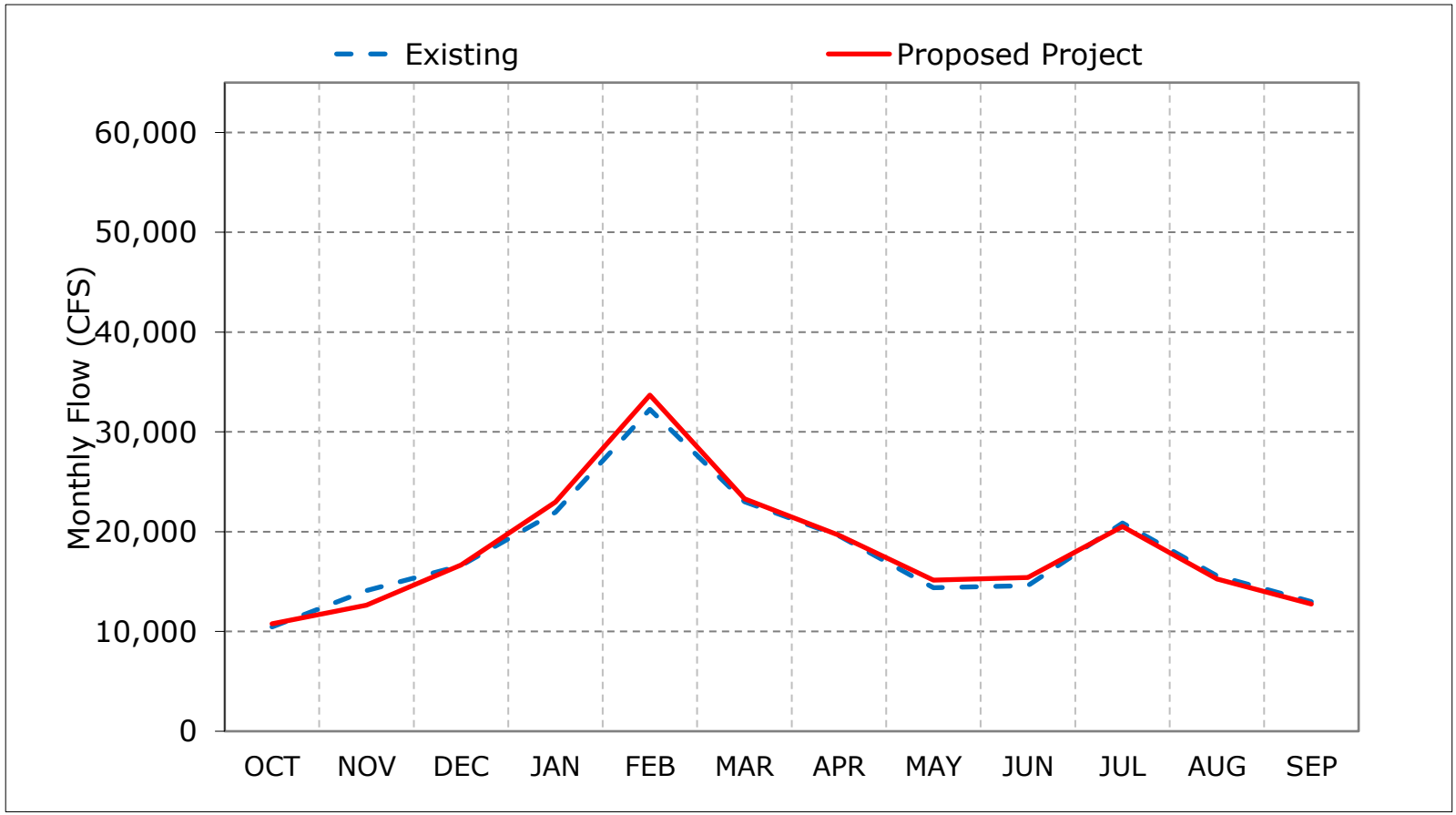
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



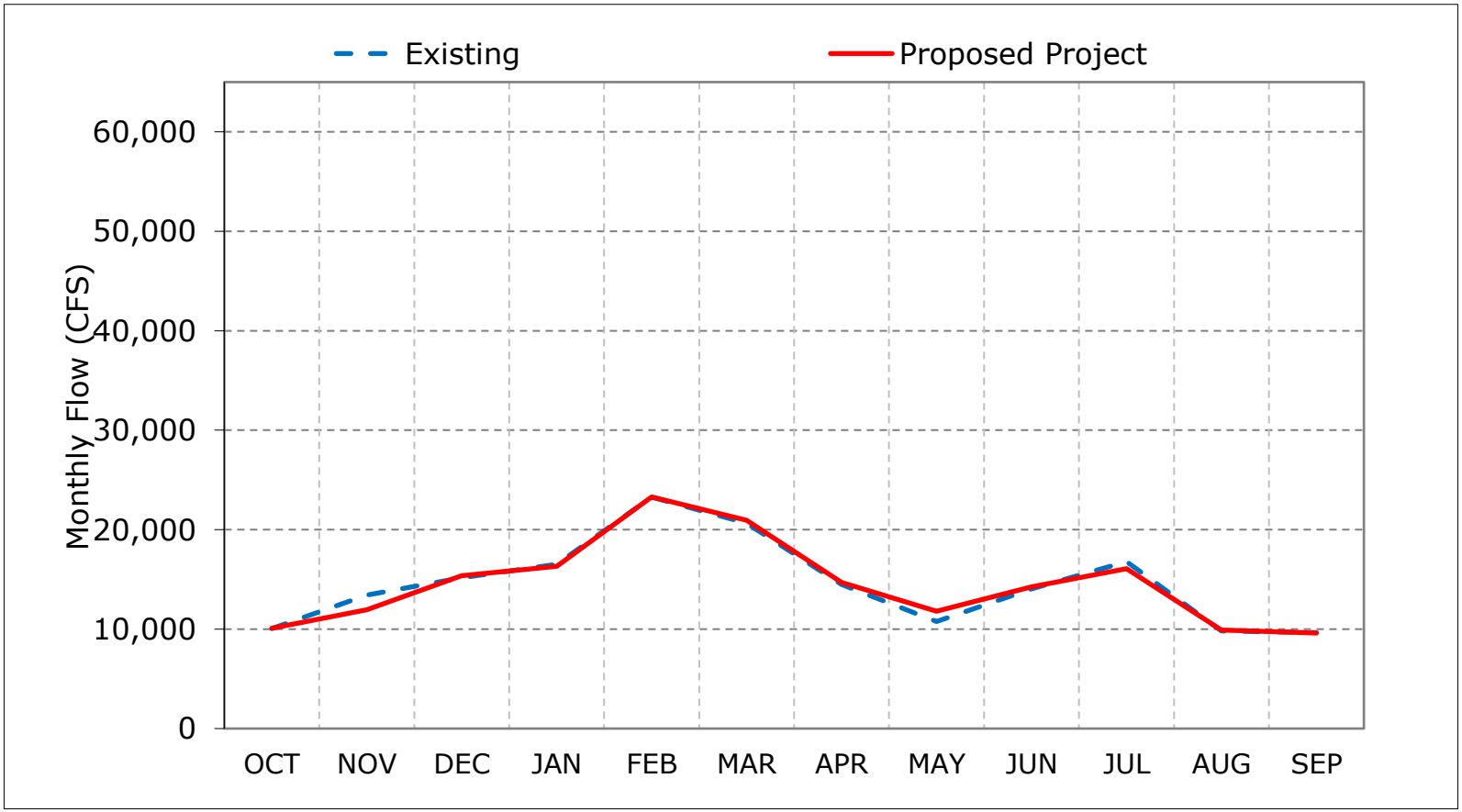
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



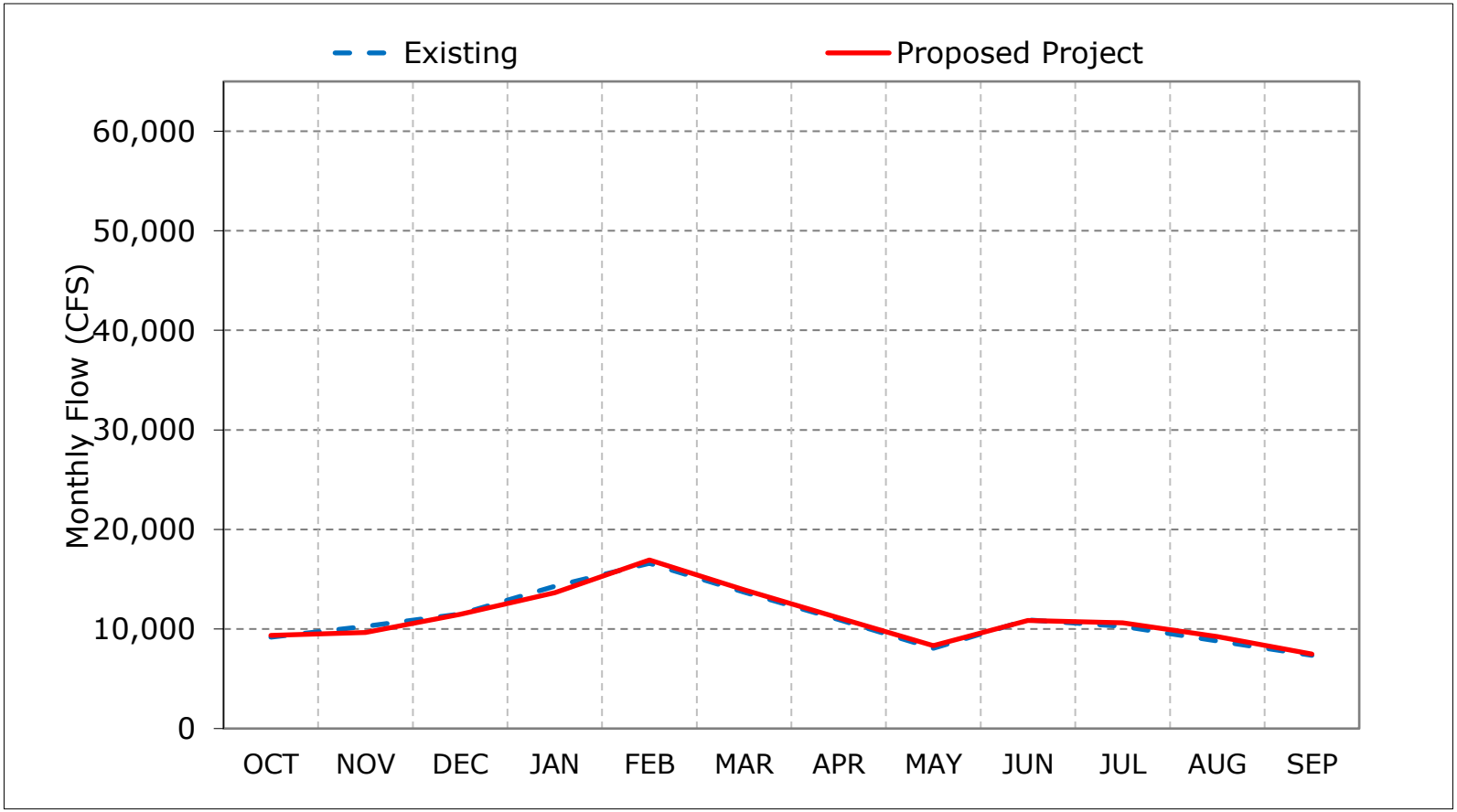
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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

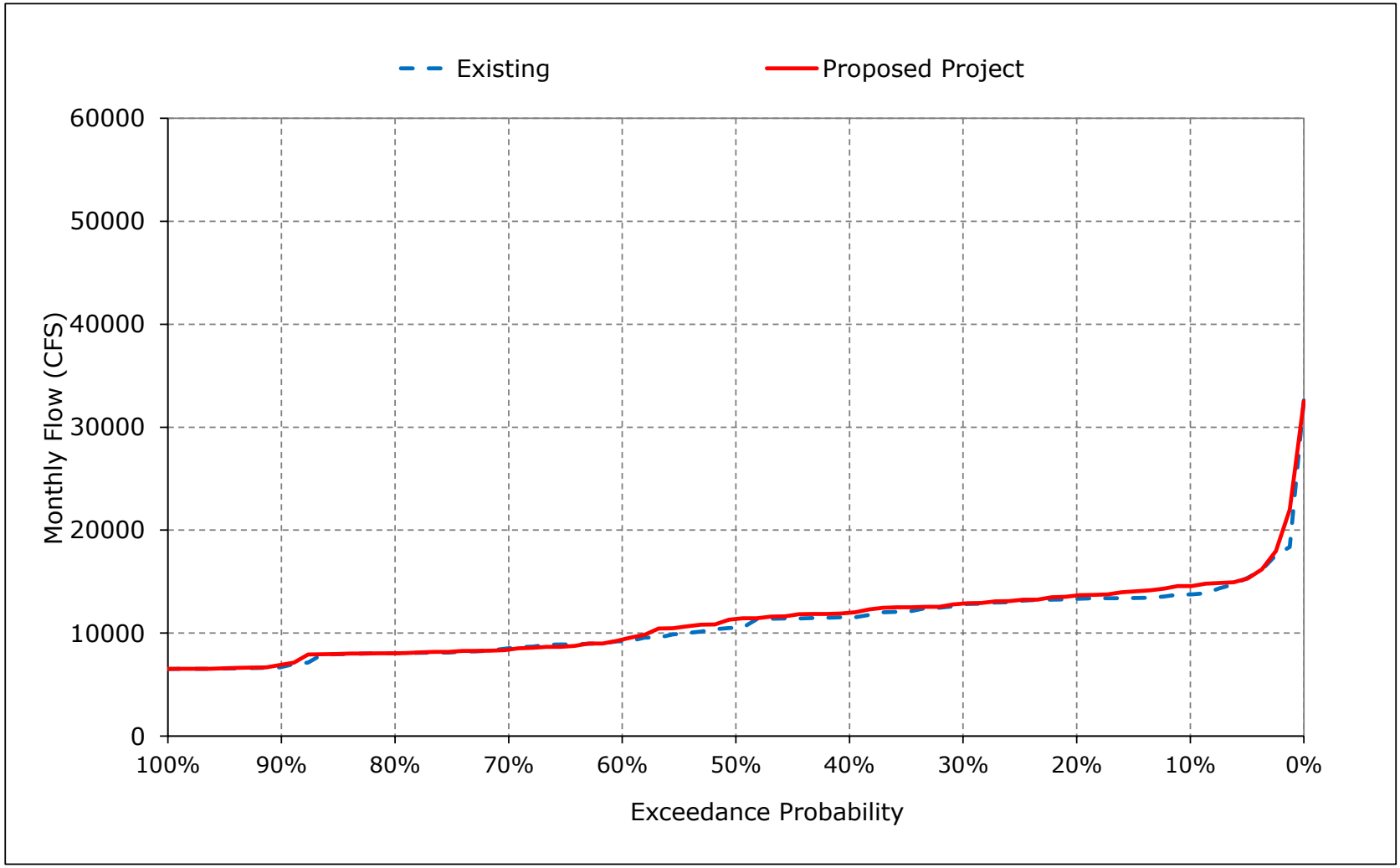


Figure 1-8. Sacramento River Flow at Freeport, November

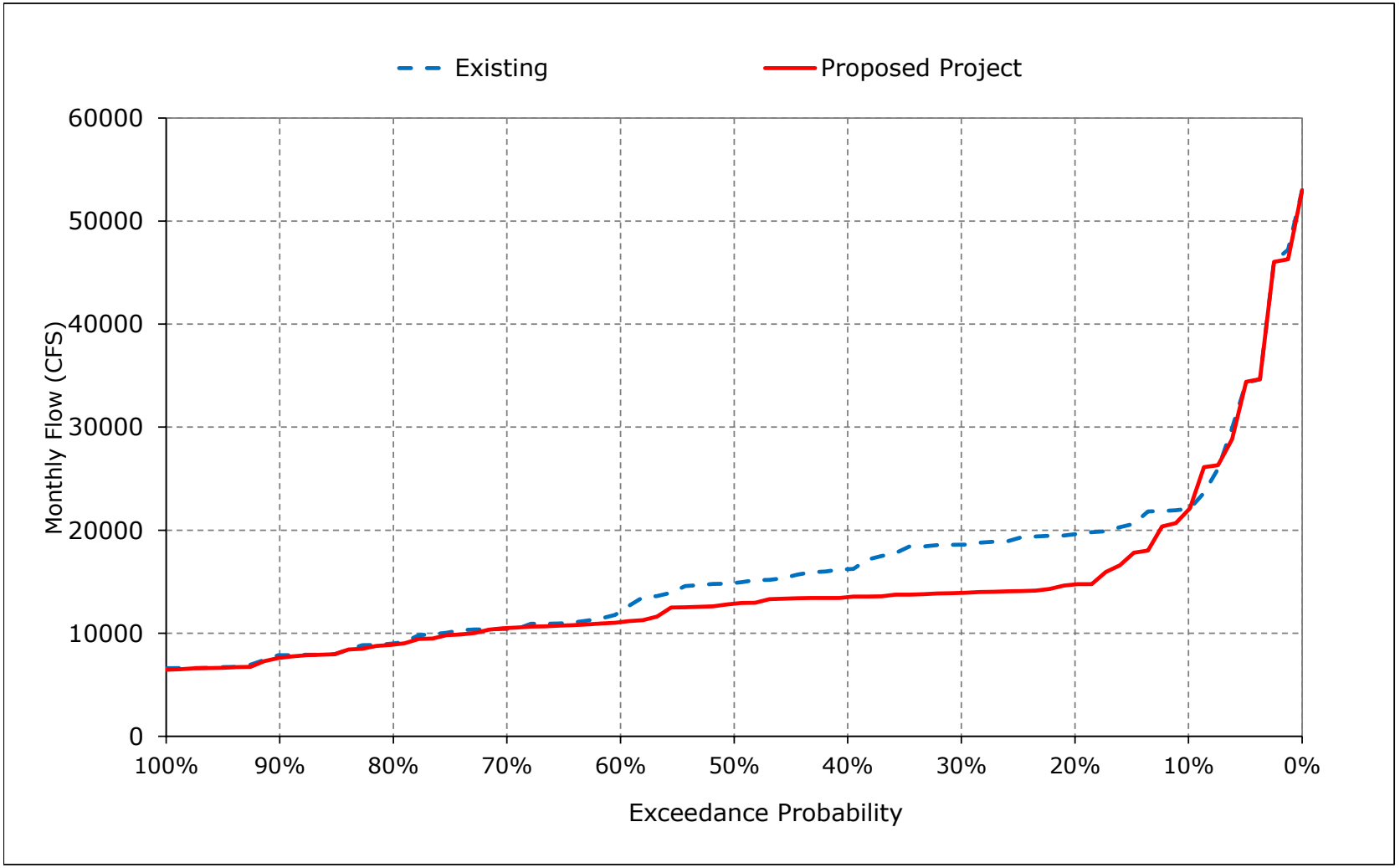


Figure 1-9. Sacramento River Flow at Freeport, December

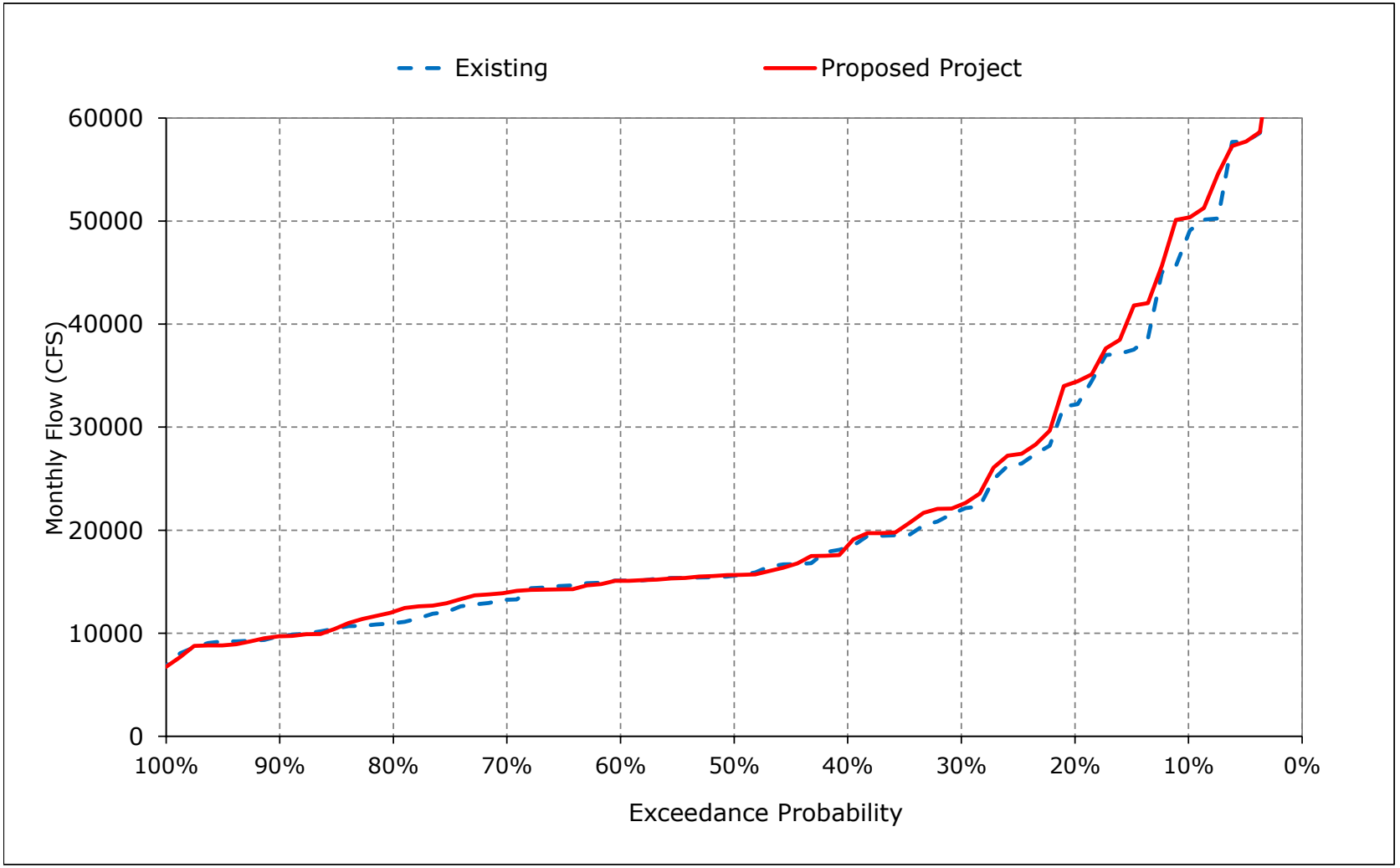


Figure 1-10. Sacramento River Flow at Freeport, January

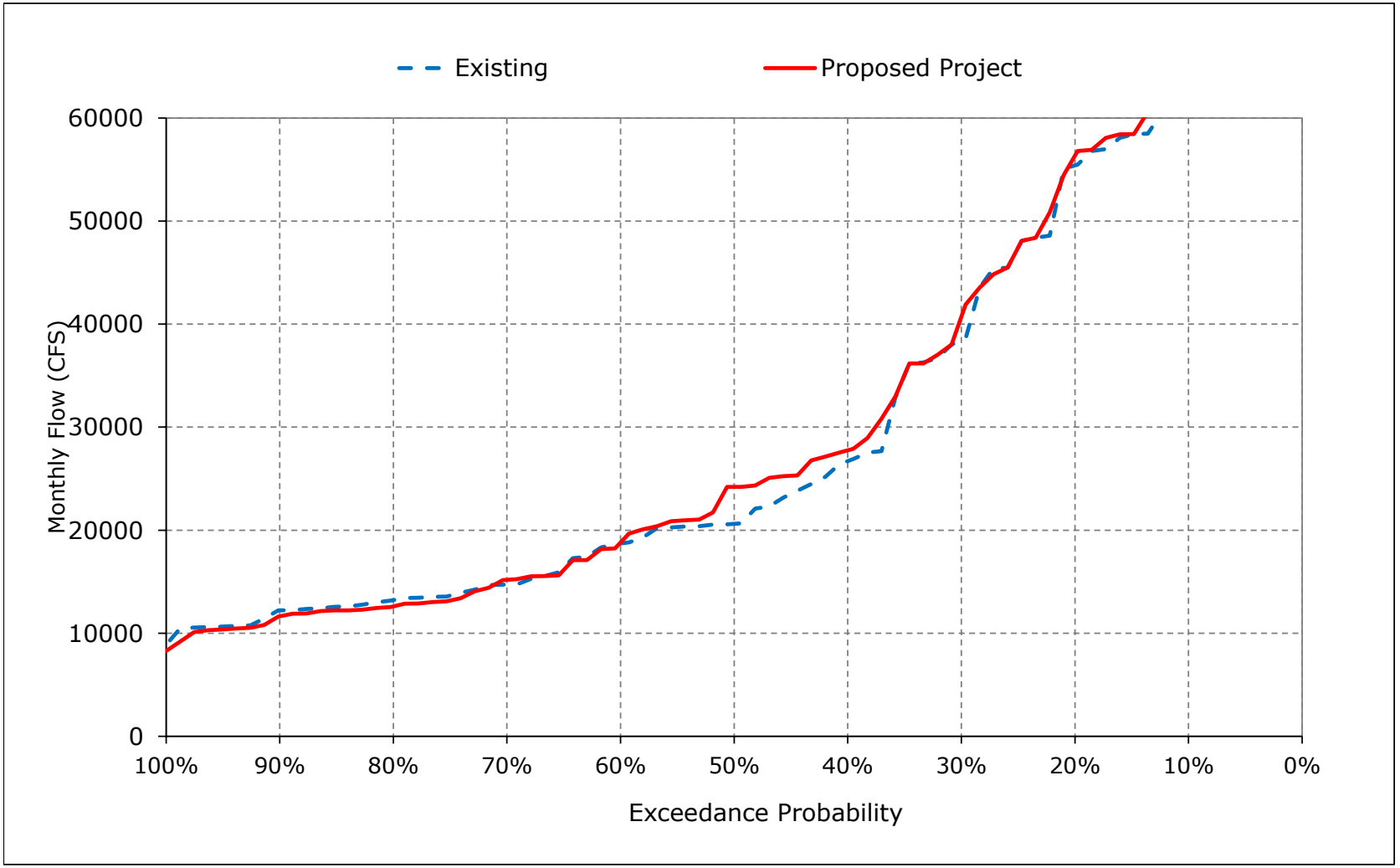


Figure 1-11. Sacramento River Flow at Freeport, February

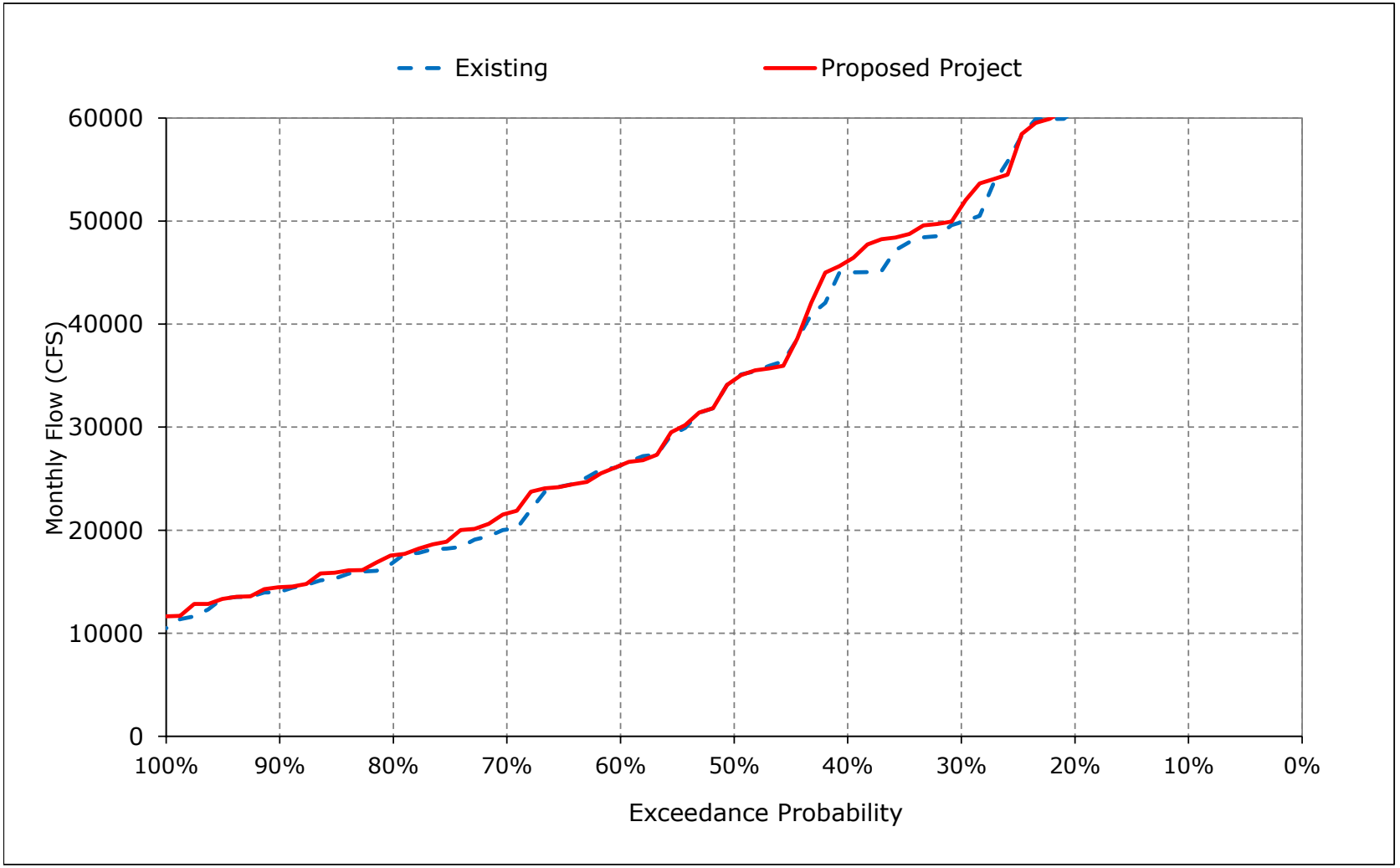


Figure 1-12. Sacramento River Flow at Freeport, March

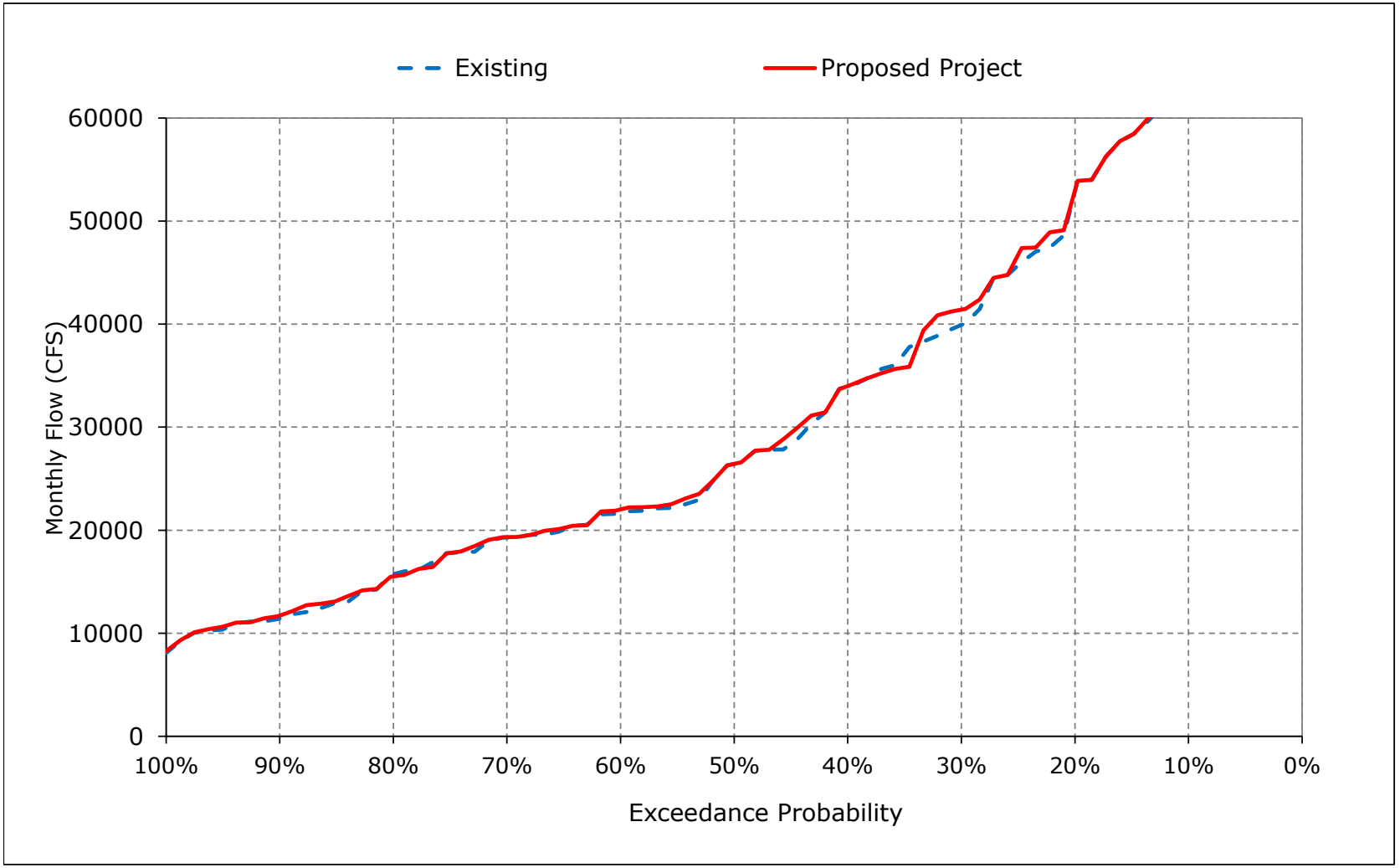


Figure 1-13. Sacramento River Flow at Freeport, April

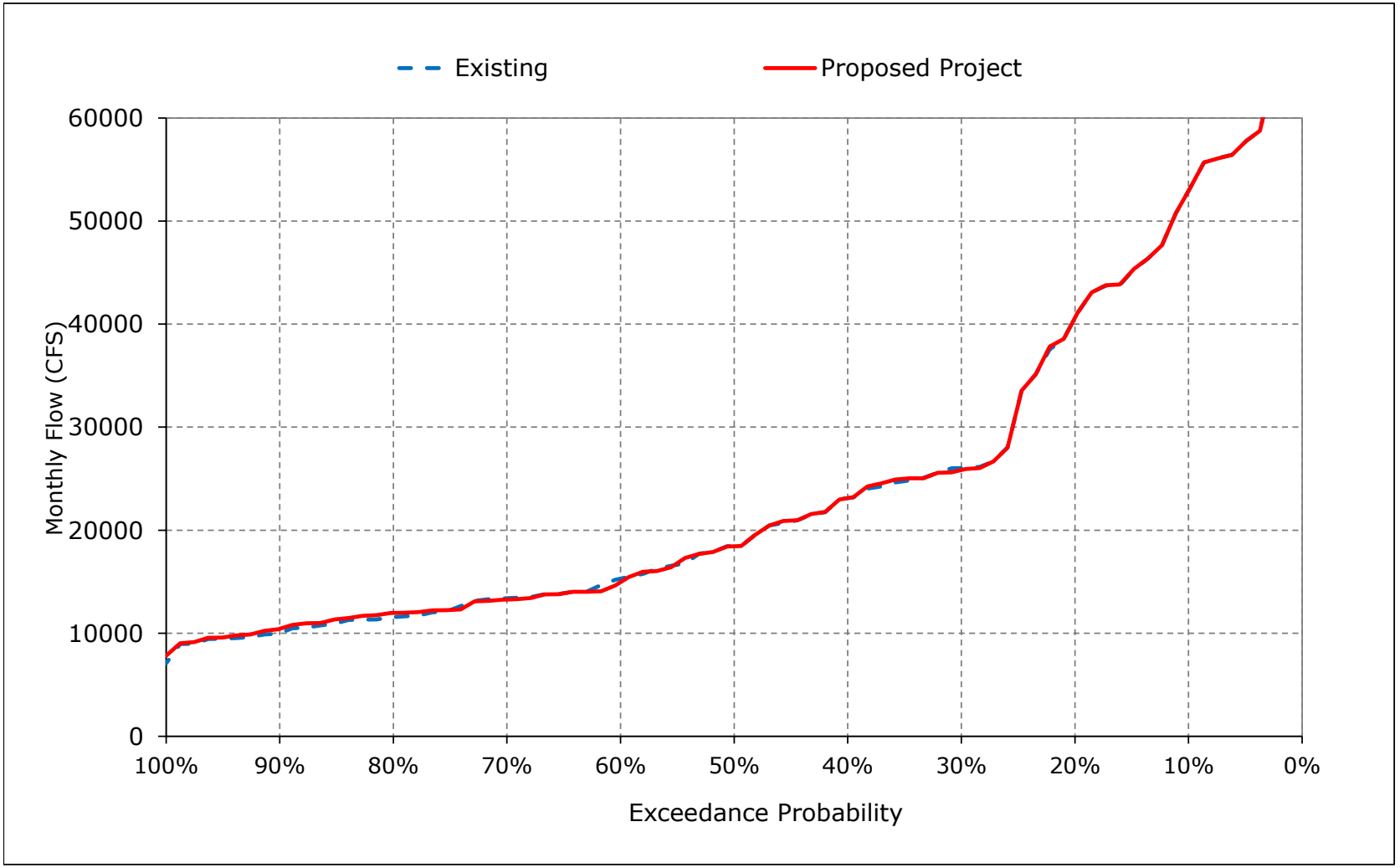


Figure 1-14. Sacramento River Flow at Freeport, May

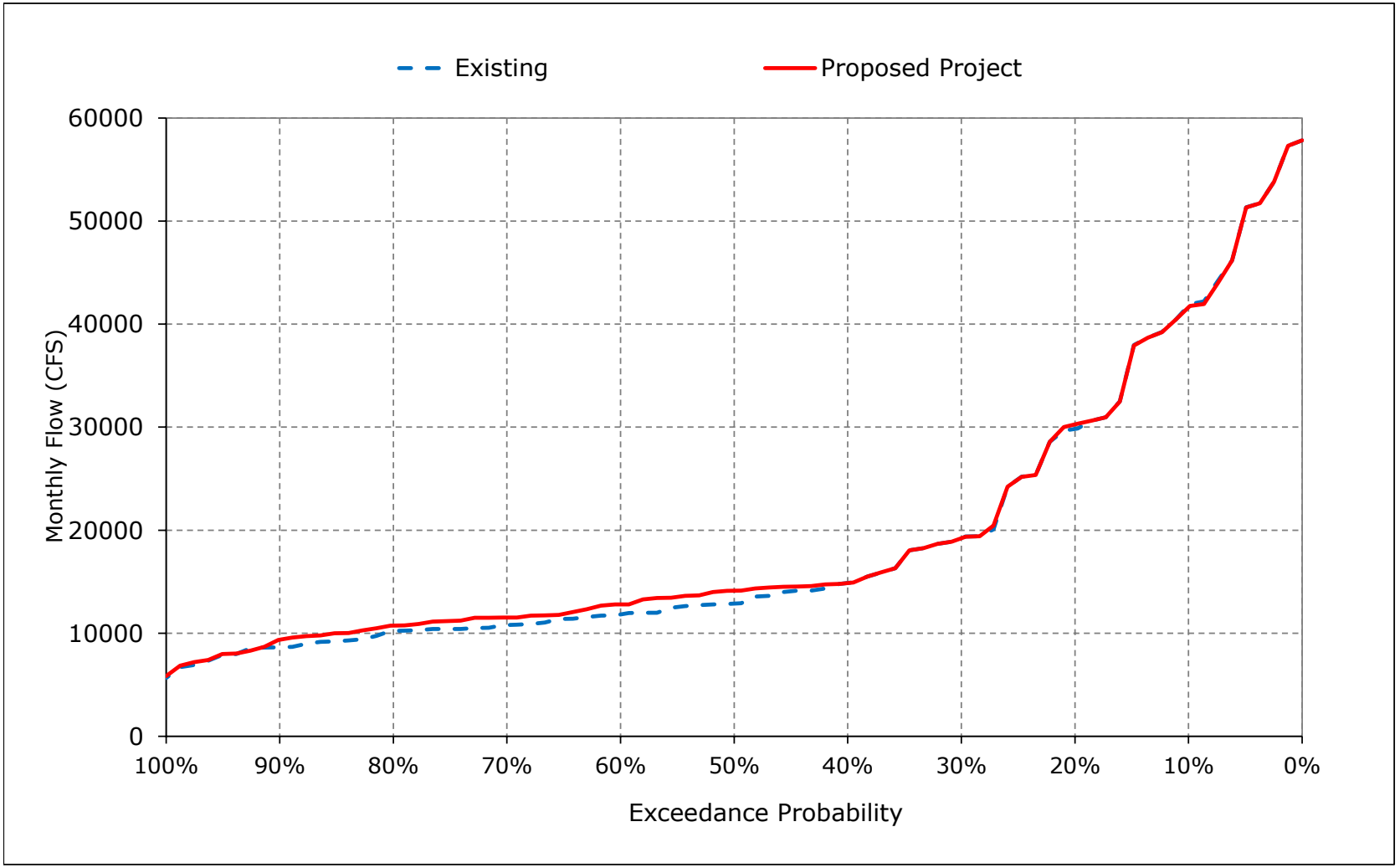


Figure 1-15. Sacramento River Flow at Freeport, June

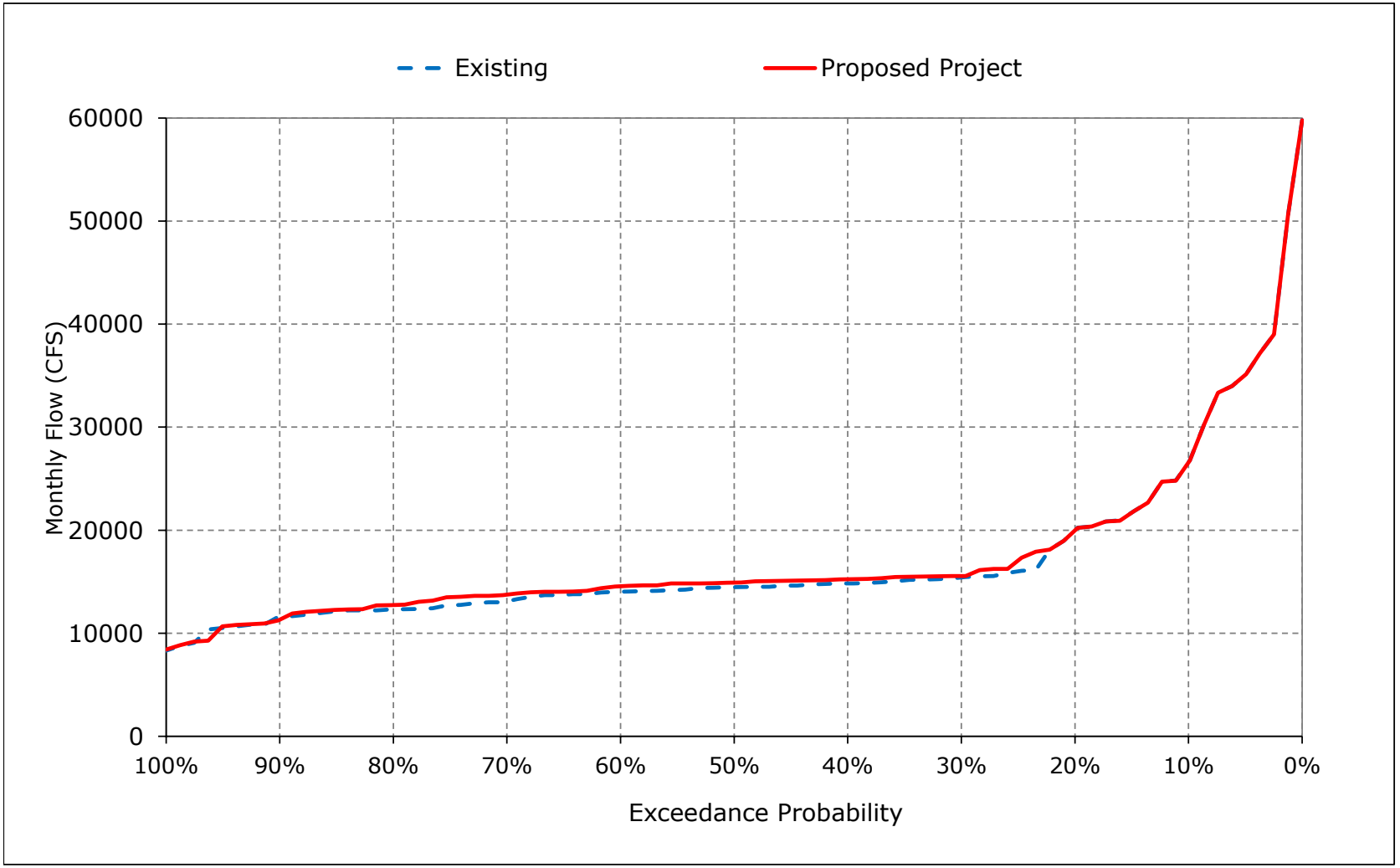


Figure 1-16. Sacramento River Flow at Freeport, July

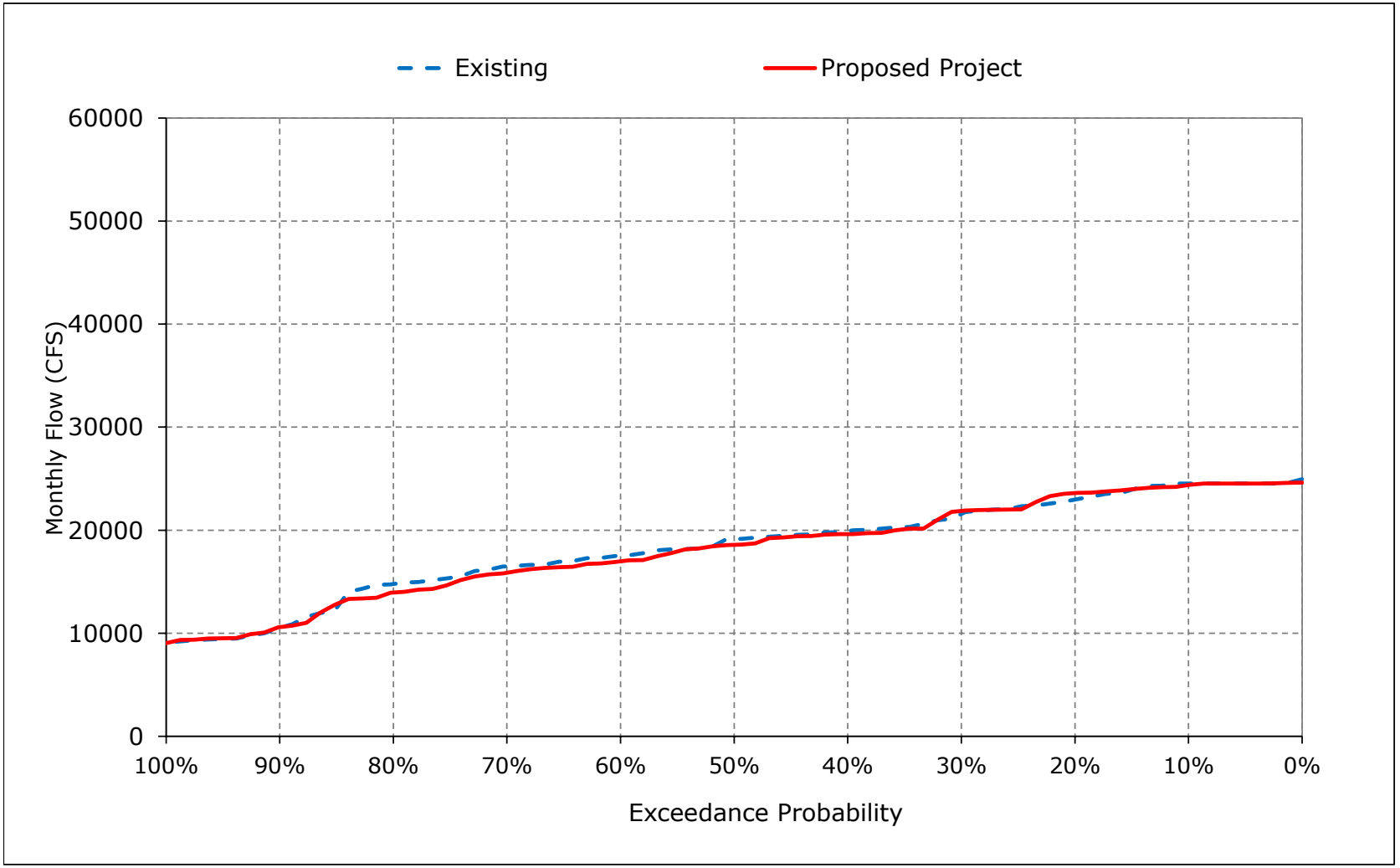


Figure 1-17. Sacramento River Flow at Freeport, August

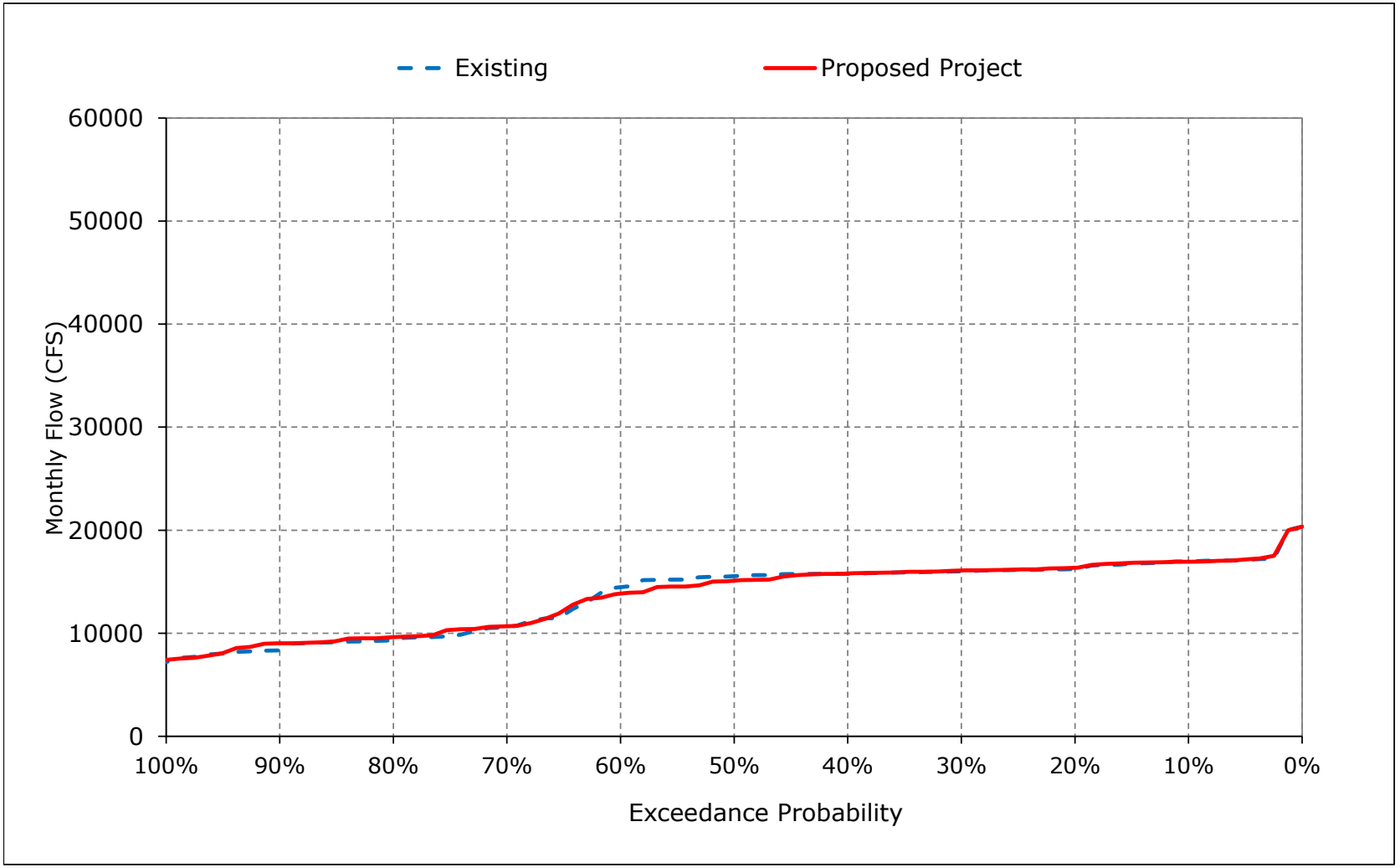


Figure 1-18. Sacramento River Flow at Freeport, September

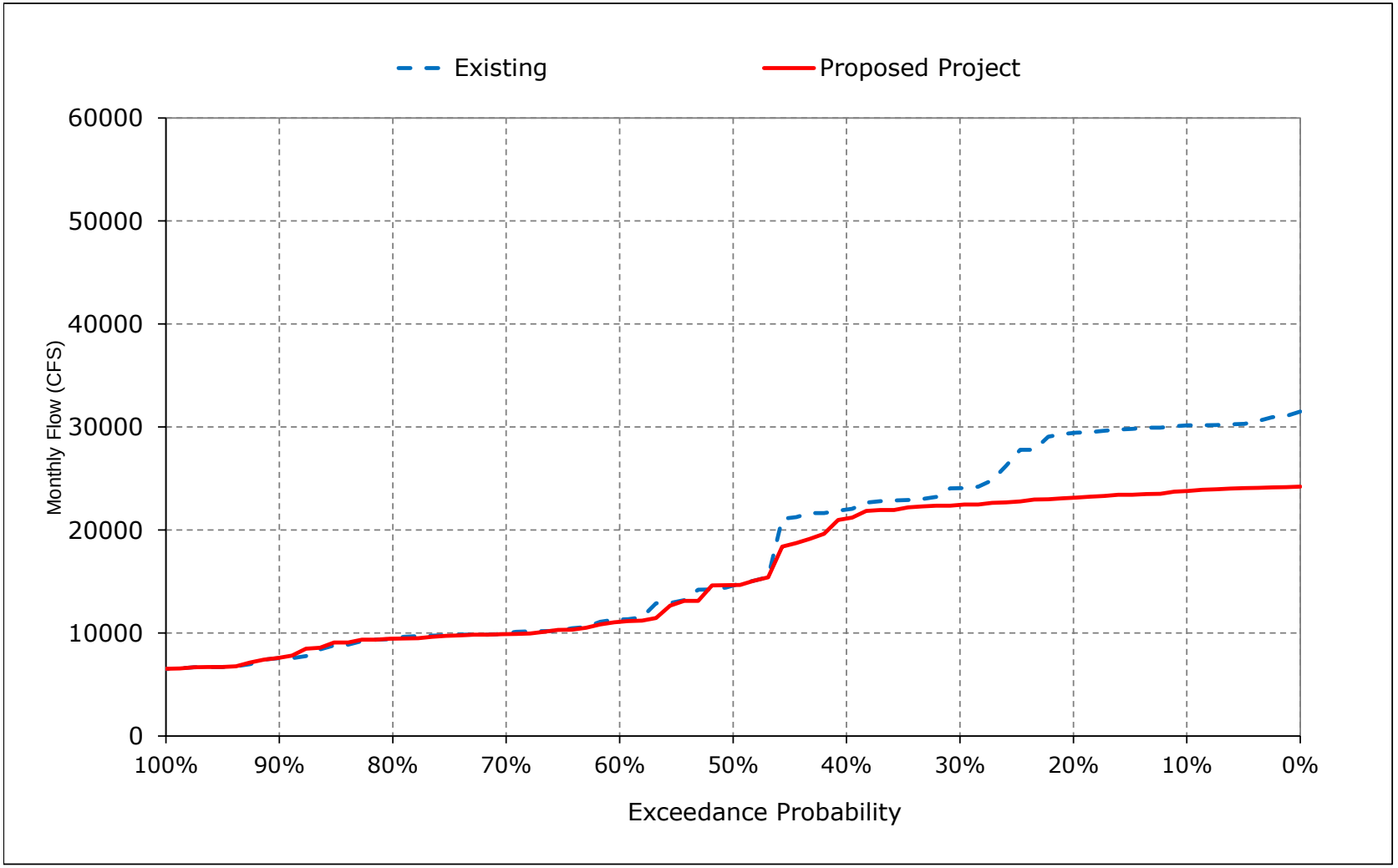


Table 2-1. Georgiana Slough, Monthly Flow

Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,894	4,016	7,532	9,442	10,171	9,326	8,070	6,594	4,577	4,298	3,309	5,056
20%	2,838	3,672	5,350	8,425	9,129	8,051	6,444	5,015	3,701	4,091	3,213	4,961
30%	2,761	3,549	3,984	6,172	7,686	6,360	4,518	3,610	3,093	3,908	3,181	4,254
40%	2,601	3,219	3,504	4,639	7,040	5,565	4,133	3,038	3,020	3,691	3,150	3,979
50%	2,467	3,047	3,144	3,834	5,668	4,581	3,519	2,772	2,970	3,588	3,122	3,004
60%	2,293	2,686	3,074	3,562	4,573	3,949	3,099	2,627	2,912	3,372	2,979	2,568
70%	2,203	2,455	2,835	3,037	3,735	3,629	2,844	2,491	2,789	3,236	2,469	2,395
80%	2,138	2,273	2,526	2,837	3,316	3,159	2,605	2,421	2,682	3,011	2,302	2,321
90%	1,960	2,118	2,364	2,700	2,935	2,586	2,397	2,213	2,592	2,441	2,176	2,071
Long Term												
Full Simulation Period[a]	2,516	3,197	4,067	5,171	6,112	5,389	4,366	3,621	3,321	3,483	2,872	3,428
Water Year Types[b,c]												
Wet (32%)	2,749	3,866	5,862	7,729	8,718	7,680	6,391	5,287	4,208	3,727	3,217	4,881
Above Normal (15%)	2,478	3,324	4,042	6,036	7,102	6,770	4,710	3,958	3,229	3,949	3,235	4,029
Below Normal (17%)	2,457	2,943	3,277	3,997	5,357	4,119	3,663	2,967	2,986	3,815	3,124	2,789
Dry (22%)	2,403	2,852	3,084	3,275	4,164	3,812	2,991	2,492	2,913	3,274	2,363	2,349
Critical (15%)	2,290	2,434	2,598	2,978	3,277	2,890	2,521	2,133	2,497	2,411	2,232	2,046

Proposed Project

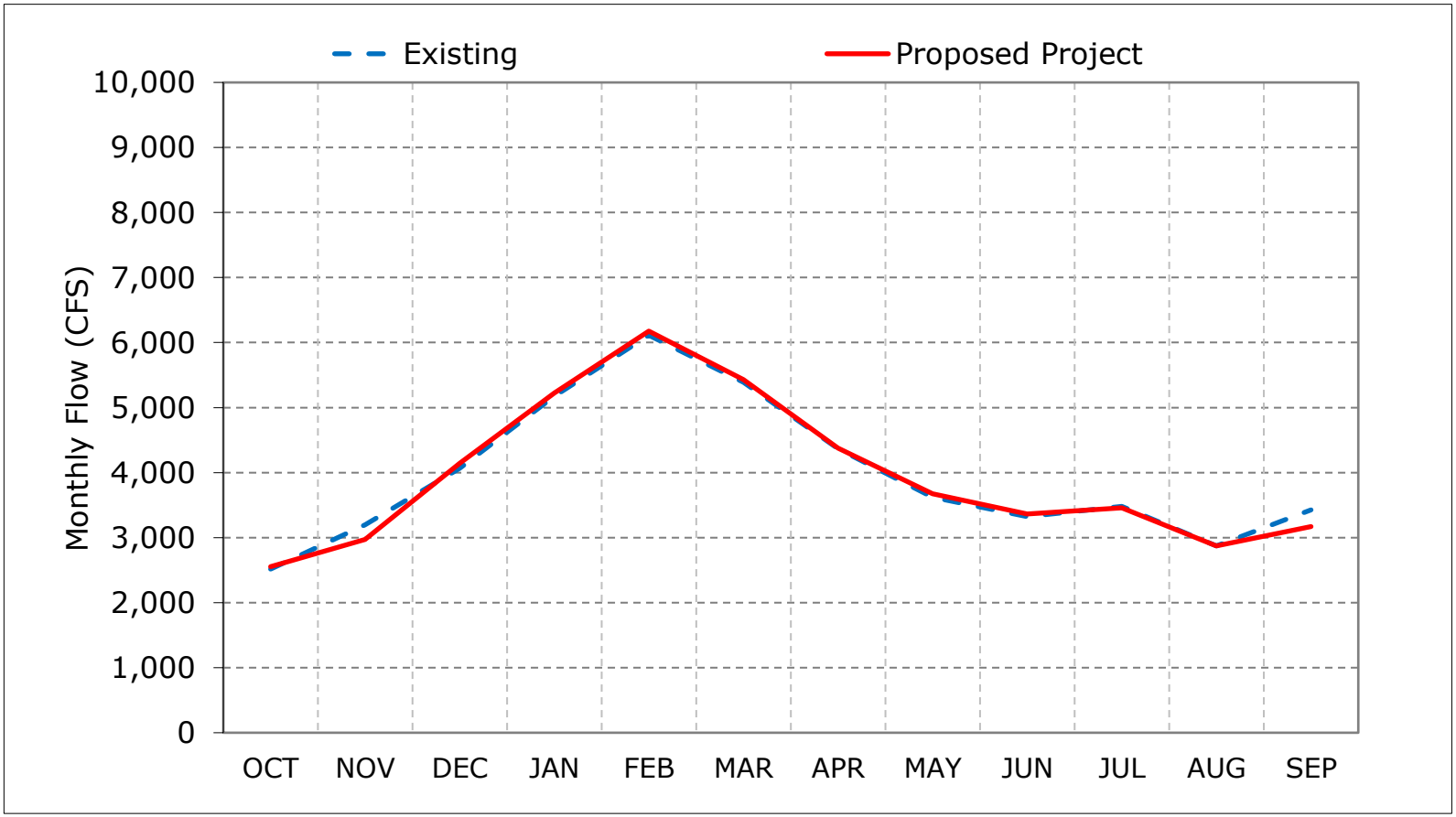
Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,002	3,991	7,766	9,530	10,186	9,374	8,070	6,579	4,576	4,278	3,307	4,215
20%	2,882	3,024	5,622	8,537	9,149	8,065	6,446	5,074	3,701	4,175	3,227	4,130
30%	2,775	2,924	4,064	6,478	7,882	6,554	4,494	3,610	3,113	3,947	3,193	4,038
40%	2,658	2,861	3,547	4,764	7,186	5,573	4,132	3,037	3,071	3,650	3,154	3,863
50%	2,576	2,780	3,151	4,298	5,663	4,580	3,517	2,936	3,029	3,512	3,062	3,011
60%	2,317	2,546	3,072	3,578	4,574	3,993	3,054	2,761	2,985	3,298	2,897	2,539
70%	2,184	2,472	2,920	3,092	3,943	3,634	2,829	2,590	2,874	3,156	2,482	2,382
80%	2,138	2,253	2,674	2,757	3,408	3,128	2,657	2,487	2,739	2,900	2,340	2,325
90%	1,993	2,083	2,361	2,628	2,995	2,628	2,450	2,303	2,554	2,451	2,260	2,078
Long Term												
Full Simulation Period[a]	2,554	2,974	4,142	5,223	6,176	5,429	4,375	3,675	3,362	3,456	2,871	3,168
Water Year Types[b,c]												
Wet (32%)	2,798	3,580	6,062	7,811	8,757	7,699	6,387	5,286	4,219	3,710	3,206	4,028
Above Normal (15%)	2,552	3,023	4,066	6,186	7,187	6,867	4,709	3,971	3,327	3,959	3,225	4,127
Below Normal (17%)	2,498	2,748	3,287	4,130	5,546	4,160	3,671	3,069	3,095	3,767	3,084	2,758
Dry (22%)	2,406	2,658	3,115	3,248	4,167	3,850	3,016	2,628	2,938	3,181	2,377	2,343
Critical (15%)	2,310	2,352	2,593	2,891	3,321	2,921	2,544	2,166	2,488	2,456	2,287	2,063

Proposed Project minus Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	108	**-25**	234	88	15	47	**0**	**-15**	**-2**	**-20**	**-2**	**-841**
20%	44	**-648**	272	113	20	14	1	58	**0**	84	14	**-831**
30%	15	**-625**	80	306	196	194	**-24**	**0**	21	38	12	**-216**
40%	58	**-358**	42	125	146	7	**0**	**-1**	52	**-41**	4	**-116**
50%	110	**-267**	7	465	**-5**	**-1**	**-2**	163	60	**-76**	**-60**	7
60%	24	**-140**	**-2**	16	1	44	**-44**	135	73	**-74**	**-82**	**-29**
70%	**-19**	18	85	56	208	5	**-15**	98	85	**-80**	14	**-13**
80%	0	**-20**	148	**-80**	92	**-31**	52	66	58	**-111**	38	4
90%	33	**-35**	**-3**	**-73**	61	42	52	90	**-38**	10	84	7
Long Term												
Full Simulation Period[a]	37	**-223**	75	52	64	40	9	54	41	**-26**	**-1**	**-260**
Water Year Types[b,c]												
Wet (32%)	50	**-287**	200	81	39	19	**-4**	**-1**	11	**-18**	**-11**	**-853**
Above Normal (15%)	73	**-301**	24	150	85	97	**-1**	13	98	9	**-10**	99
Below Normal (17%)	42	**-195**	9	132	189	40	7	102	110	**-48**	**-40**	**-32**
Dry (22%)	3	**-194**	30	**-27**	3	38	25	136	25	**-93**	13	**-5**
Critical (15%)	21	**-82**	**-4**	**-87**	44	31	24	33	**-9**	45	55	17

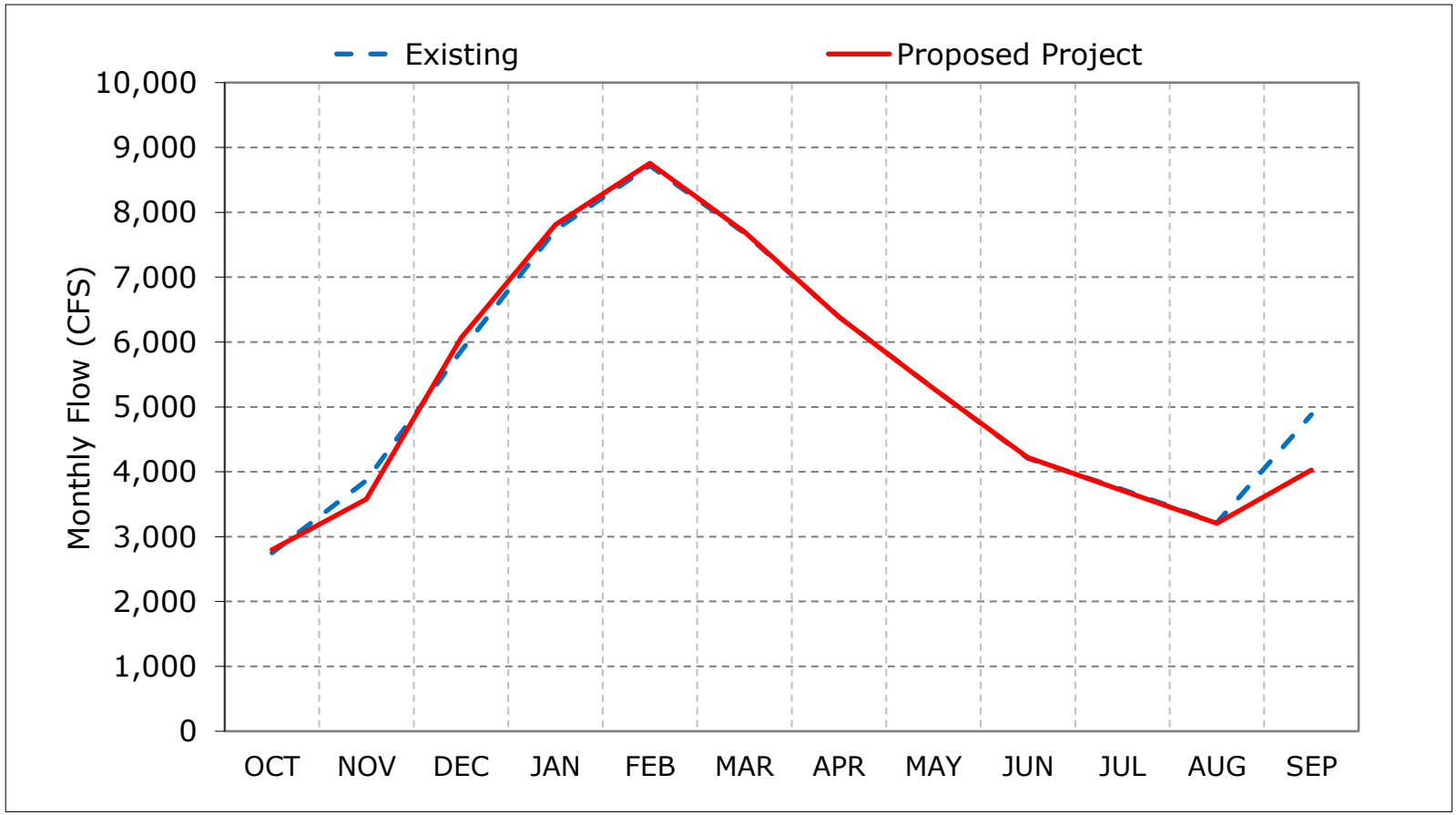
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

Figure 2-1. Georgiana Slough, Long-Term Average Flow



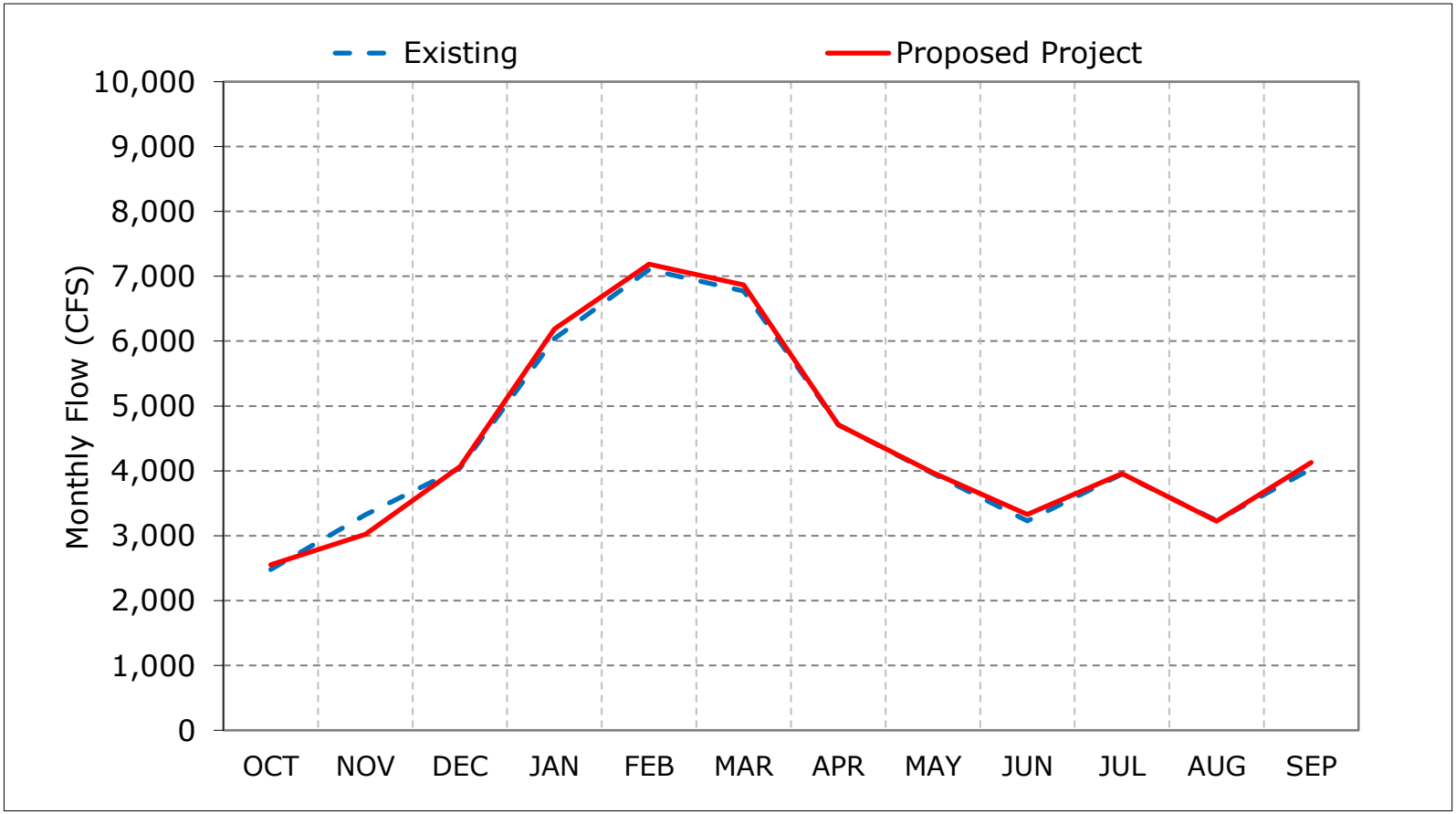
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 2-2. Georgiana Slough, Wet Year Average Flow



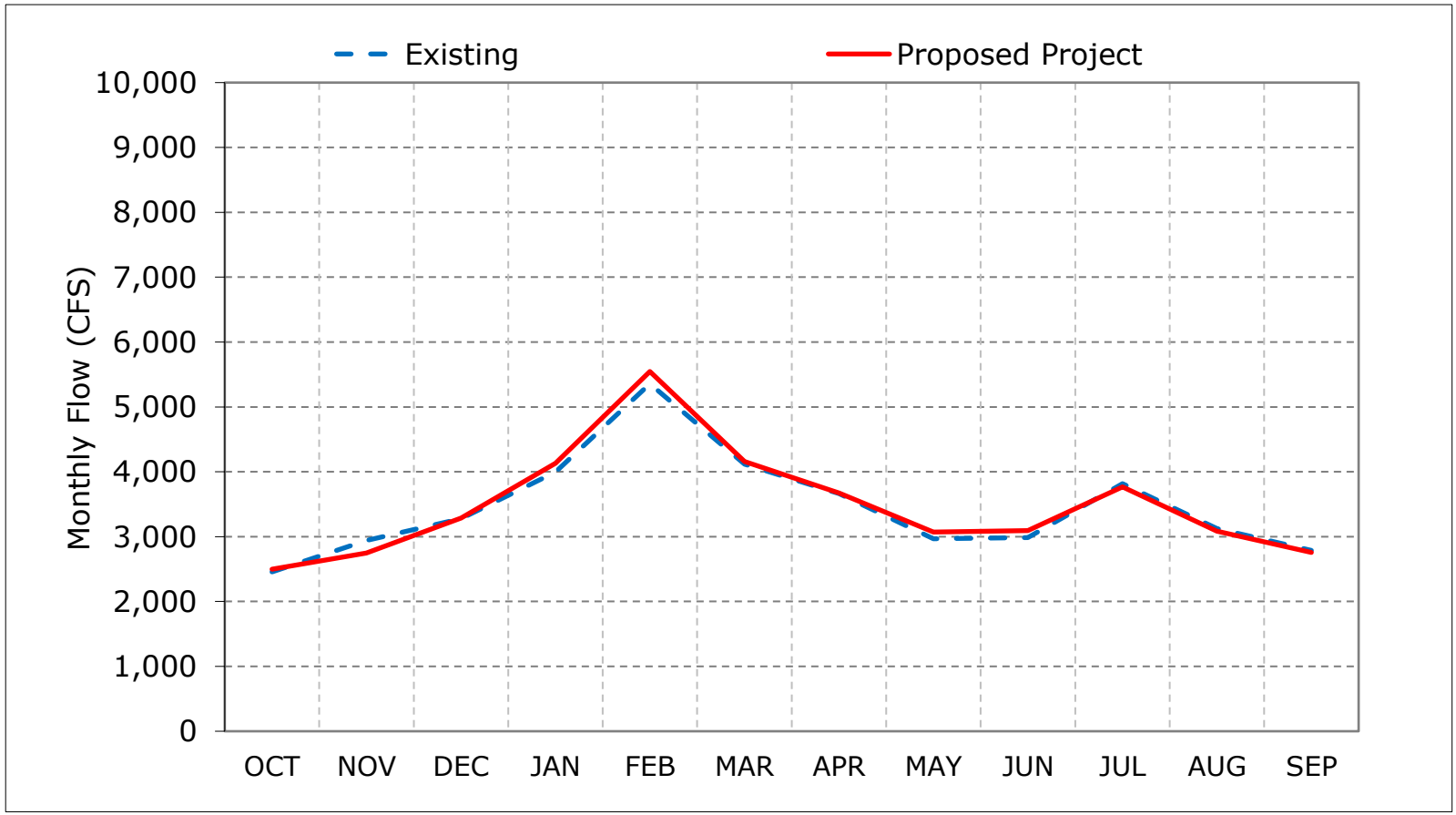
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



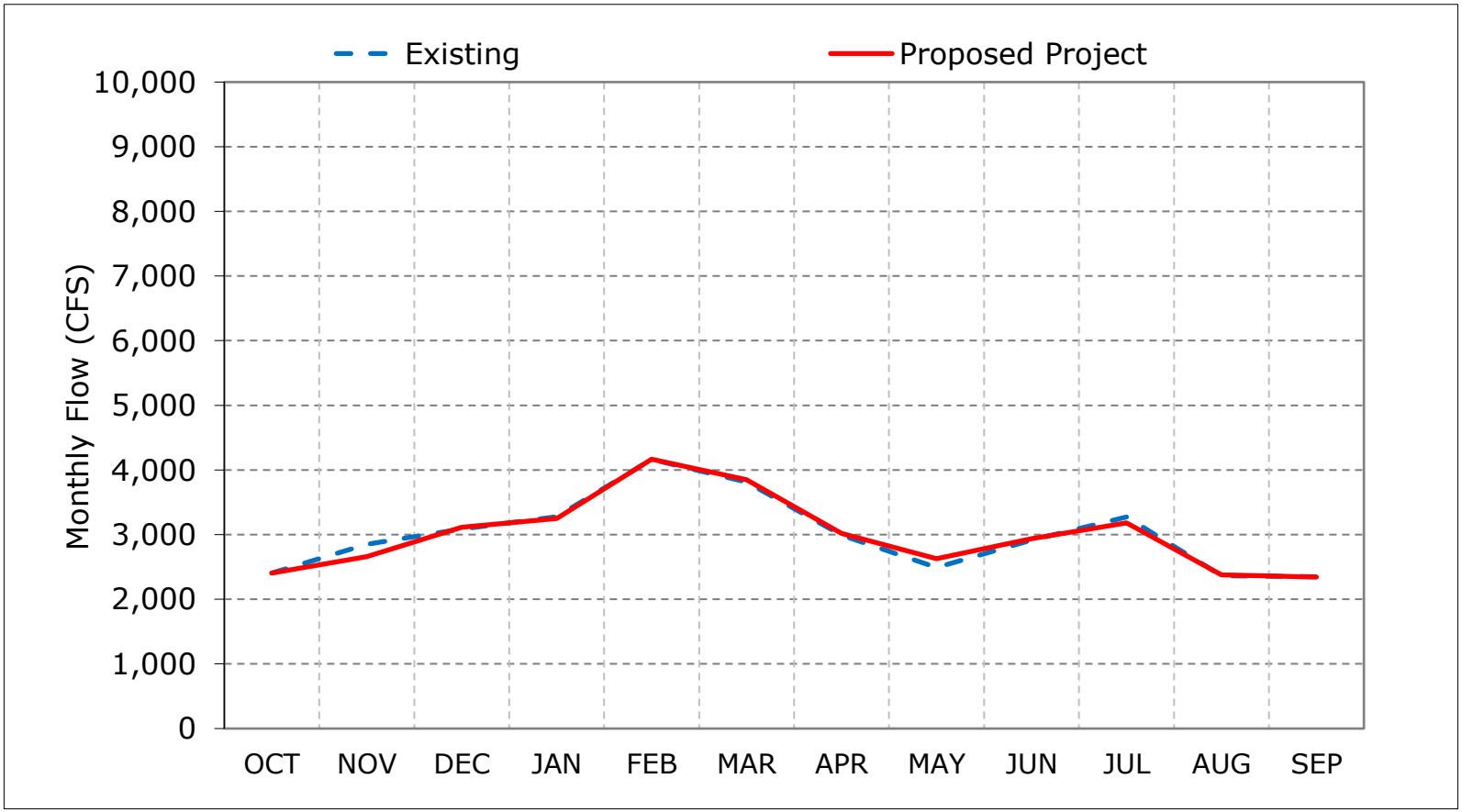
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



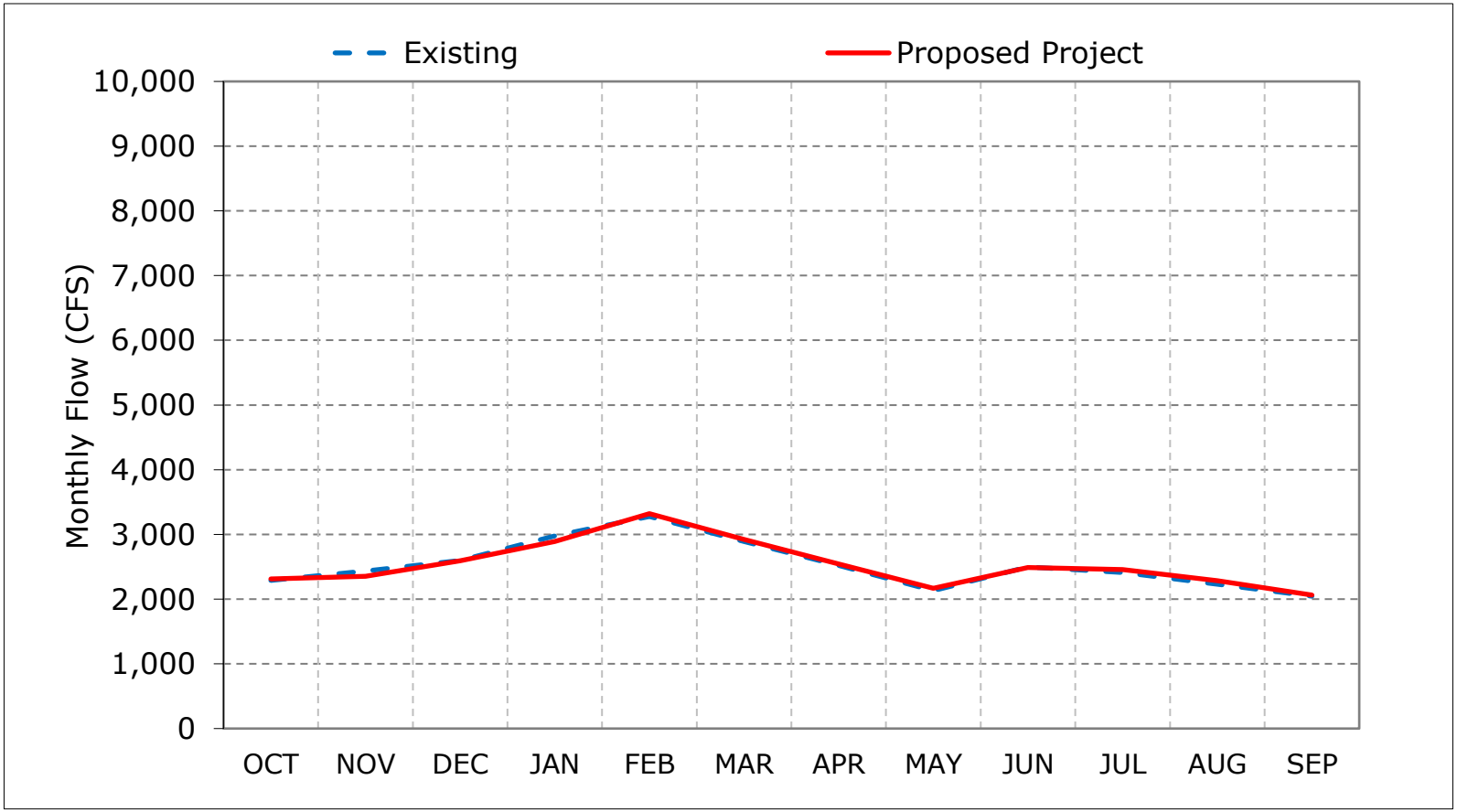
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 2-5. Georgiana Slough, Dry Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 2-6. Georgiana Slough, Critical Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 2-7. Georgiana Slough, October

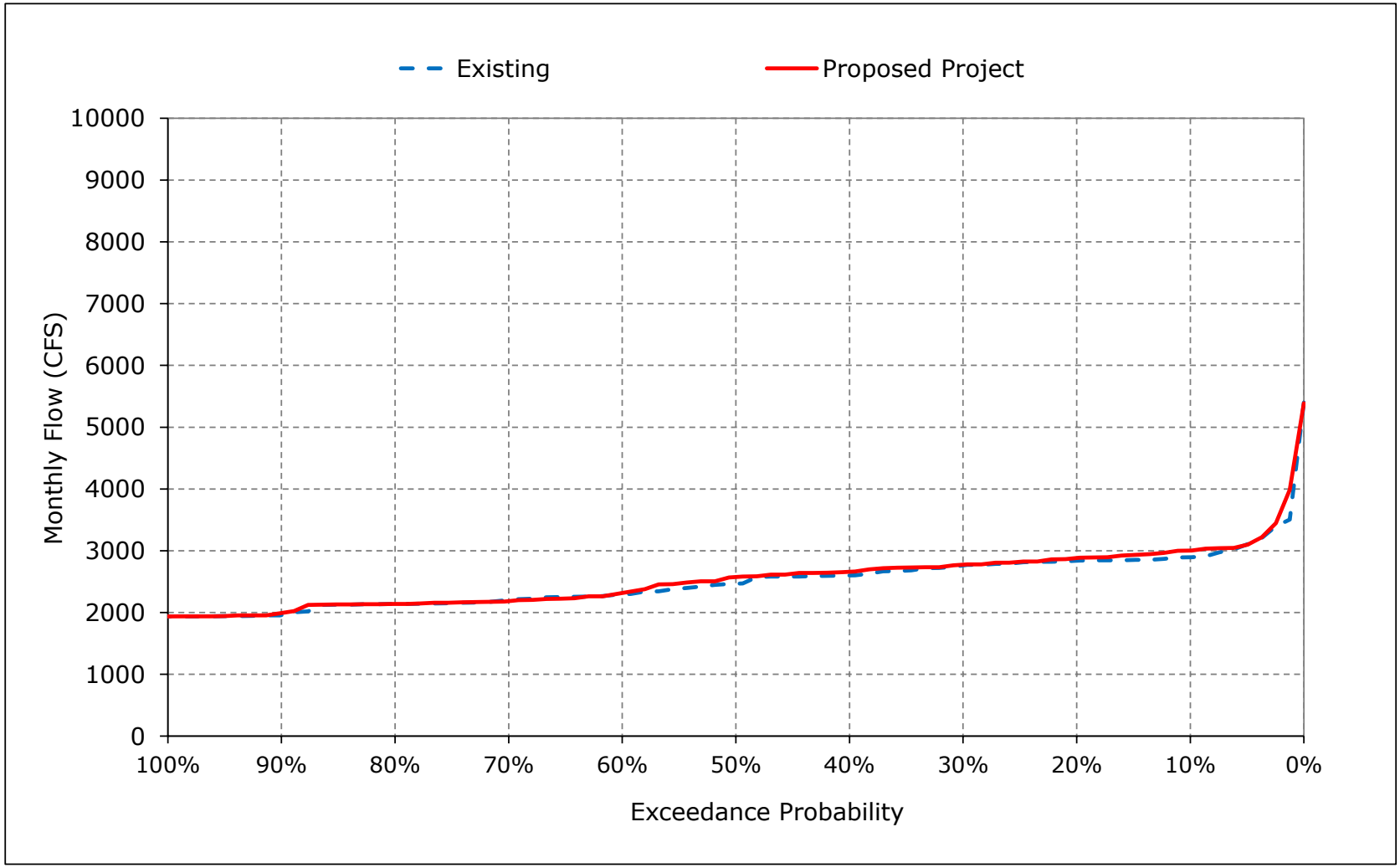


Figure 2-8. Georgiana Slough, November

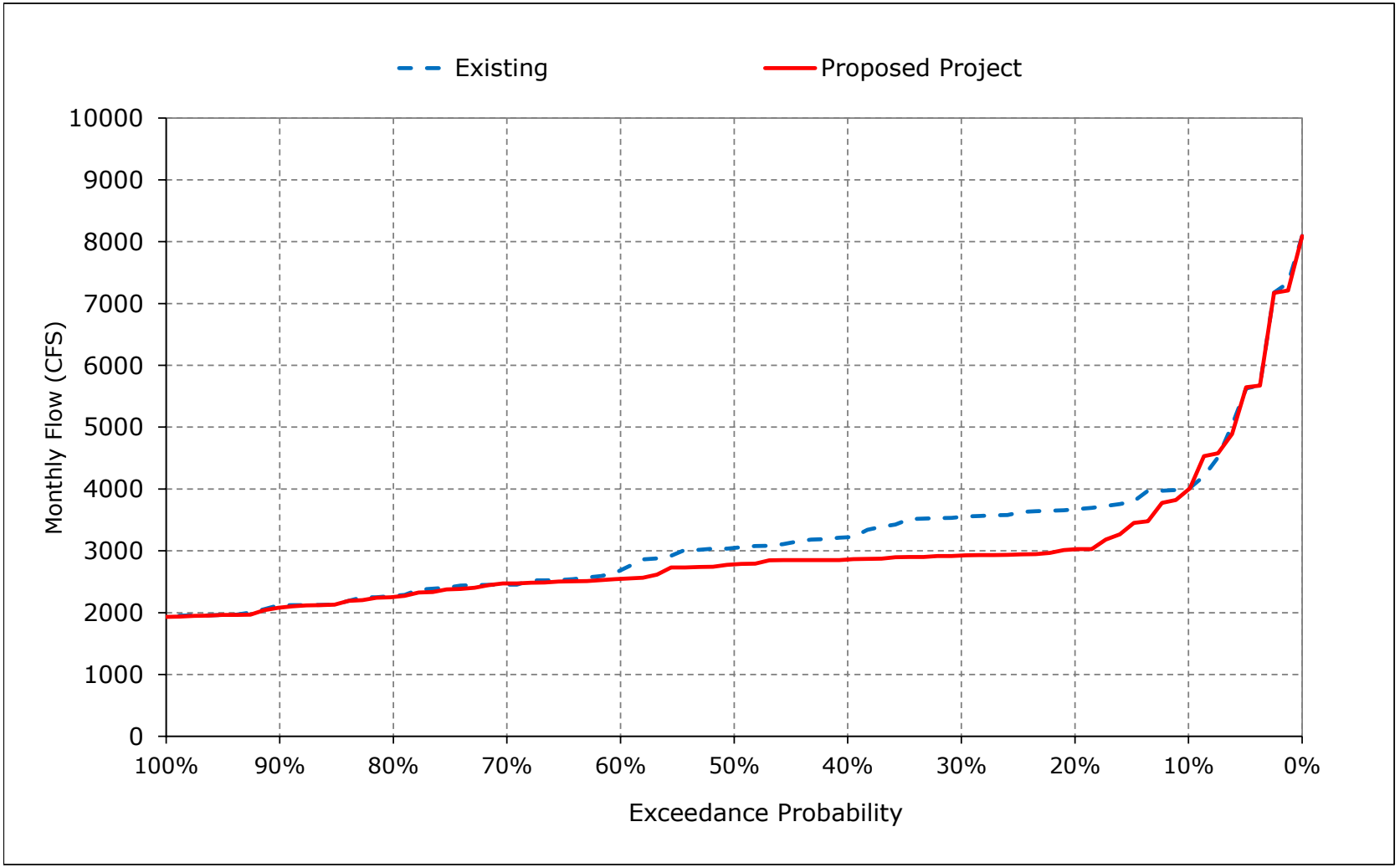


Figure 2-9. Georgiana Slough, December

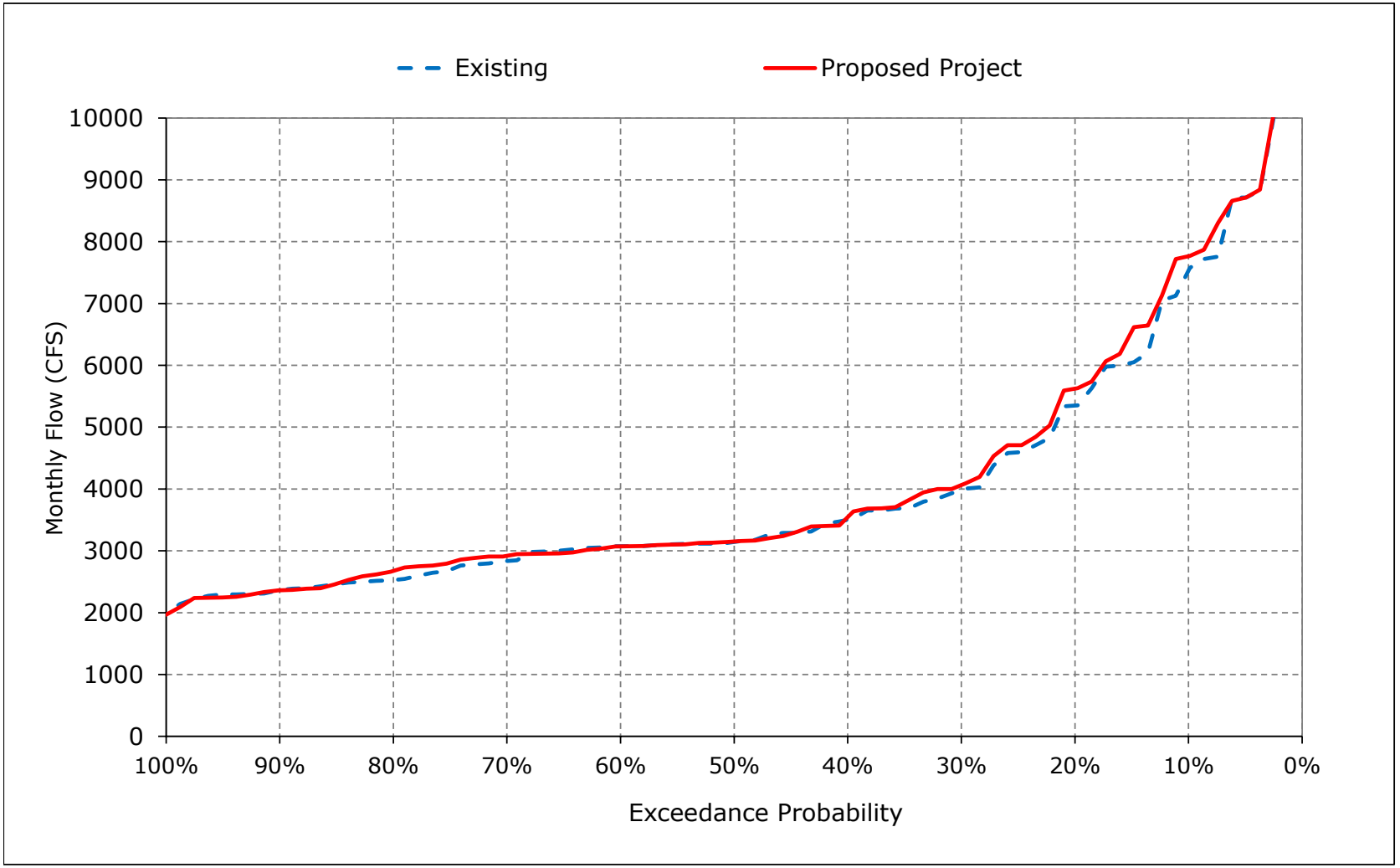


Figure 2-10. Georgiana Slough, January

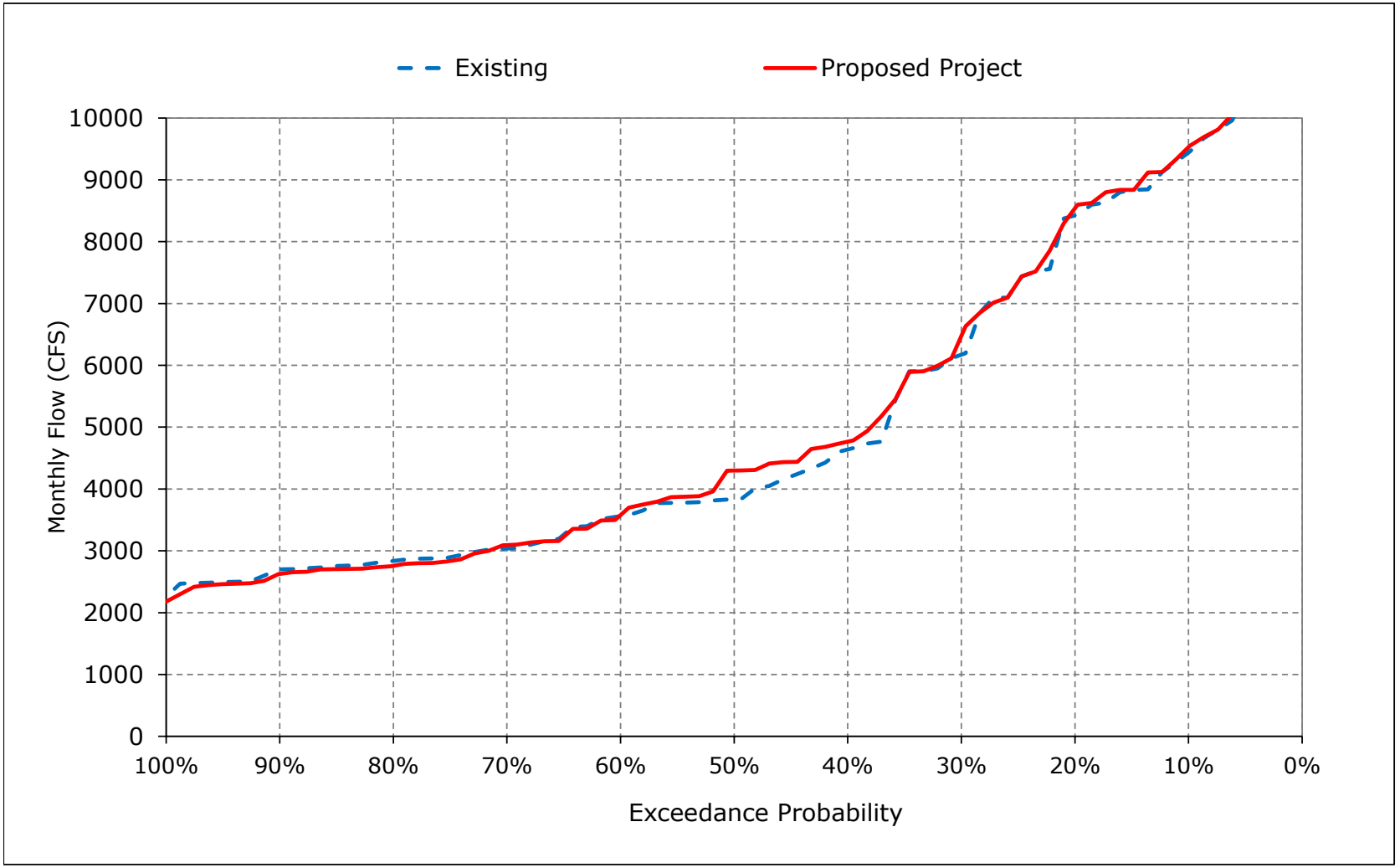


Figure 2-11. Georgiana Slough, February

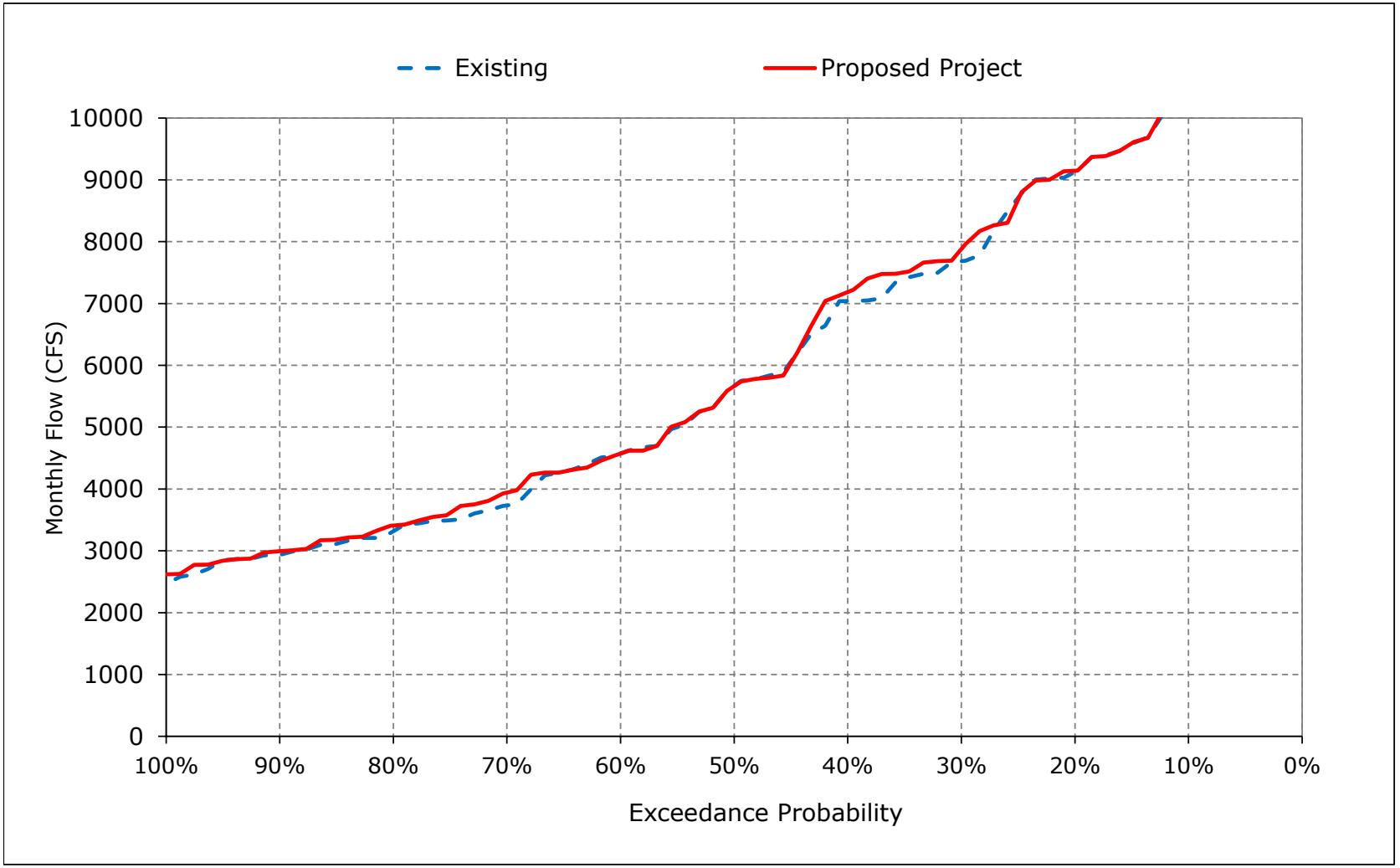


Figure 2-12. Georgiana Slough, March

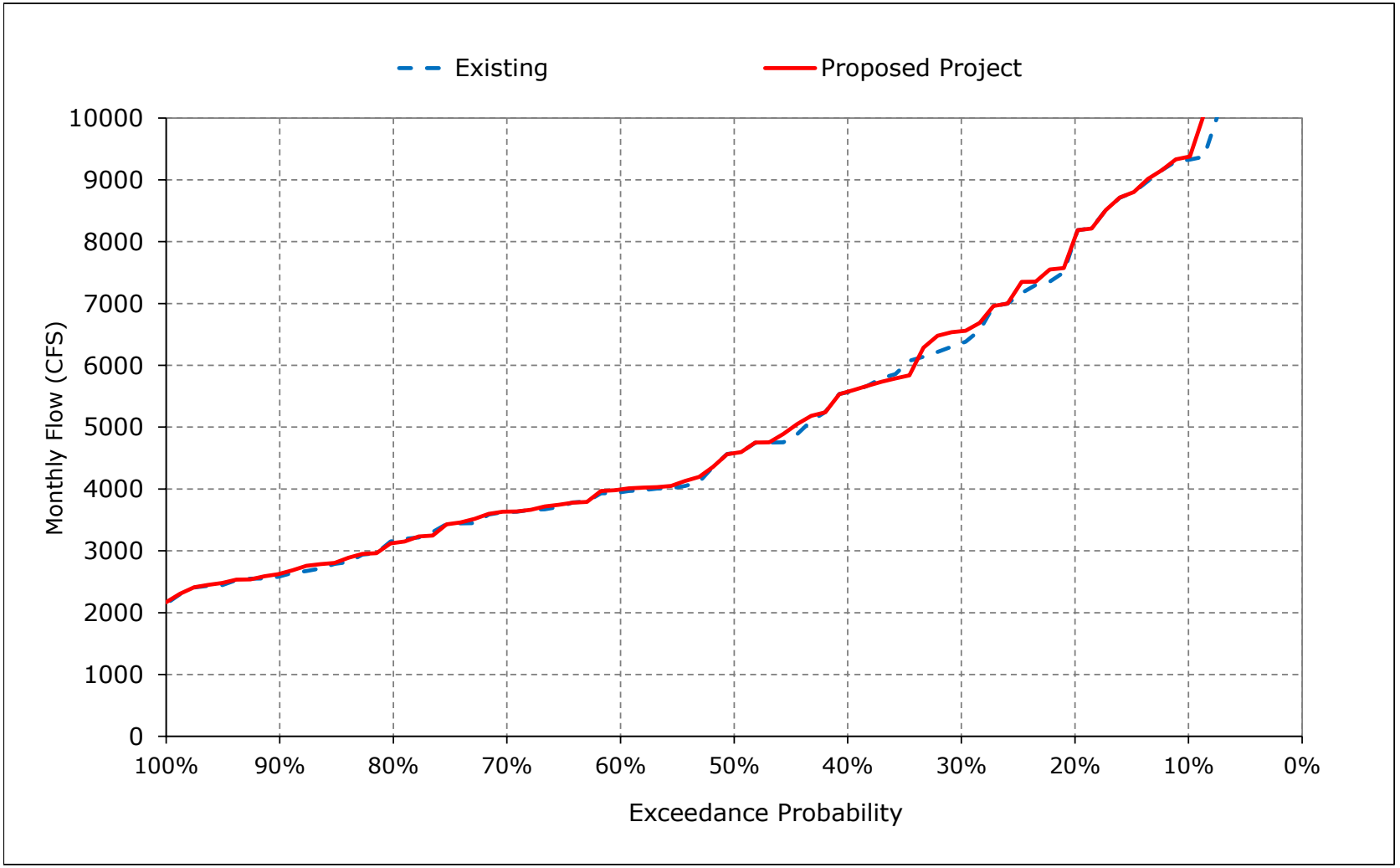


Figure 2-13. Georgiana Slough, April

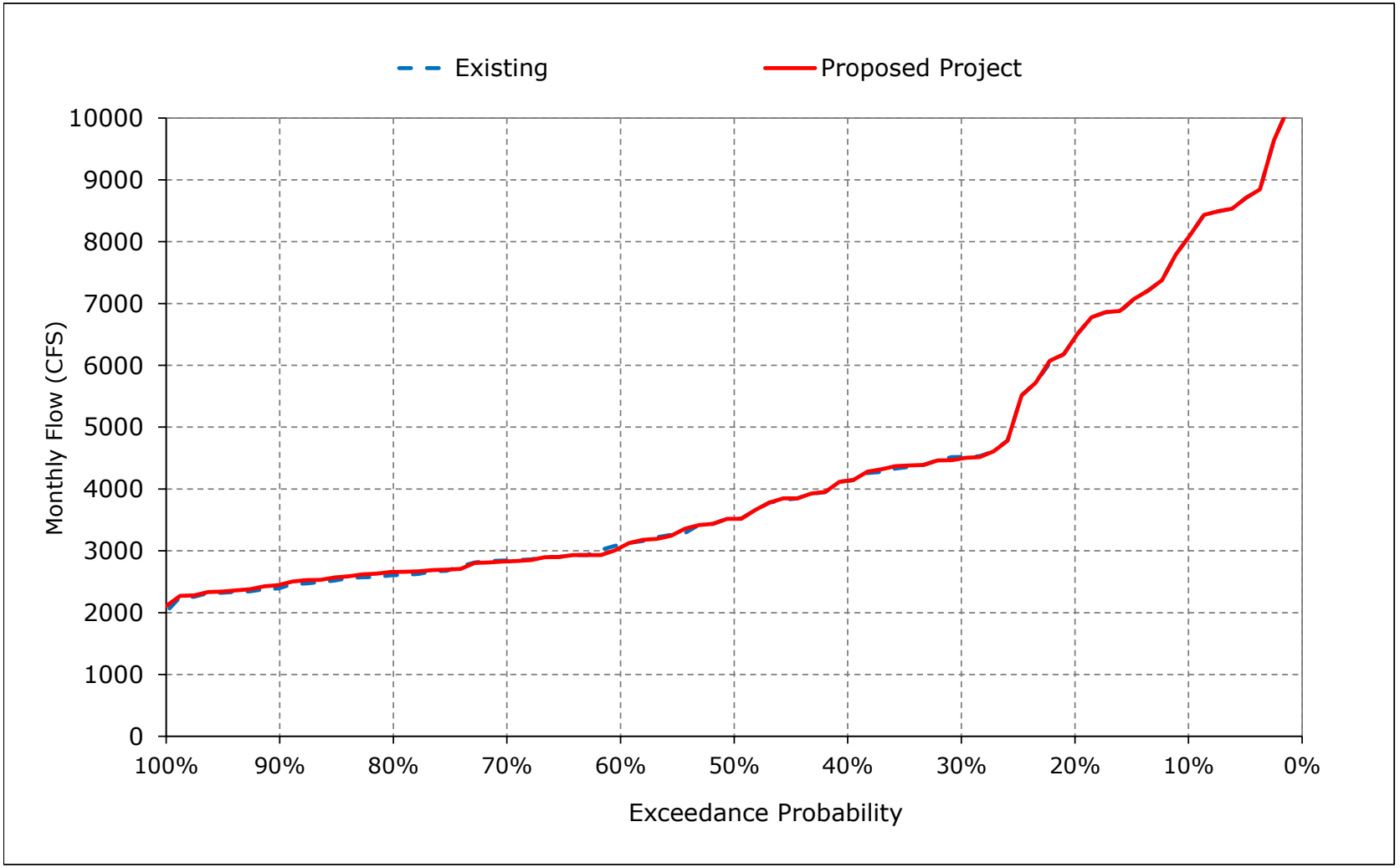


Figure 2-14. Georgiana Slough, May

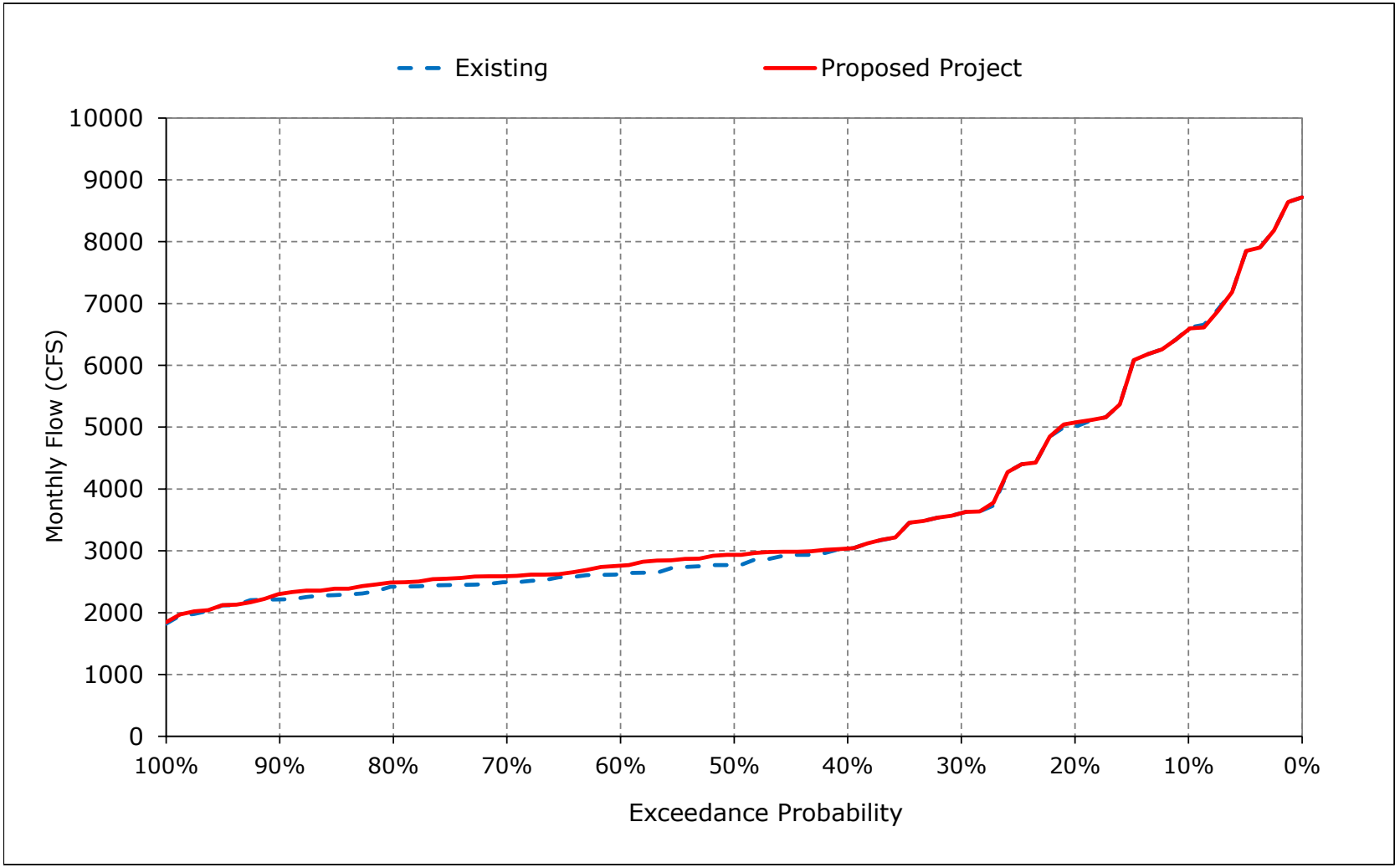


Figure 2-15. Georgiana Slough, June

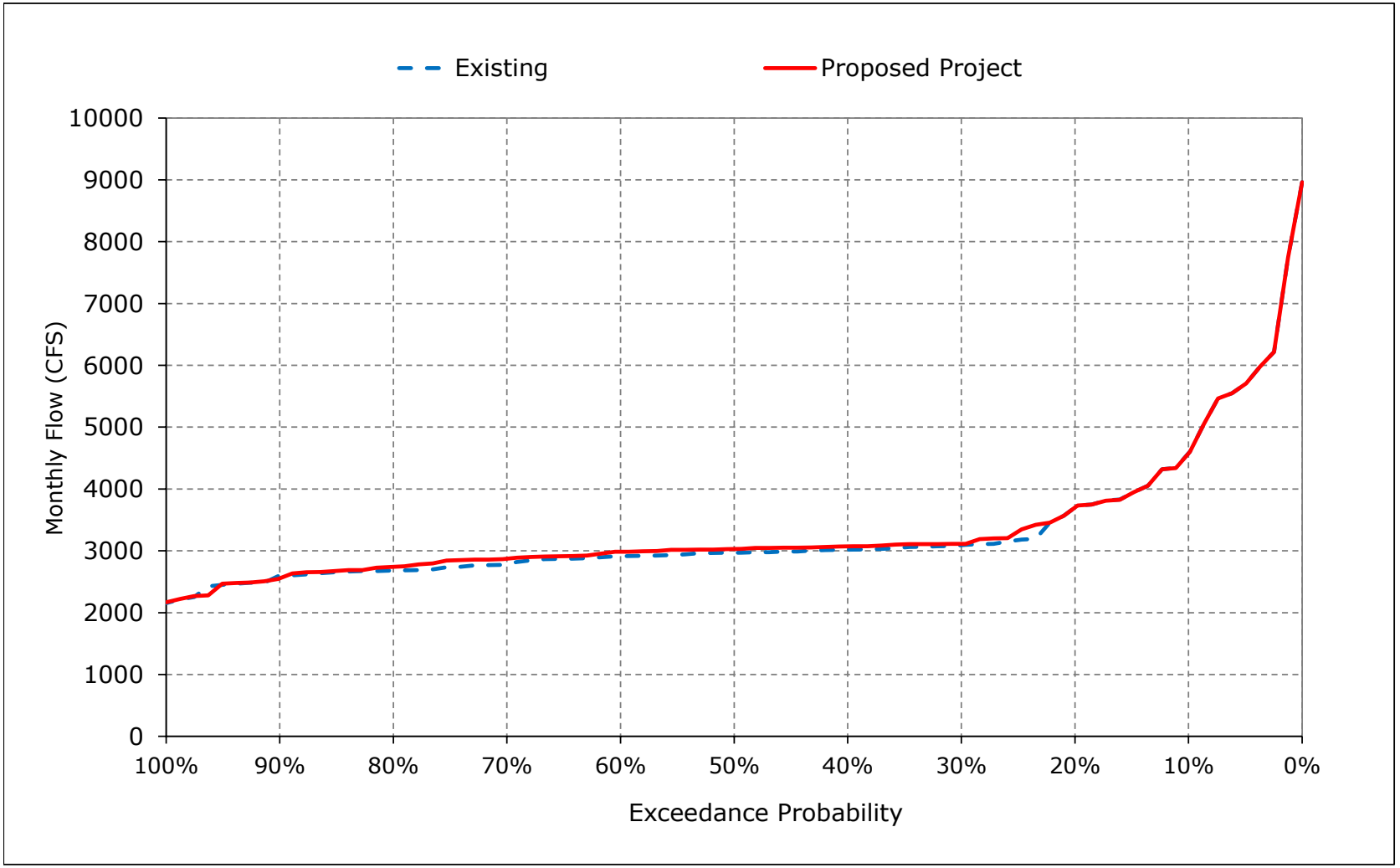


Figure 2-16. Georgiana Slough, July

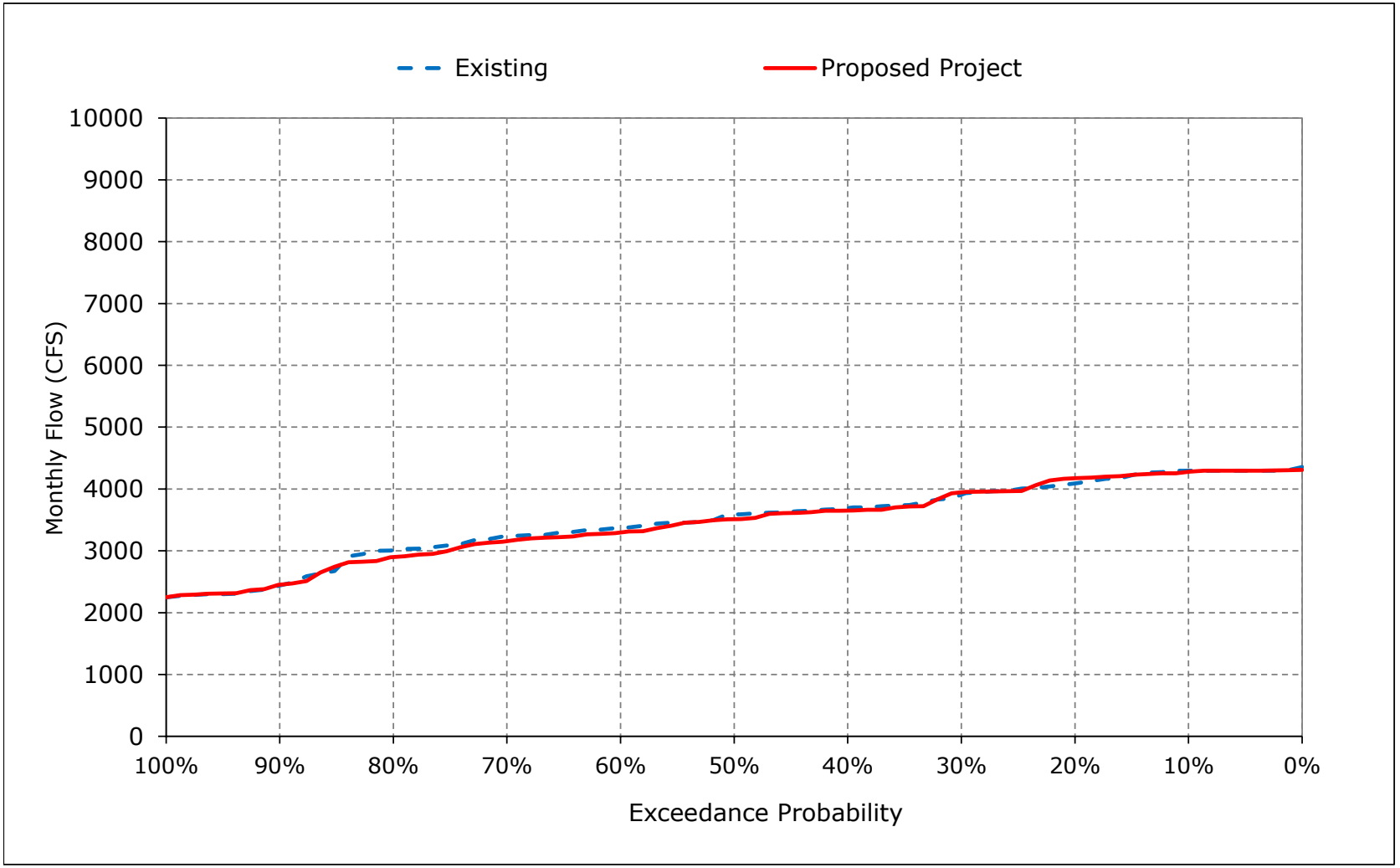


Figure 2-17. Georgiana Slough, August

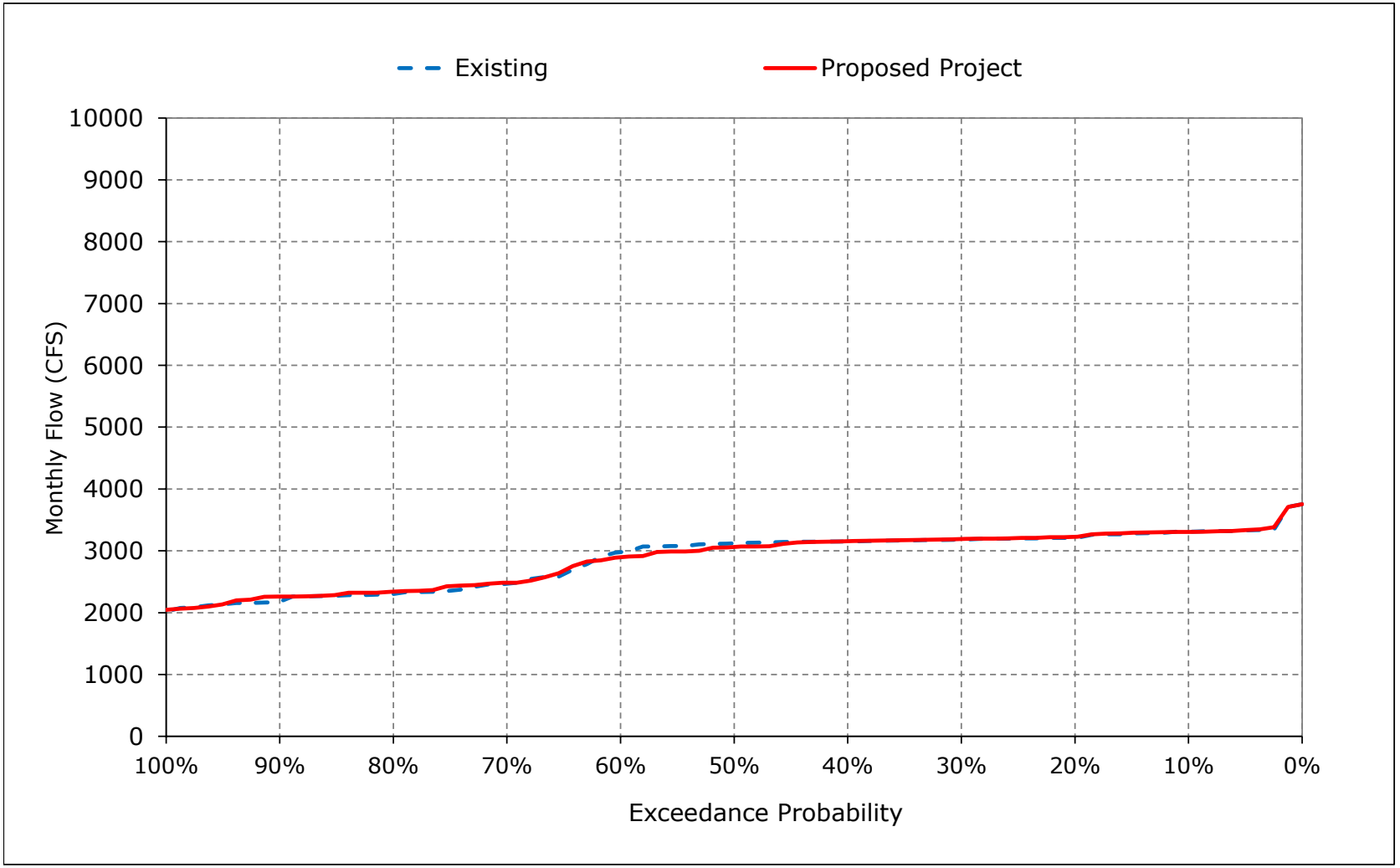


Figure 2-18. Georgiana Slough, September

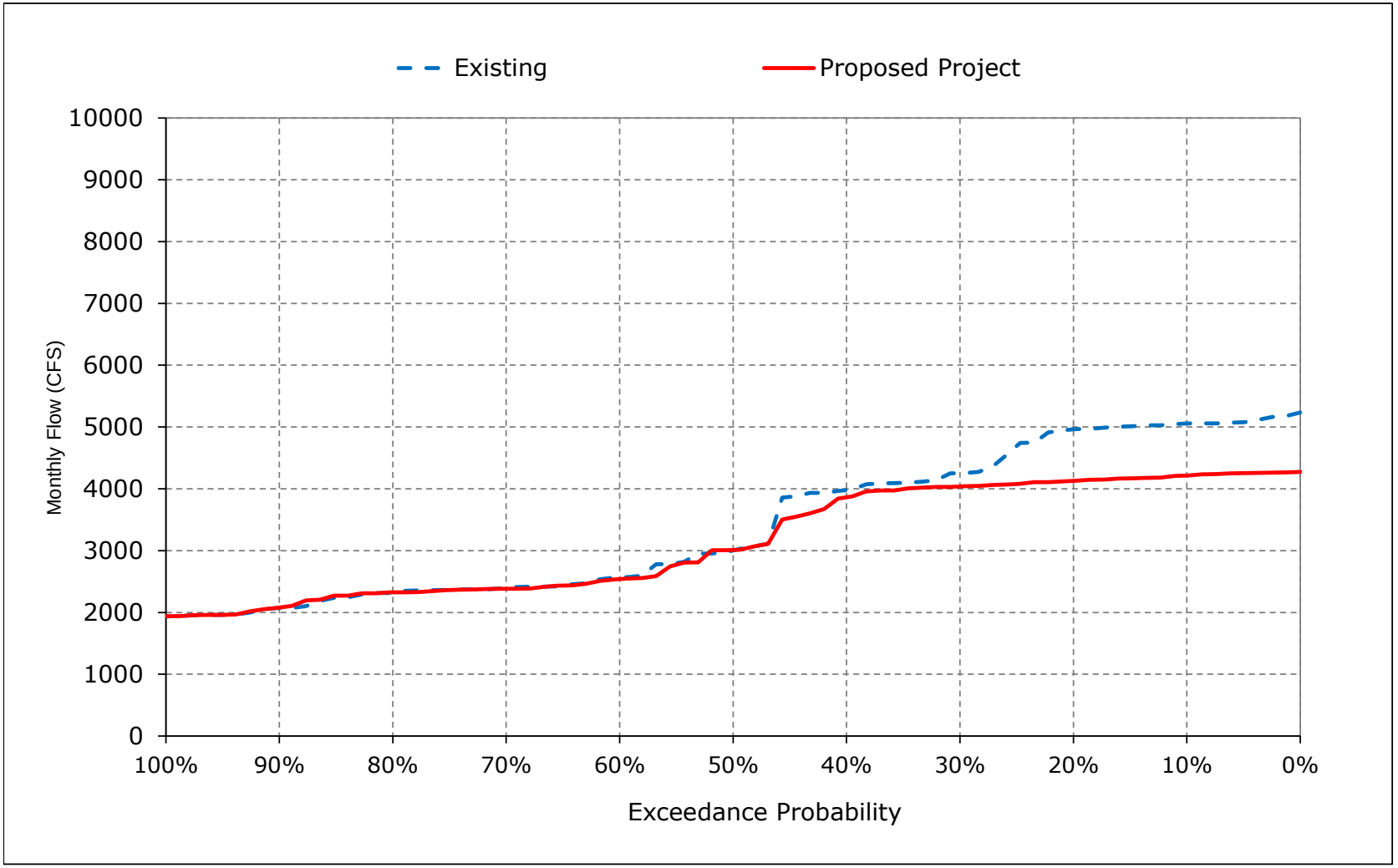


Table 3-1. Yolo Bypass Flow, Monthly Flow

Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	63	475	7,065	32,116	44,401	22,630	7,266	275	68	48	183	190
20%	61	145	2,778	10,983	16,552	8,079	3,162	78	68	48	55	110
30%	58	46	917	3,830	7,981	3,276	1,068	73	68	48	55	59
40%	53	10	316	1,912	4,787	1,767	229	70	68	48	55	59
50%	45	8	148	495	2,163	918	135	68	67	48	55	59
60%	40	5	60	269	609	279	111	65	67	48	55	59
70%	29	0	15	62	233	115	88	63	66	48	55	58
80%	16	0	0	27	82	45	78	59	64	48	55	56
90%	5	0	0	0	0	7	56	53	62	48	54	52
Long Term												
Full Simulation Period[a]	128	384	3,071	9,666	12,947	8,304	2,671	284	126	48	100	105
Water Year Types[b,c]												
Wet (32%)	263	1,057	8,104	26,331	32,235	21,722	7,047	684	255	48	143	177
Above Normal (15%)	32	176	1,191	6,758	11,720	7,440	1,747	194	66	48	95	65
Below Normal (17%)	47	33	1,415	932	3,239	704	574	67	66	48	114	85
Dry (22%)	116	68	331	557	1,842	751	308	77	67	48	62	65
Critical (15%)	41	19	89	317	365	292	107	68	64	48	54	70

Proposed Project

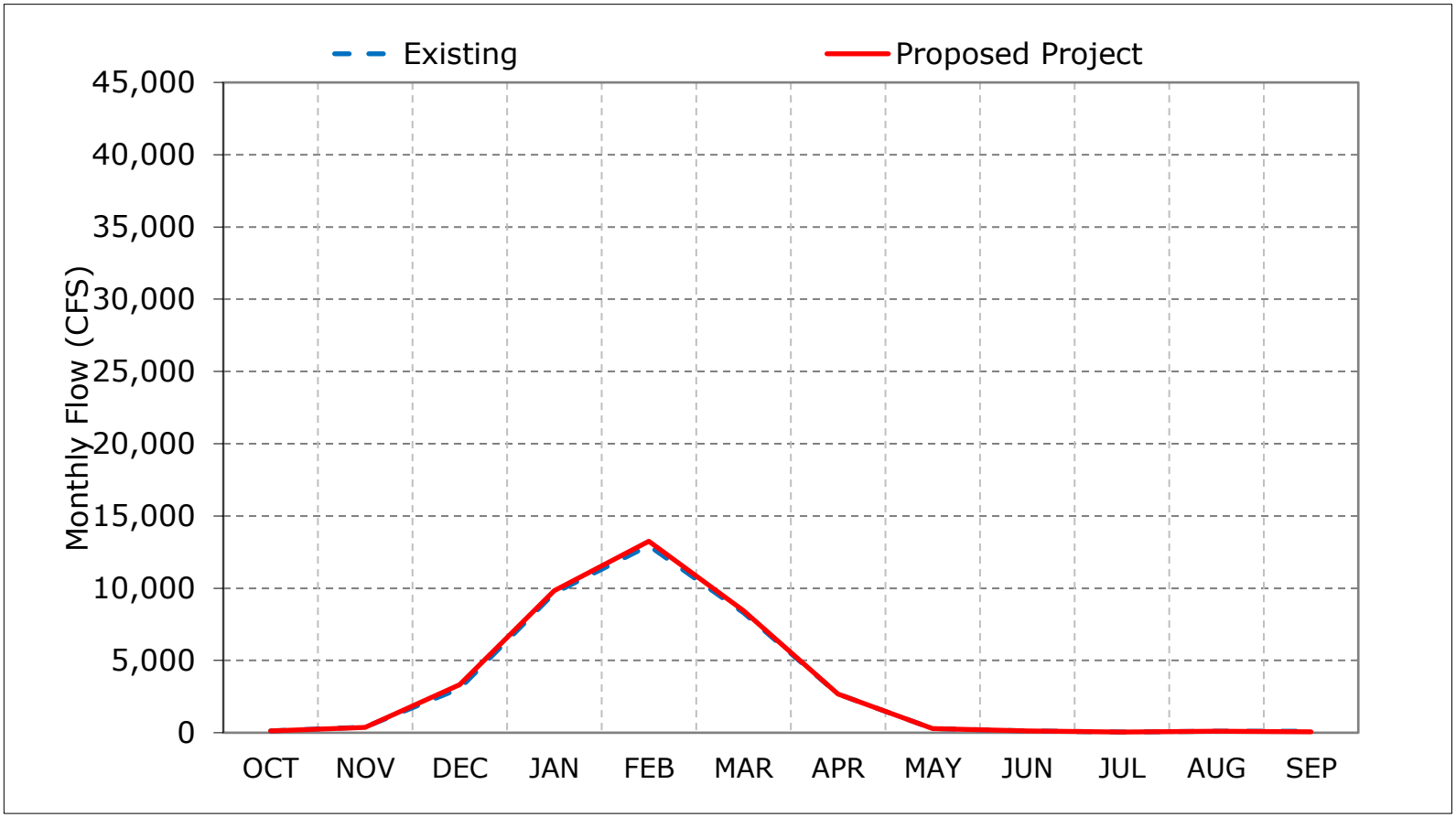
Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	63	475	8,674	32,255	45,986	23,519	7,266	275	68	48	183	127
20%	62	145	2,779	11,430	16,948	8,135	3,162	78	68	48	55	59
30%	59	50	974	3,877	8,111	3,320	1,068	73	68	48	55	59
40%	53	17	342	1,912	6,221	1,981	229	70	68	48	55	59
50%	46	9	148	509	2,328	1,005	135	68	67	48	55	59
60%	40	5	60	327	729	373	111	65	67	48	55	59
70%	31	0	15	80	261	122	88	63	66	48	55	58
80%	16	0	0	51	82	47	78	59	64	48	55	55
90%	5	0	0	13	0	7	56	53	62	48	54	52
Long Term												
Full Simulation Period[a]	130	373	3,315	9,834	13,249	8,460	2,671	279	126	48	100	73
Water Year Types[b,c]												
Wet (32%)	269	989	8,882	26,798	32,580	21,816	7,047	669	255	48	143	73
Above Normal (15%)	32	160	1,178	6,789	12,359	8,182	1,747	194	66	48	95	65
Below Normal (17%)	47	33	1,412	1,013	3,839	703	575	67	66	48	114	85
Dry (22%)	118	120	331	566	1,828	831	308	77	67	48	62	65
Critical (15%)	41	27	89	317	367	292	107	68	64	48	54	77

Proposed Project minus Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	0	1,609	140	1,585	889	**-1**	0	0	0	0	**-63**
20%	0	0	1	447	396	57	0	0	0	0	0	**-51**
30%	1	5	57	47	130	44	0	0	0	0	0	0
40%	0	7	26	0	1,433	215	0	0	0	0	0	0
50%	1	0	0	14	166	87	0	0	0	0	0	0
60%	0	1	0	57	120	94	0	0	0	0	0	**0**
70%	1	0	0	18	28	8	0	0	0	0	0	**-1**
80%	0	0	0	24	0	2	0	0	0	0	0	**-1**
90%	0	0	0	13	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[a]	2	**-11**	244	168	302	156	**0**	**-5**	**0**	0	0	**-32**
Water Year Types[b,c]												
Wet (32%)	6	**-68**	778	467	344	93	**-1**	**-15**	**0**	0	0	**-105**
Above Normal (15%)	0	**-16**	**-13**	31	639	742	0	0	0	0	0	0
Below Normal (17%)	0	0	**-3**	81	600	**0**	0	0	0	0	0	0
Dry (22%)	2	53	0	9	**-14**	80	0	0	0	0	0	0
Critical (15%)	0	8	0	**-1**	2	0	0	0	0	0	0	7

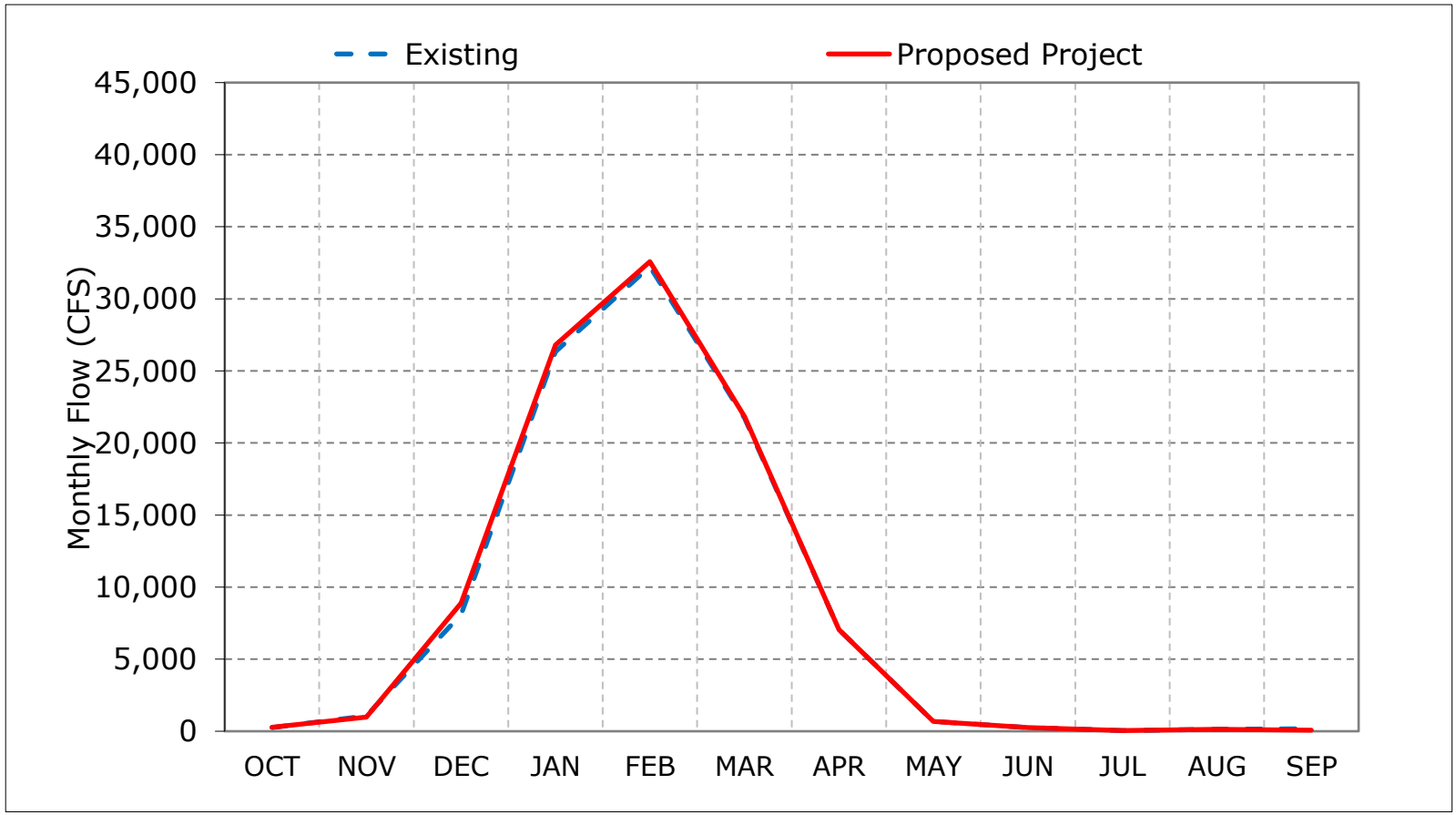
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

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



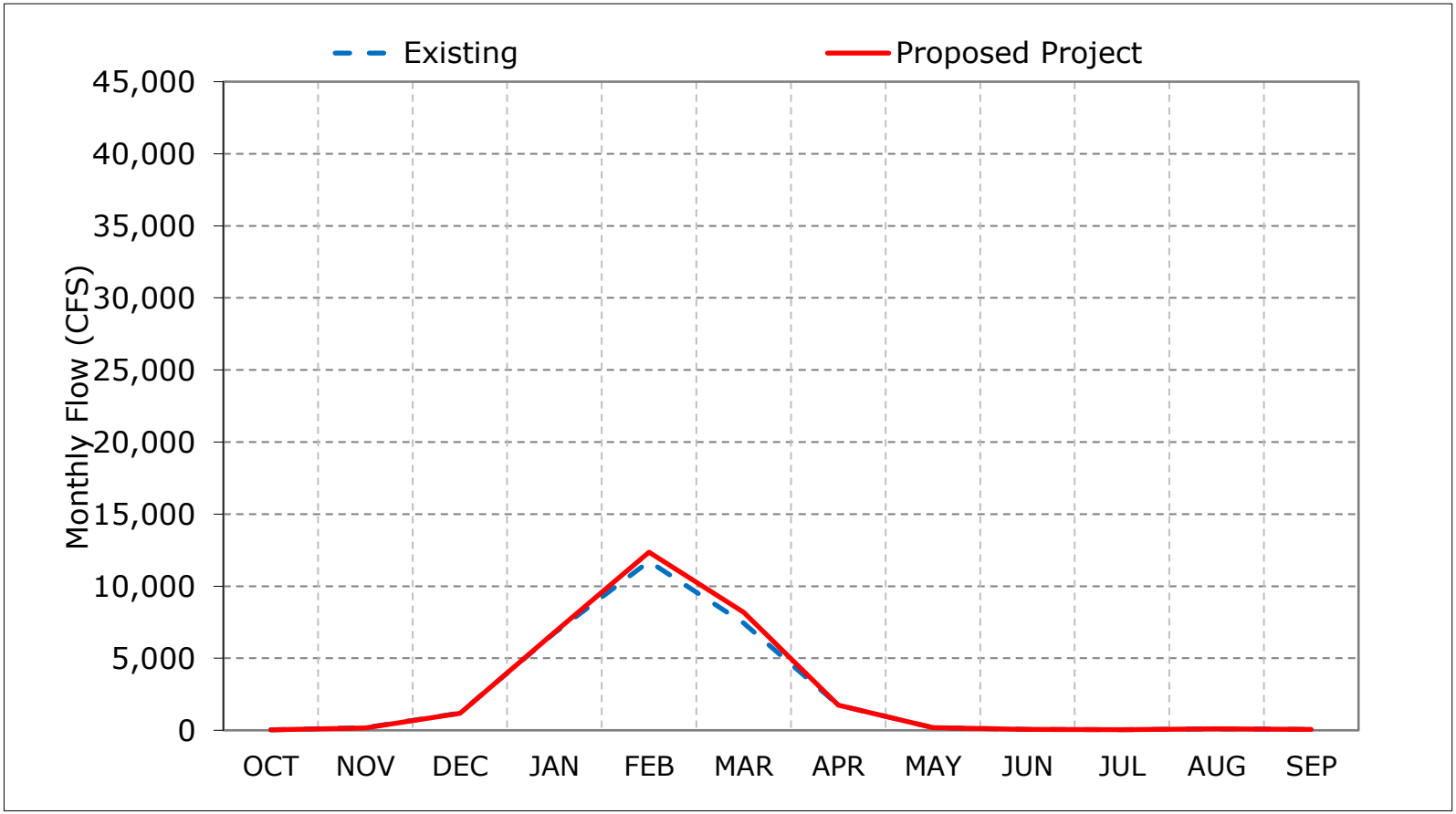
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



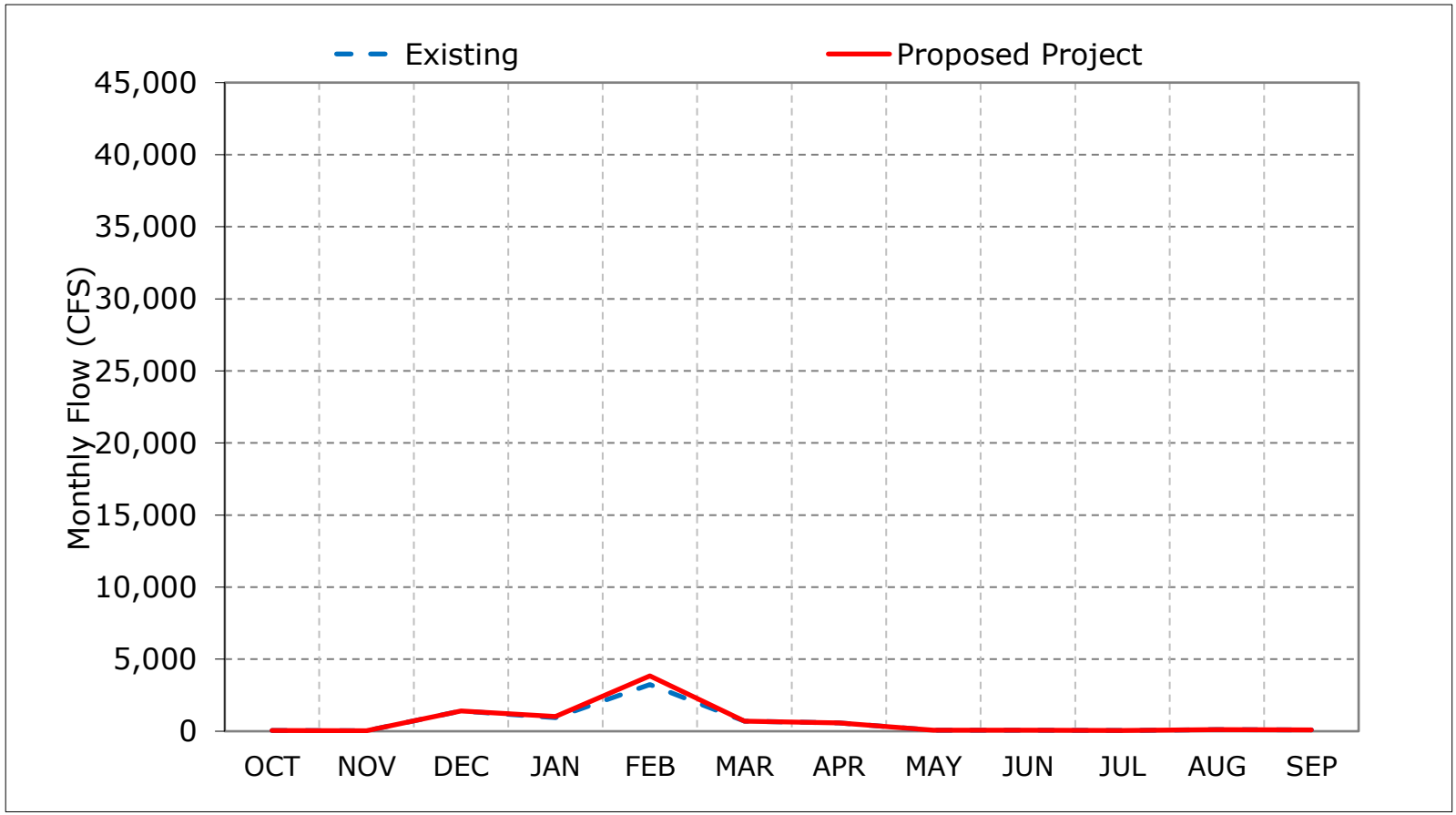
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



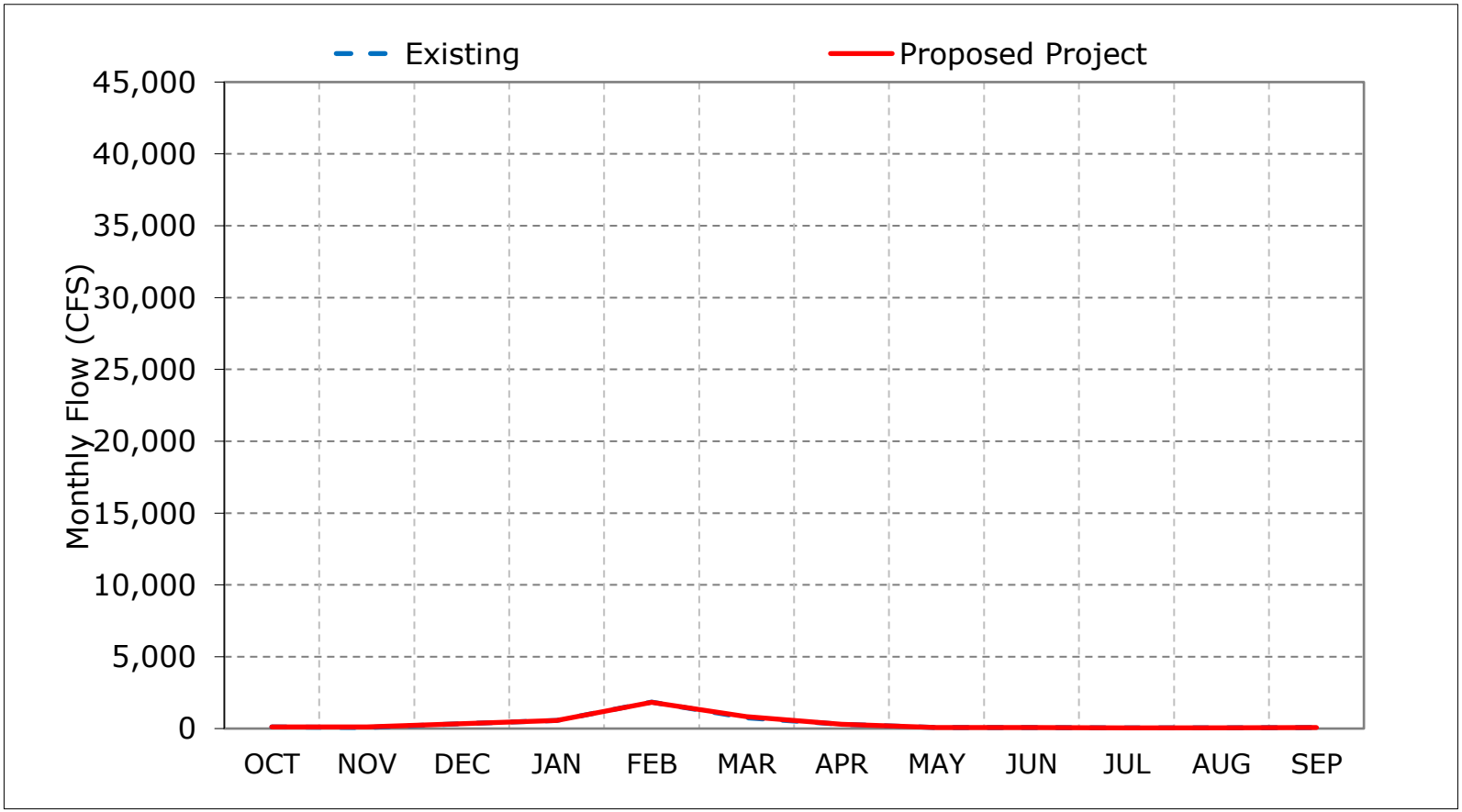
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



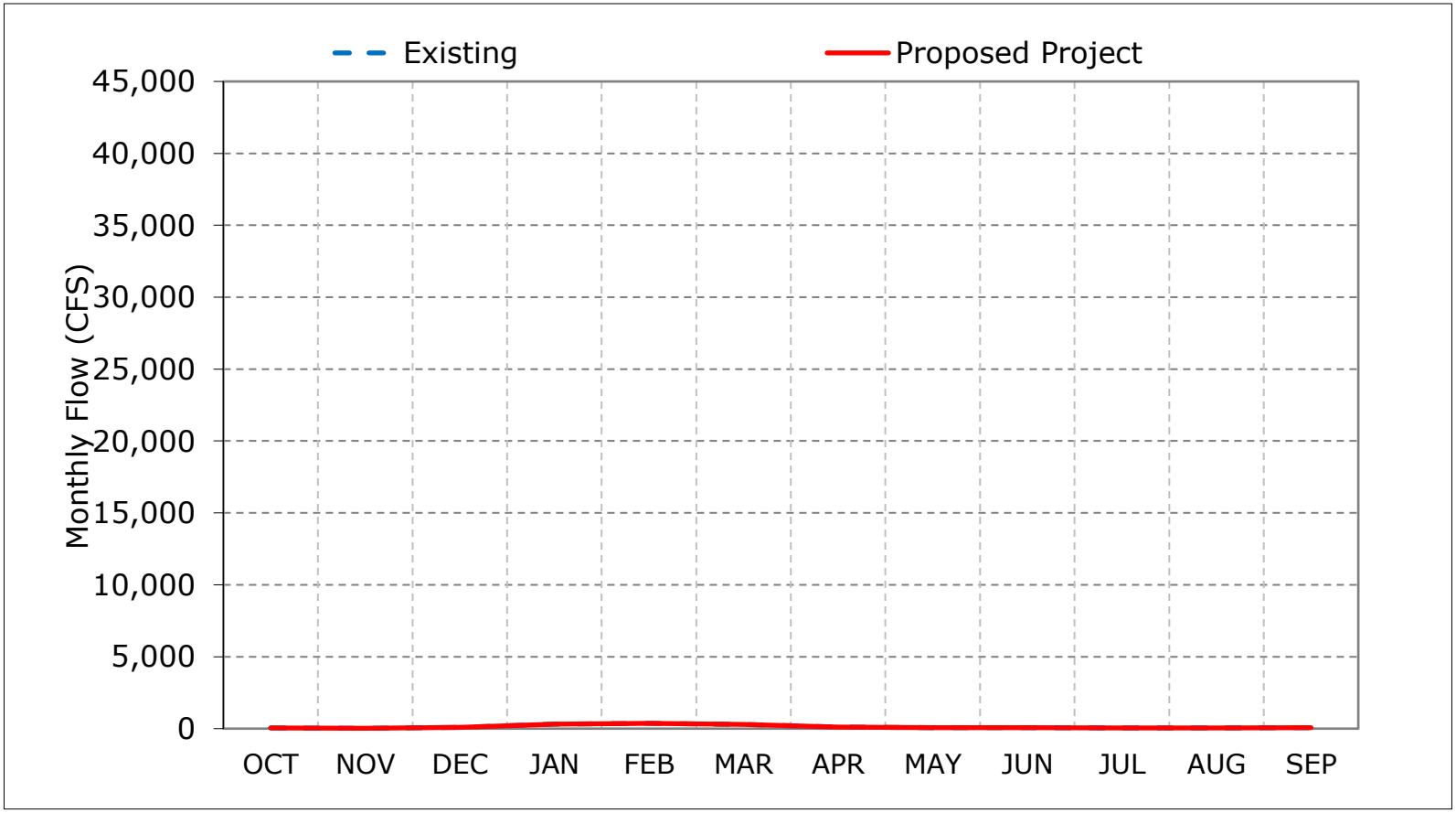
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 3-7. Yolo Bypass Flow, October

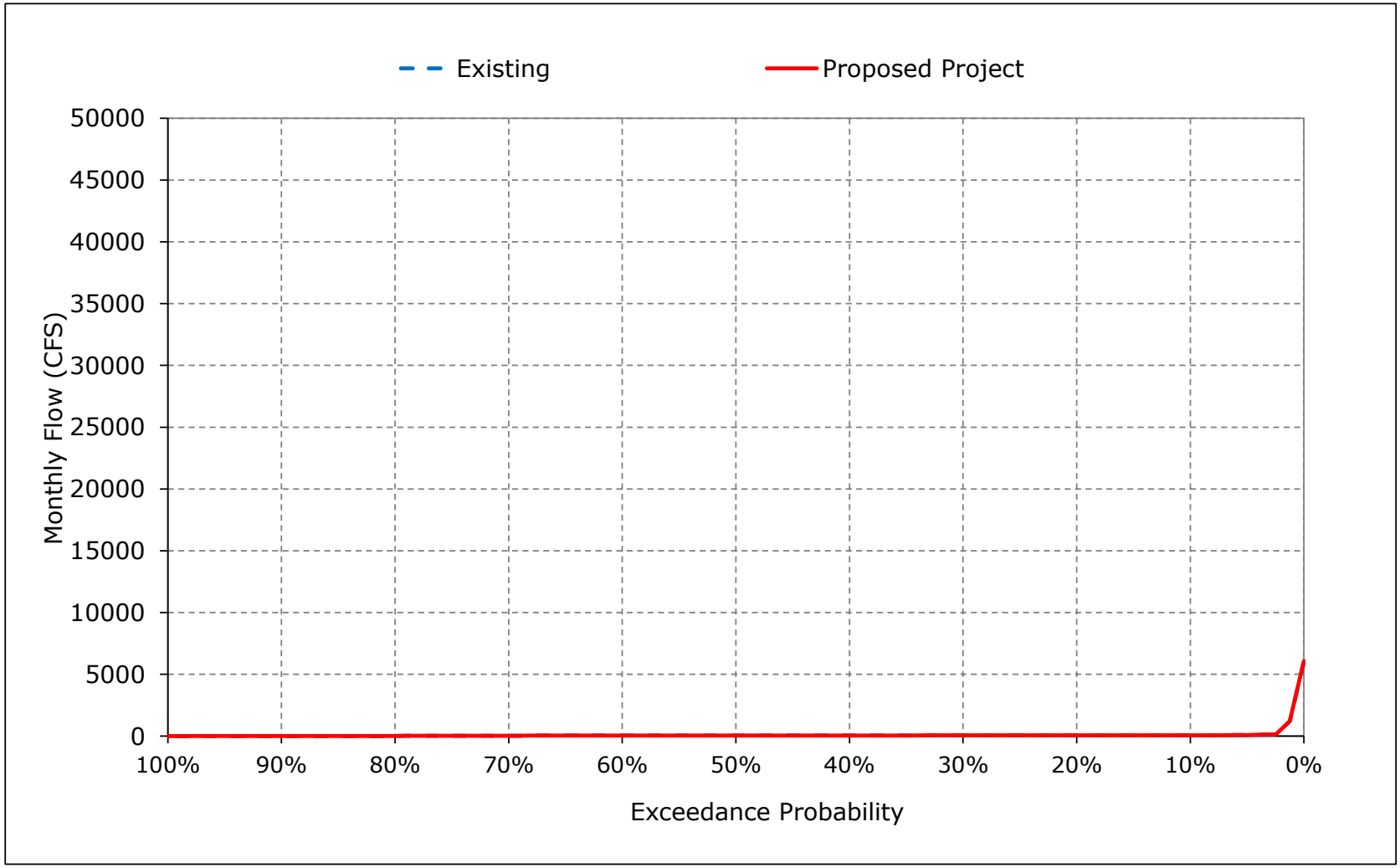


Figure 3-8. Yolo Bypass Flow, November

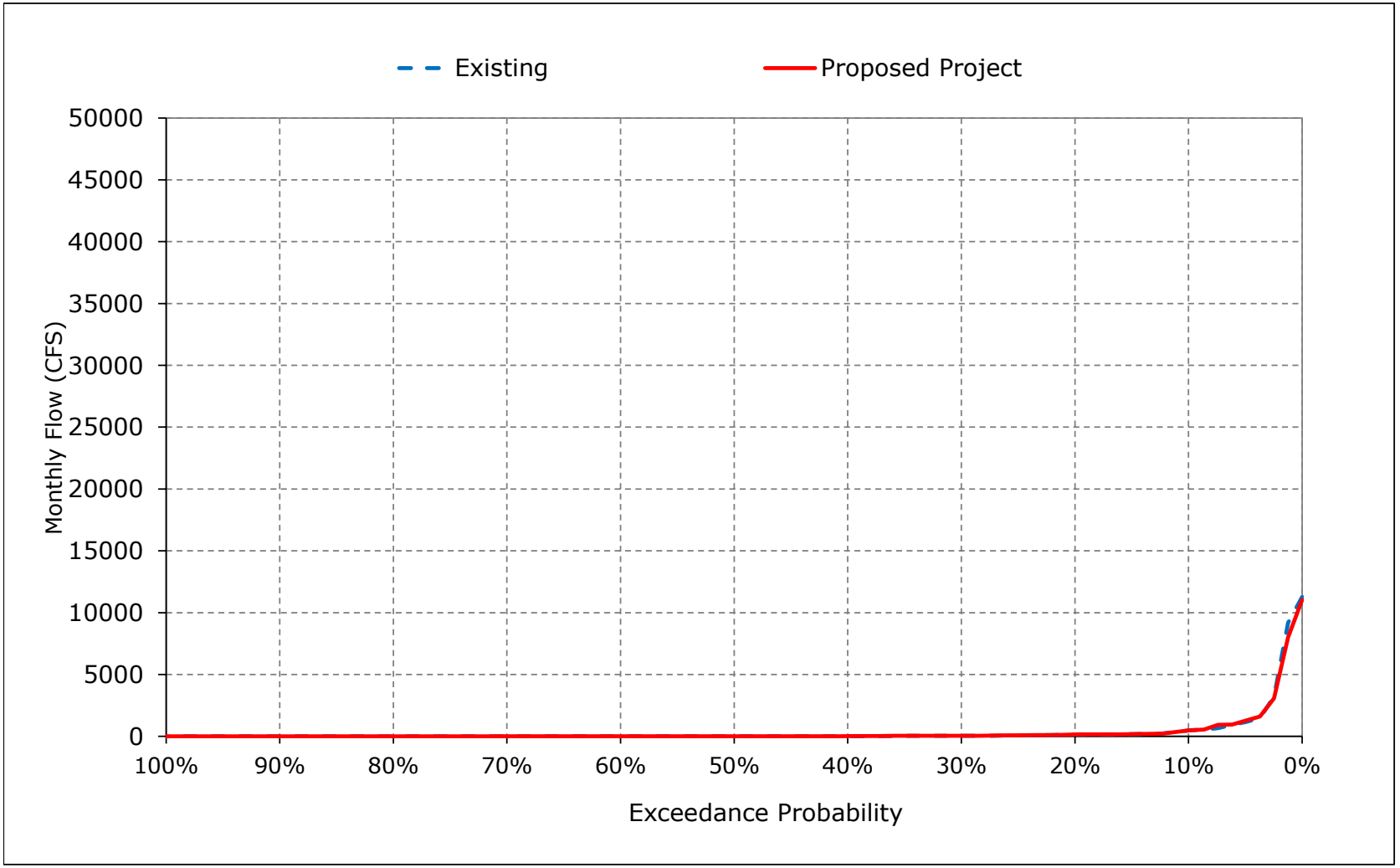


Figure 3-9. Yolo Bypass Flow, December

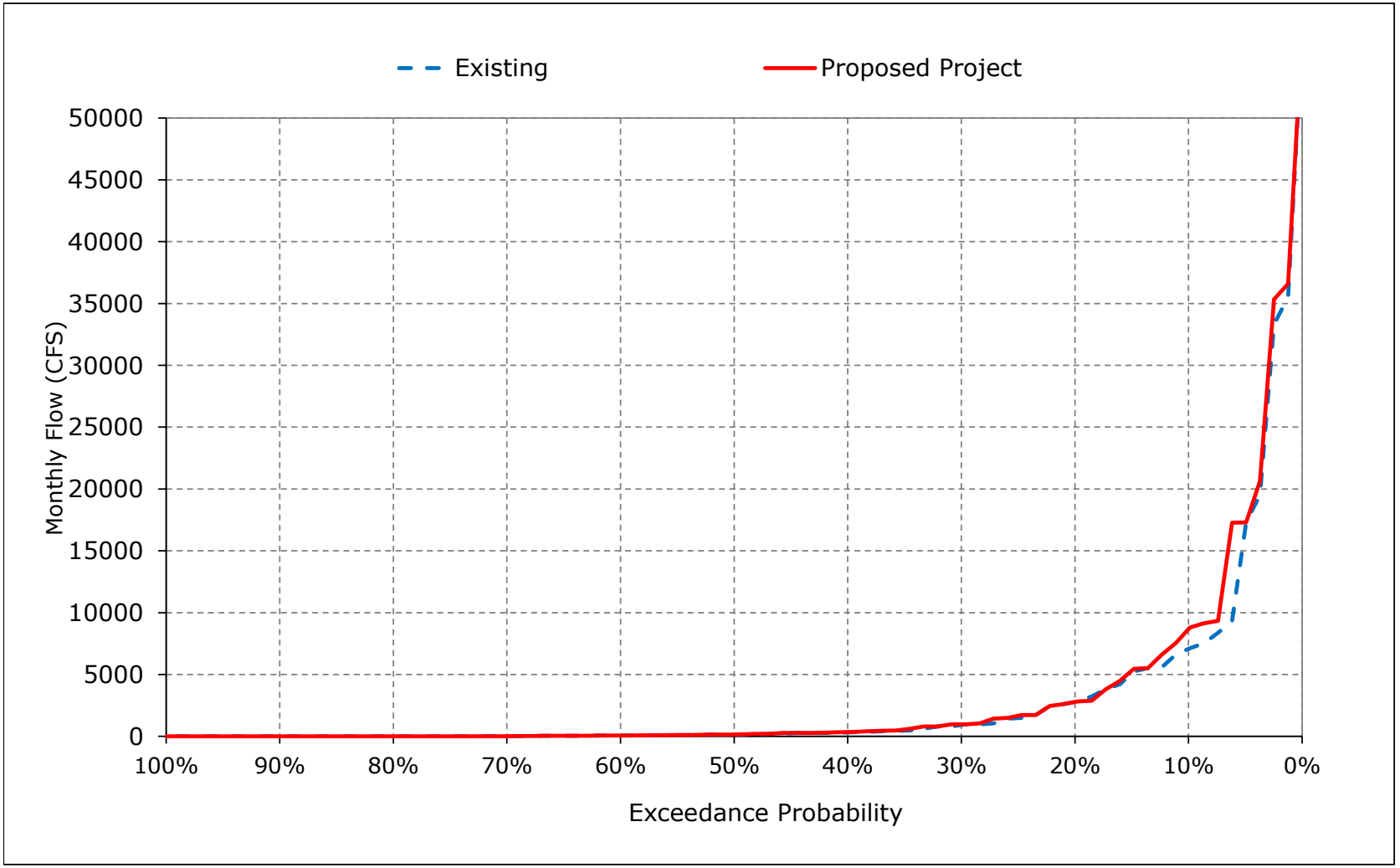


Figure 3-10. Yolo Bypass Flow, January

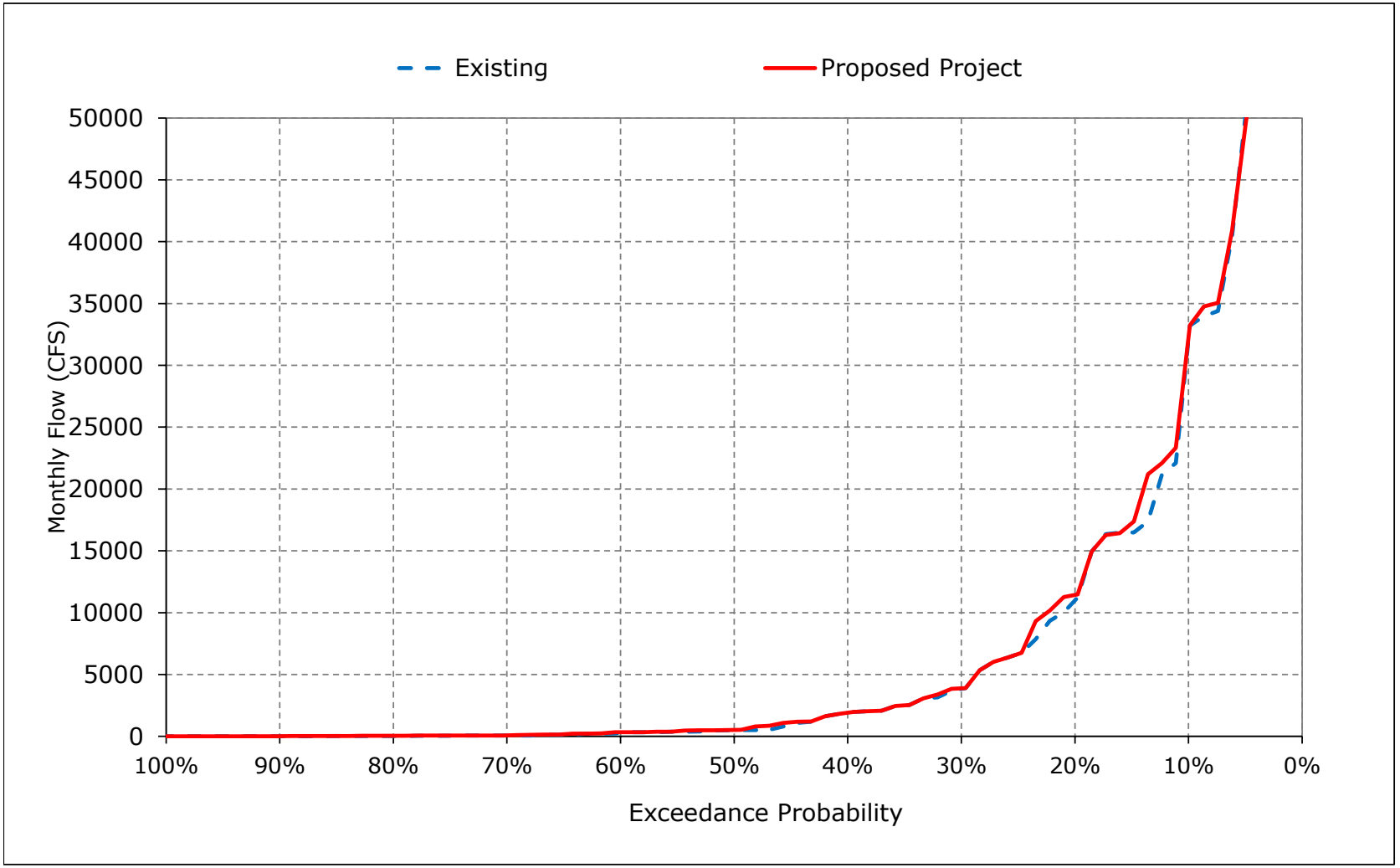


Figure 3-11. Yolo Bypass Flow, February

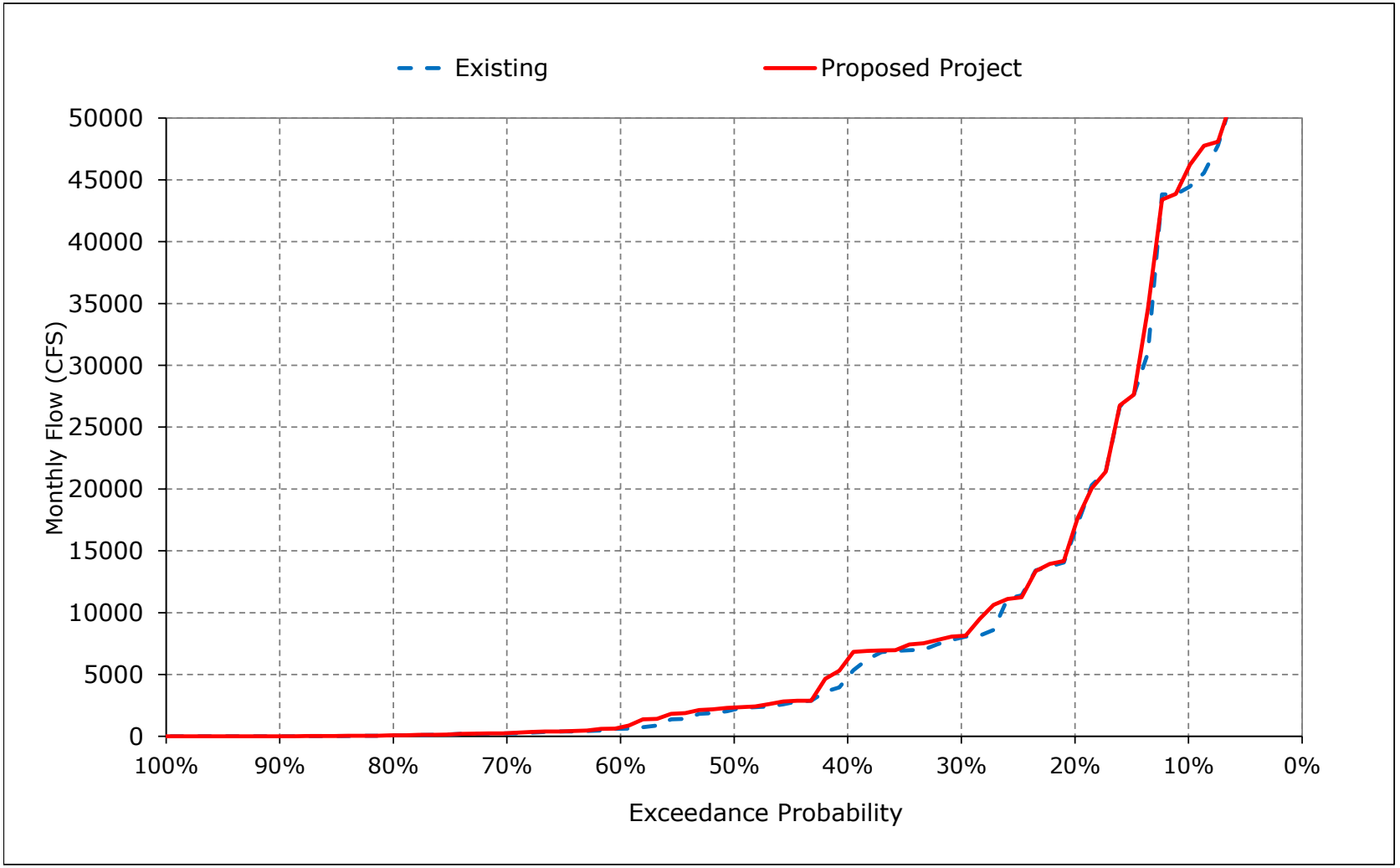


Figure 3-12. Yolo Bypass Flow, March

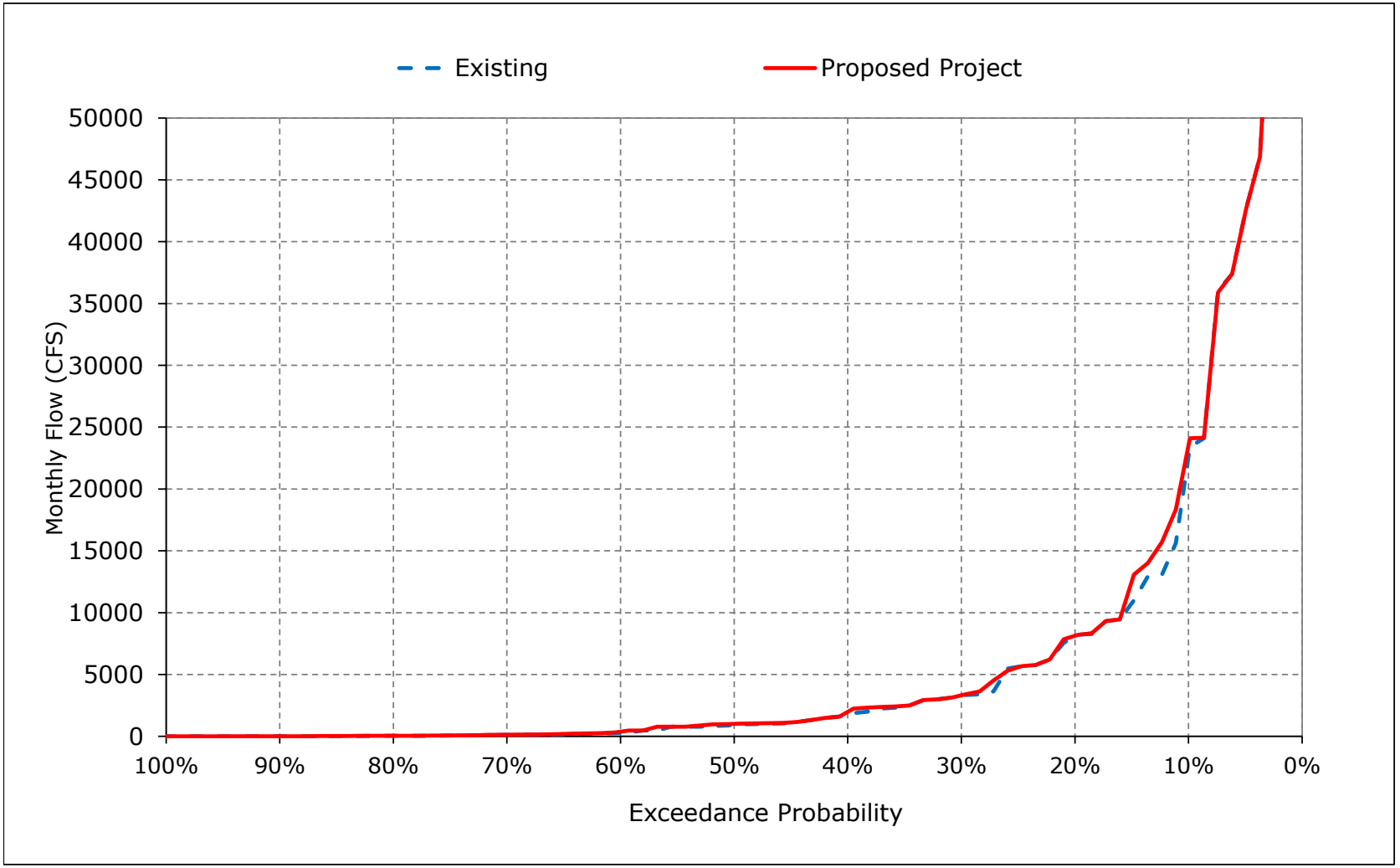


Figure 3-13. Yolo Bypass Flow, April

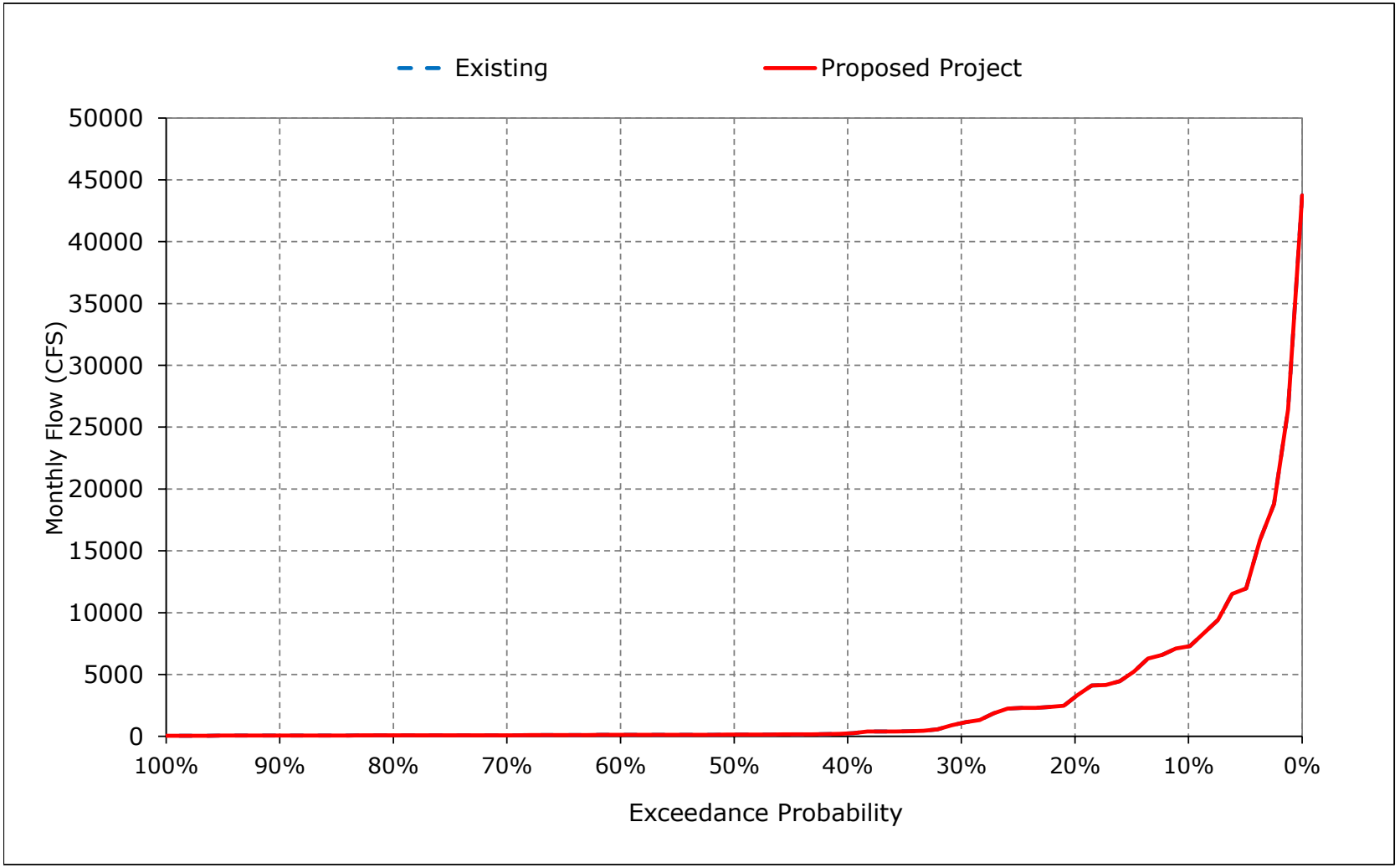


Figure 3-14. Yolo Bypass Flow, May

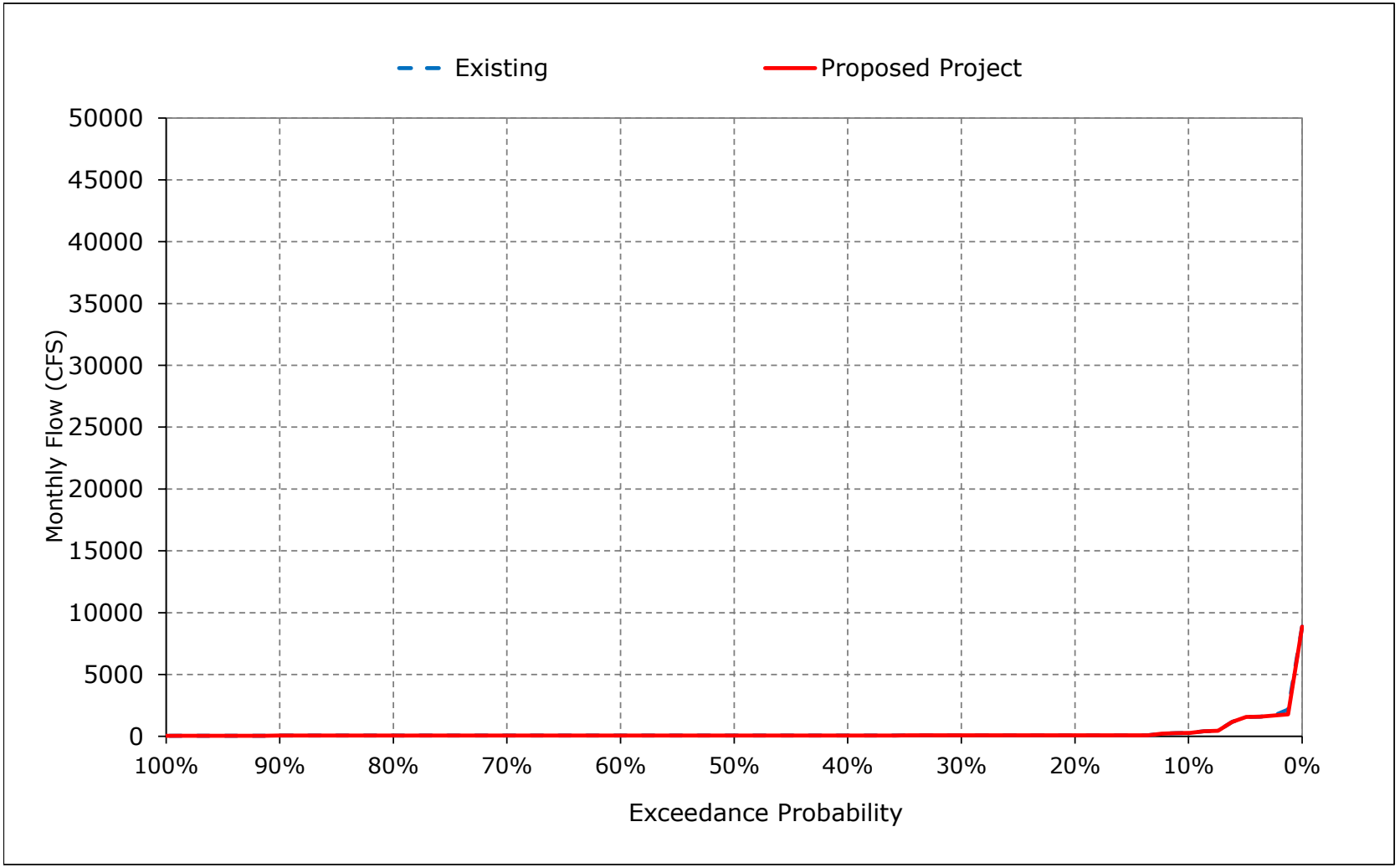


Figure 3-15. Yolo Bypass Flow, June

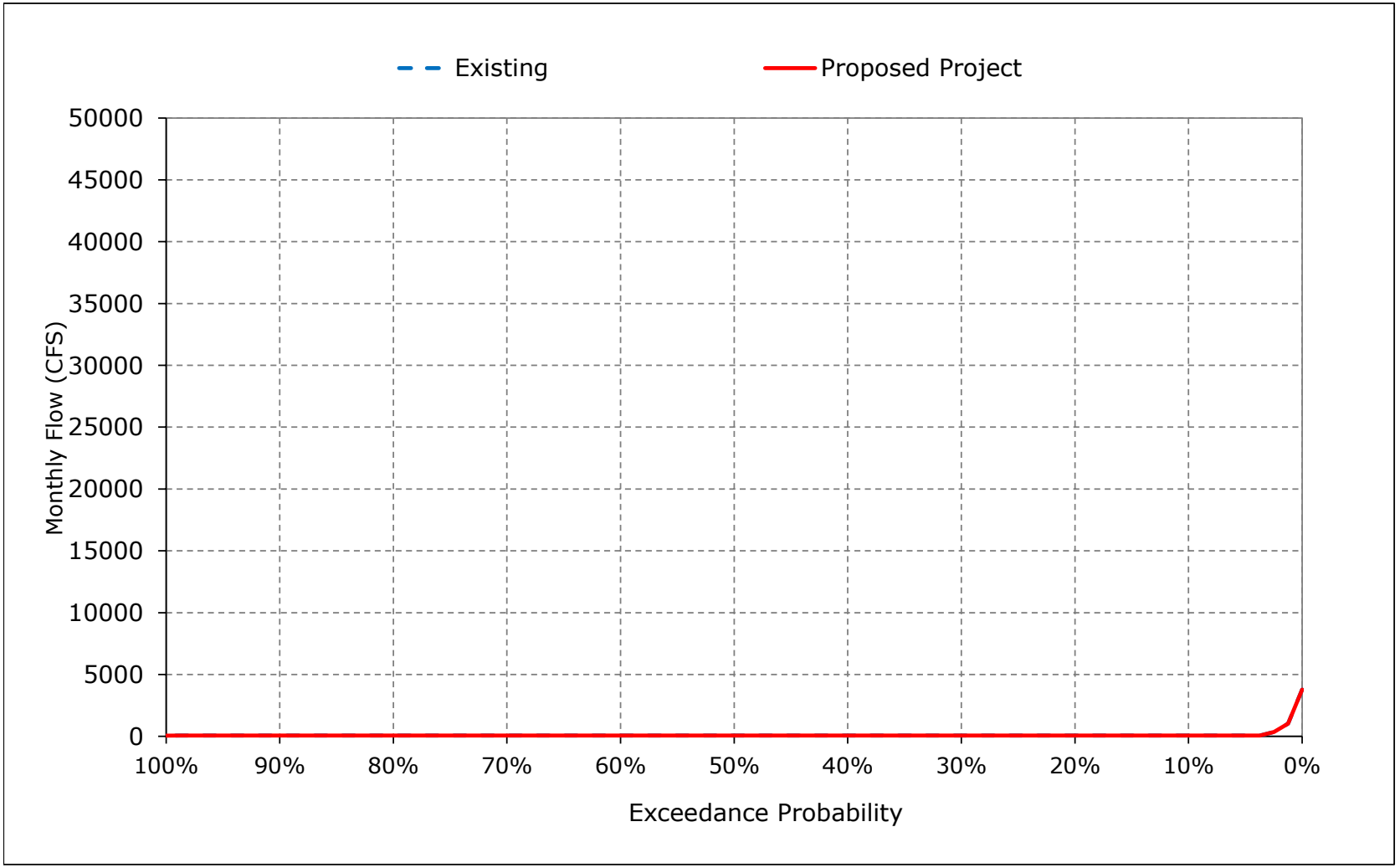


Figure 3-16. Yolo Bypass Flow, July

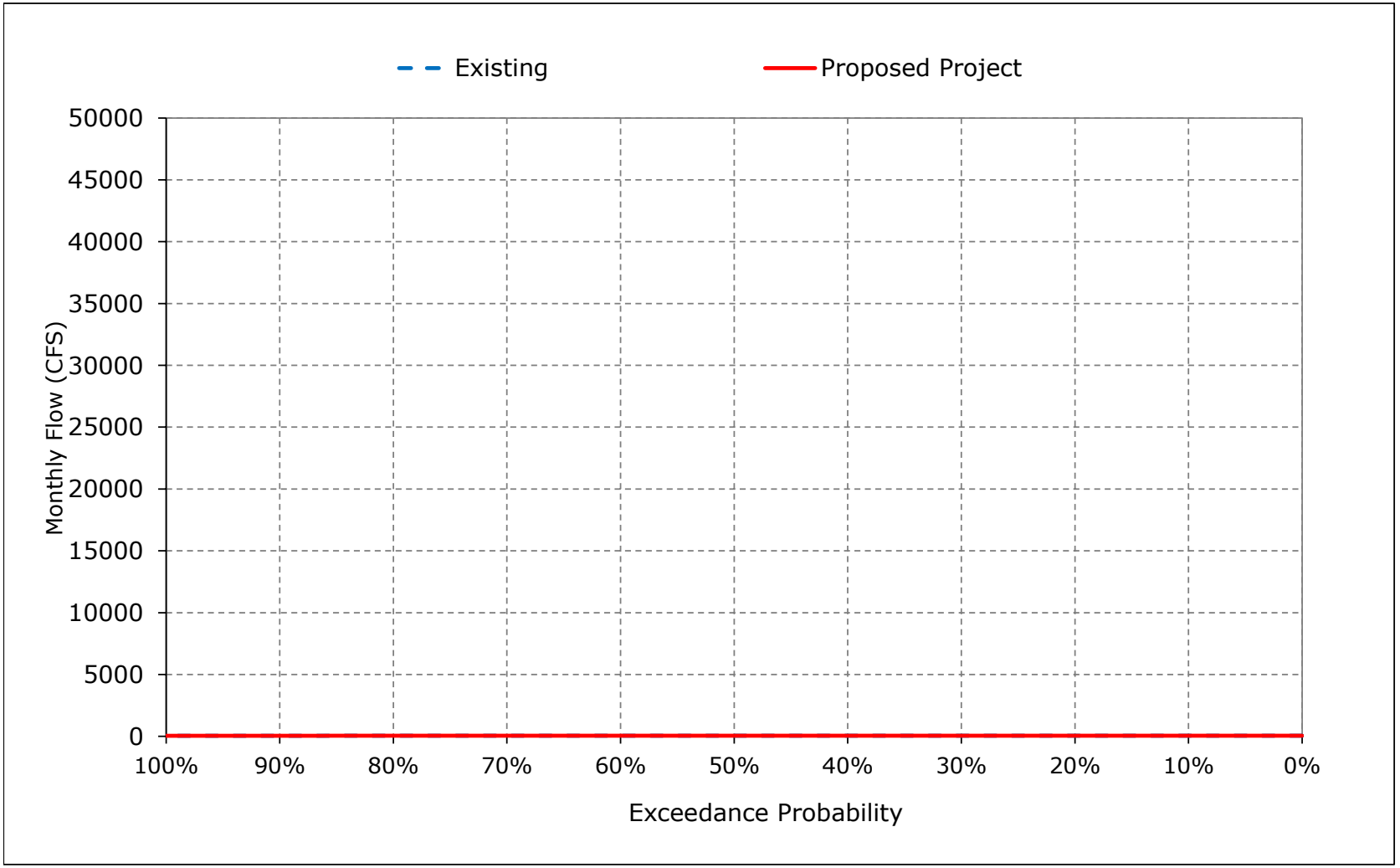


Figure 3-17. Yolo Bypass Flow, August

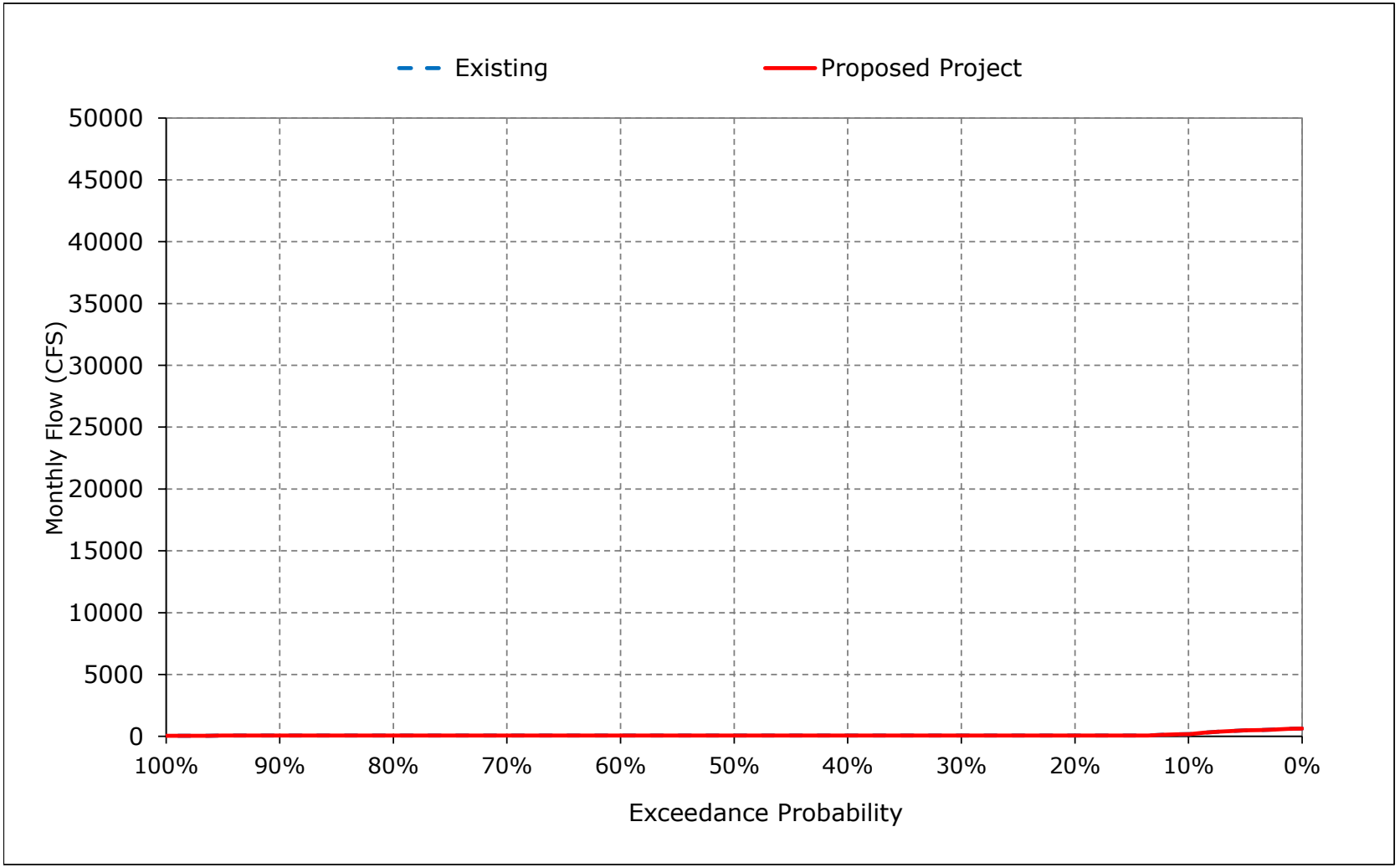


Figure 3-18. Yolo Bypass Flow, September

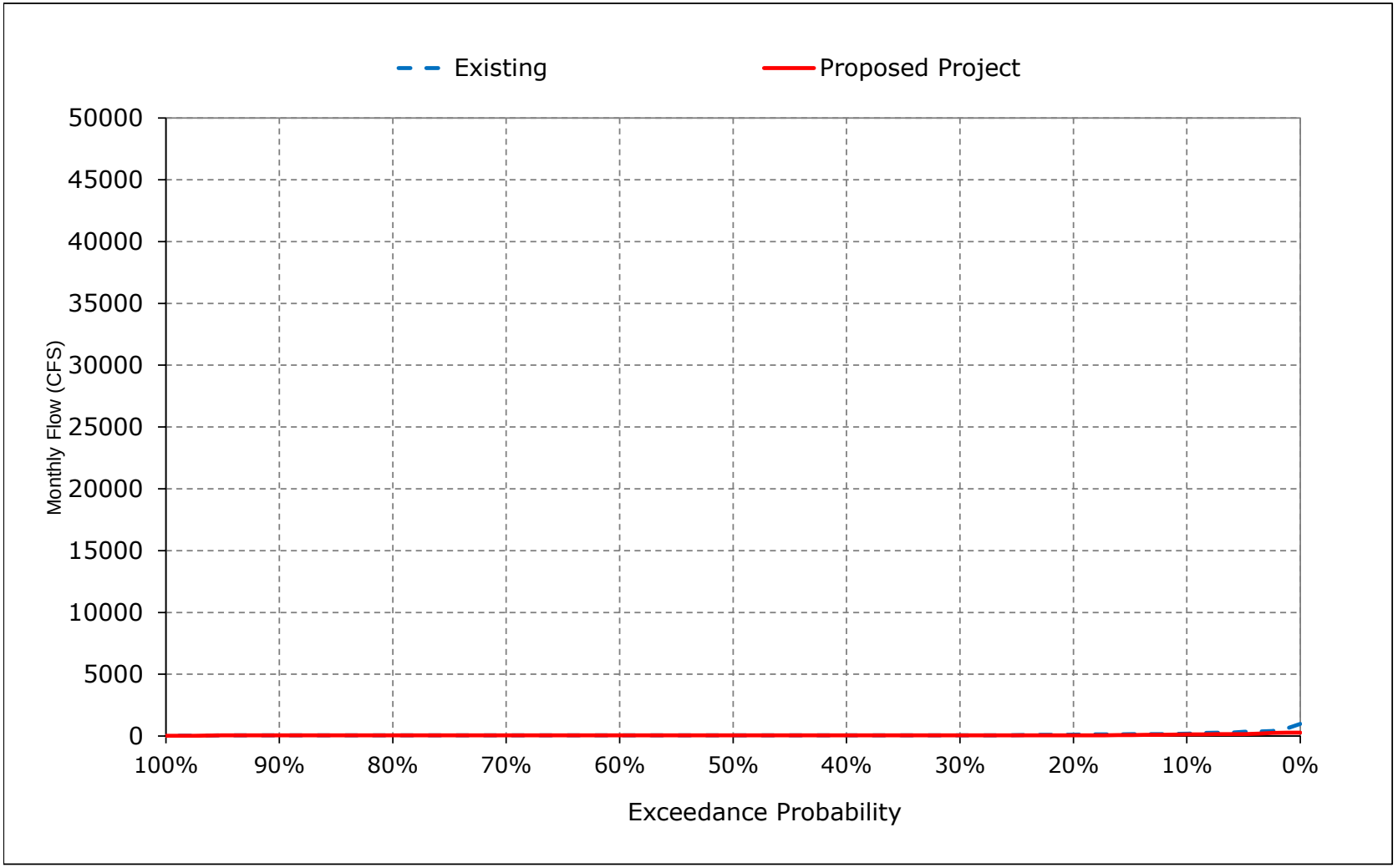


Table 4-1. Sacramento River Flow at Rio Vista, Monthly Flow

Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	9,140	18,806	52,284	86,457	105,186	73,918	54,112	34,926	20,648	14,280	9,718	24,620
20%	8,138	15,685	29,468	55,667	67,393	52,550	37,257	24,211	11,911	13,237	9,428	23,952
30%	7,537	14,649	18,168	40,343	52,127	35,838	21,850	14,901	8,567	12,292	9,053	14,756
40%	6,476	12,272	14,804	25,624	42,524	30,001	19,665	11,196	8,253	11,254	8,870	13,303
50%	5,940	10,585	12,150	18,372	30,086	22,487	14,597	9,601	7,982	10,683	8,695	8,343
60%	4,923	7,745	10,857	15,373	22,618	17,884	11,737	8,431	7,635	9,608	7,960	6,083
70%	4,401	6,657	9,754	12,155	16,358	15,500	10,094	7,427	6,990	8,871	5,327	5,285
80%	4,000	5,787	7,341	10,446	13,659	12,316	8,529	7,028	6,450	7,752	4,466	4,822
90%	3,039	4,471	6,370	9,425	11,071	8,460	7,156	5,787	6,145	4,765	3,992	3,521
Long Term												
Full Simulation Period[a]	6,443	12,240	21,031	35,843	45,193	35,436	22,760	15,220	10,618	10,157	7,442	12,045
Water Year Types[b,c]												
Wet (32%)	8,294	17,532	38,344	69,721	81,768	64,062	40,542	26,583	16,592	11,403	9,239	22,778
Above Normal (15%)	6,029	13,013	19,036	38,894	50,702	43,650	24,065	17,363	10,171	12,539	9,314	13,569
Below Normal (17%)	5,727	10,062	13,889	19,160	30,527	19,416	15,992	10,661	8,060	11,839	8,755	7,242
Dry (22%)	5,567	9,566	11,619	13,948	21,093	17,438	11,327	7,586	7,664	9,106	4,779	4,991
Critical (15%)	4,995	6,556	7,962	11,698	13,697	10,887	7,974	5,223	5,535	4,689	4,142	3,451

Proposed Project

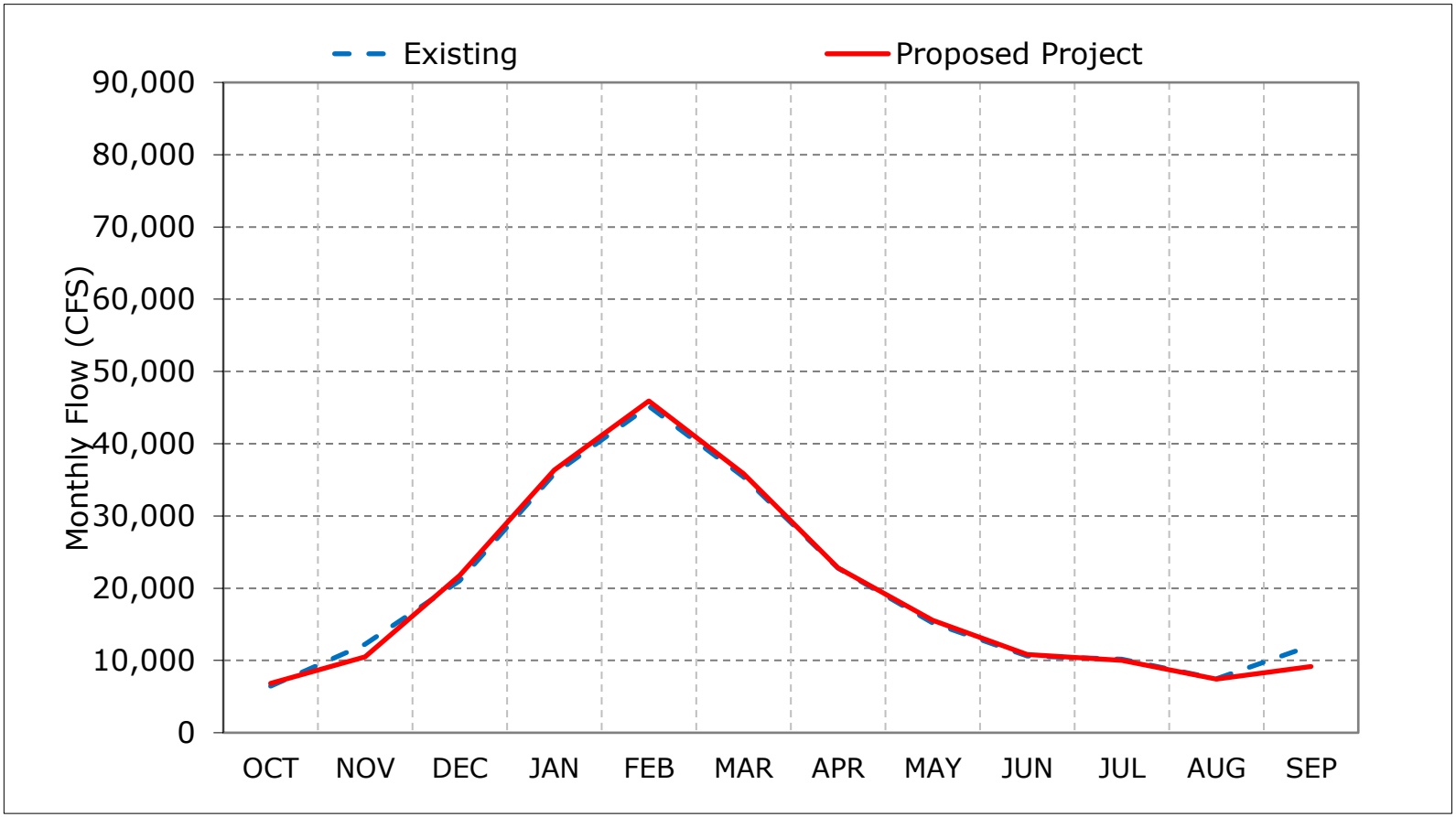
Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	9,937	17,954	56,836	86,691	105,510	76,139	54,110	34,923	20,636	14,174	9,685	14,502
20%	9,027	10,679	31,820	57,625	67,442	52,546	37,257	24,595	11,911	13,667	9,395	14,071
30%	7,780	9,424	19,243	40,753	54,662	38,414	21,618	14,898	8,754	12,506	9,156	13,611
40%	6,922	8,747	15,330	26,124	45,380	29,980	19,762	11,191	8,454	11,067	8,881	12,676
50%	6,264	8,425	11,736	20,661	30,078	22,481	14,582	10,449	8,321	10,295	8,392	8,418
60%	5,265	7,142	10,934	15,659	22,930	18,285	11,446	9,443	8,069	9,203	7,519	5,894
70%	4,323	6,598	9,655	12,166	17,577	15,546	10,031	8,270	7,478	8,558	5,467	5,180
80%	4,095	5,593	8,094	9,957	14,129	12,099	8,872	7,453	6,813	7,127	4,708	4,842
90%	3,283	4,334	6,288	9,119	11,419	8,804	7,457	6,288	5,965	4,816	4,226	3,564
Long Term												
Full Simulation Period[a]	6,829	10,495	21,780	36,351	45,915	35,853	22,820	15,570	10,834	10,021	7,439	9,182
Water Year Types[b,c]												
Wet (32%)	8,724	15,248	40,463	70,723	82,367	64,279	40,515	26,564	16,652	11,311	9,182	13,574
Above Normal (15%)	6,635	10,705	19,188	39,908	51,897	45,029	24,057	17,449	10,693	12,587	9,262	14,076
Below Normal (17%)	6,244	8,481	13,946	20,111	32,366	19,680	16,041	11,334	8,638	11,593	8,551	7,079
Dry (22%)	5,659	8,121	11,850	13,778	21,098	17,770	11,497	8,484	7,795	8,628	4,851	4,965
Critical (15%)	5,353	5,894	7,928	11,129	13,987	11,084	8,138	5,445	5,488	4,915	4,426	3,550

Proposed Project minus Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	797	**-852**	4,552	234	324	2,222	**-1**	**-3**	**-12**	**-106**	**-33**	**-10,118**
20%	890	**-5,006**	2,353	1,958	49	**-5**	**0**	384	**0**	430	**-32**	**-9,881**
30%	243	**-5,225**	1,075	410	2,536	2,576	**-233**	**-3**	187	214	103	**-1,145**
40%	446	**-3,525**	526	500	2,856	**-21**	98	**-5**	201	**-187**	11	**-628**
50%	324	**-2,159**	**-414**	2,289	**-8**	**-6**	**-15**	848	339	**-388**	**-304**	75
60%	342	**-602**	77	285	312	401	**-291**	1,012	434	**-405**	**-440**	**-189**
70%	**-78**	**-59**	**-99**	11	1,219	46	**-62**	842	488	**-314**	141	**-105**
80%	95	**-193**	753	**-489**	470	**-217**	343	425	364	**-625**	242	21
90%	243	**-137**	**-83**	**-306**	348	344	301	501	**-180**	52	234	42
Long Term												
Full Simulation Period[a]	386	**-1,746**	750	508	722	417	60	351	216	**-136**	**-3**	**-2,863**
Water Year Types[b,c]												
Wet (32%)	430	**-2,283**	2,119	1,002	599	217	**-27**	**-20**	59	**-91**	**-57**	**-9,203**
Above Normal (15%)	607	**-2,307**	151	1,015	1,195	1,379	**-8**	86	522	48	**-52**	507
Below Normal (17%)	517	**-1,581**	57	950	1,839	264	49	672	578	**-246**	**-203**	**-162**
Dry (22%)	93	**-1,445**	231	**-170**	5	331	170	898	131	**-478**	73	**-27**
Critical (15%)	358	**-663**	**-33**	**-569**	290	197	164	223	**-47**	226	284	99

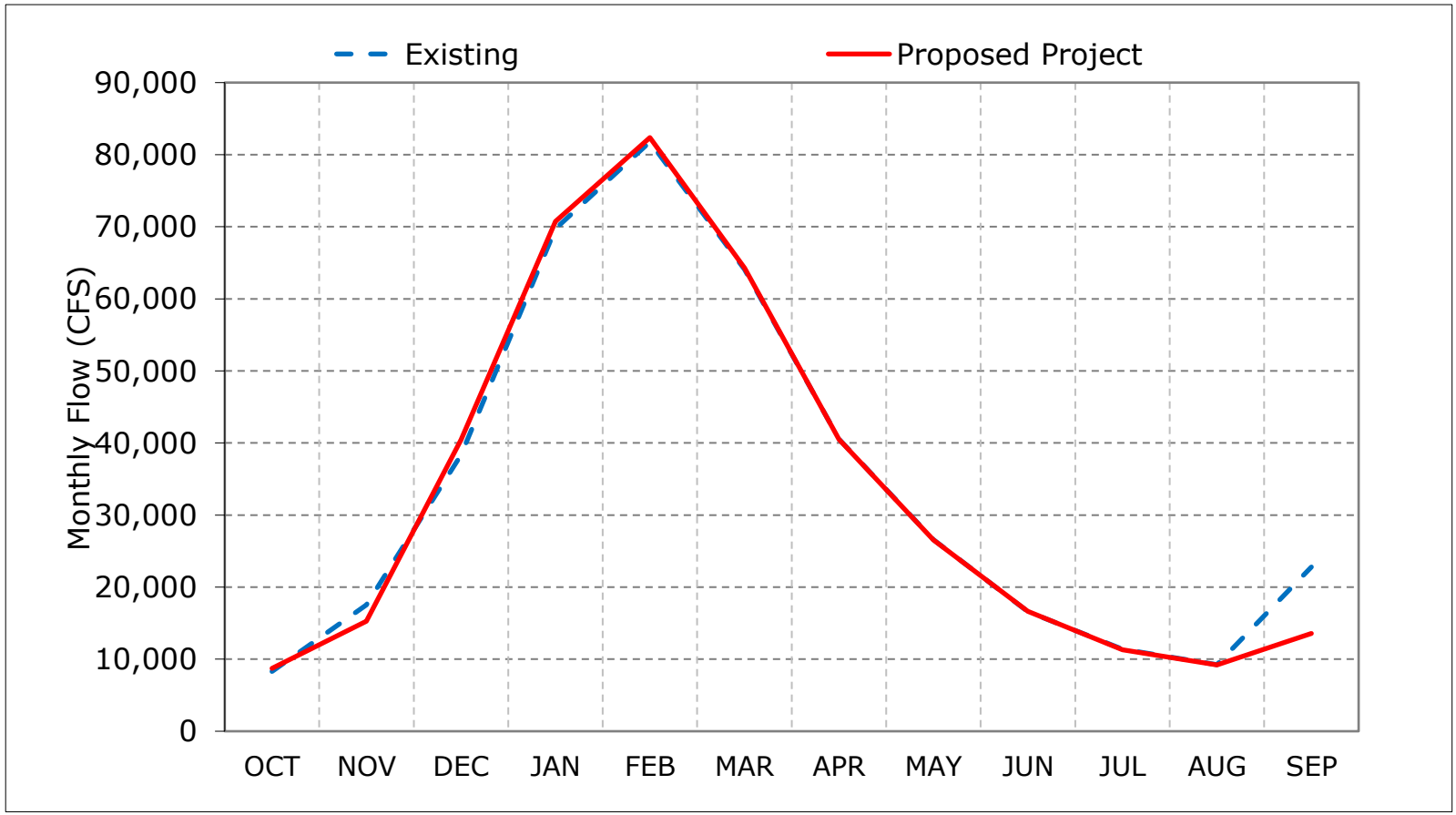
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

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



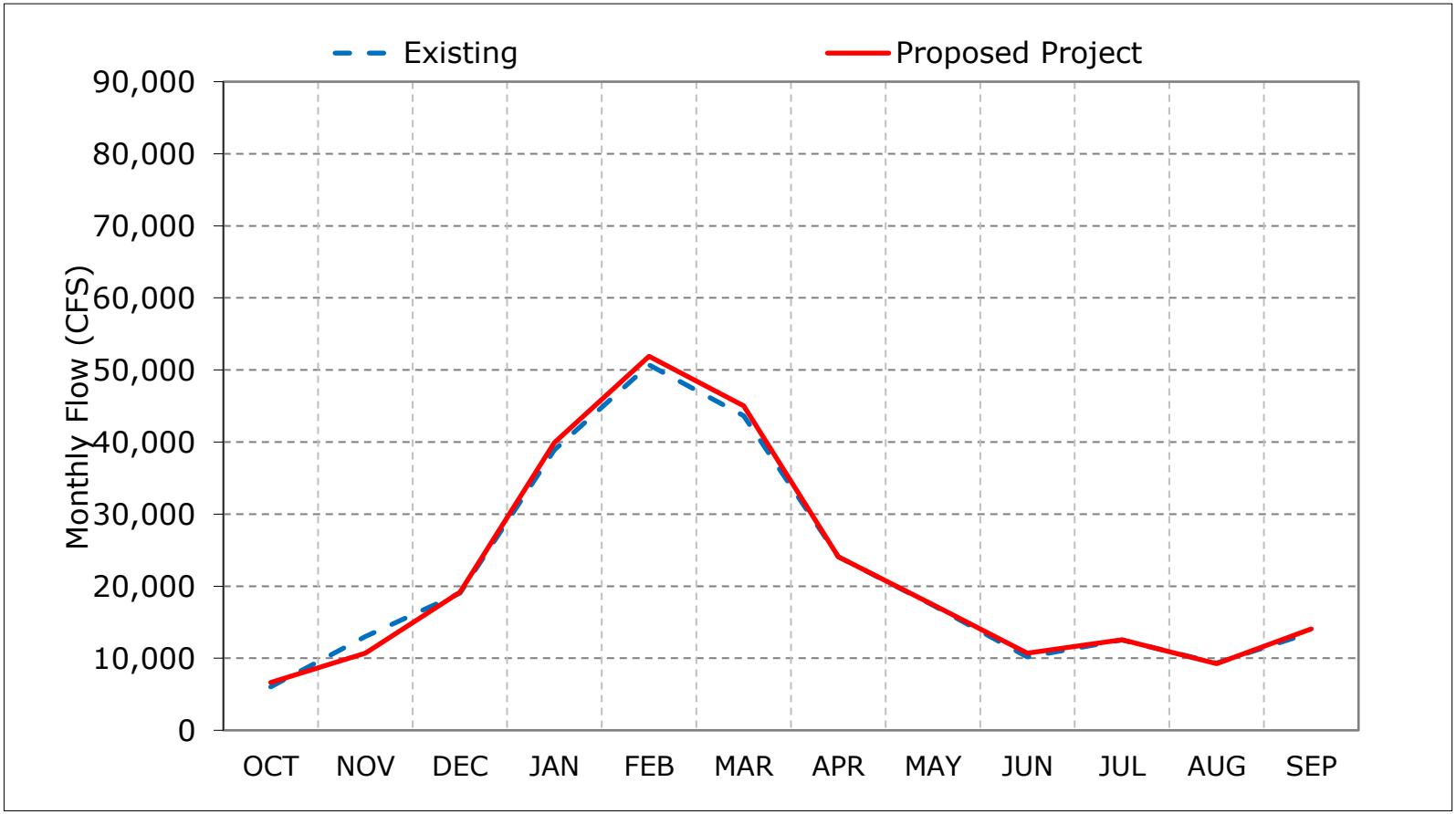
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



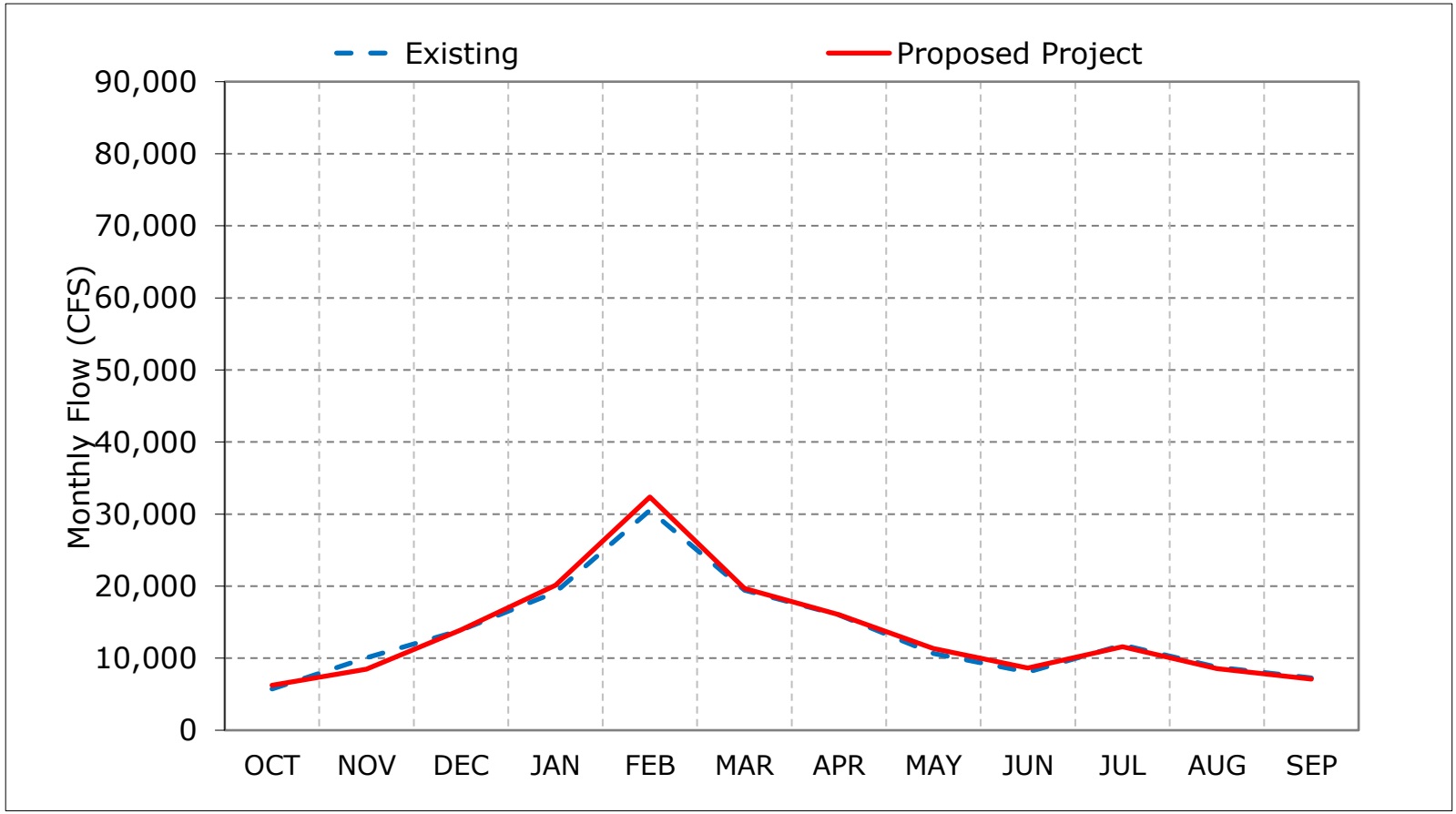
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



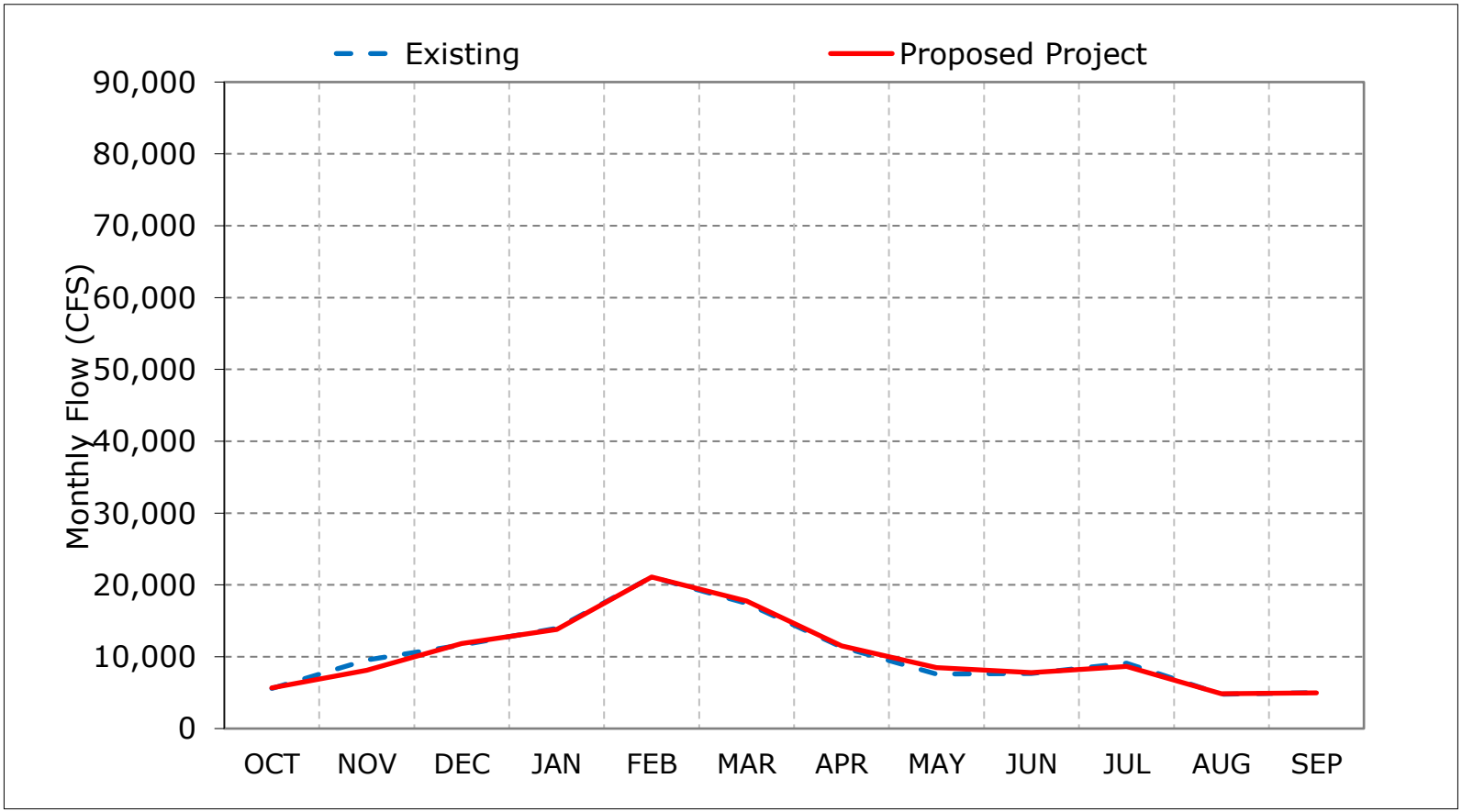
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



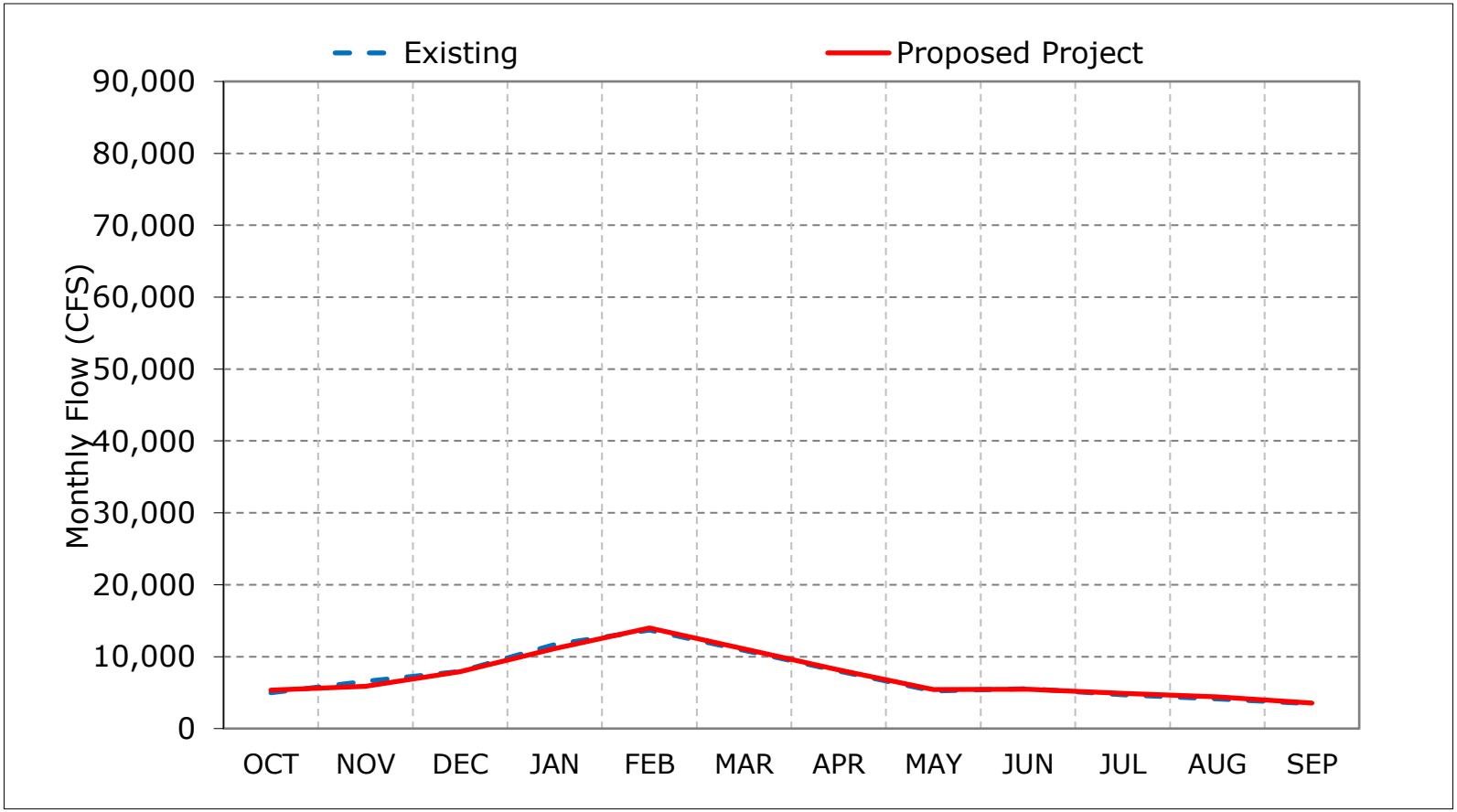
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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

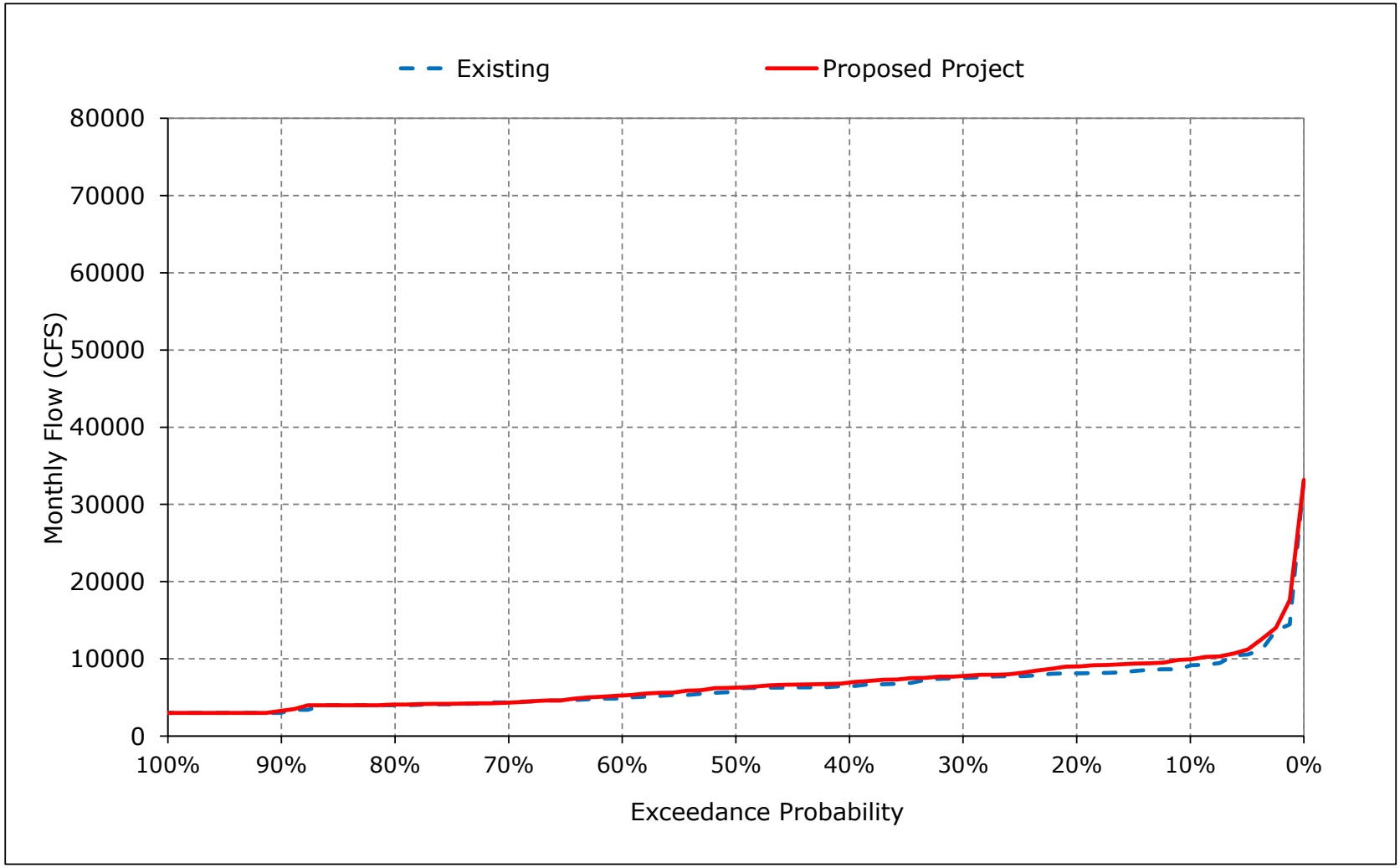


Figure 4-8. Sacramento River Flow at Rio Vista, November

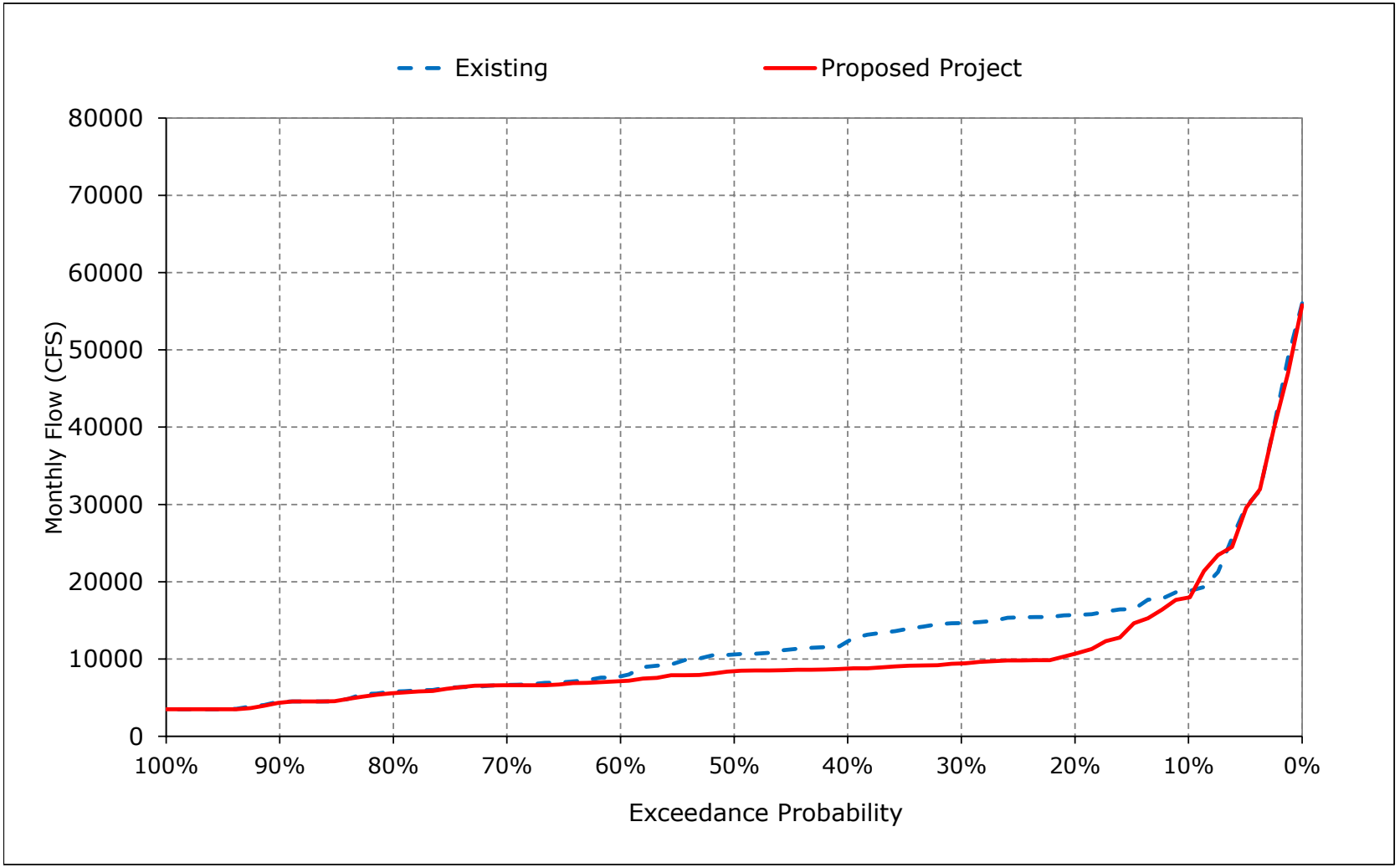


Figure 4-9. Sacramento River Flow at Rio Vista, December

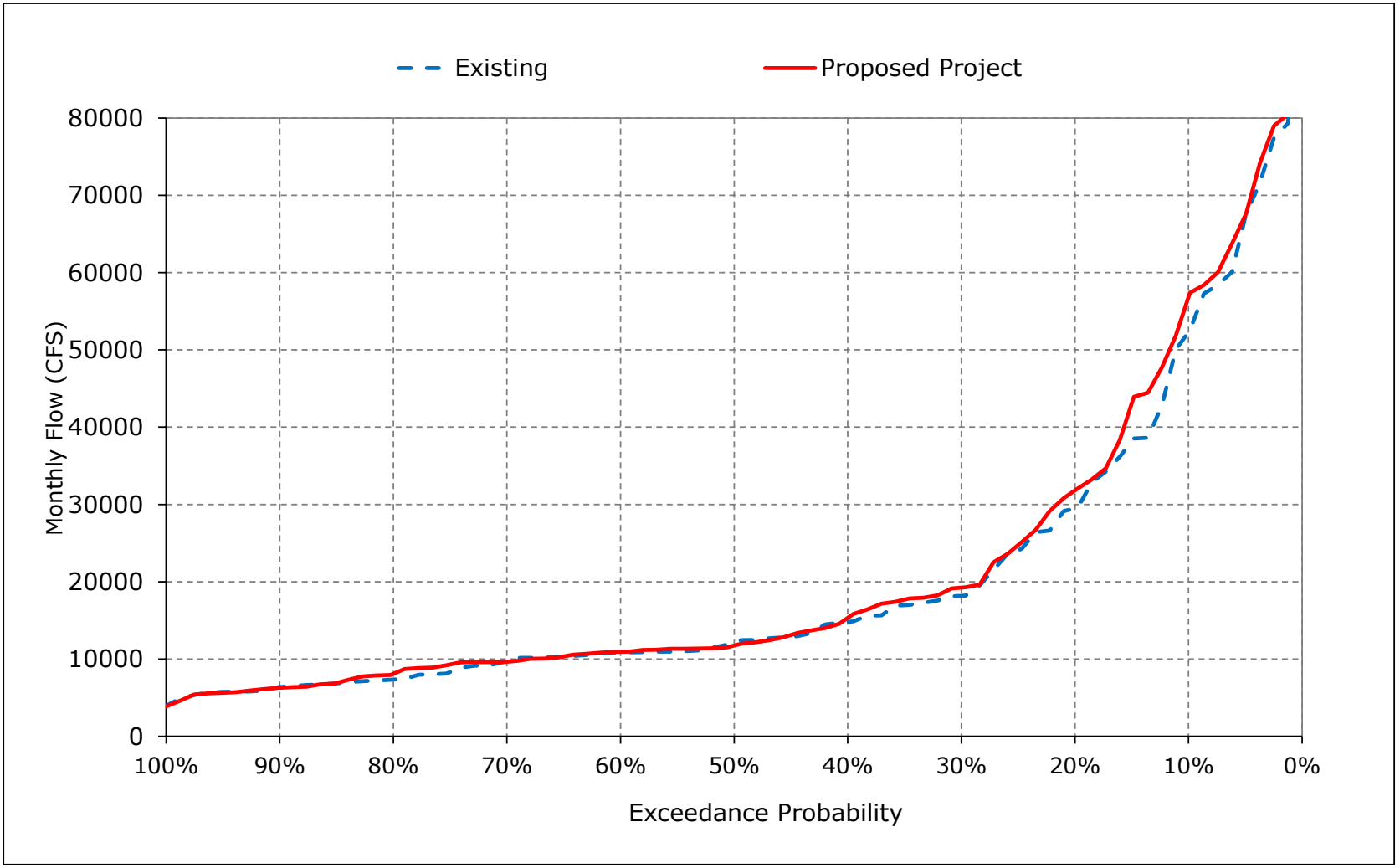


Figure 4-10. Sacramento River Flow at Rio Vista, January

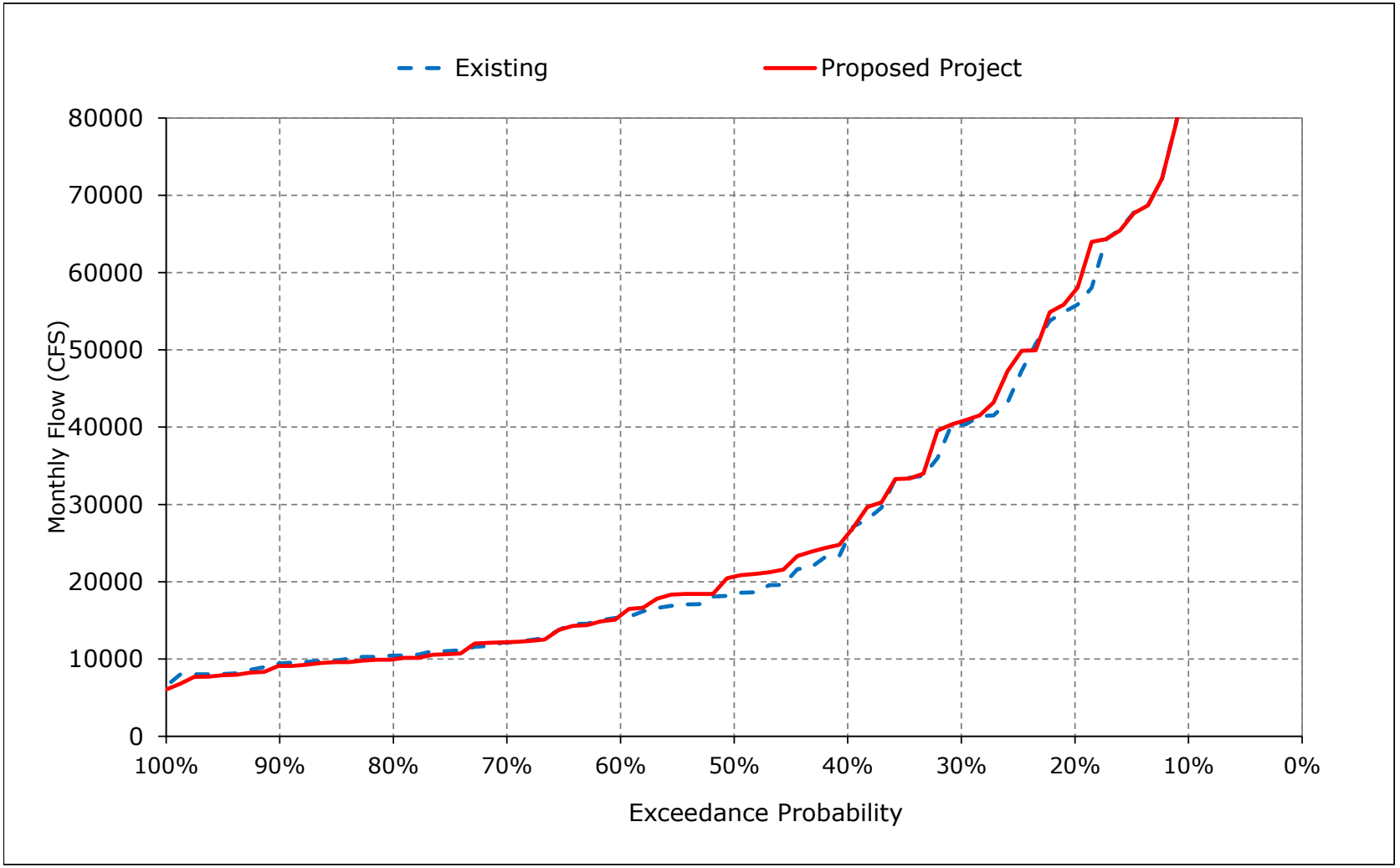


Figure 4-11. Sacramento River Flow at Rio Vista, February

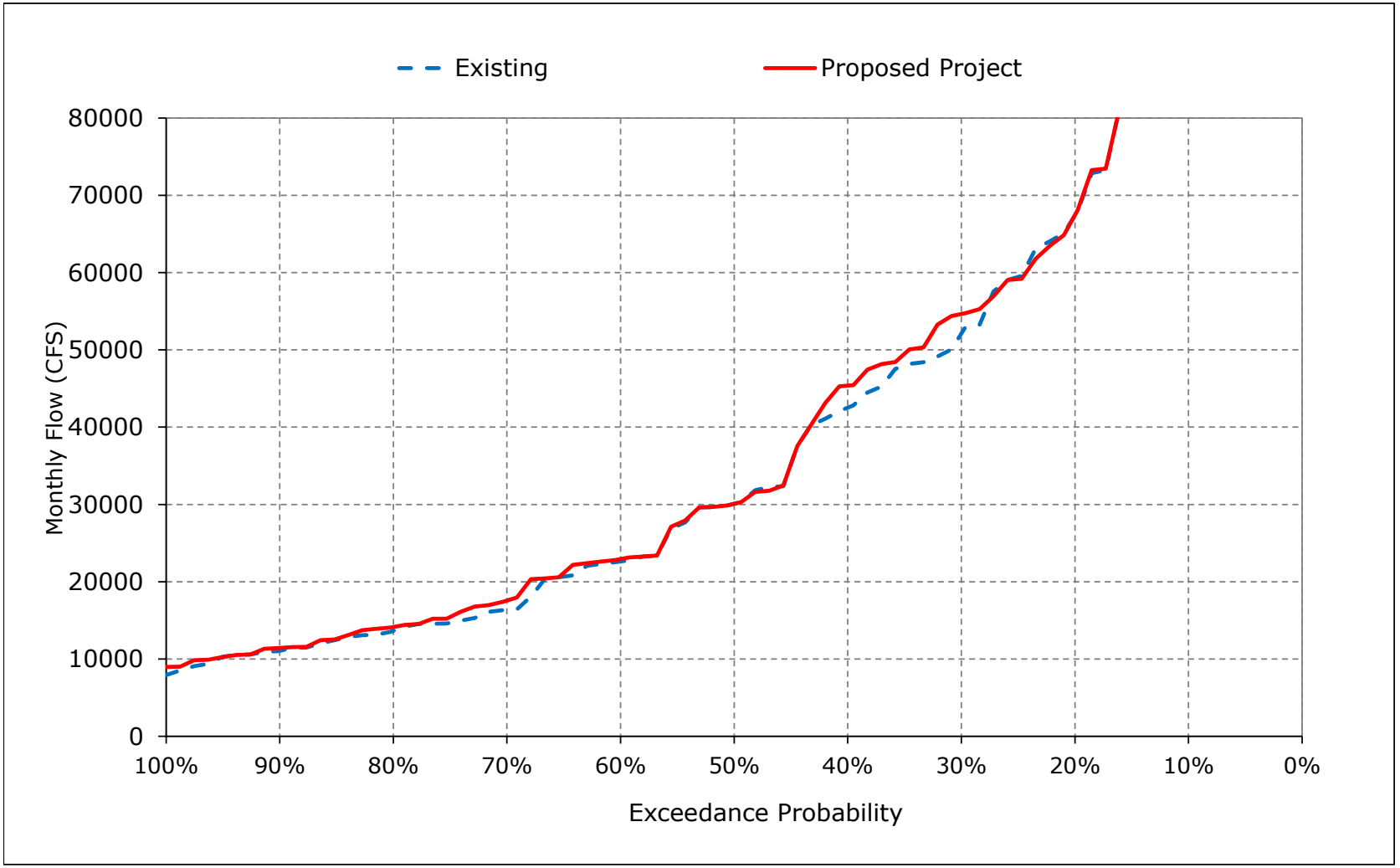


Figure 4-12. Sacramento River Flow at Rio Vista, March

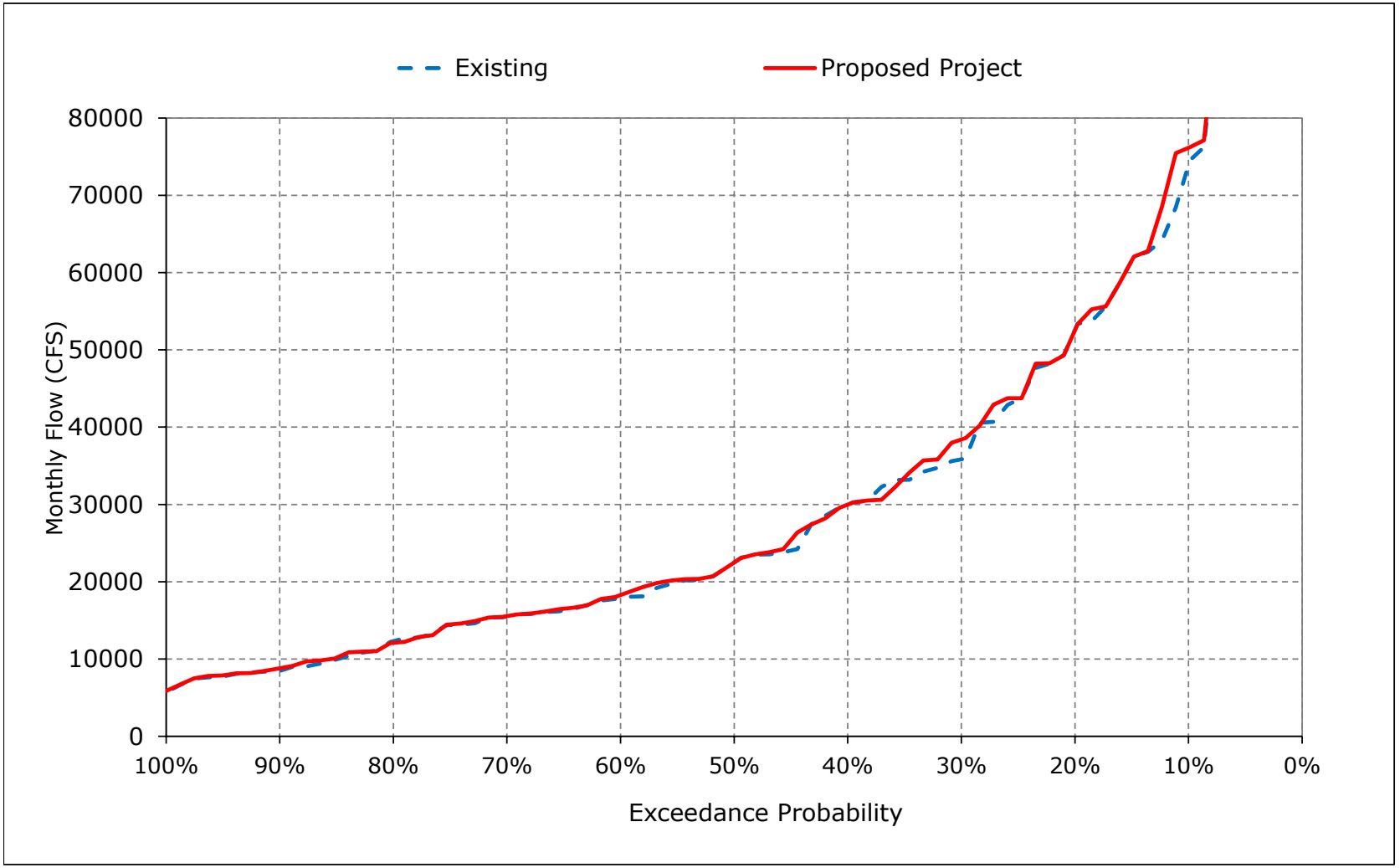


Figure 4-13. Sacramento River Flow at Rio Vista, April

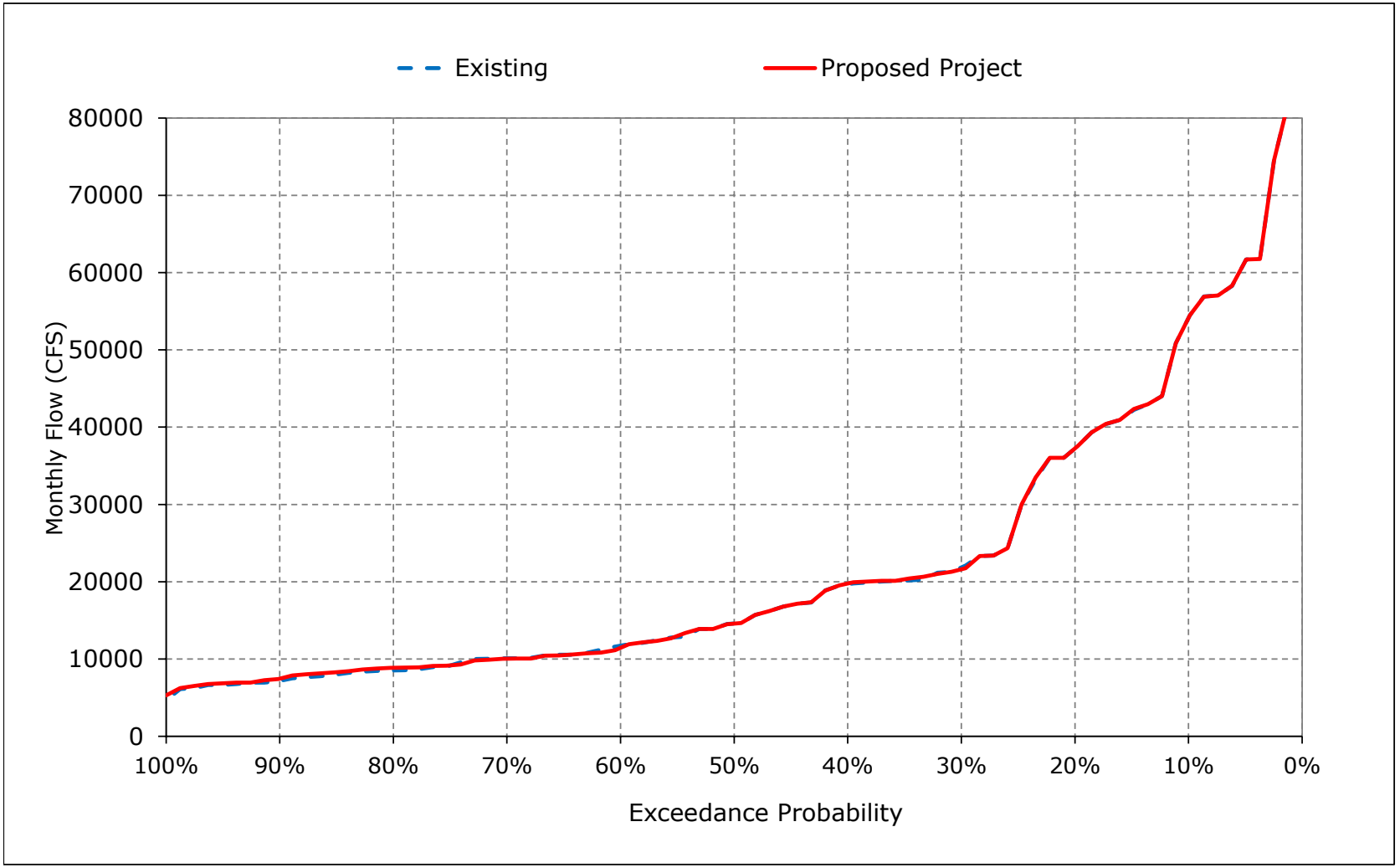


Figure 4-14. Sacramento River Flow at Rio Vista, May

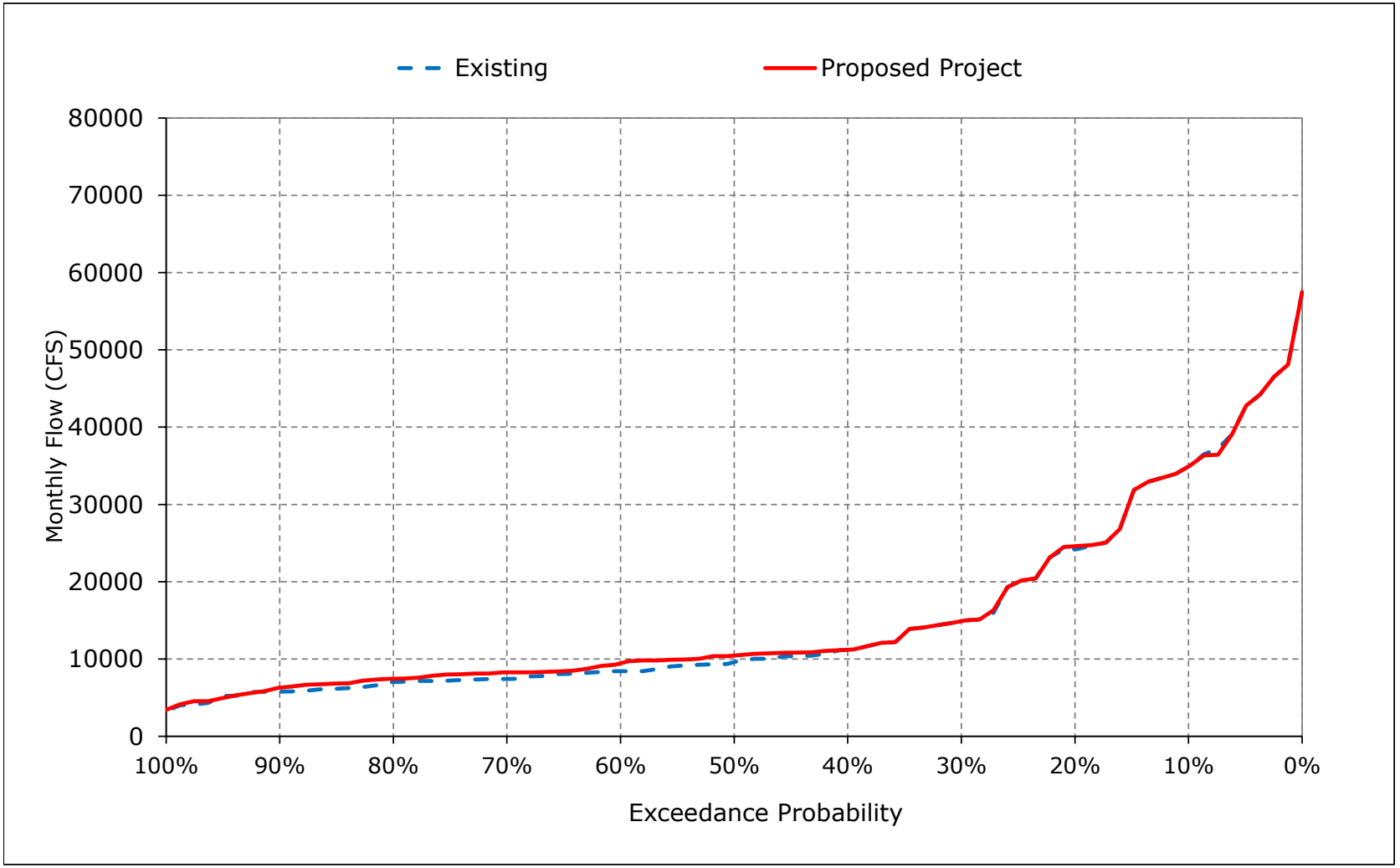


Figure 4-15. Sacramento River Flow at Rio Vista, June

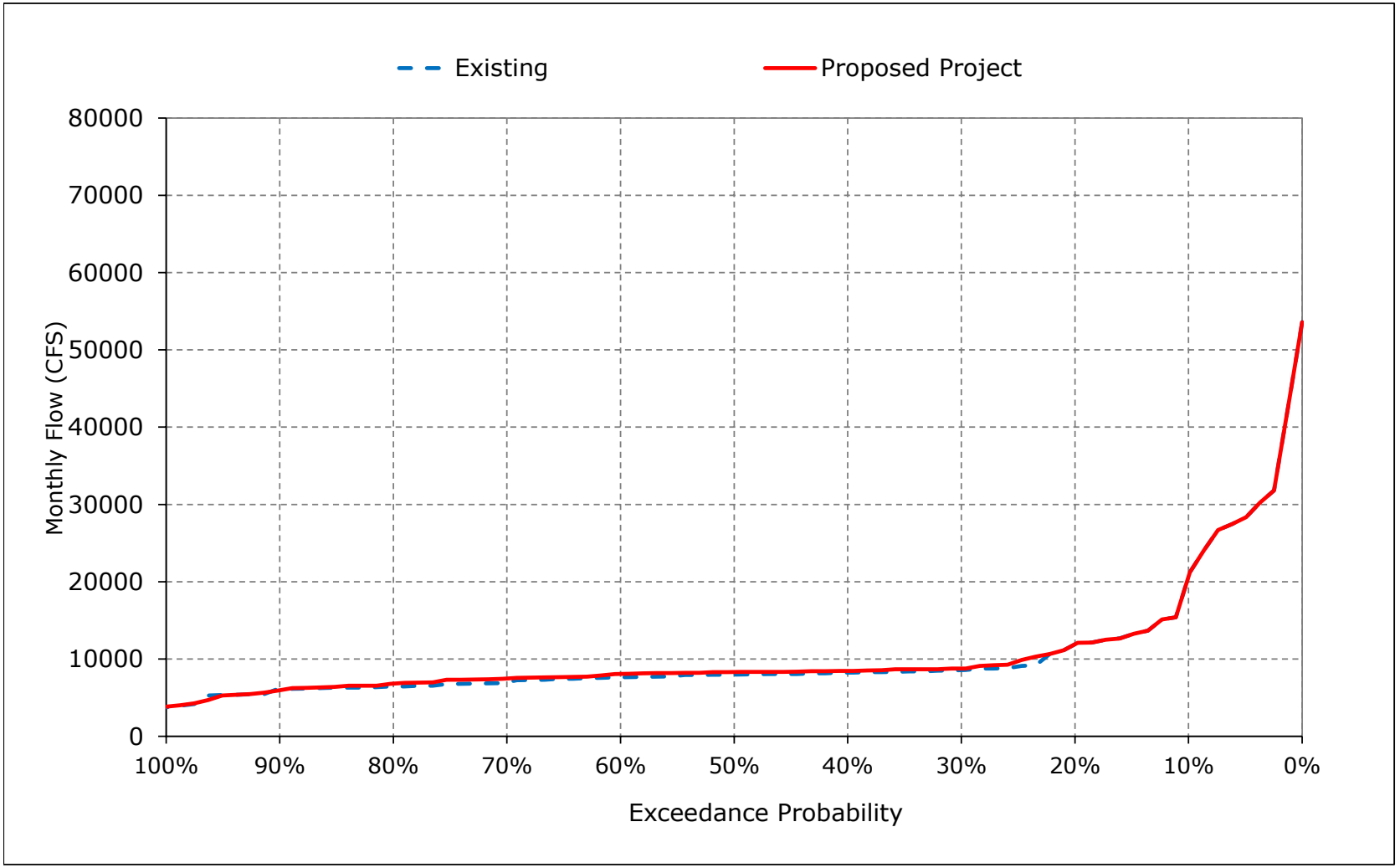


Figure 4-16. Sacramento River Flow at Rio Vista, July

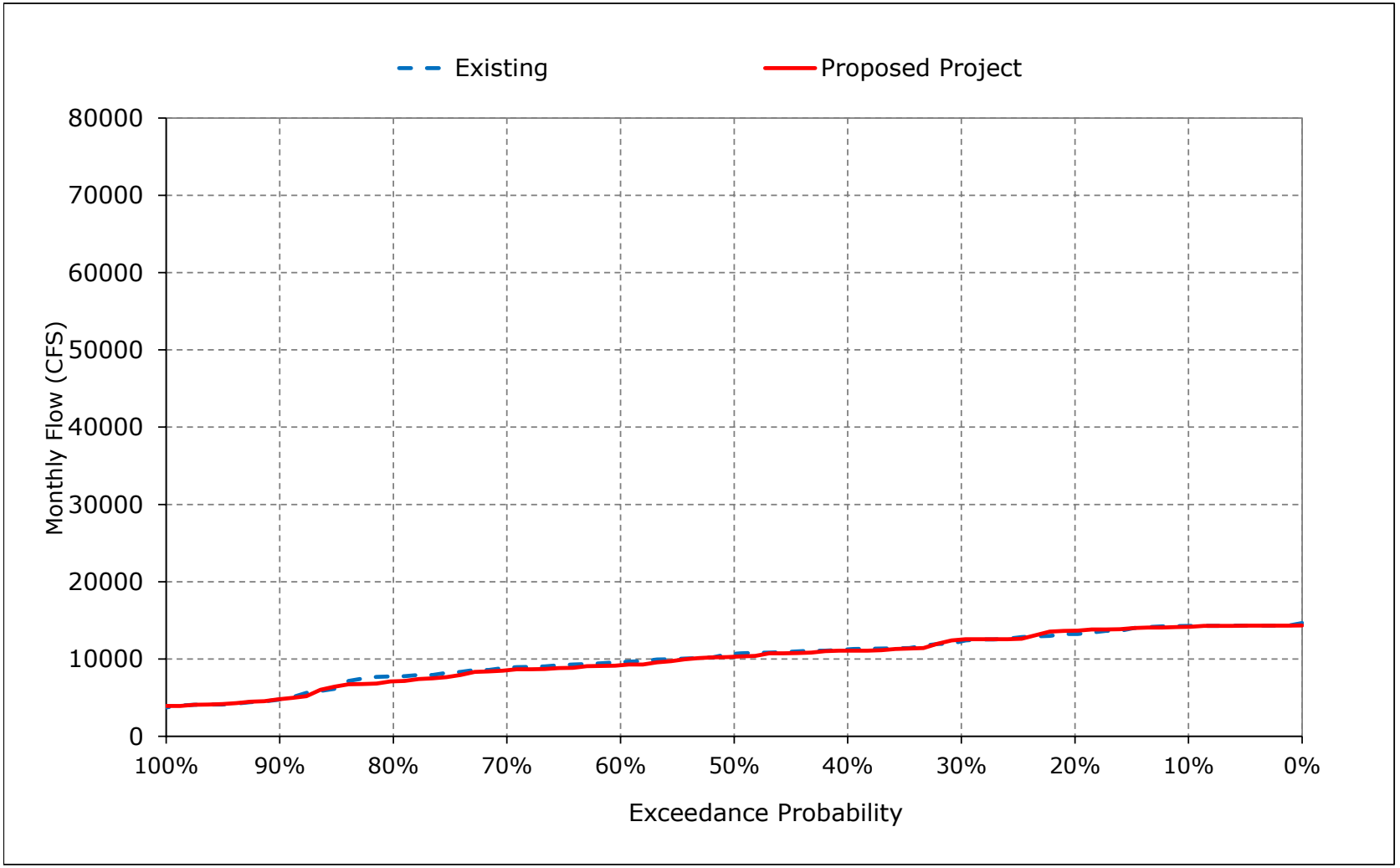


Figure 4-17. Sacramento River Flow at Rio Vista, August

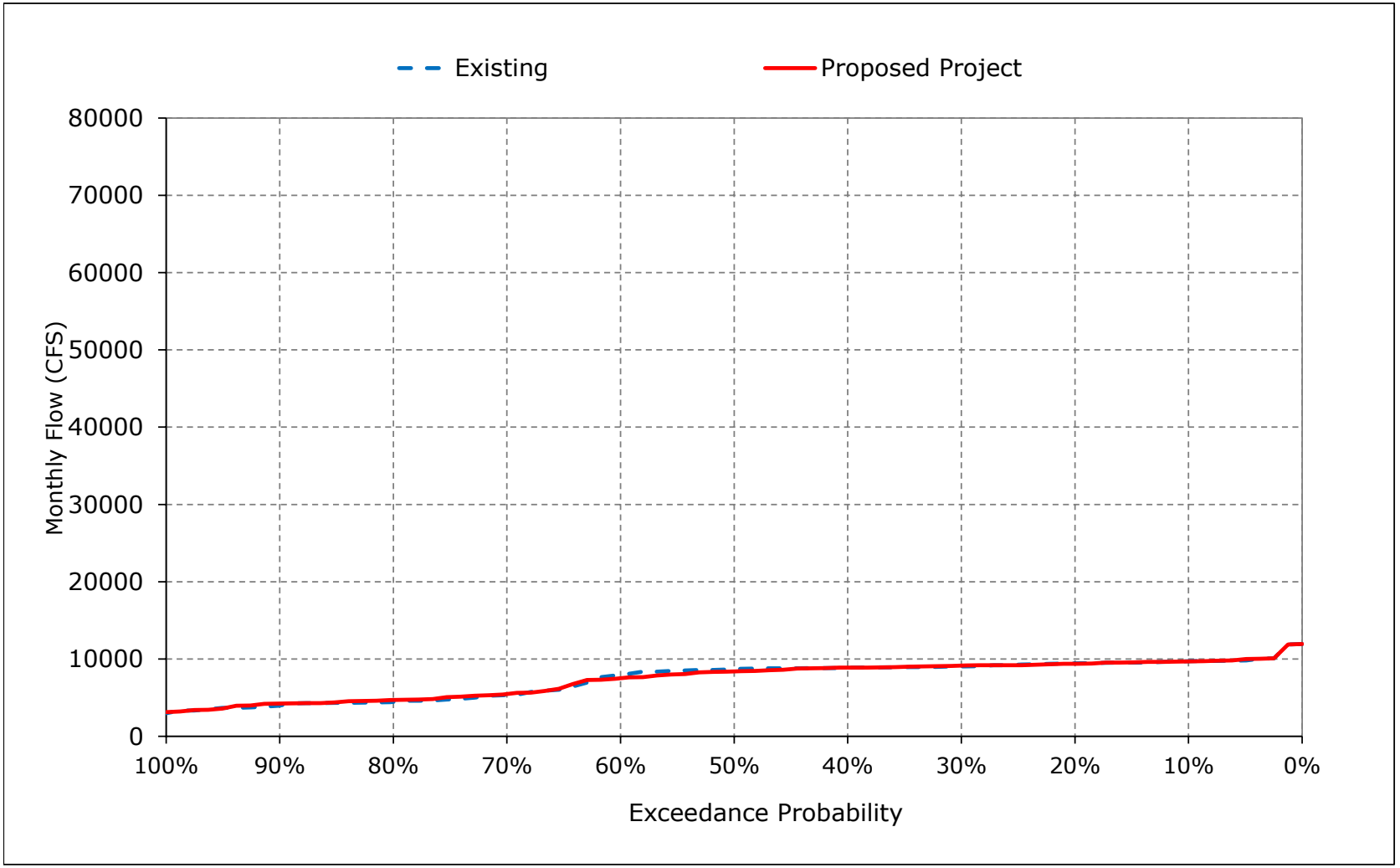


Figure 4-18. Sacramento River Flow at Rio Vista, September

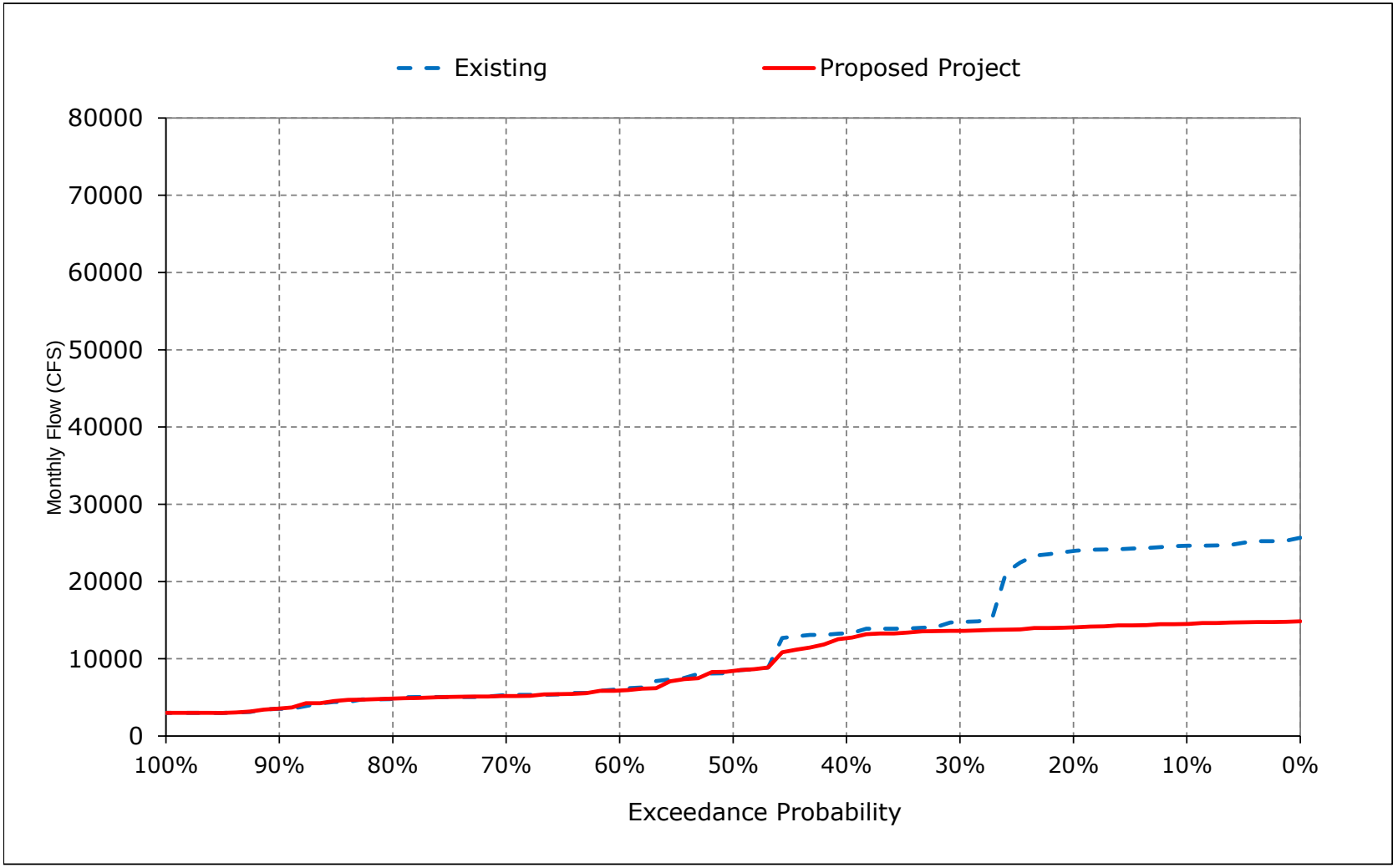


Table 5-1. San Joaquin River at Vernalis, Monthly Flow

Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,478	2,775	4,265	10,211	14,013	14,227	12,024	11,059	10,024	7,130	3,076	3,290
20%	3,115	2,561	2,816	5,121	9,911	9,351	7,937	7,369	6,949	3,529	2,780	2,817
30%	2,940	2,367	2,311	3,370	6,914	8,049	6,466	5,322	3,334	2,404	2,422	2,570
40%	2,757	2,182	2,116	2,572	4,292	6,202	5,382	4,426	2,962	1,783	1,880	2,321
50%	2,531	2,028	2,006	2,324	3,522	3,942	4,391	3,685	2,323	1,587	1,520	1,940
60%	2,405	1,957	1,936	2,179	2,808	3,420	3,513	2,937	1,845	1,393	1,437	1,842
70%	2,219	1,853	1,840	1,955	2,280	2,363	3,001	2,618	1,505	1,209	1,345	1,779
80%	2,049	1,746	1,740	1,749	2,228	1,888	2,262	2,176	1,426	1,140	1,265	1,670
90%	1,780	1,609	1,612	1,575	1,956	1,674	1,622	1,680	1,043	923	1,087	1,495
Long Term												
Full Simulation Period[a]	2,647	2,387	3,115	4,766	6,366	6,884	5,961	5,364	4,211	3,170	2,057	2,345
Water Year Types[b,c]												
Wet (32%)	2,976	3,062	4,916	9,348	11,567	13,134	10,528	9,615	8,281	6,511	3,177	3,318
Above Normal (15%)	2,337	1,975	2,828	4,077	6,178	7,223	5,874	5,054	4,541	2,744	2,026	2,377
Below Normal (17%)	2,623	2,191	2,628	3,008	5,667	4,920	4,897	4,380	2,478	1,779	1,840	2,096
Dry (22%)	2,632	2,157	2,036	2,065	2,477	2,650	3,125	2,672	1,589	1,220	1,330	1,767
Critical (15%)	2,293	1,907	1,686	1,627	1,937	1,643	1,646	1,652	1,021	907	1,004	1,358

Proposed Project

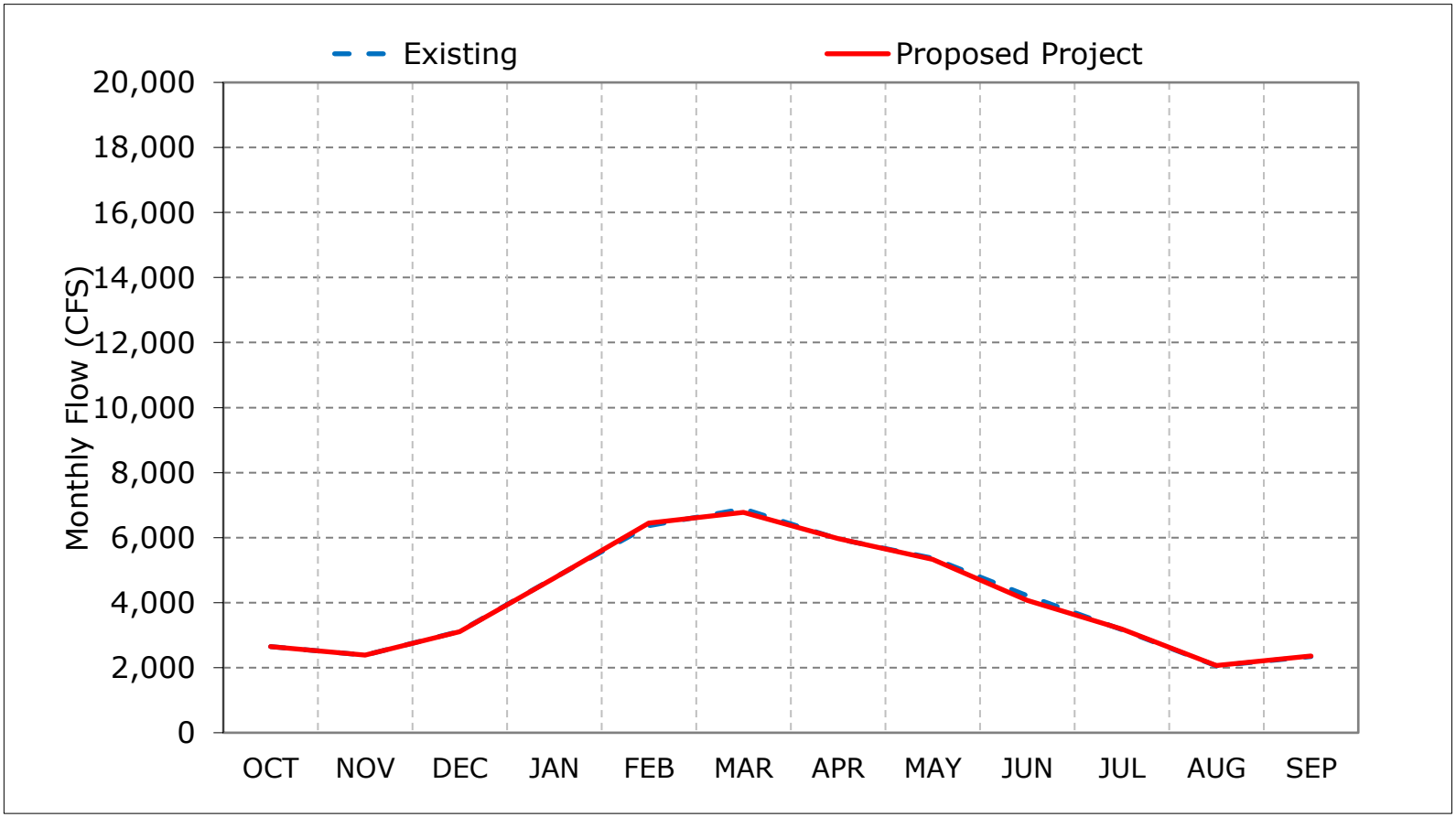
Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,479	2,776	4,265	10,216	14,903	14,724	12,153	11,839	10,077	7,137	3,464	3,511
20%	3,111	2,546	2,824	5,151	9,887	9,602	8,478	7,364	6,957	3,546	2,791	2,830
30%	2,941	2,353	2,290	3,541	7,093	7,868	6,633	5,277	2,856	2,422	2,432	2,528
40%	2,792	2,183	2,106	2,630	4,533	6,153	5,517	4,504	2,411	1,776	1,870	2,295
50%	2,556	2,028	2,006	2,407	3,486	3,942	4,456	3,532	2,101	1,578	1,517	1,943
60%	2,400	1,957	1,936	2,183	2,685	3,280	3,749	3,196	1,790	1,377	1,425	1,835
70%	2,197	1,853	1,840	1,941	2,272	2,363	2,799	2,355	1,438	1,202	1,345	1,747
80%	2,034	1,747	1,740	1,753	2,006	1,733	2,001	2,068	1,315	1,099	1,248	1,670
90%	1,759	1,609	1,612	1,569	1,768	1,499	1,515	1,523	999	908	1,079	1,479
Long Term												
Full Simulation Period[a]	2,650	2,383	3,103	4,759	6,447	6,777	5,970	5,328	4,070	3,189	2,067	2,360
Water Year Types[b,c]												
Wet (32%)	2,975	3,059	4,887	9,328	11,916	13,096	10,523	9,494	8,148	6,606	3,235	3,378
Above Normal (15%)	2,320	1,975	2,828	4,075	6,266	7,190	6,109	5,220	4,353	2,752	2,032	2,381
Below Normal (17%)	2,660	2,191	2,628	3,013	5,575	4,753	5,178	4,554	2,274	1,781	1,842	2,095
Dry (22%)	2,611	2,146	2,025	2,061	2,405	2,510	2,887	2,501	1,454	1,198	1,308	1,754
Critical (15%)	2,322	1,907	1,686	1,628	1,856	1,431	1,514	1,554	968	851	973	1,351

Proposed Project minus Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	0	0	5	889	496	129	780	54	8	388	222
20%	**-5**	**-15**	8	30	**-24**	251	541	**-6**	8	18	11	13
30%	2	**-14**	**-21**	171	179	**-181**	167	**-45**	**-478**	18	10	**-43**
40%	35	0	**-10**	58	241	**-49**	135	78	**-551**	**-7**	**-10**	**-27**
50%	25	0	0	82	**-36**	0	65	**-153**	**-222**	**-9**	**-3**	3
60%	**-5**	0	**0**	4	**-123**	**-140**	235	259	**-55**	**-16**	**-12**	**-7**
70%	**-22**	0	0	**-14**	**-8**	0	**-203**	**-263**	**-67**	**-7**	**0**	**-32**
80%	**-15**	0	**0**	3	**-223**	**-155**	**-261**	**-109**	**-111**	**-40**	**-16**	1
90%	**-21**	0	**0**	**-6**	**-187**	**-175**	**-107**	**-156**	**-43**	**-15**	**-7**	**-16**
Long Term												
Full Simulation Period[a]	3	**-3**	**-12**	**-7**	80	**-107**	9	**-36**	**-142**	18	10	15
Water Year Types[b,c]												
Wet (32%)	**-1**	**-3**	**-30**	**-20**	349	**-38**	**-5**	**-121**	**-133**	95	59	60
Above Normal (15%)	**-17**	0	0	**-2**	88	**-33**	235	167	**-188**	8	6	3
Below Normal (17%)	36	0	0	5	**-92**	**-167**	281	174	**-205**	2	2	**-2**
Dry (22%)	**-21**	**-11**	**-11**	**-4**	**-72**	**-140**	**-238**	**-171**	**-135**	**-22**	**-22**	**-13**
Critical (15%)	29	0	0	2	**-81**	**-212**	**-132**	**-98**	**-53**	**-57**	**-32**	**-7**

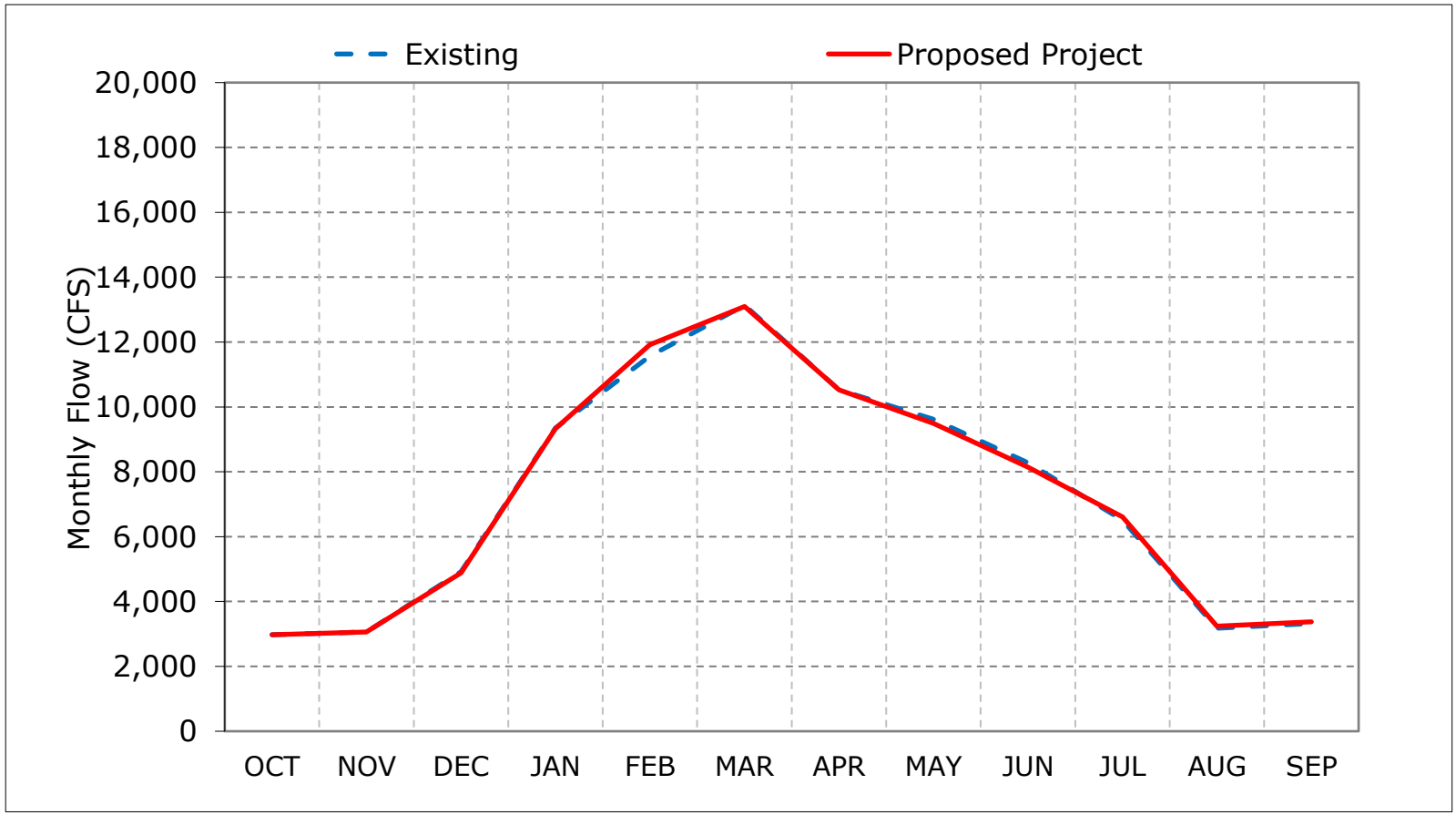
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

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



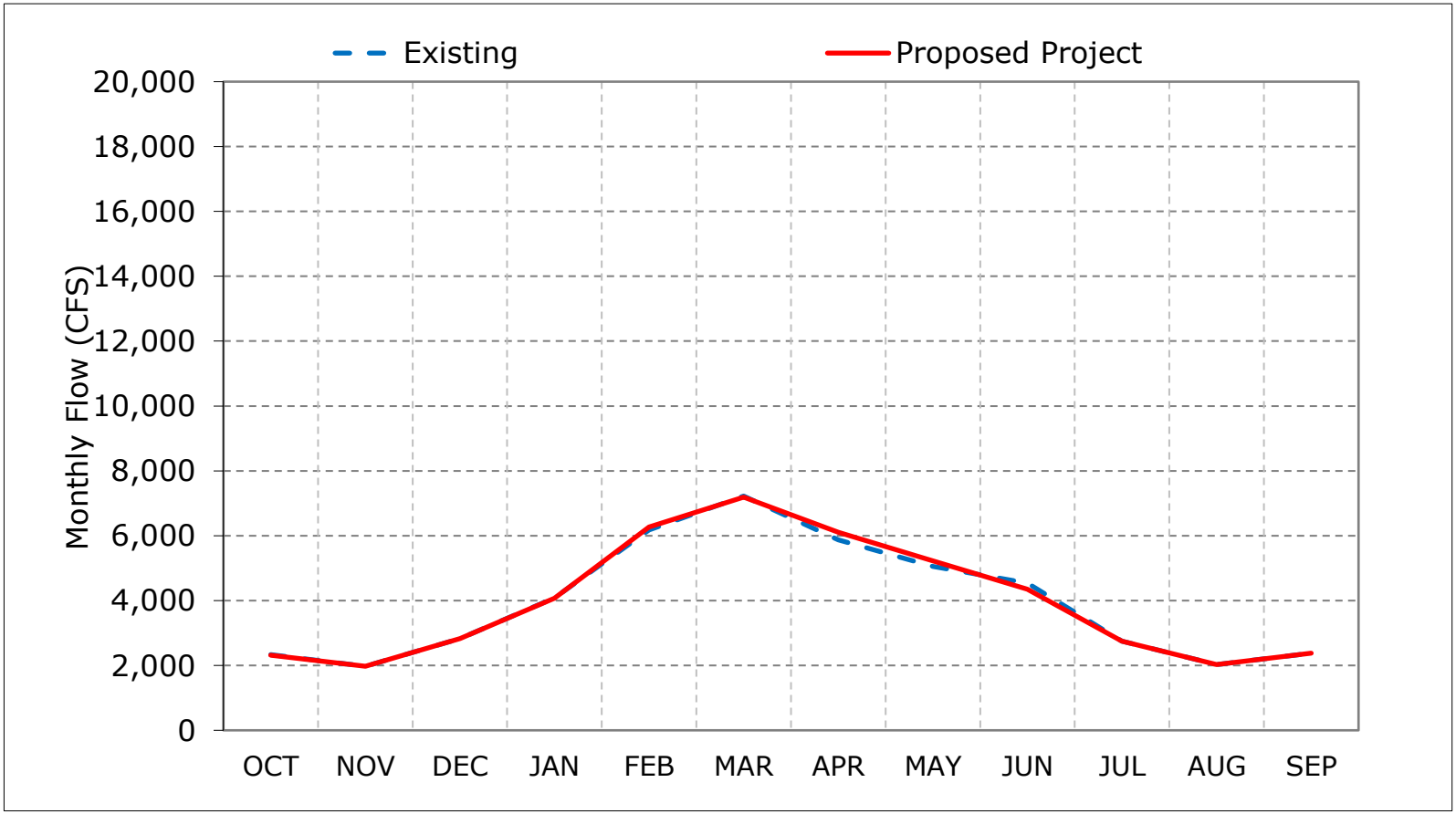
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



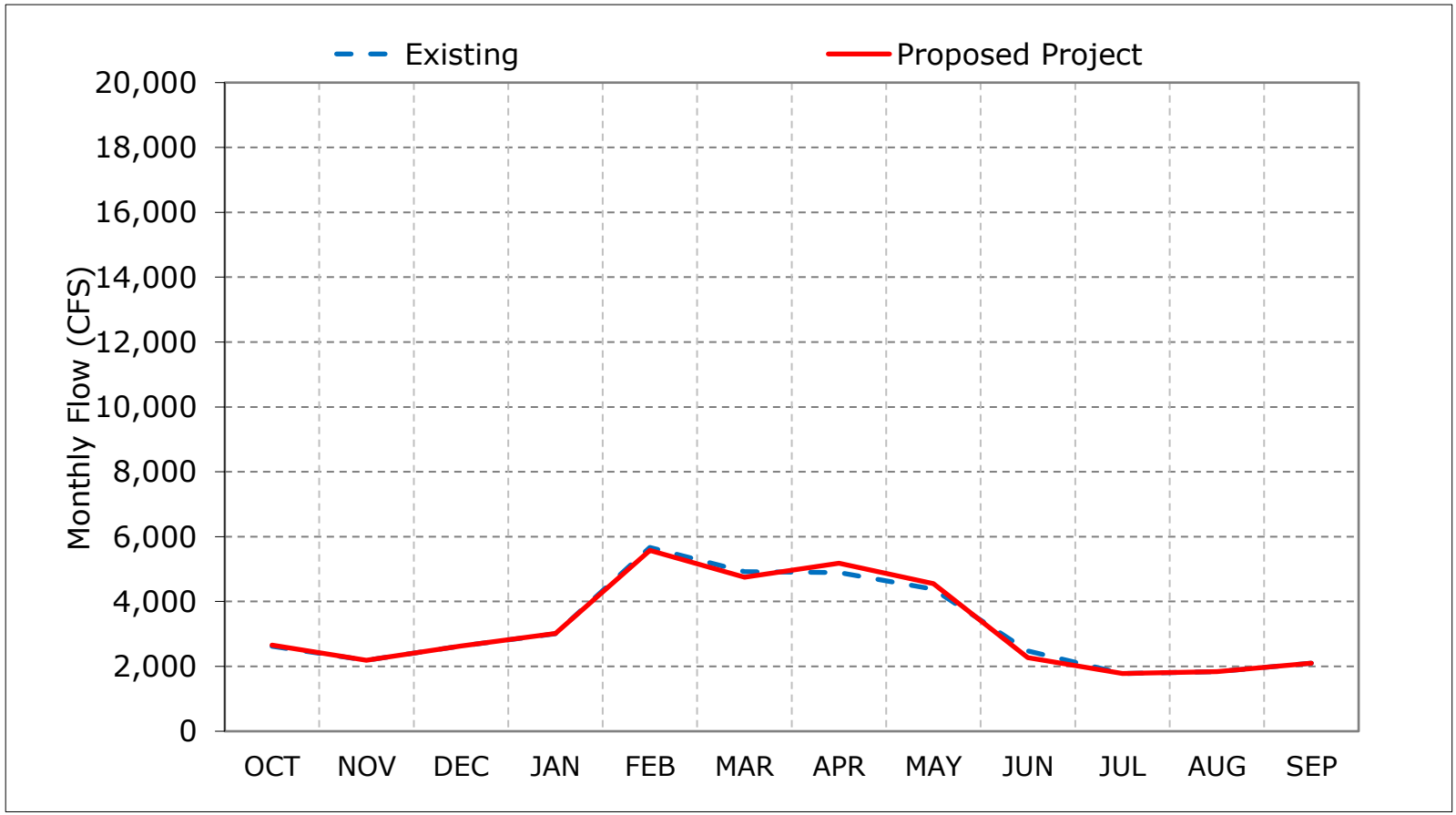
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



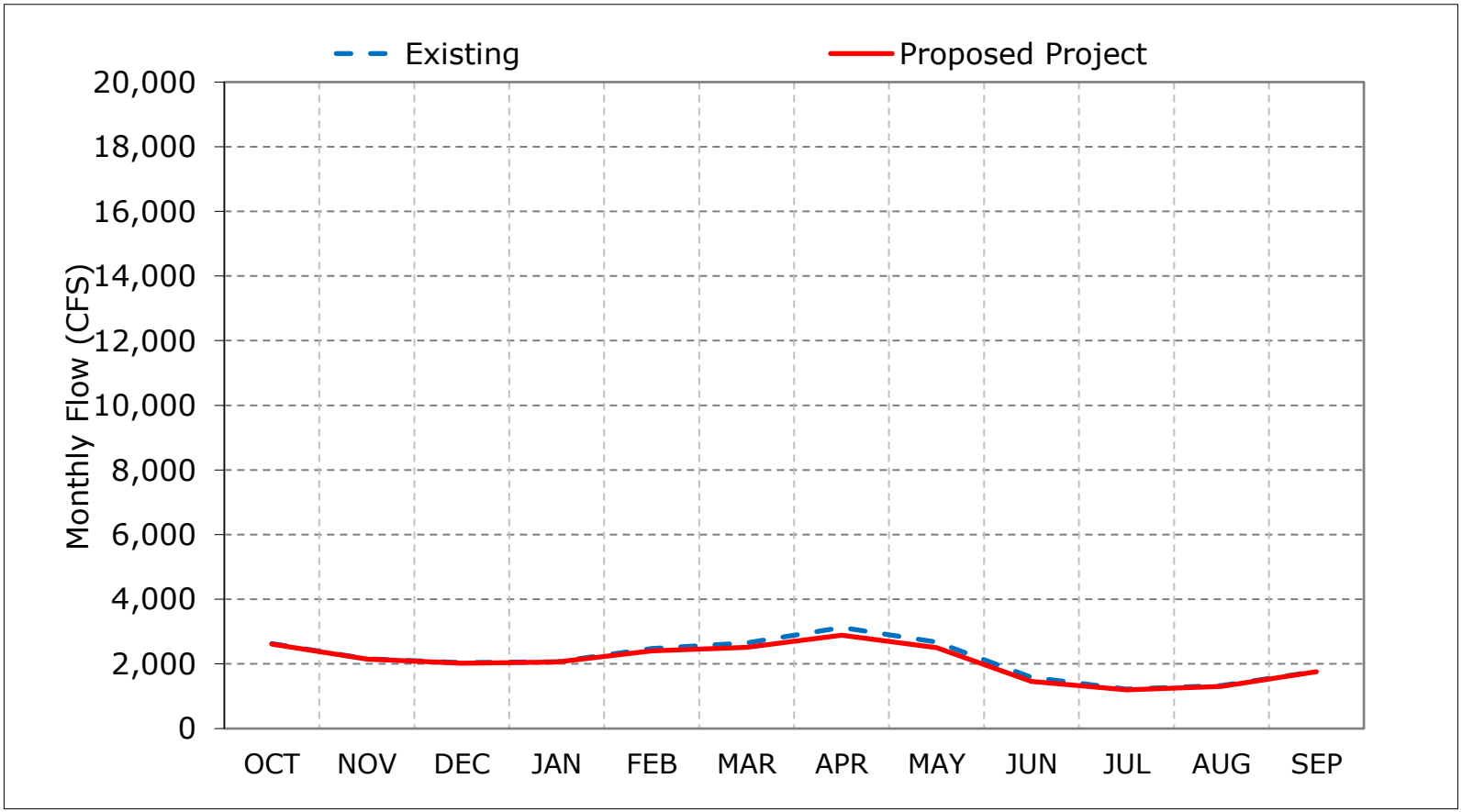
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



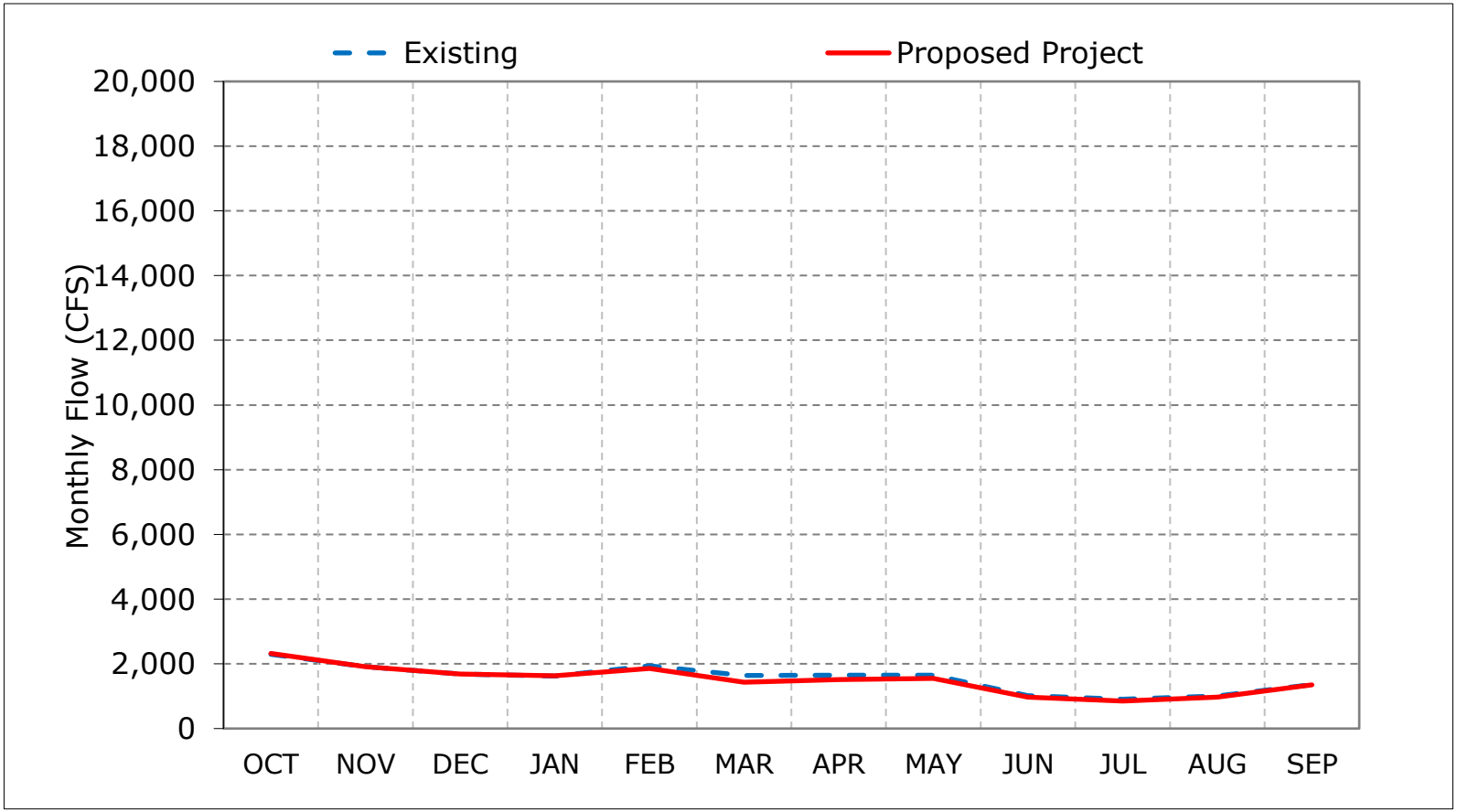
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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

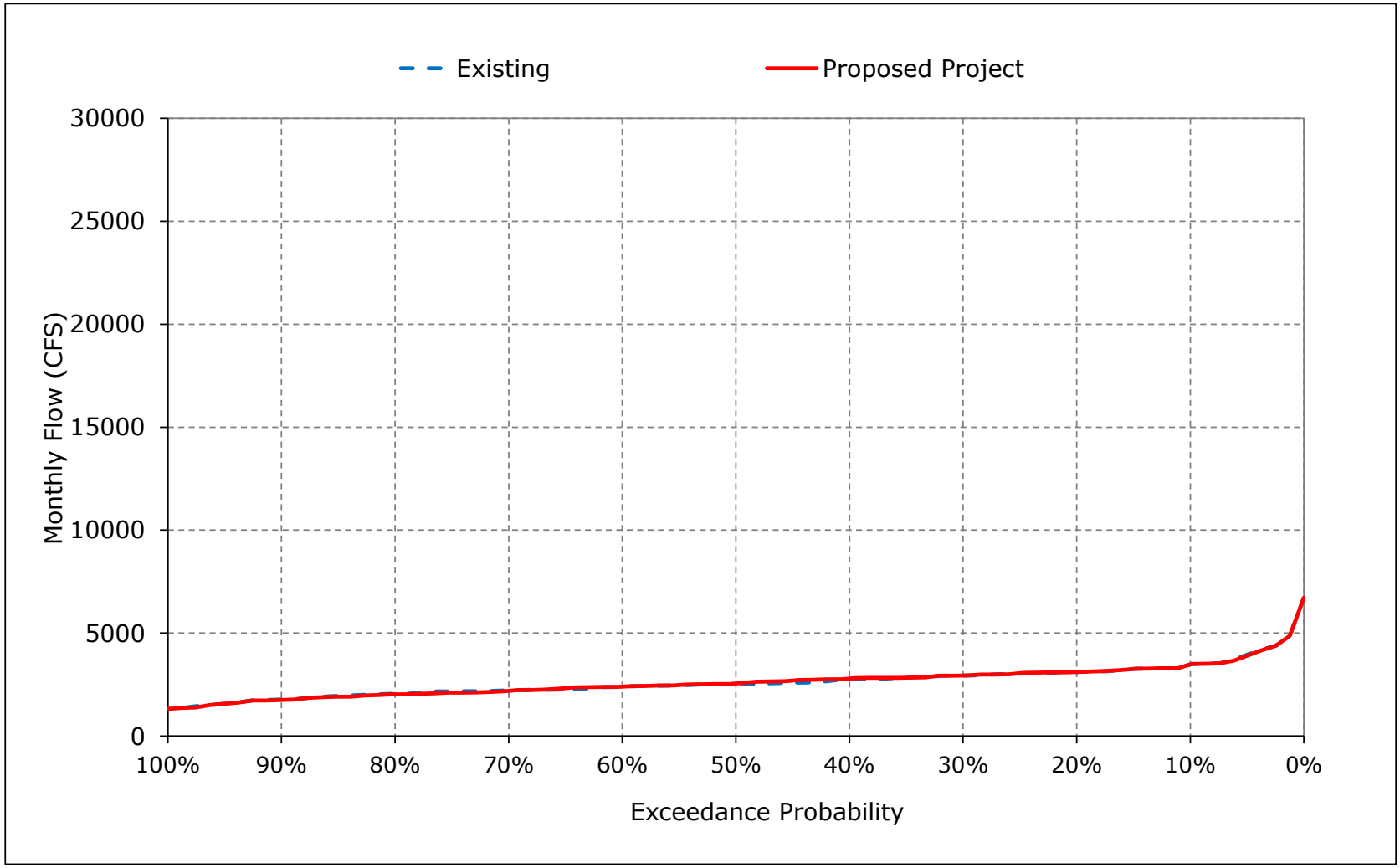


Figure 5-8. San Joaquin River at Vernalis, November

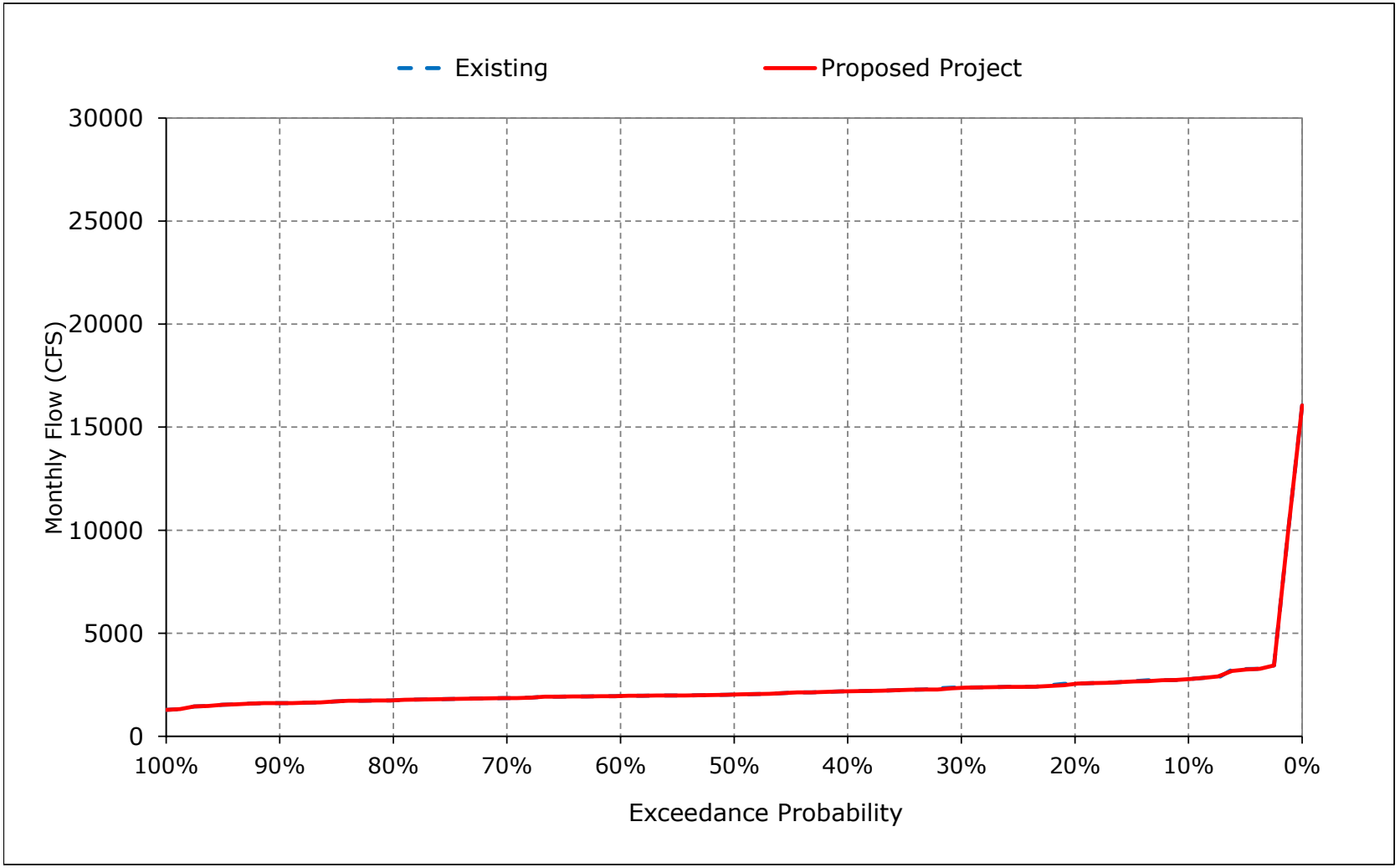


Figure 5-9. San Joaquin River at Vernalis, December

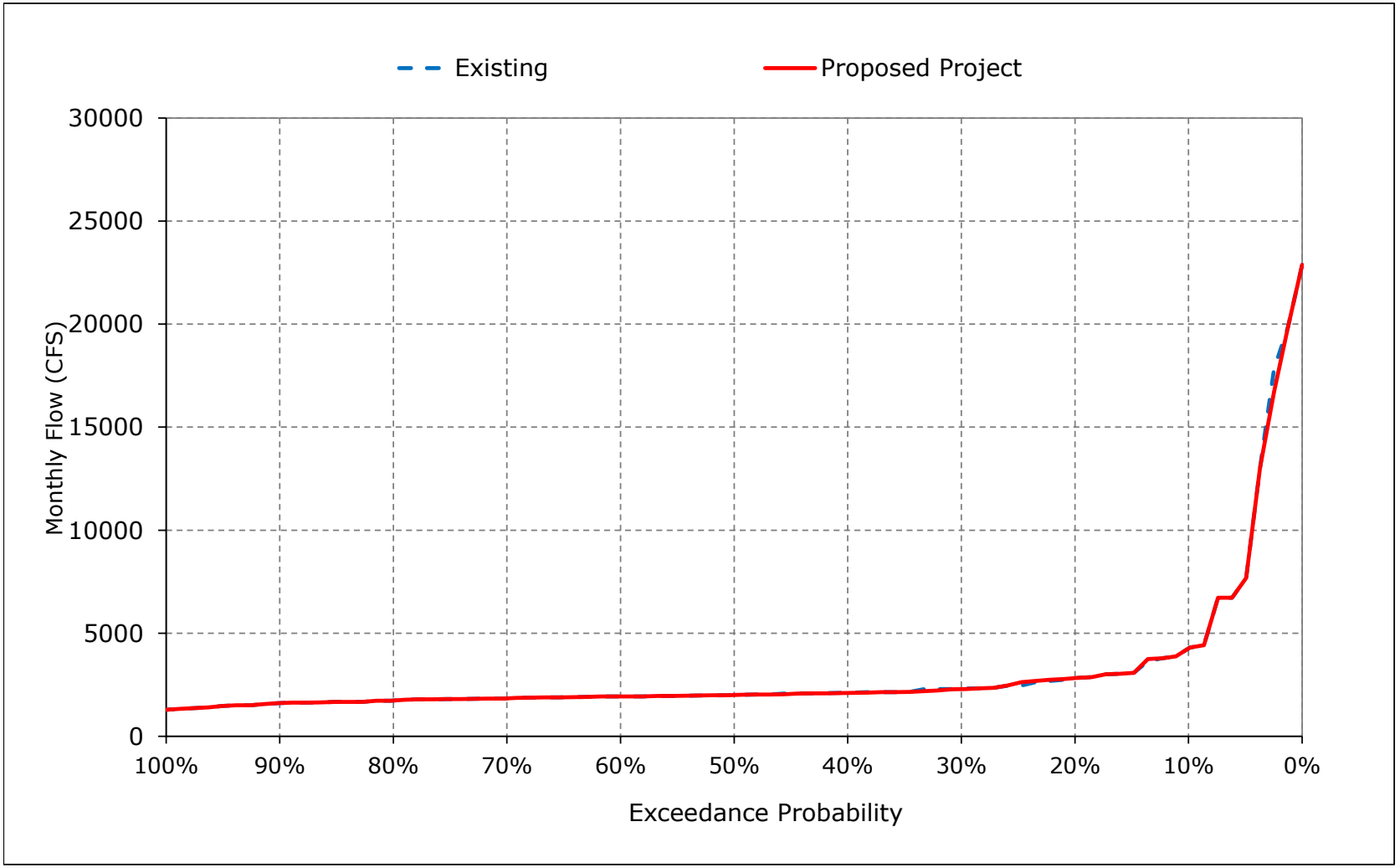


Figure 5-10. San Joaquin River at Vernalis, January

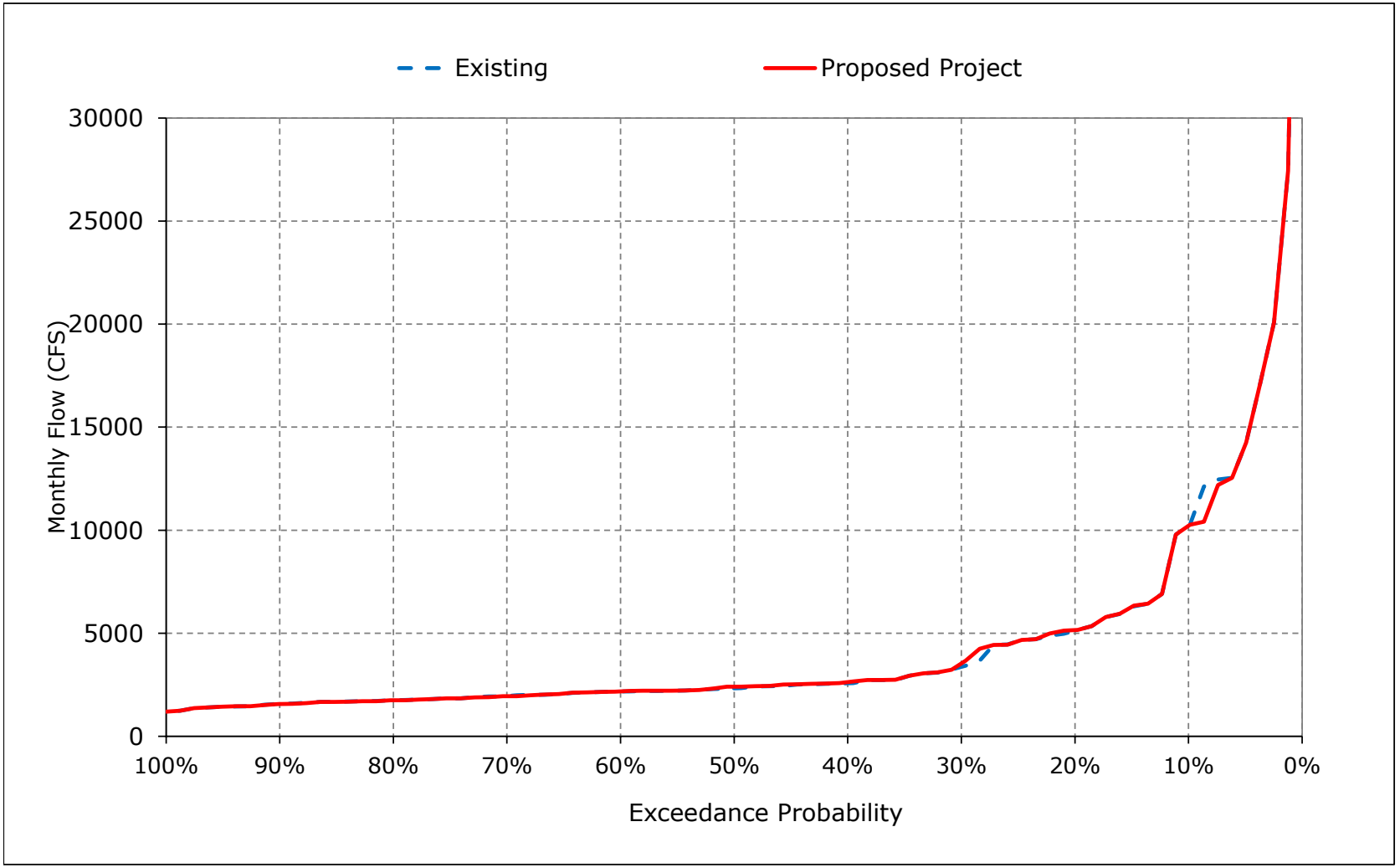


Figure 5-11. San Joaquin River at Vernalis, February

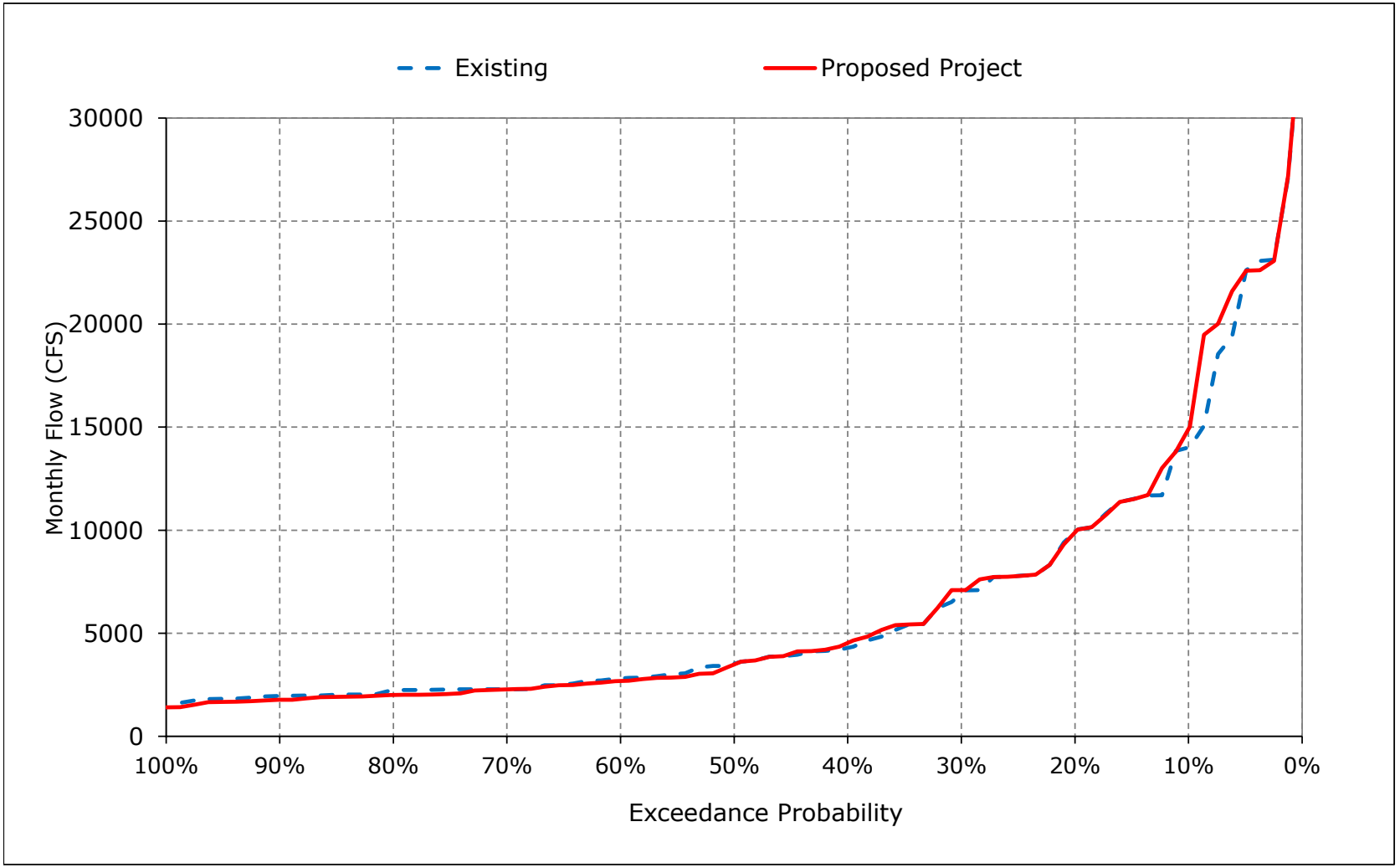


Figure 5-12. San Joaquin River at Vernalis, March

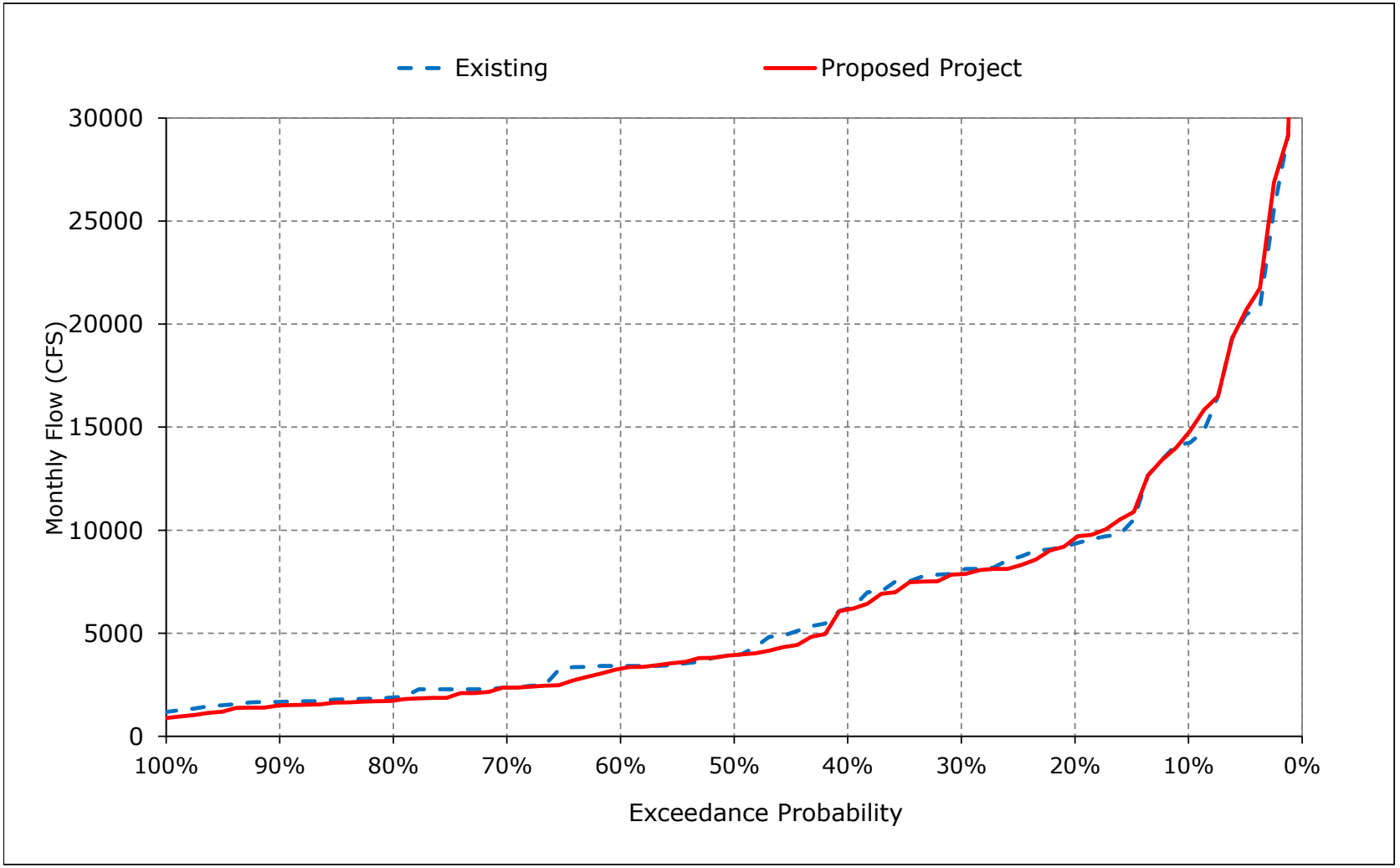


Figure 5-13. San Joaquin River at Vernalis, April

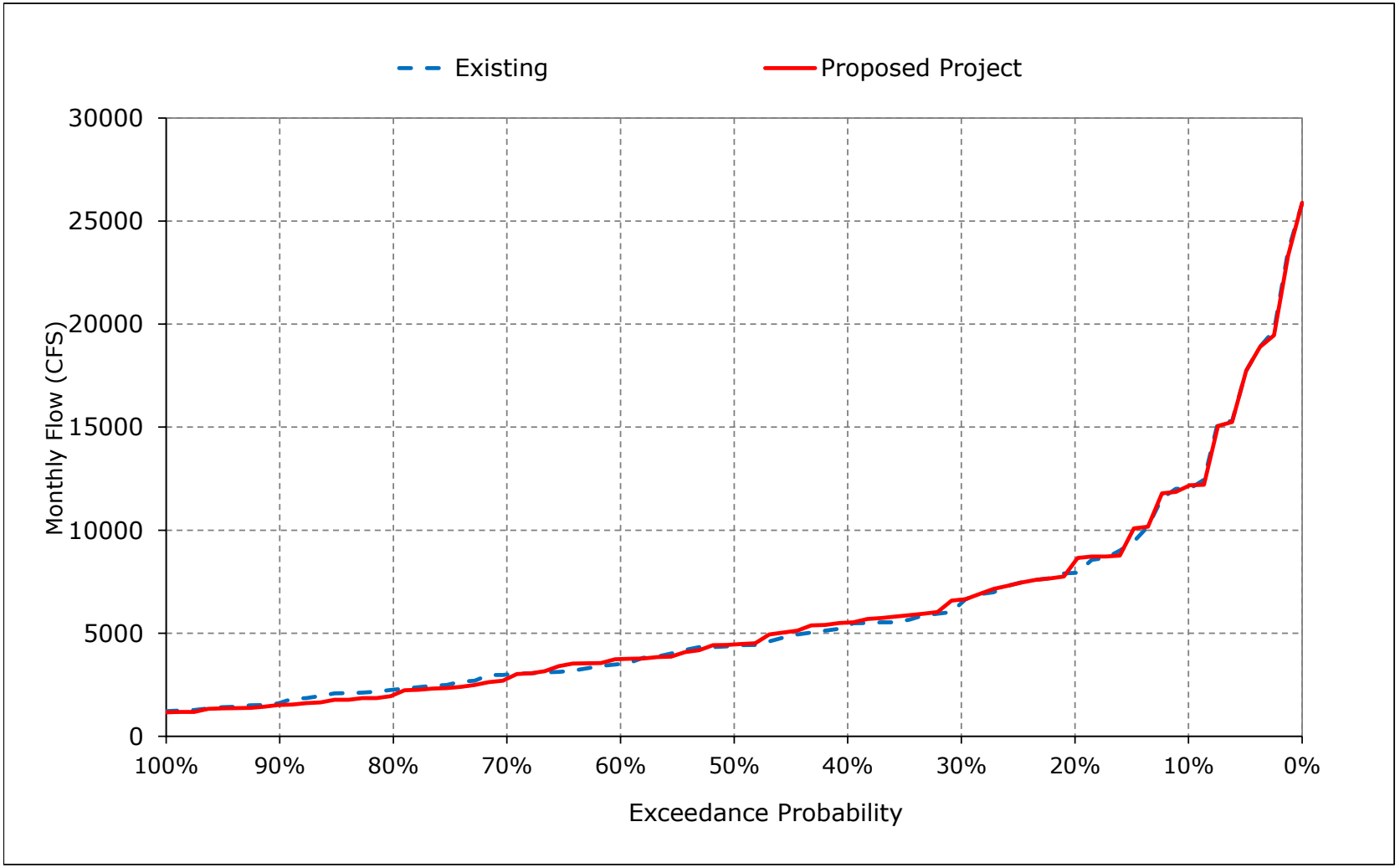


Figure 5-14. San Joaquin River at Vernalis, May

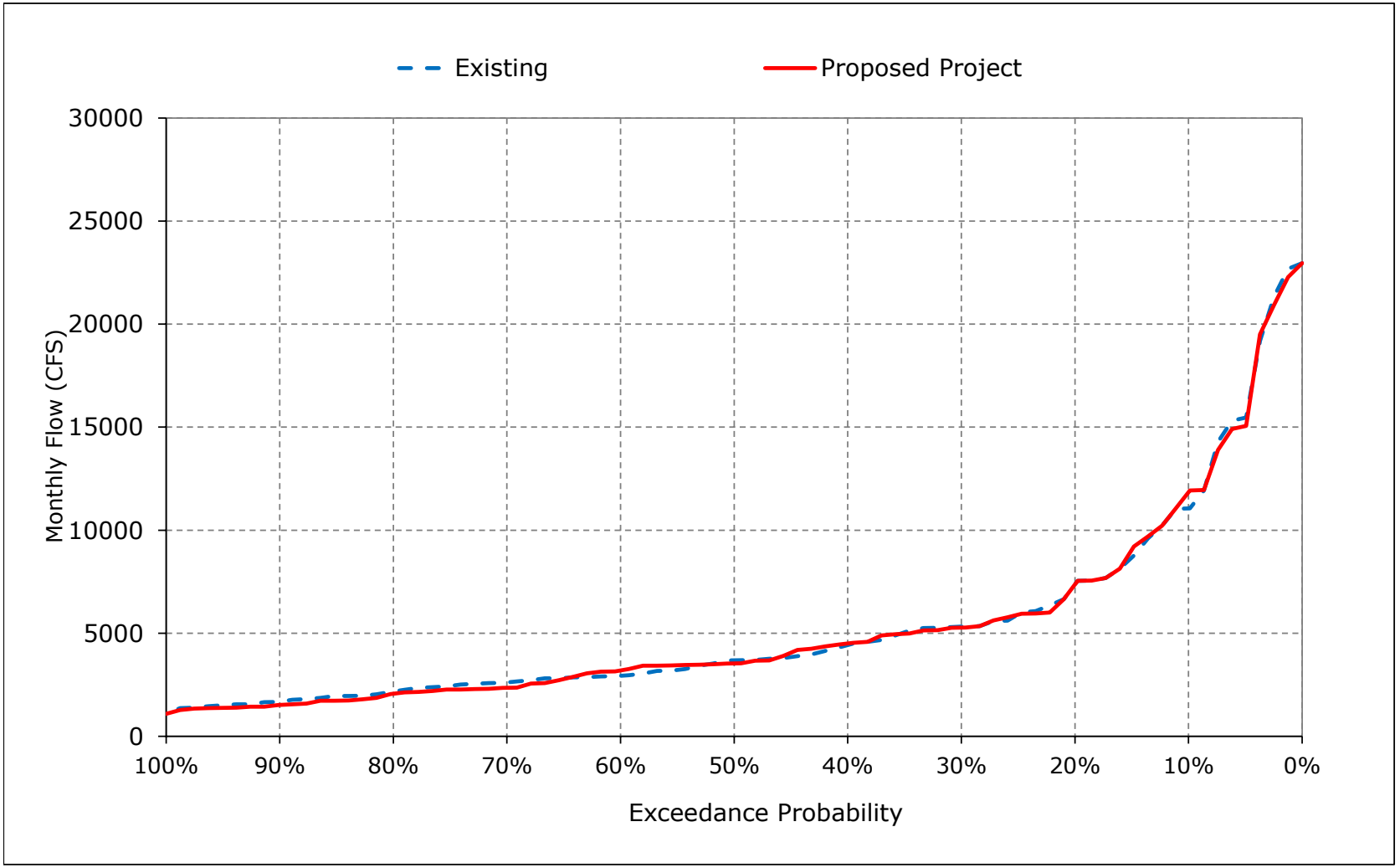


Figure 5-15. San Joaquin River at Vernalis, June

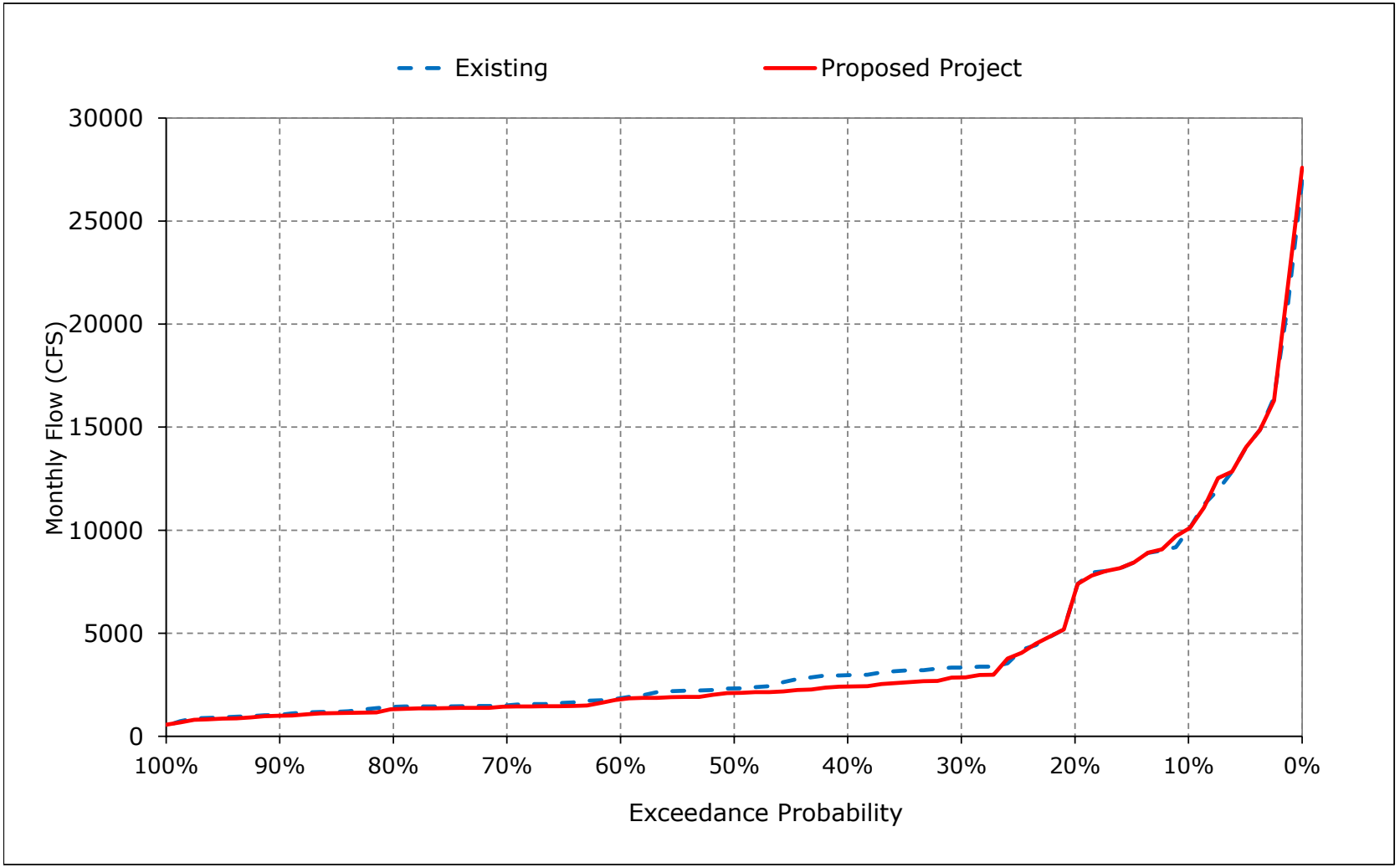


Figure 5-16. San Joaquin River at Vernalis, July

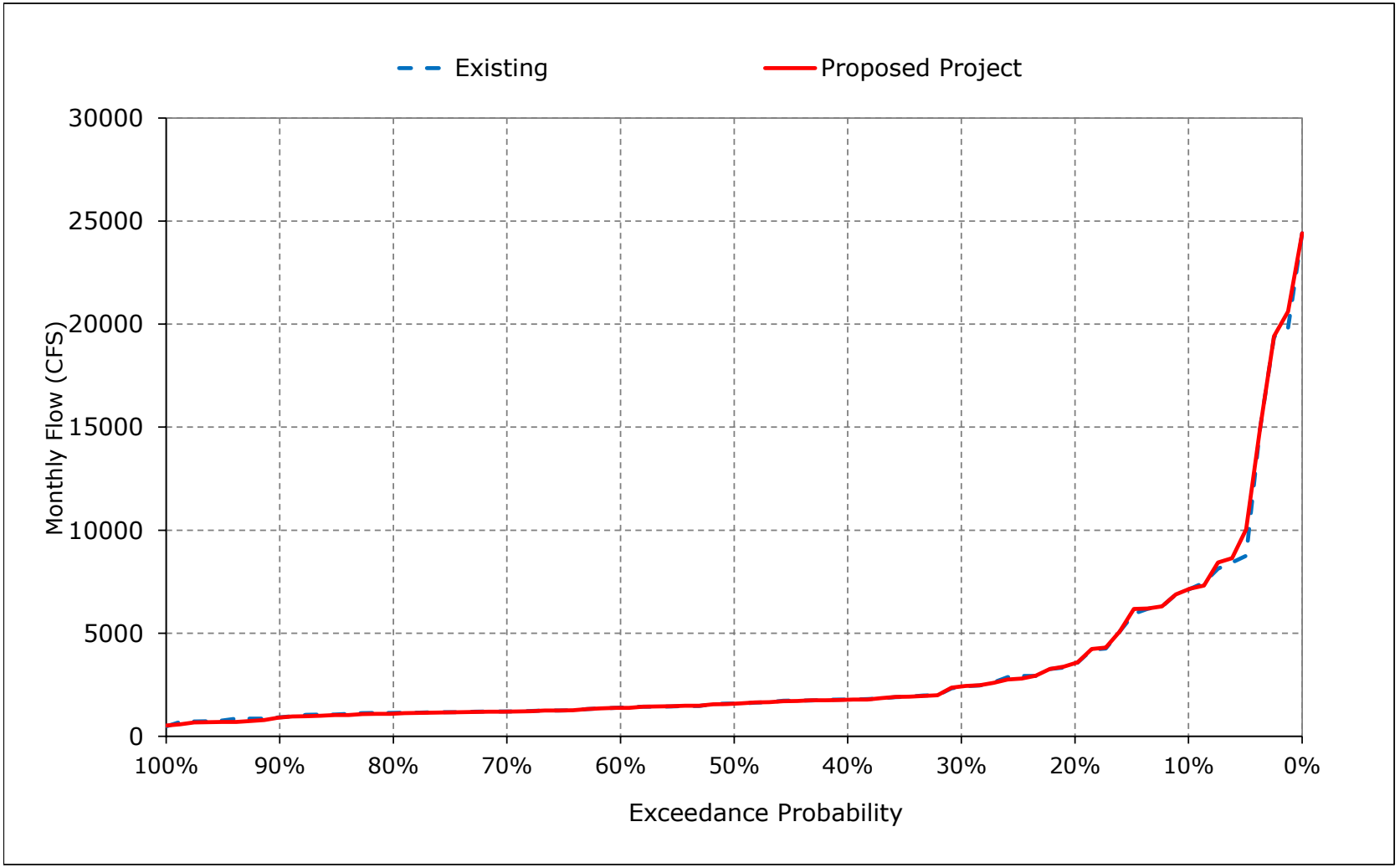


Figure 5-17. San Joaquin River at Vernalis, August

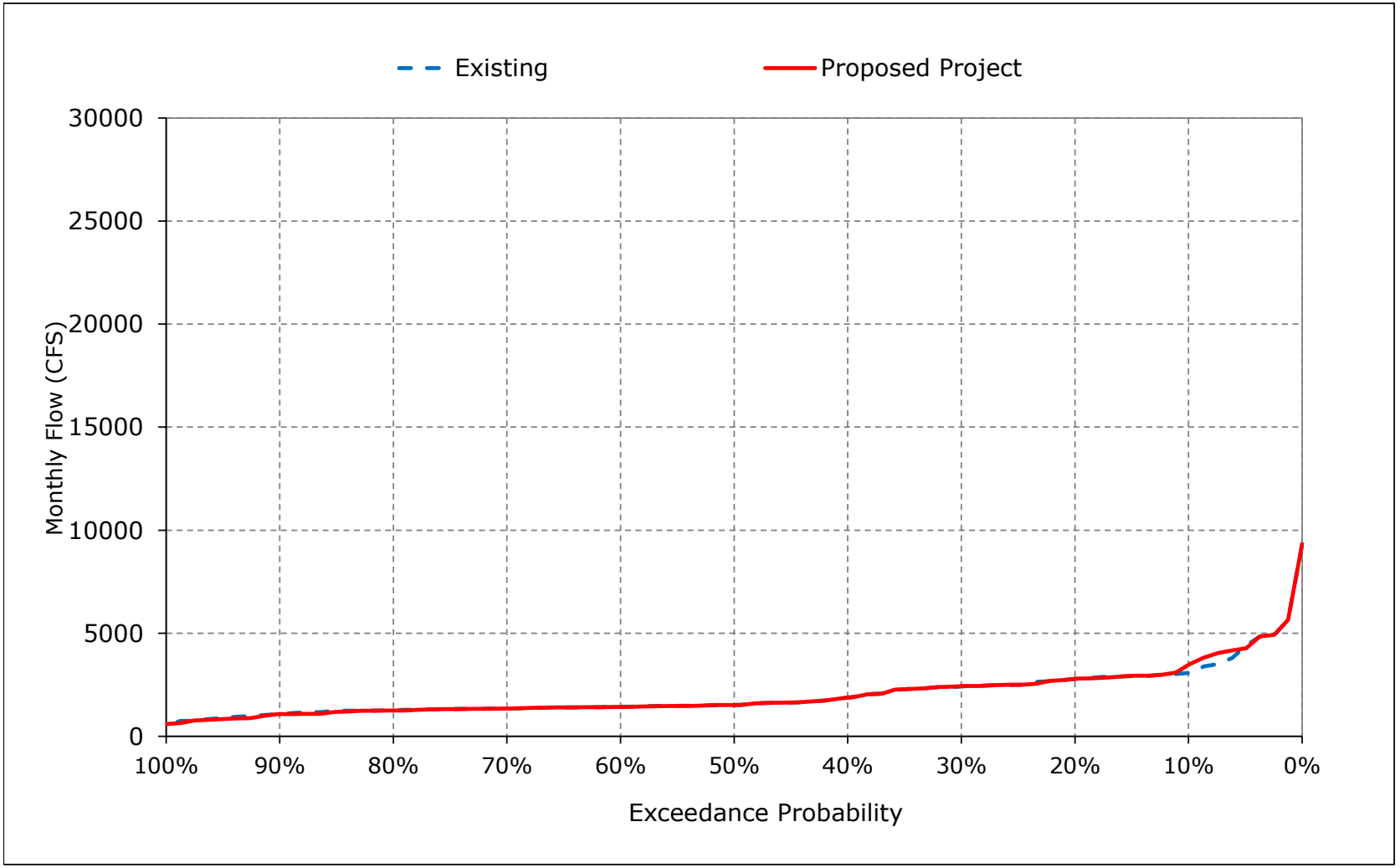


Figure 5-18. San Joaquin River at Vernalis, September

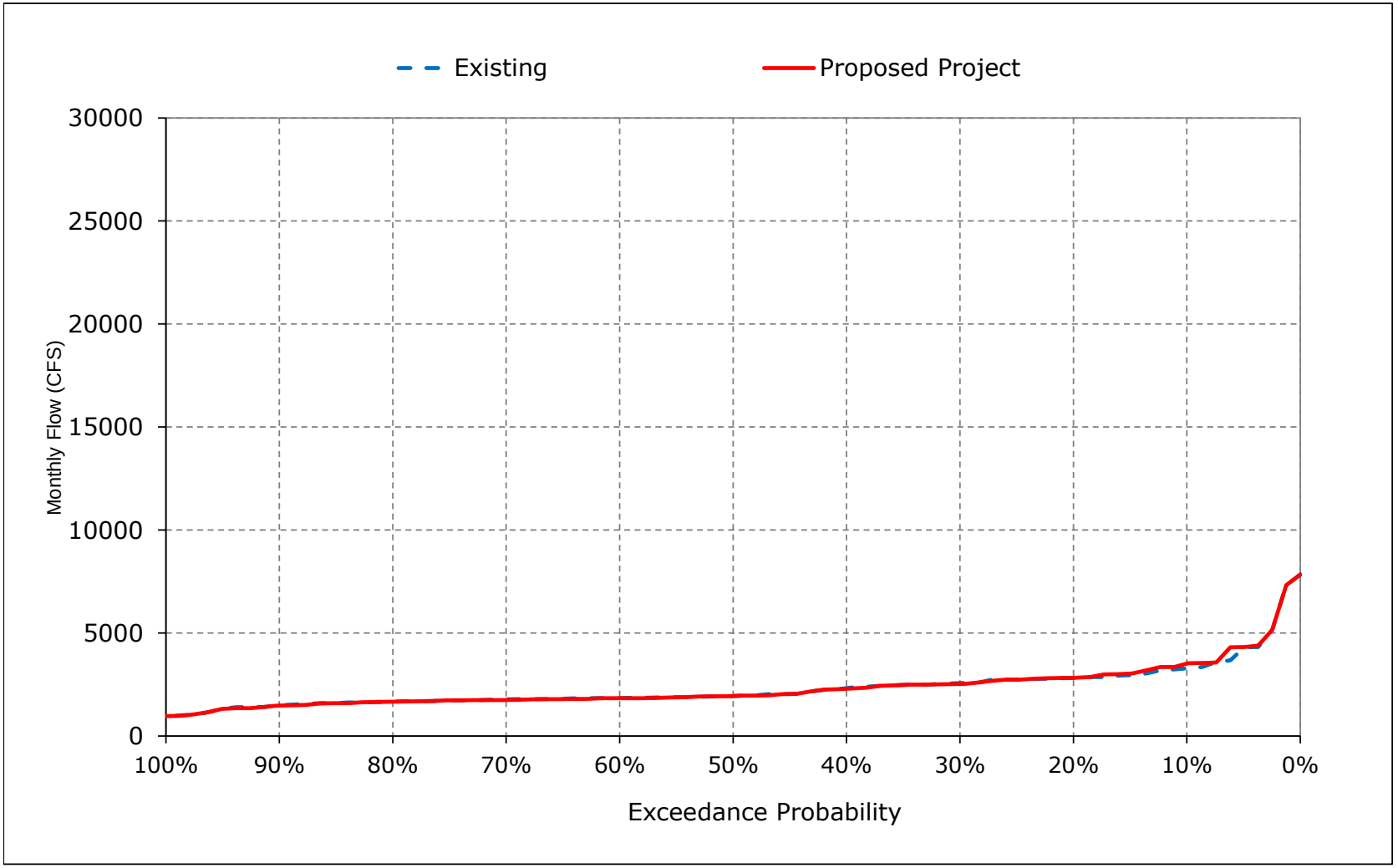


Table 6-1. Mokelumne River below Consumnes, Monthly Flow

Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	803	1,033	2,131	3,558	4,038	3,475	3,831	3,723	2,588	828	305	385
20%	631	714	879	2,337	3,063	2,618	2,518	2,729	1,706	578	237	282
30%	556	571	581	1,479	2,338	2,419	2,004	1,769	1,308	340	143	219
40%	475	509	488	886	1,605	1,704	1,592	1,406	713	268	73	164
50%	414	459	435	703	1,246	1,297	1,322	1,029	465	95	54	102
60%	321	407	388	520	868	1,018	923	790	349	56	46	85
70%	277	365	330	432	685	842	707	502	163	50	44	50
80%	222	241	265	355	509	687	607	354	83	46	41	42
90%	183	188	216	292	393	522	313	200	53	43	37	38
Long Term												
Full Simulation Period[a]	444	598	902	1,479	1,858	1,892	1,693	1,527	977	385	136	172
Water Year Types[b,c]												
Wet (32%)	545	831	1,643	2,918	3,368	3,357	2,962	2,824	2,025	905	276	318
Above Normal (15%)	398	773	966	1,811	2,019	2,280	1,836	1,627	1,083	331	129	174
Below Normal (17%)	464	529	702	833	1,536	1,325	1,596	1,314	670	151	72	107
Dry (22%)	404	413	377	455	775	889	739	620	215	79	46	68
Critical (15%)	305	280	257	315	422	495	345	225	103	44	50	85

Proposed Project

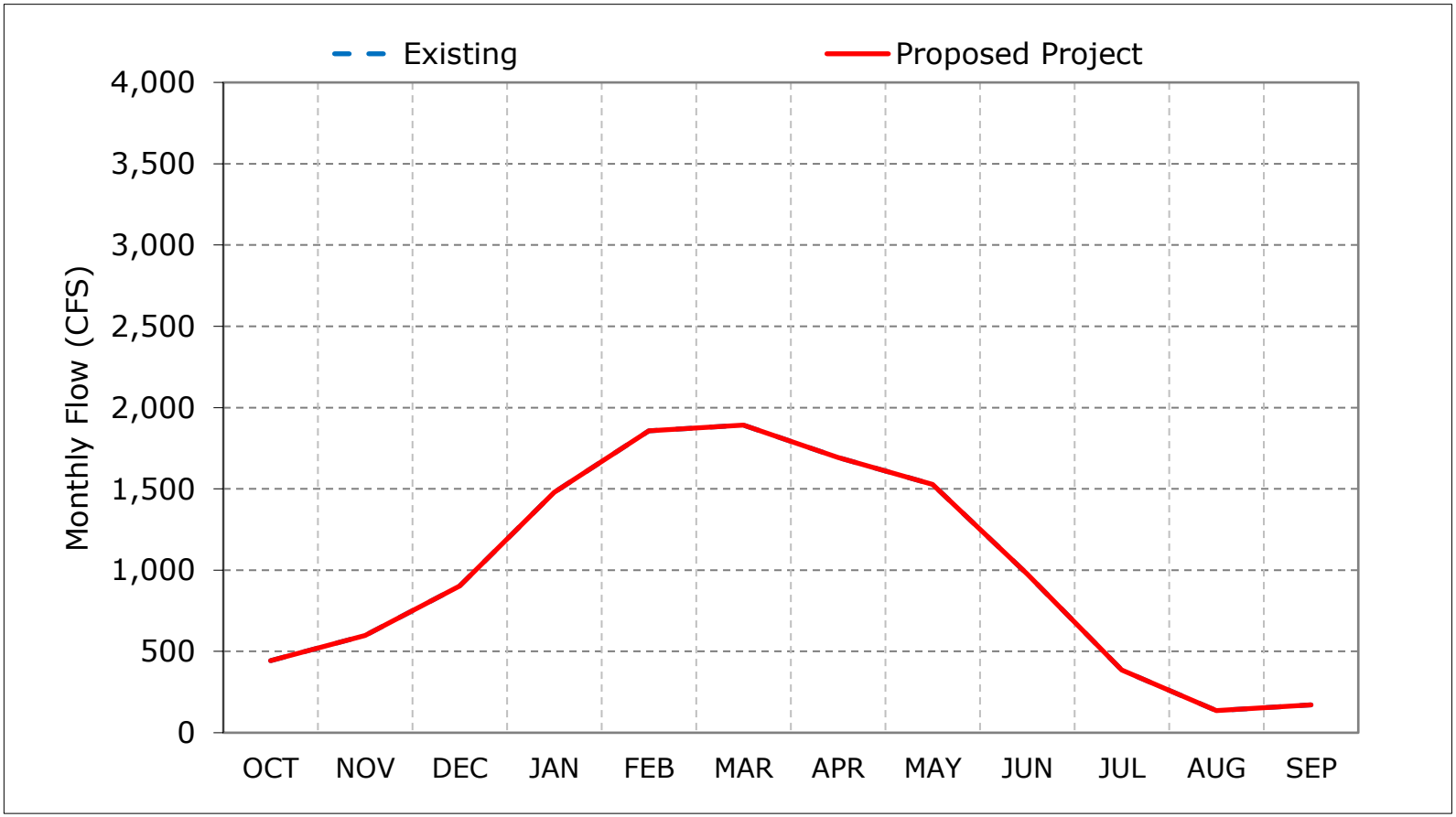
Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	803	1,033	2,131	3,558	4,038	3,475	3,831	3,723	2,588	828	305	385
20%	631	714	879	2,337	3,063	2,618	2,518	2,729	1,706	578	237	282
30%	556	571	581	1,479	2,339	2,419	2,004	1,769	1,309	341	143	219
40%	475	509	488	886	1,605	1,704	1,592	1,406	713	268	73	164
50%	414	459	435	703	1,246	1,297	1,322	1,029	465	94	54	102
60%	321	408	388	520	868	1,018	923	791	349	56	47	86
70%	277	365	331	433	685	842	707	502	163	50	44	50
80%	222	242	266	355	509	687	608	354	83	46	41	42
90%	183	188	217	292	393	522	313	200	53	43	38	38
Long Term												
Full Simulation Period[a]	444	599	903	1,479	1,858	1,892	1,693	1,527	977	385	136	172
Water Year Types[b,c]												
Wet (32%)	546	831	1,643	2,918	3,368	3,357	2,962	2,824	2,025	905	276	318
Above Normal (15%)	398	773	966	1,811	2,019	2,281	1,836	1,627	1,083	331	129	174
Below Normal (17%)	464	529	702	834	1,536	1,325	1,596	1,314	670	151	72	107
Dry (22%)	404	413	377	455	775	889	740	620	215	80	46	68
Critical (15%)	305	280	257	315	422	495	345	225	103	44	50	85

Proposed Project minus Existing

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

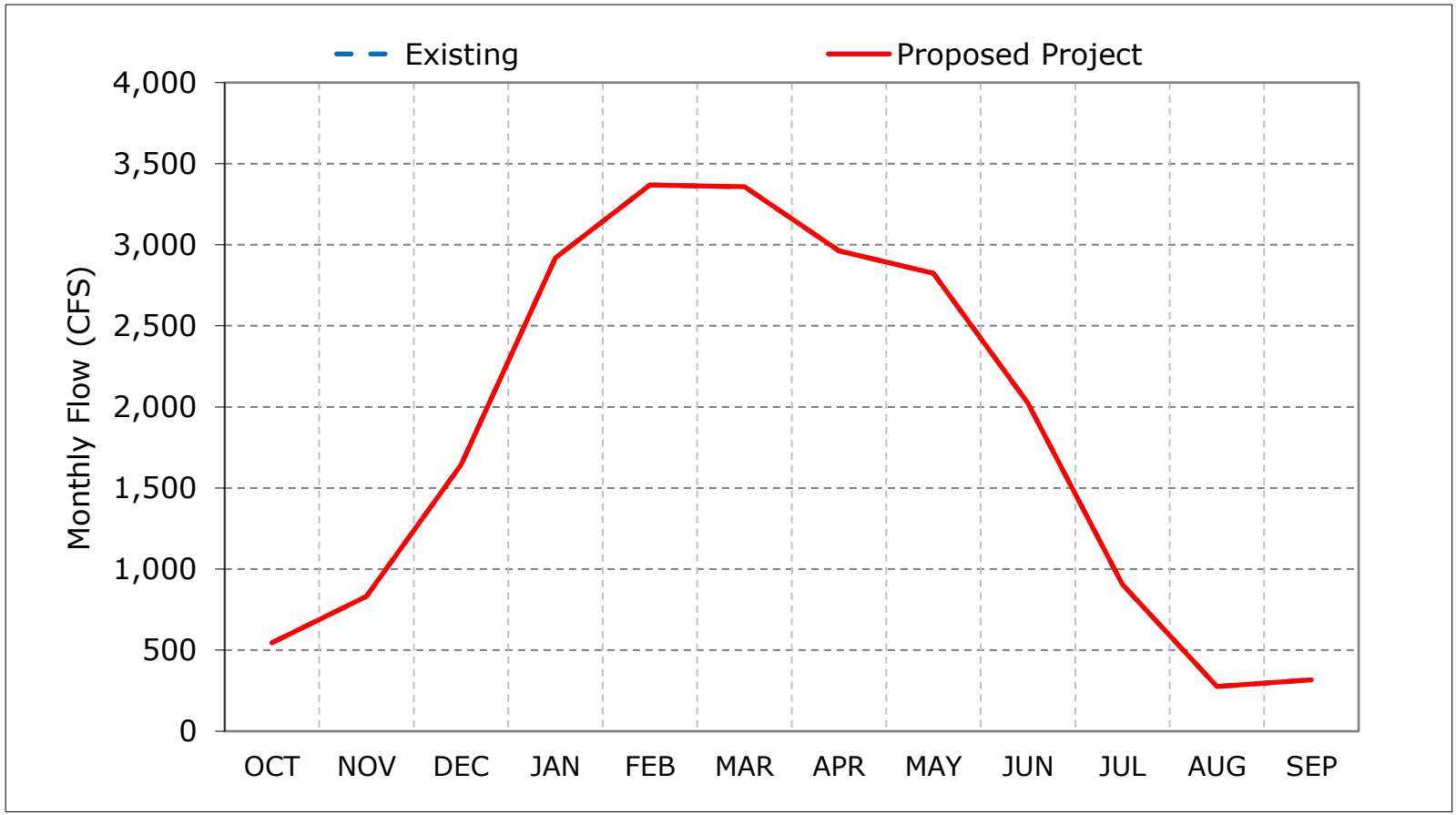
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

Figure 6-1. Mokelumne River below Consumnes, Long-Term Average Flow



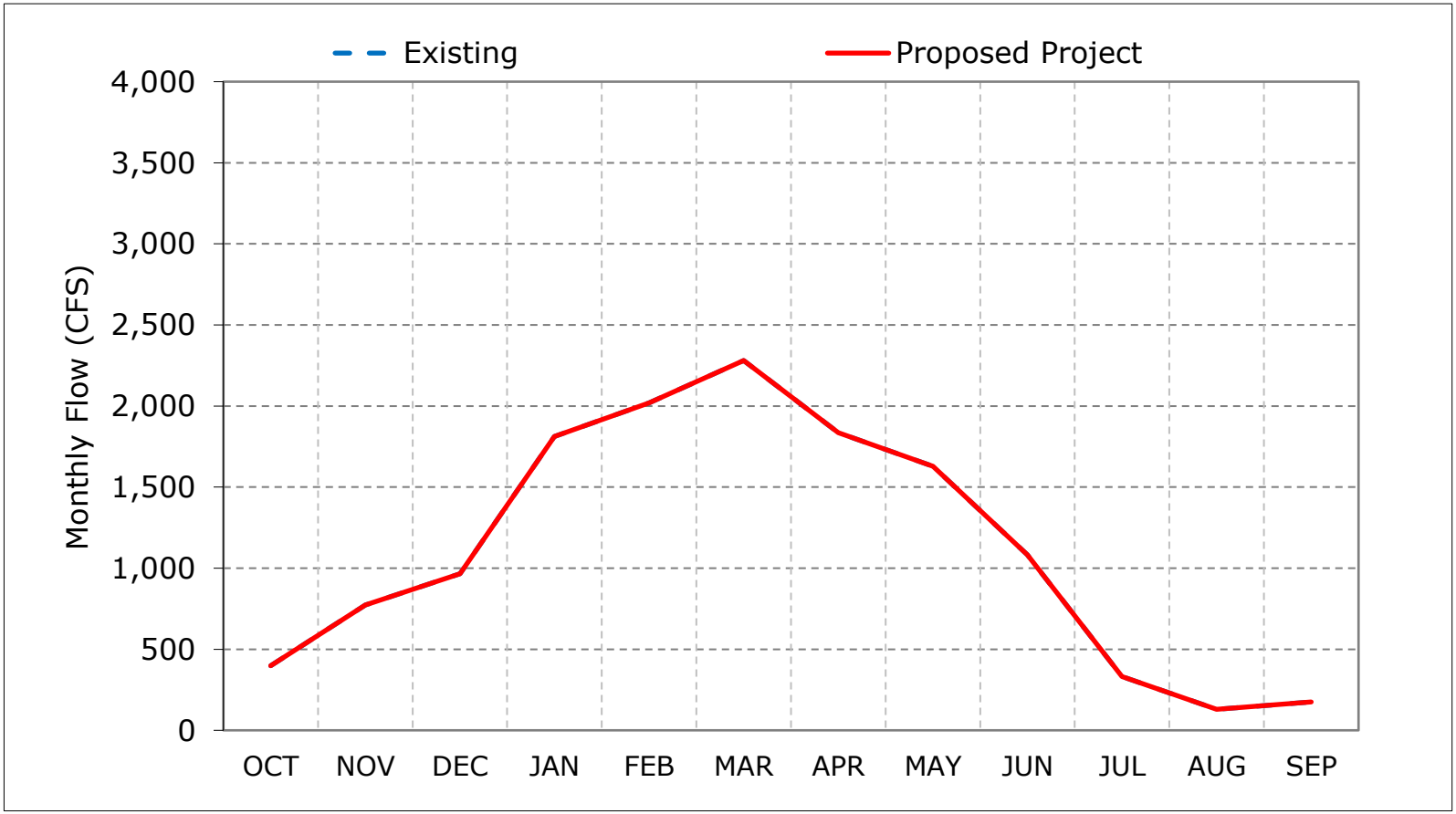
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 6-2. Mokelumne River below Consumnes, Wet Year Average Flow



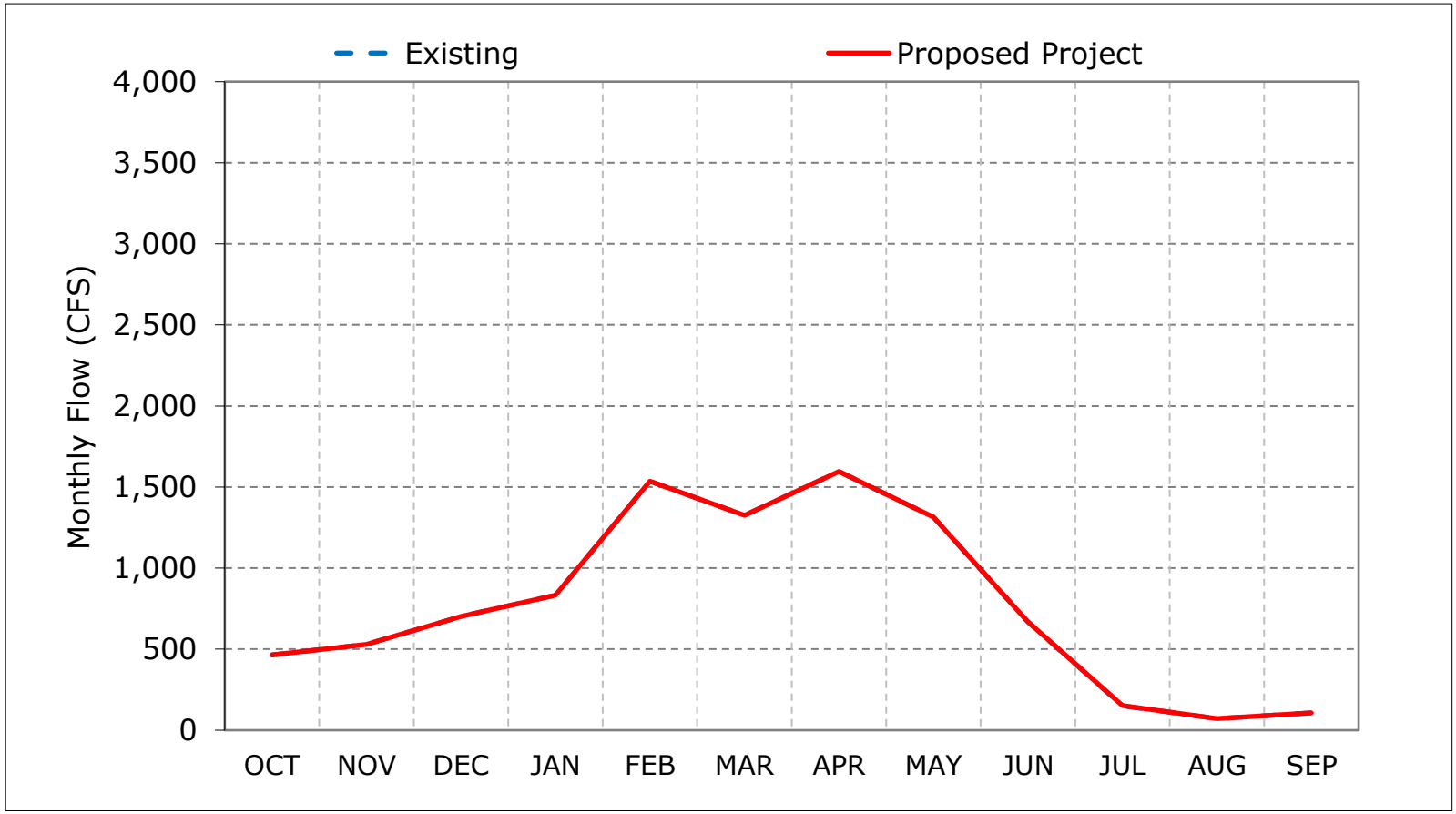
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 6-3. Mokelumne River below Consumnes, Above Normal Year Average Flow



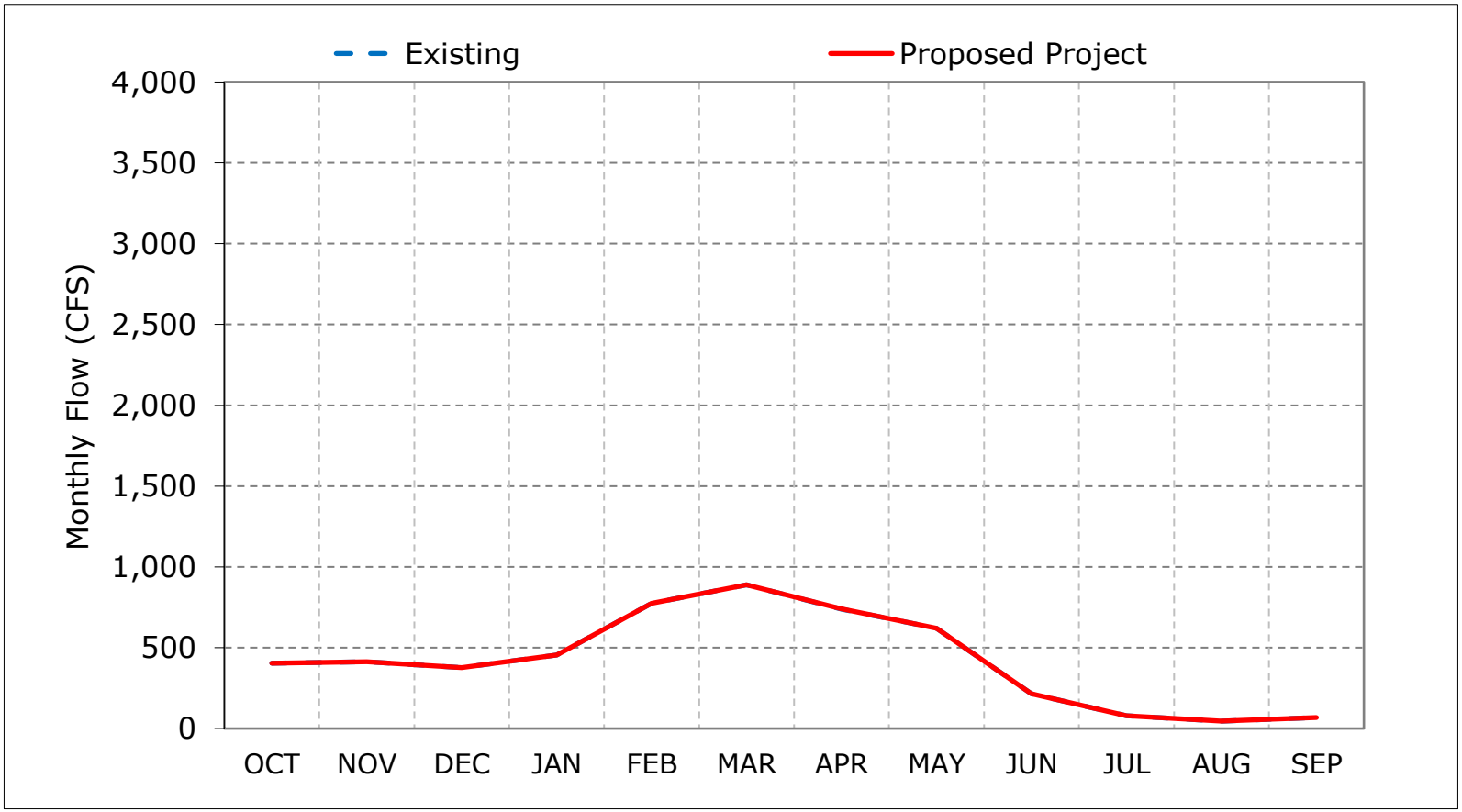
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 6-4. Mokelumne River below Consumnes, Below Normal Year Average Flow



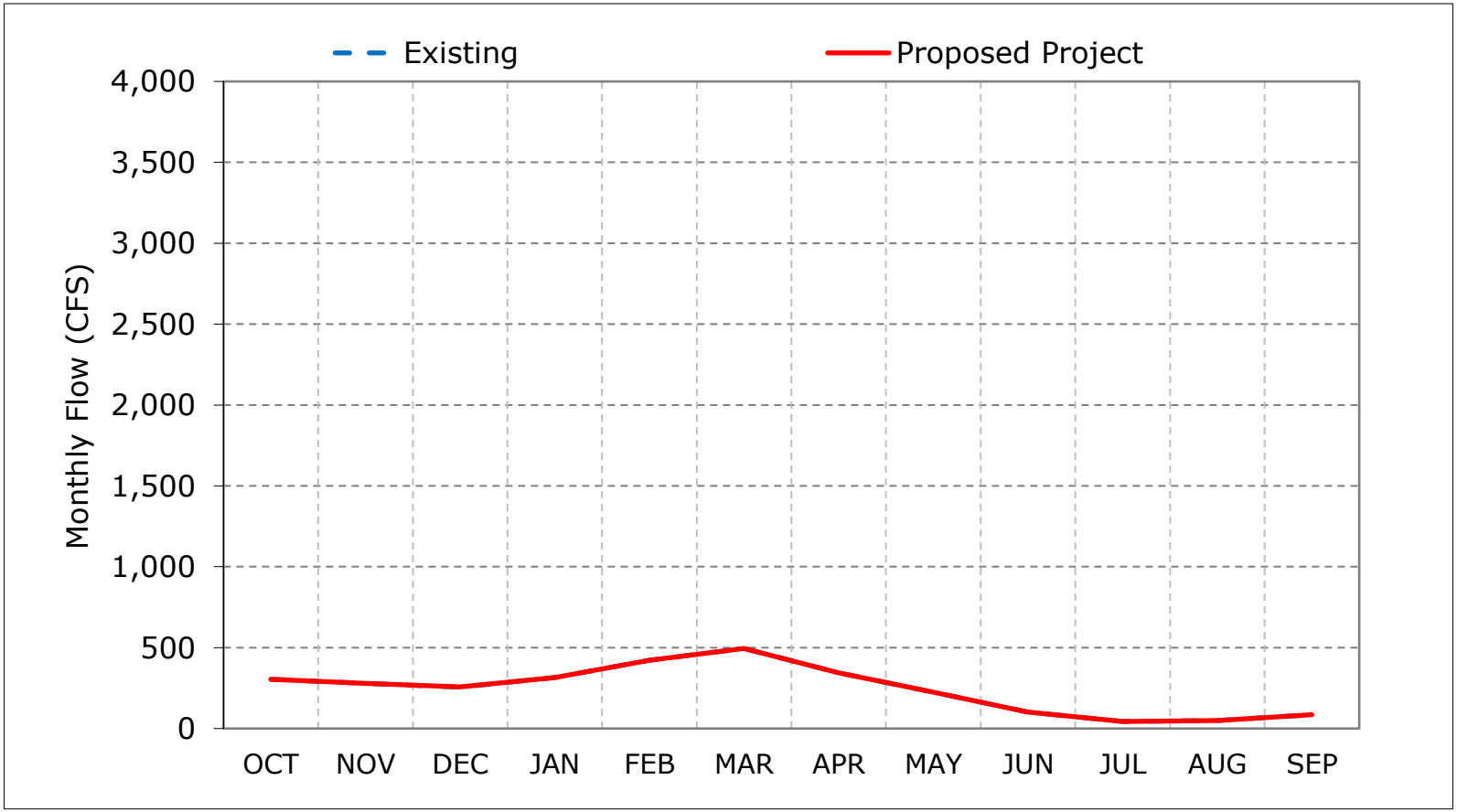
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 6-5. Mokelumne River below Consumnes, Dry Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 6-6. Mokelumne River below Consumnes, Critical Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 6-7. Mokelumne River below Consumnes, October

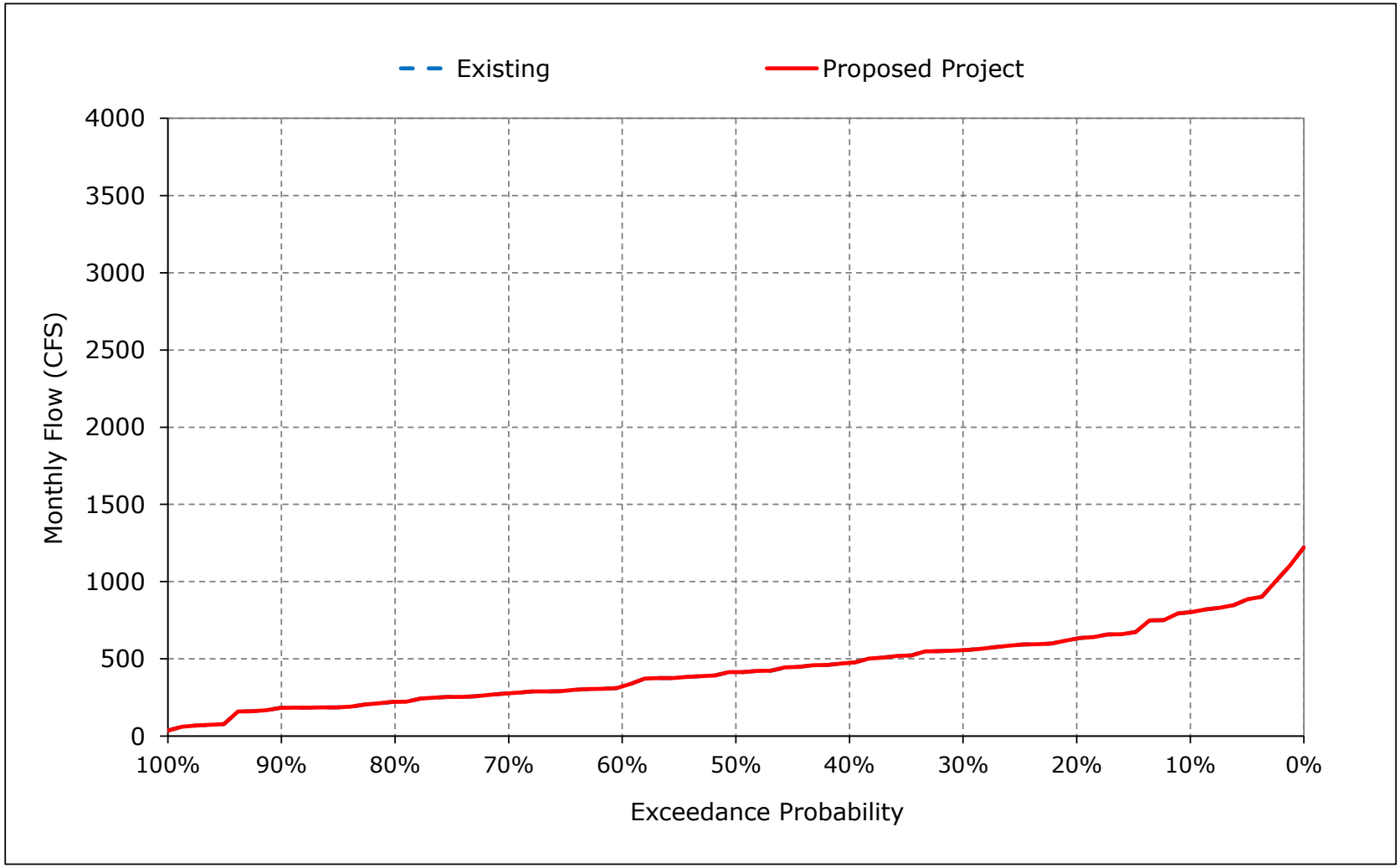


Figure 6-8. Mokelumne River below Consumnes, November

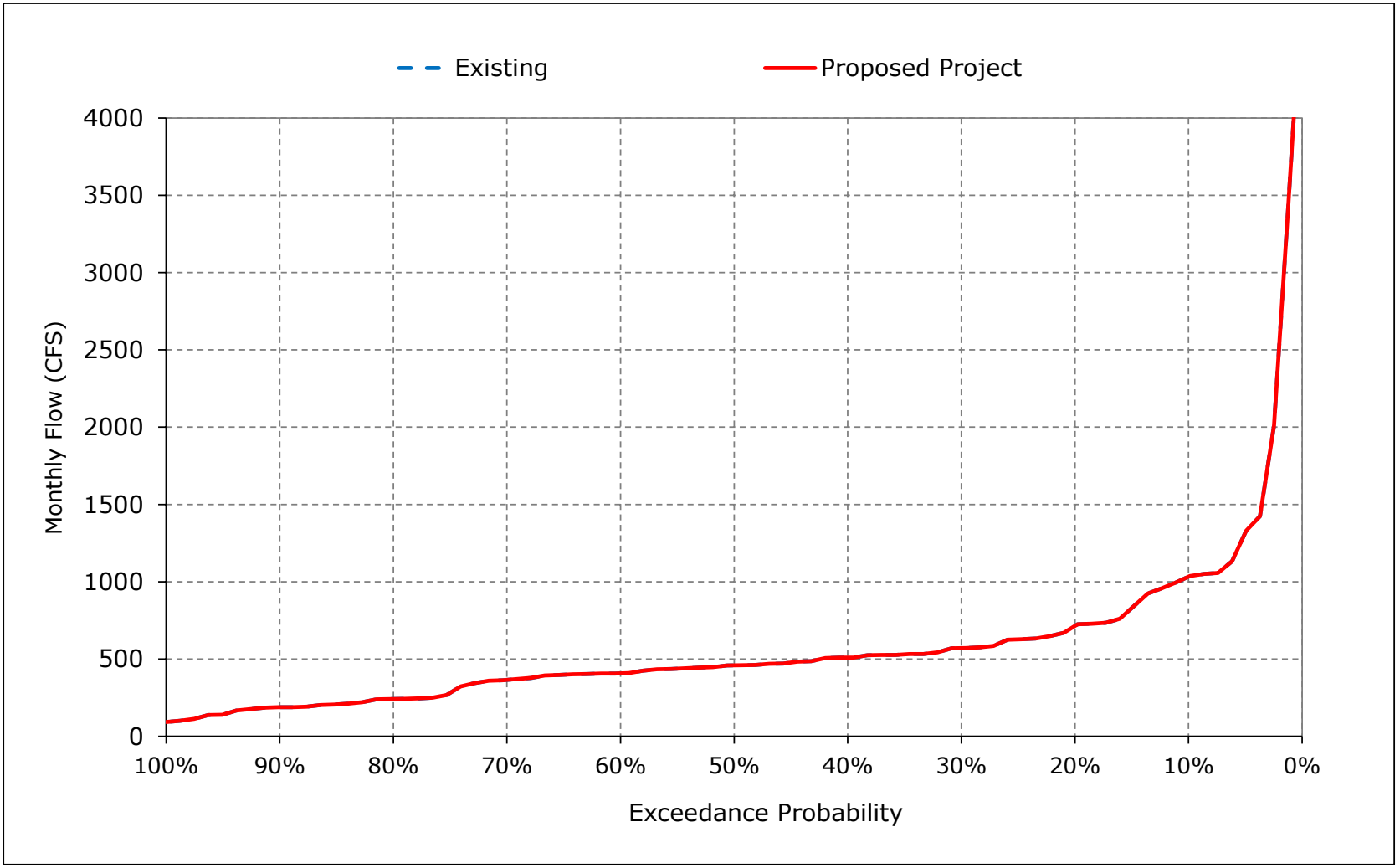


Figure 6-9. Mokelumne River below Consumnes, December

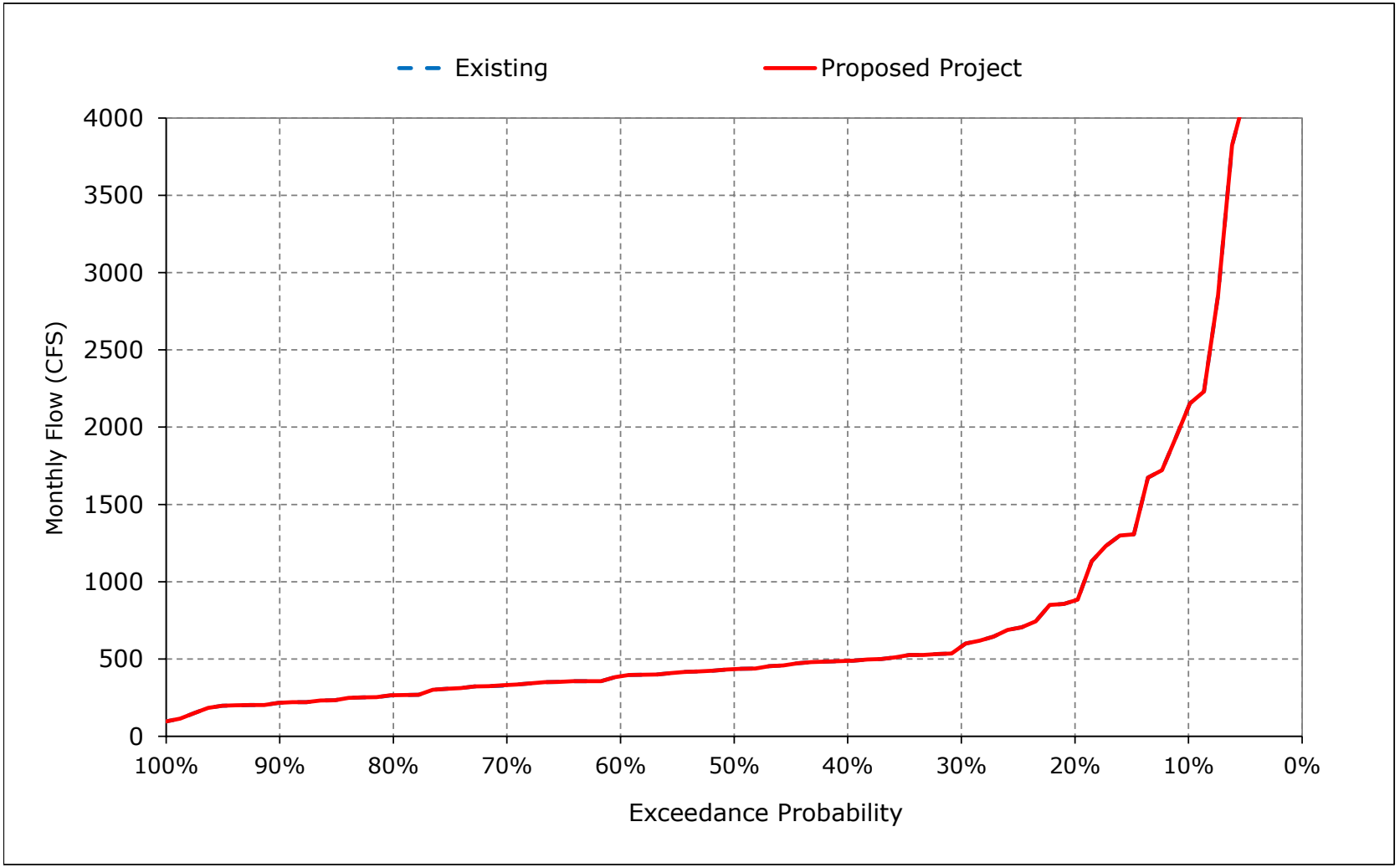


Figure 6-10. Mokelumne River below Consumnes, January

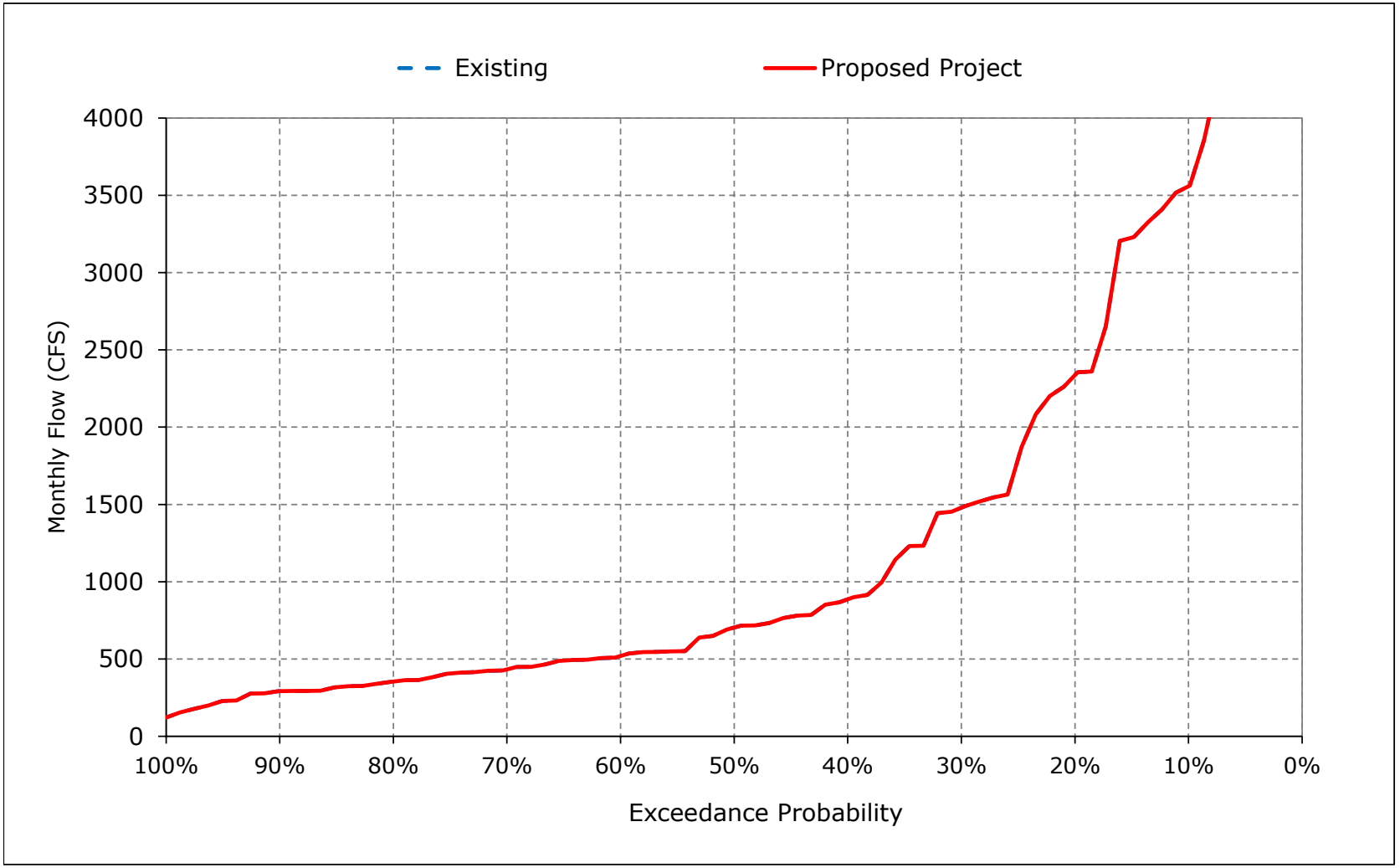


Figure 6-11. Mokelumne River below Consumnes, February

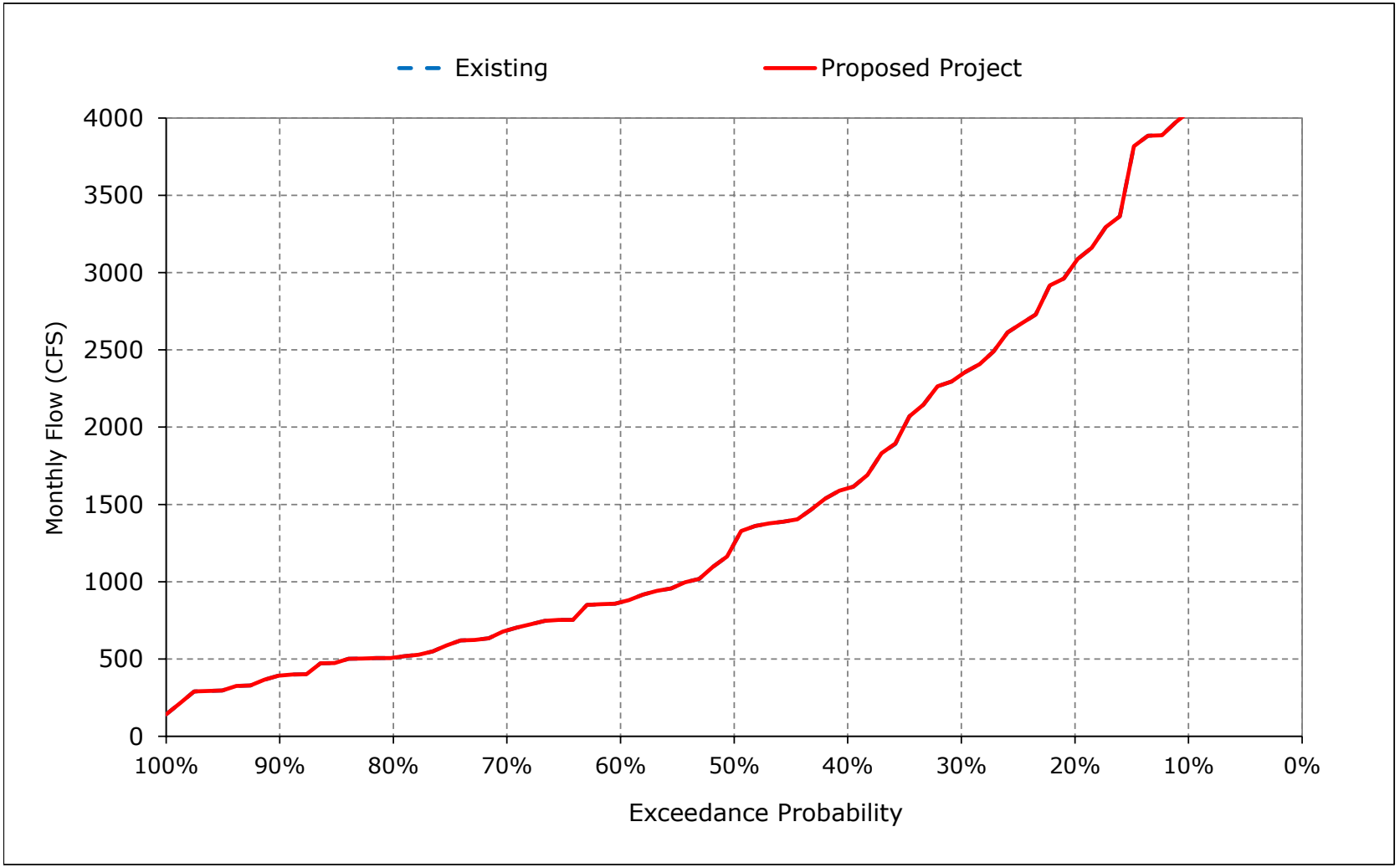


Figure 6-12. Mokelumne River below Consumnes, March

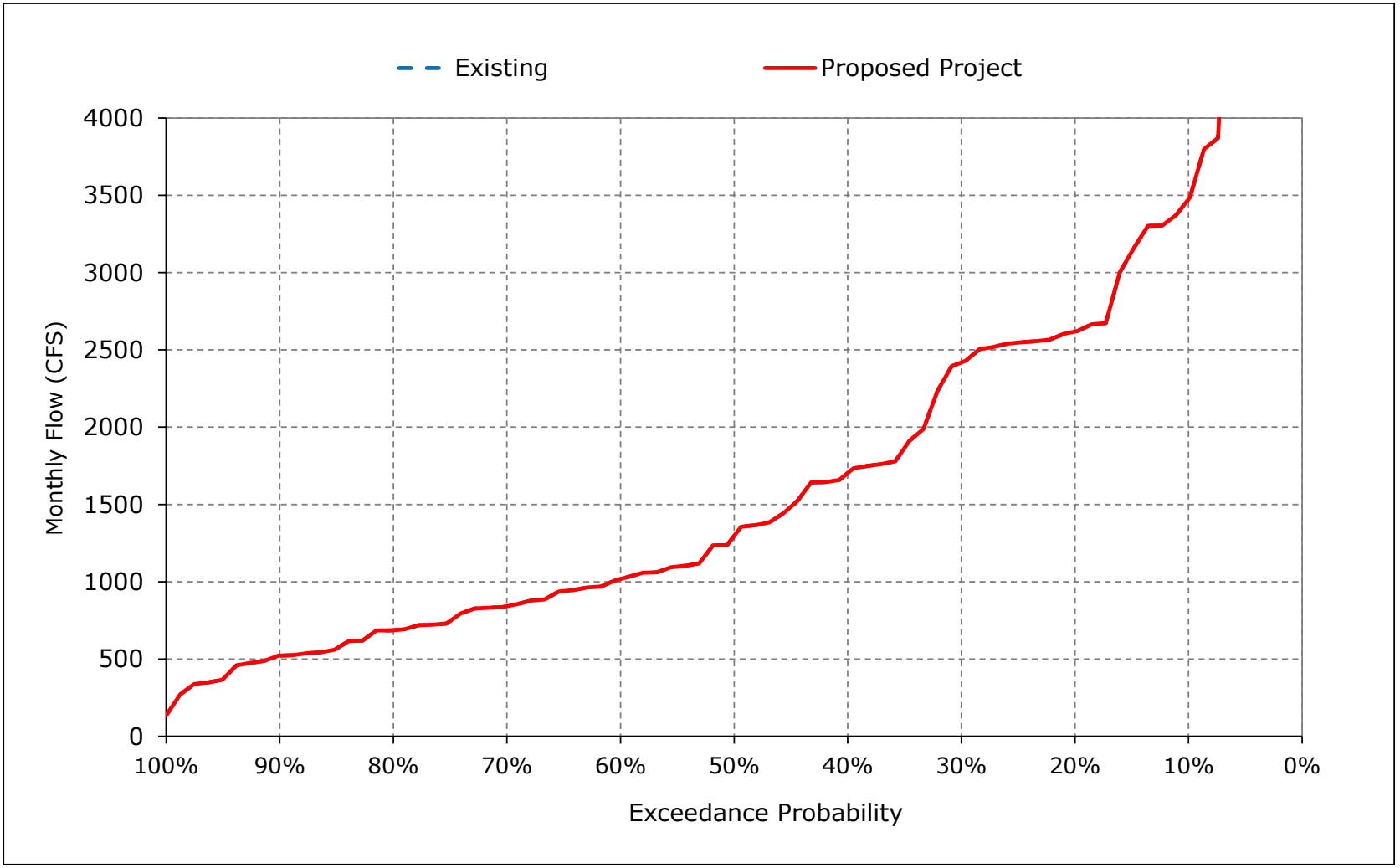


Figure 6-13. Mokelumne River below Consumnes, April

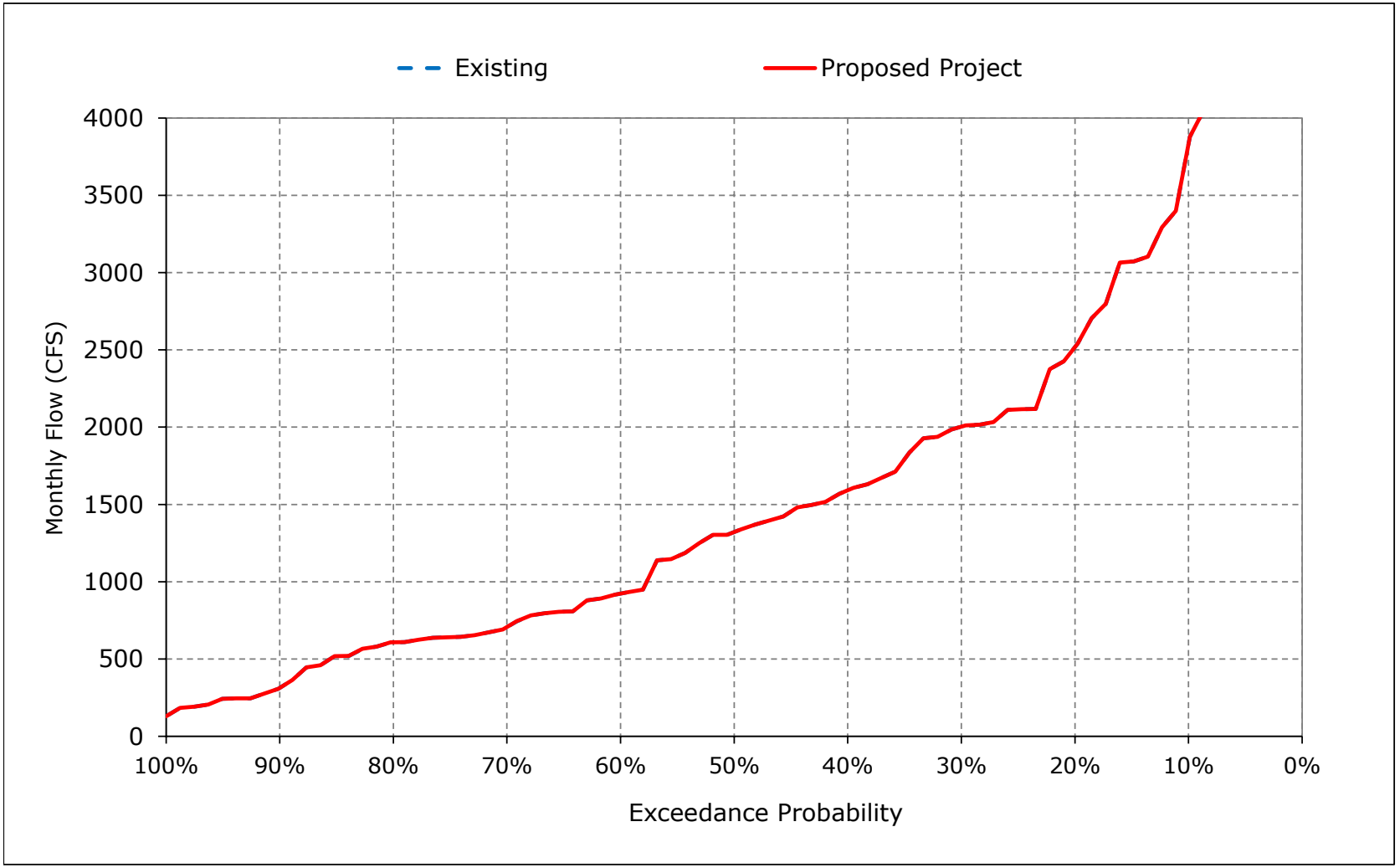


Figure 6-14. Mokelumne River below Consumnes, May

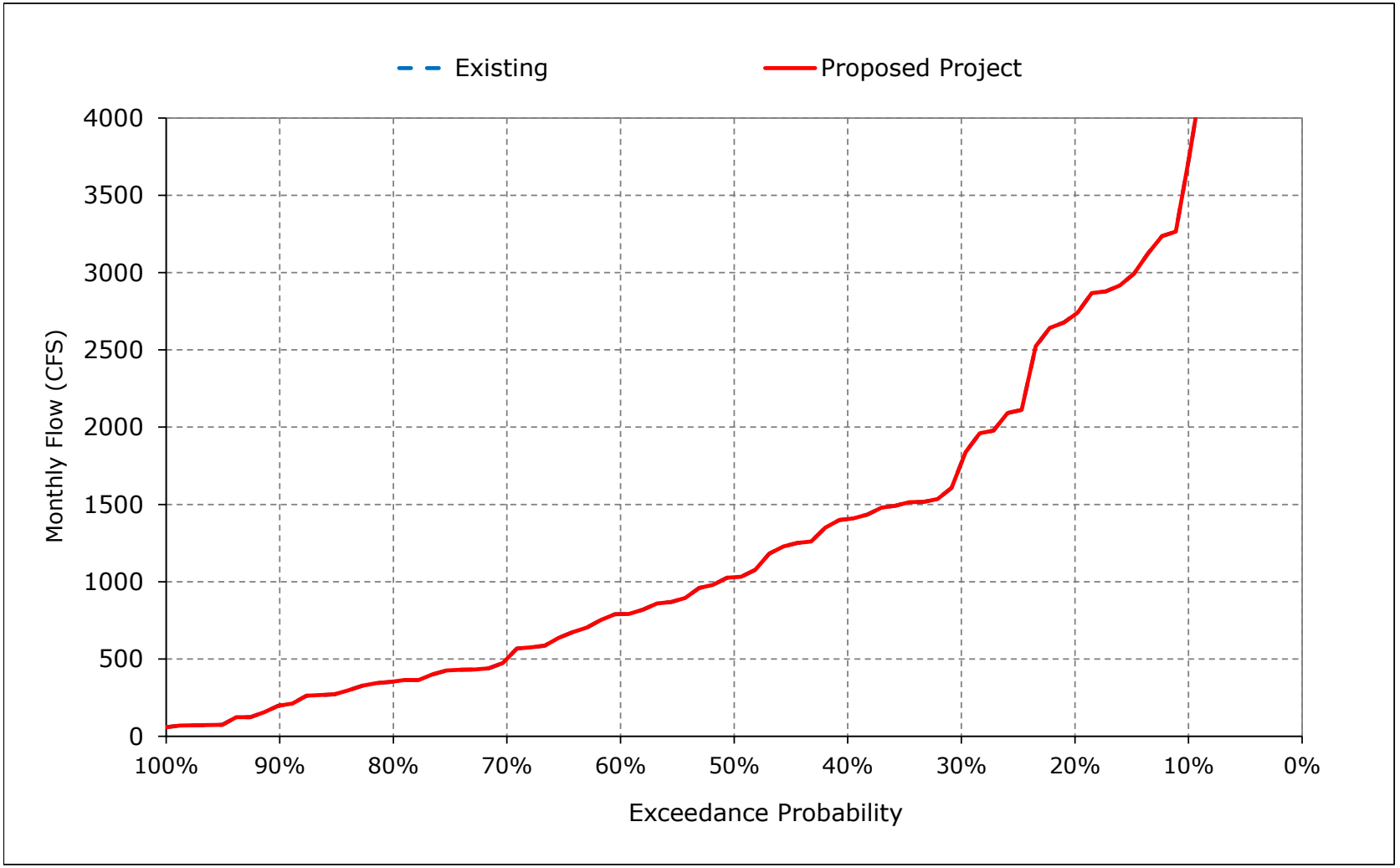


Figure 6-15. Mokelumne River below Consumnes, June

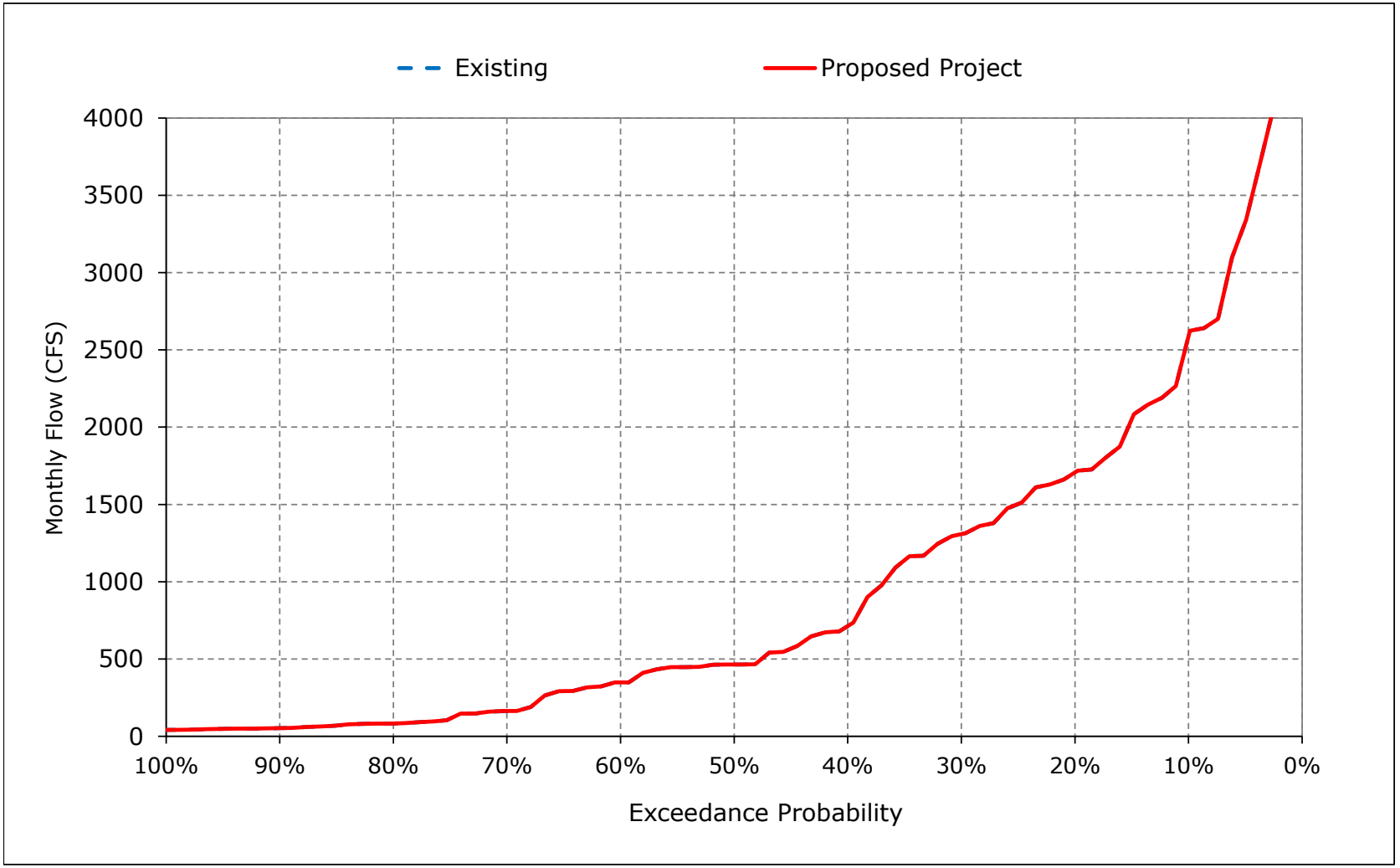


Figure 6-16. Mokelumne River below Consumnes, July

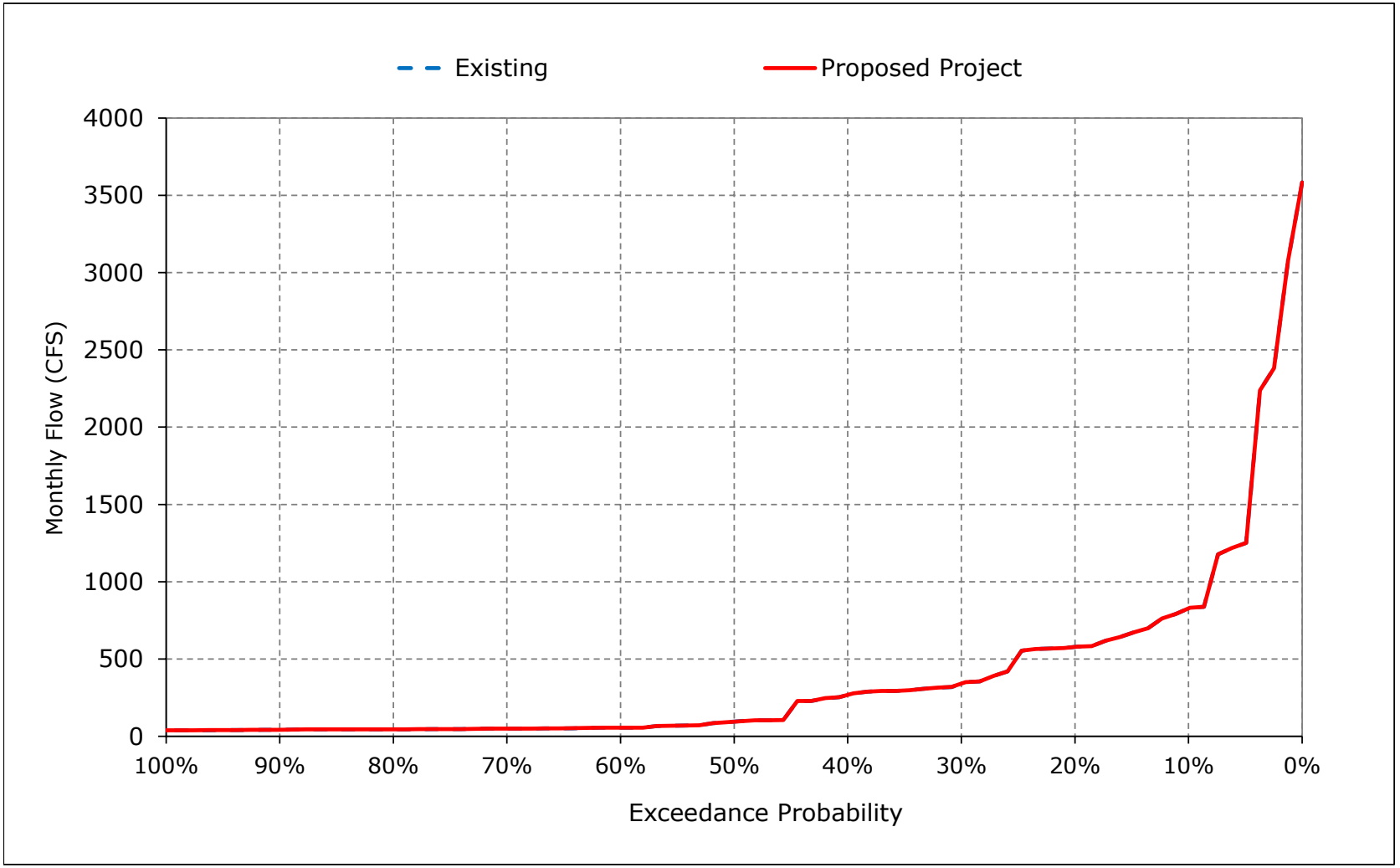


Figure 6-17. Mokelumne River below Consumnes, August

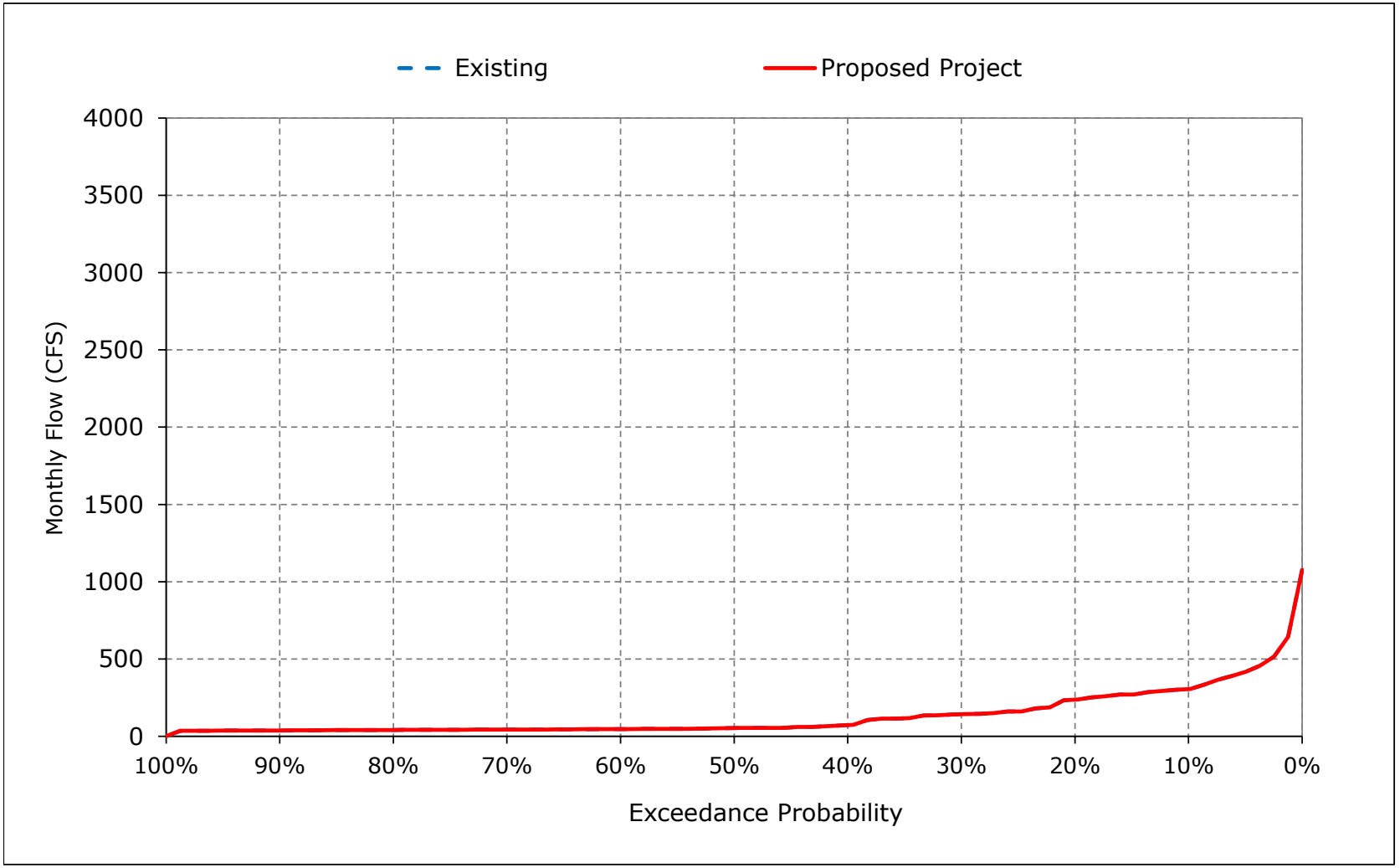


Figure 6-18. Mokelumne River below Consumnes, September

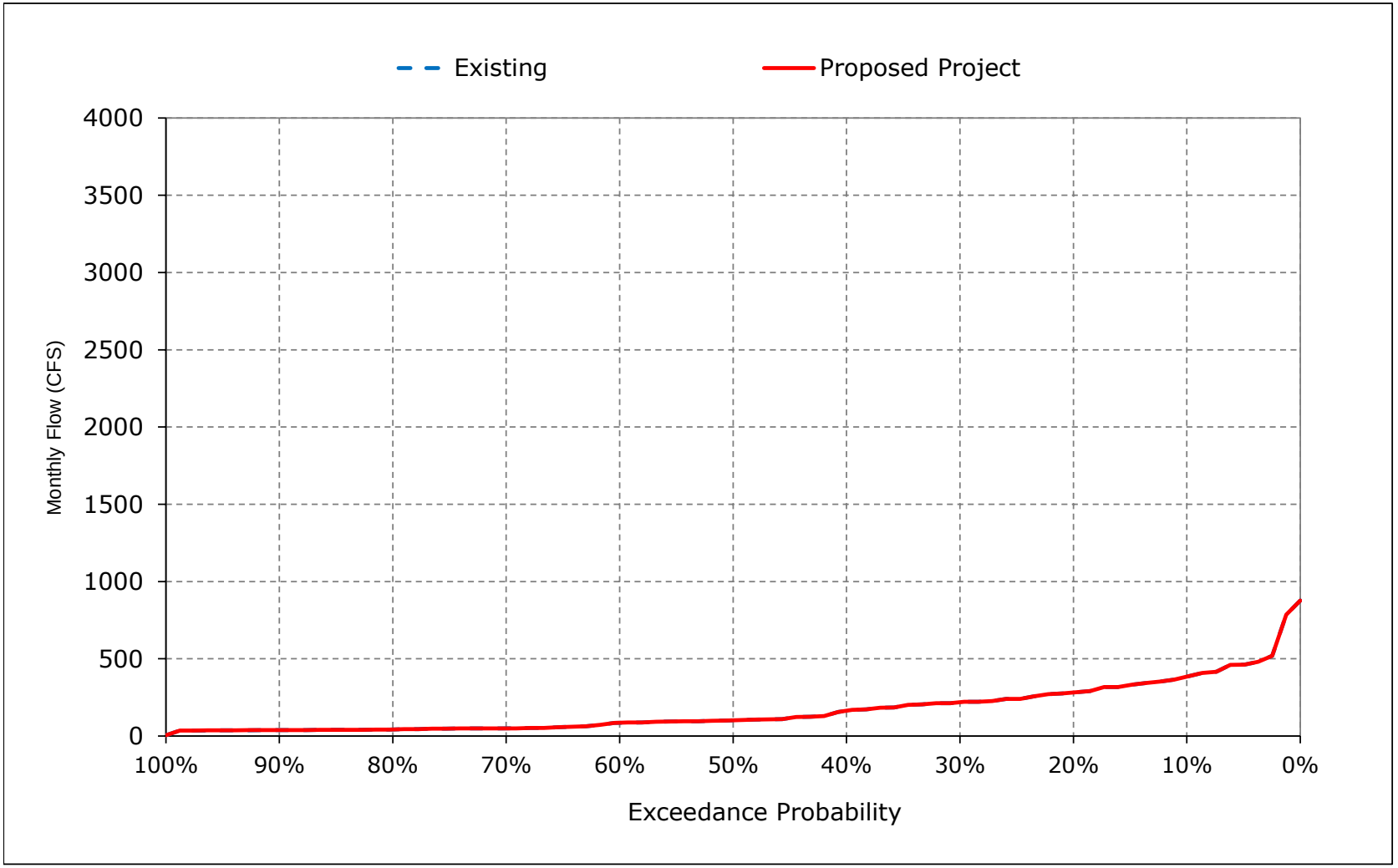


Table 7-1. Old and Middle River Flow, Monthly Flow (combined flows)

Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-3,881	-3,777	-4,457	-3,645	-3,332	-1,406	2,480	2,164	-2,590	-3,012	-3,262	-3,631
20%	-4,680	-4,317	-5,290	-3,645	-4,464	-3,539	1,530	1,037	-4,475	-5,673	-4,219	-5,827
30%	-5,019	-5,410	-5,290	-4,516	-4,464	-4,288	1,103	488	-5,000	-7,848	-5,410	-6,363
40%	-5,299	-5,958	-5,290	-4,516	-4,464	-4,371	594	-1,530	-5,000	-8,435	-8,514	-7,721
50%	-5,929	-6,405	-5,616	-4,516	-4,474	-4,371	-1,385	-1,706	-5,000	-9,287	-9,802	-8,906
60%	-6,394	-6,805	-6,374	-5,000	-4,483	-4,371	-1,592	-1,767	-5,000	-9,669	-10,268	-9,620
70%	-6,761	-7,651	-7,242	-5,000	-4,984	-4,371	-1,636	-1,796	-5,000	-10,199	-10,450	-9,841
80%	-7,446	-8,620	-9,502	-5,000	-5,000	-4,371	-1,743	-1,833	-5,000	-10,673	-10,558	-9,950
90%	-8,256	-10,054	-9,701	-5,000	-5,000	-4,371	-1,928	-1,977	-5,000	-10,901	-10,815	-10,152
Long Term												
Full Simulation Period[a]	-6,004	-6,570	-6,394	-4,029	-4,014	-3,219	-43	-582	-4,532	-8,245	-7,927	-7,854
Water Year Types[b,c]												
Wet (32%)	-6,495	-7,433	-5,515	-2,766	-2,728	-1,815	1,945	812	-4,667	-8,739	-10,214	-9,567
Above Normal (15%)	-5,955	-6,478	-7,343	-4,274	-4,248	-3,761	104	-383	-4,967	-9,553	-10,592	-9,992
Below Normal (17%)	-6,003	-6,910	-7,000	-4,578	-4,649	-4,294	-415	-695	-4,973	-10,256	-9,703	-8,760
Dry (22%)	-5,844	-6,372	-7,004	-4,889	-4,709	-4,151	-1,586	-1,773	-4,727	-8,401	-4,339	-6,036
Critical (15%)	-5,232	-4,692	-5,727	-4,588	-4,787	-3,067	-1,748	-1,881	-2,998	-3,286	-3,621	-3,678

Proposed Project

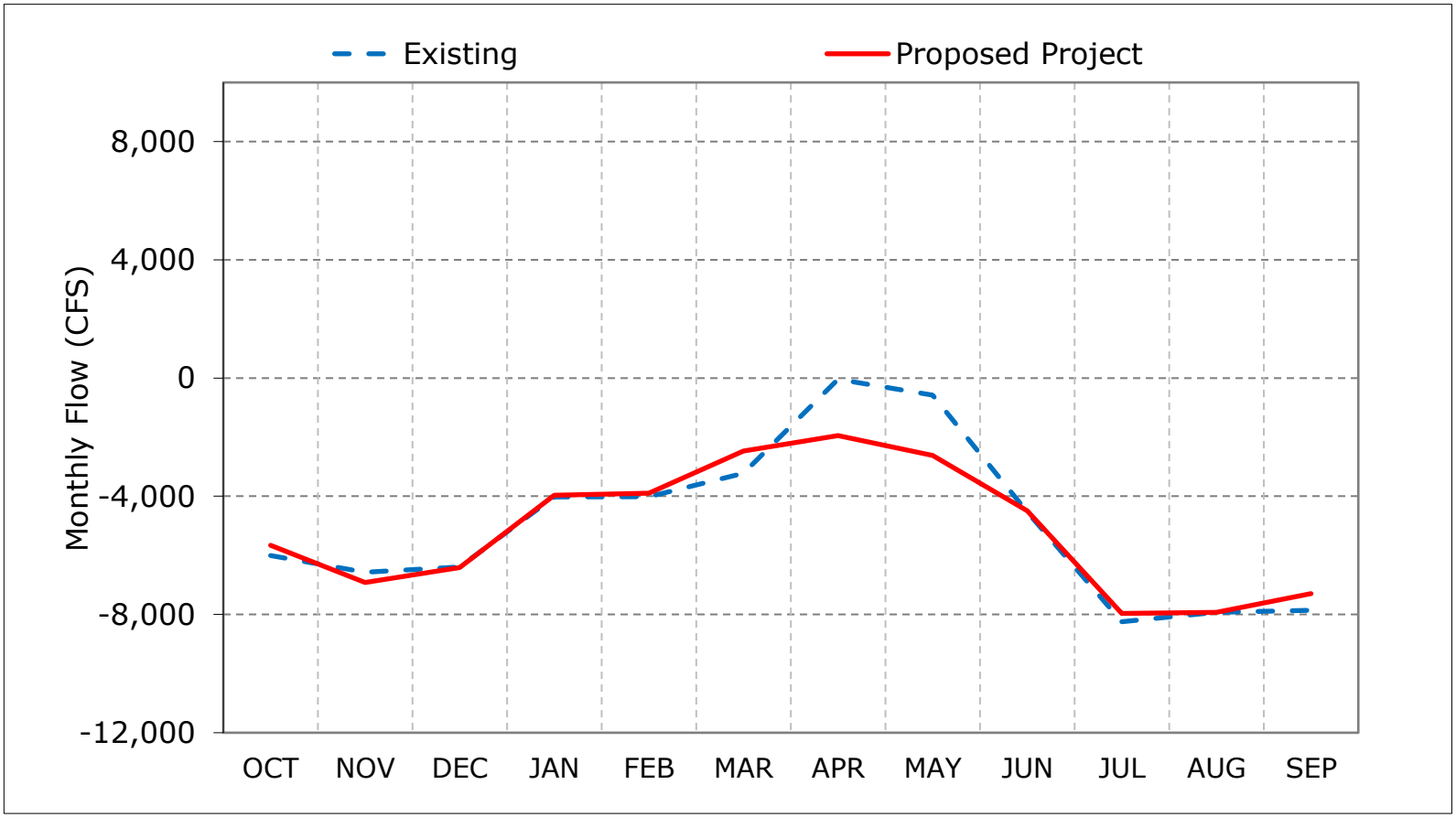
Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-3,159	-3,418	-4,037	-3,645	-2,977	-1,144	-838	-1,353	-2,588	-2,886	-3,402	-3,537
20%	-3,935	-4,497	-5,267	-3,645	-4,464	-3,258	-1,677	-1,792	-4,333	-4,885	-4,546	-5,432
30%	-4,264	-5,333	-5,290	-4,516	-4,464	-3,258	-1,888	-2,197	-5,000	-7,628	-5,633	-5,976
40%	-4,663	-6,337	-5,290	-4,516	-4,464	-3,258	-2,026	-2,571	-5,000	-8,136	-7,927	-6,740
50%	-6,059	-7,452	-5,320	-4,516	-4,466	-3,258	-2,352	-2,897	-5,000	-8,951	-9,532	-7,407
60%	-6,549	-8,886	-6,461	-5,000	-4,483	-3,258	-2,538	-3,241	-5,000	-9,552	-10,098	-8,662
70%	-6,933	-9,101	-7,976	-5,226	-5,000	-3,258	-2,926	-3,557	-5,000	-10,007	-10,441	-9,284
80%	-7,355	-9,253	-9,447	-5,226	-5,193	-3,258	-3,109	-3,760	-5,000	-10,414	-10,580	-9,507
90%	-8,244	-9,373	-9,699	-5,226	-5,250	-3,500	-3,260	-4,061	-5,000	-10,816	-10,844	-9,660
Long Term												
Full Simulation Period[a]	-5,655	-6,916	-6,413	-3,967	-3,901	-2,466	-1,948	-2,622	-4,491	-7,964	-7,929	-7,292
Water Year Types[b,c]												
Wet (32%)	-6,267	-7,818	-5,512	-2,373	-2,270	-955	-1,208	-2,388	-4,629	-8,548	-10,134	-8,733
Above Normal (15%)	-5,951	-6,950	-7,391	-4,331	-3,985	-2,755	-2,740	-3,585	-4,961	-9,713	-10,525	-9,339
Below Normal (17%)	-5,725	-7,415	-6,970	-4,707	-4,787	-3,238	-2,495	-3,268	-4,959	-9,485	-9,414	-8,182
Dry (22%)	-5,342	-6,276	-7,274	-5,061	-4,918	-3,289	-2,300	-2,548	-4,668	-7,739	-4,457	-5,653
Critical (15%)	-4,422	-5,307	-5,447	-4,553	-4,794	-3,316	-1,592	-1,522	-2,909	-3,512	-4,031	-3,545

Proposed Project minus Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	722	358	420	0	354	262	**-3,318**	**-3,517**	2	126	**-141**	94
20%	745	**-180**	23	0	0	281	**-3,207**	**-2,830**	142	787	**-327**	395
30%	755	78	0	0	0	1,030	**-2,991**	**-2,685**	0	220	**-224**	387
40%	636	**-379**	0	0	0	1,113	**-2,620**	**-1,041**	0	300	587	981
50%	**-131**	**-1,046**	297	0	8	1,113	**-967**	**-1,191**	0	336	271	1,499
60%	**-155**	**-2,081**	**-87**	0	0	1,113	**-946**	**-1,475**	0	117	170	958
70%	**-172**	**-1,450**	**-734**	**-226**	**-16**	1,113	**-1,290**	**-1,762**	0	193	9	557
80%	91	**-633**	55	**-226**	**-193**	1,113	**-1,366**	**-1,928**	0	259	**-22**	443
90%	12	681	2	**-226**	**-250**	871	**-1,332**	**-2,084**	0	86	**-29**	492
Long Term												
Full Simulation Period[a]	349	**-346**	**-19**	61	113	753	**-1,905**	**-2,040**	41	281	**-2**	562
Water Year Types[b,c]												
Wet (32%)	228	**-385**	3	392	457	859	**-3,154**	**-3,200**	39	191	80	834
Above Normal (15%)	4	**-472**	**-48**	**-56**	262	1,005	**-2,844**	**-3,202**	6	**-159**	67	653
Below Normal (17%)	278	**-505**	30	**-129**	**-137**	1,056	**-2,080**	**-2,573**	13	772	289	579
Dry (22%)	503	96	**-270**	**-173**	**-209**	862	**-714**	**-775**	59	662	**-119**	383
Critical (15%)	810	**-615**	280	36	**-7**	**-250**	156	359	89	**-227**	**-411**	133

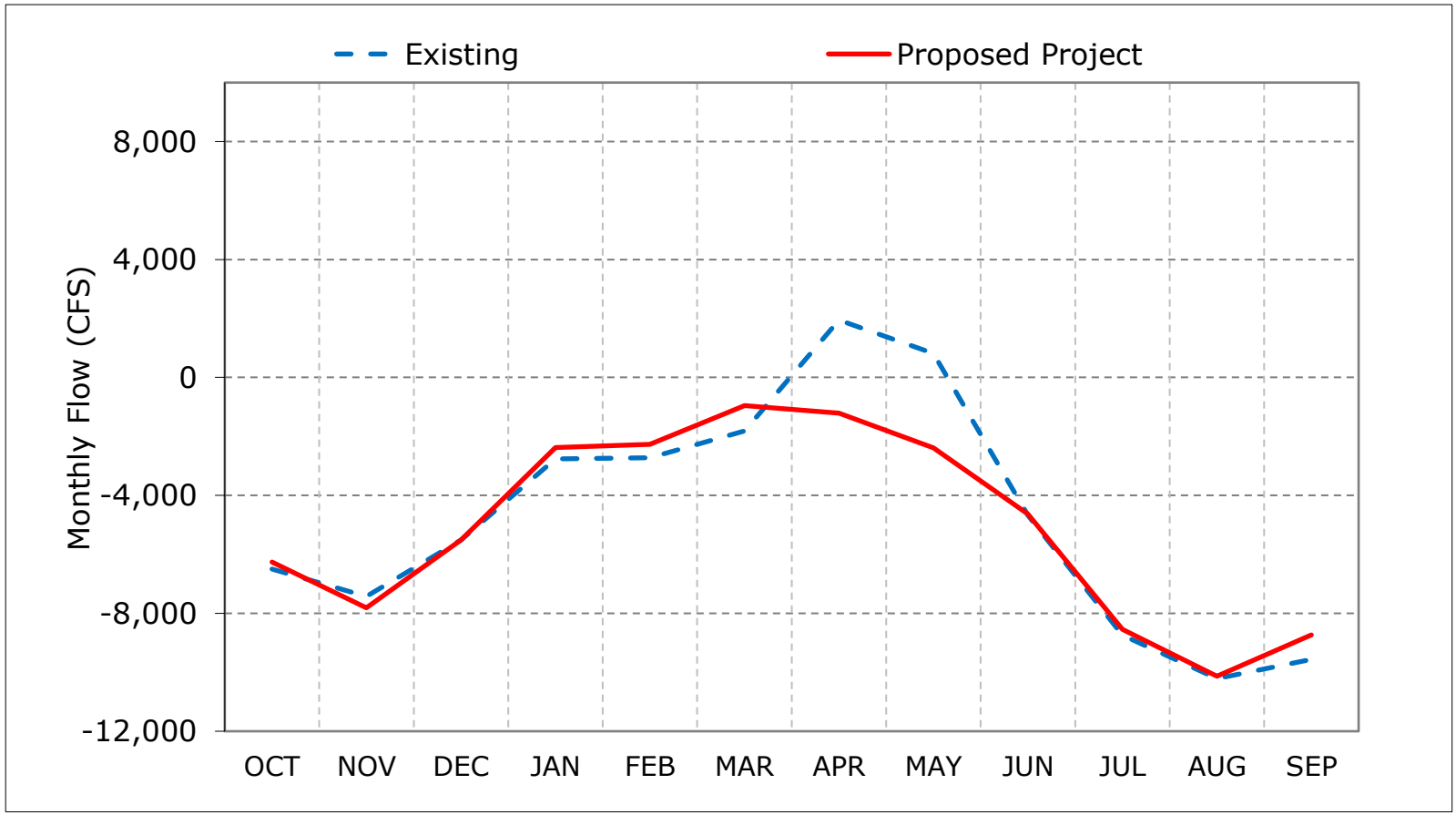
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

Figure 7-1. Old and Middle River Flow, Long-Term Average Flow



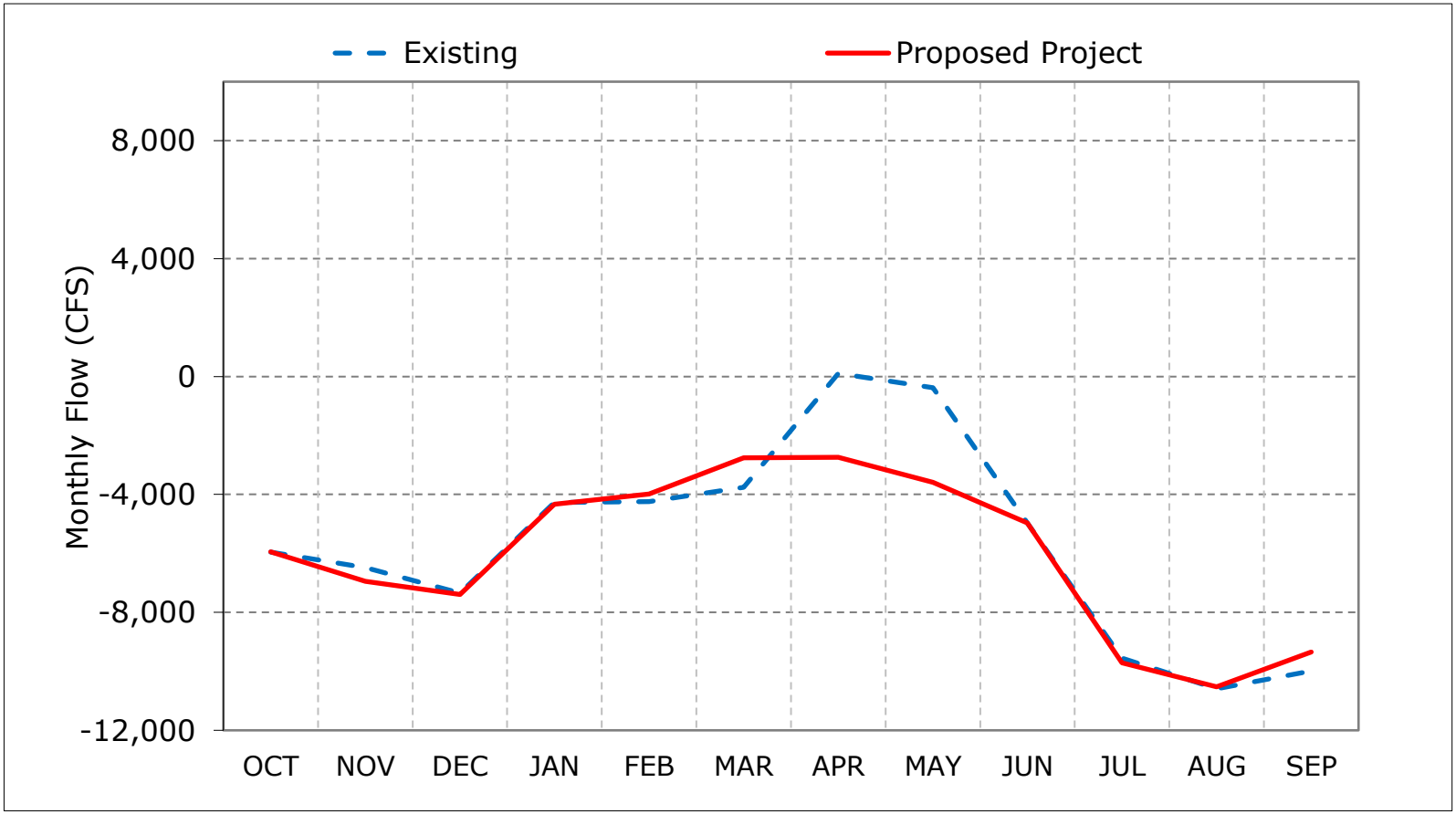
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 7-2. Old and Middle River Flow, Wet Year Average Flow



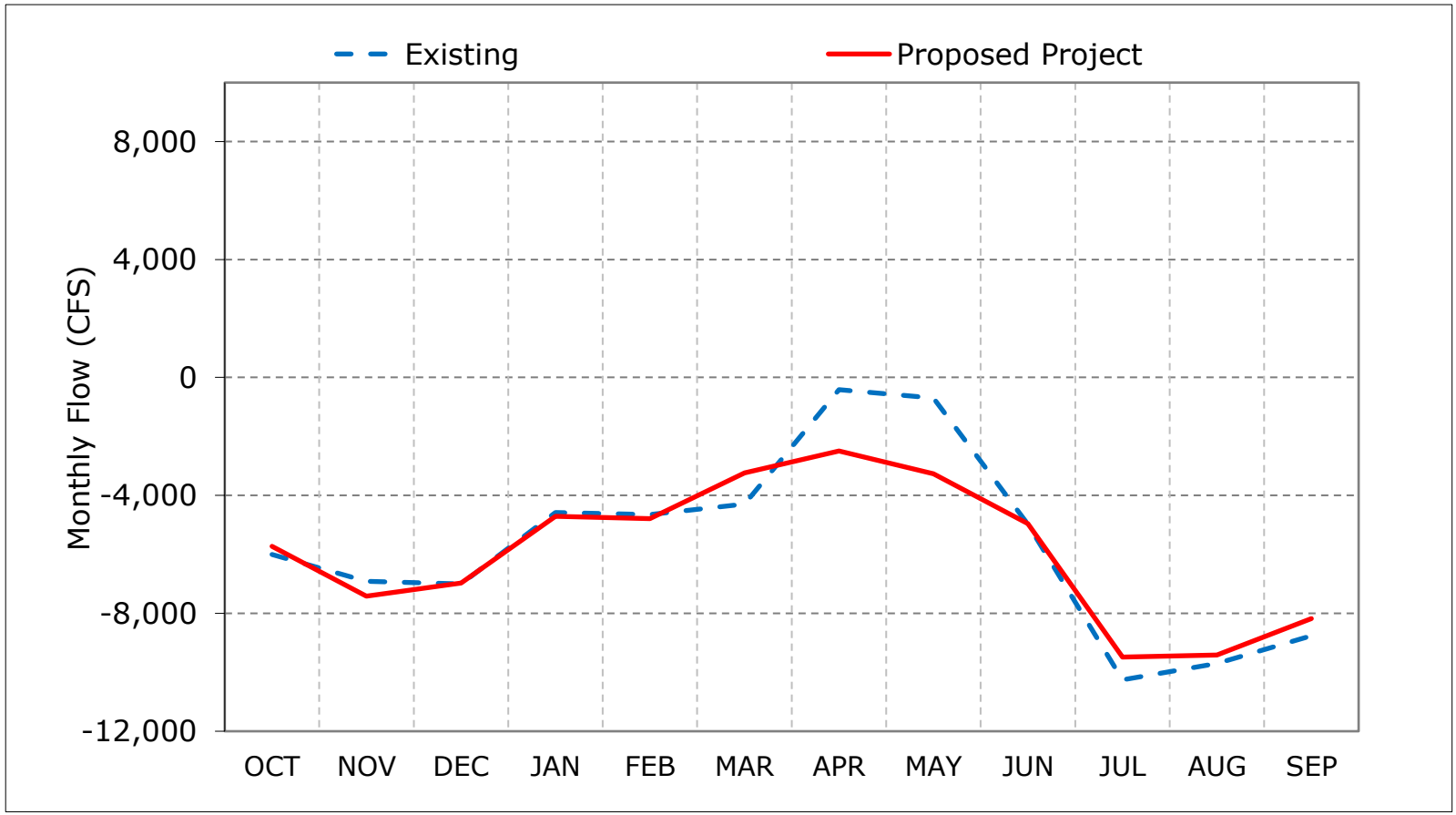
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 7-3. Old and Middle River Flow, Above Normal Year Average Flow



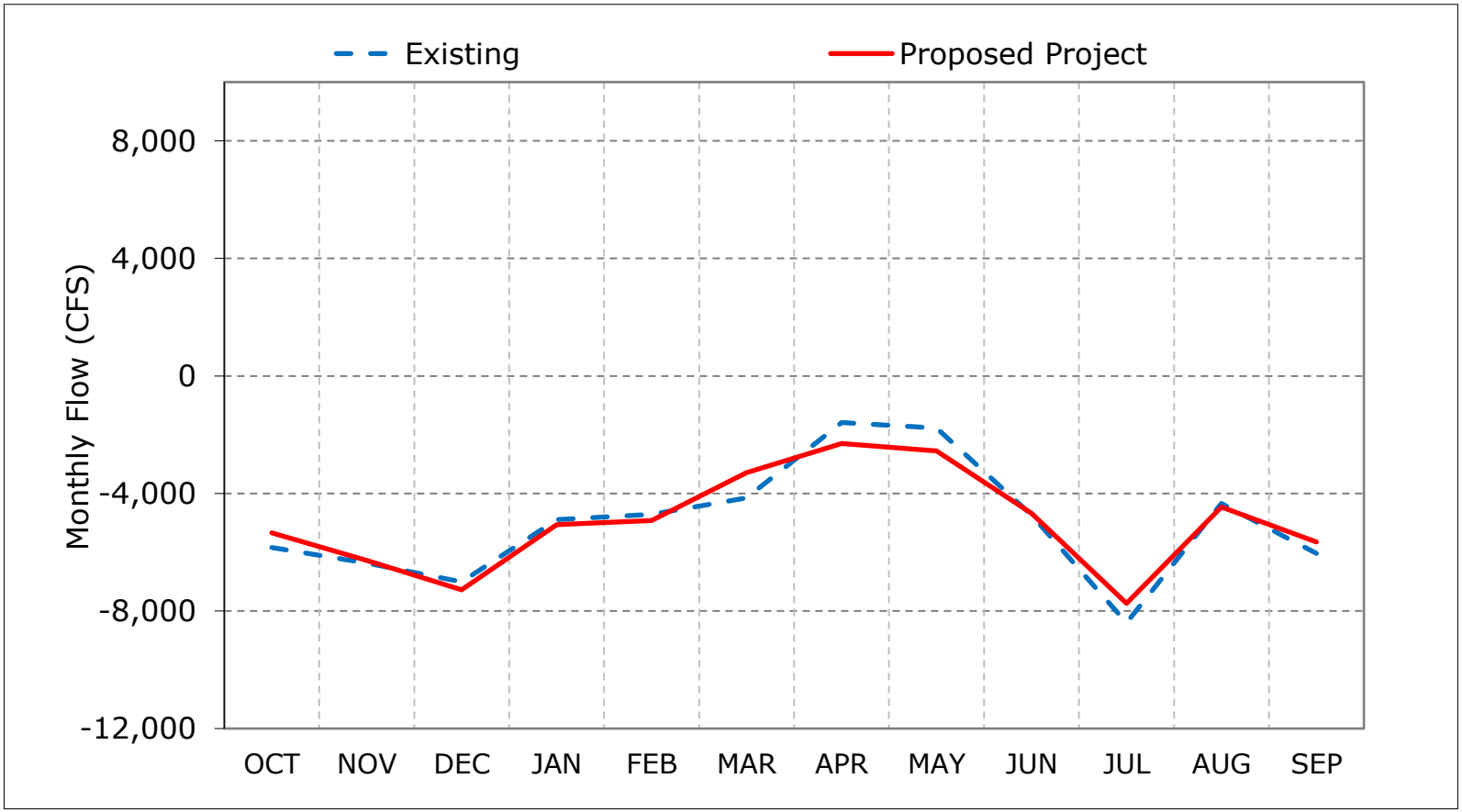
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 7-4. Old and Middle River Flow, Below Normal Year Average Flow



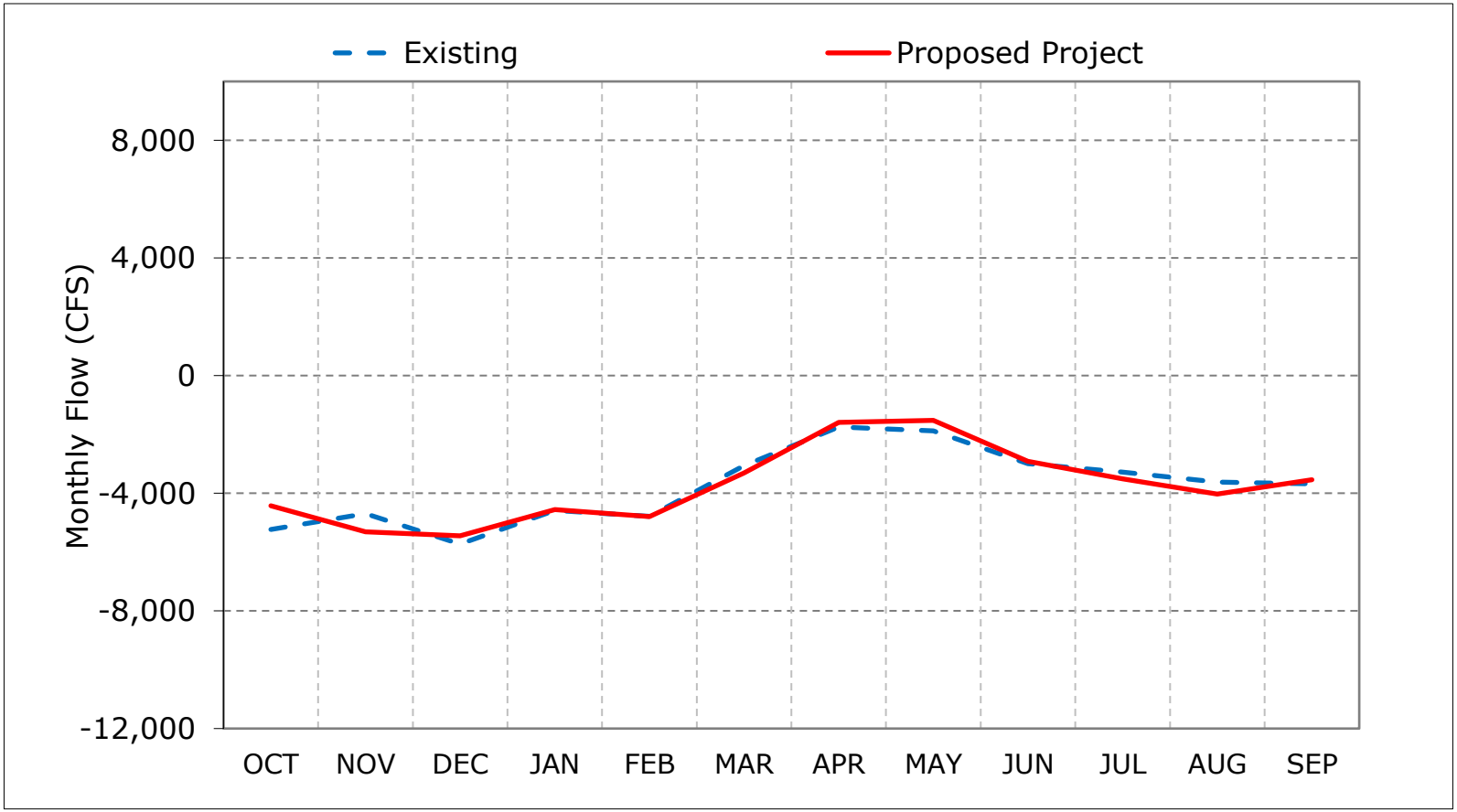
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 7-5. Old and Middle River Flow, Dry Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 7-6. Old and Middle River Flow, Critical Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 7-7. Old and Middle River Flow, October

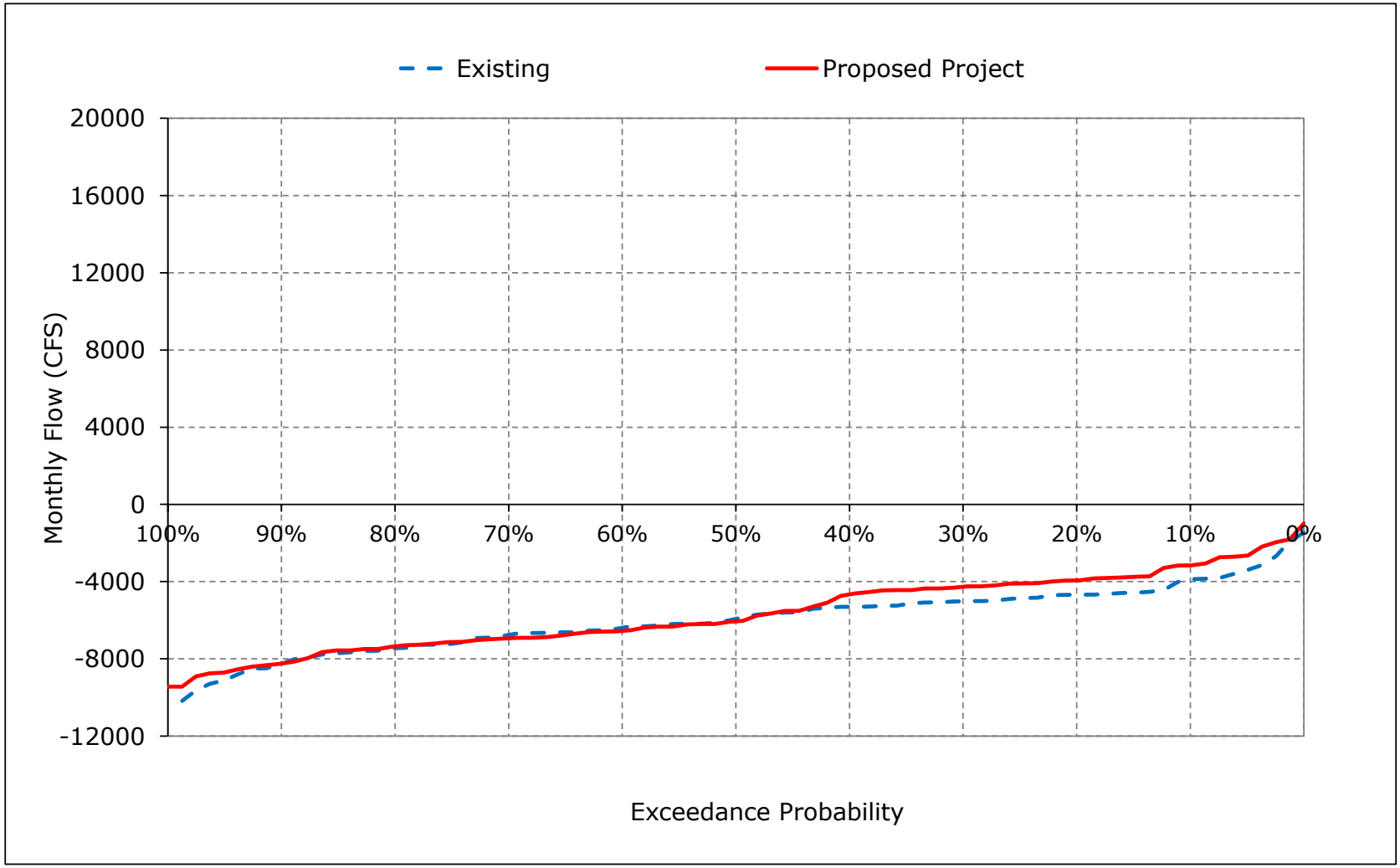


Figure 7-8. Old and Middle River Flow, November

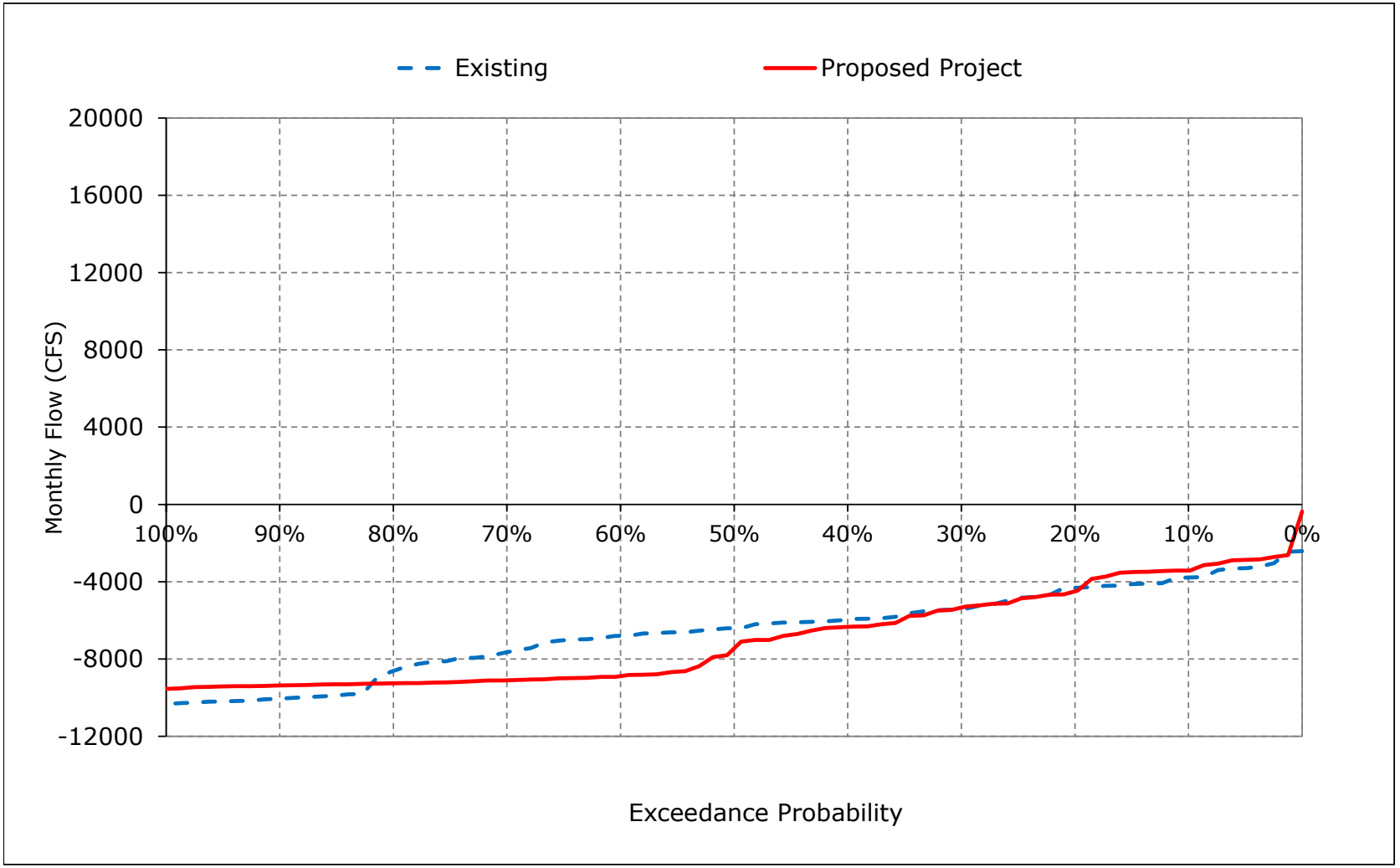


Figure 7-9. Old and Middle River Flow, December

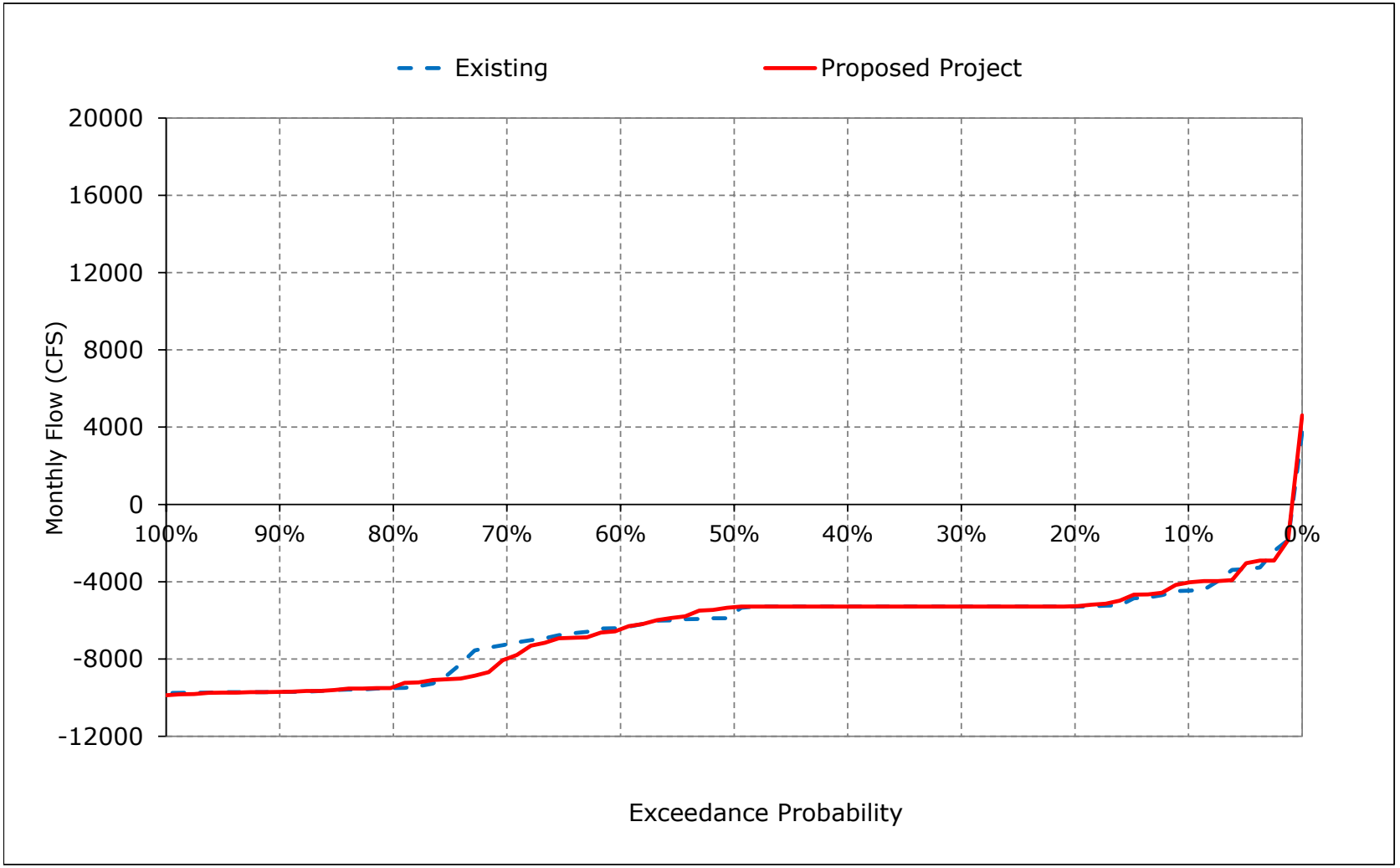


Figure 7-10. Old and Middle River Flow, January

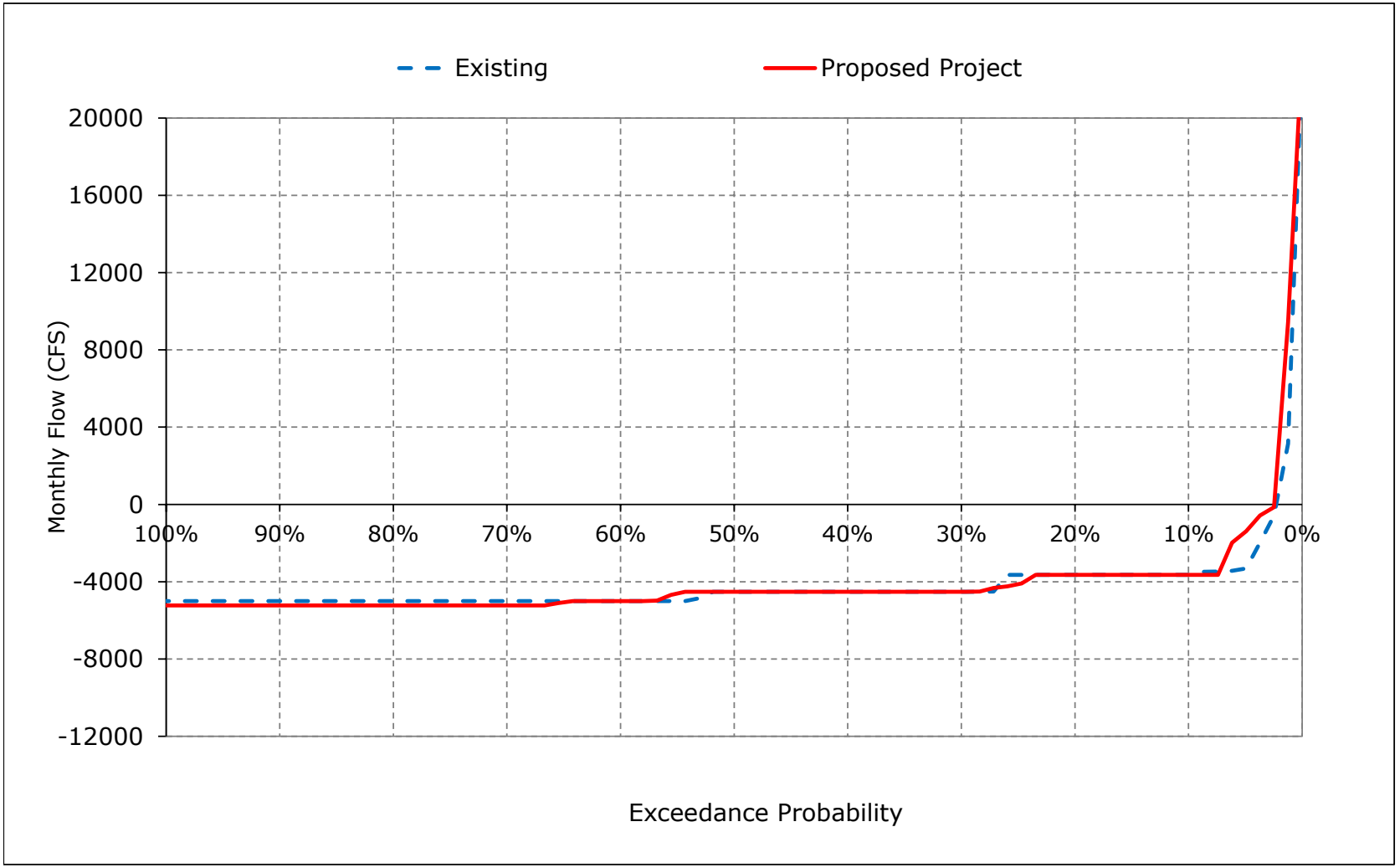


Figure 7-11. Old and Middle River Flow, February

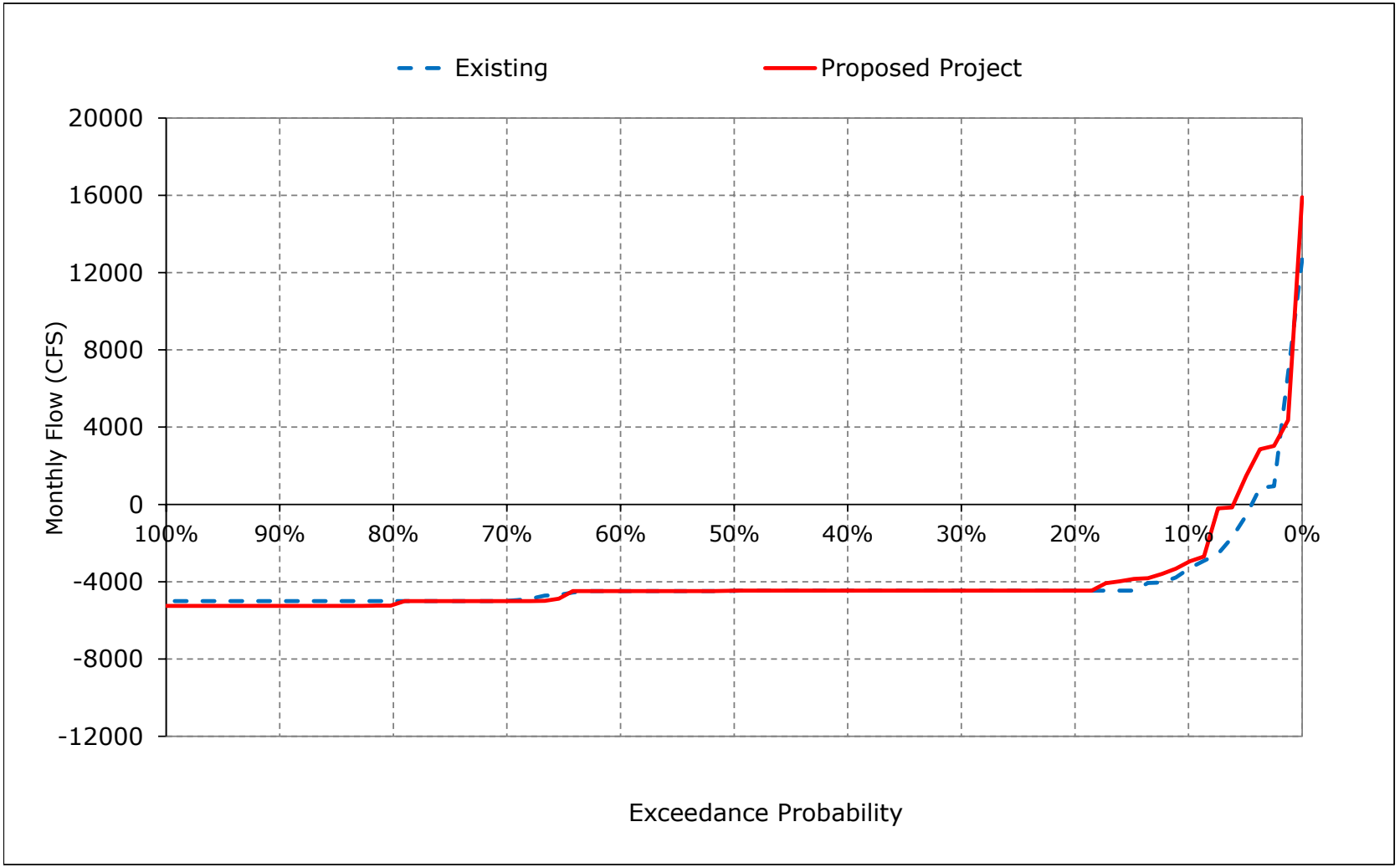


Figure 7-12. Old and Middle River Flow, March

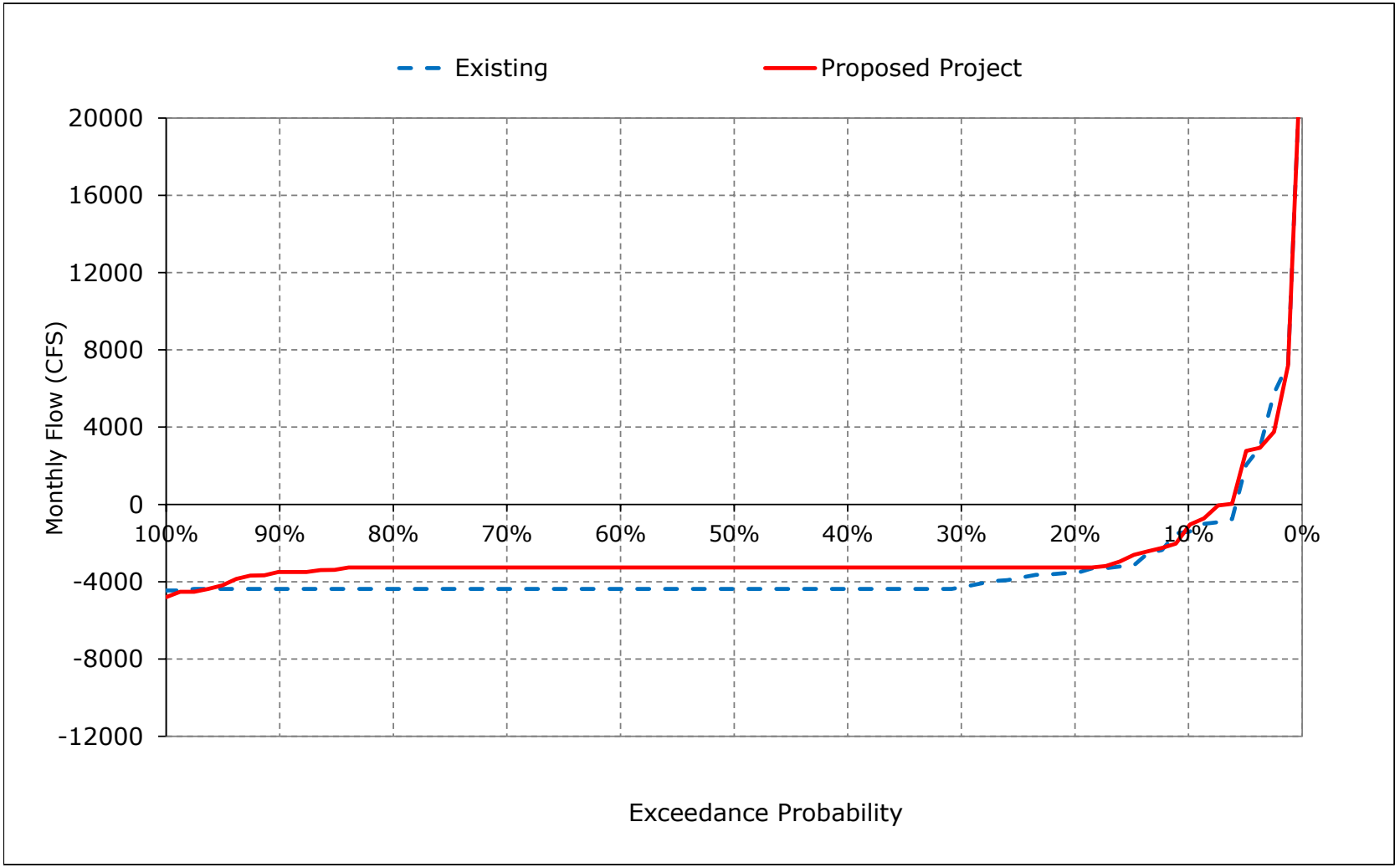


Figure 7-13. Old and Middle River Flow, April

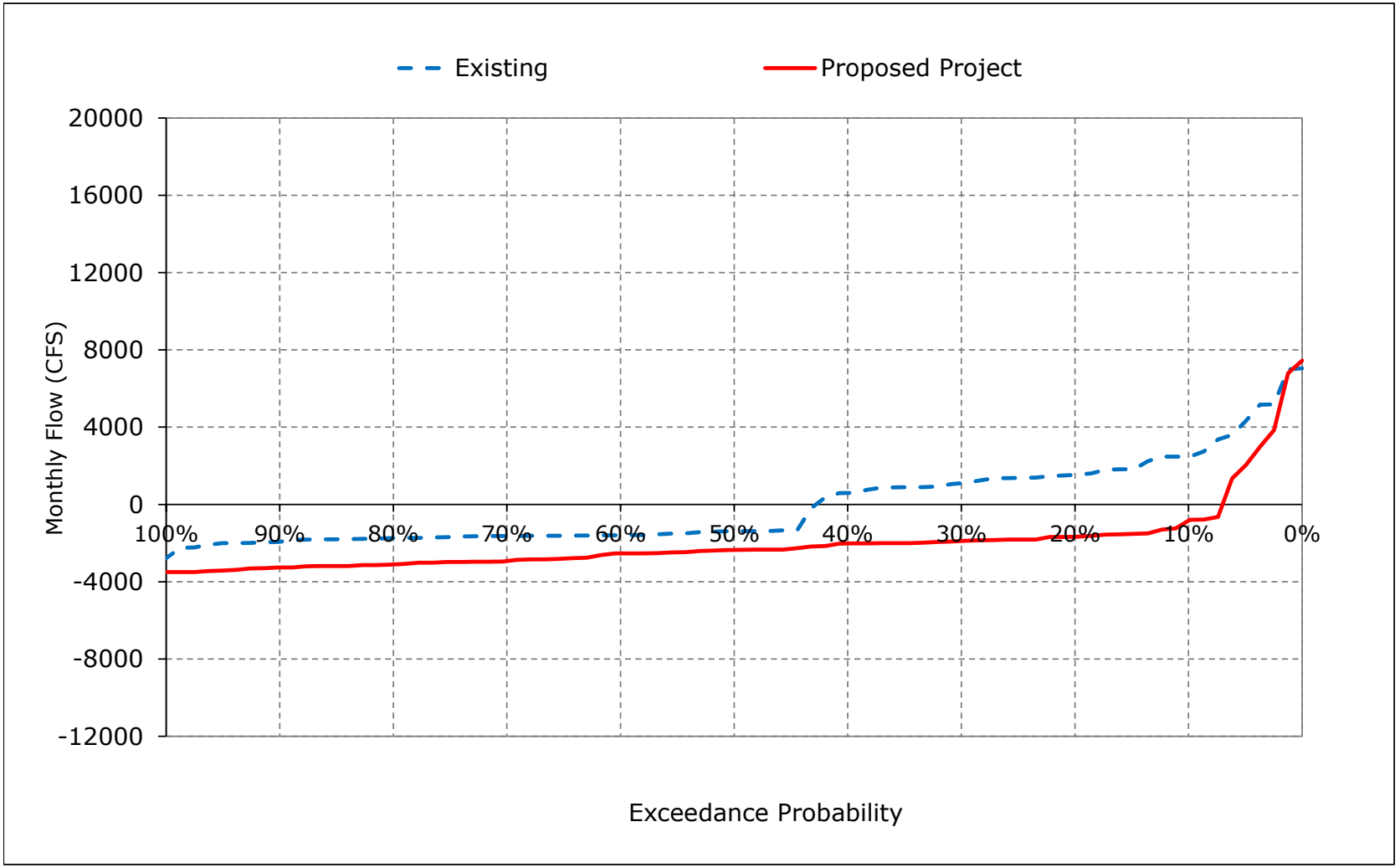


Figure 7-14. Old and Middle River Flow, May

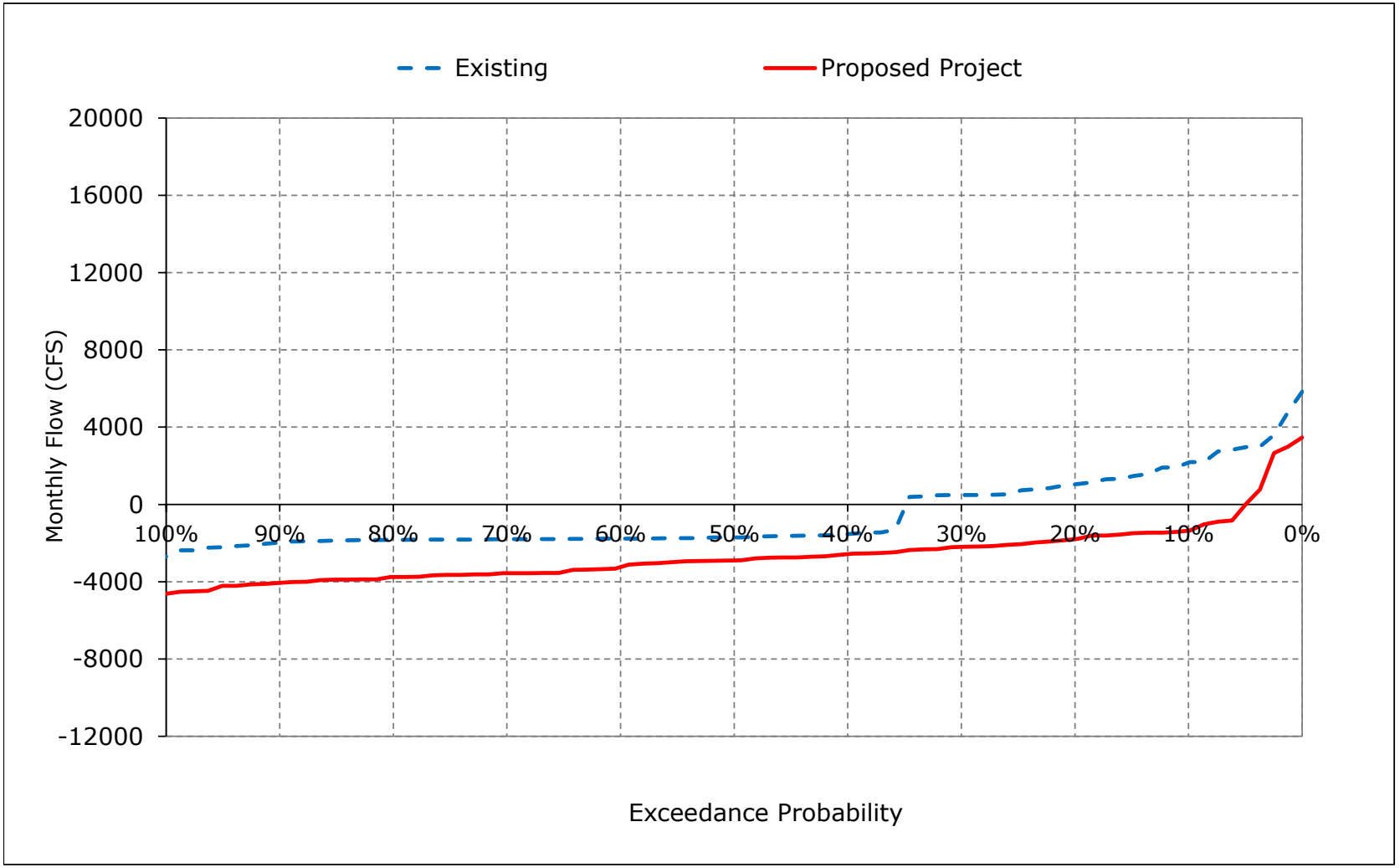


Figure 7-15. Old and Middle River Flow, June

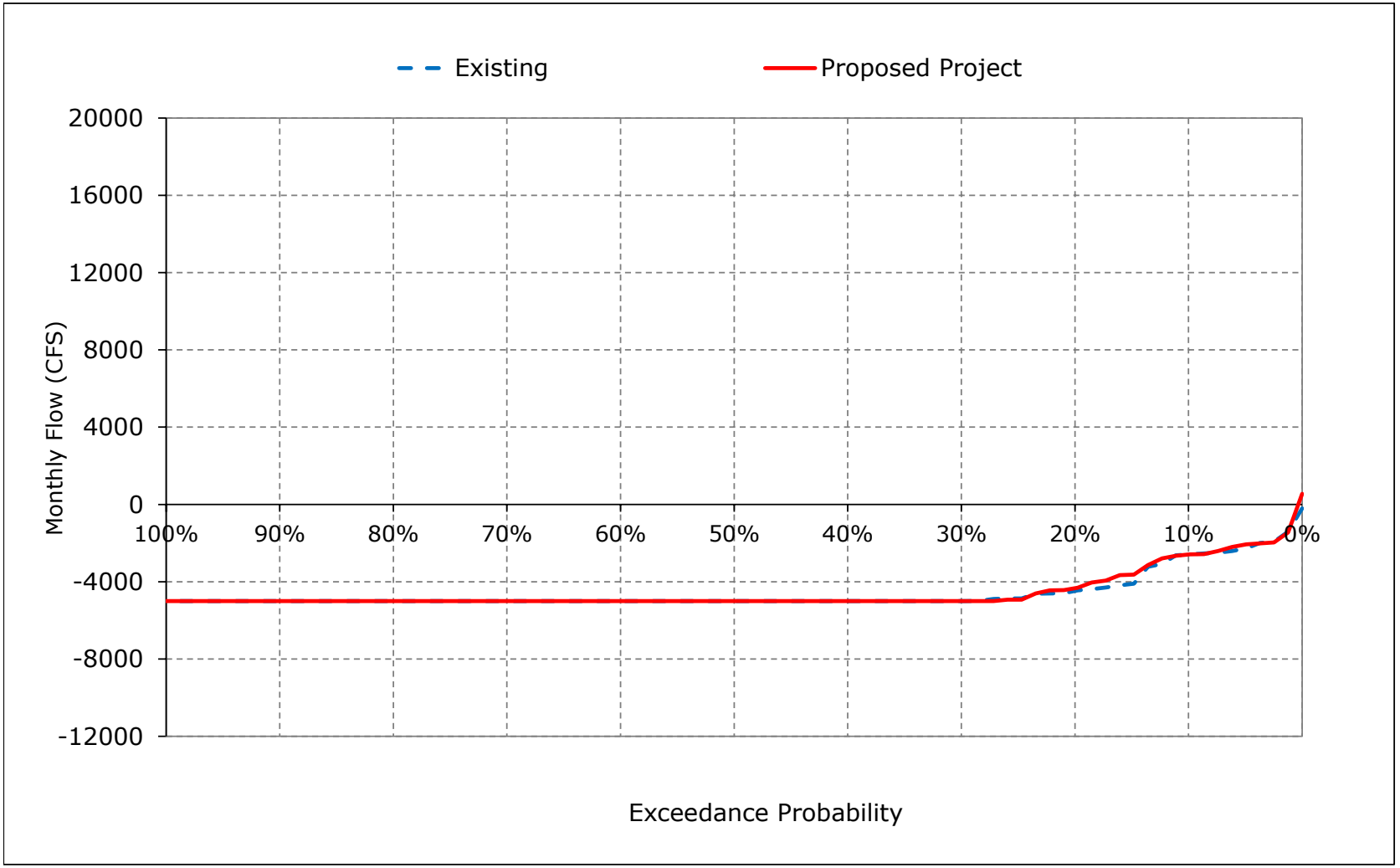


Figure 7-16. Old and Middle River Flow, July

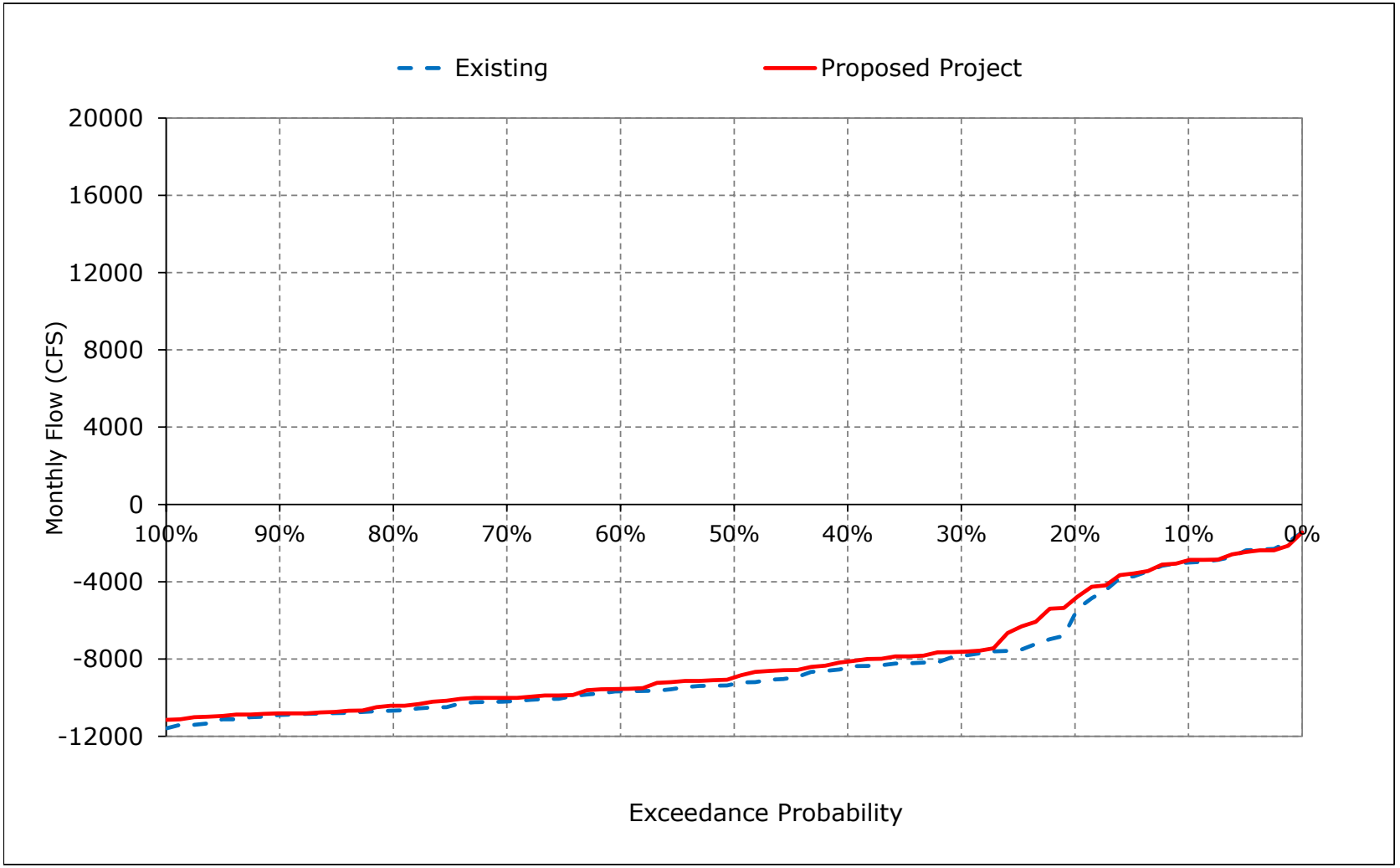


Figure 7-17. Old and Middle River Flow, August

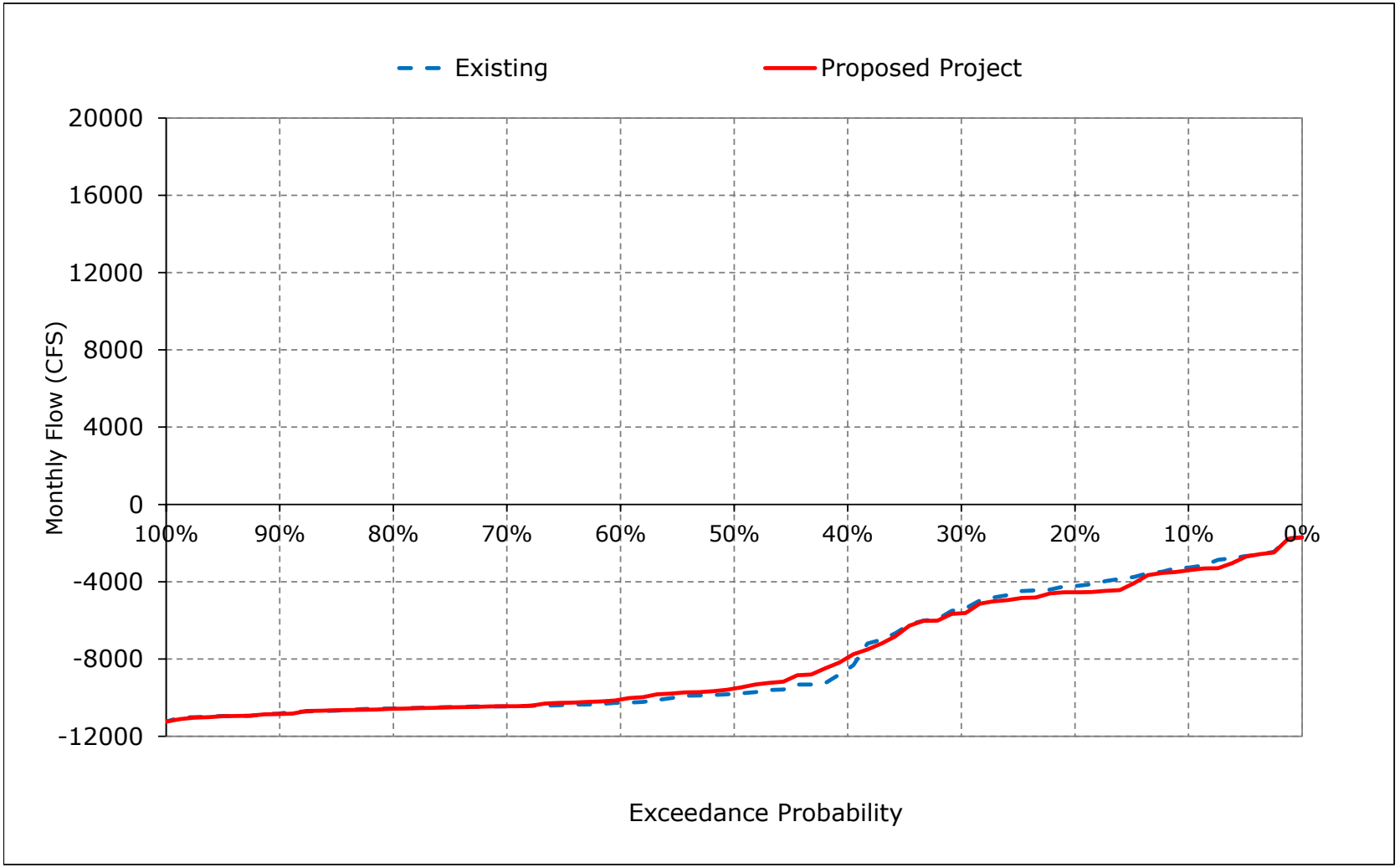


Figure 7-18. Old and Middle River Flow, September

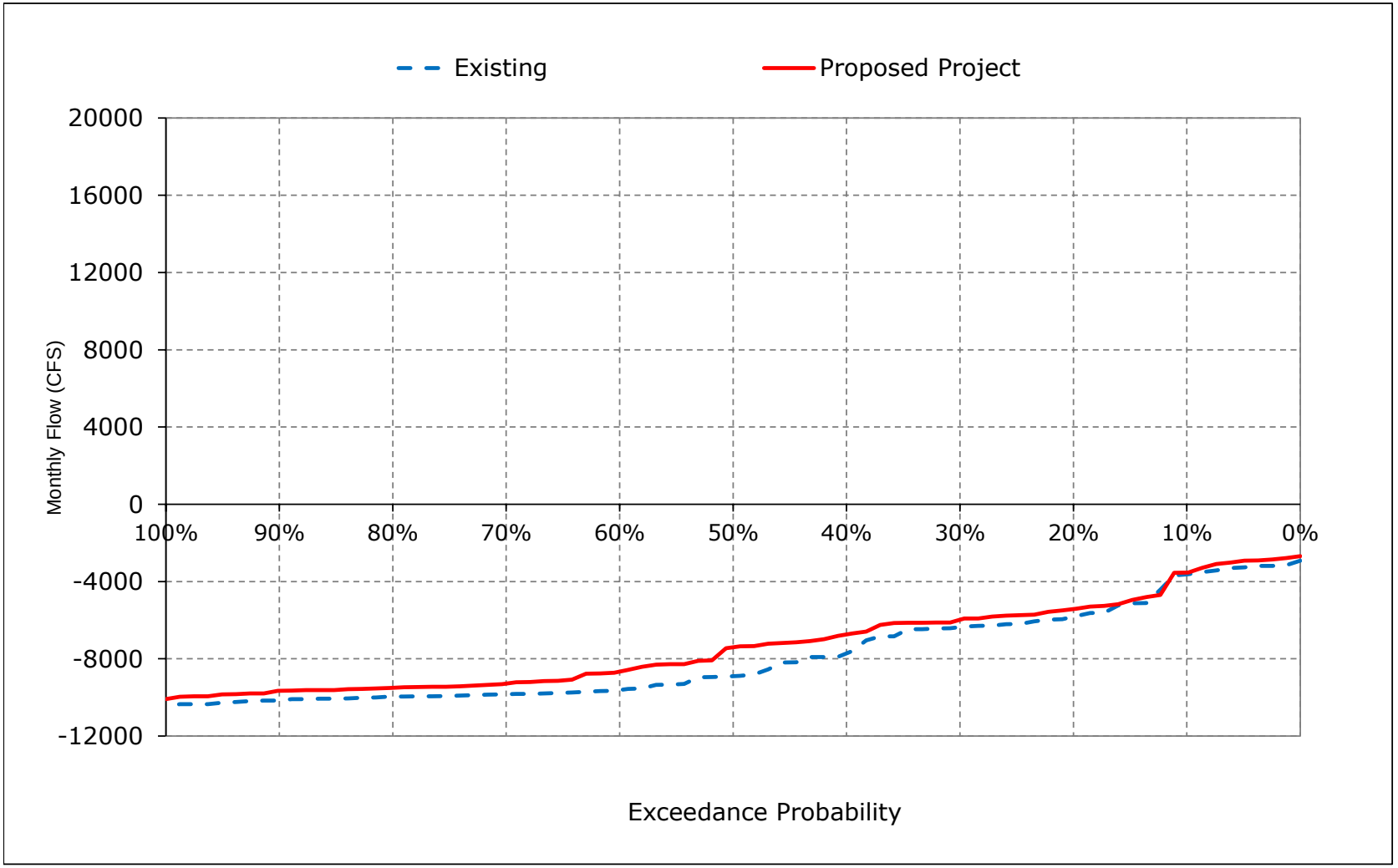


Table 8-1. Qwest, Monthly Flow

Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	1,101	1,598	7,499	14,692	18,541	18,228	20,508	16,658	7,874	362	245	35
20%	459	97	2,675	10,229	12,454	11,863	14,500	9,590	3,602	-285	-650	-1,012
30%	76	-77	-321	5,864	10,150	6,927	10,843	7,568	2,039	-1,323	-1,260	-1,568
40%	-10	-641	-1,310	3,159	7,473	5,169	8,593	6,449	1,054	-2,443	-2,321	-1,948
50%	-224	-923	-1,710	1,398	4,039	3,332	6,602	5,451	476	-2,799	-4,233	-2,266
60%	-371	-1,513	-2,422	261	1,931	2,051	4,740	3,606	51	-3,227	-4,588	-2,638
70%	-578	-1,990	-3,349	-189	730	1,470	3,805	2,374	-556	-3,787	-4,725	-3,631
80%	-1,237	-2,586	-4,822	-985	-18	684	2,559	1,691	-930	-4,236	-5,078	-4,095
90%	-1,696	-3,624	-5,504	-1,333	-908	-178	1,618	921	-1,123	-4,772	-5,296	-4,560
Long Term												
Full Simulation Period[a]	-375	-767	-53	5,395	7,422	7,194	8,963	6,858	2,054	-1,788	-3,008	-2,285
Water Year Types[b,c]												
Wet (32%)	-497	-233	4,357	13,707	15,795	15,802	16,456	13,289	6,129	542	-3,962	-3,120
Above Normal (15%)	-536	-877	-1,207	6,404	8,852	8,806	9,620	7,376	1,502	-2,434	-5,088	-1,665
Below Normal (17%)	-221	-1,429	-1,740	1,722	5,401	3,169	7,343	5,311	189	-4,172	-4,524	-3,501
Dry (22%)	-281	-1,341	-2,853	-309	1,266	1,312	3,890	2,496	-660	-3,778	-769	-1,874
Critical (15%)	-268	-182	-2,286	-781	-560	451	1,572	755	25	-425	-449	-295

Proposed Project

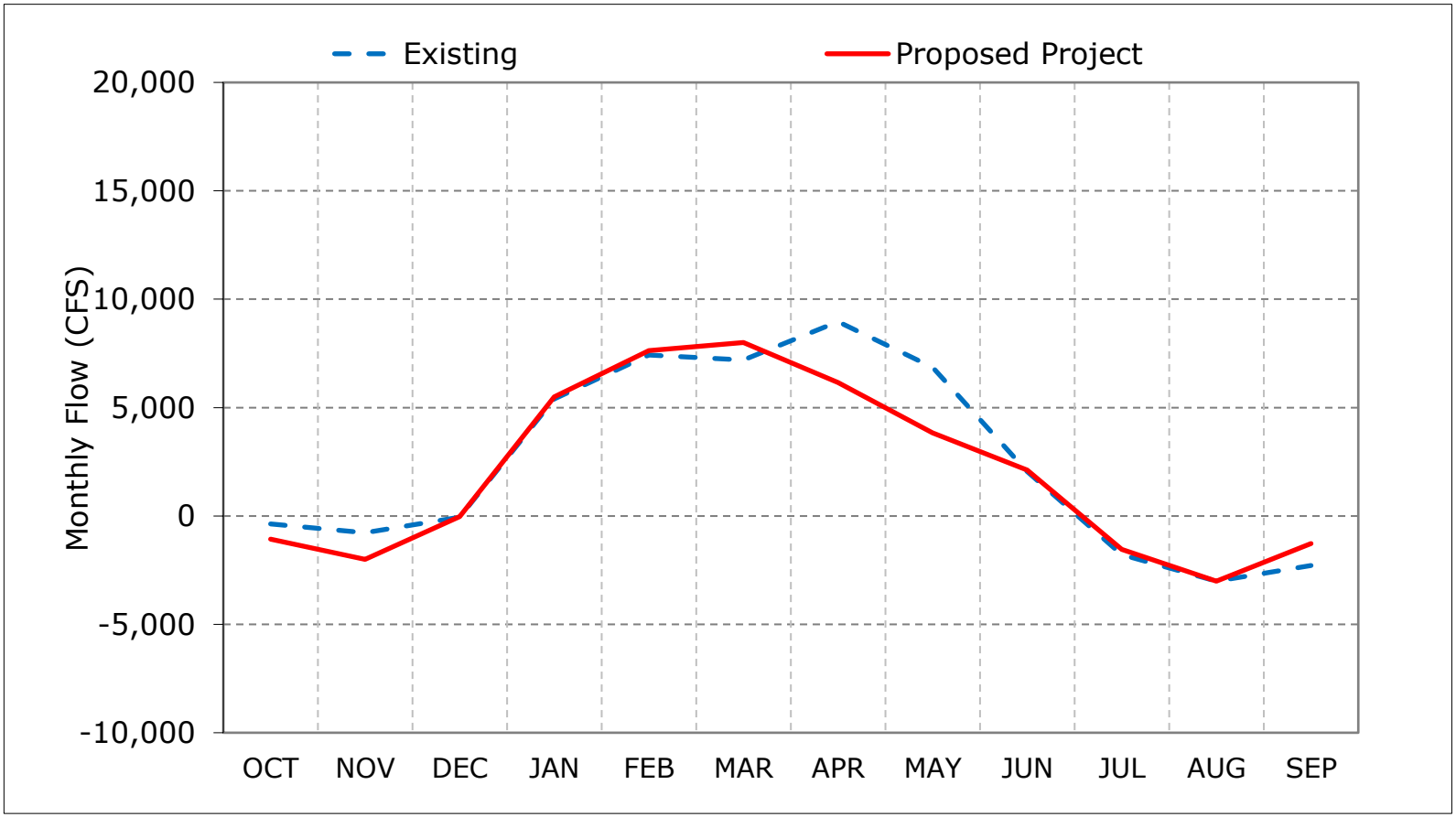
Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	485	60	7,406	14,759	19,661	18,842	14,629	10,860	7,870	362	-3	399
20%	66	-270	2,425	10,208	12,519	13,483	9,890	4,611	3,762	-104	-1,020	27
30%	-97	-1,185	-240	5,986	9,693	7,878	6,428	3,428	2,105	-1,053	-1,511	-588
40%	-309	-2,025	-1,146	3,492	7,430	6,540	4,573	2,225	1,187	-1,906	-2,476	-1,020
50%	-711	-2,389	-1,593	1,762	4,072	4,475	3,218	1,747	508	-2,622	-3,693	-1,491
60%	-1,306	-3,364	-2,365	132	1,825	2,886	2,086	1,086	11	-3,090	-4,271	-1,785
70%	-1,774	-3,628	-3,357	-653	575	1,911	1,772	650	-496	-3,428	-4,795	-1,981
80%	-2,216	-3,967	-4,945	-1,172	-401	1,302	1,321	264	-832	-3,999	-5,029	-2,266
90%	-3,033	-4,706	-5,426	-1,505	-1,033	-101	786	-36	-1,095	-4,290	-5,392	-3,078
Long Term												
Full Simulation Period[a]	-1,064	-2,007	-26	5,494	7,622	8,001	6,155	3,830	2,113	-1,540	-3,008	-1,268
Water Year Types[b,c]												
Wet (32%)	-1,362	-1,756	4,499	14,173	16,435	16,725	12,634	9,001	6,123	758	-3,870	-154
Above Normal (15%)	-1,489	-2,116	-1,245	6,427	9,208	9,991	5,917	3,228	1,626	-2,580	-5,036	-1,208
Below Normal (17%)	-1,067	-2,716	-1,691	1,736	5,440	4,290	4,354	1,905	337	-3,452	-4,306	-3,385
Dry (22%)	-772	-2,042	-3,154	-528	990	2,222	1,847	588	-615	-3,305	-890	-1,848
Critical (15%)	-430	-1,561	-1,979	-827	-564	106	914	339	72	-600	-778	-405

Proposed Project minus Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	**-615**	**-1,538**	**-94**	67	1,120	614	**-5,880**	**-5,799**	**-4**	0	**-248**	364
20%	**-393**	**-368**	**-251**	**-21**	65	1,619	**-4,610**	**-4,979**	160	182	**-370**	1,039
30%	**-173**	**-1,108**	80	122	**-458**	951	**-4,416**	**-4,140**	66	270	**-251**	980
40%	**-299**	**-1,383**	165	333	**-43**	1,371	**-4,020**	**-4,224**	132	536	**-154**	928
50%	**-488**	**-1,466**	117	364	33	1,143	**-3,384**	**-3,703**	32	177	540	776
60%	**-935**	**-1,851**	57	**-129**	**-105**	835	**-2,654**	**-2,520**	**-40**	136	318	853
70%	**-1,196**	**-1,637**	**-8**	**-465**	**-155**	441	**-2,033**	**-1,724**	60	360	**-69**	1,650
80%	**-980**	**-1,381**	**-122**	**-186**	**-383**	618	**-1,238**	**-1,428**	99	237	49	1,829
90%	**-1,337**	**-1,082**	78	**-172**	**-124**	77	**-832**	**-957**	29	482	**-96**	1,481
Long Term												
Full Simulation Period[a]	**-690**	**-1,240**	27	99	200	806	**-2,809**	**-3,028**	59	248	**0**	1,017
Water Year Types[b,c]												
Wet (32%)	**-865**	**-1,523**	142	467	639	923	**-3,822**	**-4,288**	**-6**	216	92	2,966
Above Normal (15%)	**-953**	**-1,239**	**-39**	23	356	1,185	**-3,703**	**-4,147**	124	**-145**	52	457
Below Normal (17%)	**-845**	**-1,287**	49	15	39	1,121	**-2,989**	**-3,406**	148	720	218	116
Dry (22%)	**-492**	**-701**	**-301**	**-219**	**-276**	910	**-2,042**	**-1,908**	46	473	**-121**	26
Critical (15%)	**-162**	**-1,378**	307	**-47**	**-3**	**-346**	**-658**	**-416**	47	**-175**	**-328**	**-110**

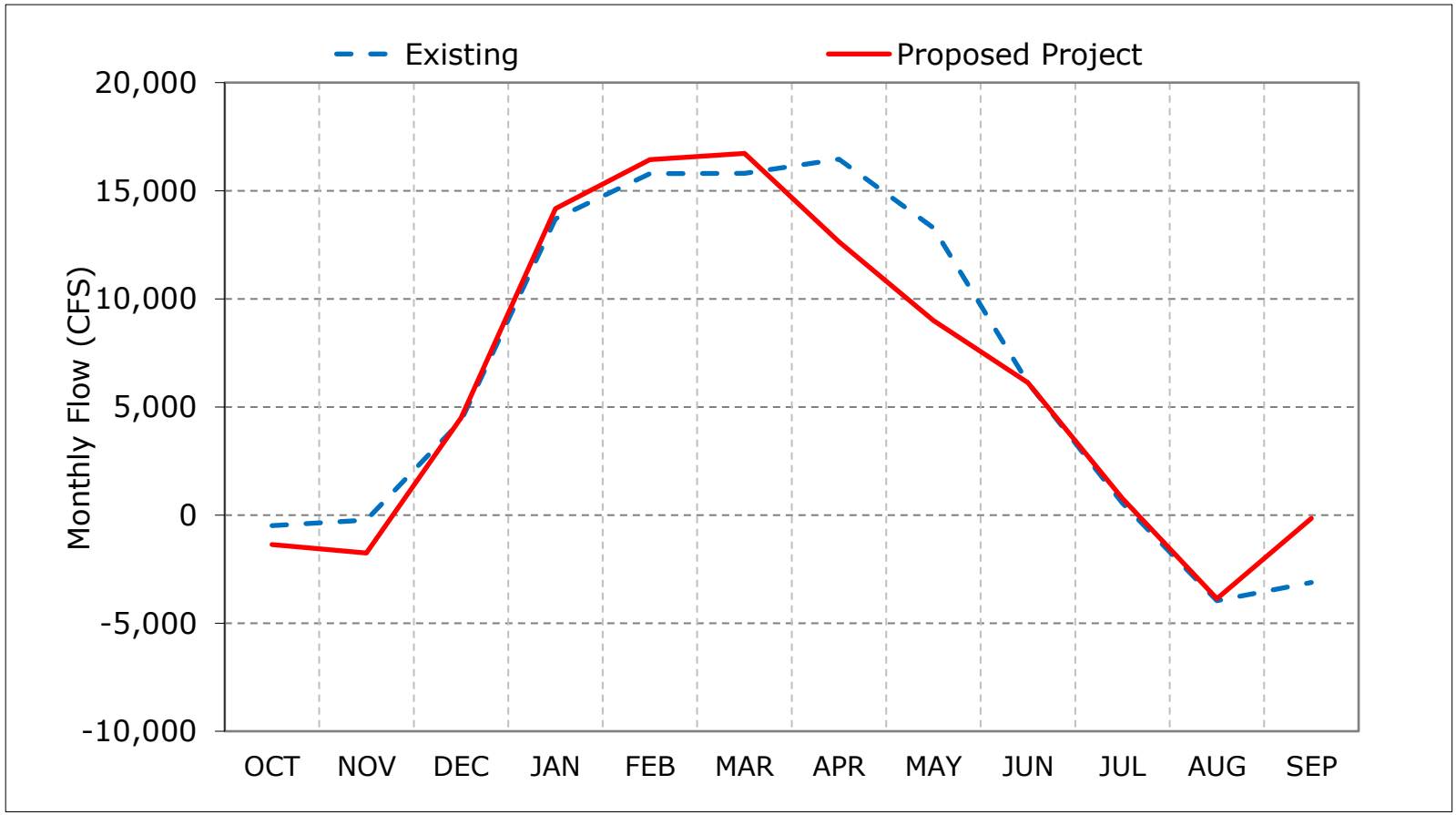
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

Figure 8-1. Qwest, Long-Term Average Flow



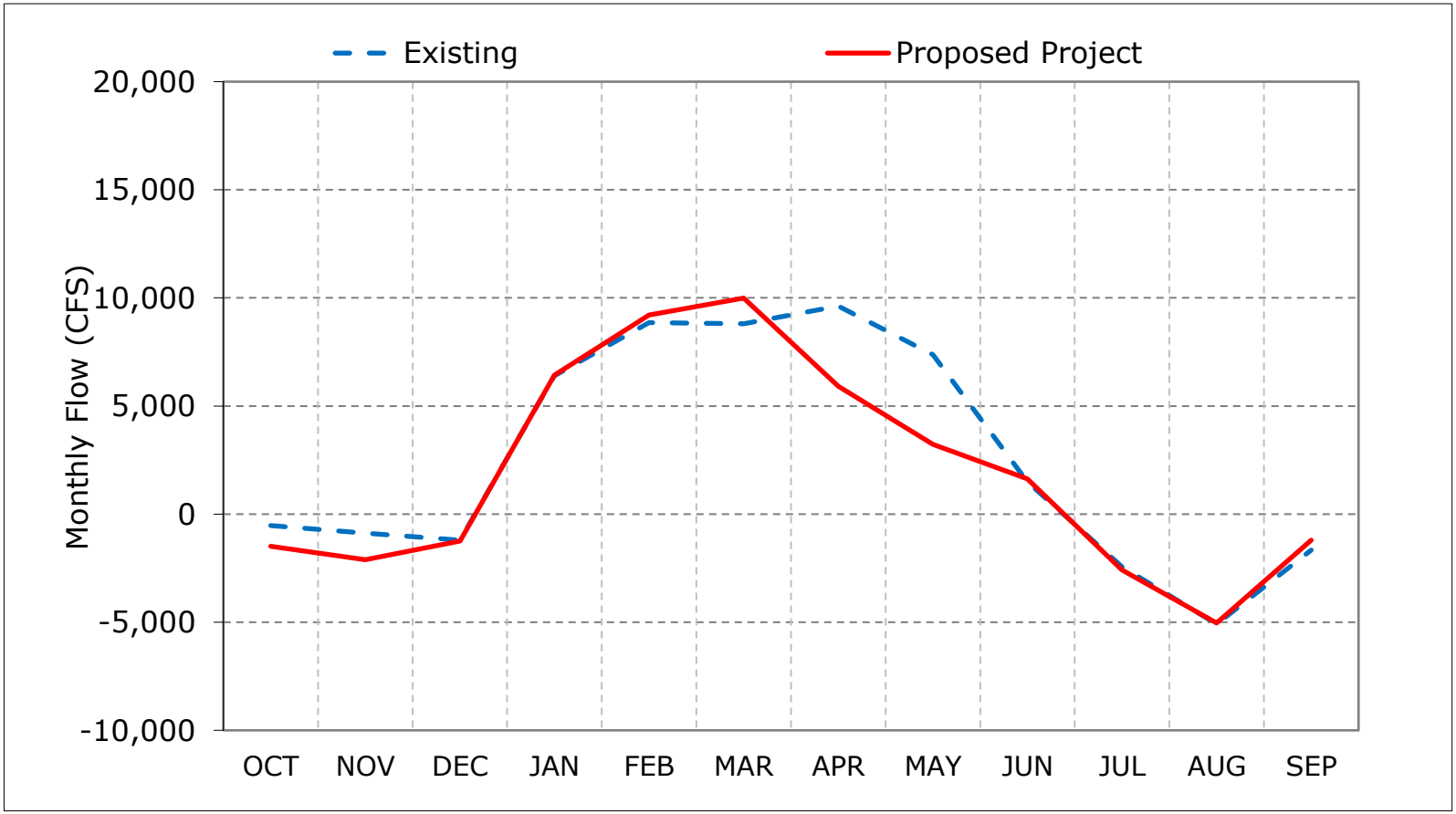
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 8-2. Qwest, Wet Year Average Flow



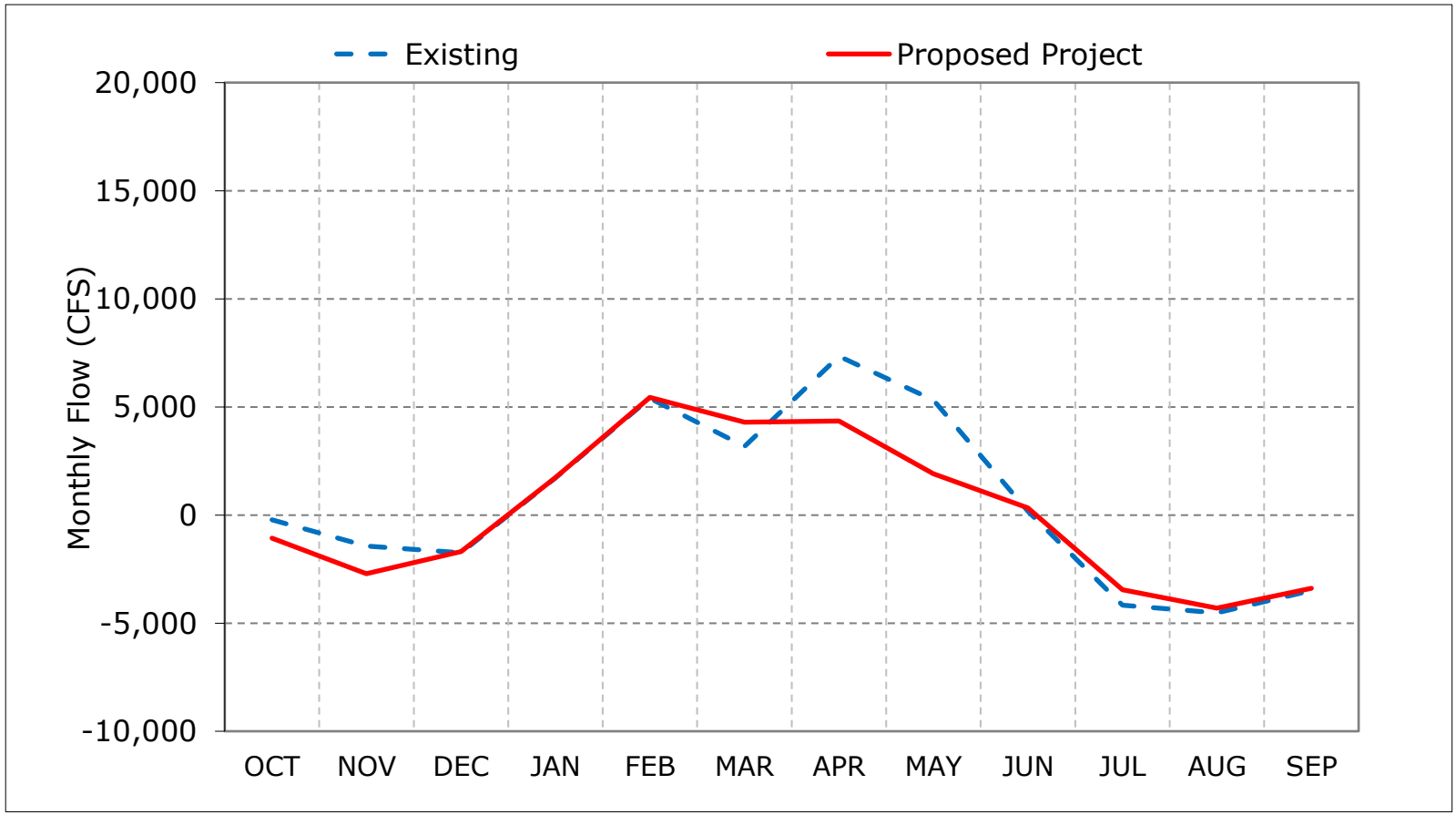
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 8-3. Qwest, Above Normal Year Average Flow



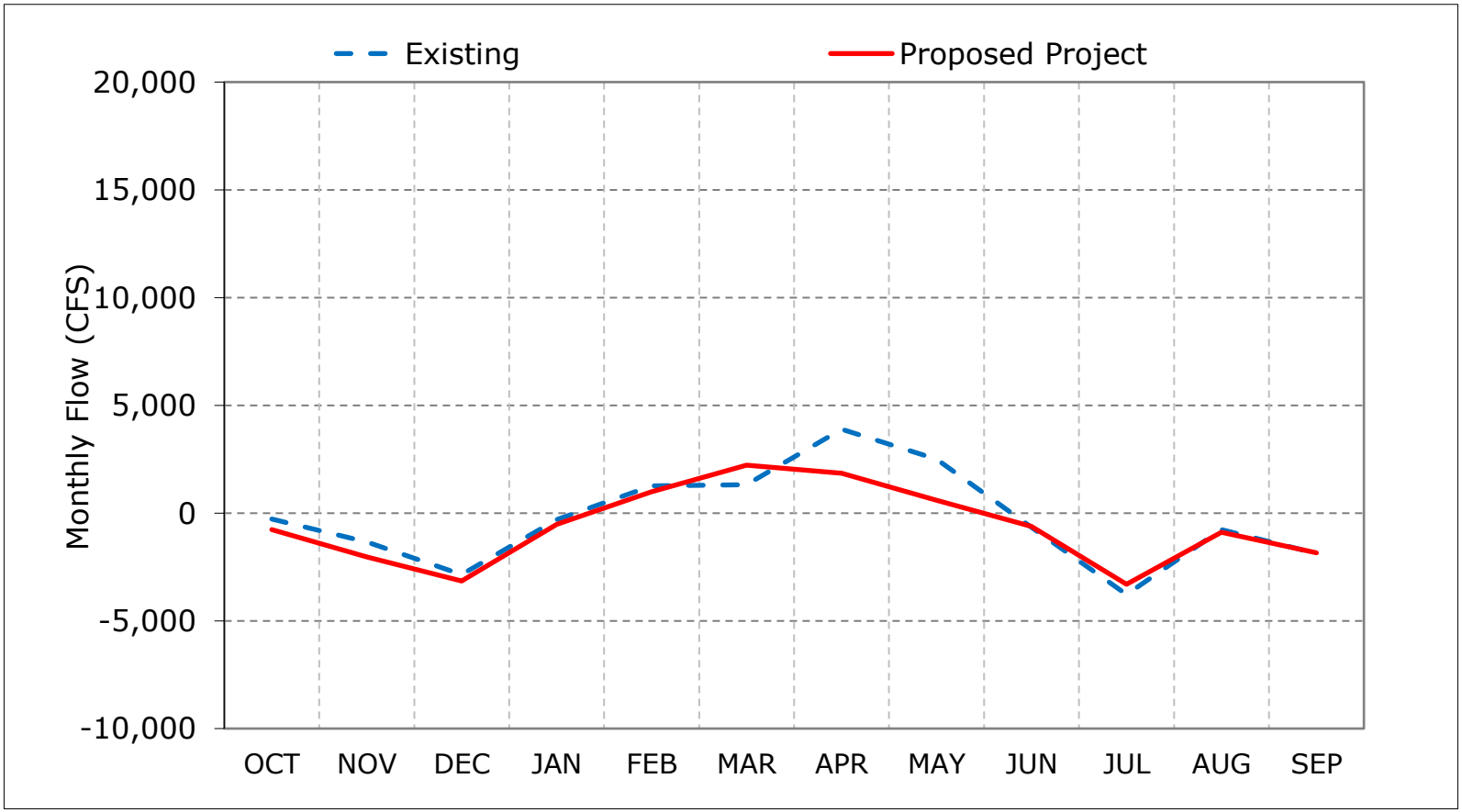
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 8-4. Qwest, Below Normal Year Average Flow



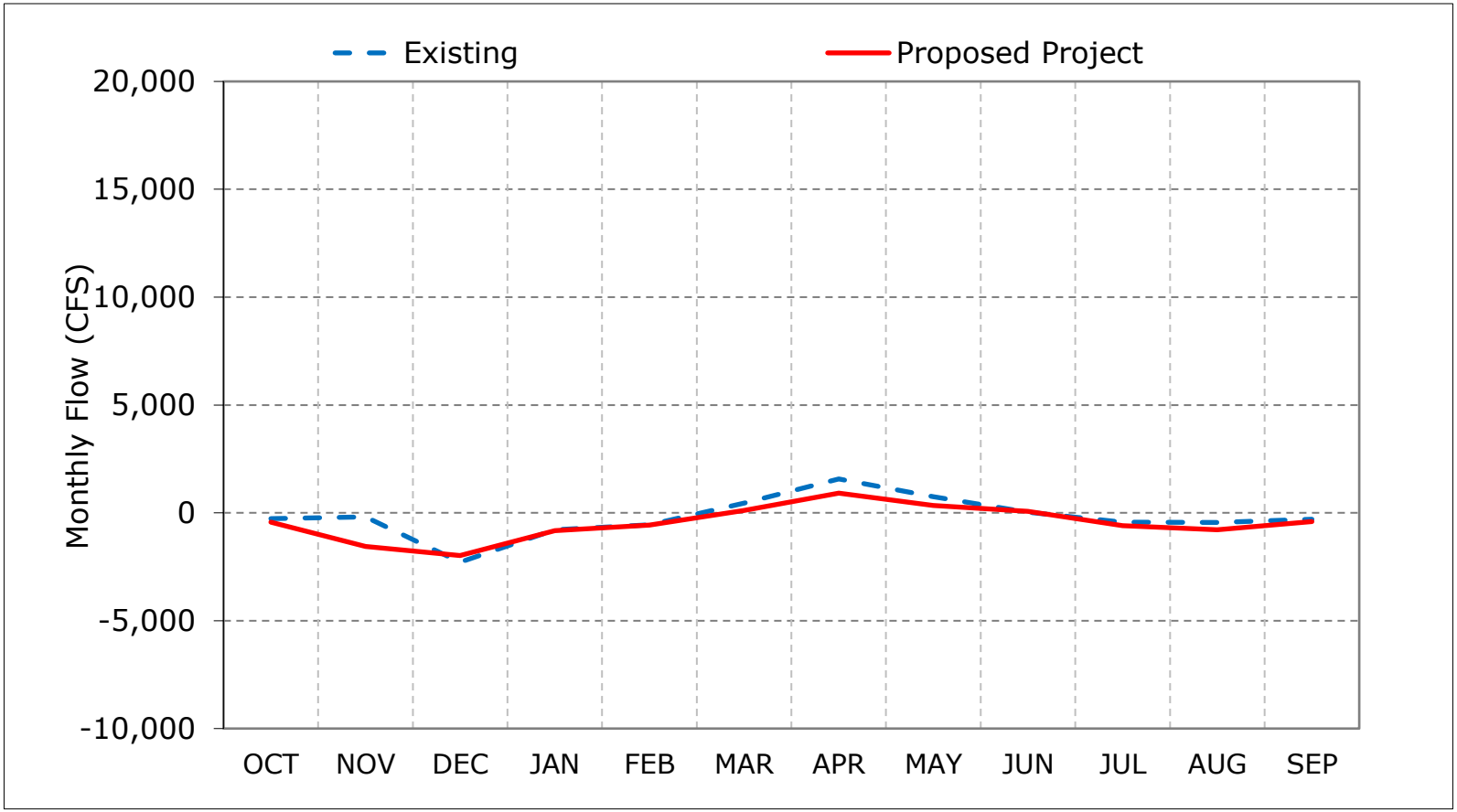
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 8-5. Qwest, Dry Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 8-6. Qwest, Critical Year Average Flow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 8-7. Qwest, October

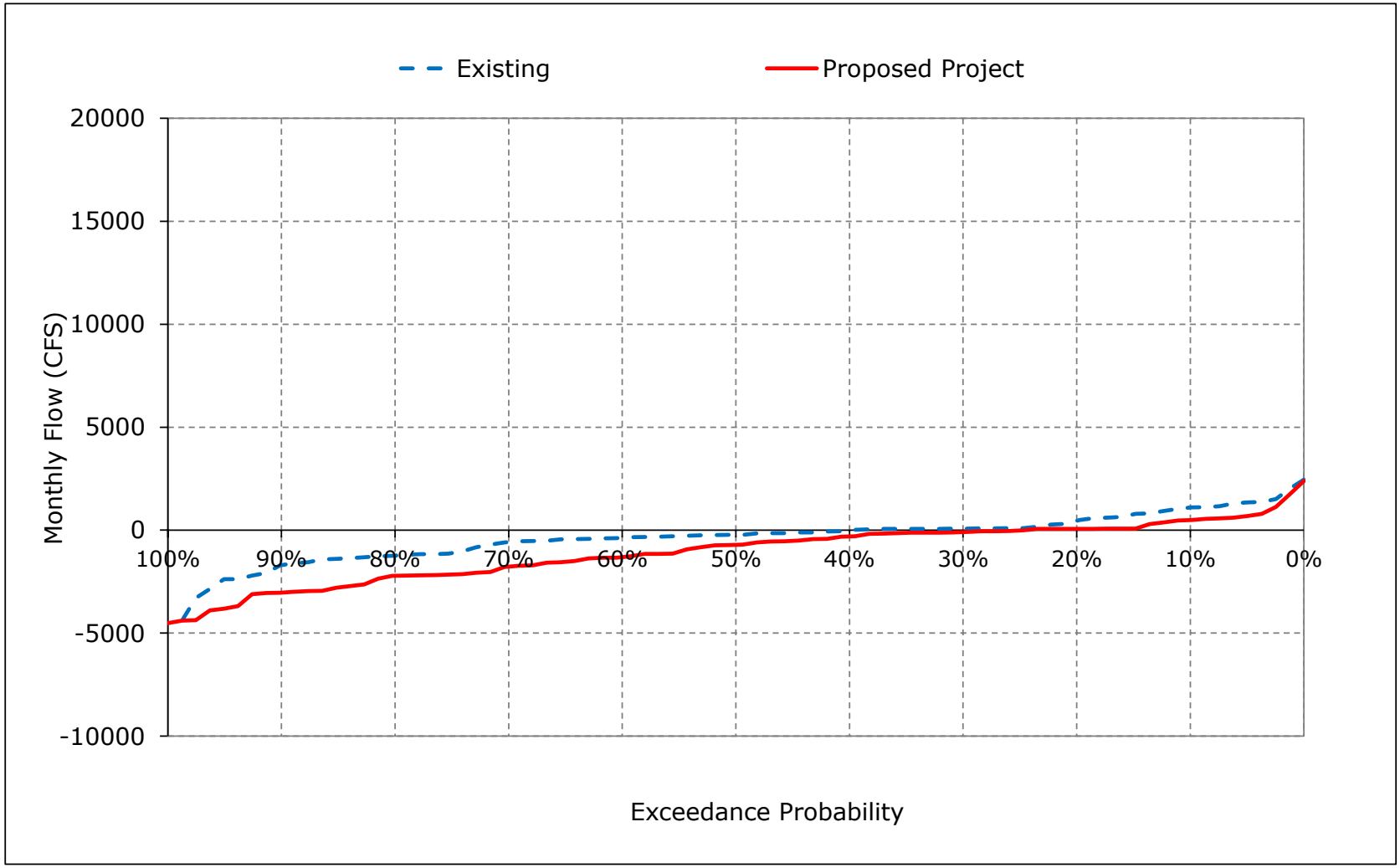


Figure 8-8. Qwest, November

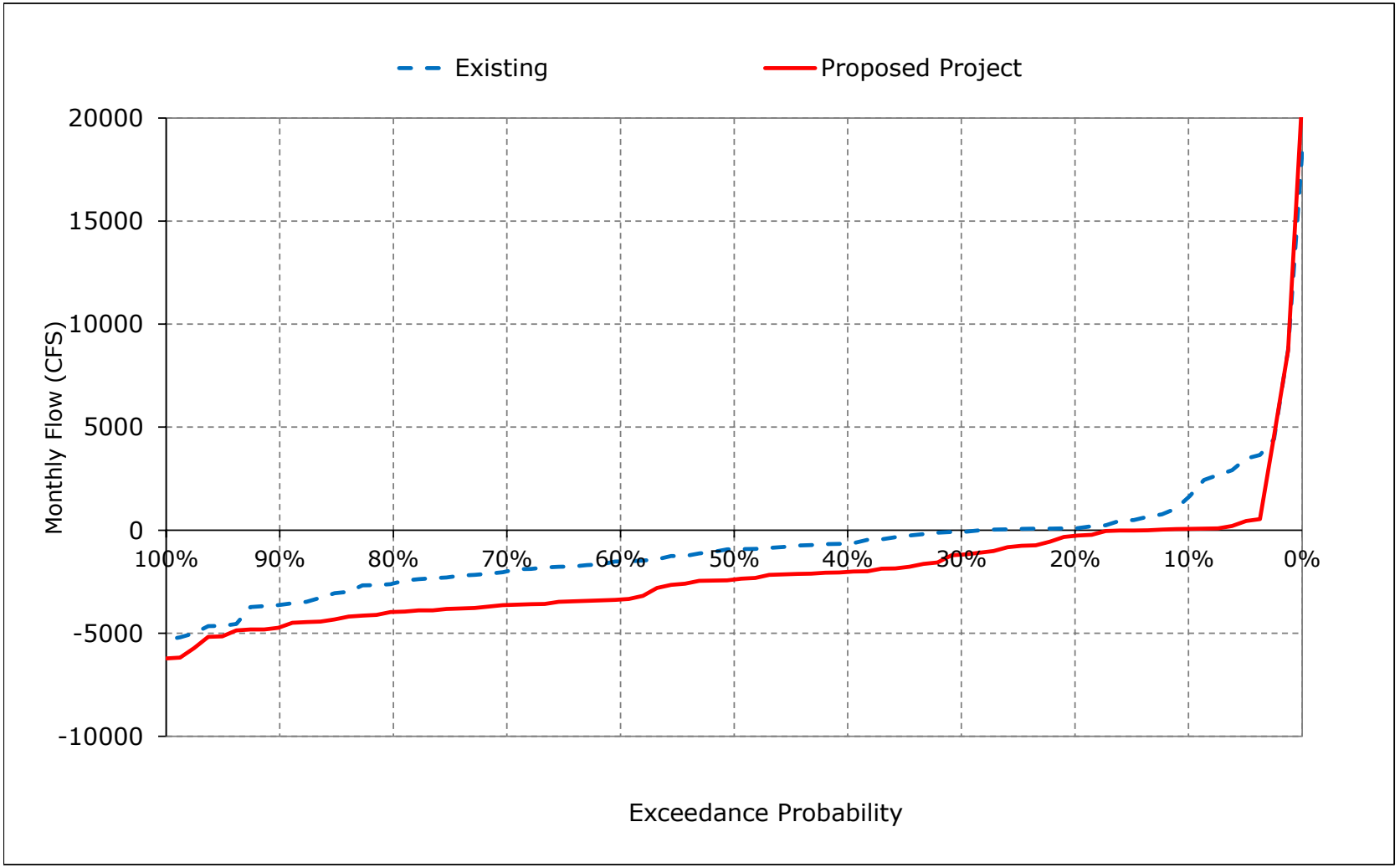


Figure 8-9. Qwest, December

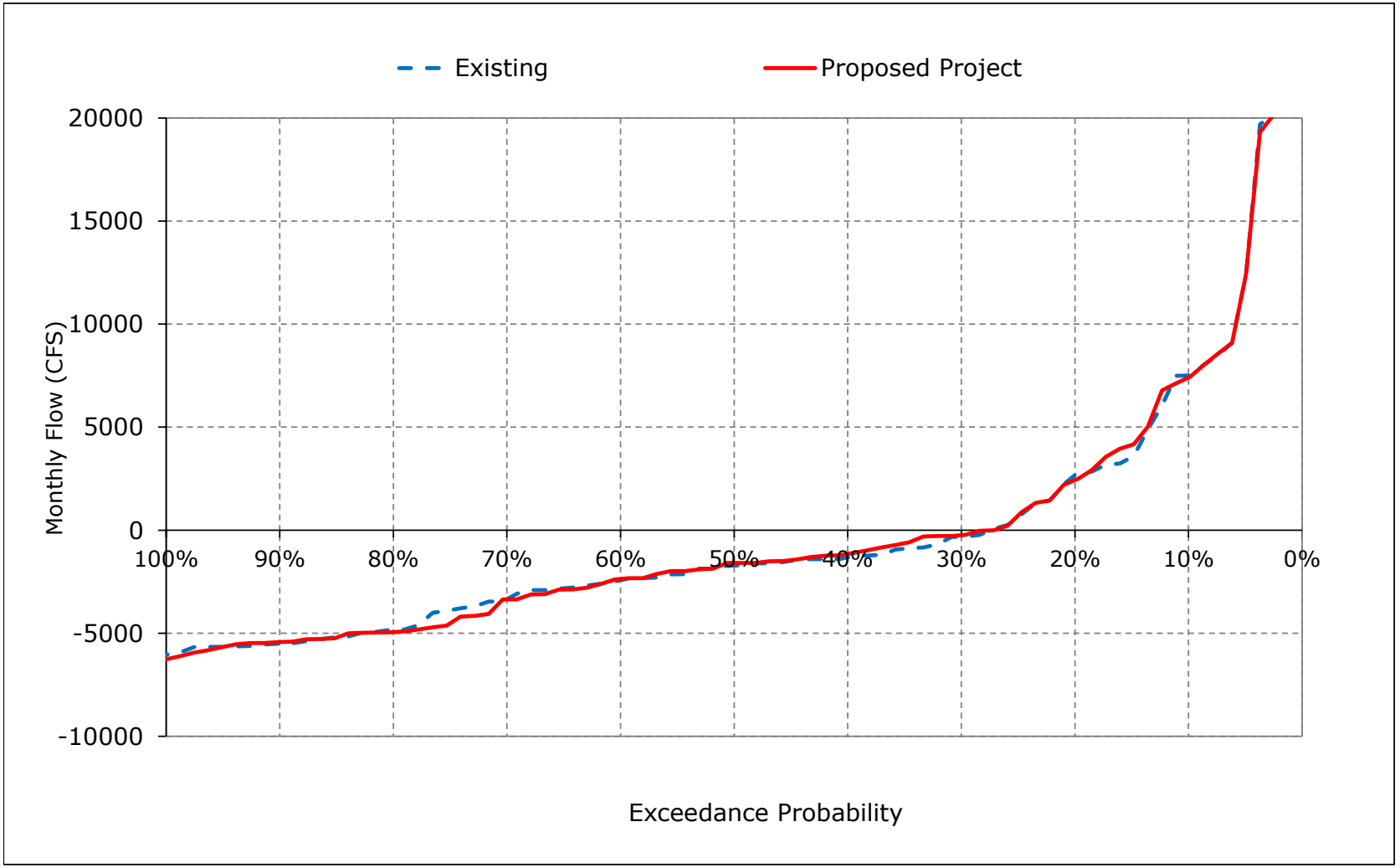


Figure 8-10. Qwest, January

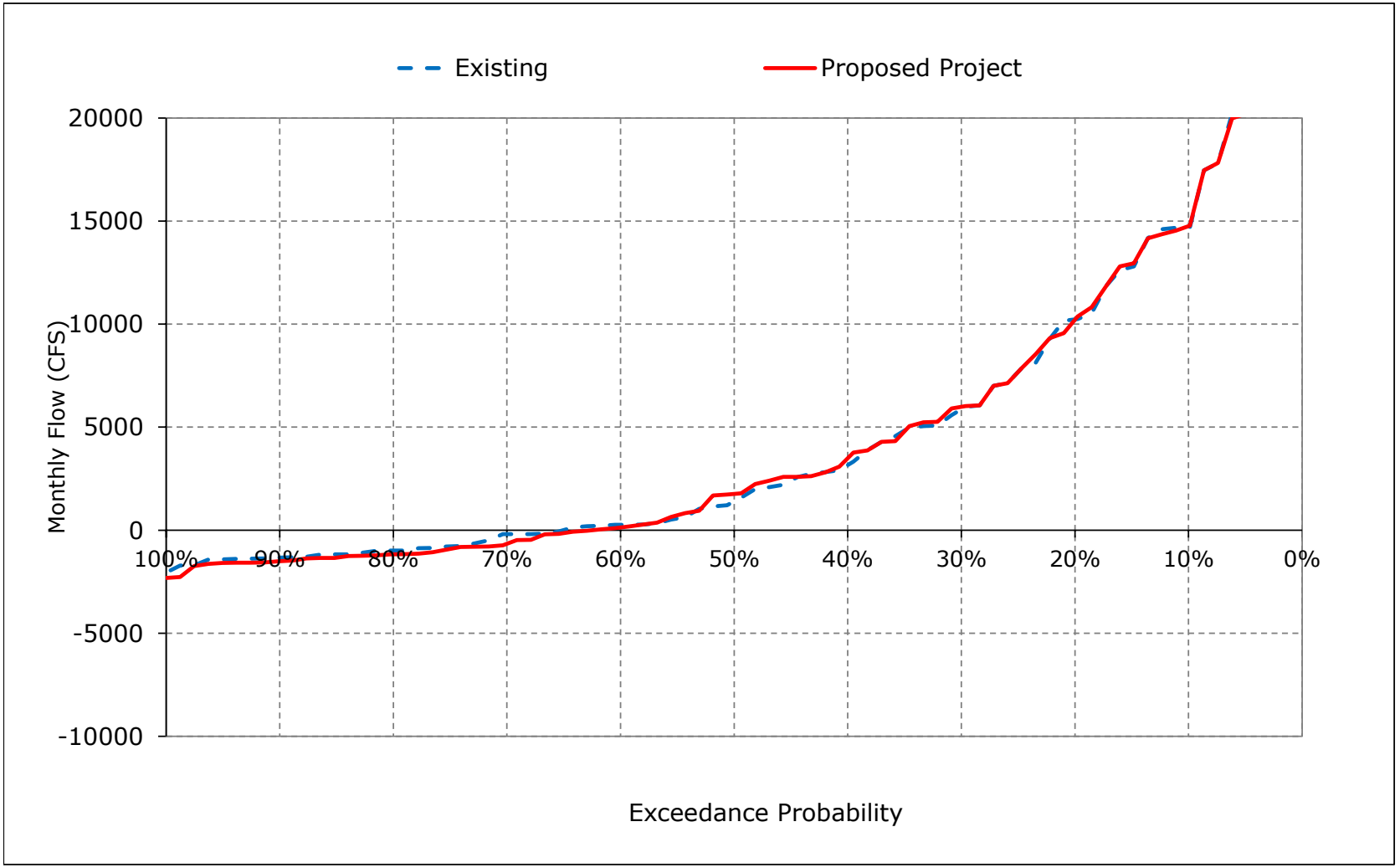


Figure 8-11. Qwest, February

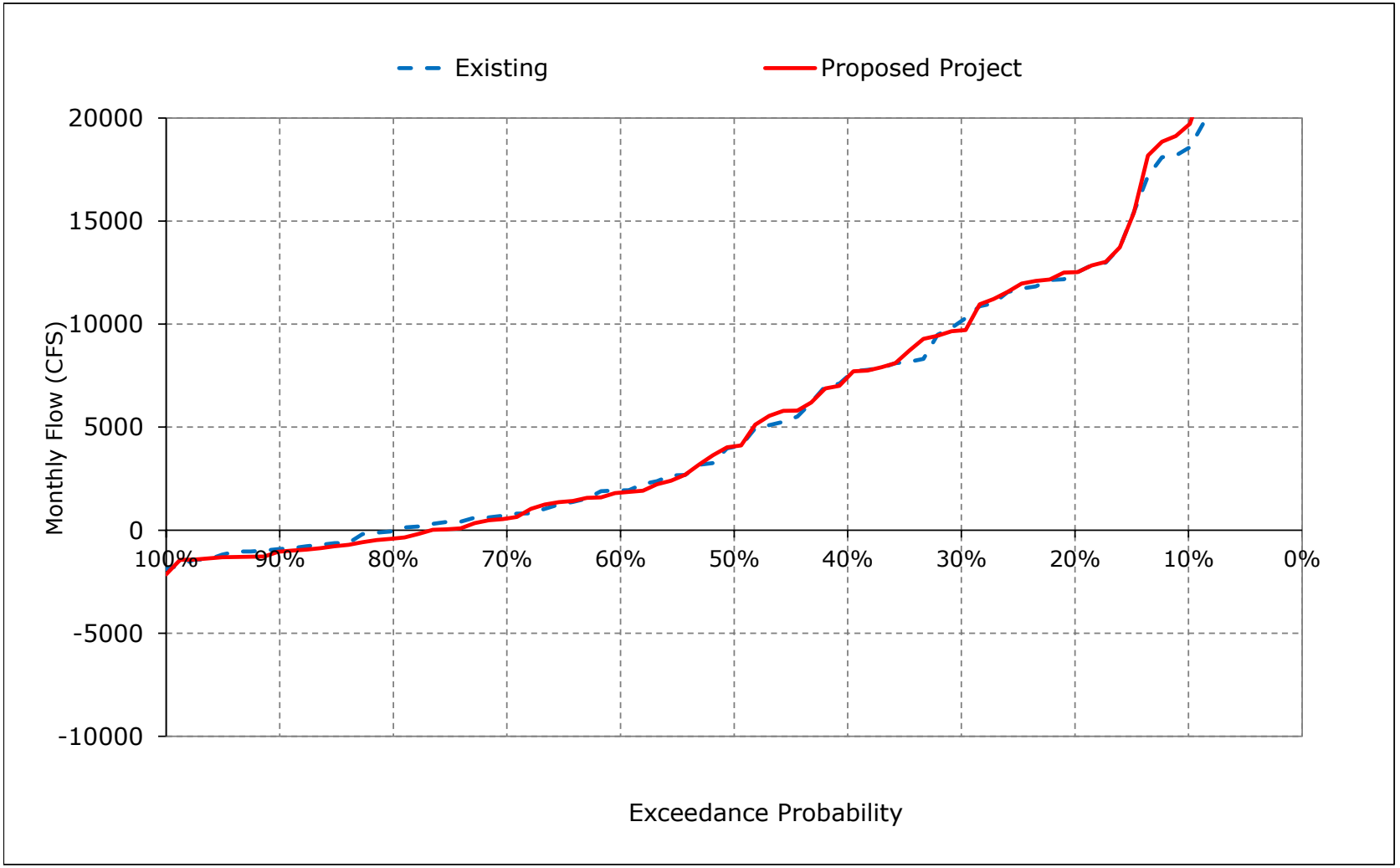


Figure 8-12. Qwest, March

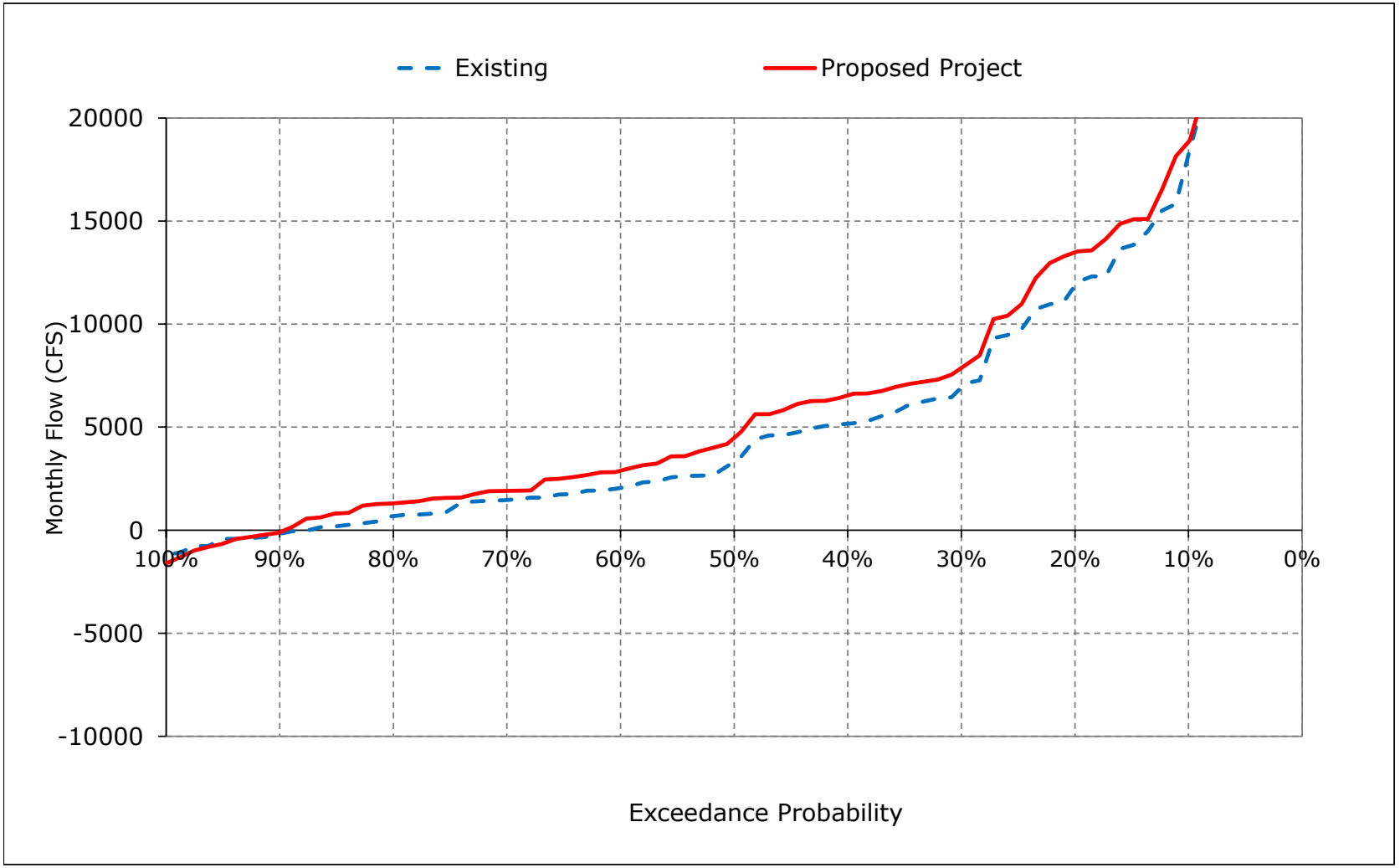


Figure 8-13. Qwest, April

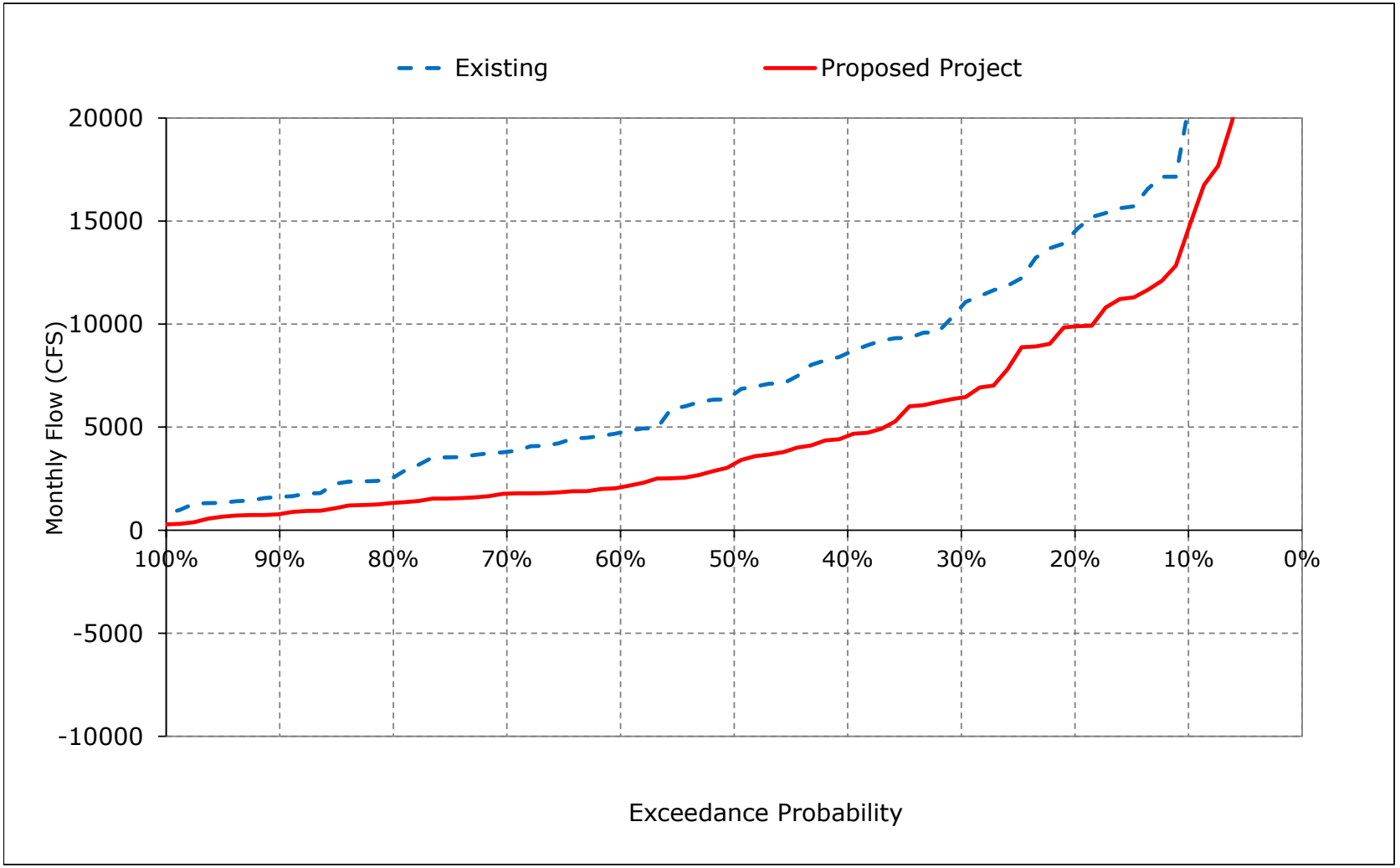


Figure 8-14. Qwest, May

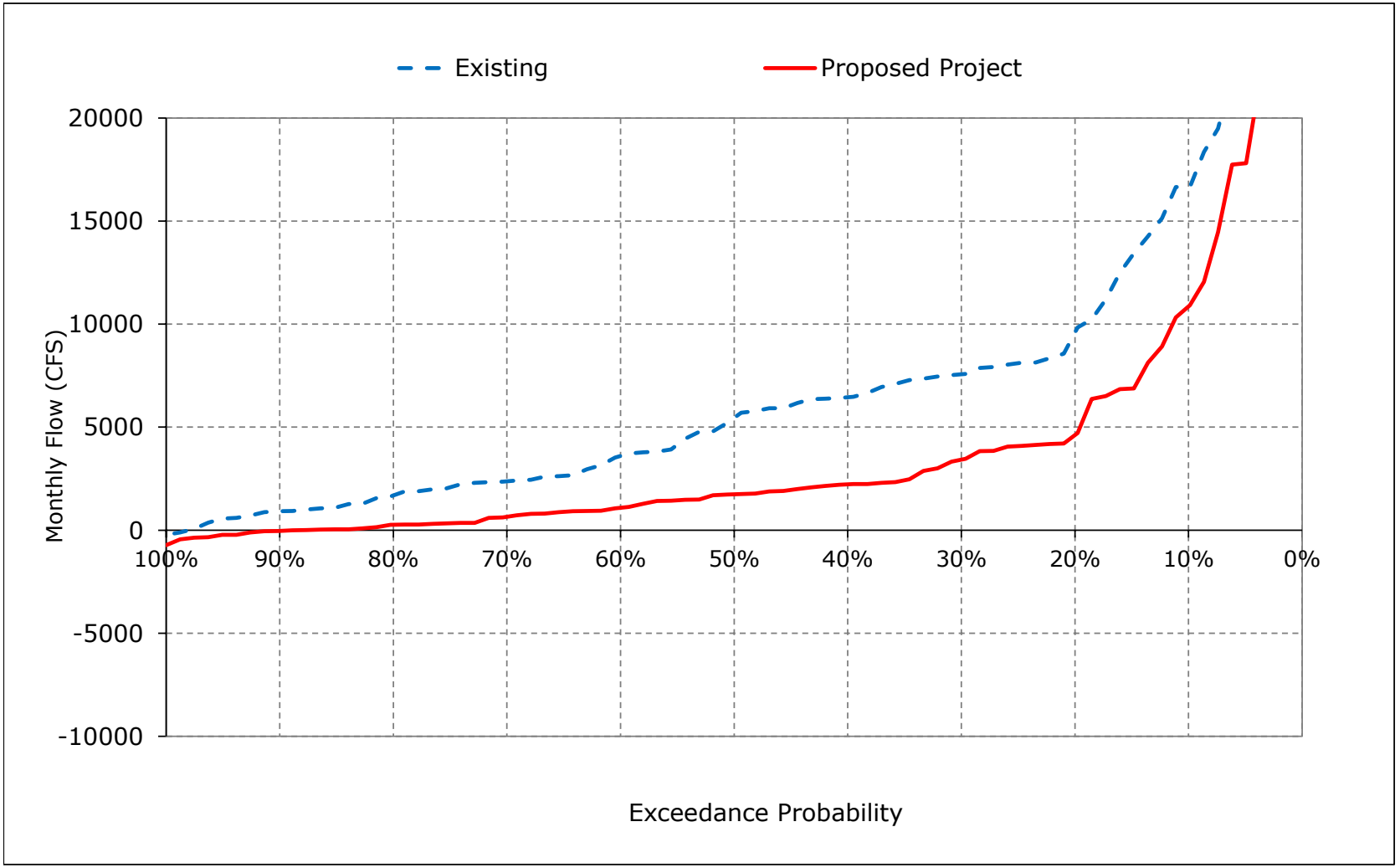


Figure 8-15. Qwest, June

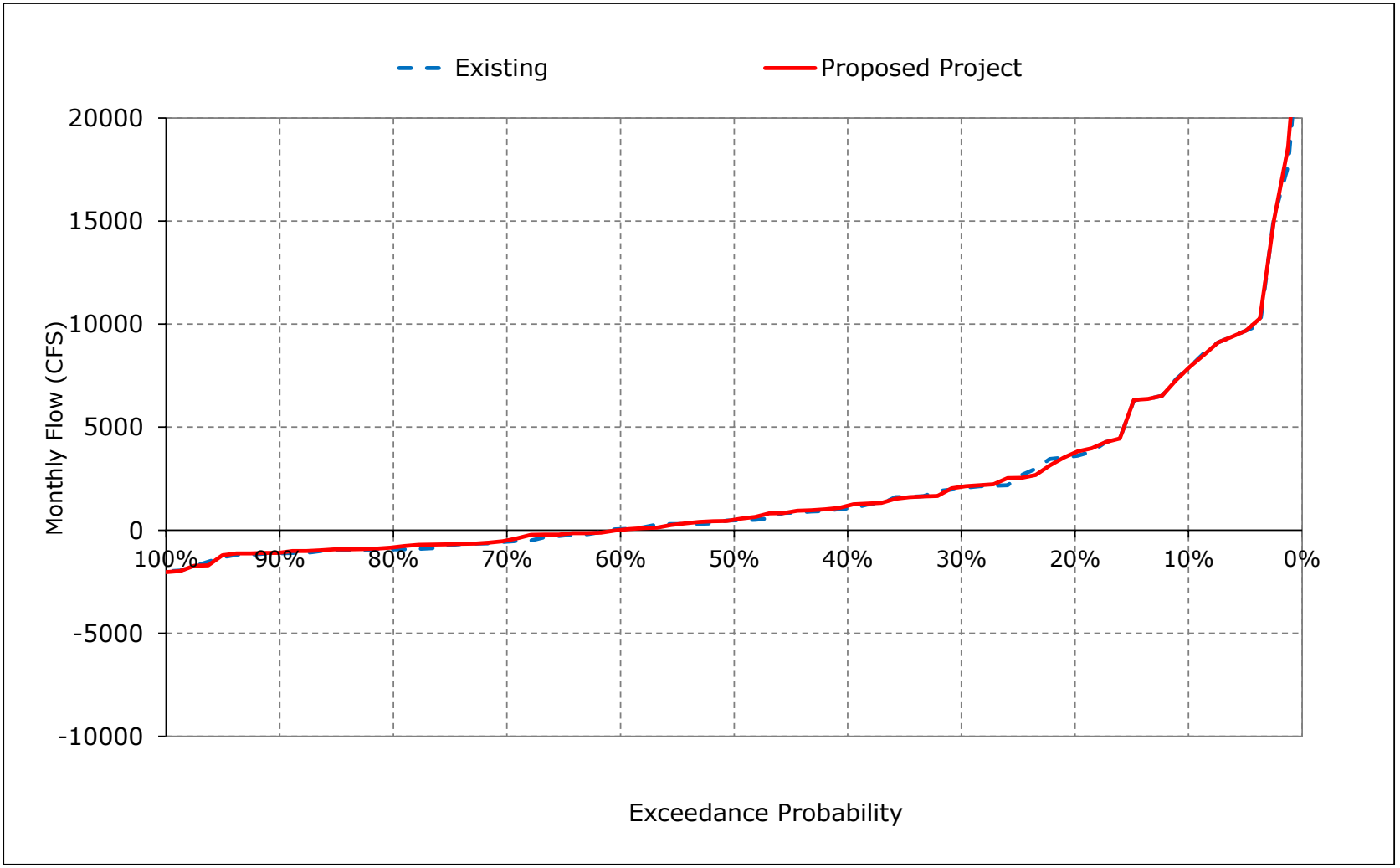


Figure 8-16. Qwest, July

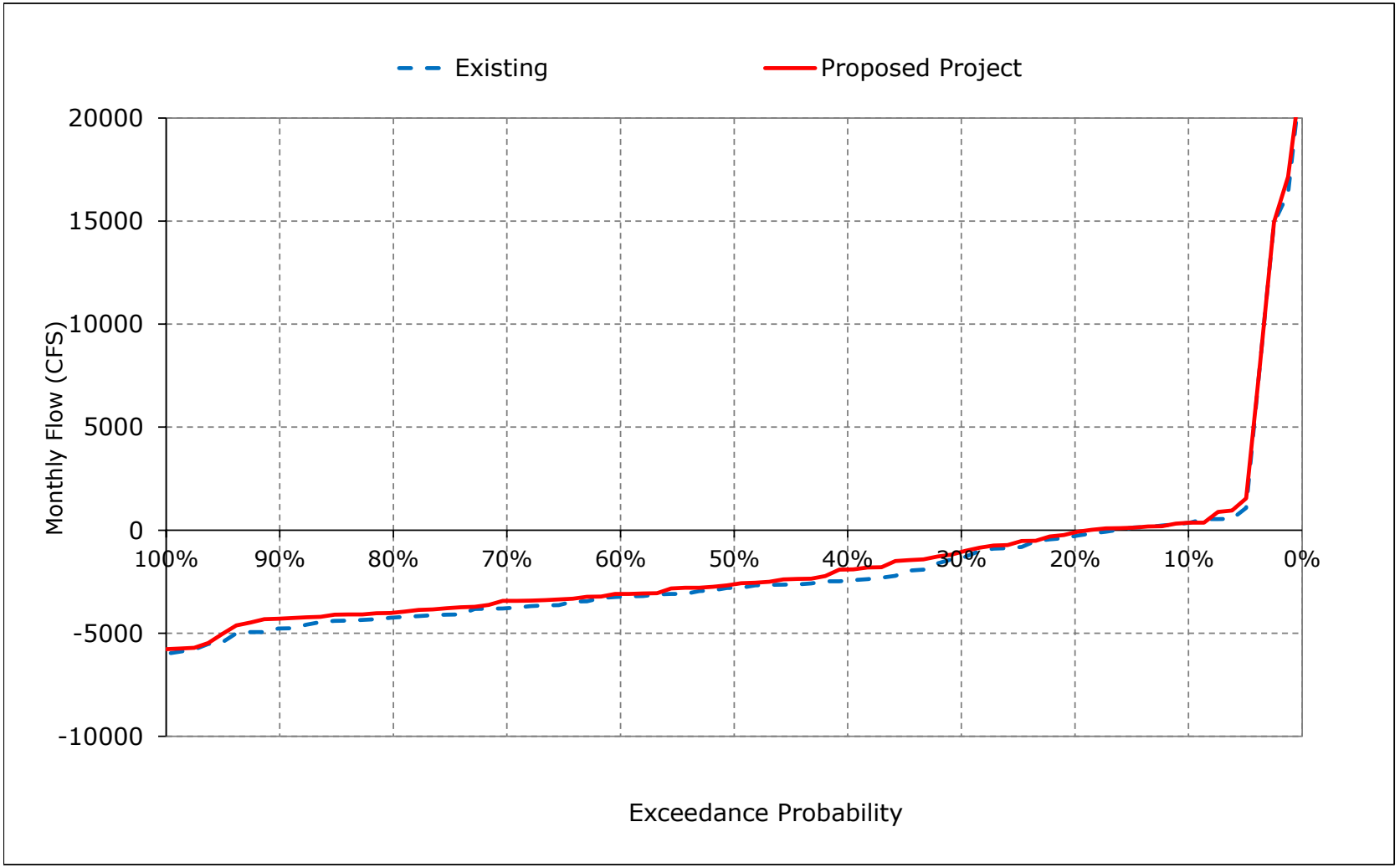


Figure 8-17. Qwest, August

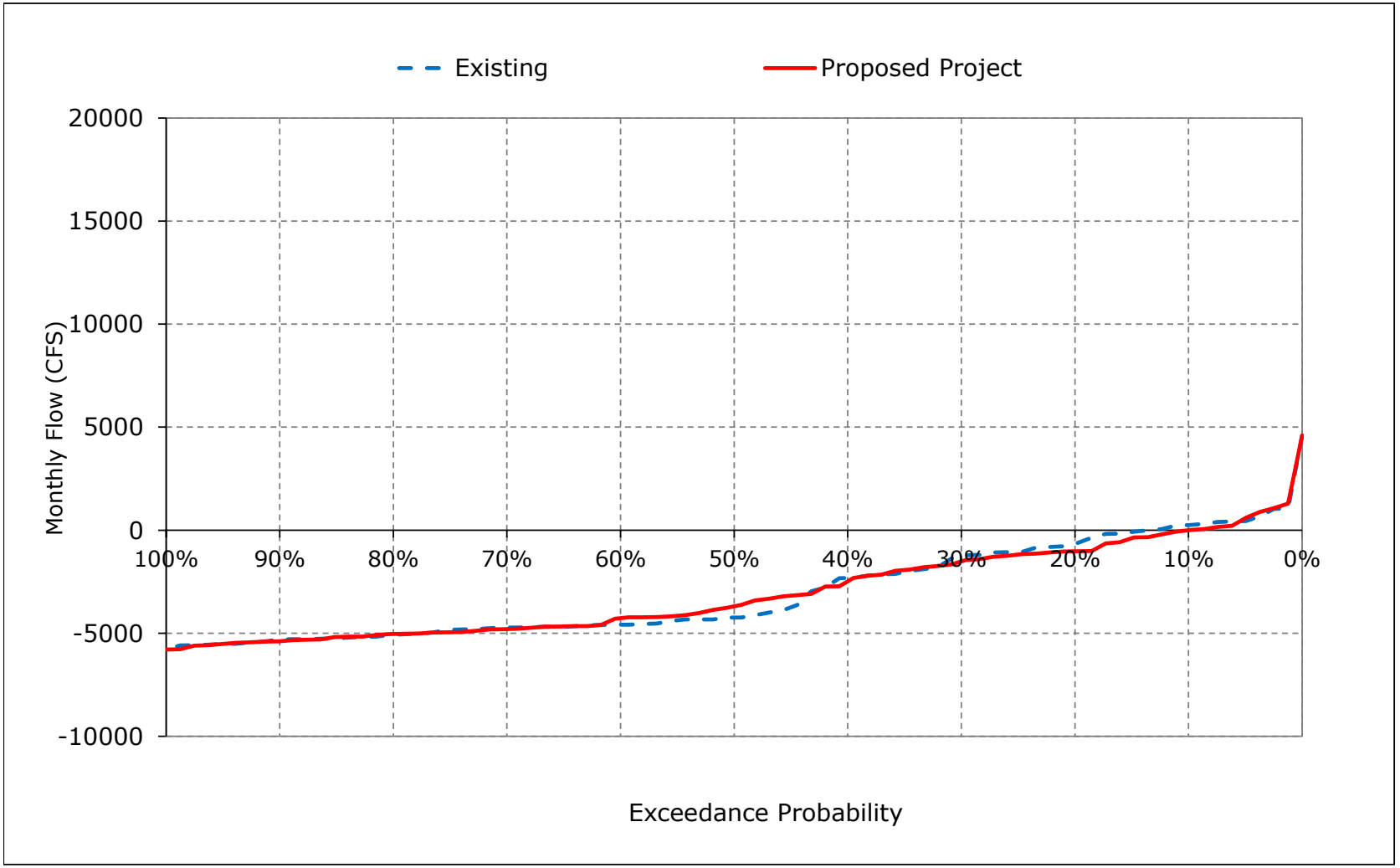


Figure 8-18. Qwest, September

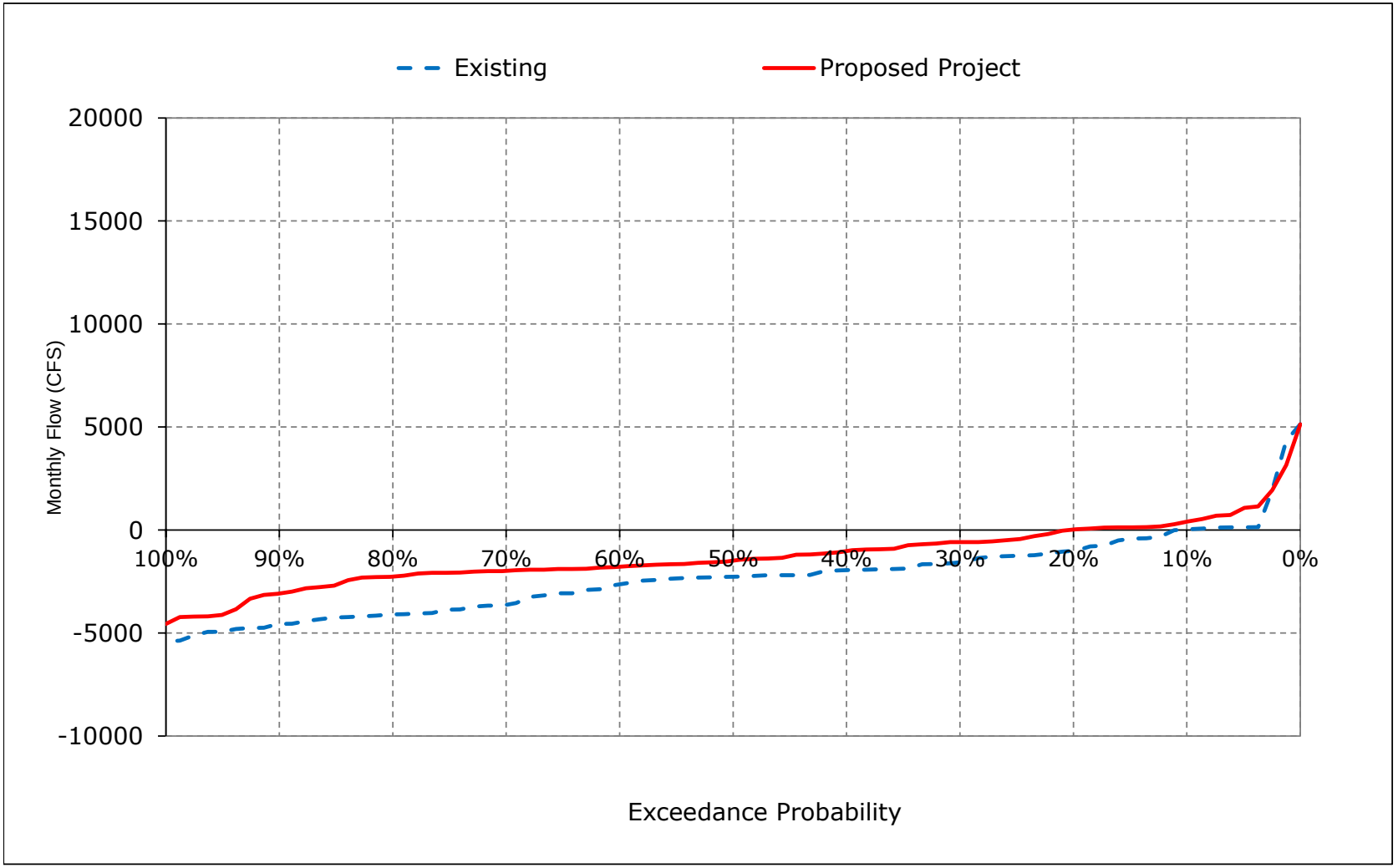


Table 9-1. Delta Outflow, Monthly Outflow

Existing

	Monthly Outflow (CFS)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	8,281	16,003	64,924	99,529	128,573	86,962	73,320	51,194	29,470	11,514	4,216	20,133
20%	7,813	15,281	32,439	66,067	79,799	65,200	53,523	31,419	14,524	9,504	4,000	19,500
30%	7,453	13,889	15,815	47,484	60,558	43,763	31,053	21,380	10,193	8,268	4,000	15,953
40%	6,031	11,000	12,583	28,238	51,342	35,194	28,456	18,465	7,993	8,000	4,000	11,563
50%	4,712	10,156	9,684	19,147	35,758	25,841	22,248	15,195	7,243	8,000	4,000	4,203
60%	4,000	5,463	5,579	16,356	24,017	20,399	16,601	11,910	7,100	6,500	4,000	3,055
70%	4,000	4,500	4,932	11,933	16,765	16,301	13,467	9,446	7,037	5,000	3,998	3,000
80%	4,000	4,500	4,506	9,402	14,140	12,437	11,550	8,237	6,119	5,000	3,838	3,000
90%	4,000	4,500	4,500	8,081	10,146	9,076	9,541	6,979	5,034	4,000	3,500	3,000
Long Term												
Full Simulation Period[a]	5,997	11,472	21,026	41,339	52,691	42,631	31,618	21,916	12,394	8,075	4,216	9,630
Water Year Types[b,c]												
Wet (32%)	7,724	17,334	42,783	83,568	97,663	79,915	56,933	39,709	22,444	11,645	5,047	19,510
Above Normal (15%)	5,432	12,125	17,901	45,449	59,682	52,471	33,562	24,582	11,383	9,804	4,000	11,758
Below Normal (17%)	5,429	8,622	12,186	20,966	36,006	22,558	23,217	15,806	7,964	7,360	4,000	3,625
Dry (22%)	5,213	8,210	8,791	13,693	22,405	18,720	15,097	9,920	6,717	5,036	3,801	3,006
Critical (15%)	4,657	6,332	5,673	10,968	13,155	11,295	9,410	5,821	5,316	4,004	3,506	3,040

Proposed Project

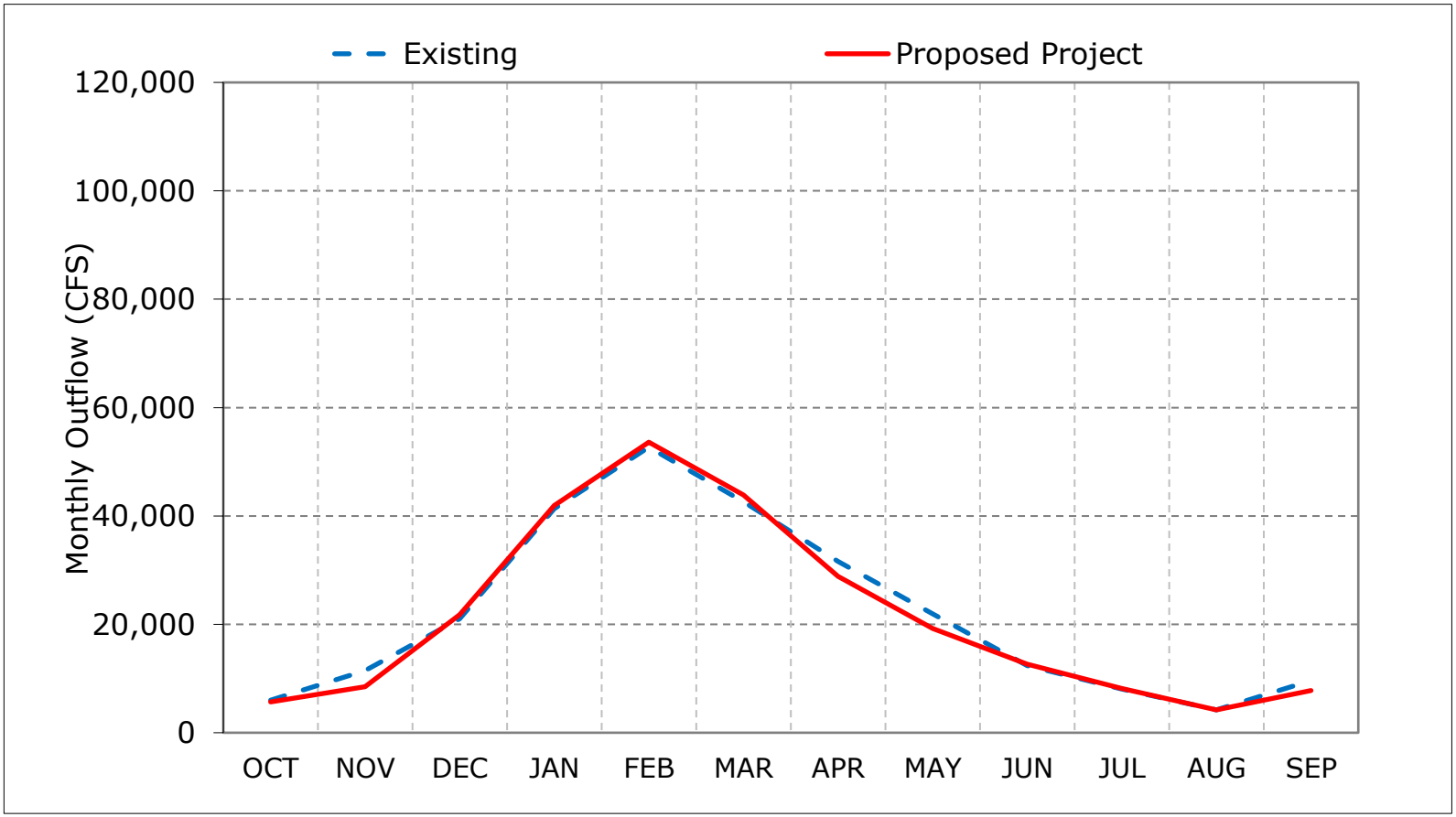
	Monthly Outflow (CFS)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	6,859	14,685	64,939	100,311	129,486	90,940	67,887	44,418	29,473	11,562	4,284	13,594
20%	6,406	6,932	32,897	66,826	80,337	65,797	48,067	28,298	14,459	9,830	4,000	12,656
30%	6,250	5,186	19,037	47,311	64,736	45,962	27,983	17,016	10,628	8,581	4,000	12,500
40%	6,010	4,997	12,289	28,203	53,411	36,137	23,971	13,637	8,509	8,000	4,000	12,125
50%	5,250	4,865	9,331	22,286	36,075	27,590	17,845	12,246	7,700	8,000	4,000	4,199
60%	4,196	4,500	6,400	15,901	24,348	22,213	13,221	10,391	7,197	6,500	4,000	3,000
70%	4,000	4,500	5,161	11,690	17,941	17,235	11,321	8,791	7,100	5,000	3,933	3,000
80%	4,000	4,500	4,613	8,949	14,002	12,990	9,673	7,241	6,915	5,000	3,722	3,000
90%	4,000	3,976	4,500	7,950	10,082	9,117	8,442	6,546	4,956	4,000	3,500	3,000
Long Term												
Full Simulation Period[a]	5,693	8,486	21,802	41,945	53,614	43,855	28,870	19,239	12,669	8,188	4,213	7,784
Water Year Types[b,c]												
Wet (32%)	7,288	13,528	45,045	85,036	98,901	81,055	53,084	35,402	22,498	11,770	5,082	13,273
Above Normal (15%)	5,086	8,579	18,014	46,486	61,233	55,035	29,851	20,521	12,029	9,707	4,000	12,721
Below Normal (17%)	5,100	5,755	12,292	21,931	37,884	23,943	20,278	13,073	8,690	7,835	4,014	3,579
Dry (22%)	4,814	6,064	8,722	13,304	22,134	19,961	13,225	8,909	6,894	5,030	3,753	3,006
Critical (15%)	4,854	4,291	5,946	10,352	13,442	11,146	8,916	5,628	5,316	4,056	3,462	3,028

Proposed Project minus Existing

	Monthly Outflow (CFS)											
Statistic	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**
Probability of Exceedance												
10%	**-1,422**	**-1,318**	14	782	913	3,978	**-5,433**	**-6,777**	3	48	68	**-6,539**
20%	**-1,406**	**-8,349**	458	760	538	597	**-5,456**	**-3,121**	**-65**	326	0	**-6,844**
30%	**-1,203**	**-8,703**	3,222	**-174**	4,177	2,199	**-3,070**	**-4,364**	435	313	0	**-3,453**
40%	**-21**	**-6,003**	**-294**	**-35**	2,069	944	**-4,485**	**-4,828**	516	0	0	563
50%	537	**-5,291**	**-353**	3,139	317	1,749	**-4,403**	**-2,949**	457	0	0	**-4**
60%	196	**-963**	821	**-454**	330	1,813	**-3,380**	**-1,520**	97	0	0	**-55**
70%	0	0	229	**-243**	1,176	935	**-2,146**	**-655**	63	0	**-65**	0
80%	0	0	107	**-453**	**-137**	553	**-1,877**	**-997**	796	0	**-116**	0
90%	0	**-524**	0	**-130**	**-64**	41	**-1,100**	**-433**	**-77**	0	0	0
Long Term												
Full Simulation Period[a]	**-304**	**-2,985**	776	607	923	1,224	**-2,749**	**-2,677**	274	113	**-3**	**-1,846**
Water Year Types[b,c]												
Wet (32%)	**-436**	**-3,806**	2,261	1,468	1,238	1,140	**-3,849**	**-4,307**	54	125	35	**-6,237**
Above Normal (15%)	**-346**	**-3,546**	113	1,038	1,550	2,564	**-3,711**	**-4,061**	646	**-97**	0	964
Below Normal (17%)	**-329**	**-2,868**	106	965	1,878	1,385	**-2,940**	**-2,733**	726	474	14	**-46**
Dry (22%)	**-399**	**-2,146**	**-70**	**-389**	**-270**	1,241	**-1,873**	**-1,011**	177	**-6**	**-48**	**-1**
Critical (15%)	196	**-2,041**	273	**-616**	286	**-149**	**-494**	**-194**	**0**	51	**-44**	**-11**

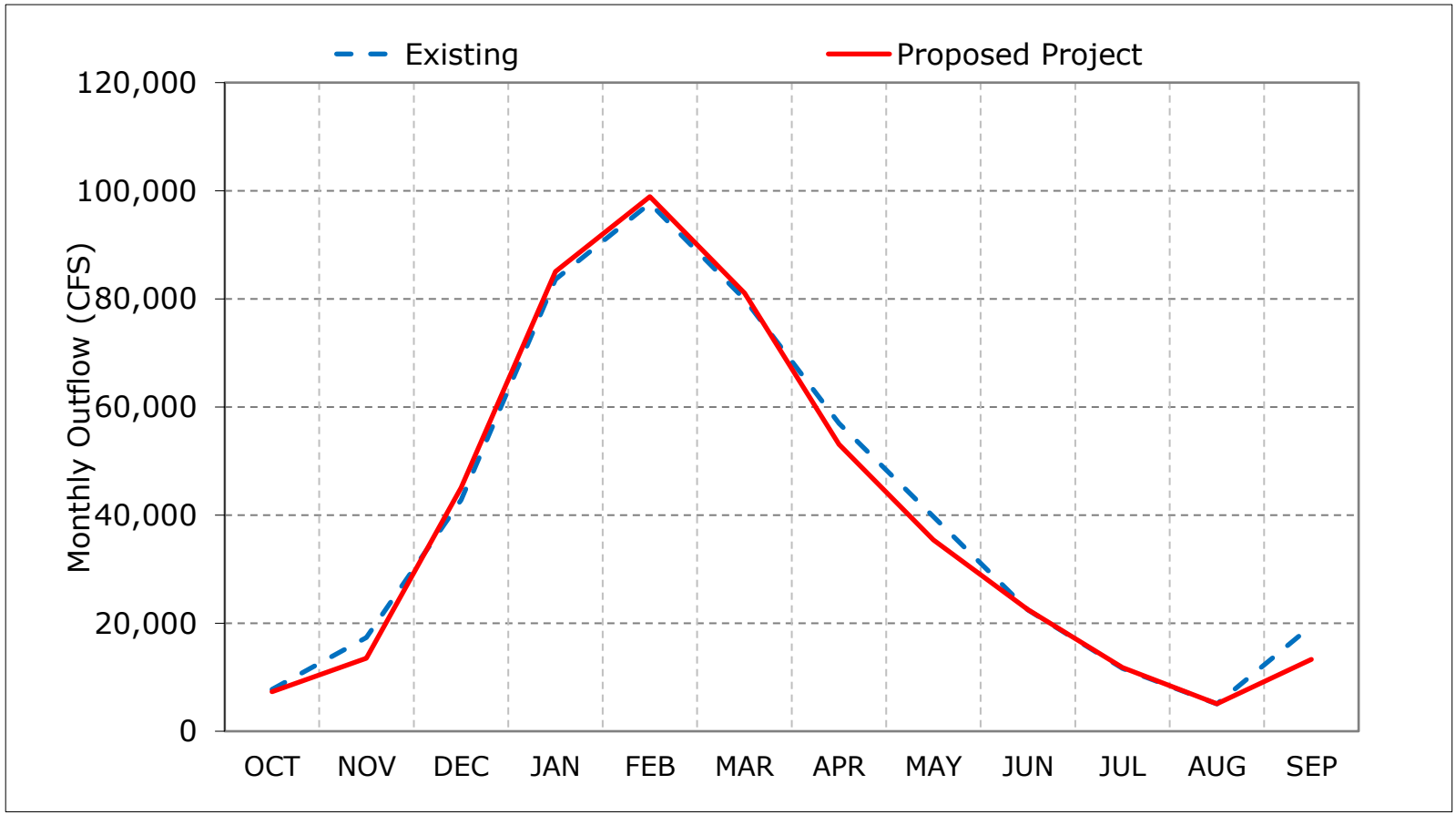
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

Figure 9-1. Delta Outflow, Long-Term Average Outflow



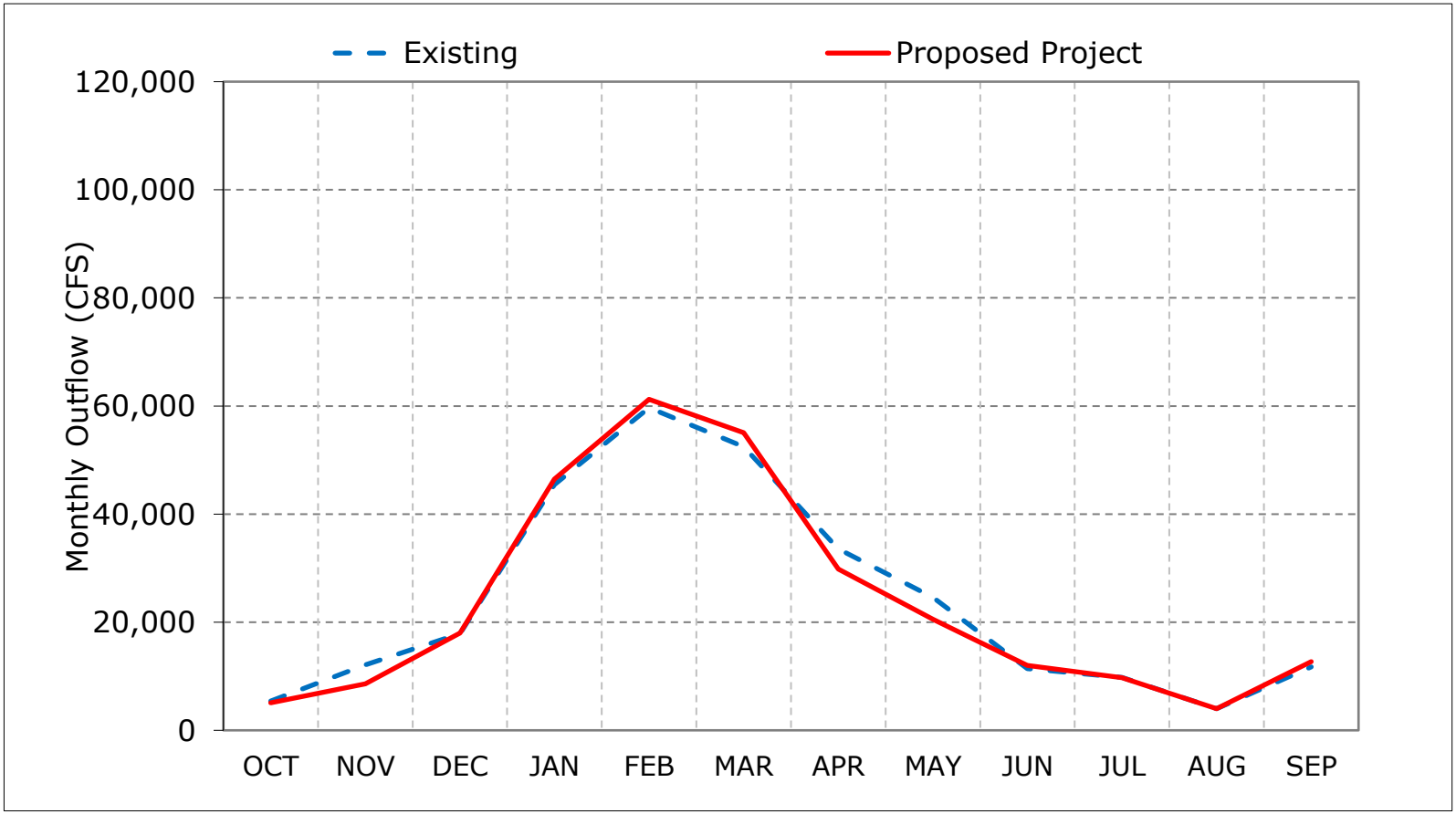
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 9-2. Delta Outflow, Wet Year Average Outflow



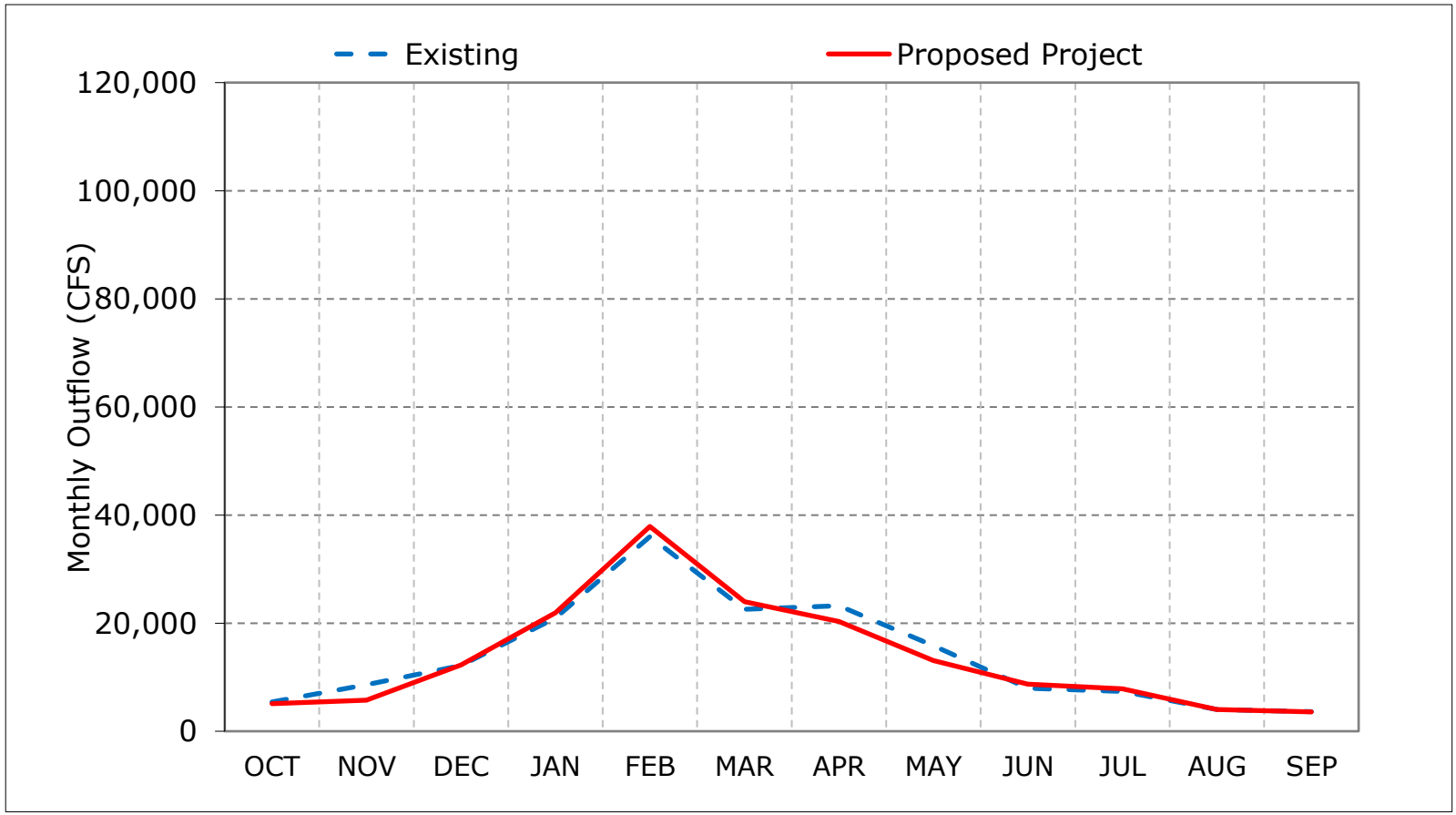
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 9-3. Delta Outflow, Above Normal Year Average Outflow



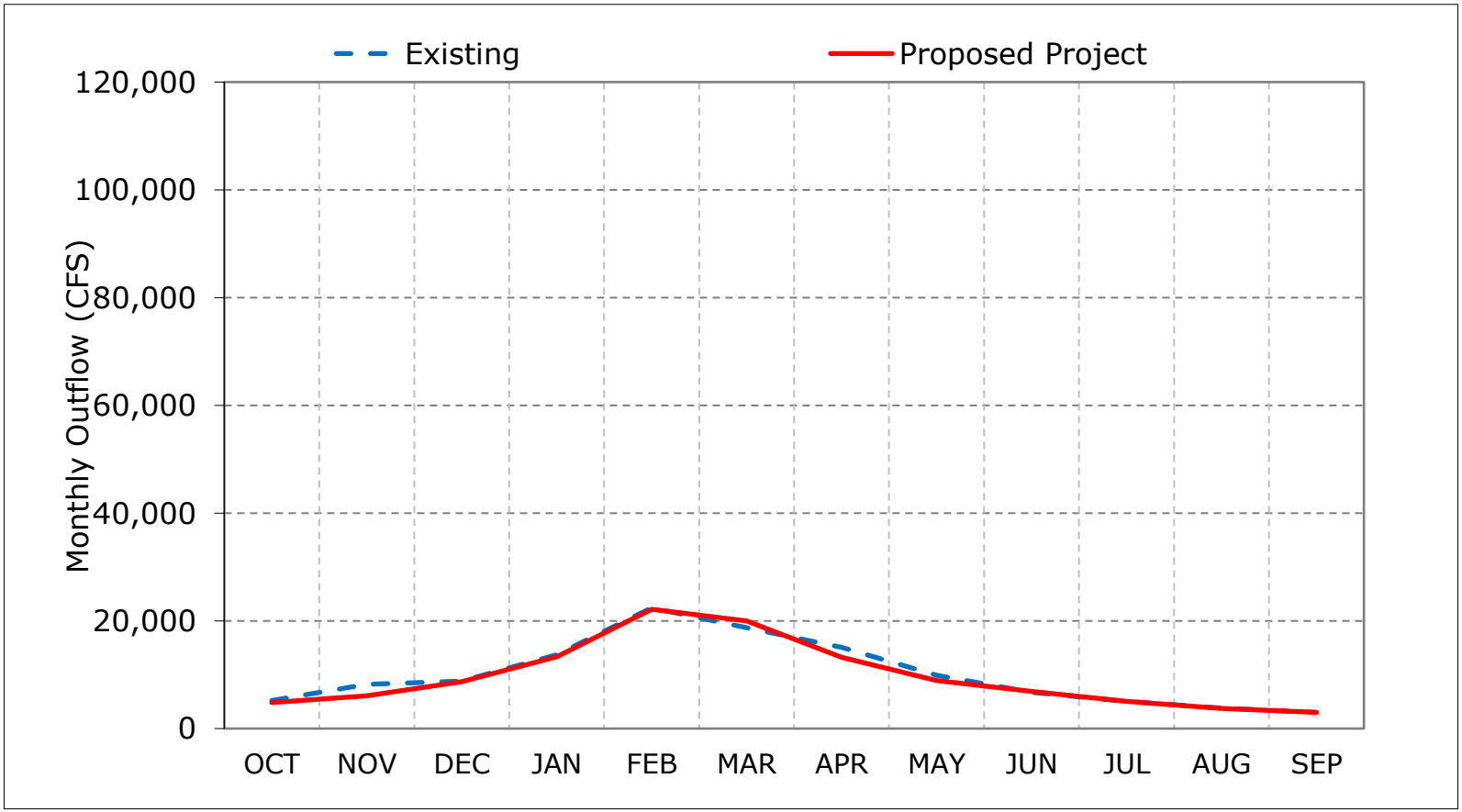
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 9-4. Delta Outflow, Below Normal Year Average Outflow



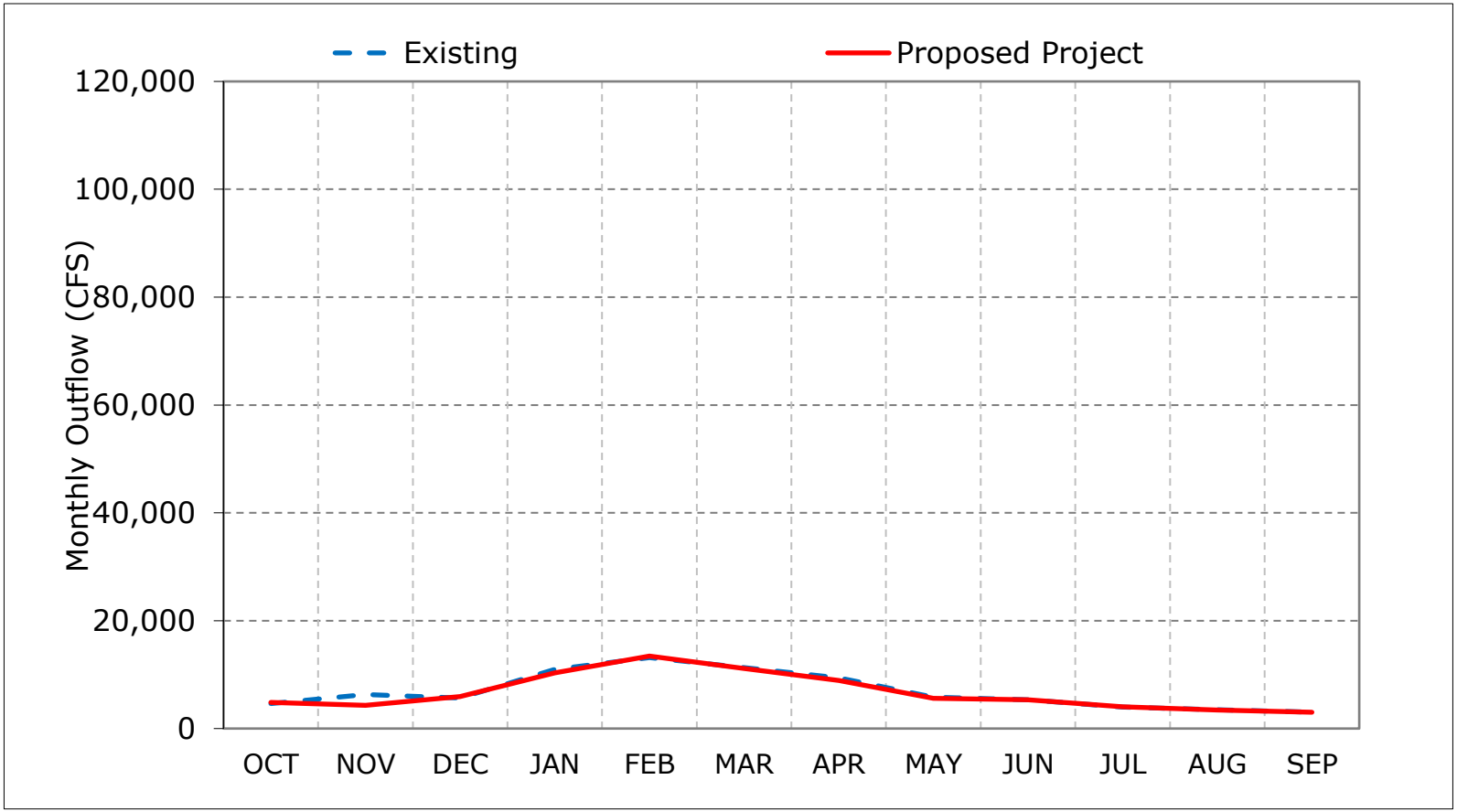
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 9-5. Delta Outflow, Dry Year Average Outflow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 9-6. Delta Outflow, Critical Year Average Outflow



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 9-7. Delta Outflow, October

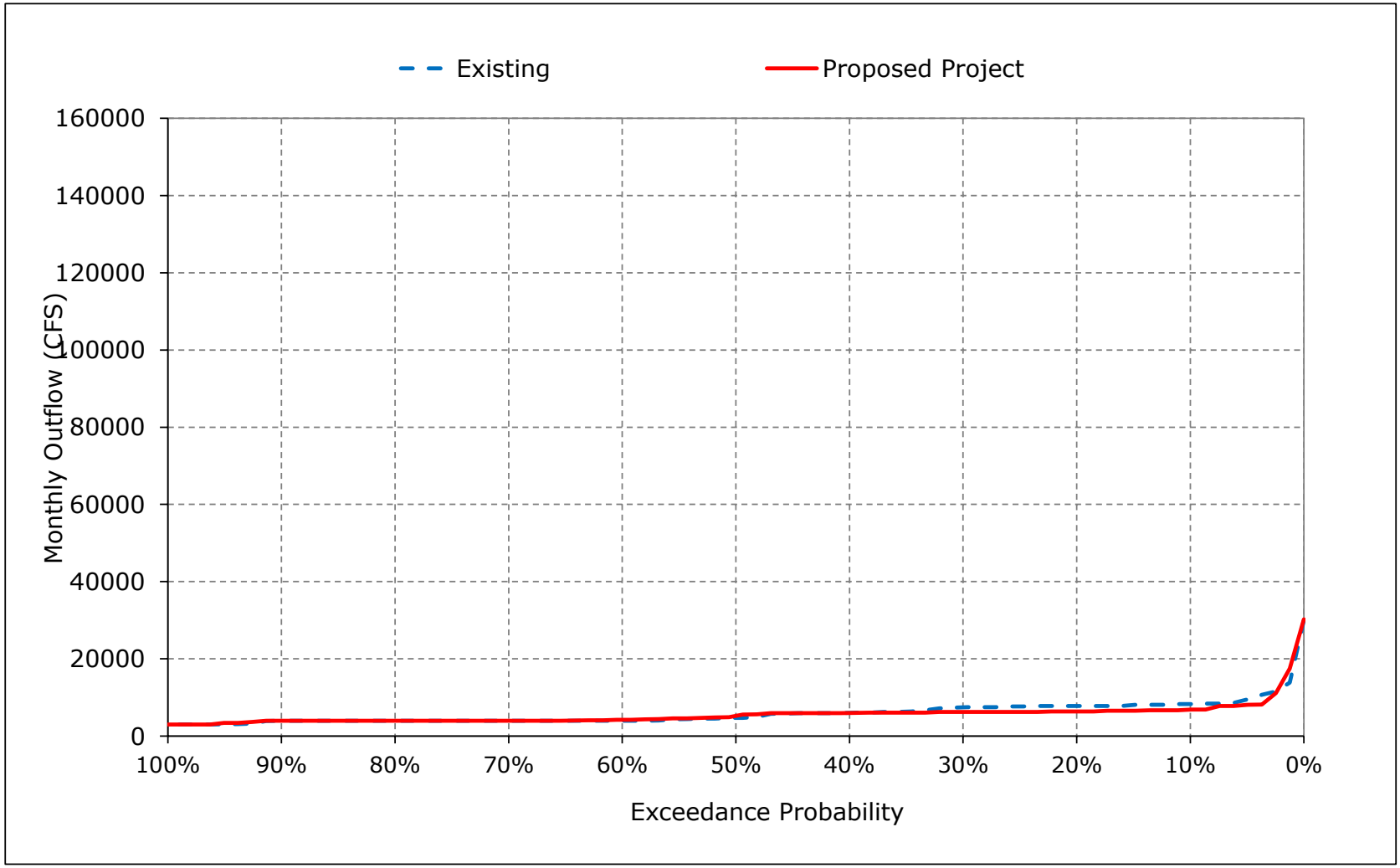


Figure 9-8. Delta Outflow, November

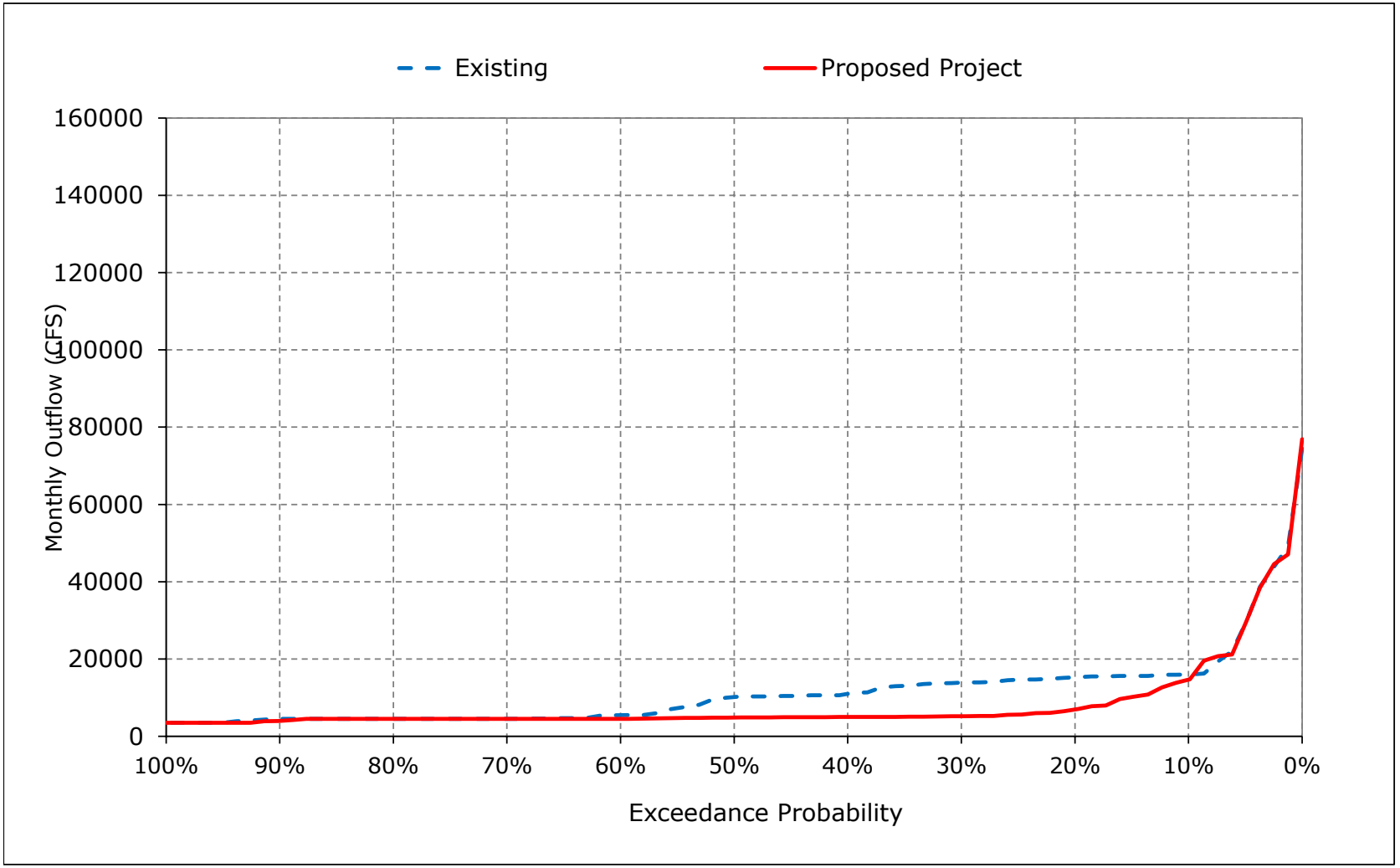


Figure 9-9. Delta Outflow, December

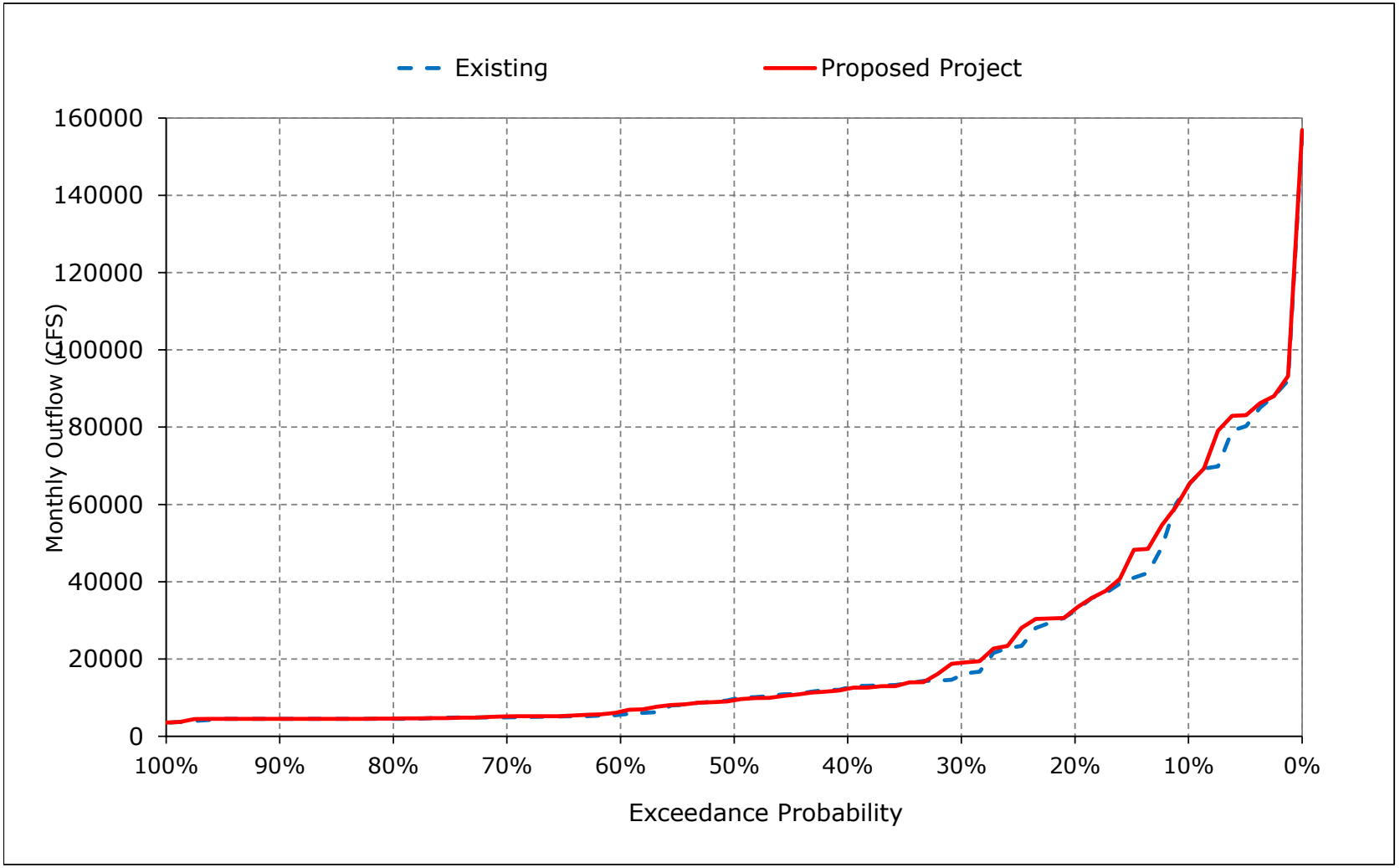


Figure 9-10. Delta Outflow, January

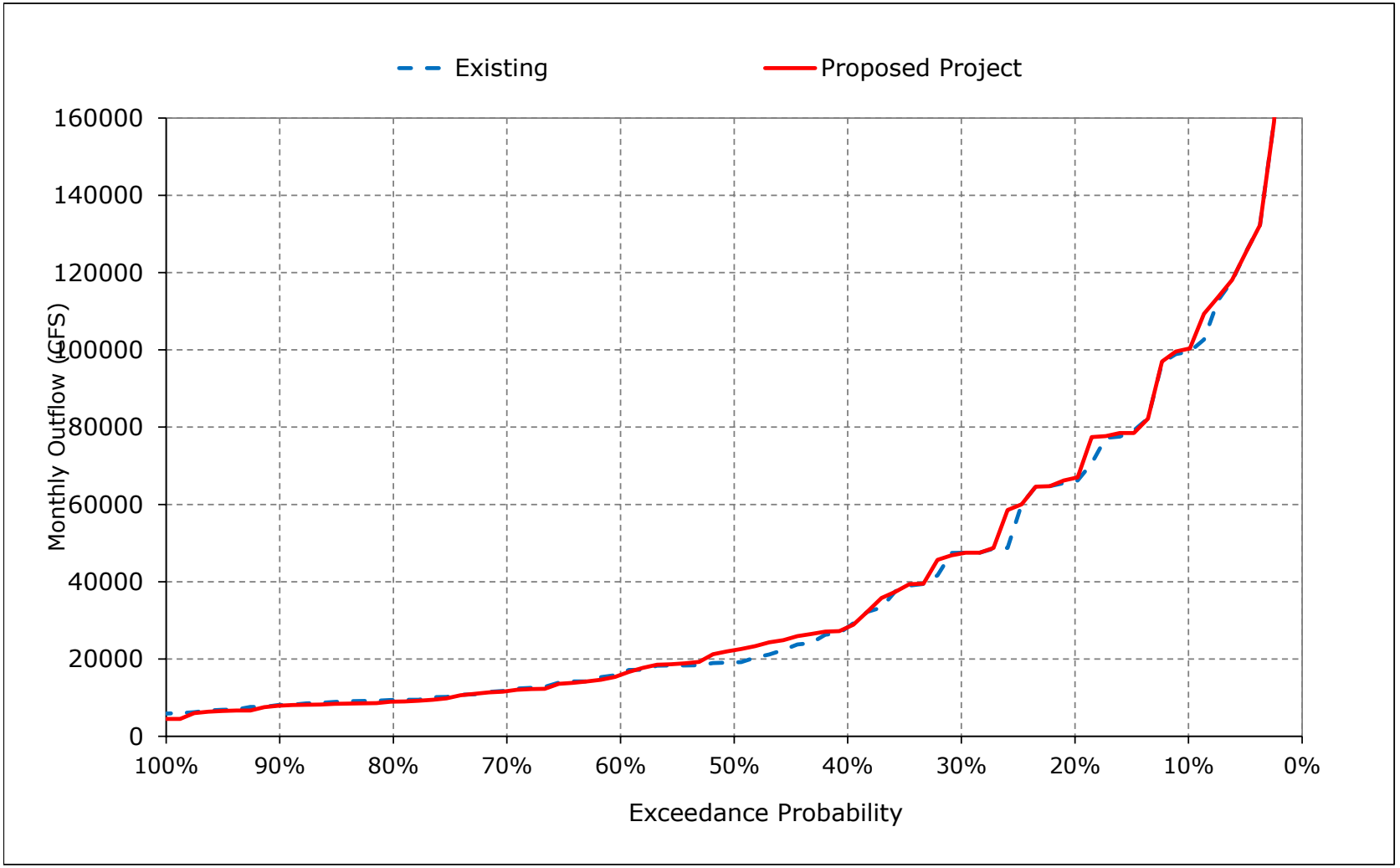


Figure 9-11. Delta Outflow, February

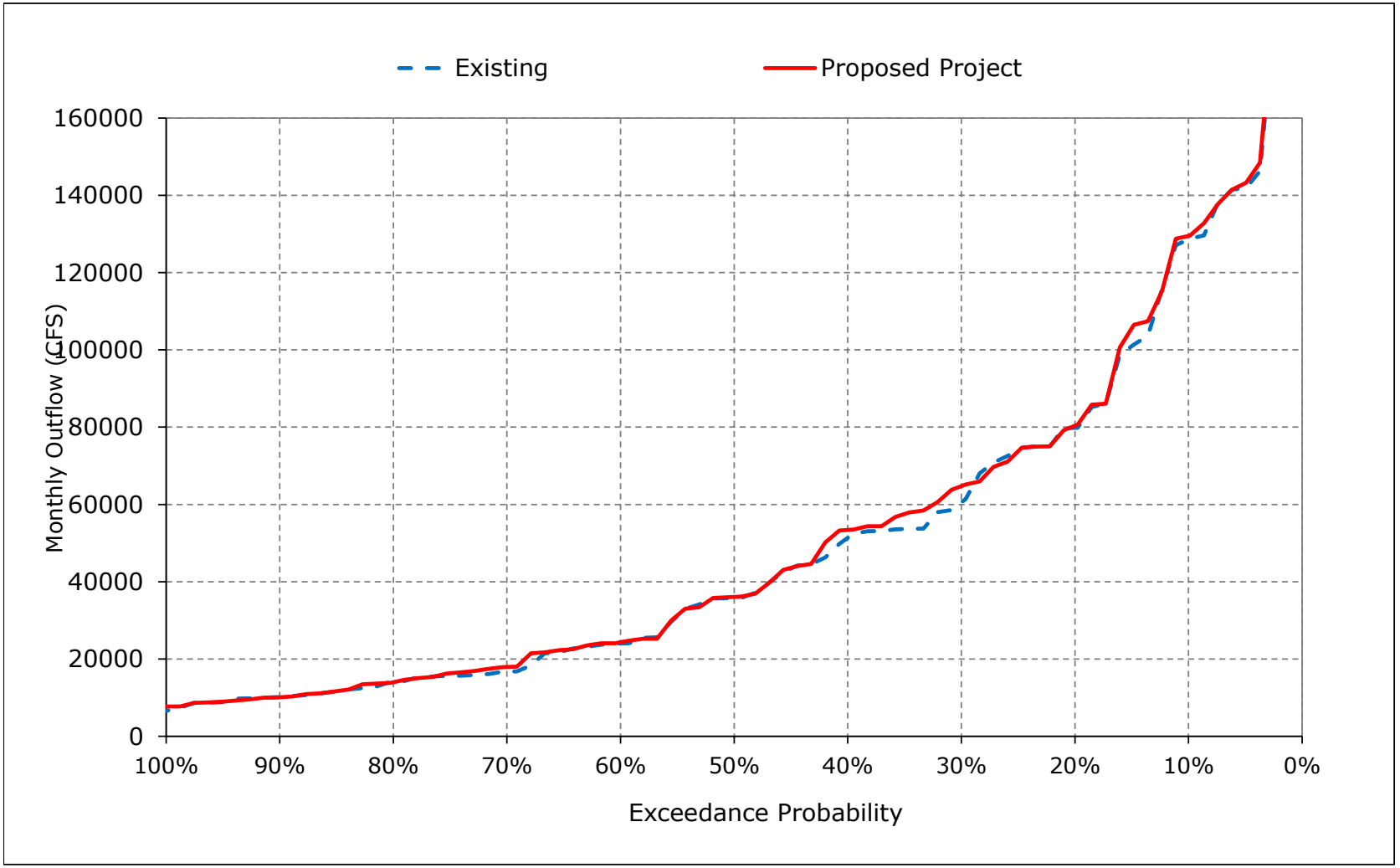


Figure 9-12. Delta Outflow, March

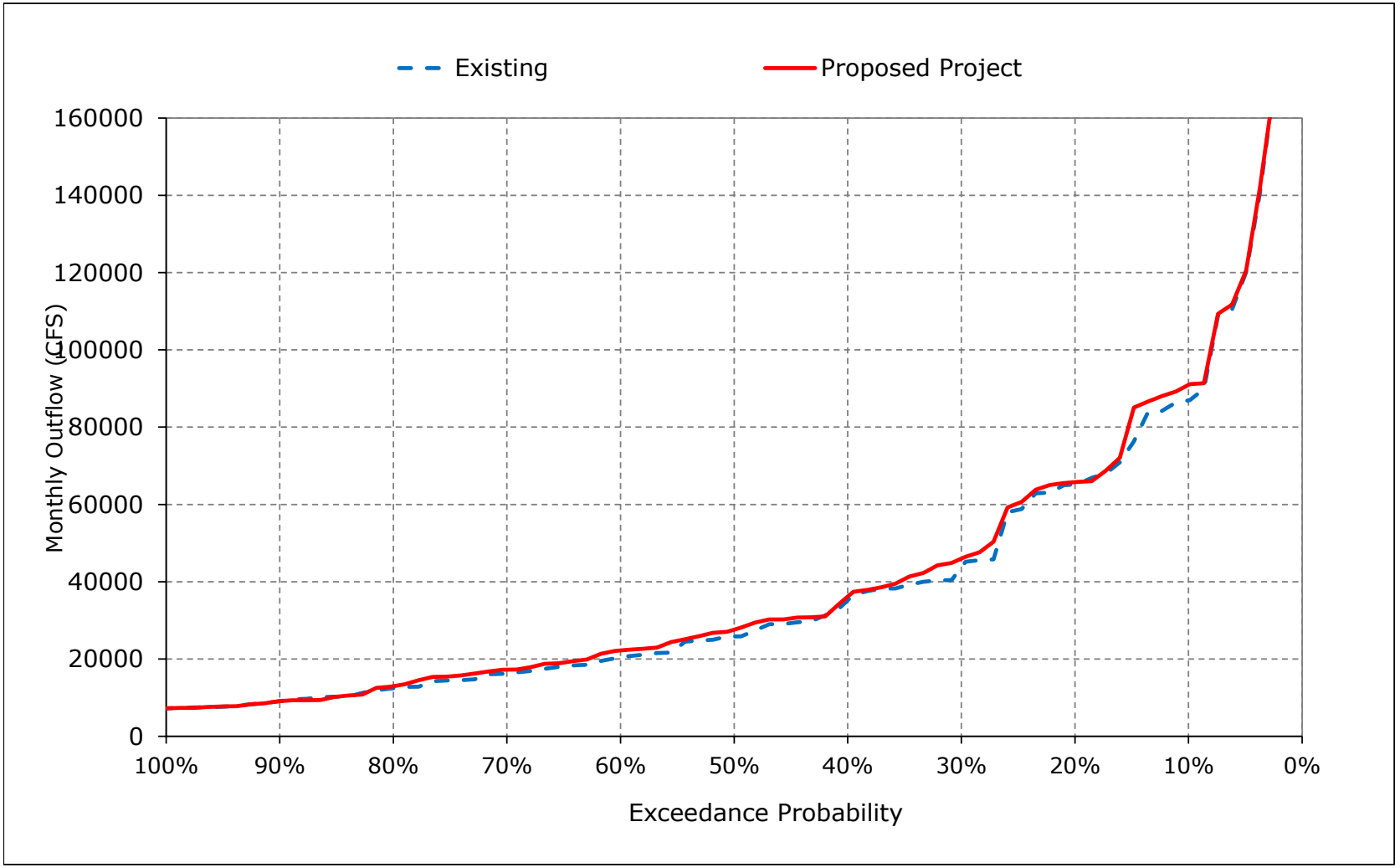


Figure 9-13. Delta Outflow, April

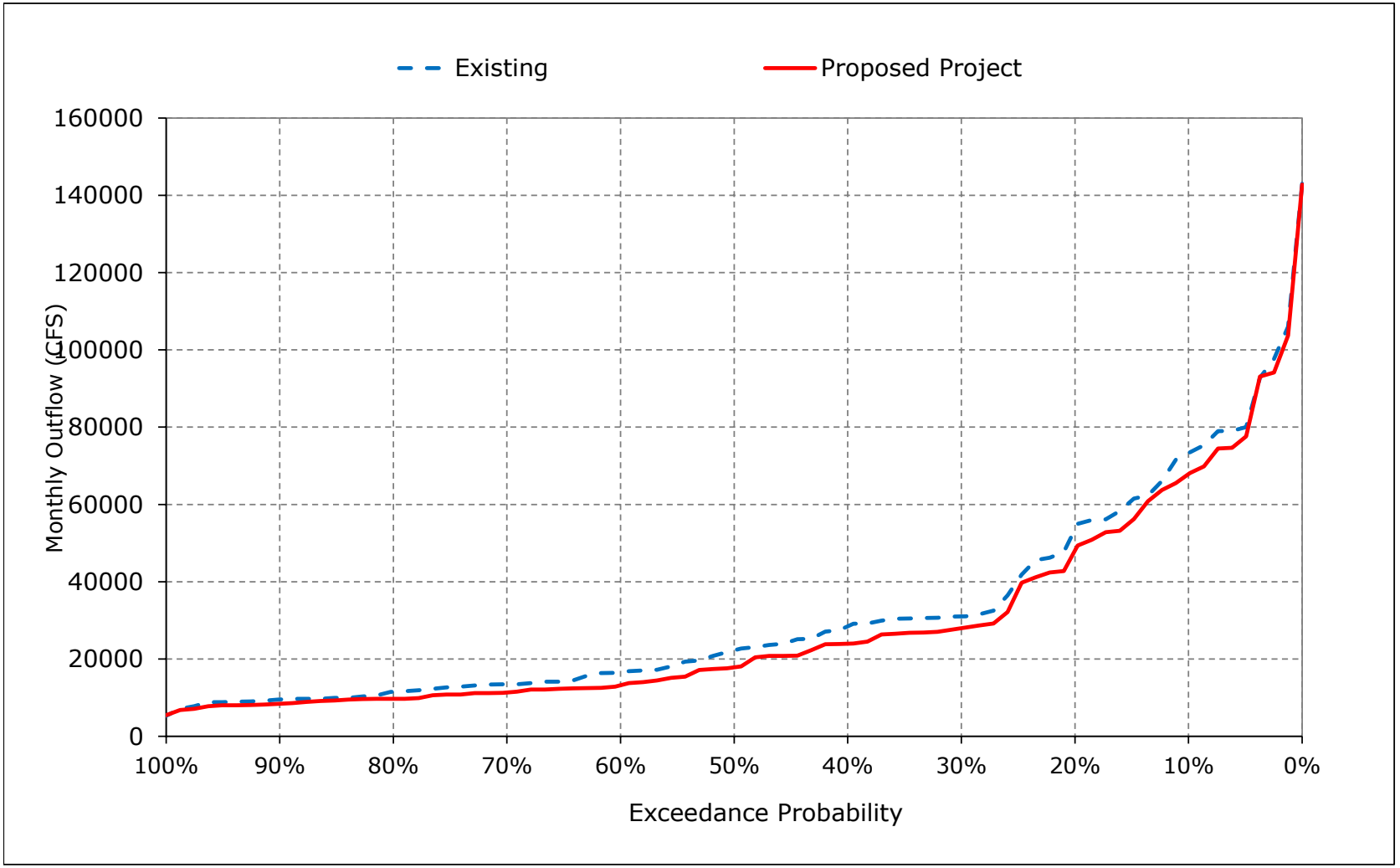


Figure 9-14. Delta Outflow, May

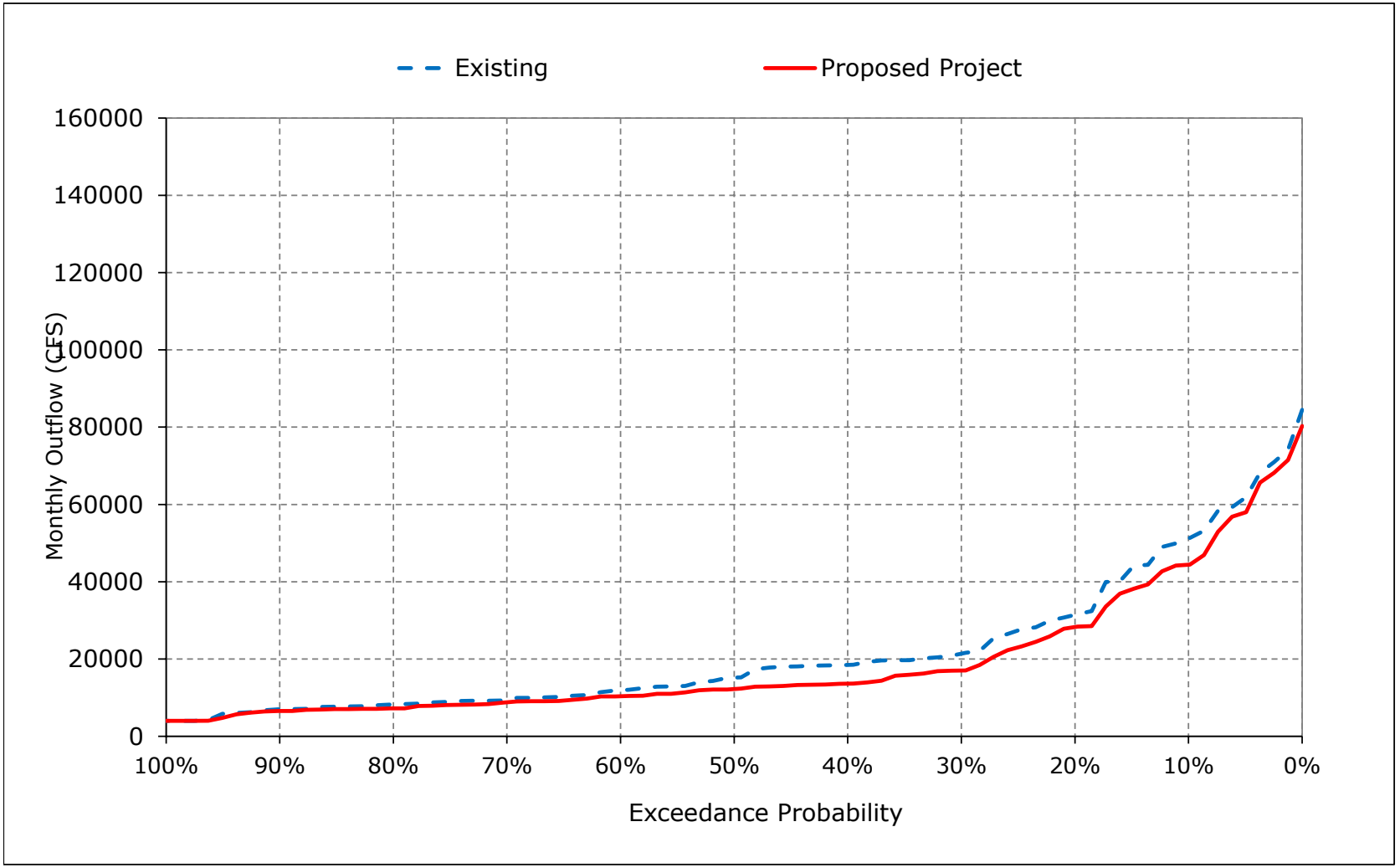


Figure 9-15. Delta Outflow, June

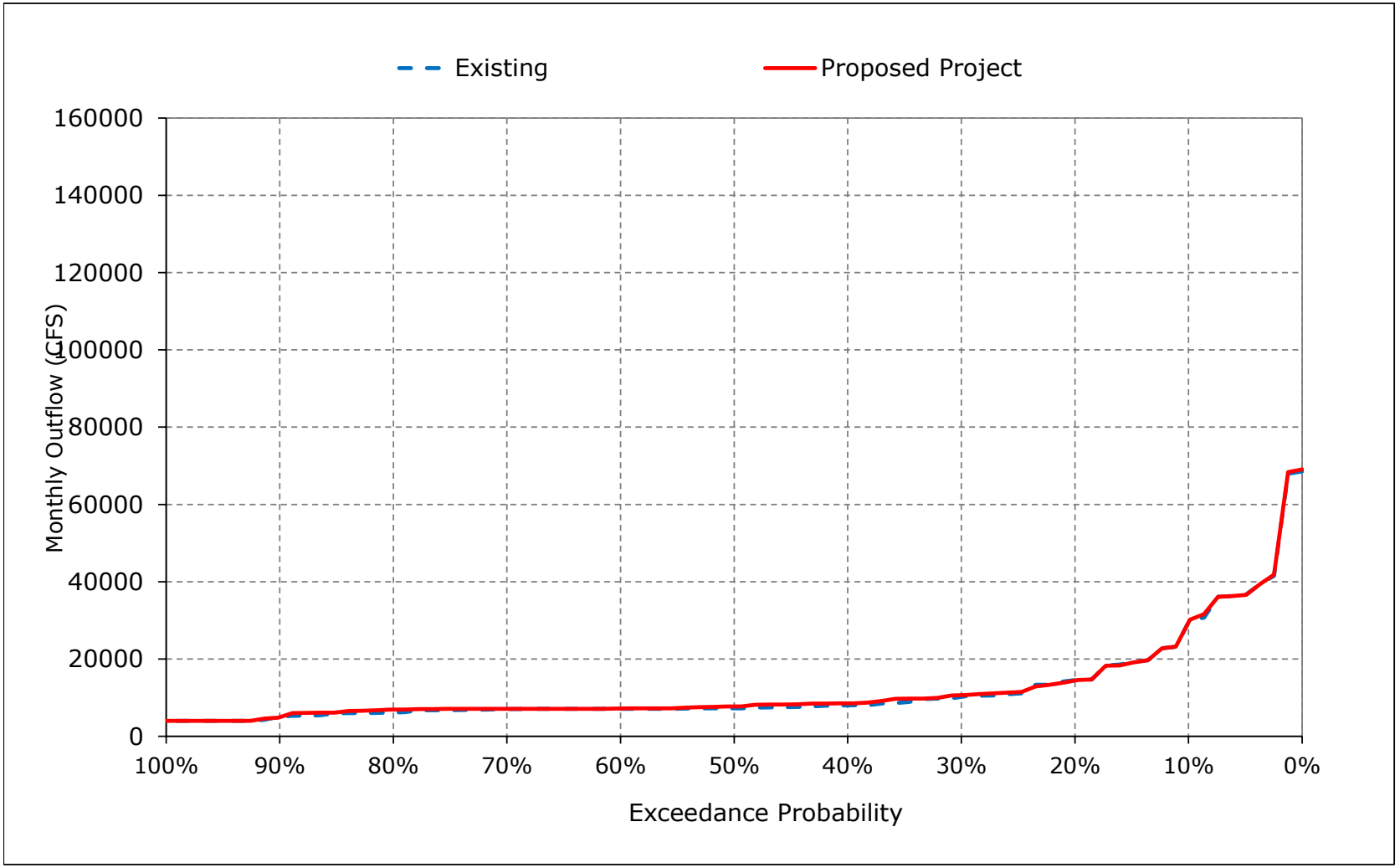


Figure 9-16. Delta Outflow, July

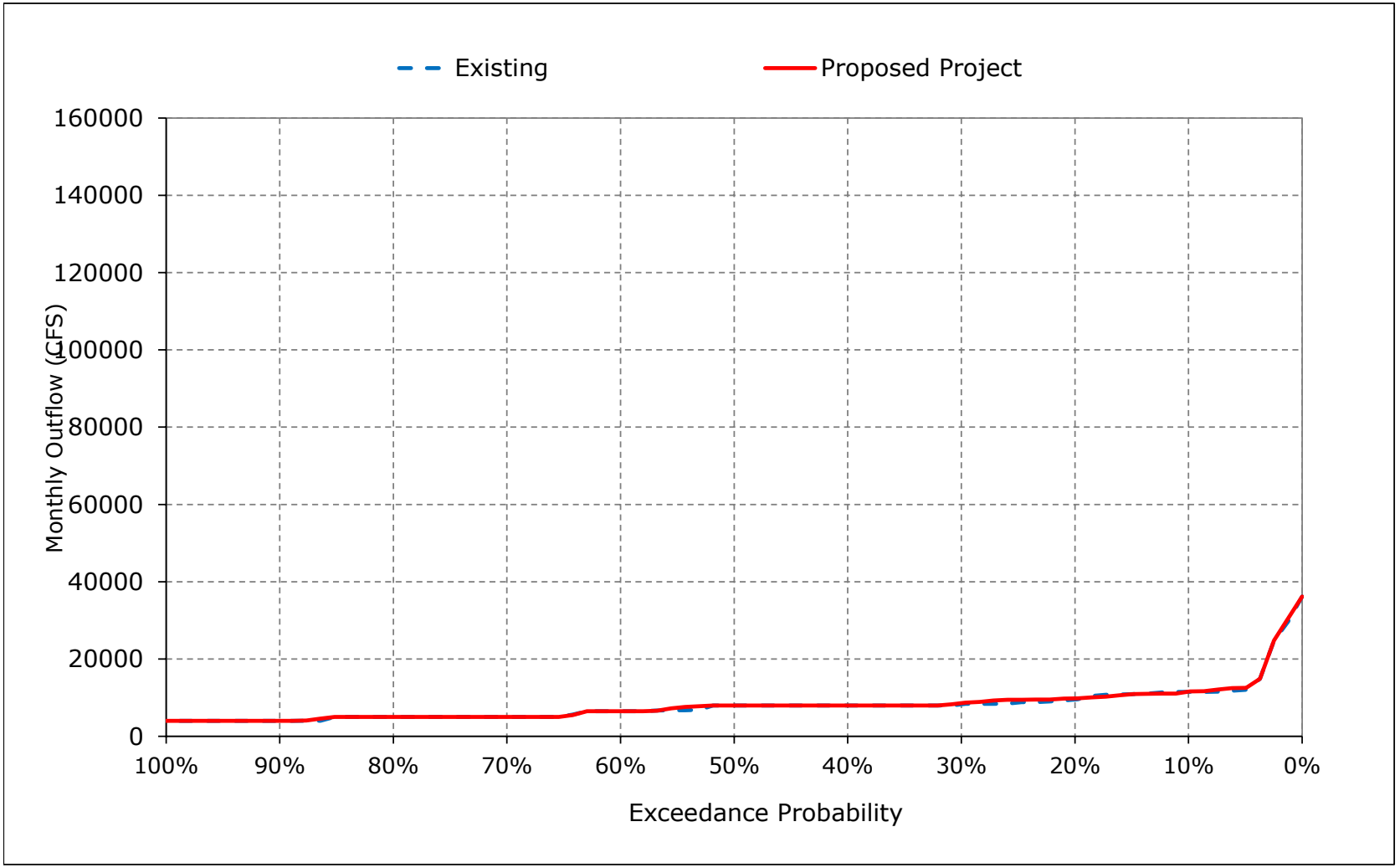


Figure 9-17. Delta Outflow, August

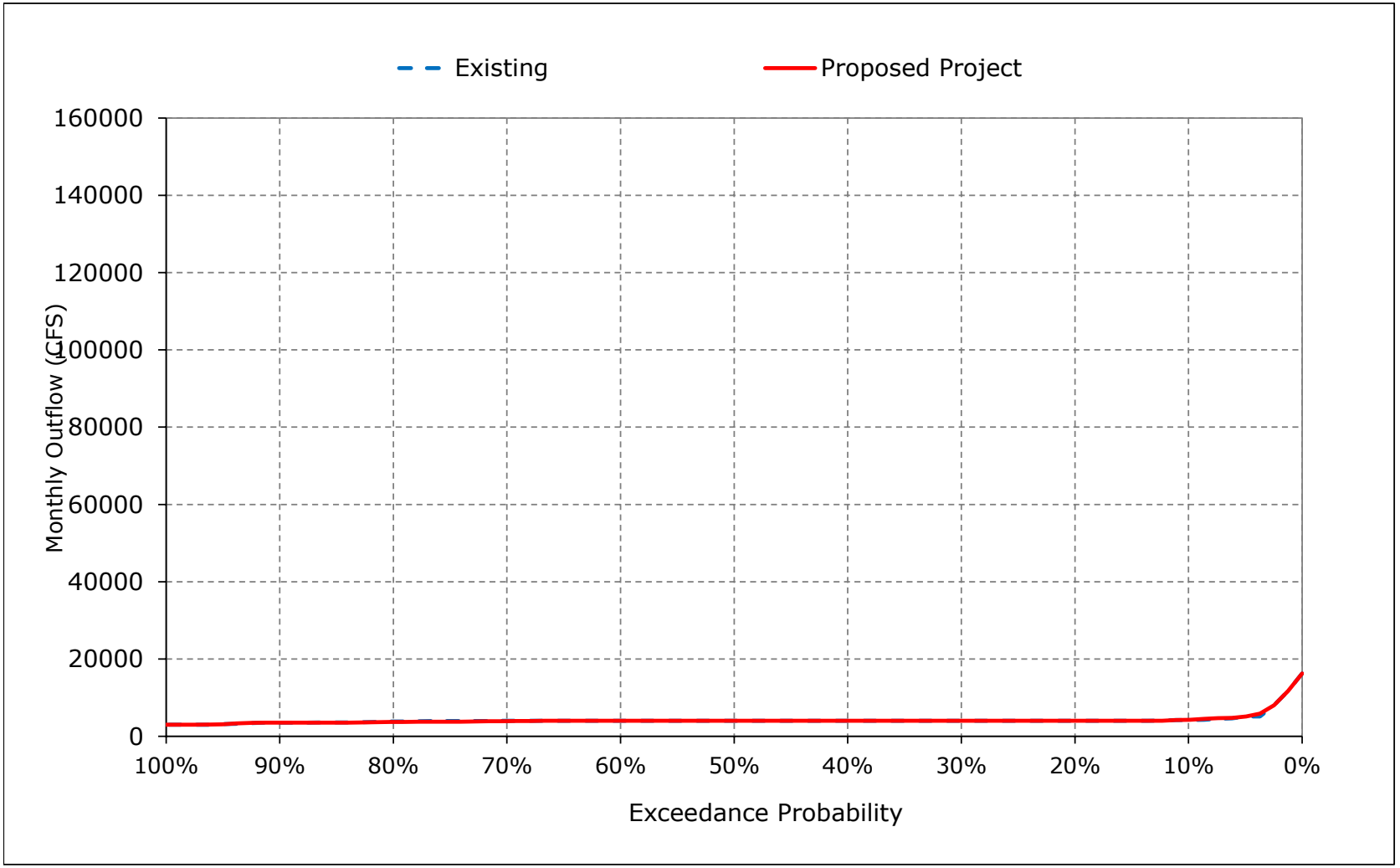
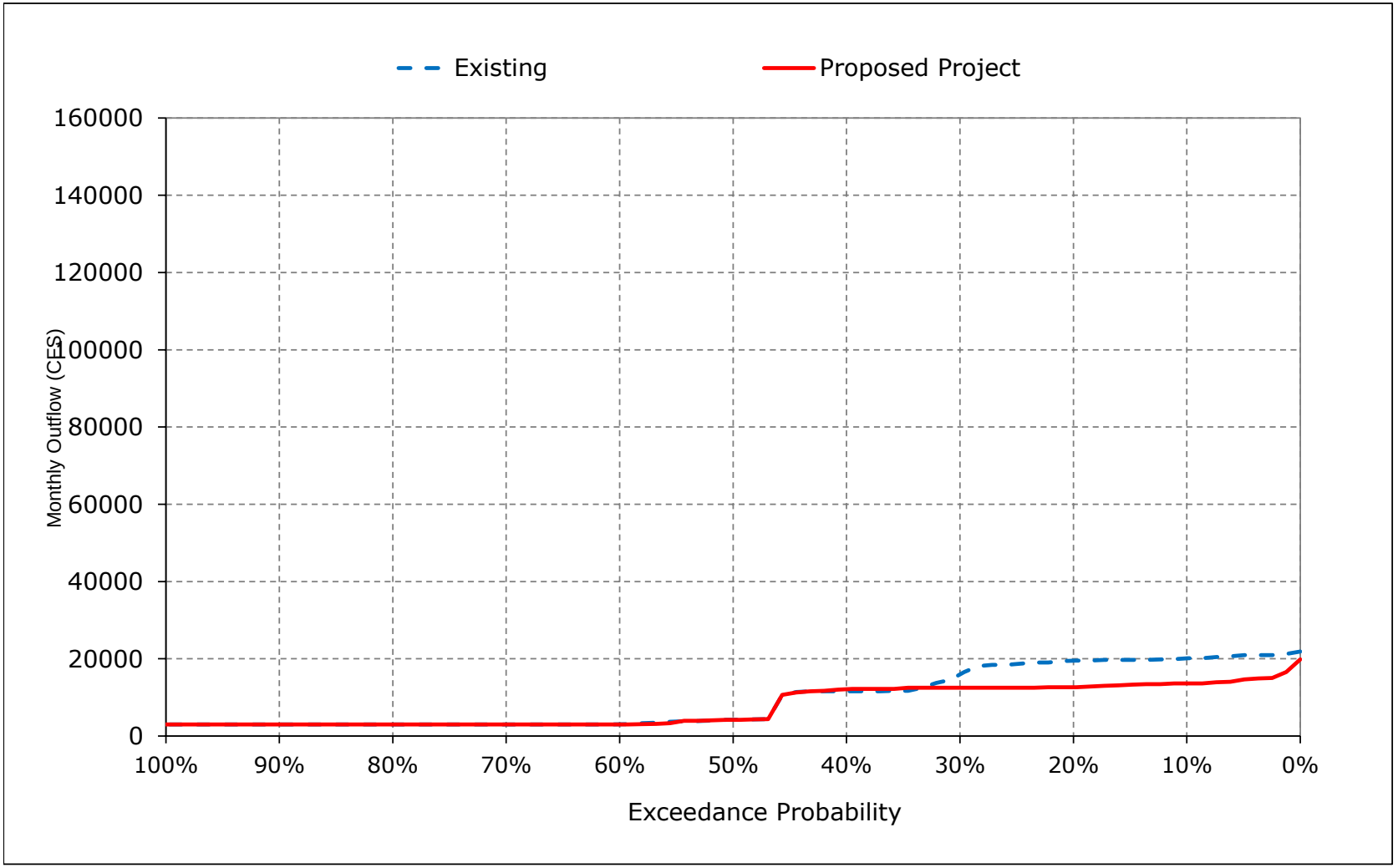


Figure 9-18. Delta Outflow, September



Appendix C – Modeling

Attachment 2-3 – Diversion Results (CalSim II)

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

- Existing Conditions
- Proposed Project

Table 2-3.1. Diversion Results (CalSim II)

Title	Model Parameter	Table Numbers	Figure Numbers
North Bay Aqueduct Exports	D403B	1-1	1-1 to 1-18
DCC Flow	C401B_DXC	2-1	2-1 to 2-18
Total Delta Exports	TOTAL_EXP	3-1	3-1 to 3-18
SWP Banks PP Exports	D419_SWP	4-1	4-1 to 4-18
CVP Banks PP Exports	D419_CVP	5-1	5-1 to 5-18
Banks PP Exports	D419	6-1	6-1 to 6-18
Jones PP Exports	D418	7-1	7-1 to 7-18

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 1-1. North Bay Aqueduct, Monthly Diversion

Existing

Statistic	Monthly Diversion (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	74	72	67	33	37	33	87	66	70	92	83	66
20%	54	70	65	33	37	33	87	64	70	90	63	66
30%	54	63	65	33	37	33	86	63	69	89	63	66
40%	54	38	64	33	37	33	85	57	64	64	63	66
50%	53	38	64	33	37	33	84	57	61	64	63	62
60%	53	38	63	33	37	33	84	57	61	60	63	62
70%	51	38	60	33	37	33	63	57	36	37	60	52
80%	46	36	60	33	36	33	63	53	36	37	60	52
90%	41	32	32	33	36	33	35	32	2	3	35	41
Long Term												
Full Simulation Period[a]	54	47	58	33	35	31	70	53	51	59	61	59
Water Year Types[b,c]												
Wet (32%)	54	51	63	33	37	33	86	57	68	73	63	66
Above Normal (15%)	57	48	58	33	37	33	86	61	70	86	63	66
Below Normal (17%)	54	43	58	33	32	33	84	65	62	81	60	62
Dry (22%)	53	49	57	33	35	32	59	57	38	37	75	52
Critical (15%)	55	42	50	33	34	17	21	15	2	5	35	44

Proposed Project

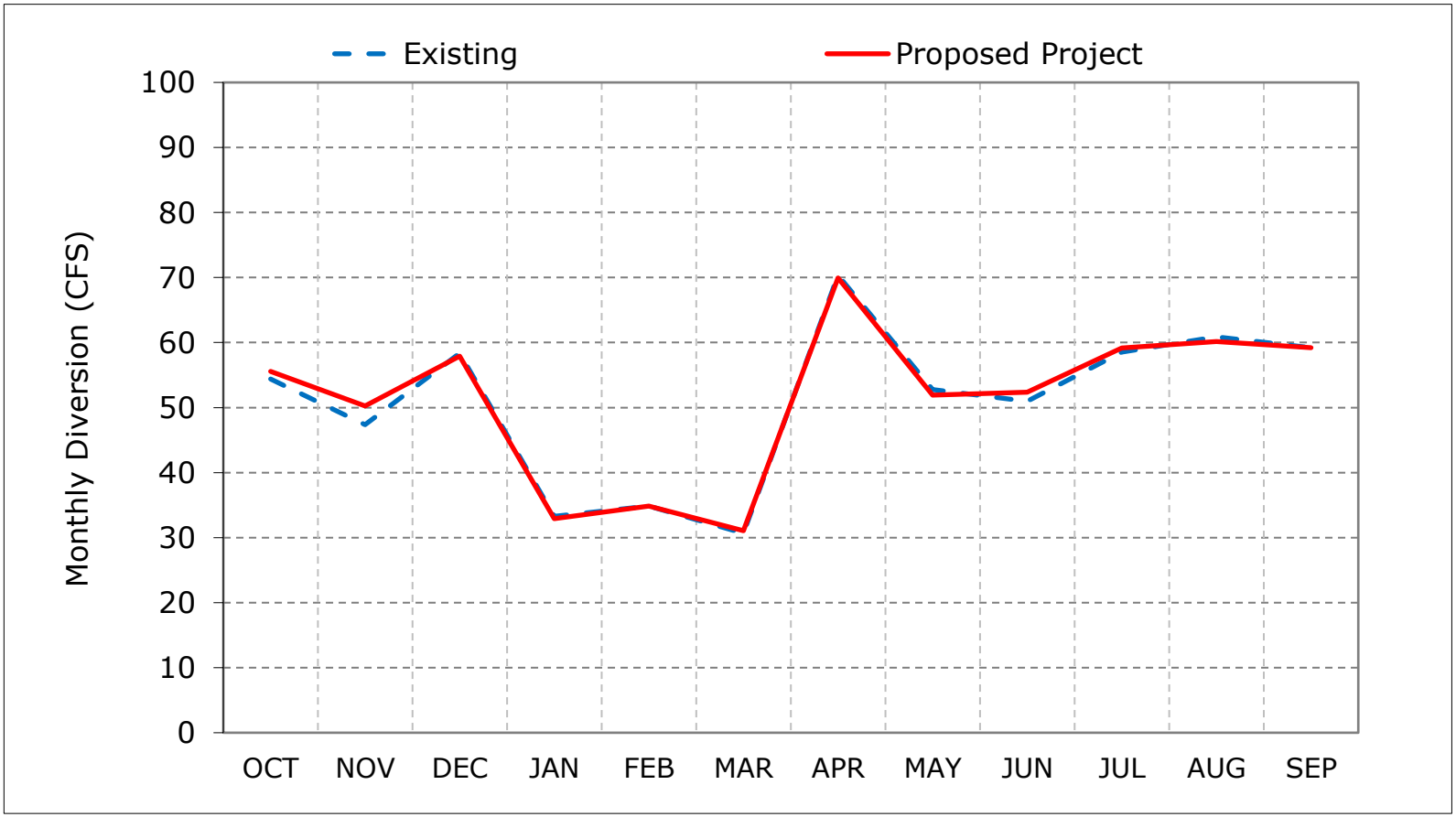
Statistic	Monthly Diversion (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	74	72	67	33	37	33	87	64	76	92	83	66
20%	58	70	65	33	37	33	87	64	70	90	63	66
30%	54	66	65	33	37	33	86	63	70	89	63	66
40%	54	49	64	33	37	33	85	57	64	64	63	66
50%	54	42	63	33	37	33	84	57	64	64	63	62
60%	53	39	63	33	37	33	84	57	61	60	61	62
70%	51	38	60	33	37	33	63	57	36	37	60	52
80%	51	38	60	33	36	33	63	53	36	37	50	52
90%	41	32	32	33	36	33	35	32	2	3	35	41
Long Term												
Full Simulation Period[a]	56	50	58	33	35	31	70	52	52	59	60	59
Water Year Types[b,c]												
Wet (32%)	54	56	63	33	37	33	86	57	68	74	64	66
Above Normal (15%)	62	48	58	33	37	33	86	61	68	86	65	66
Below Normal (17%)	54	49	56	33	32	33	84	63	70	81	60	62
Dry (22%)	53	52	55	33	35	32	57	57	39	37	70	52
Critical (15%)	58	39	53	31	34	20	21	13	2	8	32	44

Proposed Project minus Existing

Statistic	Monthly Diversion (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	0	0	0	0	0	0	**-2**	6	0	**0**	0
20%	4	0	**0**	0	0	0	0	0	0	0	**0**	0
30%	0	3	0	0	0	0	0	**0**	1	0	0	0
40%	0	10	**0**	0	0	0	0	**0**	0	0	0	0
50%	1	4	**-1**	0	0	0	0	0	3	0	**0**	0
60%	0	1	**0**	**0**	0	0	0	**0**	0	0	**-2**	0
70%	0	0	**0**	0	0	0	0	**0**	0	0	**0**	0
80%	5	1	0	0	0	0	0	0	0	0	**-9**	0
90%	0	0	**0**	0	0	0	0	**0**	0	0	0	0
Long Term												
Full Simulation Period[a]	1	3	**0**	**0**	0	0	**0**	**-1**	1	1	**-1**	0
Water Year Types[b,c]												
Wet (32%)	0	4	0	0	0	0	0	0	0	1	1	0
Above Normal (15%)	5	0	**-1**	0	0	0	0	**-1**	**-2**	0	3	0
Below Normal (17%)	0	6	**-2**	0	0	0	0	**-2**	8	0	0	0
Dry (22%)	0	3	**-2**	0	0	0	**-2**	0	1	0	**-4**	0
Critical (15%)	3	**-2**	3	**-3**	0	3	0	**-3**	0	3	**-3**	0

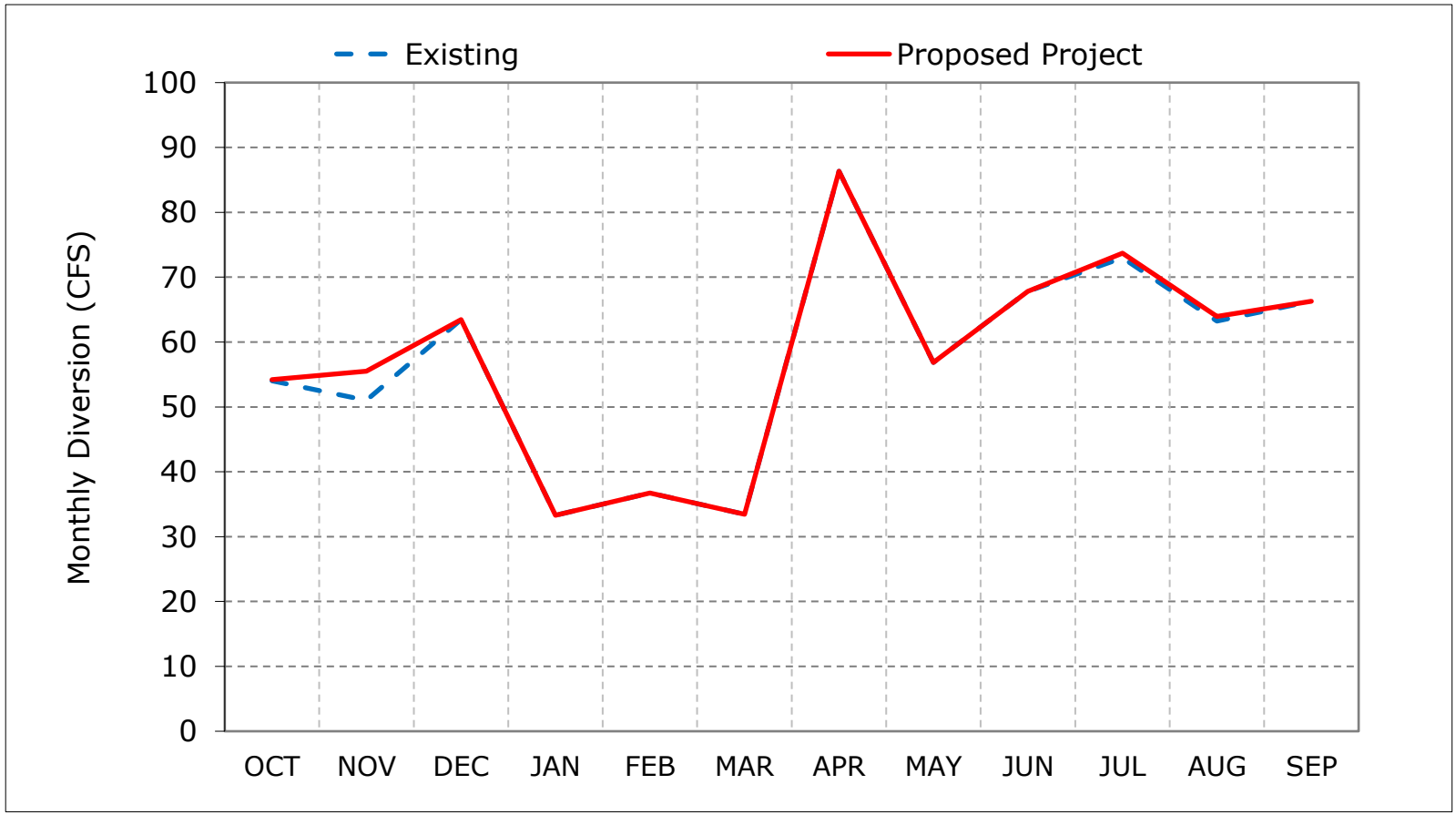
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

Figure 1-1. North Bay Aqueduct, Long-Term Average Diversion



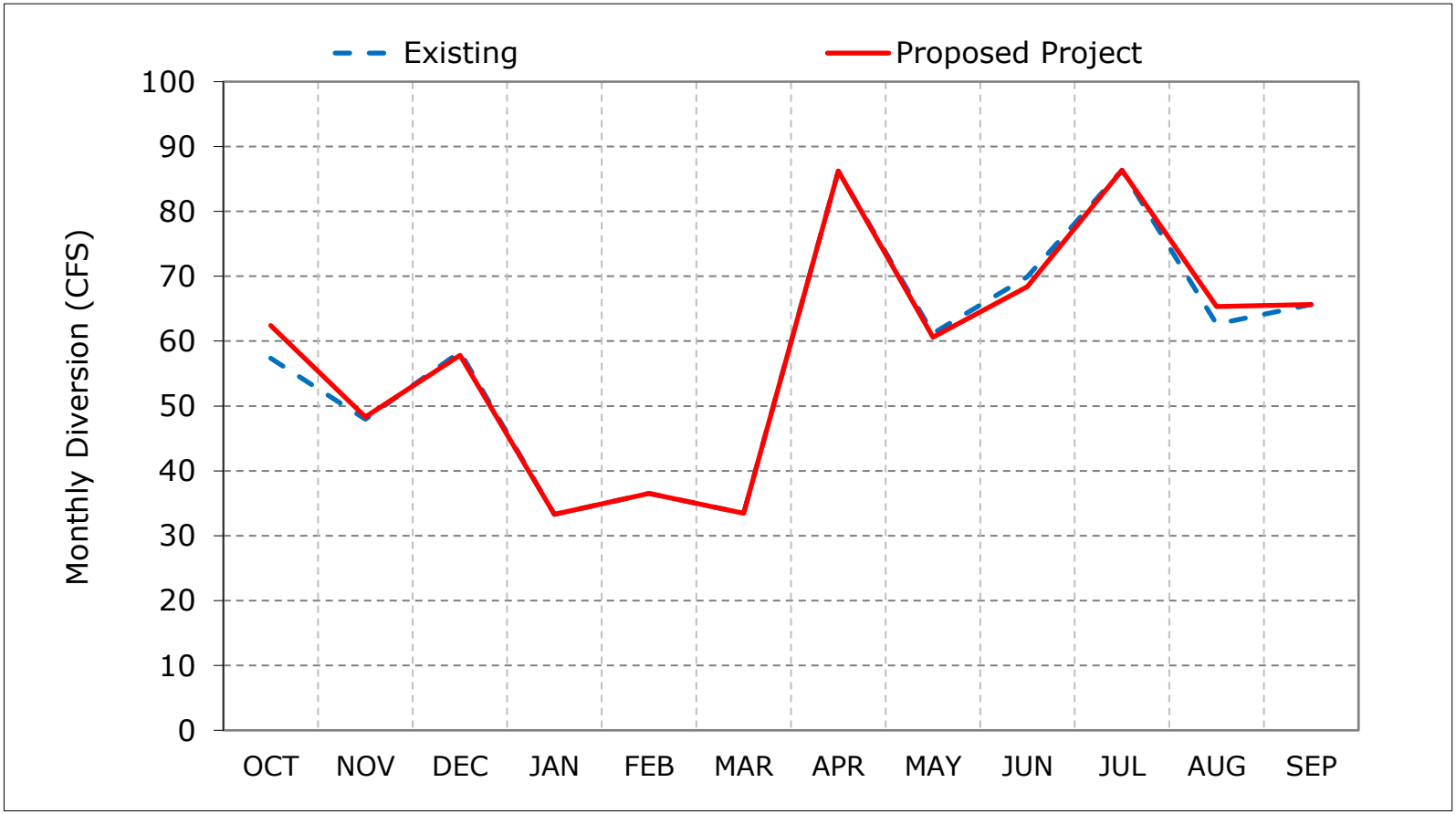
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 1-2. North Bay Aqueduct, Wet Year Average Diversion



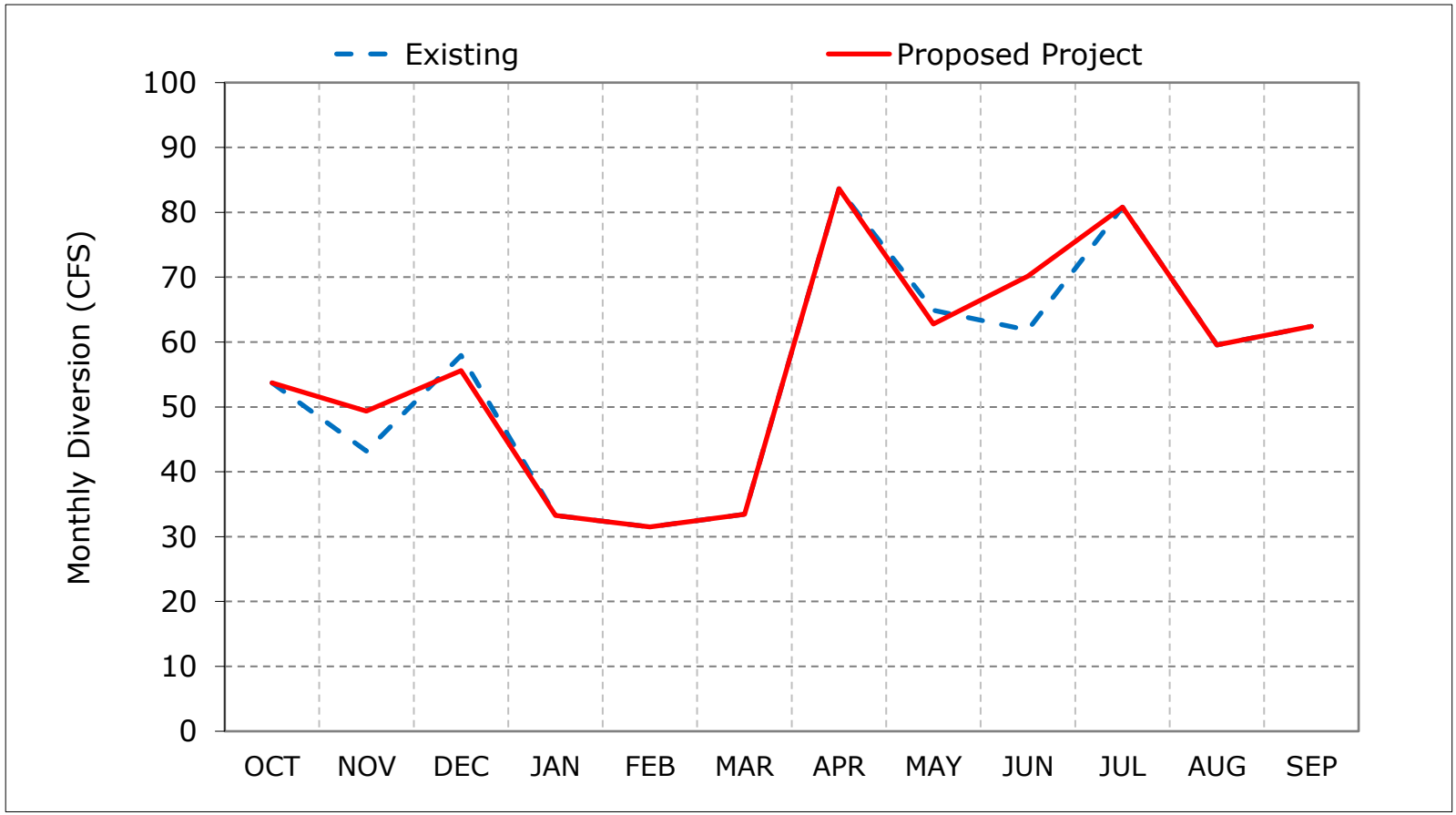
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 1-3. North Bay Aqueduct, Above Normal Year Average Diversion



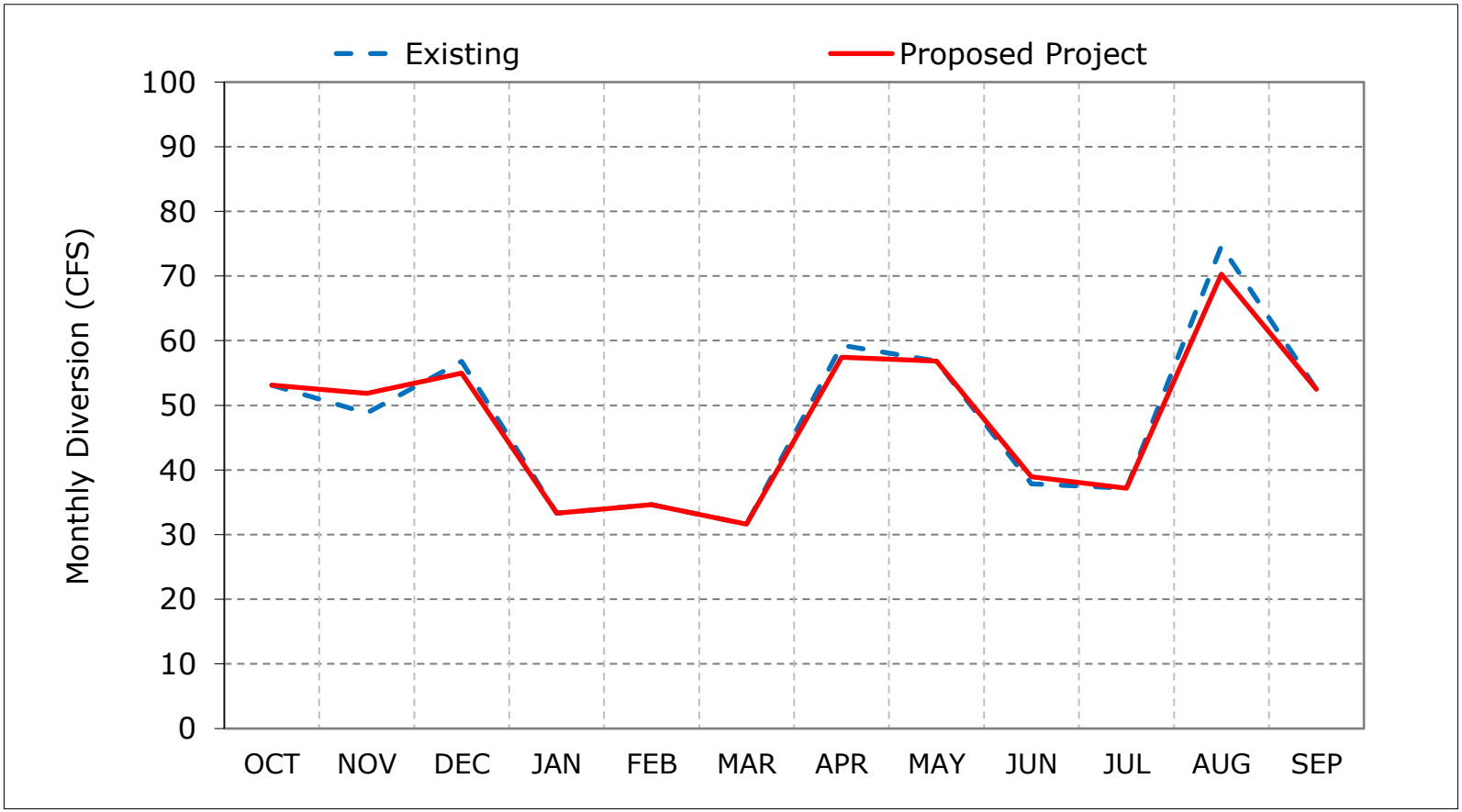
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 1-4. North Bay Aqueduct, Below Normal Year Average Diversion



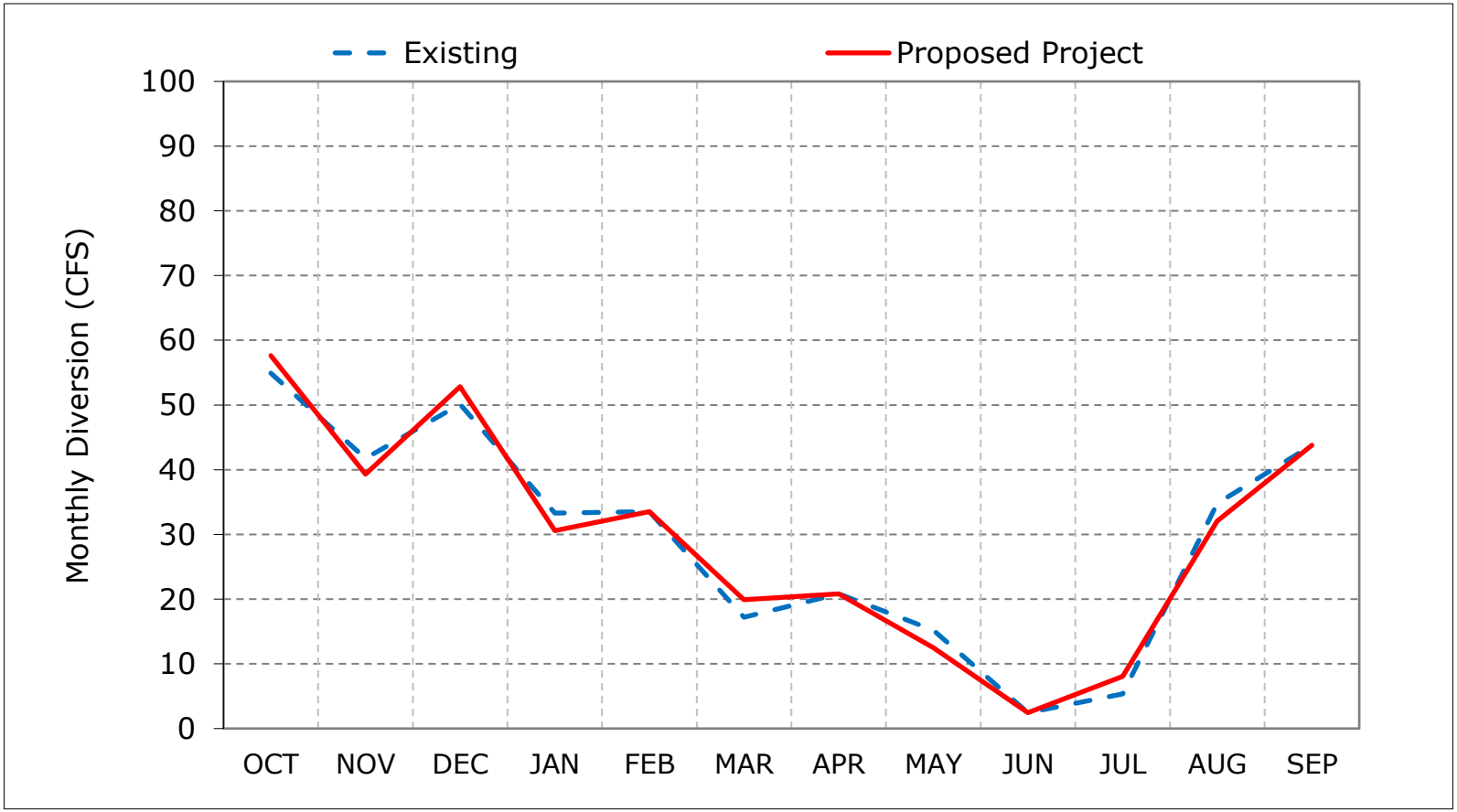
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 1-5. North Bay Aqueduct, Dry Year Average Diversion



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 1-6. North Bay Aqueduct, Critical Year Average Diversion



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 1-7. North Bay Aqueduct, October

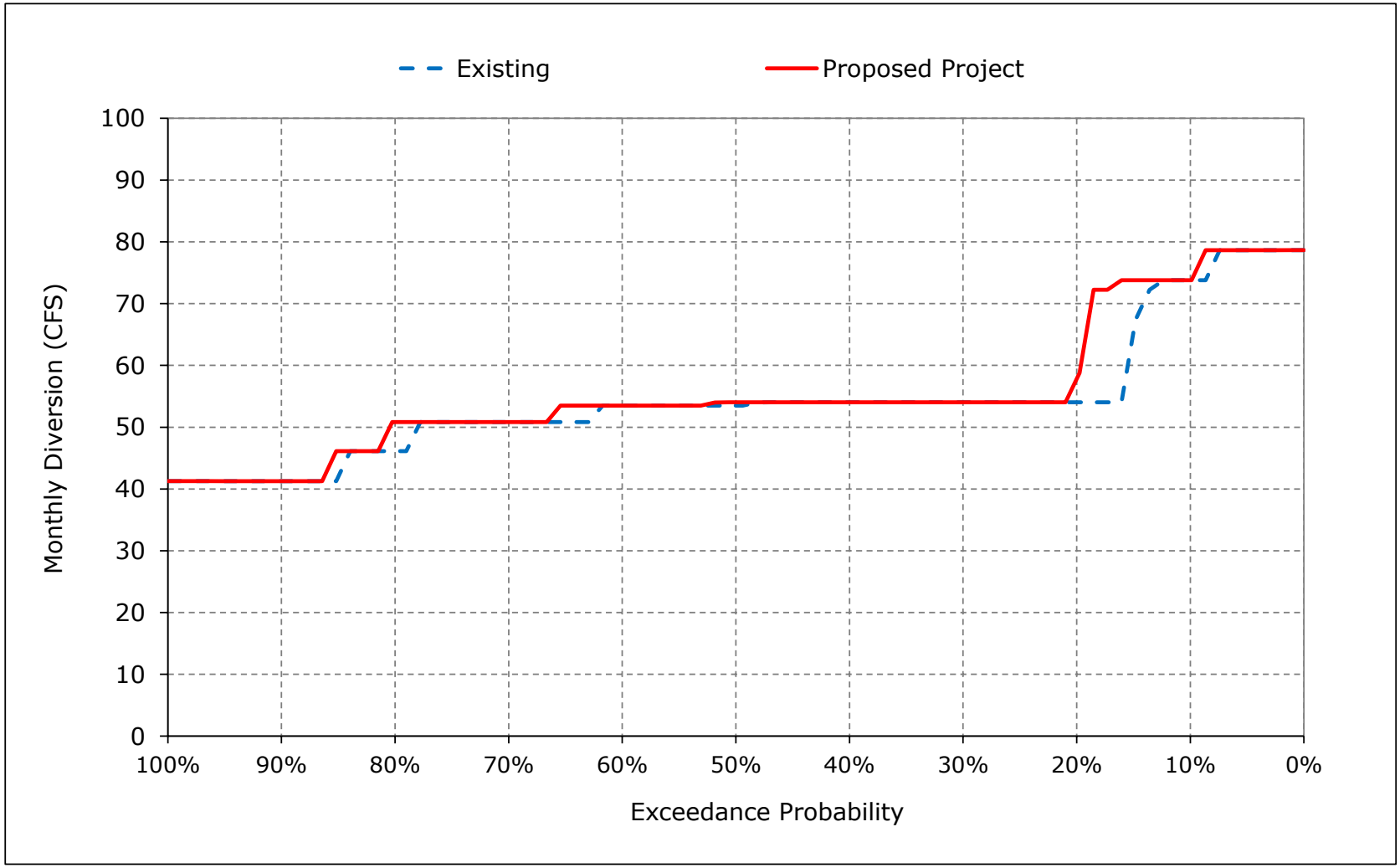


Figure 1-8. North Bay Aqueduct, November

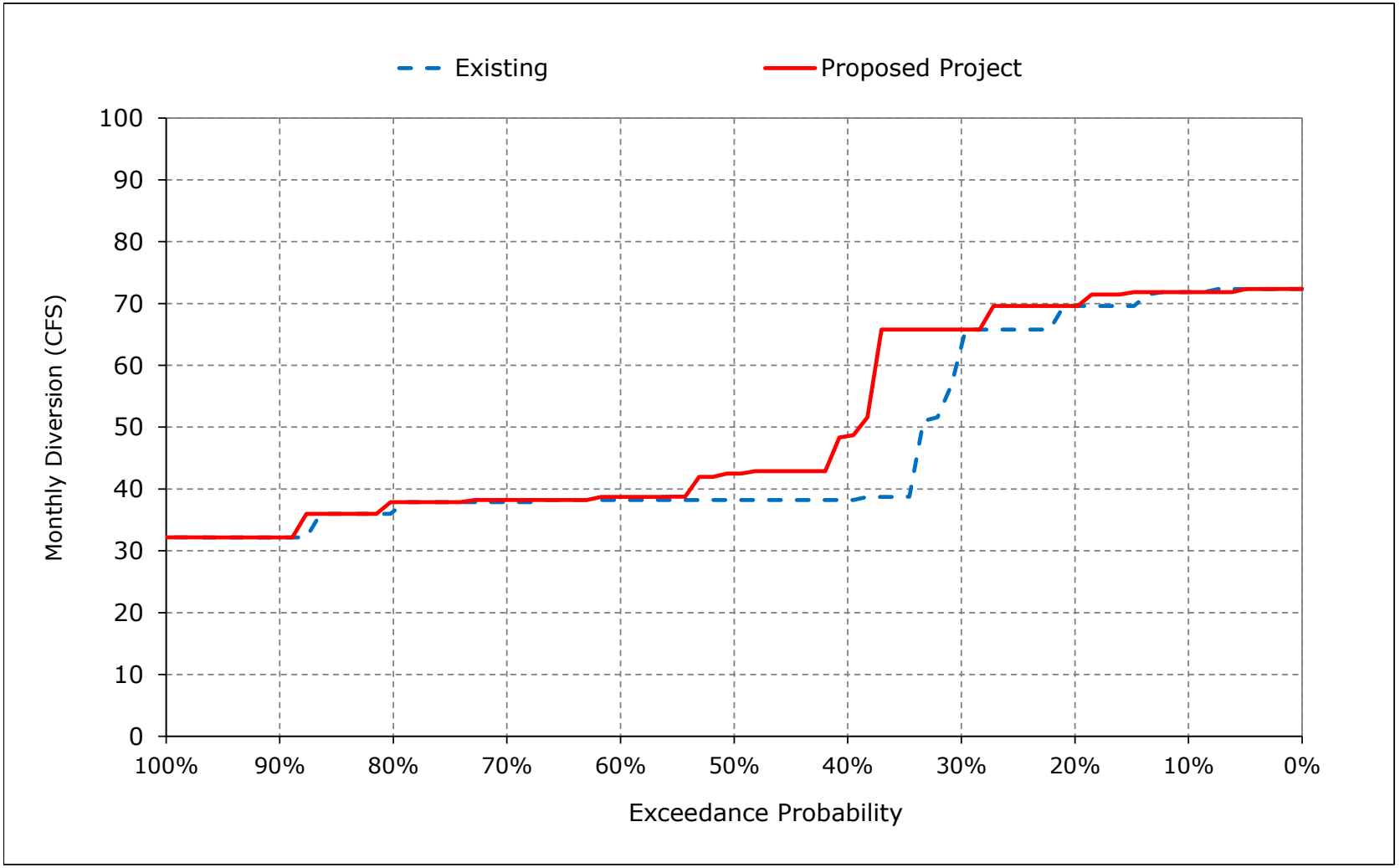


Figure 1-9. North Bay Aqueduct, December

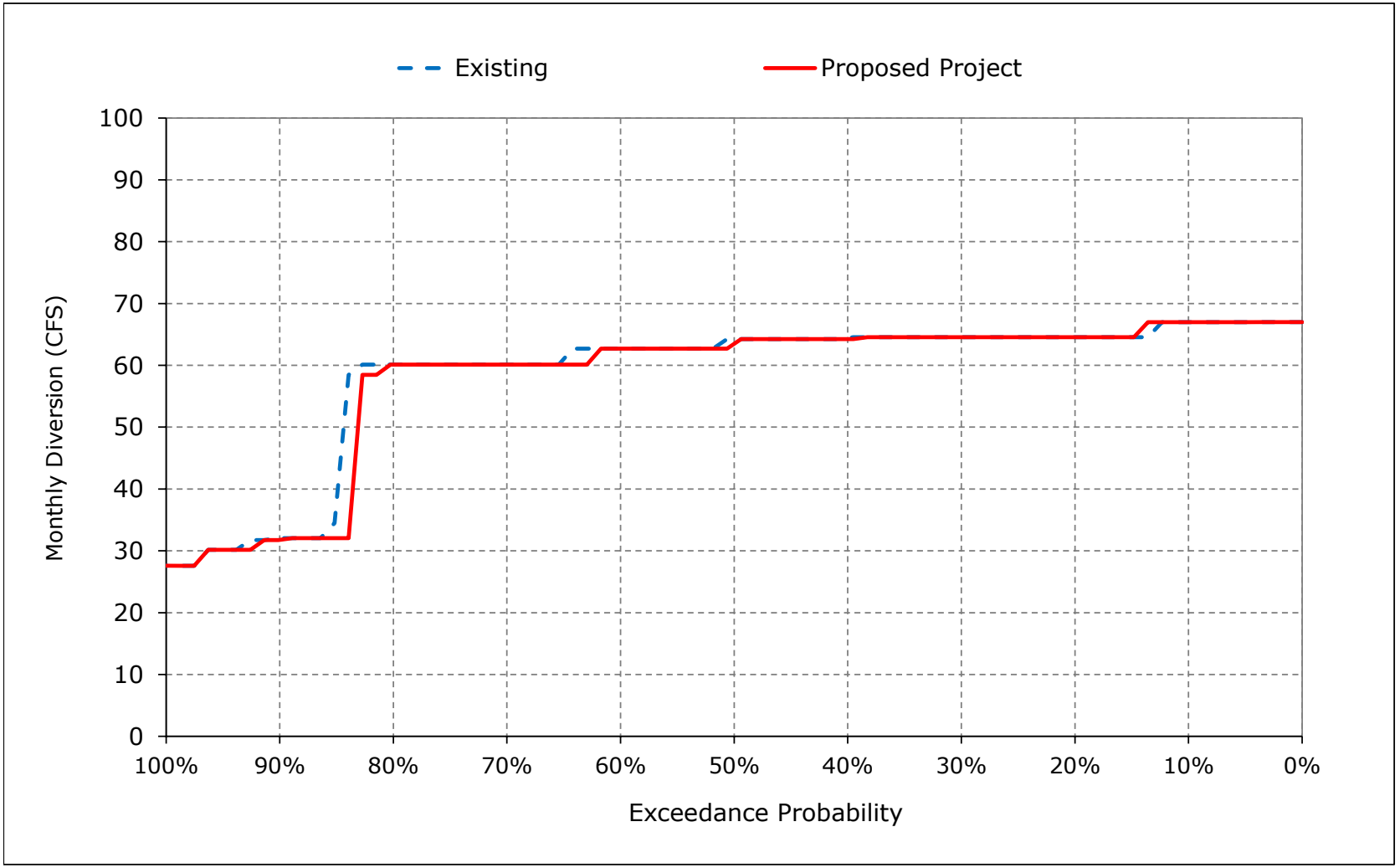


Figure 1-10. North Bay Aqueduct, January

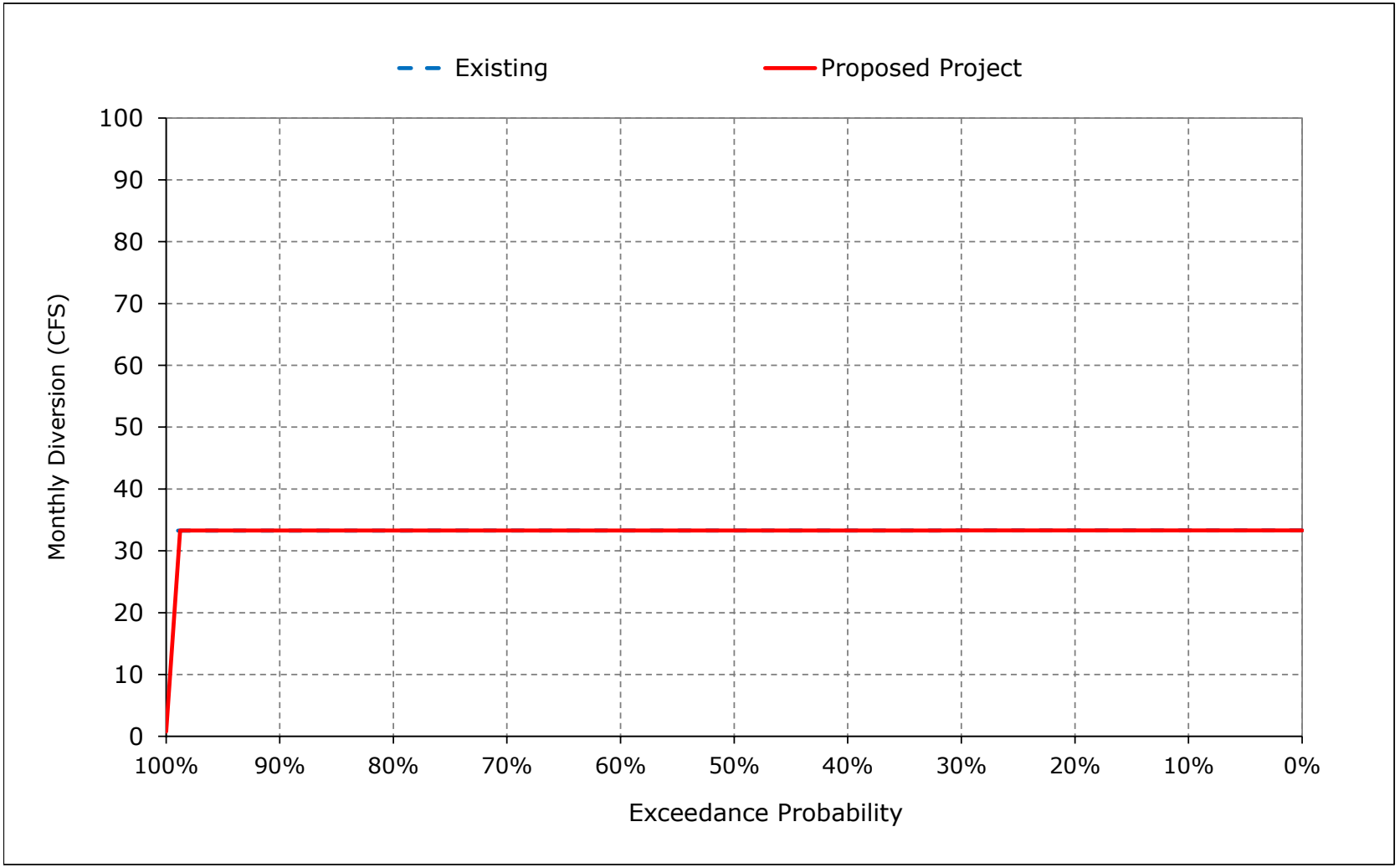


Figure 1-11. North Bay Aqueduct, February

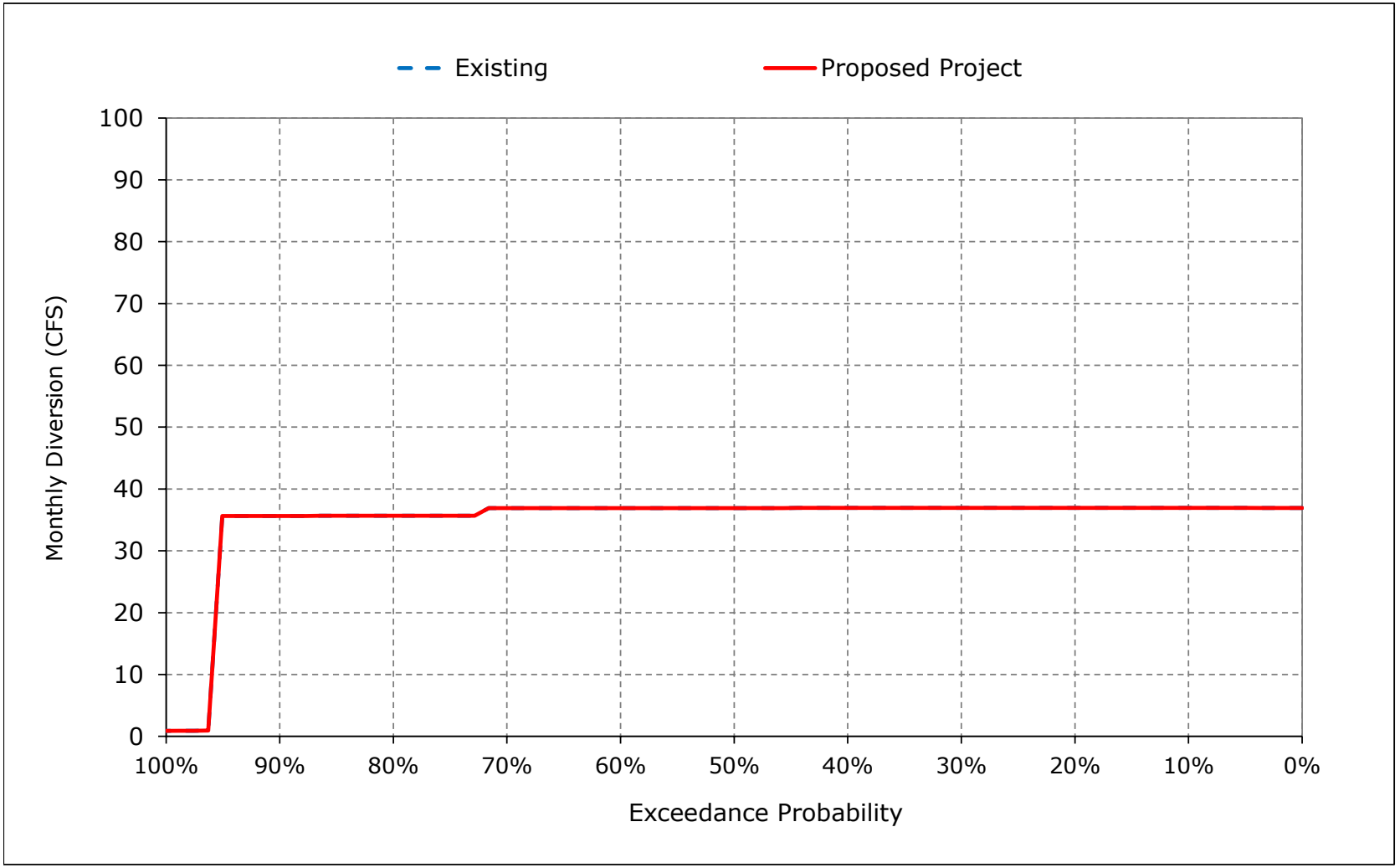


Figure 1-12. North Bay Aqueduct, March

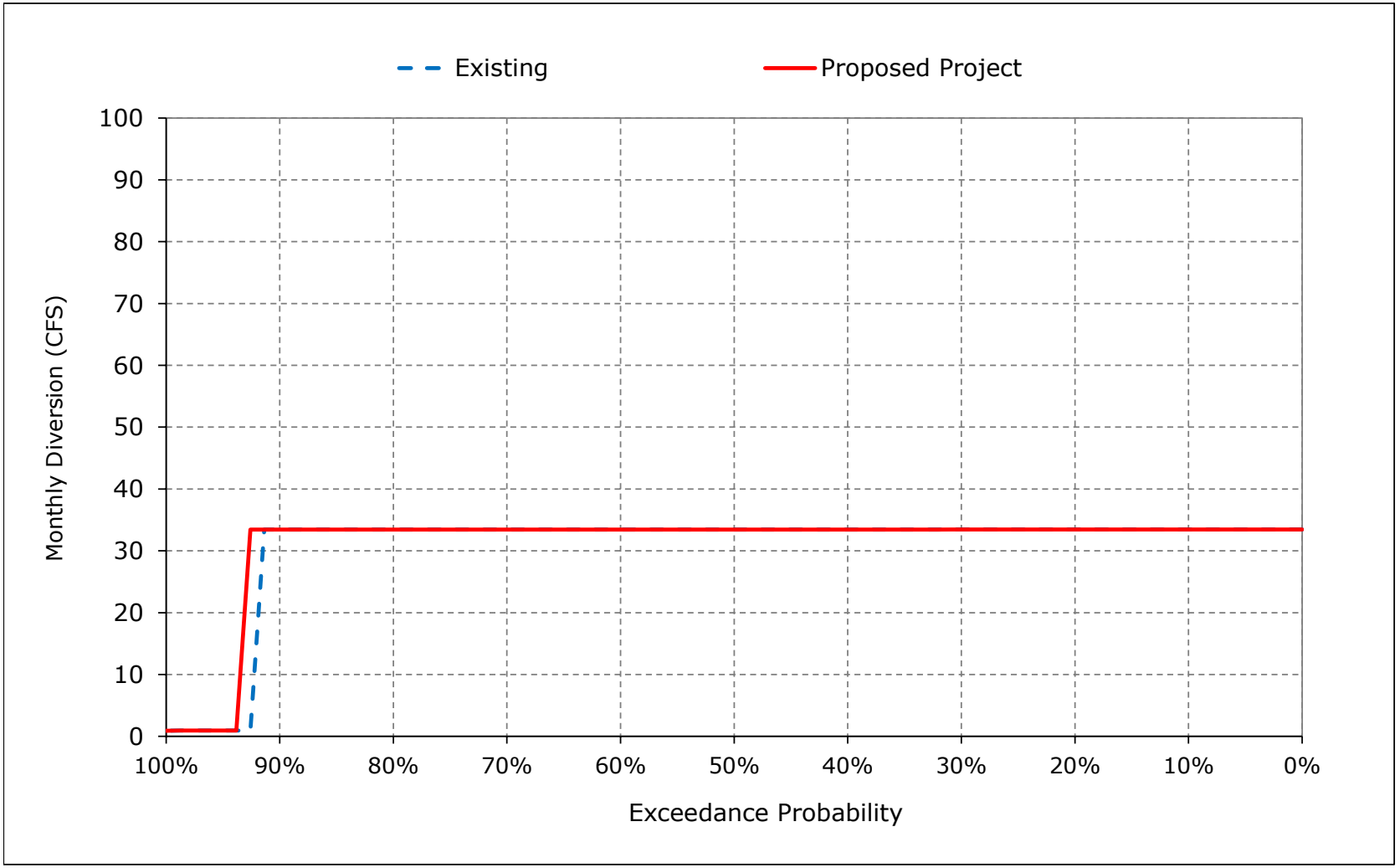


Figure 1-13. North Bay Aqueduct, April

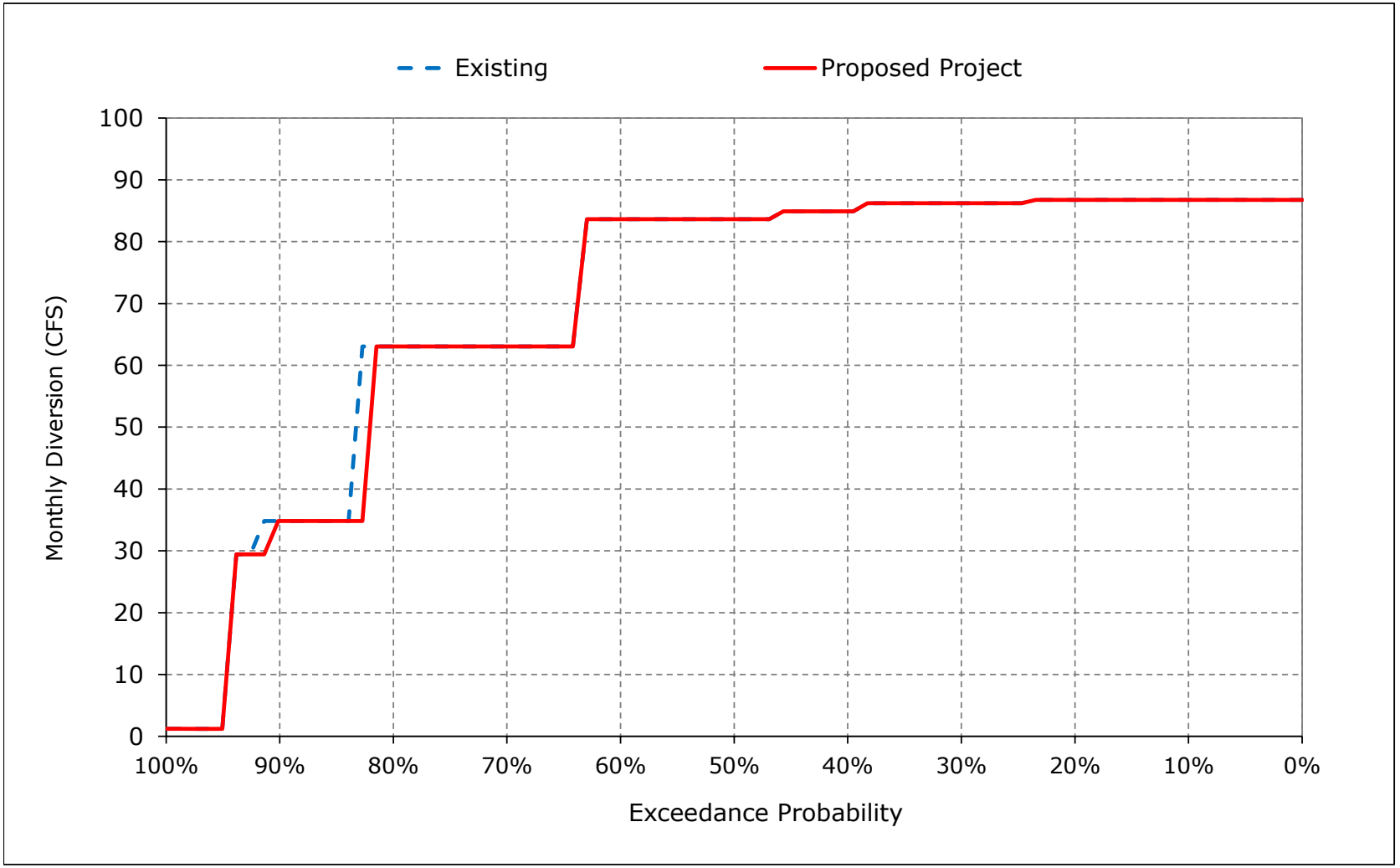


Figure 1-14. North Bay Aqueduct, May

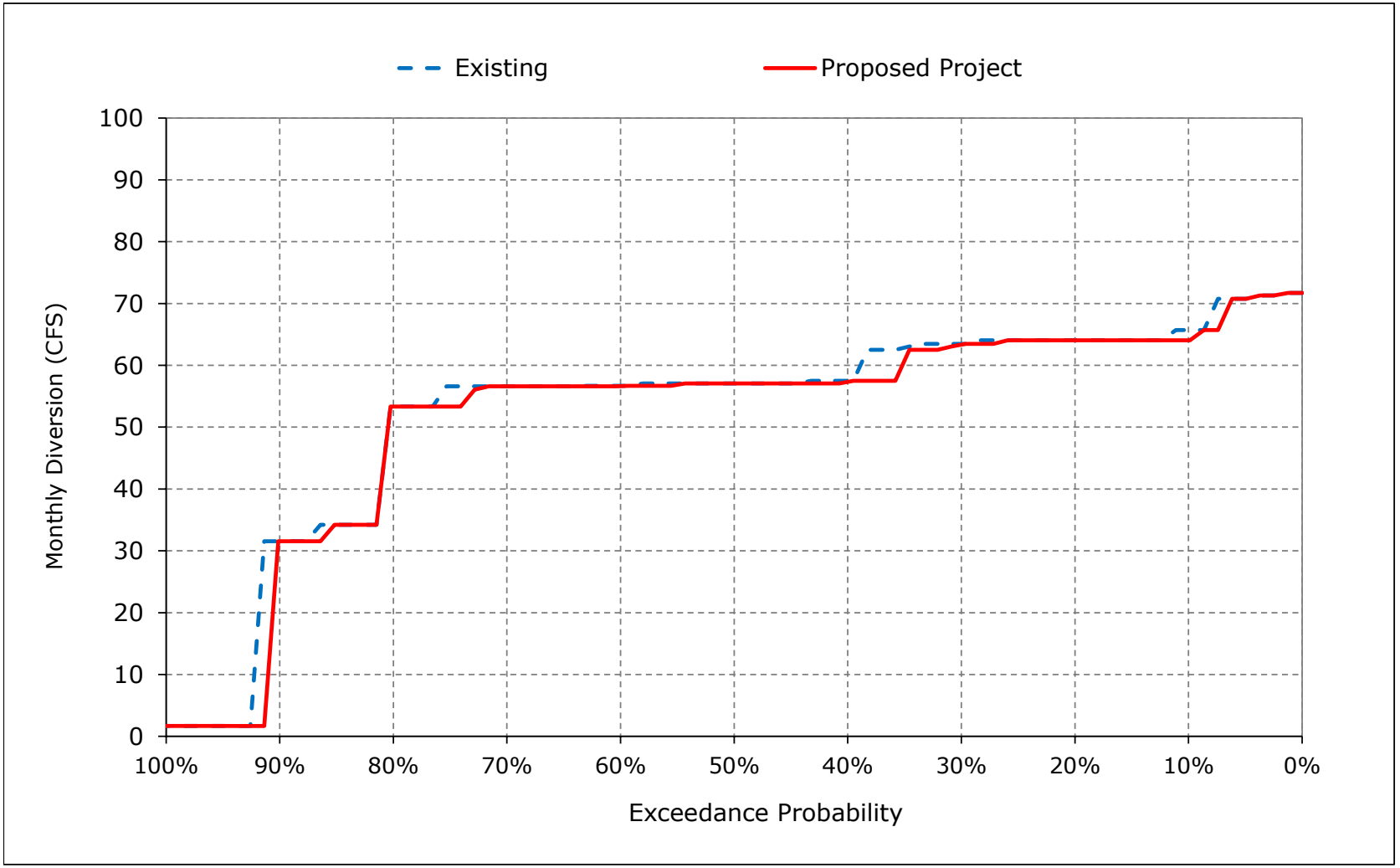


Figure 1-15. North Bay Aqueduct, June

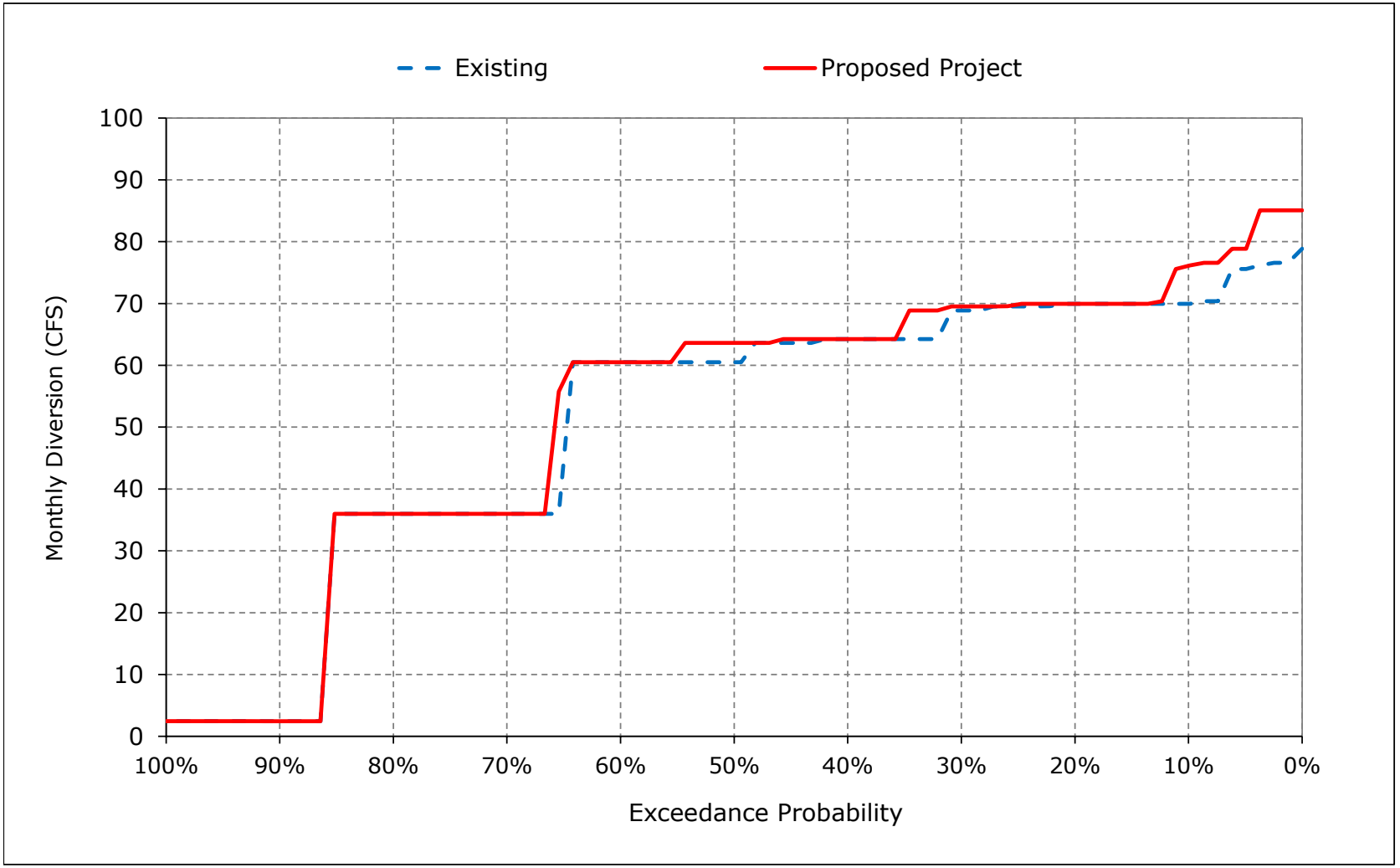


Figure 1-16. North Bay Aqueduct, July

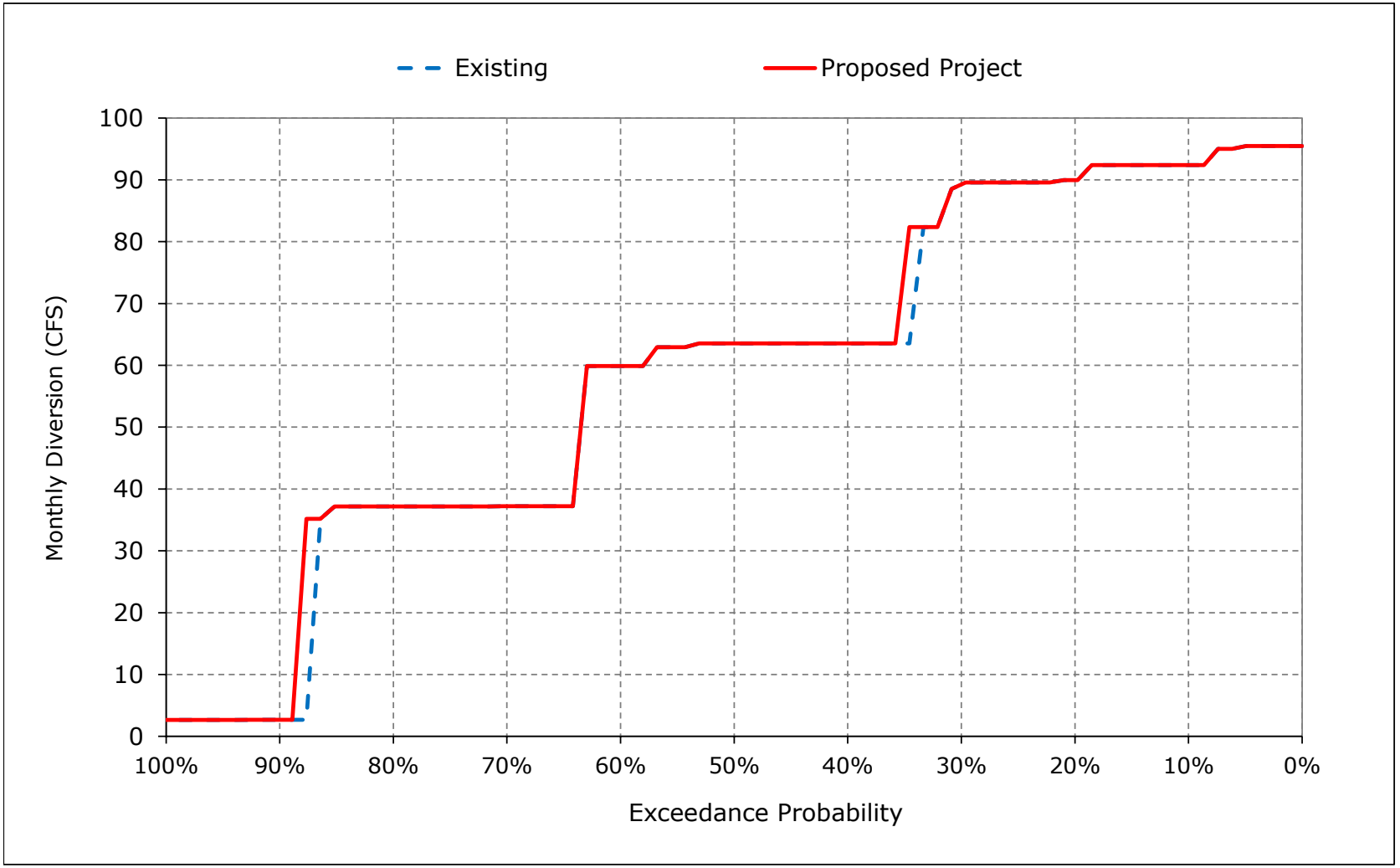


Figure 1-17. North Bay Aqueduct, August

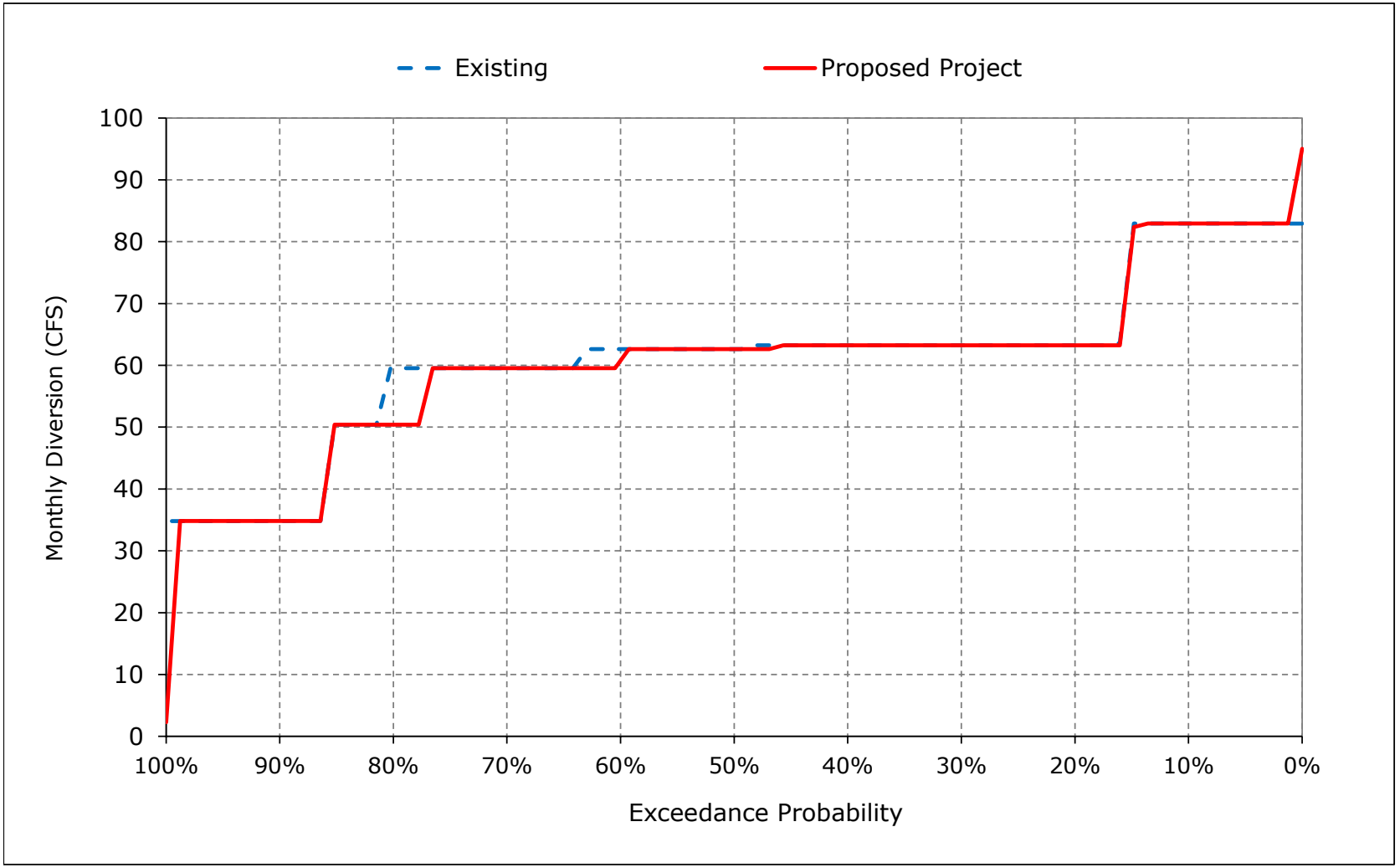


Figure 1-18. North Bay Aqueduct, September

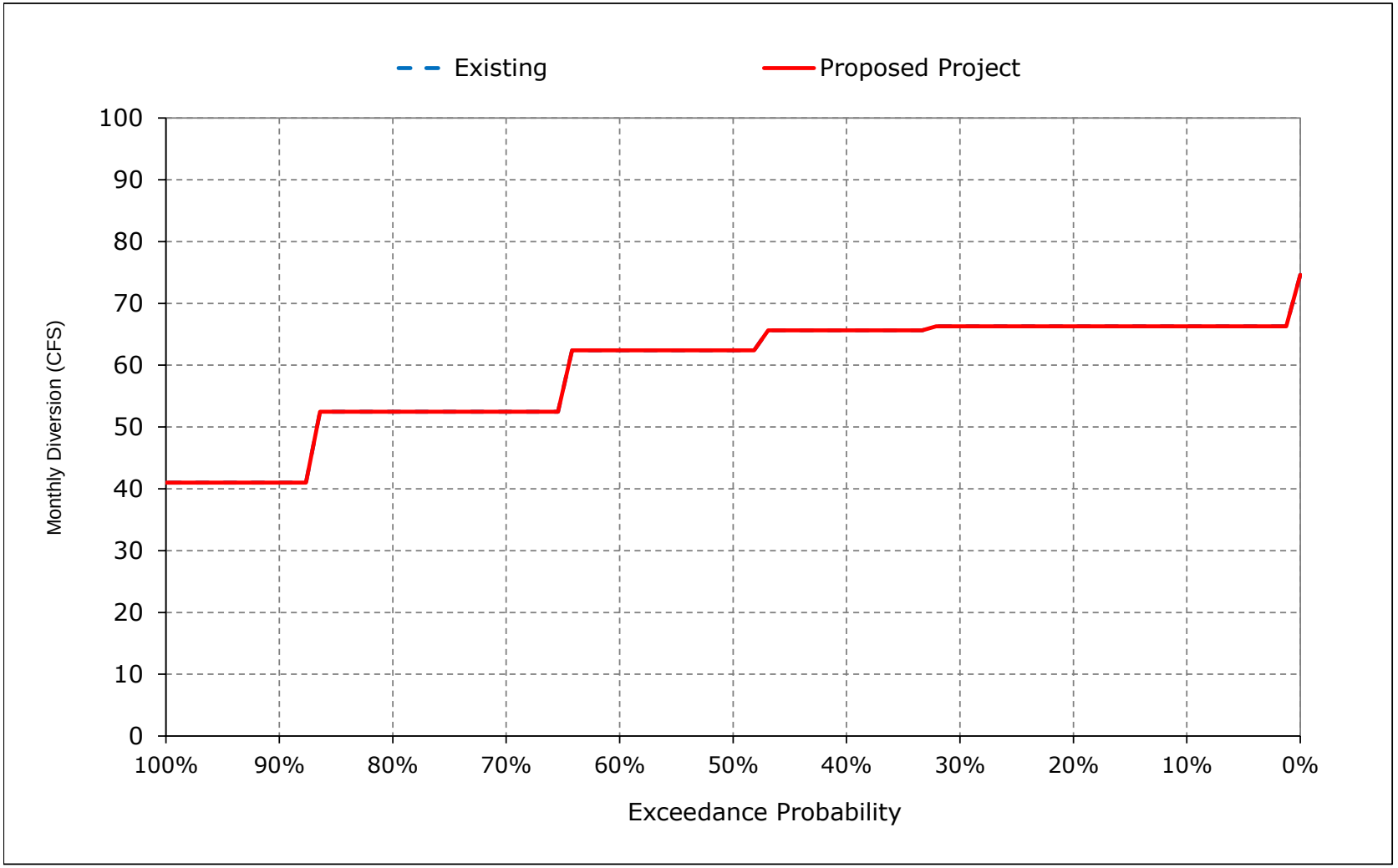


Table 2-1. DCC Flow, Monthly Flow

Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,148	1,277	922	0	0	0	0	0	3,039	4,572	3,153	4,268
20%	2,080	1,142	861	0	0	0	0	0	2,446	4,276	3,015	2,858
30%	1,881	1,008	776	0	0	0	0	0	2,368	4,013	2,970	2,314
40%	1,765	883	685	0	0	0	0	0	2,308	3,701	2,925	1,875
50%	1,613	797	485	0	0	0	0	0	2,230	3,553	2,885	1,789
60%	1,486	523	0	0	0	0	0	0	2,065	3,244	2,680	1,468
70%	1,446	30	0	0	0	0	0	0	1,944	3,049	1,947	1,213
80%	1,208	0	0	0	0	0	0	0	1,733	2,726	1,708	0
90%	1,157	0	0	0	0	0	0	0	130	1,907	1,527	0
Long Term												
Full Simulation Period[a]	1,596	645	436	0	0	0	0	0	2,061	3,402	2,526	1,828
Water Year Types[b,c]												
Wet (32%)	1,419	450	107	0	0	0	0	0	2,060	3,754	3,021	690
Above Normal (15%)	1,669	516	417	0	0	0	0	0	1,820	4,072	3,046	4,186
Below Normal (17%)	1,827	783	679	0	0	0	0	0	2,331	3,879	2,887	2,407
Dry (22%)	1,705	716	567	0	0	0	0	0	2,240	3,103	1,796	1,775
Critical (15%)	1,470	930	684	0	0	0	0	0	1,723	1,865	1,607	1,340

Proposed Project

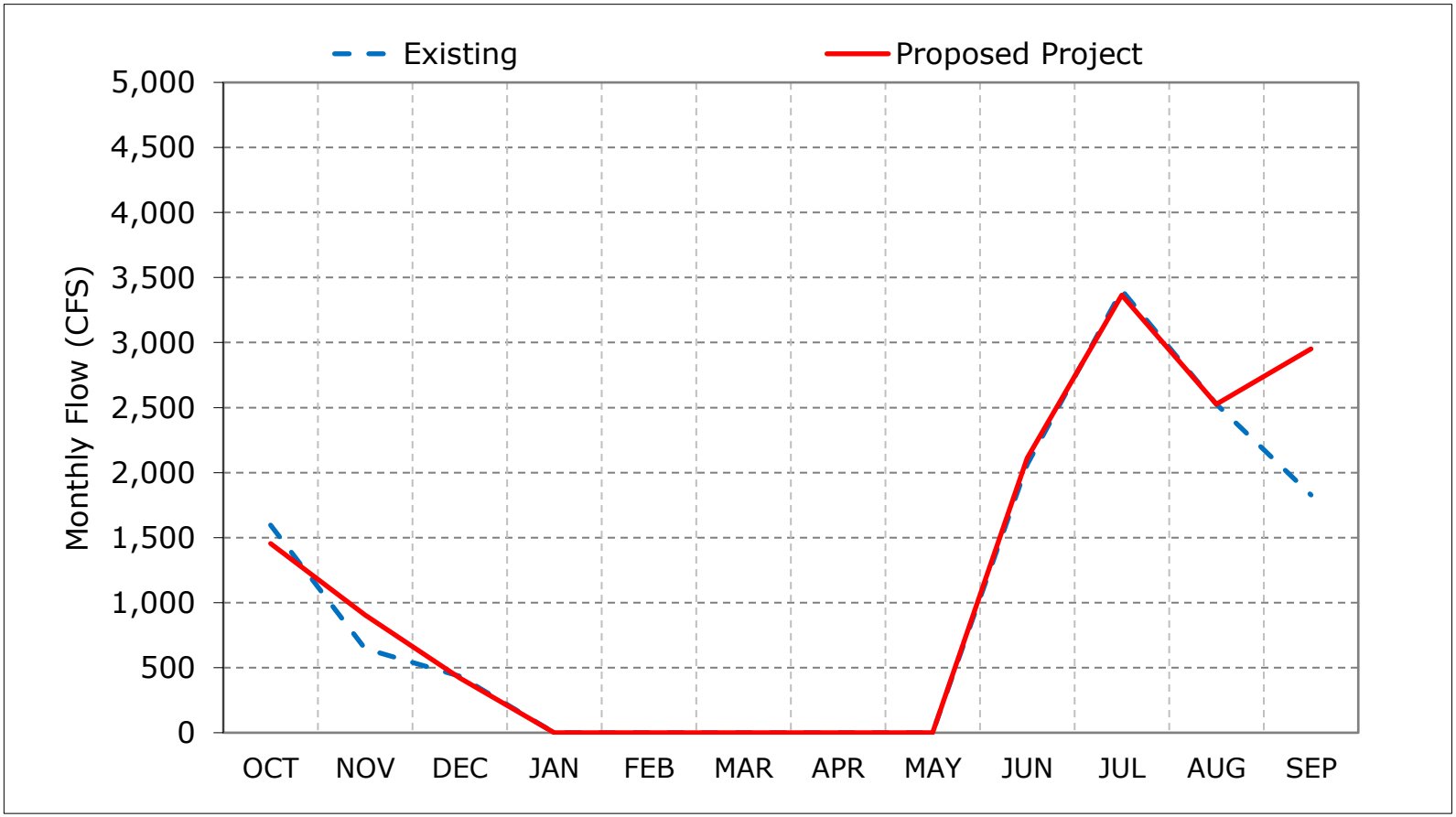
Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,111	1,593	996	0	0	0	0	0	3,039	4,544	3,150	4,454
20%	1,935	1,461	830	0	0	0	0	0	2,486	4,397	3,035	4,332
30%	1,707	1,297	744	0	0	0	0	0	2,433	4,068	2,986	4,200
40%	1,592	1,113	645	0	0	0	0	0	2,380	3,643	2,931	3,948
50%	1,502	959	416	0	0	0	0	0	2,311	3,445	2,799	2,726
60%	1,424	832	0	0	0	0	0	0	2,176	3,137	2,562	2,047
70%	1,236	774	0	0	0	0	0	0	2,013	2,933	1,967	1,823
80%	1,186	190	0	0	0	0	0	0	1,745	2,566	1,762	1,741
90%	734	0	0	0	0	0	0	0	131	1,922	1,648	1,386
Long Term												
Full Simulation Period[a]	1,455	905	421	0	0	0	0	0	2,112	3,365	2,525	2,951
Water Year Types[b,c]												
Wet (32%)	1,321	763	82	0	0	0	0	0	2,074	3,729	3,005	4,185
Above Normal (15%)	1,536	828	407	0	0	0	0	0	1,943	4,086	3,033	4,328
Below Normal (17%)	1,582	1,063	684	0	0	0	0	0	2,467	3,810	2,831	2,362
Dry (22%)	1,633	935	537	0	0	0	0	0	2,271	2,969	1,815	1,767
Critical (15%)	1,246	1,058	685	0	0	0	0	0	1,712	1,928	1,686	1,365

Proposed Project minus Existing

Statistic	Monthly Flow (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	**-38**	317	74	0	0	0	0	0	**0**	**-28**	**-3**	187
20%	**-145**	319	**-31**	0	0	0	0	0	41	121	21	1,474
30%	**-174**	289	**-32**	0	0	0	0	0	64	55	17	1,885
40%	**-173**	231	**-39**	0	0	0	0	0	72	**-58**	6	2,073
50%	**-111**	162	**-70**	0	0	0	0	0	81	**-109**	**-86**	936
60%	**-62**	309	0	0	0	0	0	0	111	**-107**	**-118**	580
70%	**-210**	744	0	0	0	0	0	0	69	**-115**	19	610
80%	**-22**	190	0	0	0	0	0	0	12	**-160**	54	1,741
90%	**-423**	0	0	0	0	0	0	0	2	14	120	1,386
Long Term												
Full Simulation Period[a]	**-141**	259	**-15**	0	0	0	0	0	51	**-38**	**-1**	1,123
Water Year Types[b,c]												
Wet (32%)	**-98**	313	**-25**	0	0	0	0	0	14	**-25**	**-16**	3,495
Above Normal (15%)	**-134**	311	**-10**	0	0	0	0	0	122	13	**-14**	142
Below Normal (17%)	**-244**	280	5	0	0	0	0	0	136	**-69**	**-57**	**-45**
Dry (22%)	**-72**	220	**-30**	0	0	0	0	0	31	**-134**	19	**-8**
Critical (15%)	**-223**	127	1	0	0	0	0	0	**-11**	64	79	25

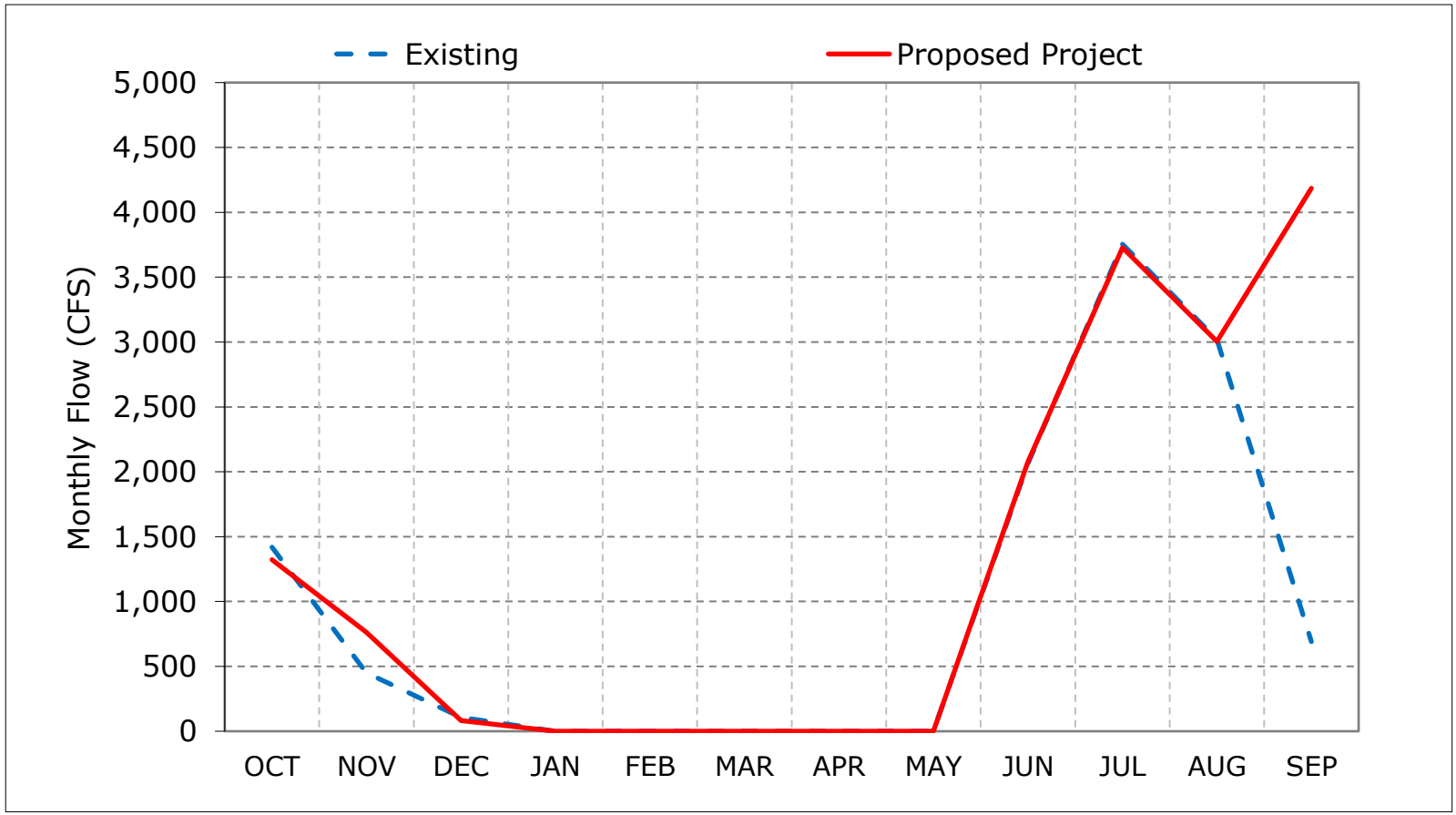
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

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



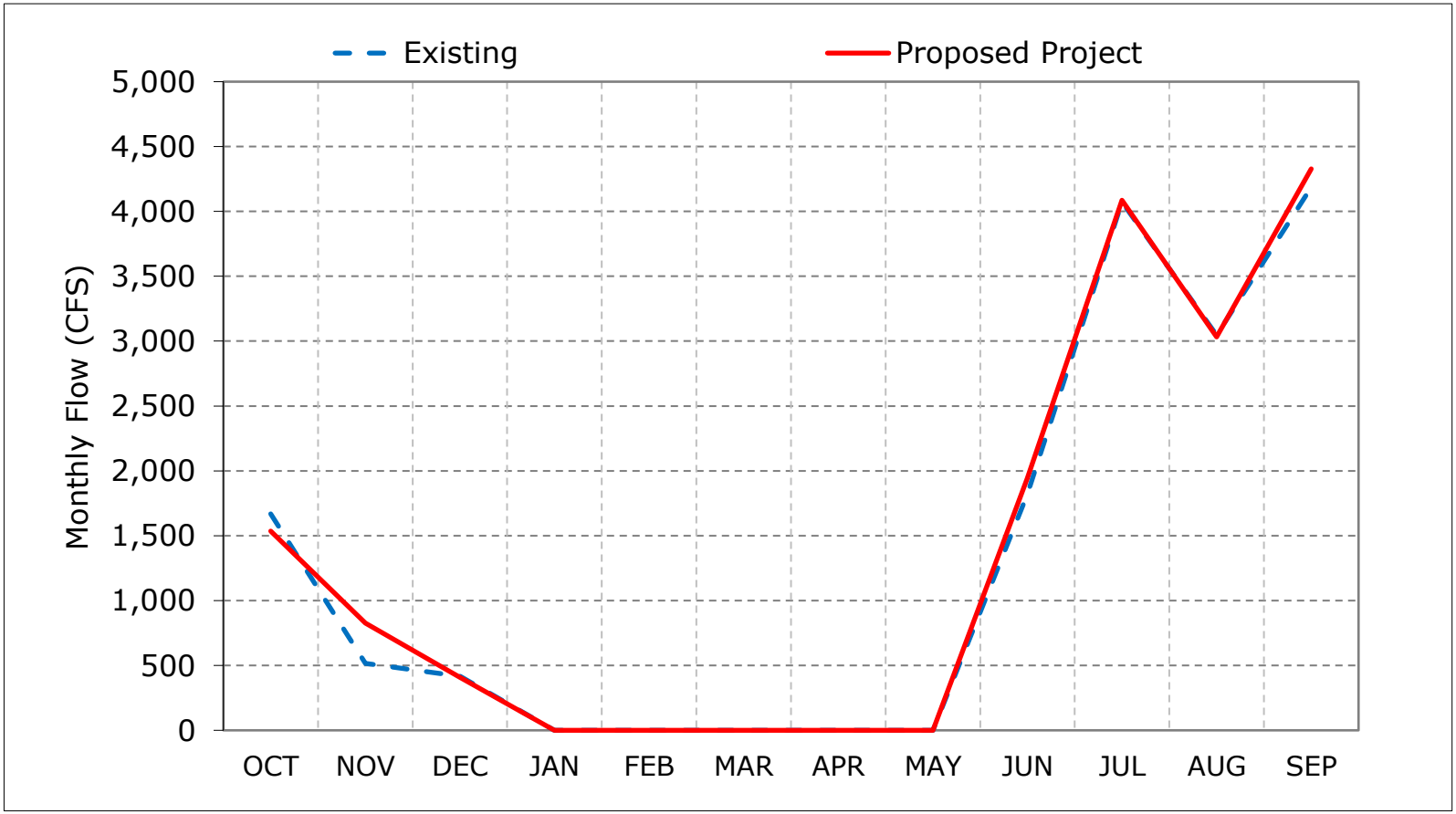
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



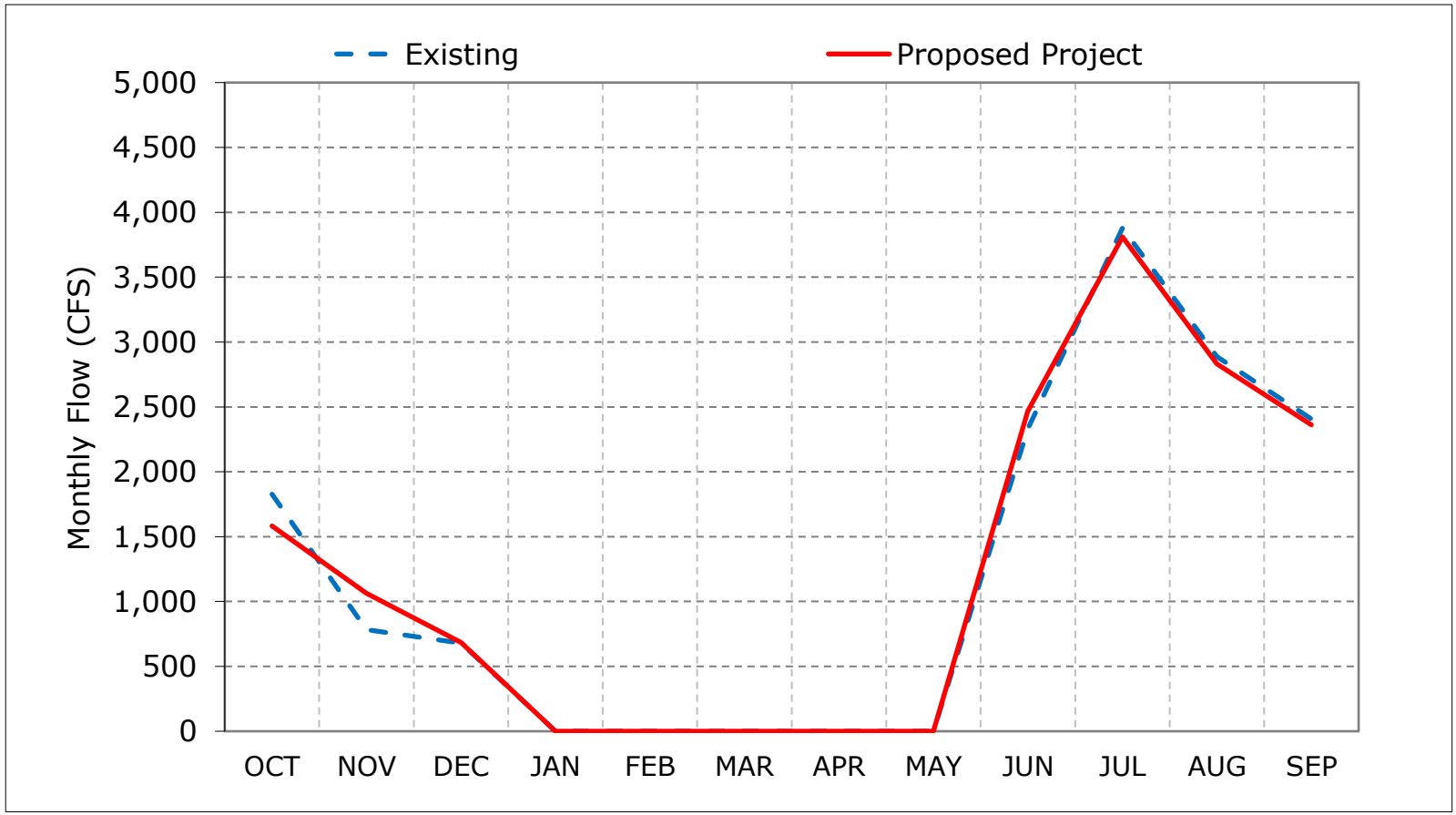
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



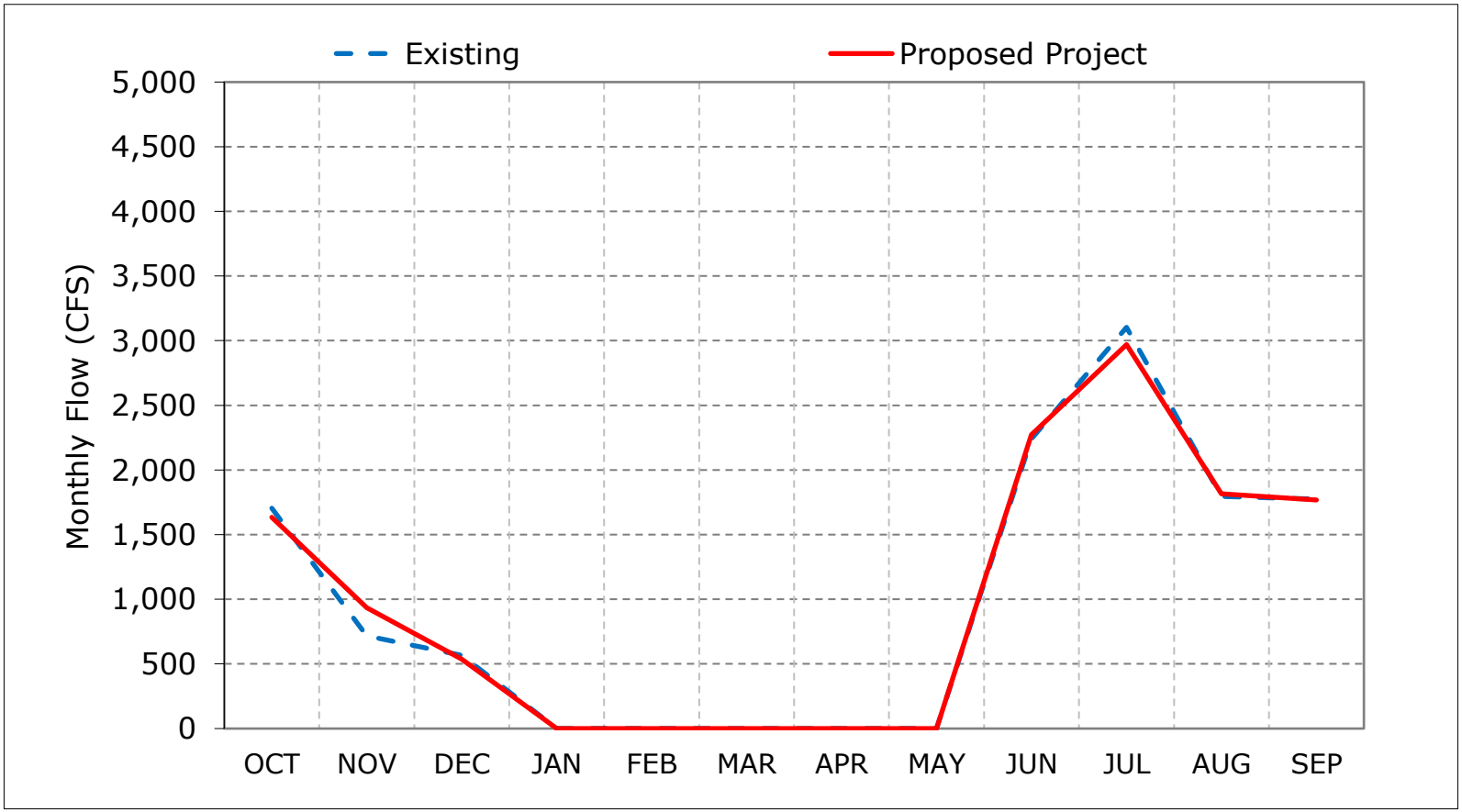
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



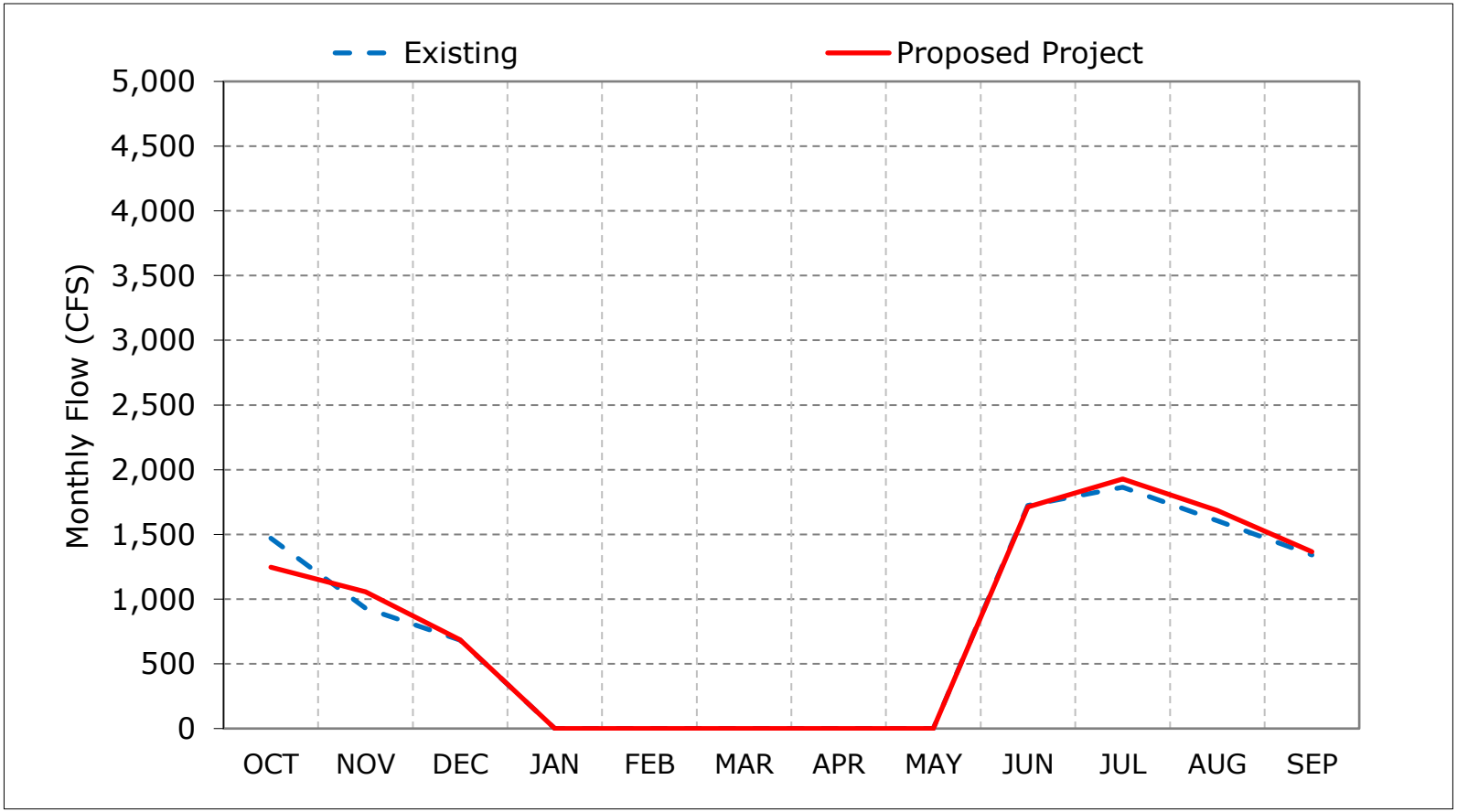
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

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



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 2-7. DCC Flow, October

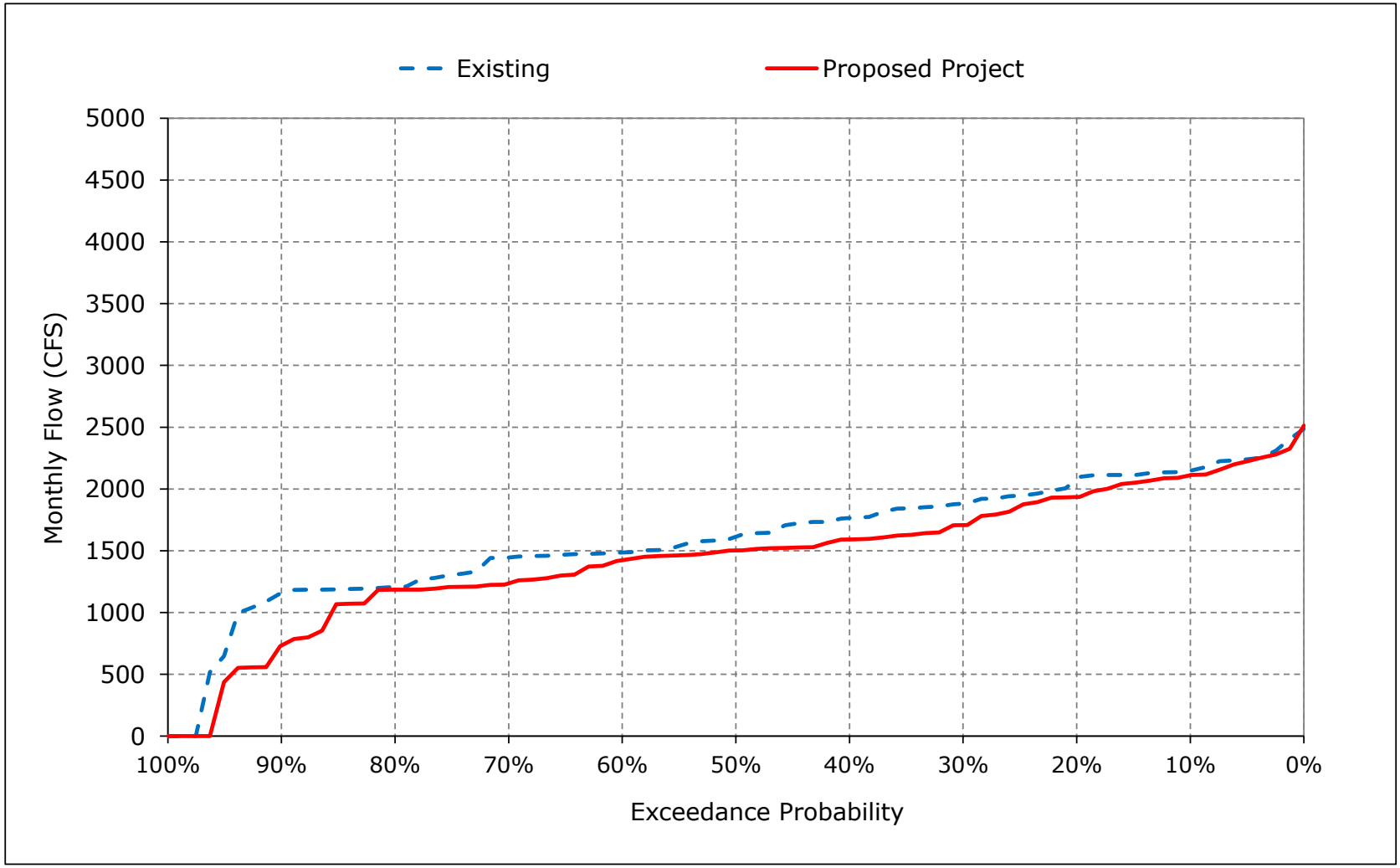


Figure 2-8. DCC Flow, November

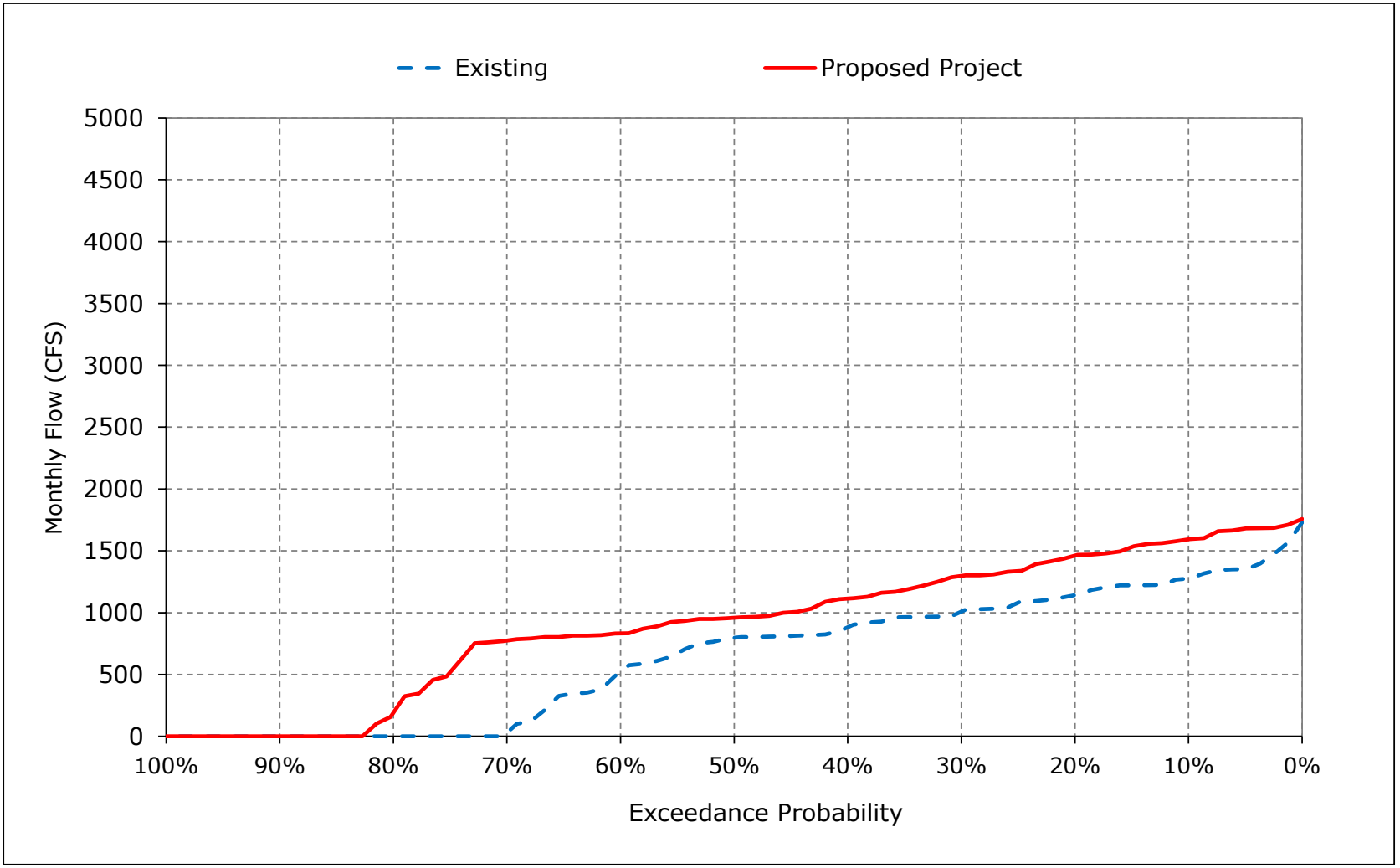


Figure 2-9. DCC Flow, December

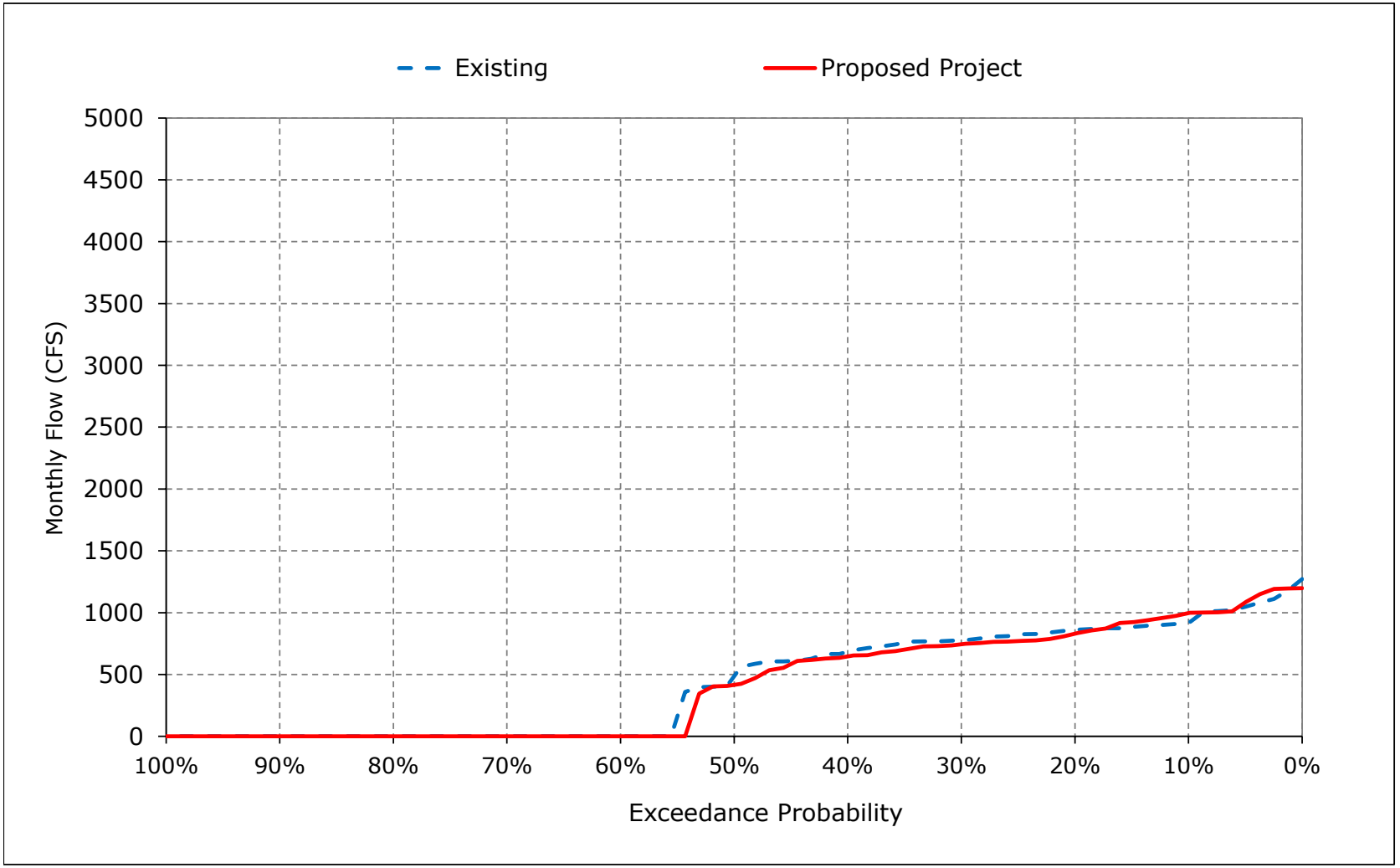


Figure 2-10. DCC Flow, January

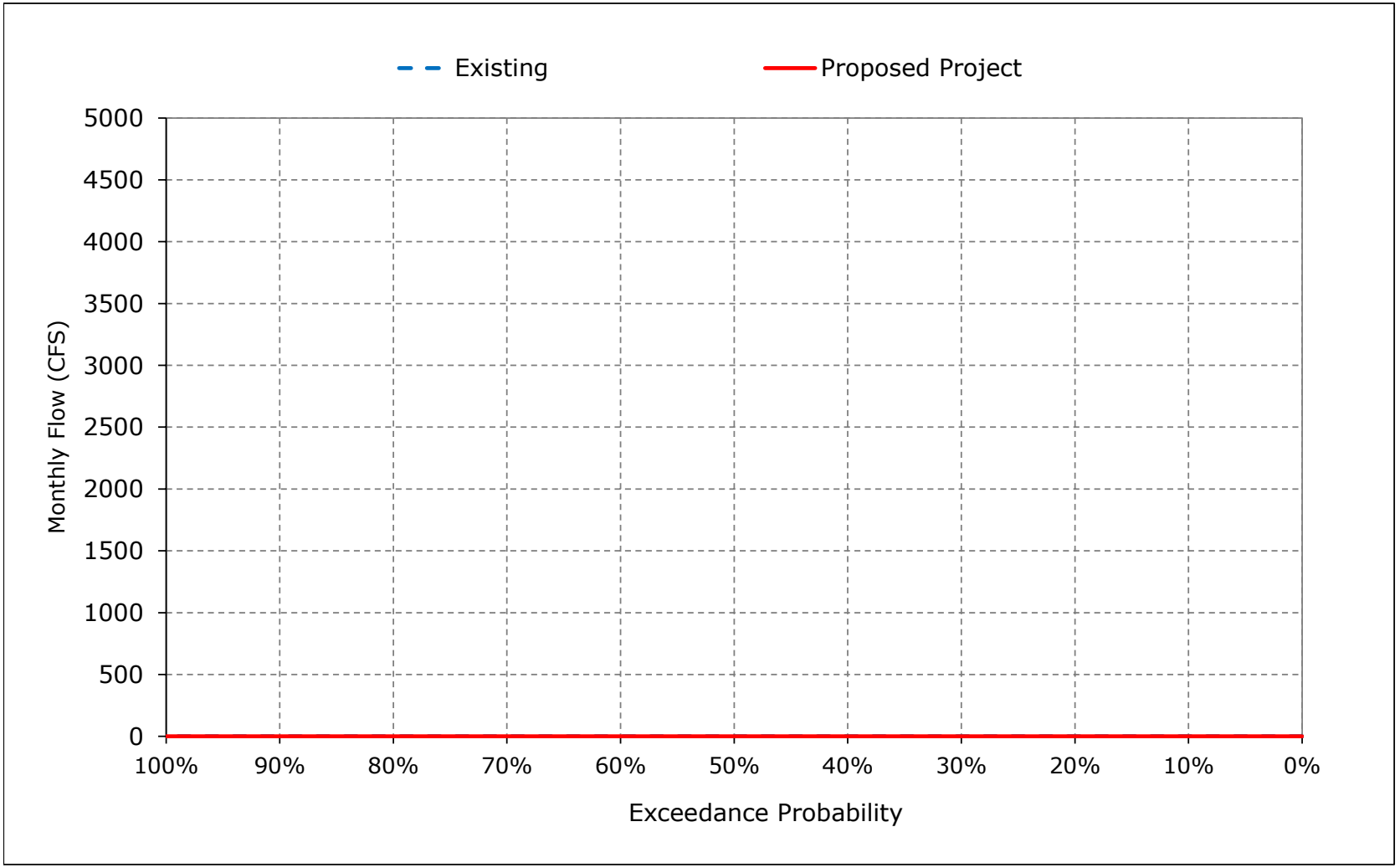


Figure 2-11. DCC Flow, February

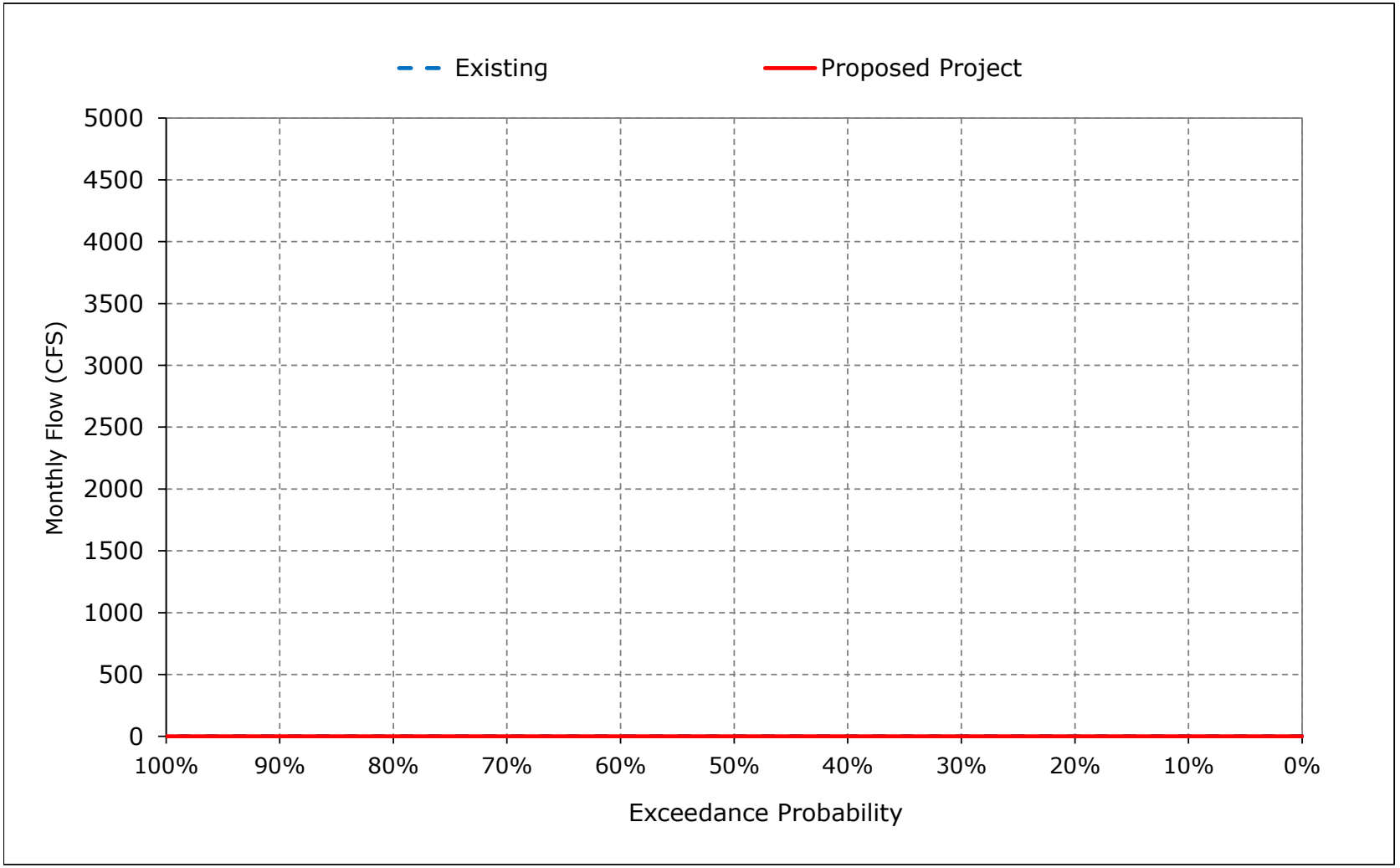


Figure 2-12. DCC Flow, March

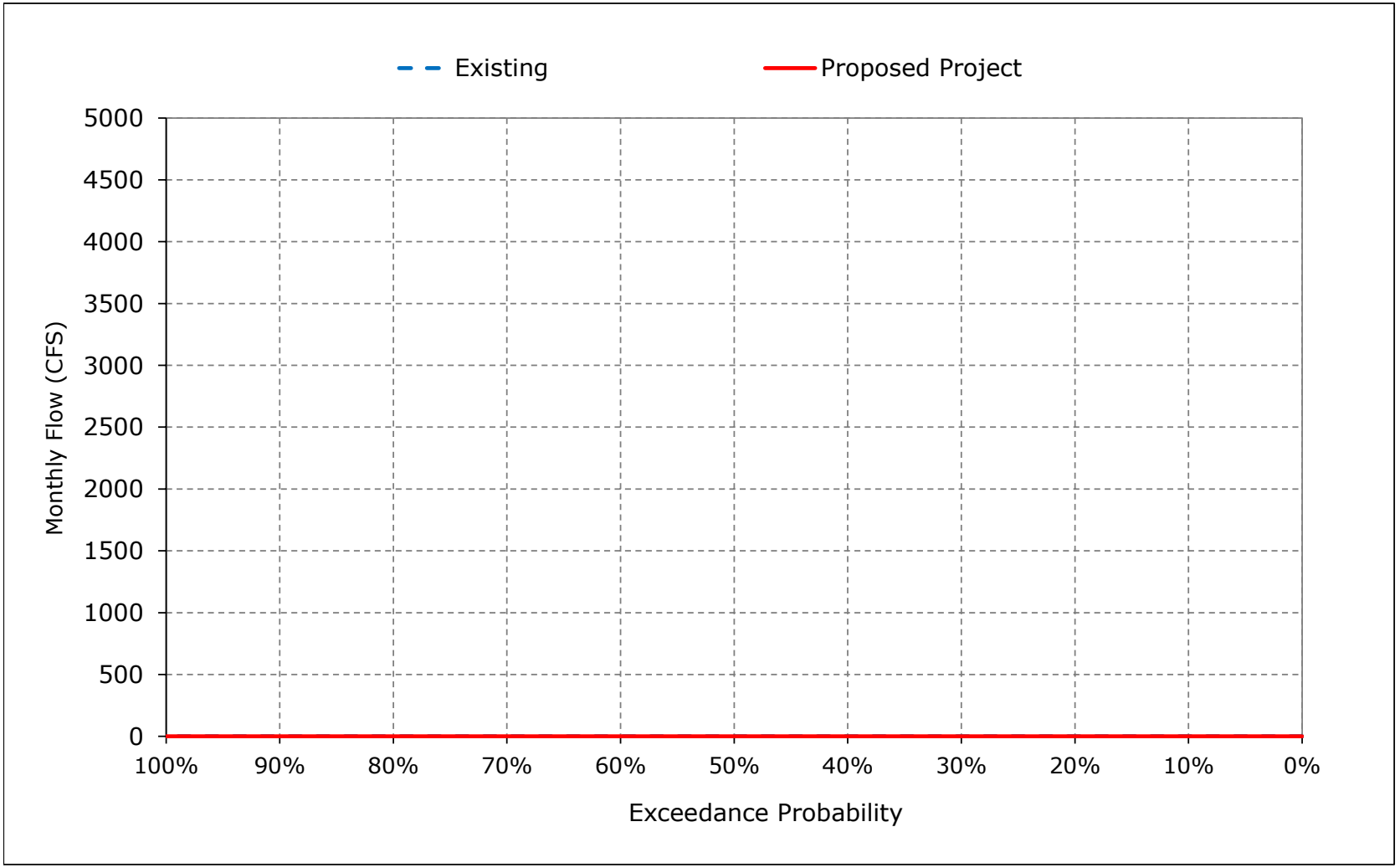


Figure 2-13. DCC Flow, April

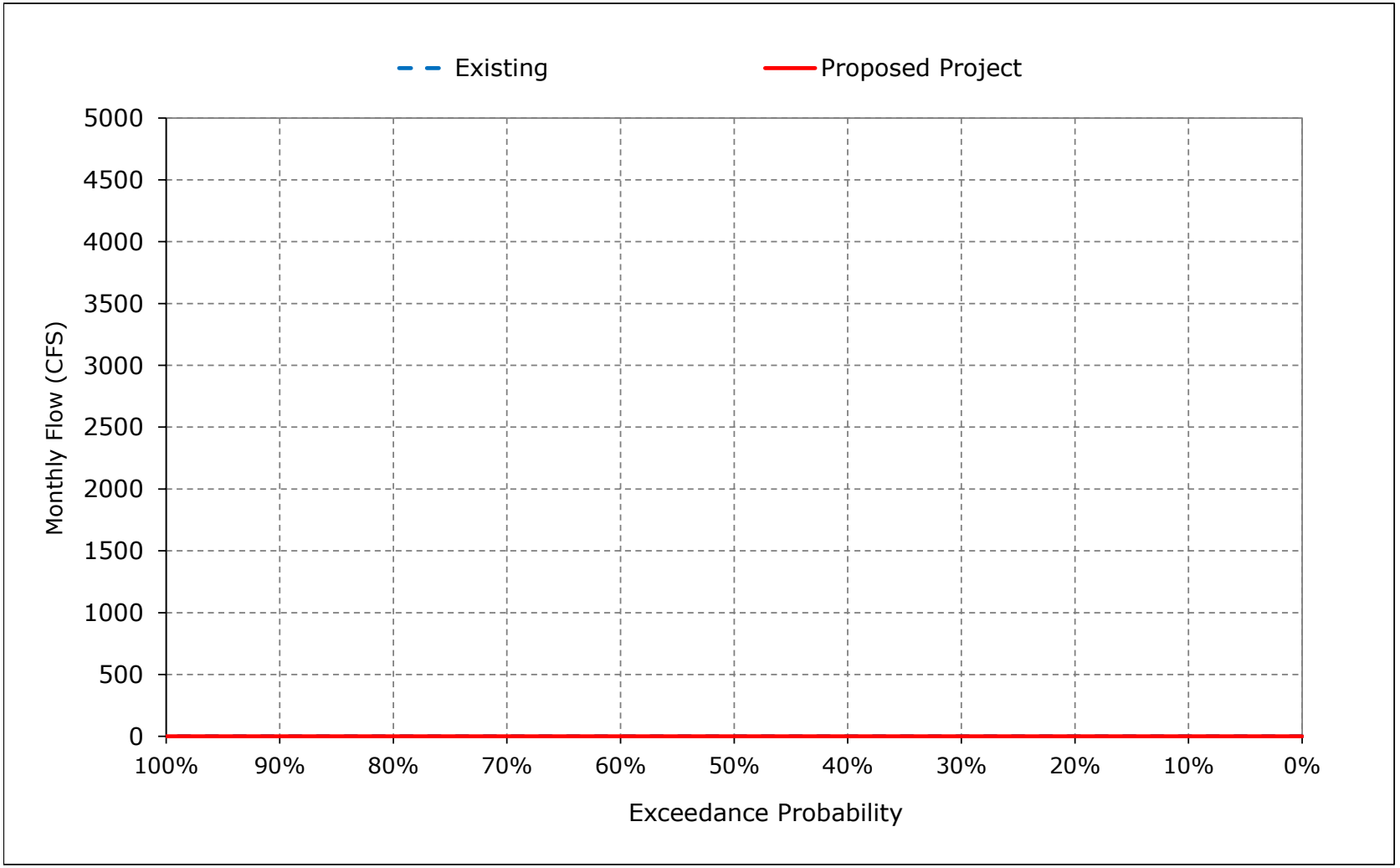


Figure 2-14. DCC Flow, May

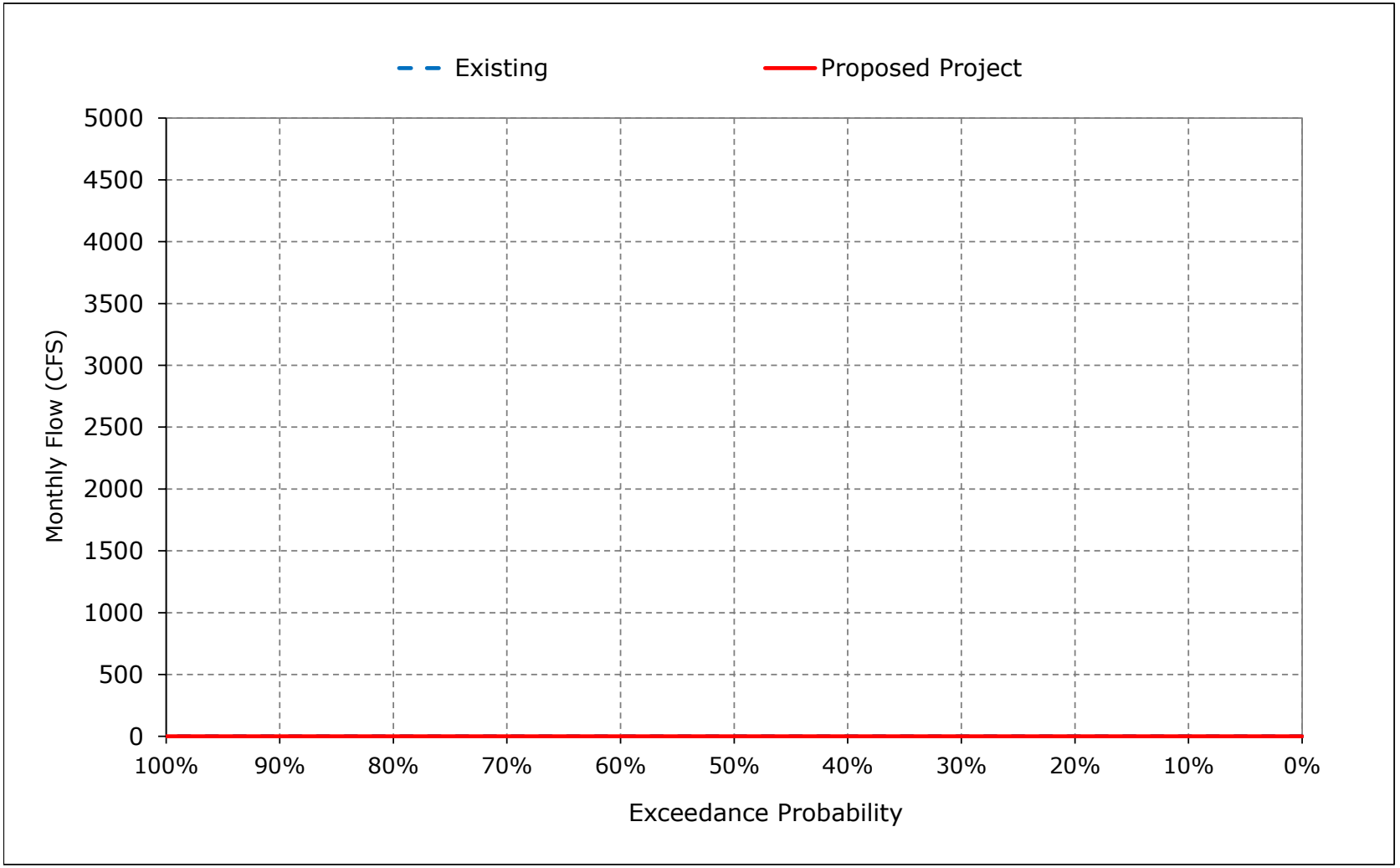


Figure 2-15. DCC Flow, June

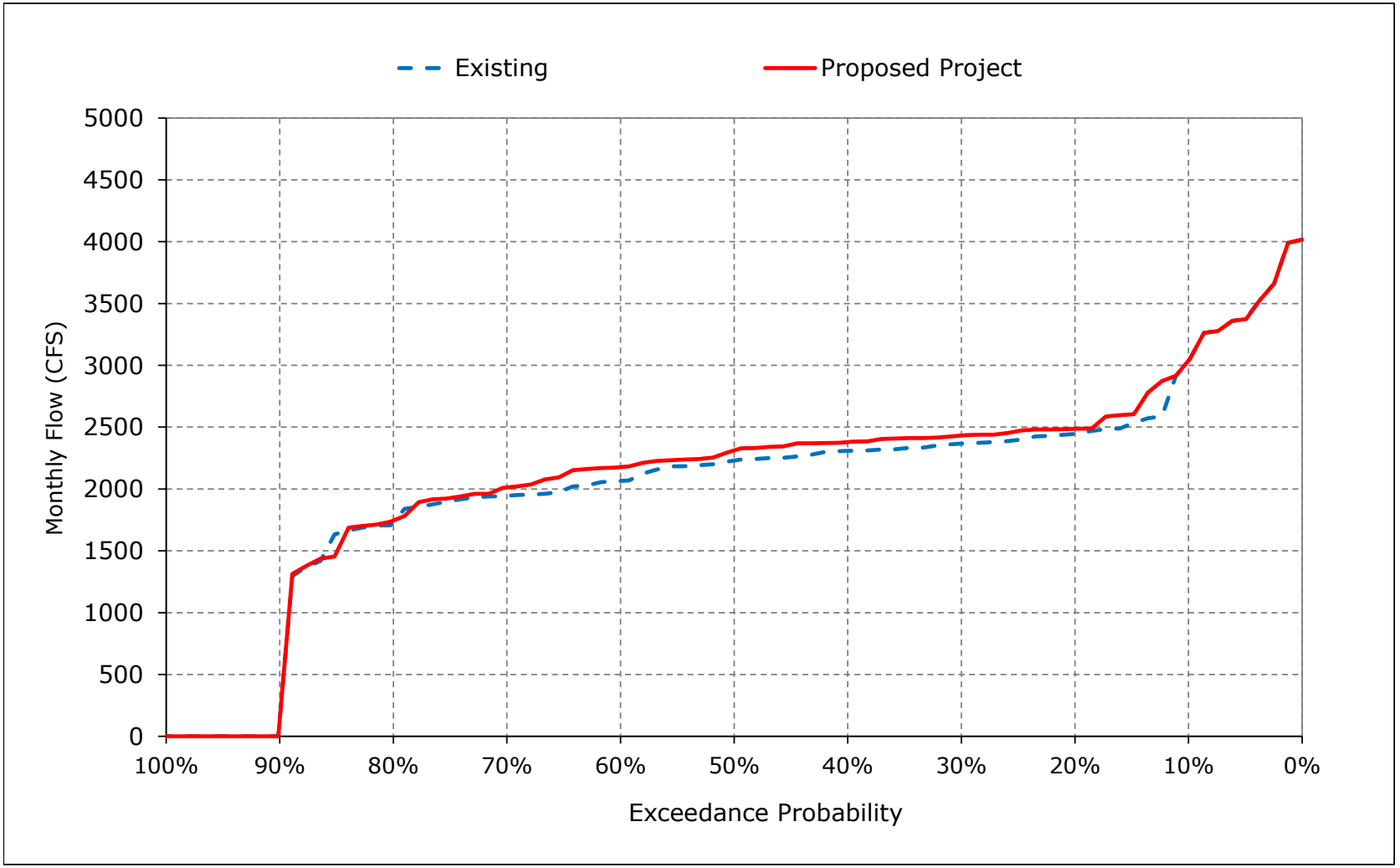


Figure 2-16. DCC Flow, July

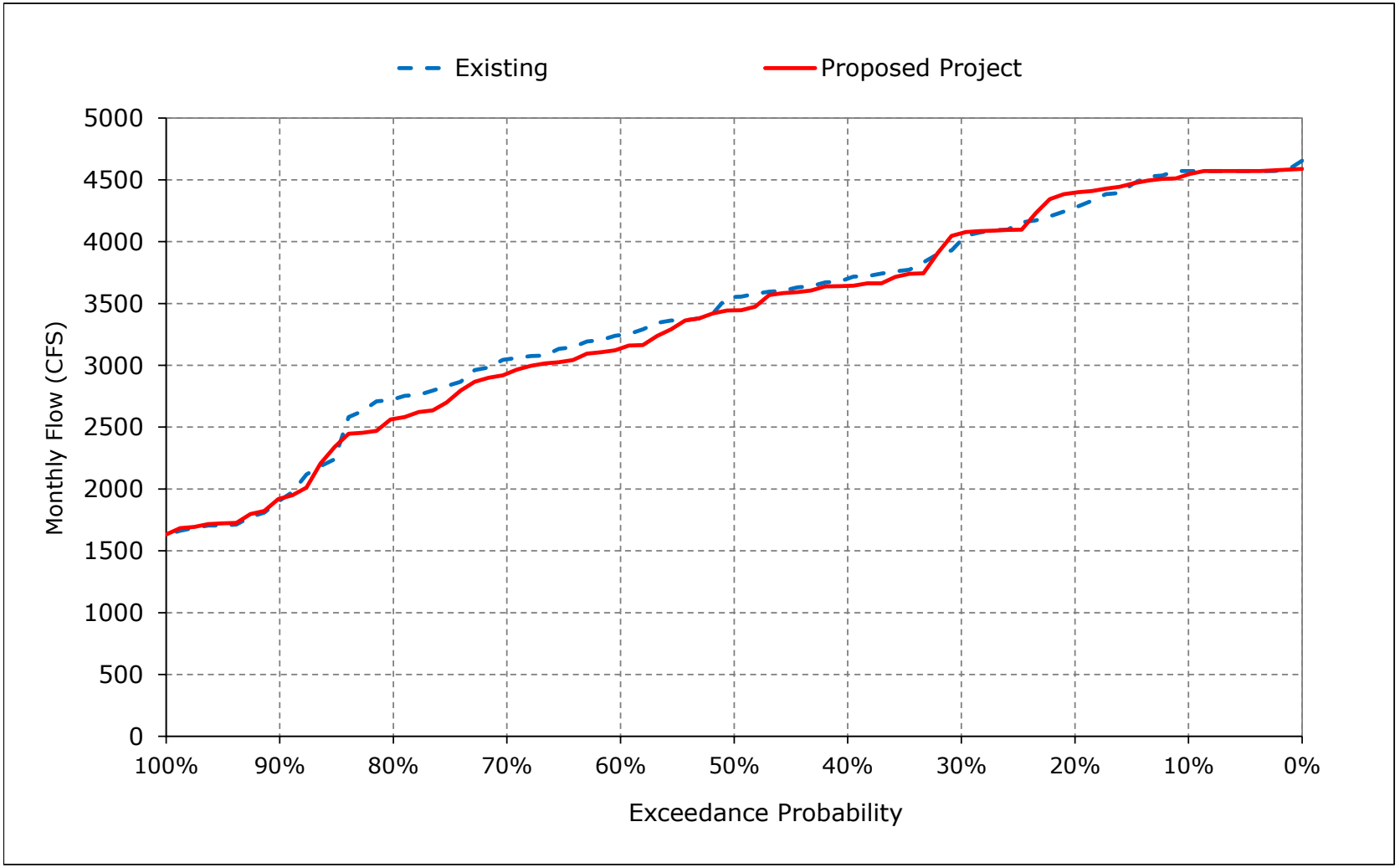


Figure 2-17. DCC Flow, August

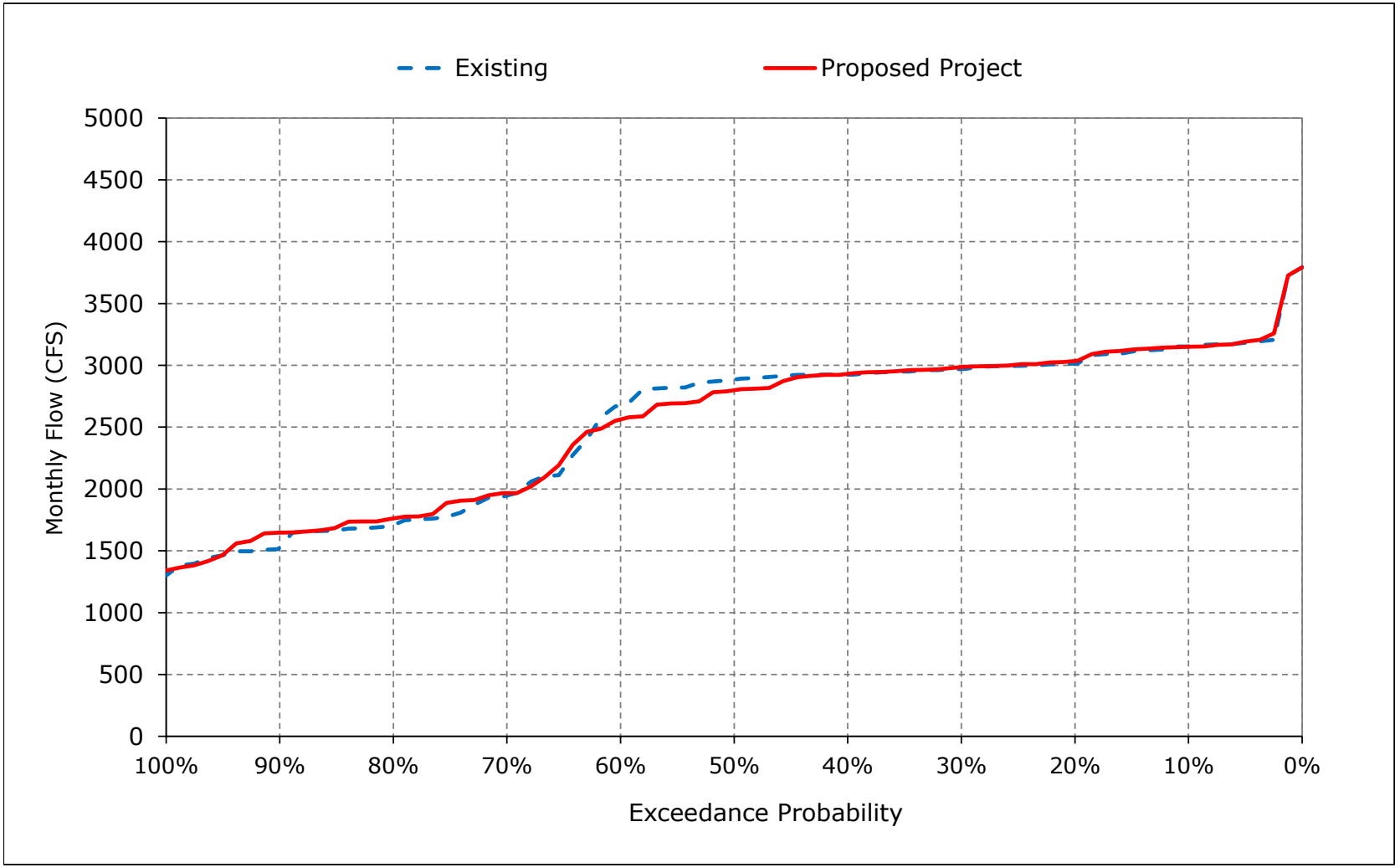


Figure 2-18. DCC Flow, September

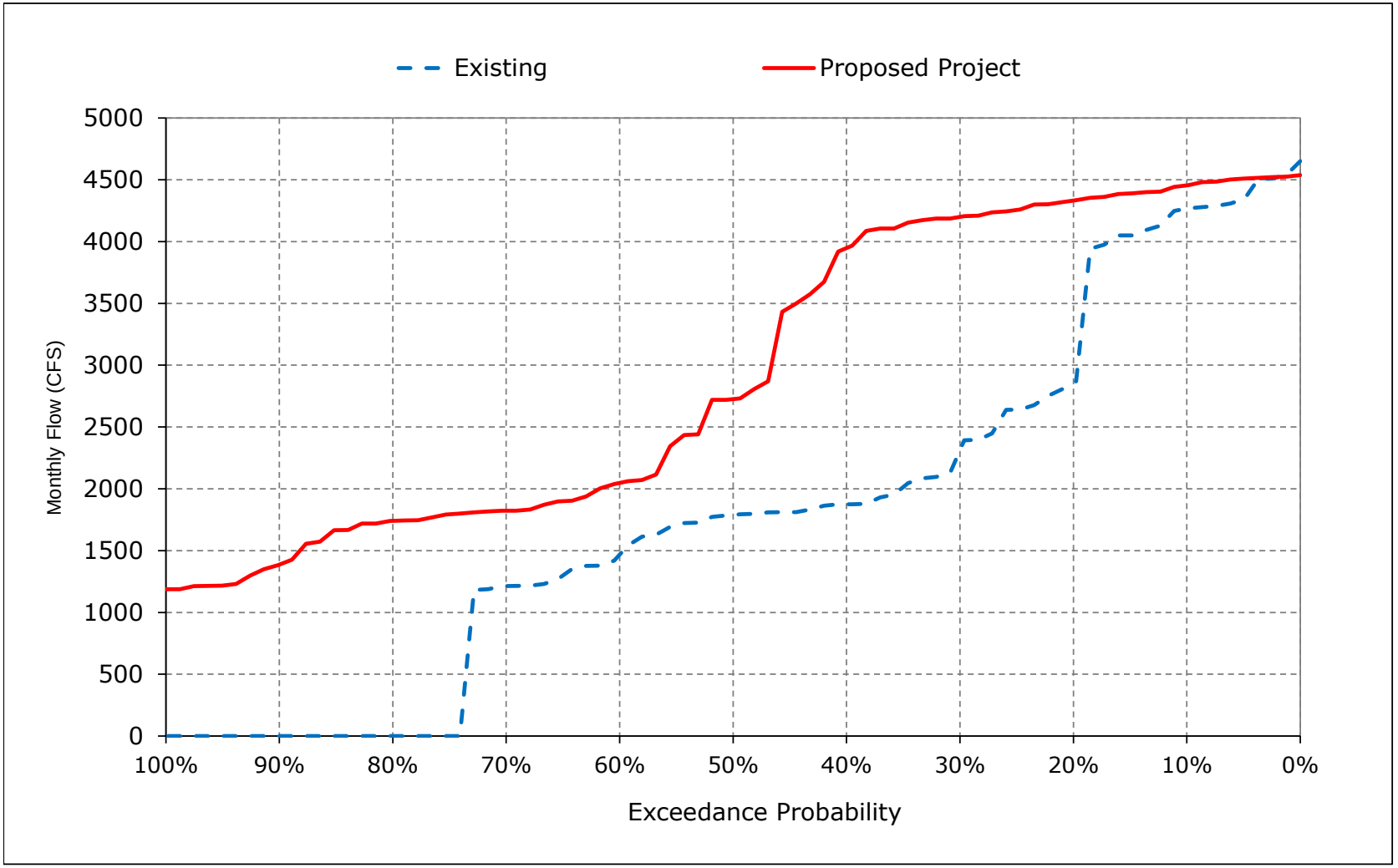


Table 3-1. Total Delta Exports, Monthly Delivery

Existing

Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	9,505	11,280	11,672	10,061	12,003	10,316	3,006	2,765	8,910	11,483	11,629	11,280
20%	8,355	10,656	11,620	8,032	9,639	9,196	2,231	1,956	6,968	11,338	11,569	11,280
30%	7,633	8,681	10,027	7,159	8,359	8,719	1,970	1,698	5,734	11,280	11,363	11,206
40%	7,193	7,557	8,942	6,890	7,752	7,282	1,790	1,514	5,587	11,140	11,280	11,115
50%	6,672	7,183	8,016	6,749	7,108	6,587	1,625	1,500	5,319	10,475	10,858	10,419
60%	5,945	6,628	7,390	6,549	6,703	6,104	1,500	1,500	5,053	9,917	10,057	8,592
70%	5,628	6,008	7,197	6,453	6,576	5,823	1,500	1,500	4,907	8,976	5,344	7,062
80%	5,093	4,950	6,685	6,180	6,419	5,545	1,500	1,500	4,670	7,186	4,136	6,579
90%	4,332	4,216	5,939	5,204	6,063	4,720	1,500	1,500	2,900	2,468	3,201	3,927
Long Term												
Full Simulation Period[a]	6,738	7,386	8,593	7,274	8,058	7,232	2,053	2,013	5,677	9,053	8,537	8,885
Water Year Types[b,c]												
Wet (32%)	7,370	8,515	8,705	8,773	9,741	9,395	2,791	2,861	7,690	11,211	11,501	11,092
Above Normal (15%)	6,560	7,164	9,463	7,134	8,319	7,873	1,765	1,639	6,253	10,328	11,350	11,102
Below Normal (17%)	6,739	7,696	8,931	6,680	8,176	7,197	1,651	1,580	5,366	10,518	10,293	9,805
Dry (22%)	6,572	7,130	8,672	6,573	6,552	5,843	1,813	1,621	4,684	8,247	4,413	6,754
Critical (15%)	5,790	5,184	6,966	5,907	6,271	4,027	1,570	1,644	2,592	2,603	3,439	4,011

Proposed Project

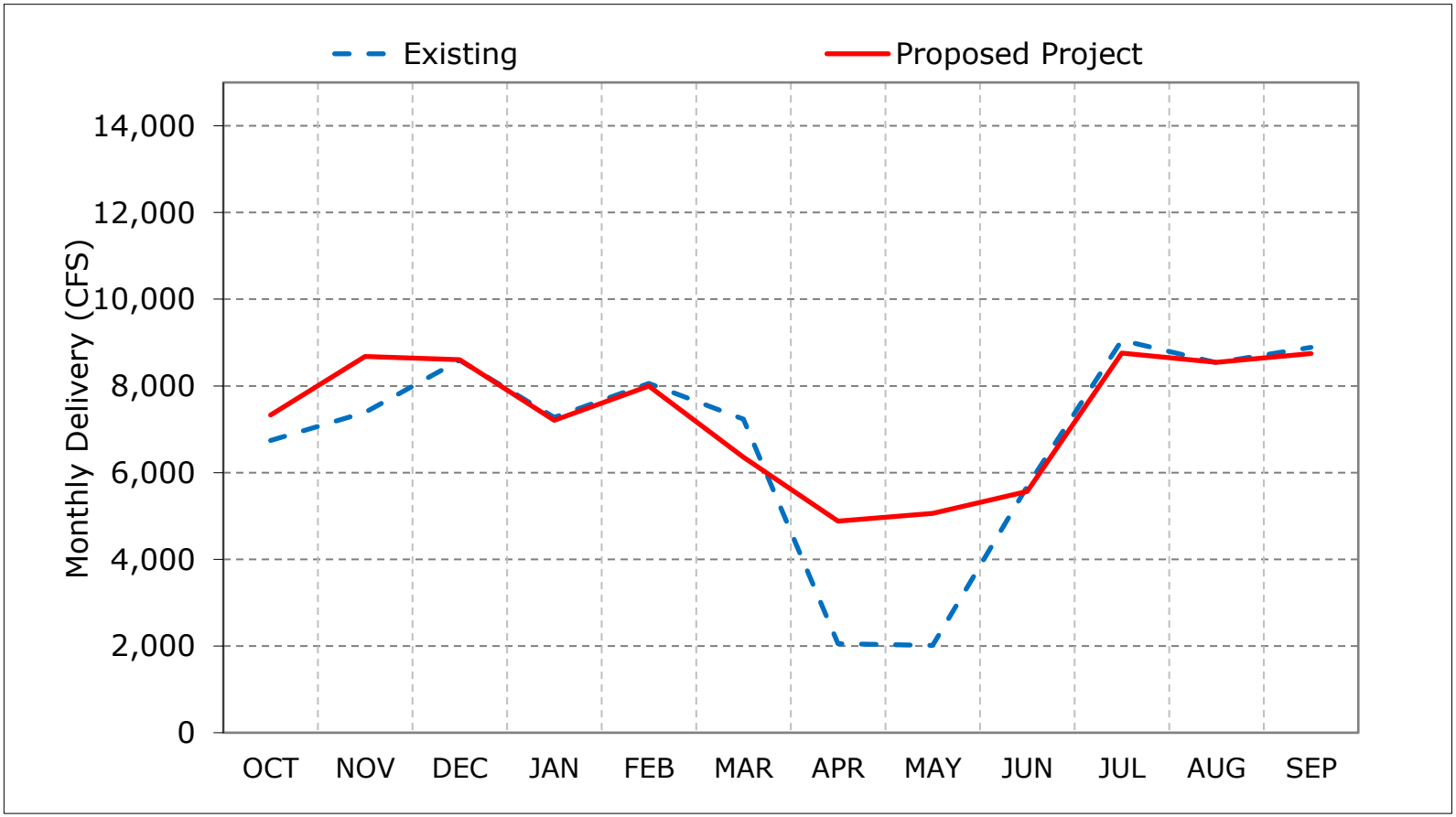
Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	11,062	11,280	11,696	9,352	10,883	9,977	7,423	8,500	8,907	11,386	11,622	11,280
20%	9,229	11,280	11,627	8,004	9,226	7,874	6,315	7,417	6,925	11,280	11,531	11,280
30%	8,850	11,280	10,699	7,251	8,575	7,455	6,037	6,249	5,519	11,279	11,280	11,238
40%	8,362	10,980	9,039	7,093	7,875	6,172	5,542	5,686	5,372	10,675	11,258	10,925
50%	7,932	9,343	7,982	6,904	7,244	5,683	4,929	5,029	5,156	10,221	10,712	9,768
60%	6,427	8,271	7,347	6,738	6,737	5,348	4,347	4,211	5,019	9,560	8,870	8,316
70%	5,644	6,874	7,034	6,521	6,544	4,843	3,624	3,383	4,845	7,893	5,613	6,957
80%	5,100	5,798	6,634	6,108	6,294	4,611	2,923	2,762	4,603	6,037	4,632	6,434
90%	4,122	4,517	5,817	5,537	6,068	4,403	2,382	2,112	2,730	2,416	3,333	4,055
Long Term												
Full Simulation Period[a]	7,327	8,681	8,605	7,207	7,996	6,357	4,881	5,058	5,568	8,757	8,543	8,748
Water Year Types[b,c]												
Wet (32%)	8,188	10,049	8,678	8,346	9,476	8,453	6,606	7,027	7,588	11,047	11,441	10,828
Above Normal (15%)	7,437	8,489	9,515	7,195	8,096	6,752	5,702	5,966	6,162	10,504	11,280	10,886
Below Normal (17%)	7,418	9,123	8,898	6,824	8,279	5,951	4,931	5,258	5,259	9,684	9,981	9,618
Dry (22%)	6,973	7,871	8,962	6,761	6,745	4,824	3,643	3,495	4,560	7,520	4,532	6,702
Critical (15%)	5,777	6,609	6,660	5,868	6,236	4,191	2,121	1,996	2,472	2,823	3,869	4,156

Proposed Project minus Existing

Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	1,556	0	24	**-708**	**-1,120**	**-339**	4,417	5,735	**-3**	**-97**	**-8**	0
20%	874	624	7	**-28**	**-413**	**-1,321**	4,084	5,461	**-43**	**-58**	**-38**	0
30%	1,217	2,599	671	92	216	**-1,264**	4,067	4,551	**-215**	**-1**	**-83**	32
40%	1,169	3,423	97	203	122	**-1,111**	3,752	4,172	**-216**	**-465**	**-22**	**-190**
50%	1,260	2,161	**-35**	155	136	**-904**	3,305	3,529	**-162**	**-255**	**-146**	**-652**
60%	482	1,643	**-43**	189	34	**-756**	2,847	2,711	**-33**	**-357**	**-1,187**	**-276**
70%	15	866	**-163**	69	**-32**	**-979**	2,124	1,883	**-62**	**-1,083**	269	**-105**
80%	7	848	**-51**	**-72**	**-125**	**-934**	1,423	1,262	**-67**	**-1,149**	495	**-145**
90%	**-210**	301	**-122**	333	5	**-317**	882	612	**-170**	**-52**	132	129
Long Term												
Full Simulation Period[a]	590	1,295	12	**-67**	**-62**	**-875**	2,828	3,045	**-109**	**-296**	6	**-138**
Water Year Types[b,c]												
Wet (32%)	818	1,534	**-27**	**-428**	**-265**	**-942**	3,815	4,166	**-102**	**-164**	**-60**	**-264**
Above Normal (15%)	876	1,325	53	61	**-222**	**-1,121**	3,937	4,327	**-91**	176	**-70**	**-217**
Below Normal (17%)	679	1,427	**-33**	144	103	**-1,246**	3,280	3,678	**-107**	**-834**	**-312**	**-186**
Dry (22%)	402	741	291	187	192	**-1,019**	1,830	1,874	**-125**	**-726**	118	**-52**
Critical (15%)	**-12**	1,425	**-307**	**-38**	**-34**	164	550	351	**-120**	220	430	145

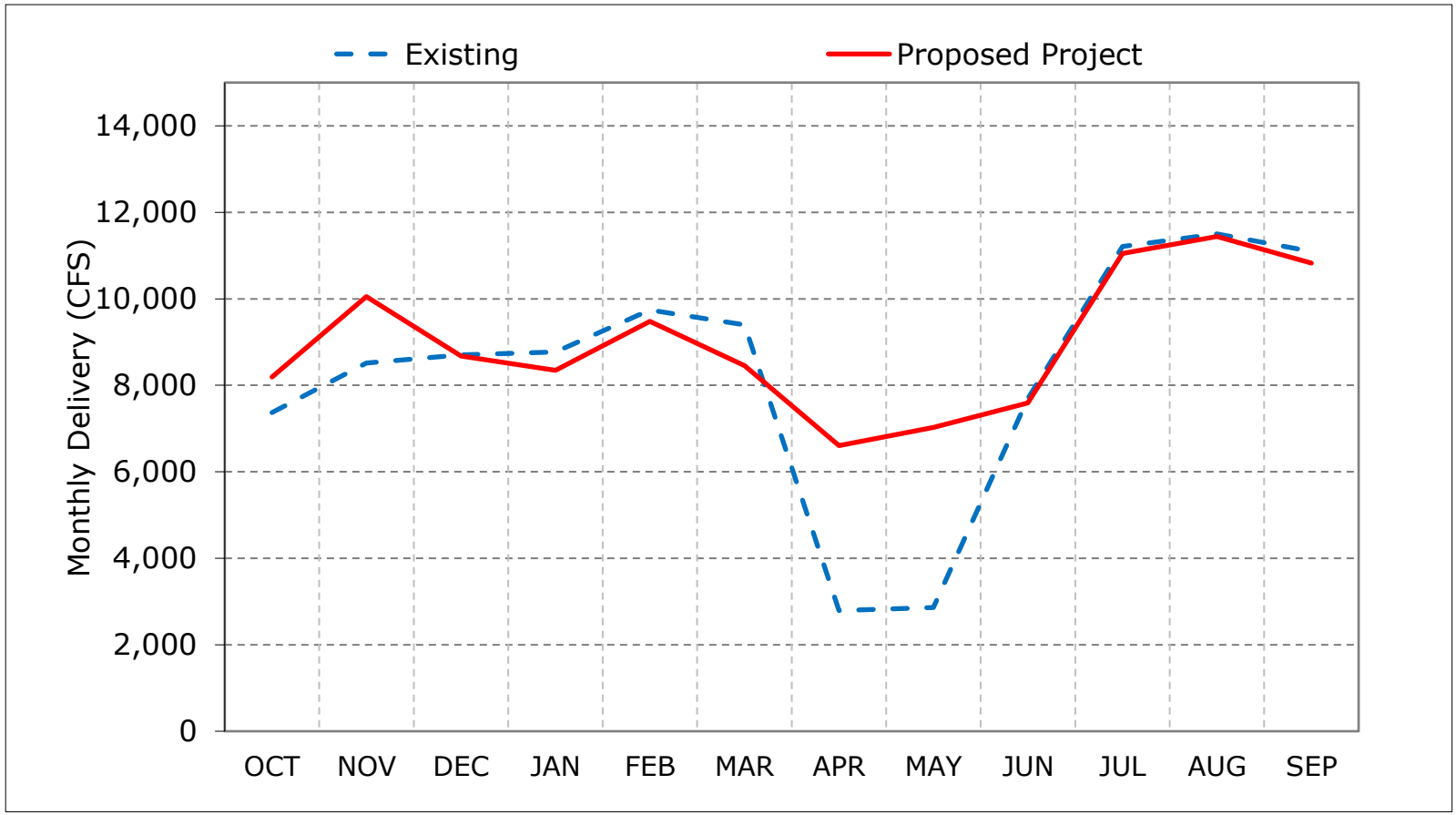
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

Figure 3-1. Total Delta Exports, Long-Term Average Delivery



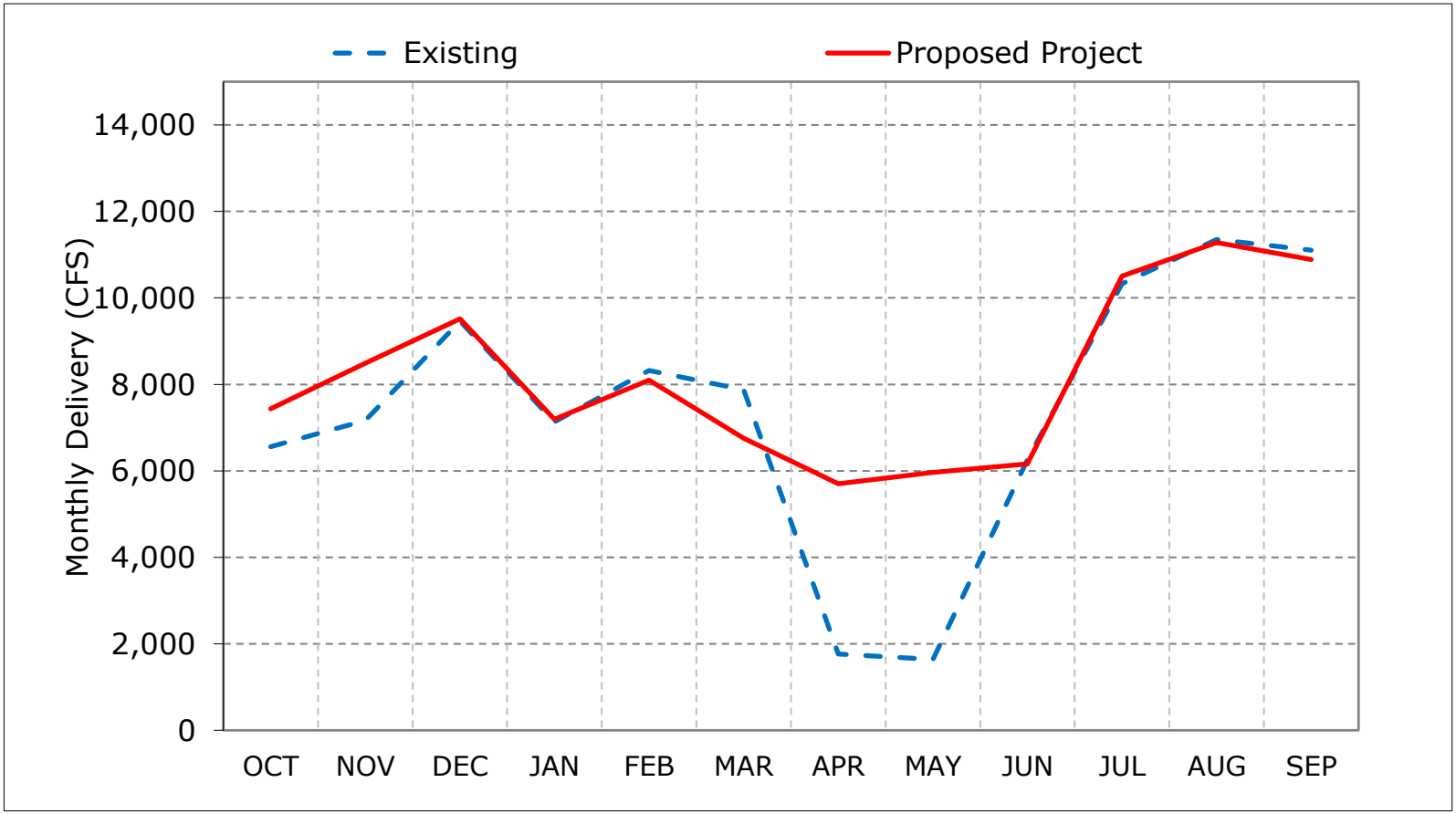
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 3-2. Total Delta Exports, Wet Year Average Delivery



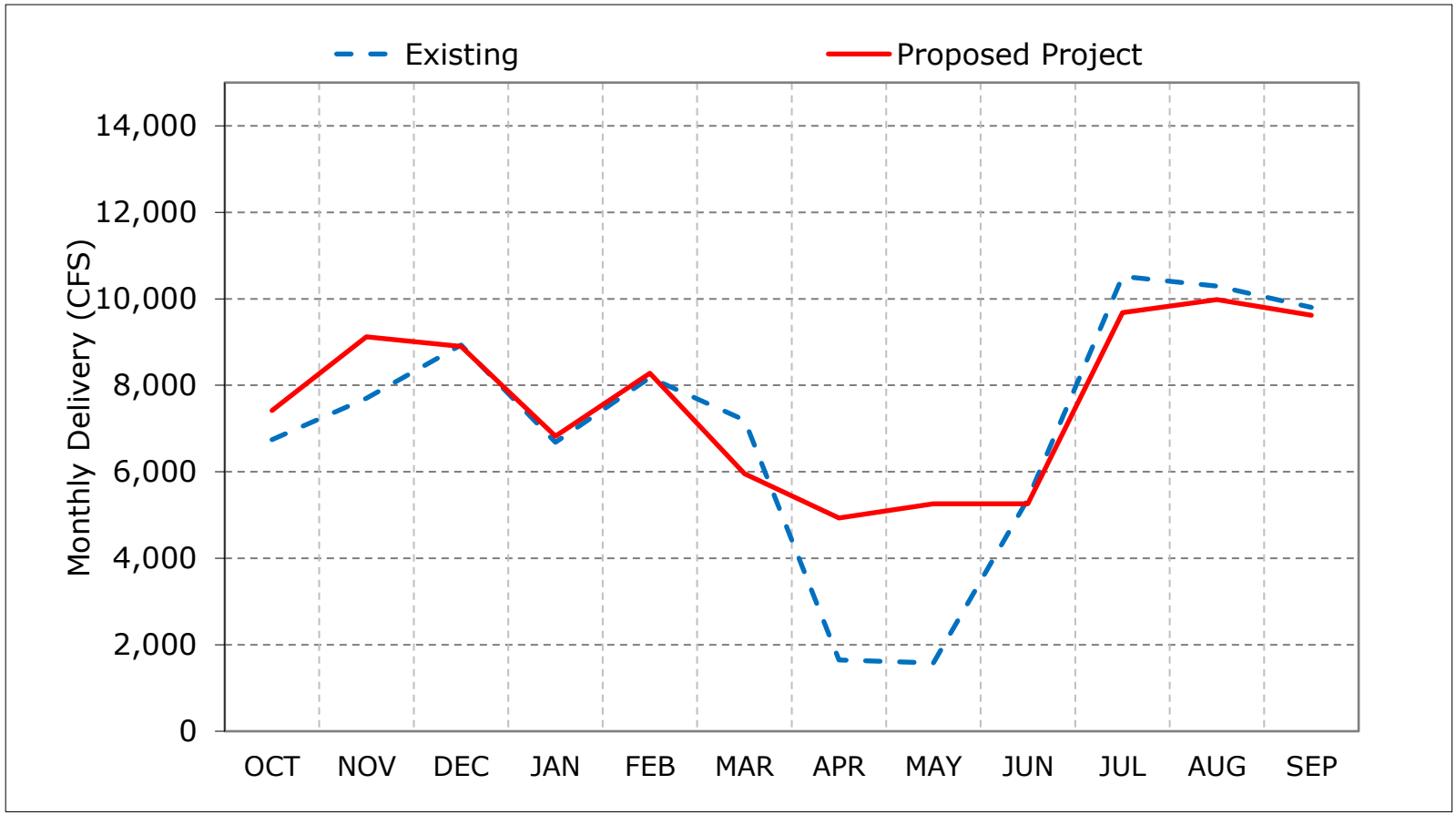
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 3-3. Total Delta Exports, Above Normal Year Average Delivery



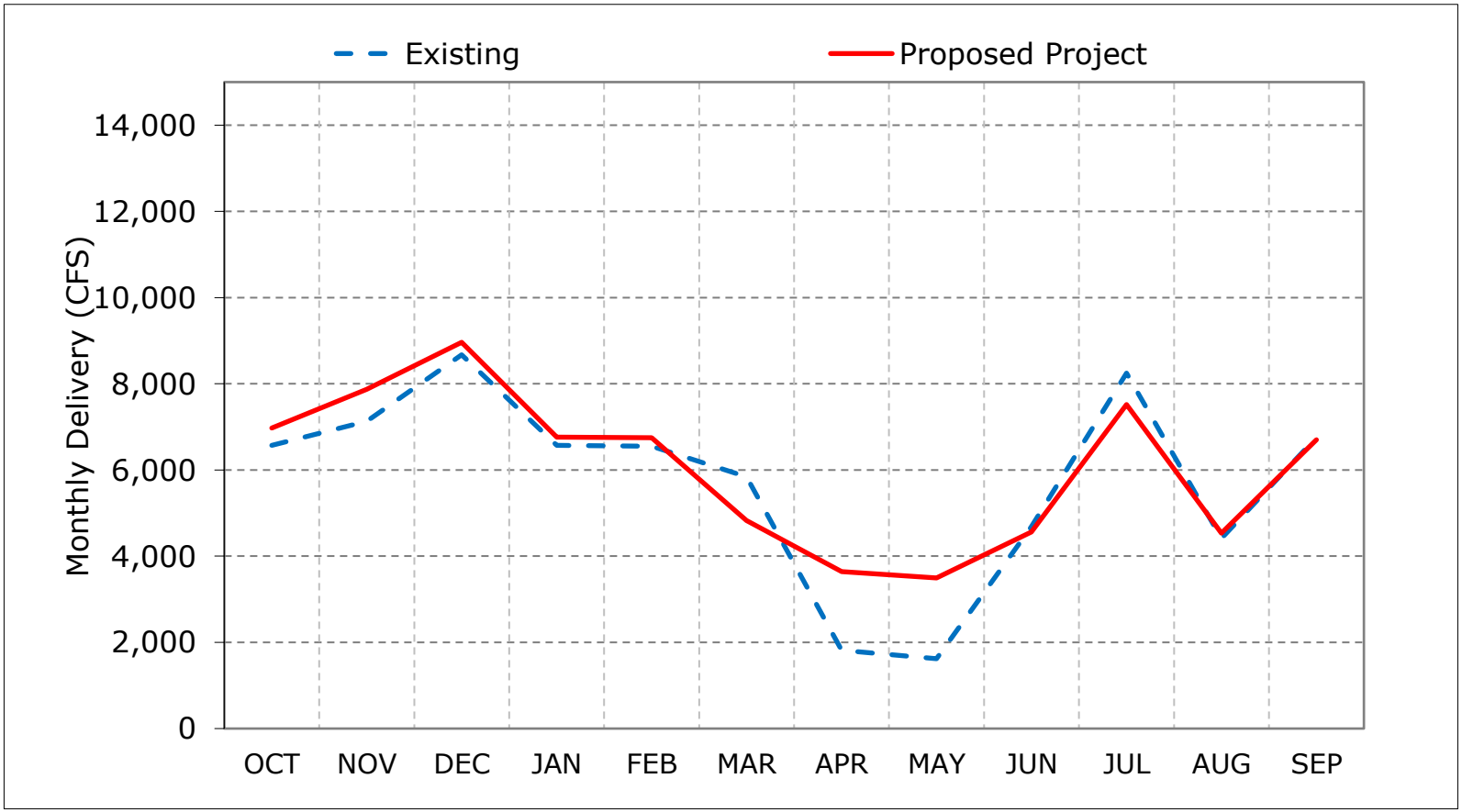
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 3-4. Total Delta Exports, Below Normal Year Average Delivery



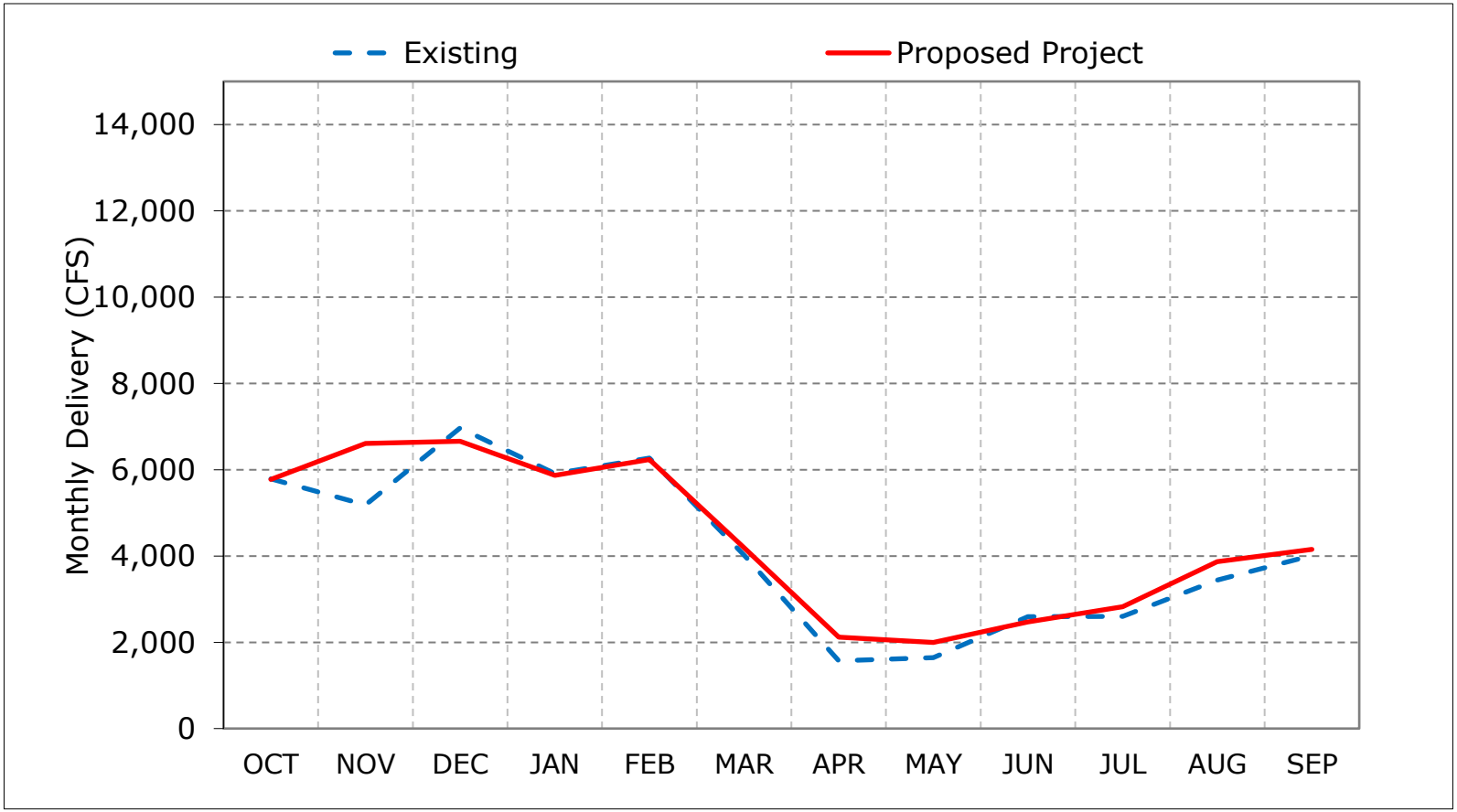
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 3-5. Total Delta Exports, Dry Year Average Delivery



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 3-6. Total Delta Exports, Critical Year Average Delivery



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 3-7. Total Delta Exports, October

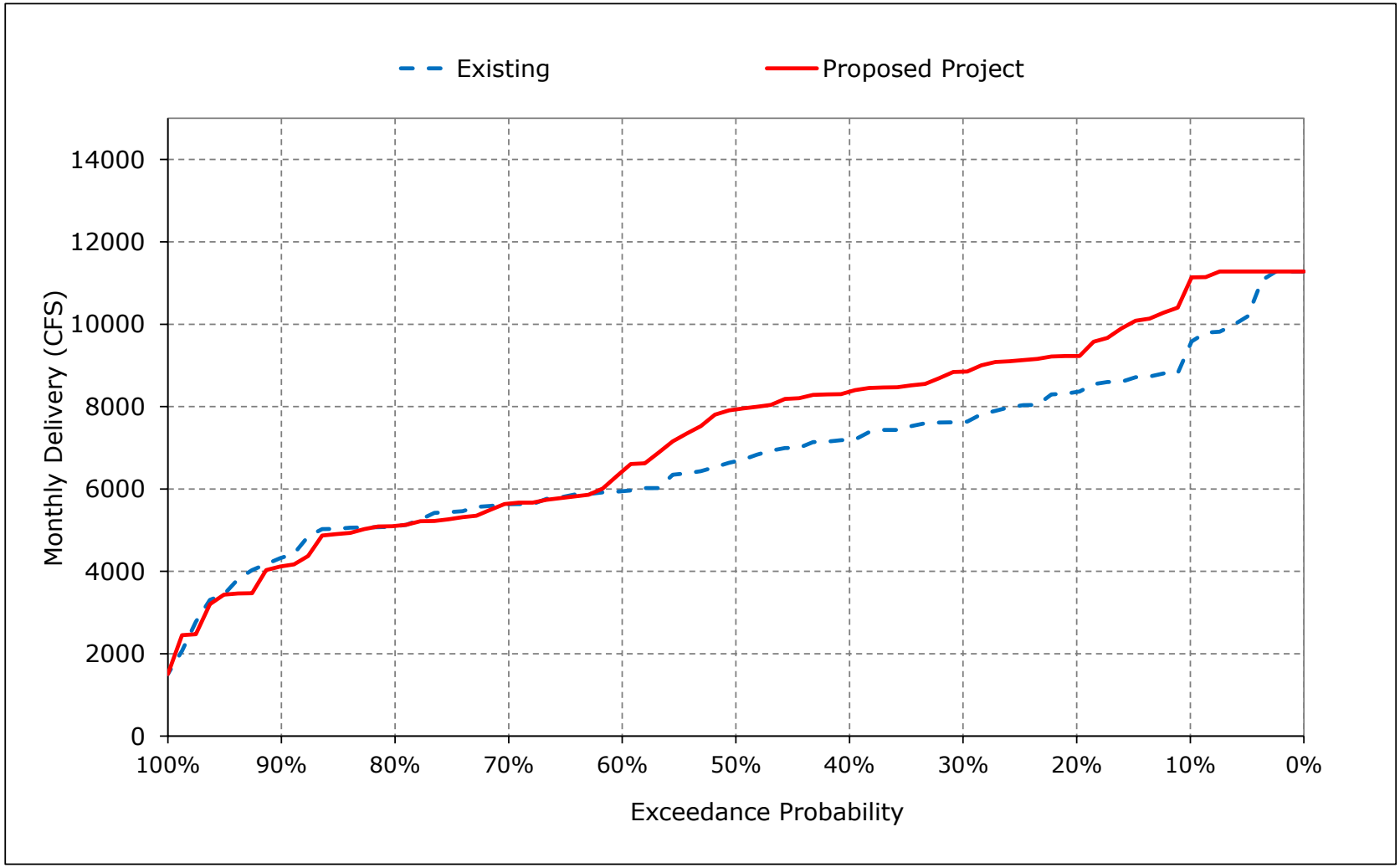


Figure 3-8. Total Delta Exports, November

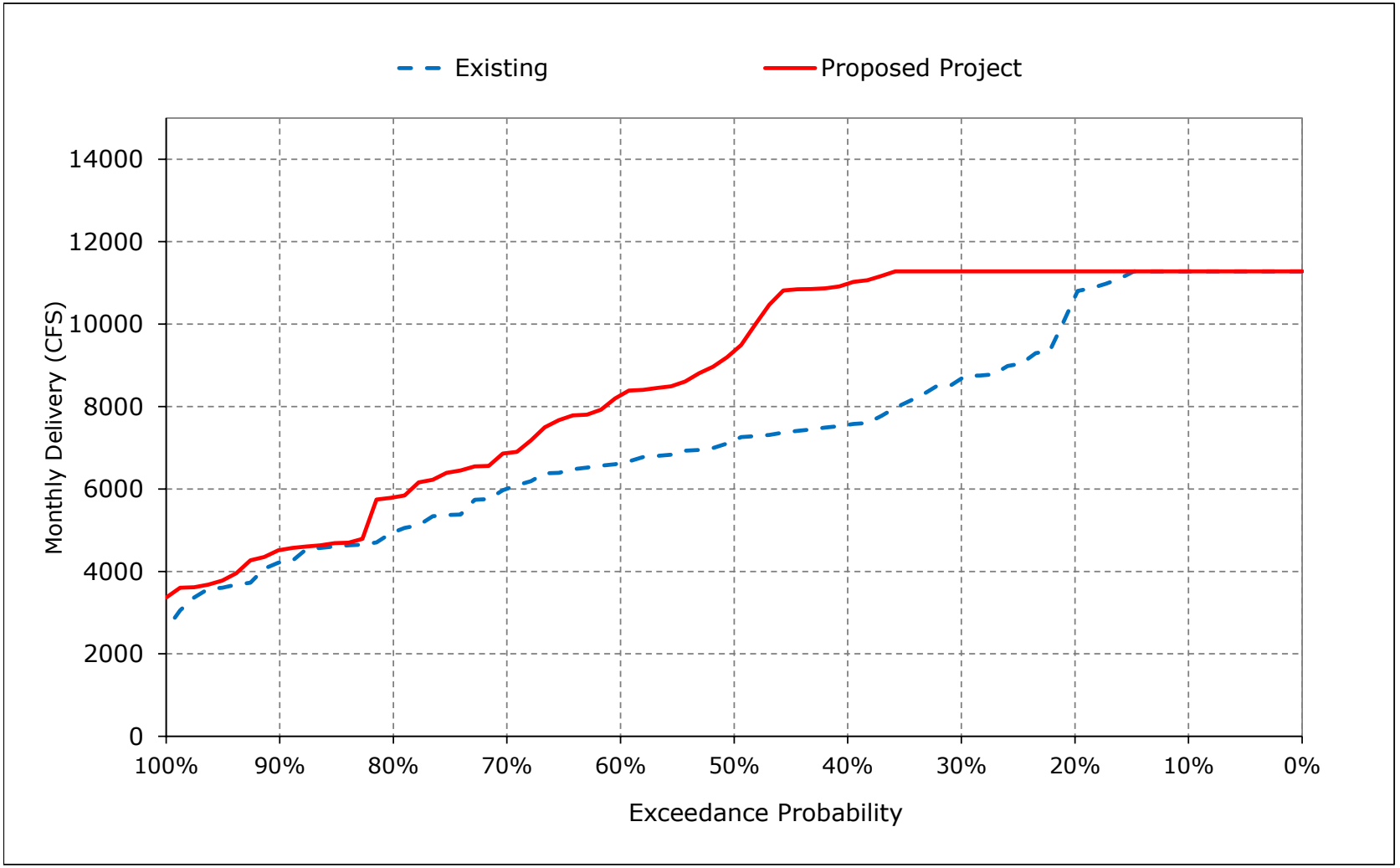


Figure 3-9. Total Delta Exports, December

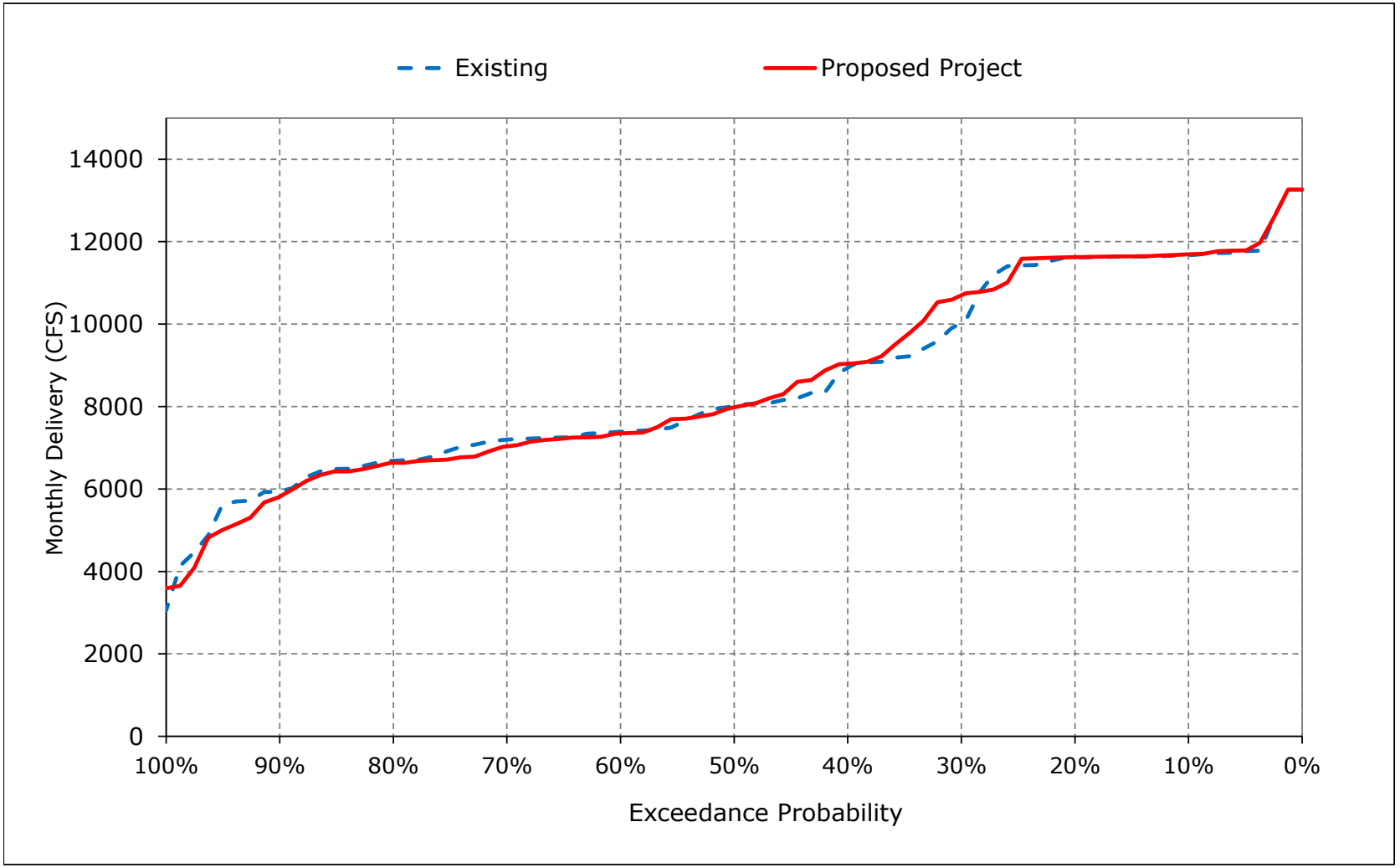


Figure 3-10. Total Delta Exports, January

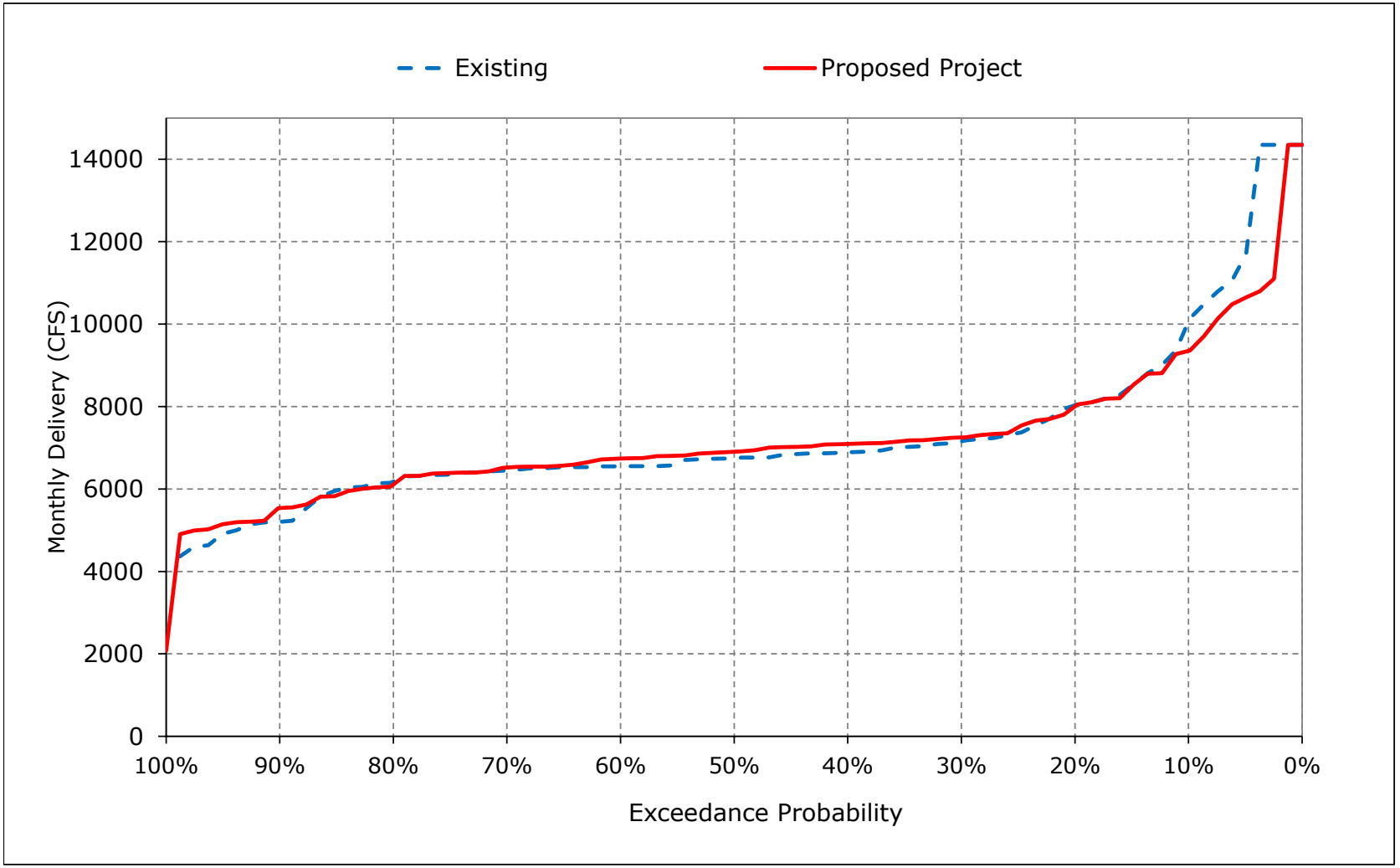


Figure 3-11. Total Delta Exports, February

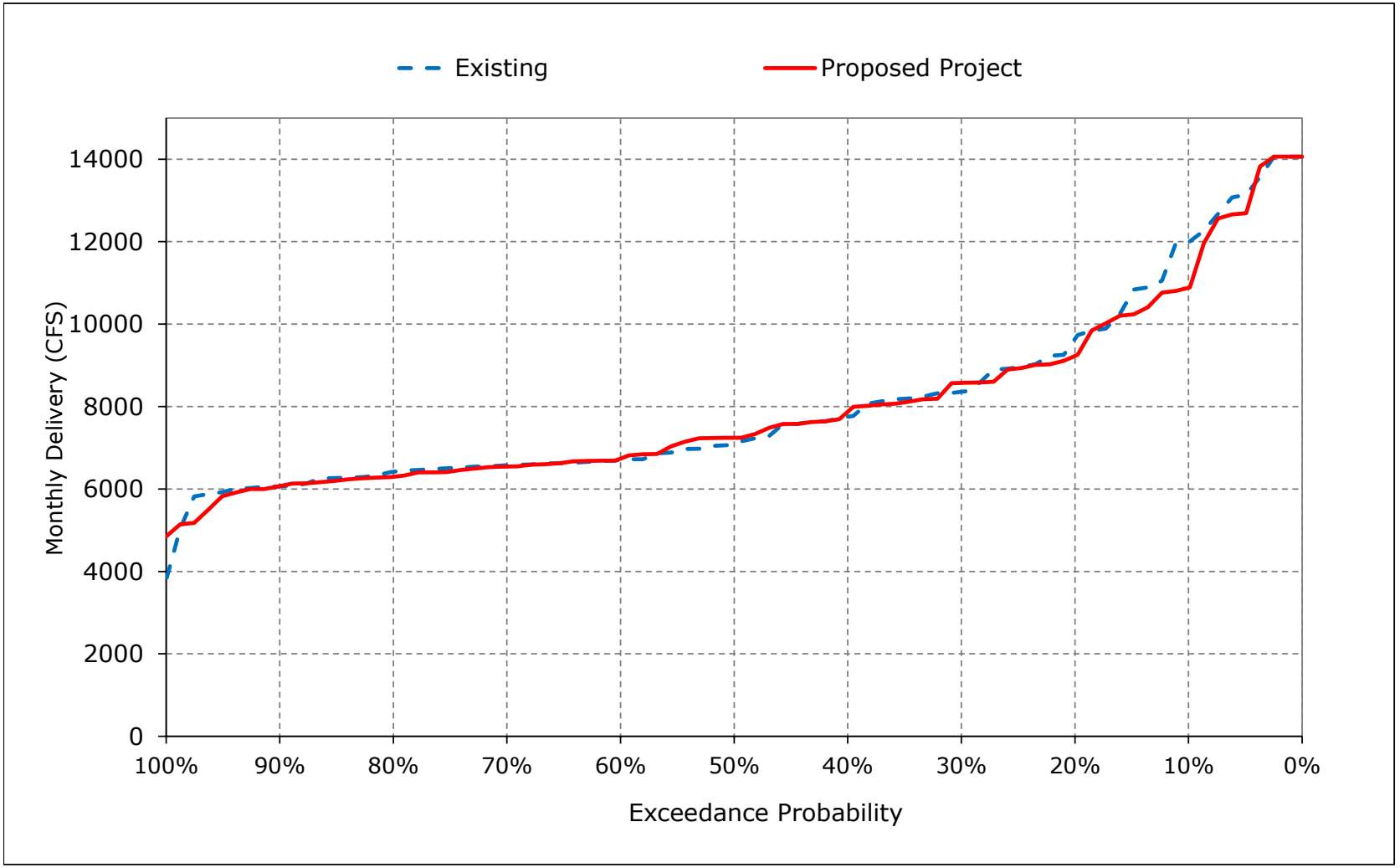


Figure 3-12. Total Delta Exports, March

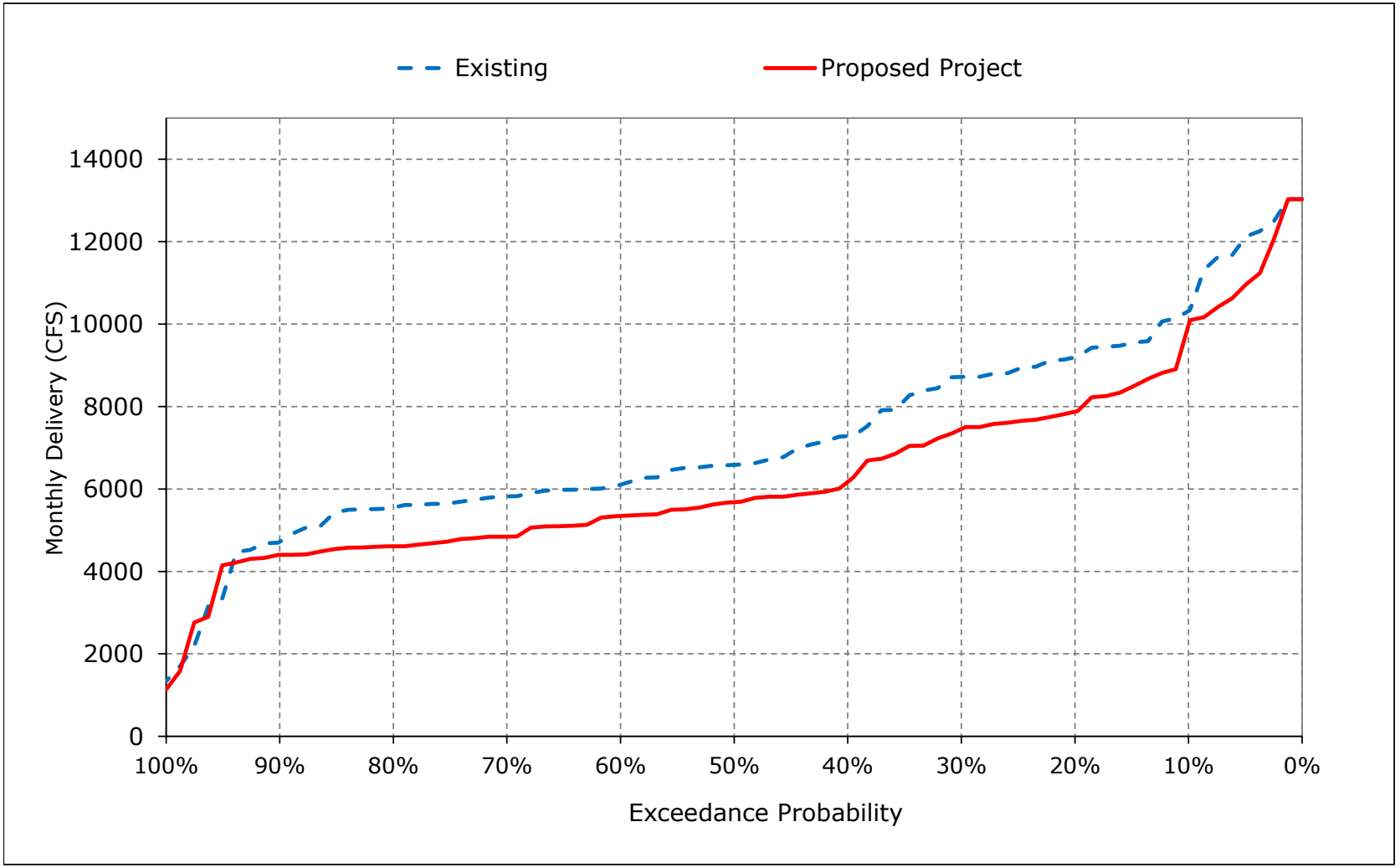


Figure 3-13. Total Delta Exports, April

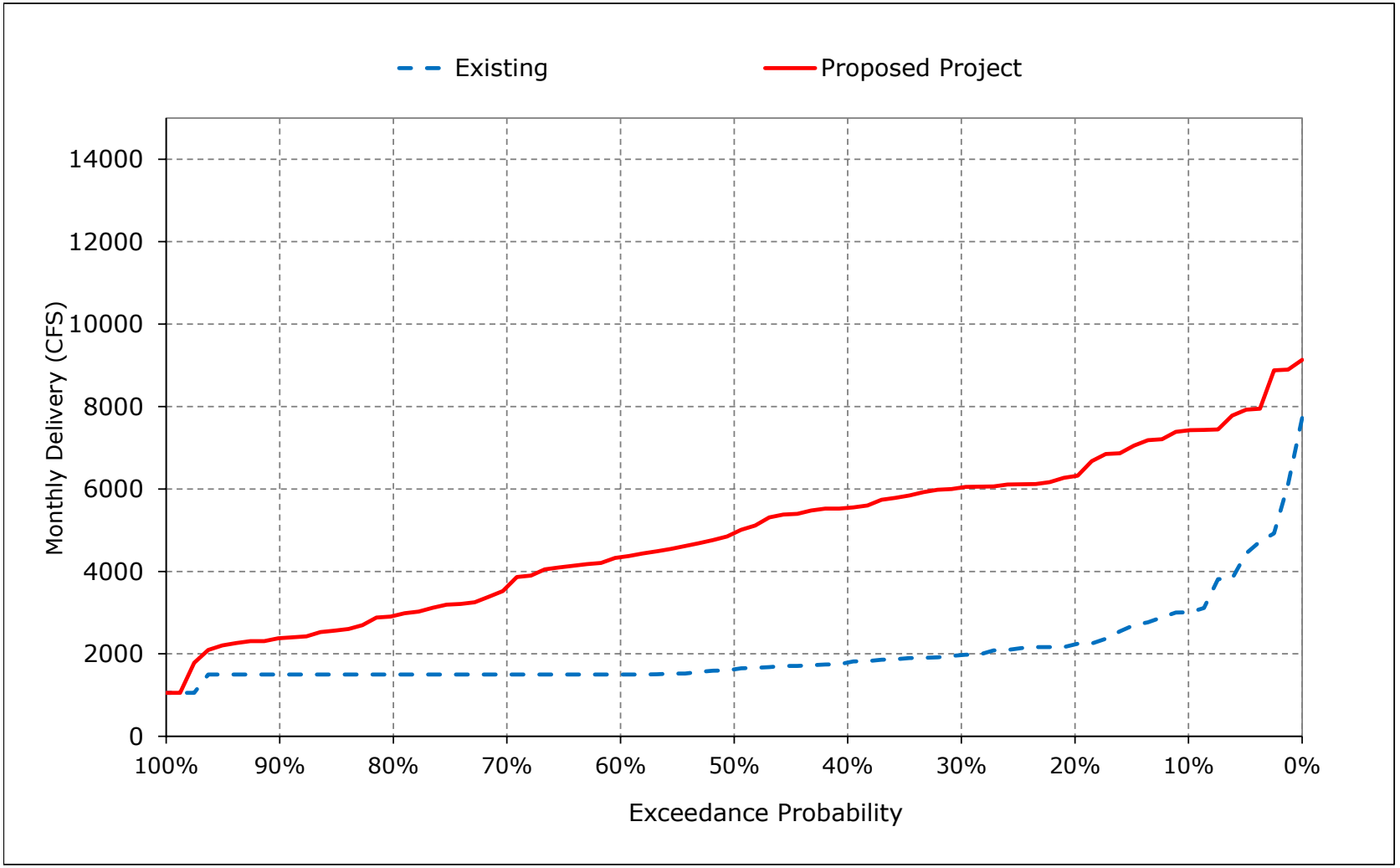


Figure 3-14. Total Delta Exports, May

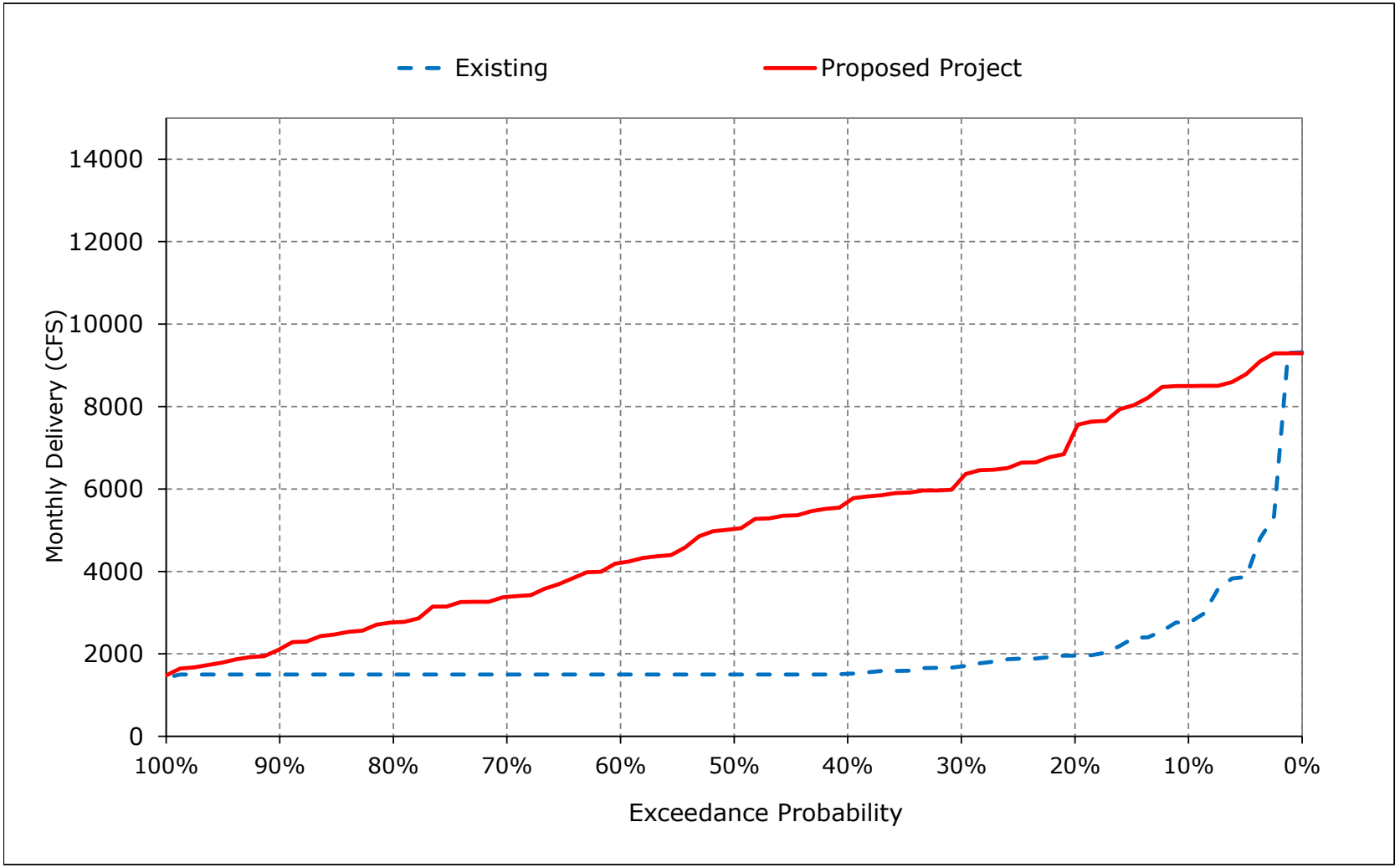


Figure 3-15. Total Delta Exports, June

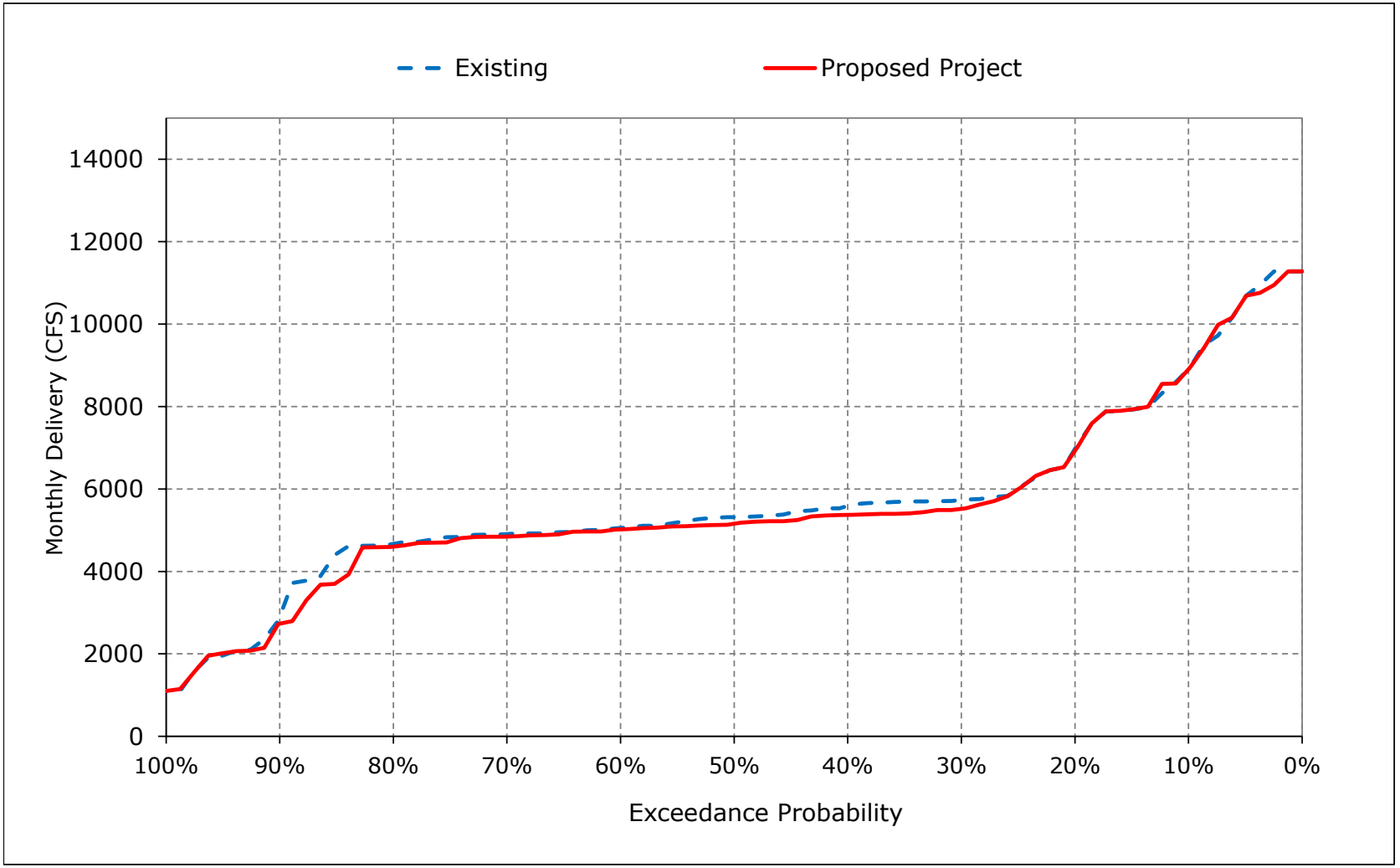


Figure 3-16. Total Delta Exports, July

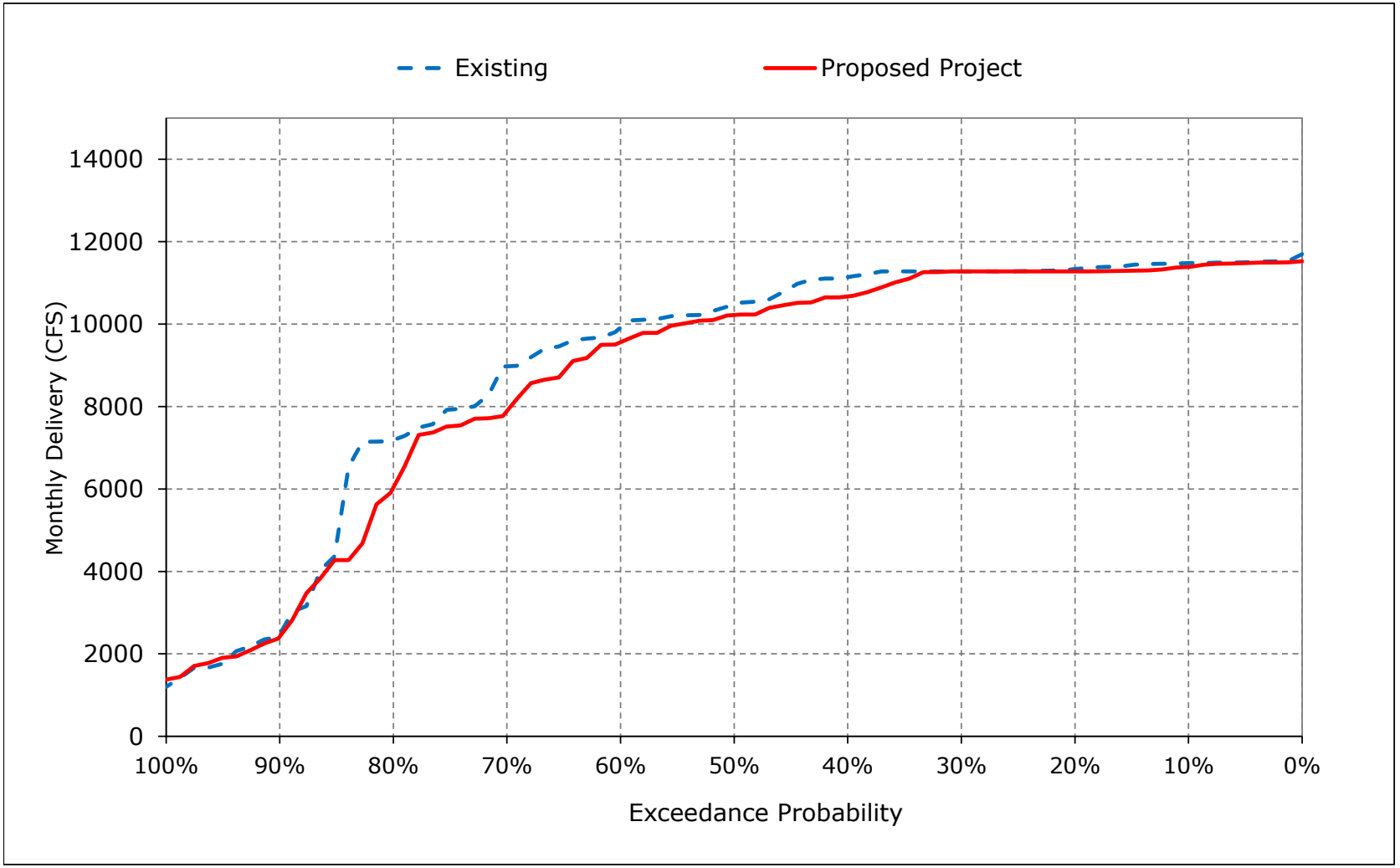


Figure 3-17. Total Delta Exports, August

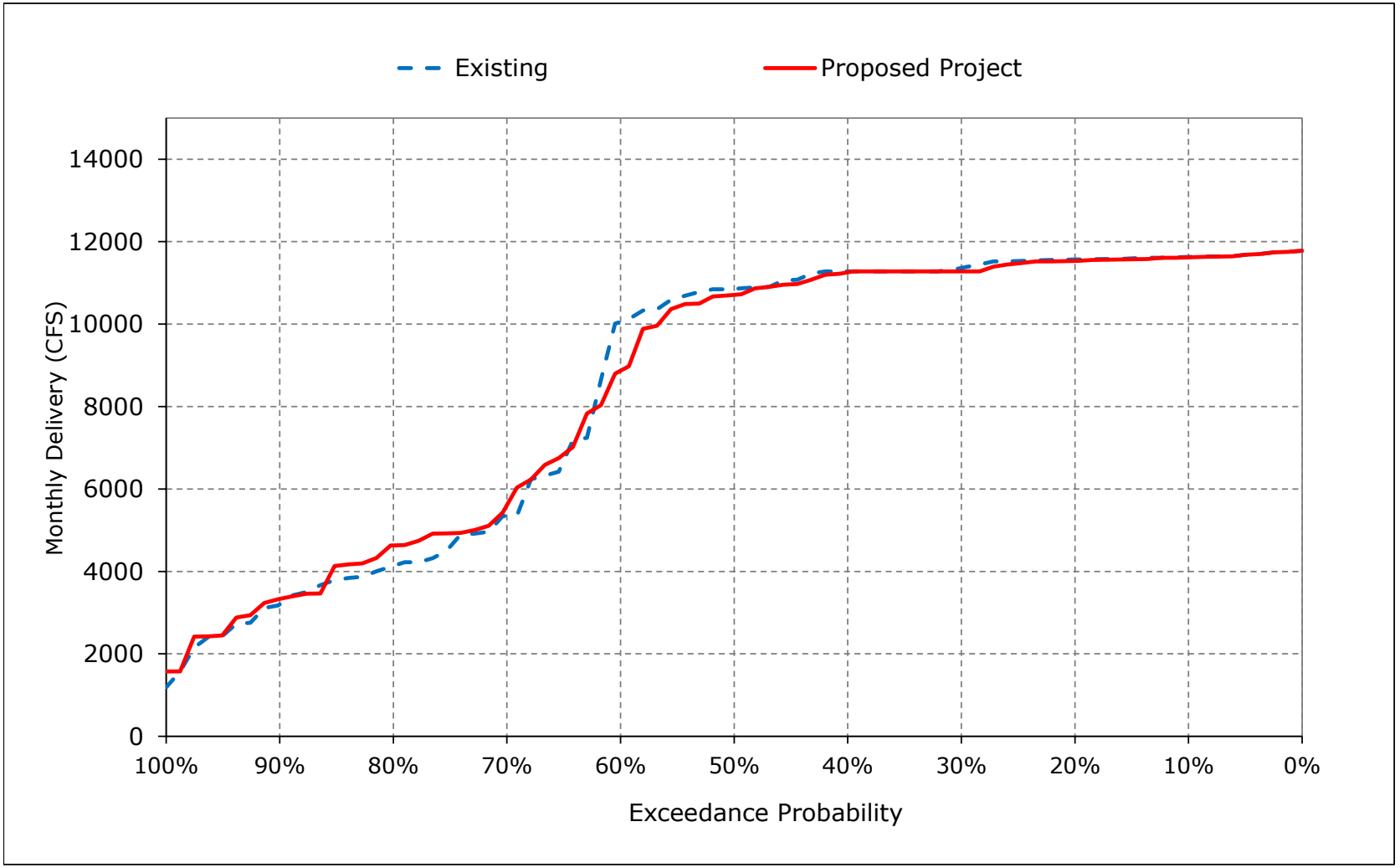


Figure 3-18. Total Delta Exports, September

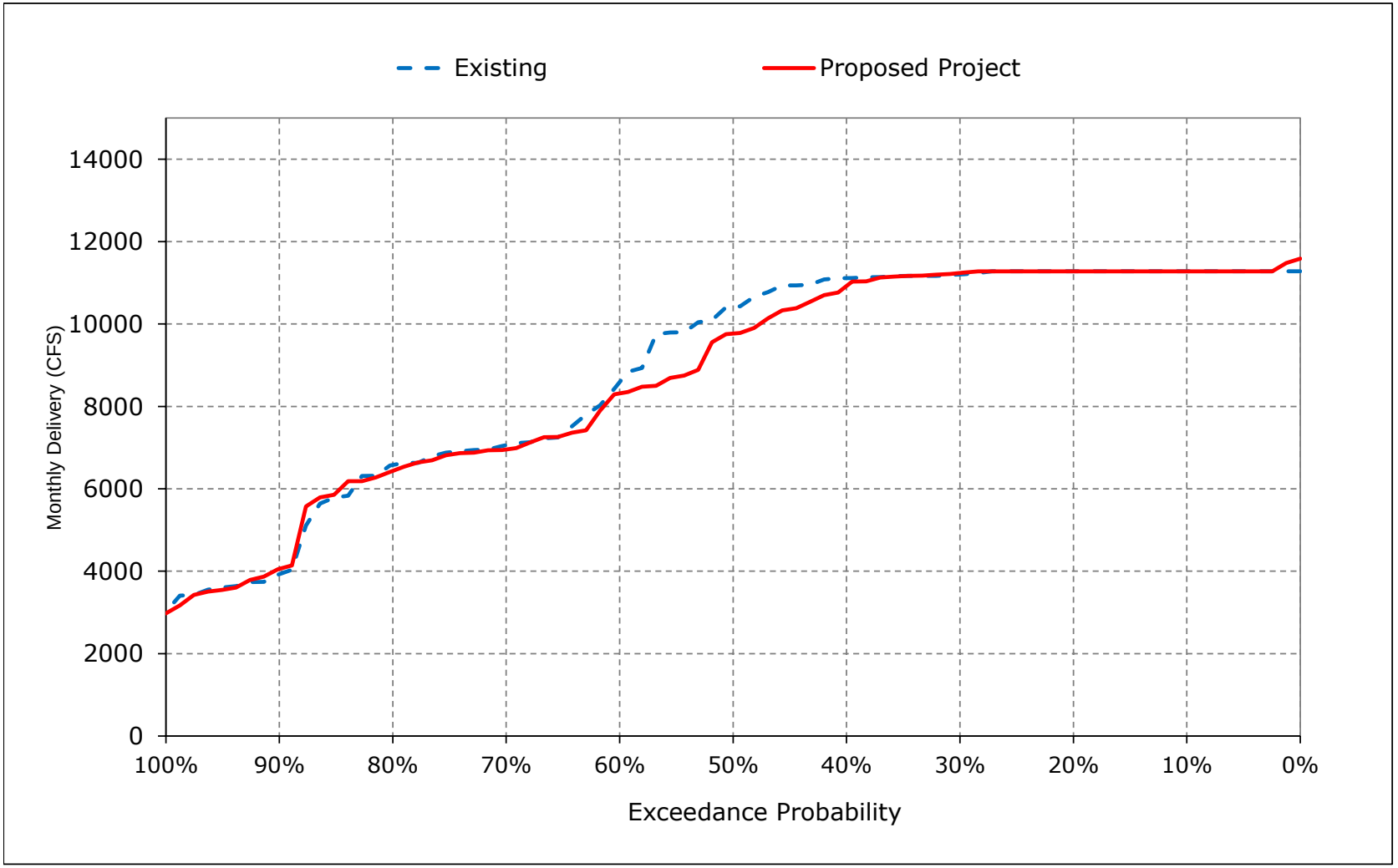


Table 4-1. SWP Banks PP Exports, Monthly Delivery

Existing

Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	4,953	6,680	7,105	5,846	7,403	8,190	1,330	1,106	4,310	6,680	6,680	6,680
20%	4,110	5,508	7,043	3,432	5,331	5,223	935	766	3,083	6,680	6,680	6,680
30%	3,758	4,523	6,552	2,864	3,916	4,832	787	637	2,325	6,680	6,680	6,680
40%	3,419	3,519	4,565	2,770	3,313	3,773	712	600	2,119	6,680	6,680	6,680
50%	3,163	2,821	4,000	2,707	2,877	2,912	673	600	1,935	6,680	6,680	6,428
60%	2,882	2,225	3,485	2,621	2,689	2,634	606	600	1,848	6,626	6,680	3,197
70%	2,297	1,683	2,960	2,601	2,622	2,386	600	600	1,741	5,788	511	2,574
80%	1,813	1,337	2,774	2,485	2,559	2,249	600	600	1,635	2,943	300	2,416
90%	986	564	2,487	2,204	2,423	1,632	600	526	324	300	300	1,678
Long Term												
Full Simulation Period[a]	3,088	3,243	4,576	3,302	3,900	3,793	873	811	2,335	5,164	4,373	4,622
Water Year Types[b,c]												
Wet (32%)	3,680	4,067	4,520	4,574	5,340	5,783	1,264	1,270	3,555	6,602	6,680	6,617
Above Normal (15%)	3,044	2,865	5,335	3,151	4,114	3,956	706	656	2,482	6,411	6,680	6,680
Below Normal (17%)	3,114	3,394	4,908	2,768	3,839	3,682	672	632	2,049	6,676	6,404	4,657
Dry (22%)	2,775	3,074	4,599	2,692	2,683	2,383	695	628	1,687	4,089	515	2,581
Critical (15%)	2,289	1,911	3,514	2,234	2,464	1,566	692	454	852	650	483	1,264

Proposed Project

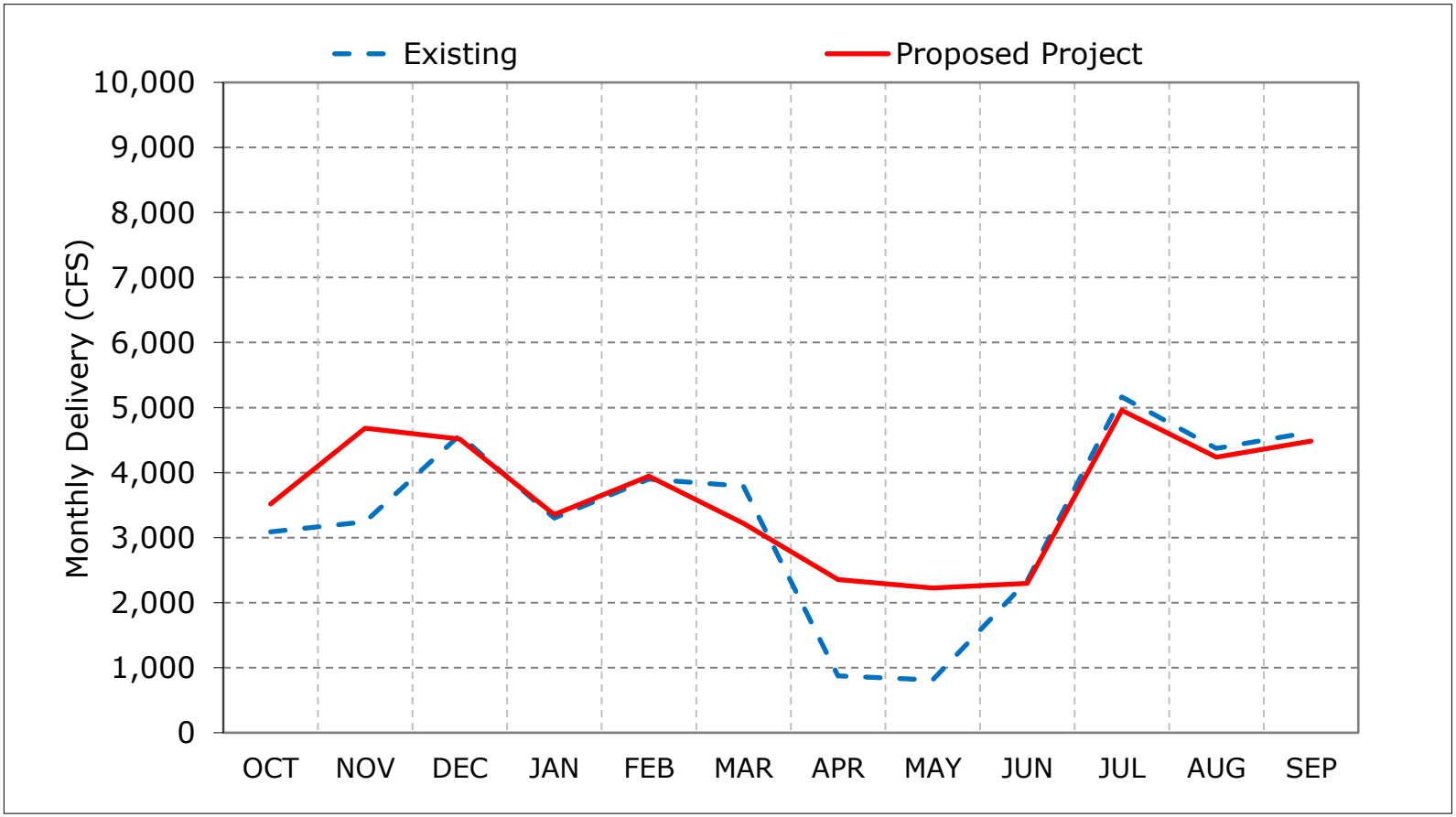
Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	5,791	6,680	7,103	5,534	6,288	6,357	3,972	4,558	4,318	6,680	6,680	6,680
20%	5,062	6,680	7,040	3,861	5,596	4,169	3,189	3,539	3,243	6,680	6,680	6,680
30%	4,490	6,434	5,420	3,185	4,321	3,582	2,859	2,810	2,461	6,680	6,680	6,680
40%	3,961	5,531	4,831	2,914	3,517	3,065	2,523	2,390	2,003	6,680	6,680	6,680
50%	3,644	5,076	3,977	2,837	3,031	2,655	2,305	2,144	1,898	6,675	6,680	5,182
60%	3,095	4,095	3,476	2,748	2,874	2,243	1,999	1,602	1,795	6,239	3,915	3,157
70%	2,412	3,577	2,960	2,642	2,634	2,029	1,714	1,405	1,738	5,121	997	2,620
80%	1,933	2,899	2,817	2,526	2,518	1,821	1,453	904	1,644	1,395	300	2,455
90%	1,009	2,133	2,574	2,216	2,371	1,623	1,078	451	300	300	300	1,820
Long Term												
Full Simulation Period[a]	3,518	4,684	4,517	3,355	3,946	3,218	2,353	2,225	2,295	4,957	4,237	4,484
Water Year Types[b,c]												
Wet (32%)	4,245	5,995	4,558	4,352	5,403	4,945	3,241	3,393	3,449	6,490	6,382	6,318
Above Normal (15%)	3,646	4,424	5,264	3,184	3,934	3,092	2,669	2,702	2,477	6,473	6,378	6,555
Below Normal (17%)	3,483	4,784	4,900	2,946	3,974	3,046	2,515	2,221	2,023	6,175	6,050	4,372
Dry (22%)	3,100	4,043	4,759	2,931	2,801	1,965	1,636	1,334	1,666	3,537	694	2,599
Critical (15%)	2,484	2,949	2,870	2,480	2,486	1,678	999	559	870	831	646	1,400

Proposed Project minus Existing

Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	838	0	**-1**	**-312**	**-1,115**	**-1,834**	2,642	3,452	8	0	0	0
20%	952	1,172	**-3**	429	265	**-1,054**	2,254	2,773	161	0	0	0
30%	732	1,910	**-1,132**	321	405	**-1,250**	2,072	2,173	137	0	0	0
40%	542	2,013	266	144	204	**-707**	1,810	1,790	**-115**	0	0	0
50%	480	2,255	**-23**	130	154	**-257**	1,632	1,544	**-37**	**-5**	0	**-1,245**
60%	213	1,870	**-9**	126	185	**-391**	1,393	1,002	**-53**	**-387**	**-2,765**	**-40**
70%	115	1,894	0	41	11	**-356**	1,114	805	**-3**	**-667**	486	46
80%	120	1,562	43	42	**-42**	**-429**	853	304	9	**-1,547**	0	38
90%	23	1,569	88	12	**-52**	**-9**	478	**-76**	**-24**	0	0	141
Long Term												
Full Simulation Period[a]	430	1,442	**-59**	53	46	**-576**	1,480	1,414	**-41**	**-207**	**-136**	**-138**
Water Year Types[b,c]												
Wet (32%)	565	1,929	38	**-222**	63	**-837**	1,977	2,123	**-106**	**-111**	**-298**	**-300**
Above Normal (15%)	601	1,559	**-71**	33	**-180**	**-864**	1,963	2,046	**-5**	62	**-302**	**-125**
Below Normal (17%)	369	1,390	**-9**	178	135	**-636**	1,844	1,590	**-25**	**-501**	**-355**	**-285**
Dry (22%)	326	969	160	239	118	**-419**	941	706	**-21**	**-552**	179	17
Critical (15%)	195	1,039	**-644**	246	23	112	306	105	18	181	164	136

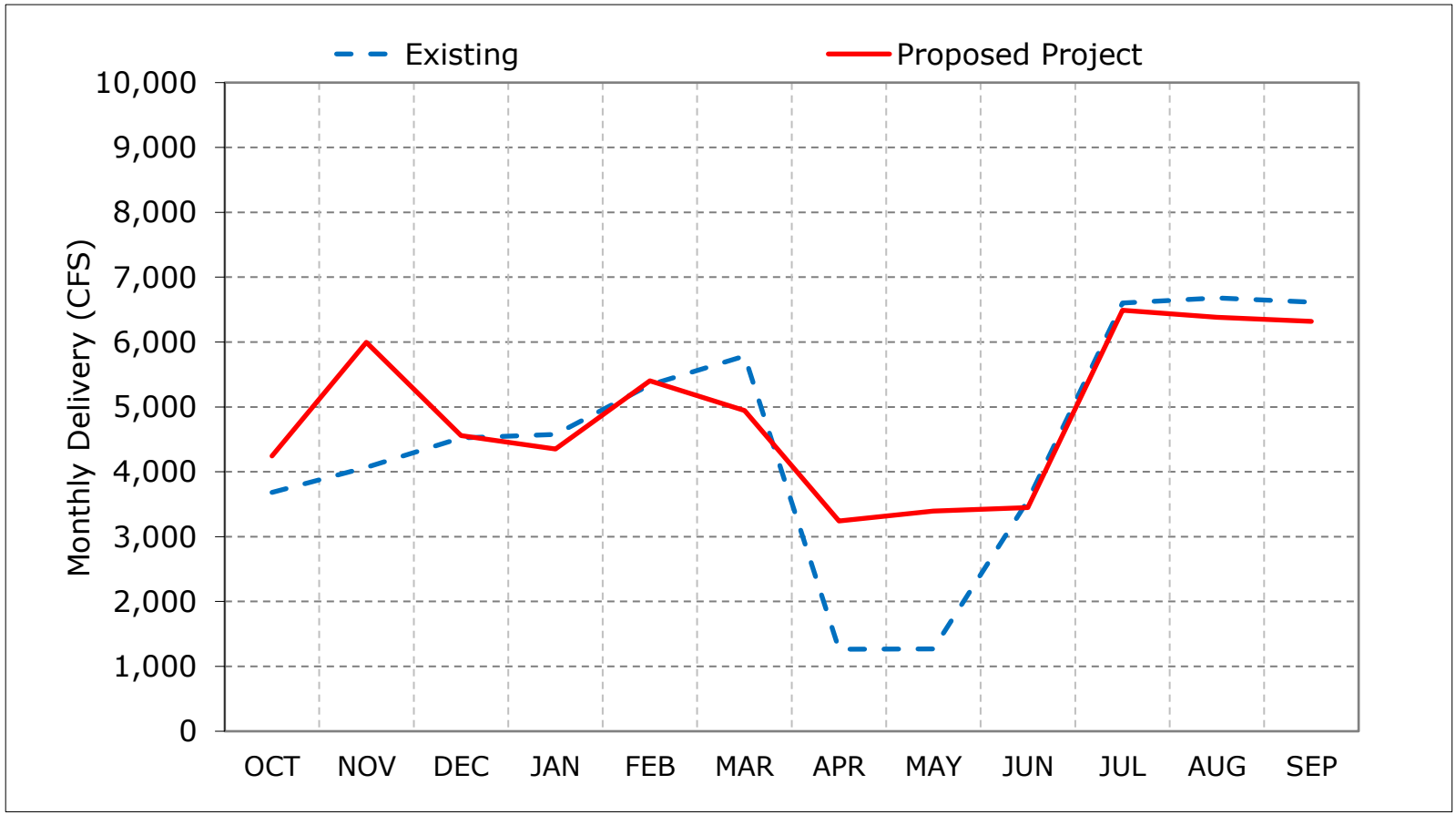
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

Figure 4-1. SWP Banks PP Exports, Long-Term Average Delivery



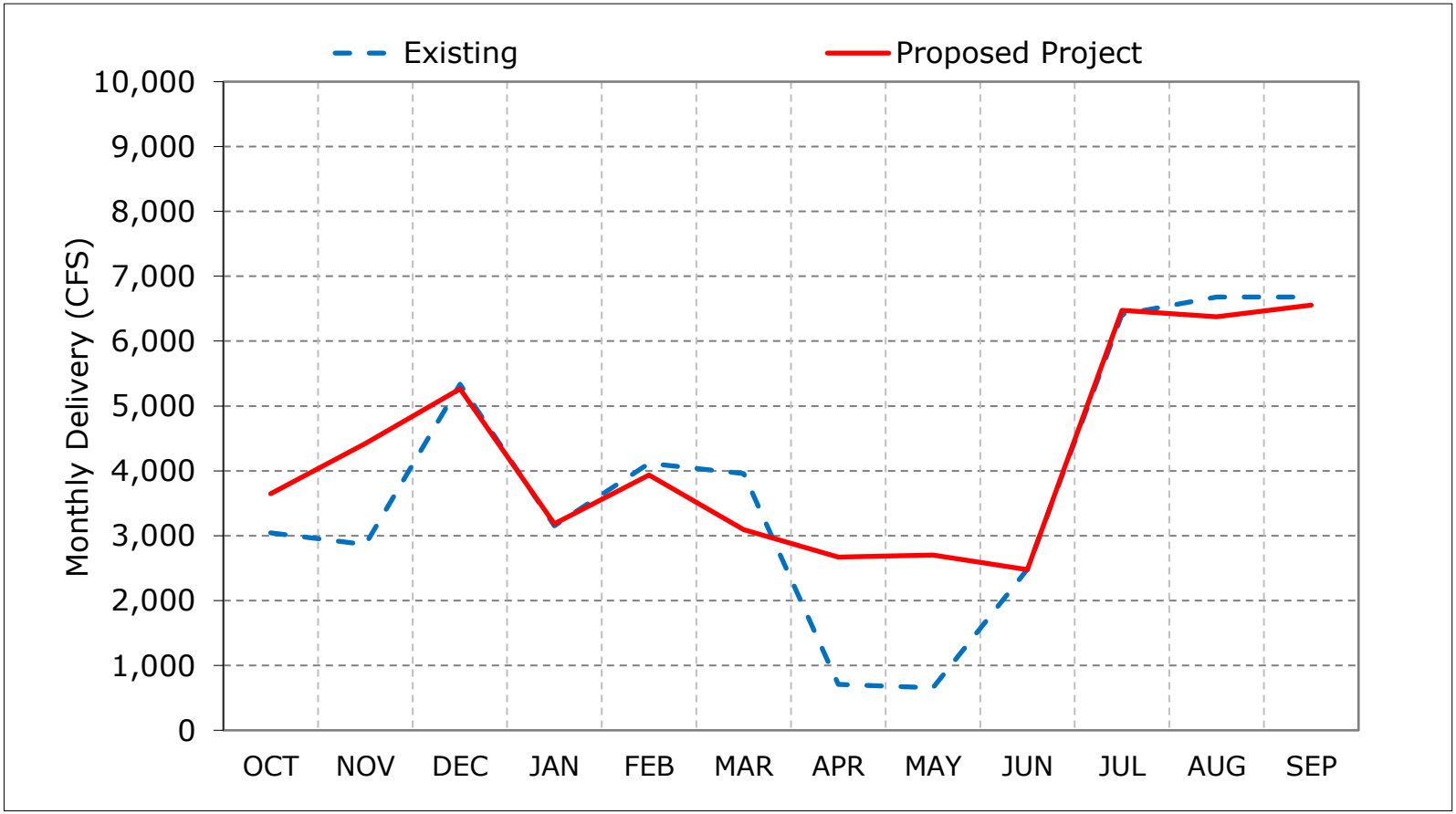
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 4-2. SWP Banks PP Exports, Wet Year Average Delivery



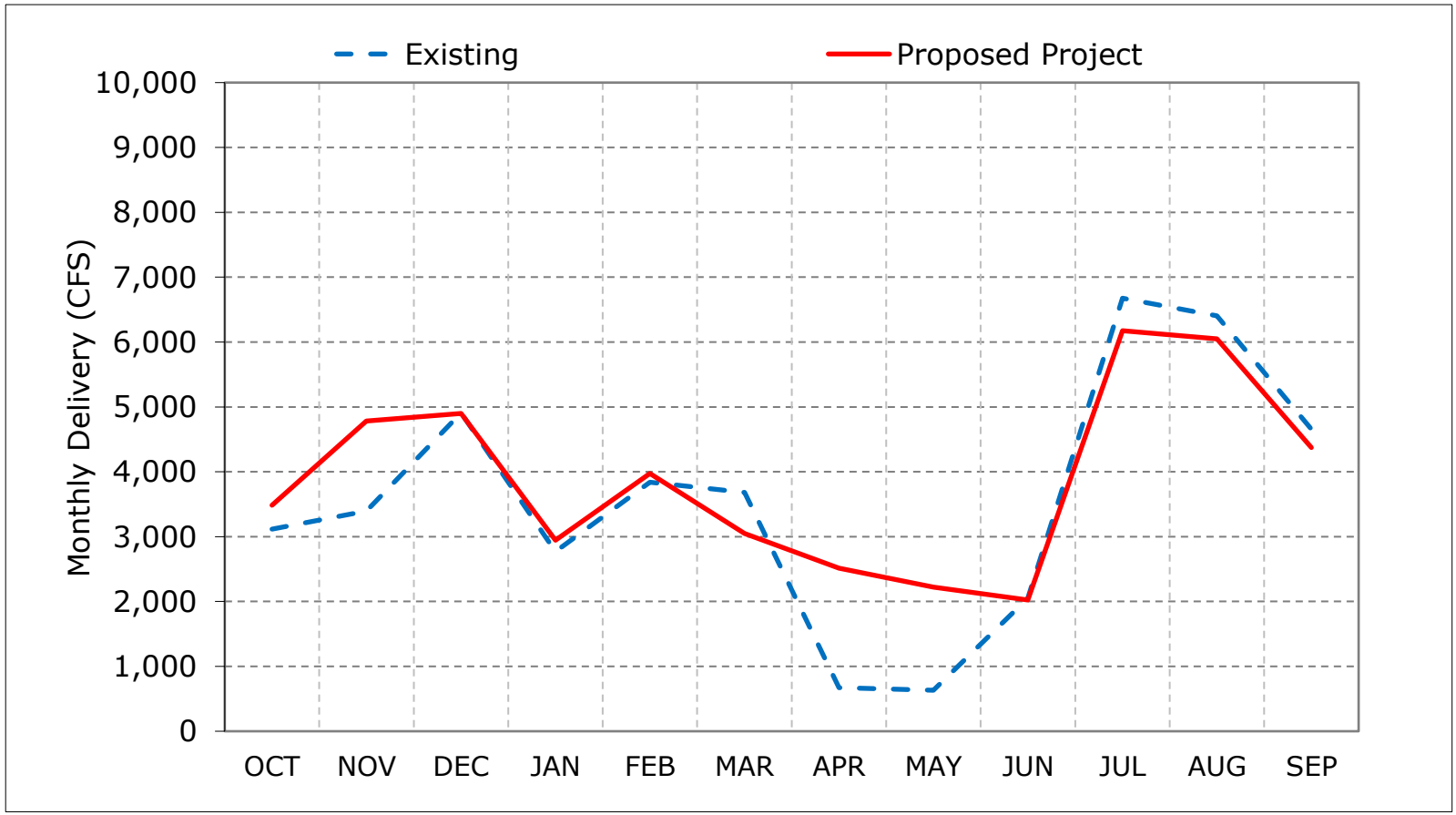
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 4-3. SWP Banks PP Exports, Above Normal Year Average Delivery



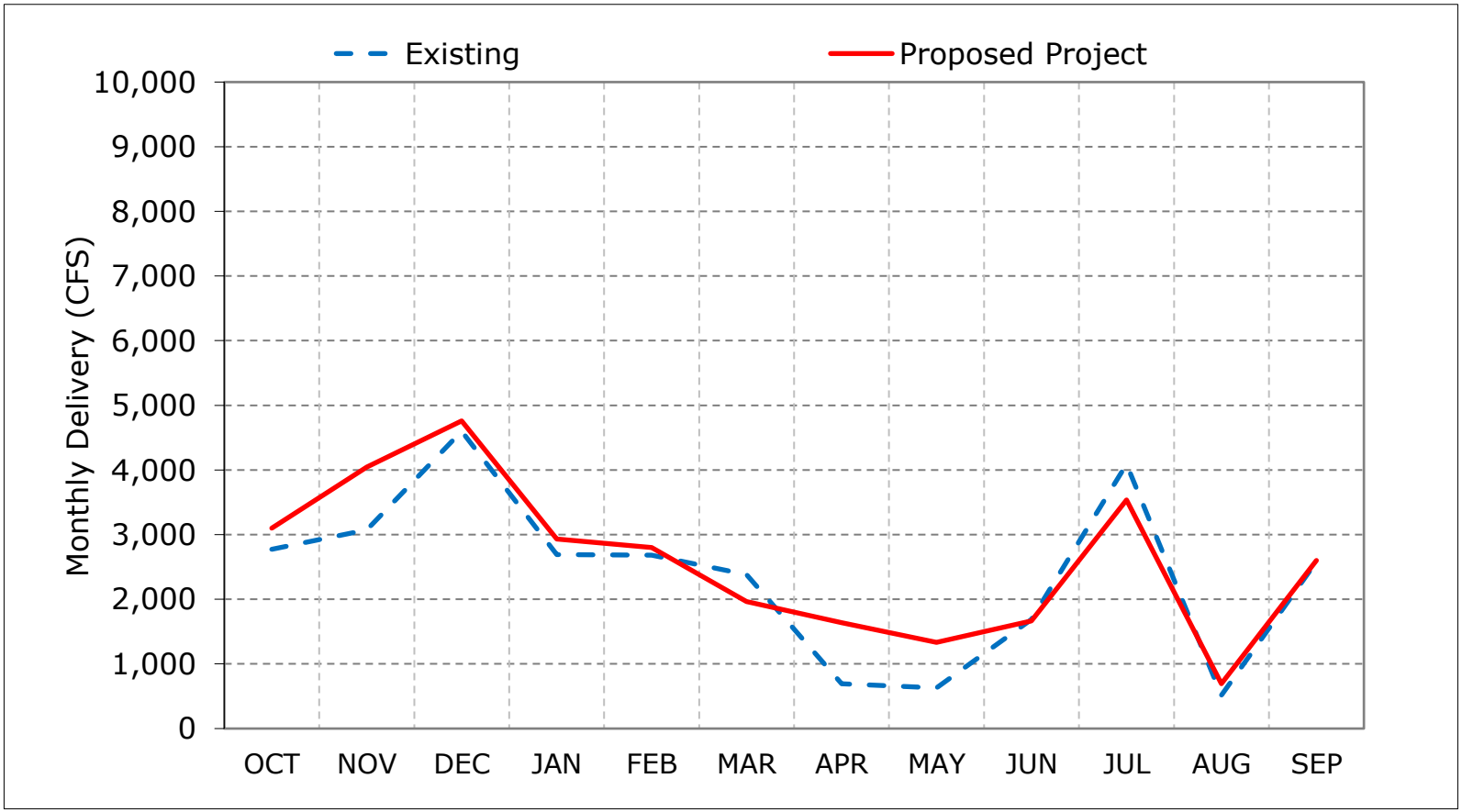
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 4-4. SWP Banks PP Exports, Below Normal Year Average Delivery



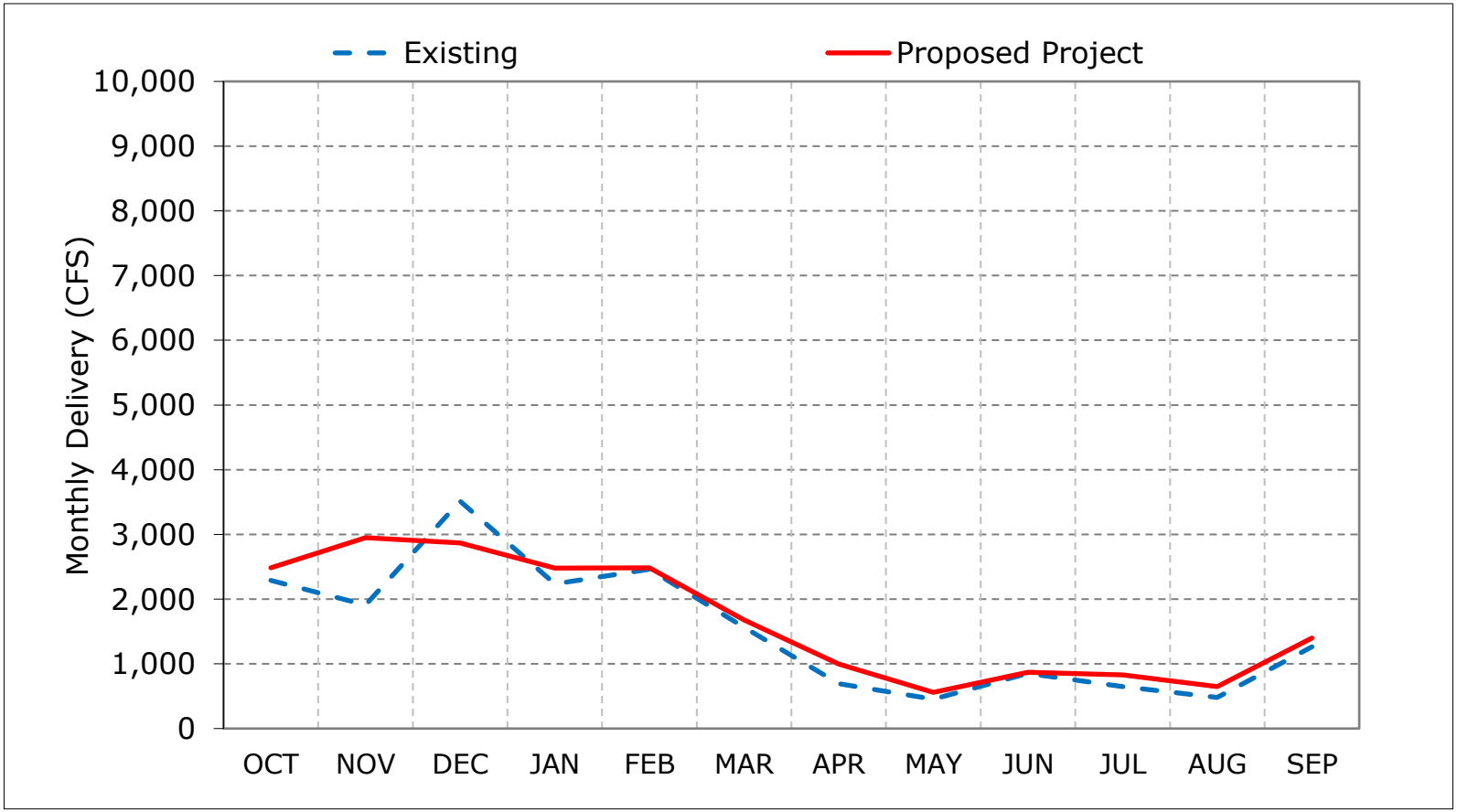
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 4-5. SWP Banks PP Exports, Dry Year Average Delivery



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 4-6. SWP Banks PP Exports, Critical Year Average Delivery



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 4-7. SWP Banks PP Exports, October

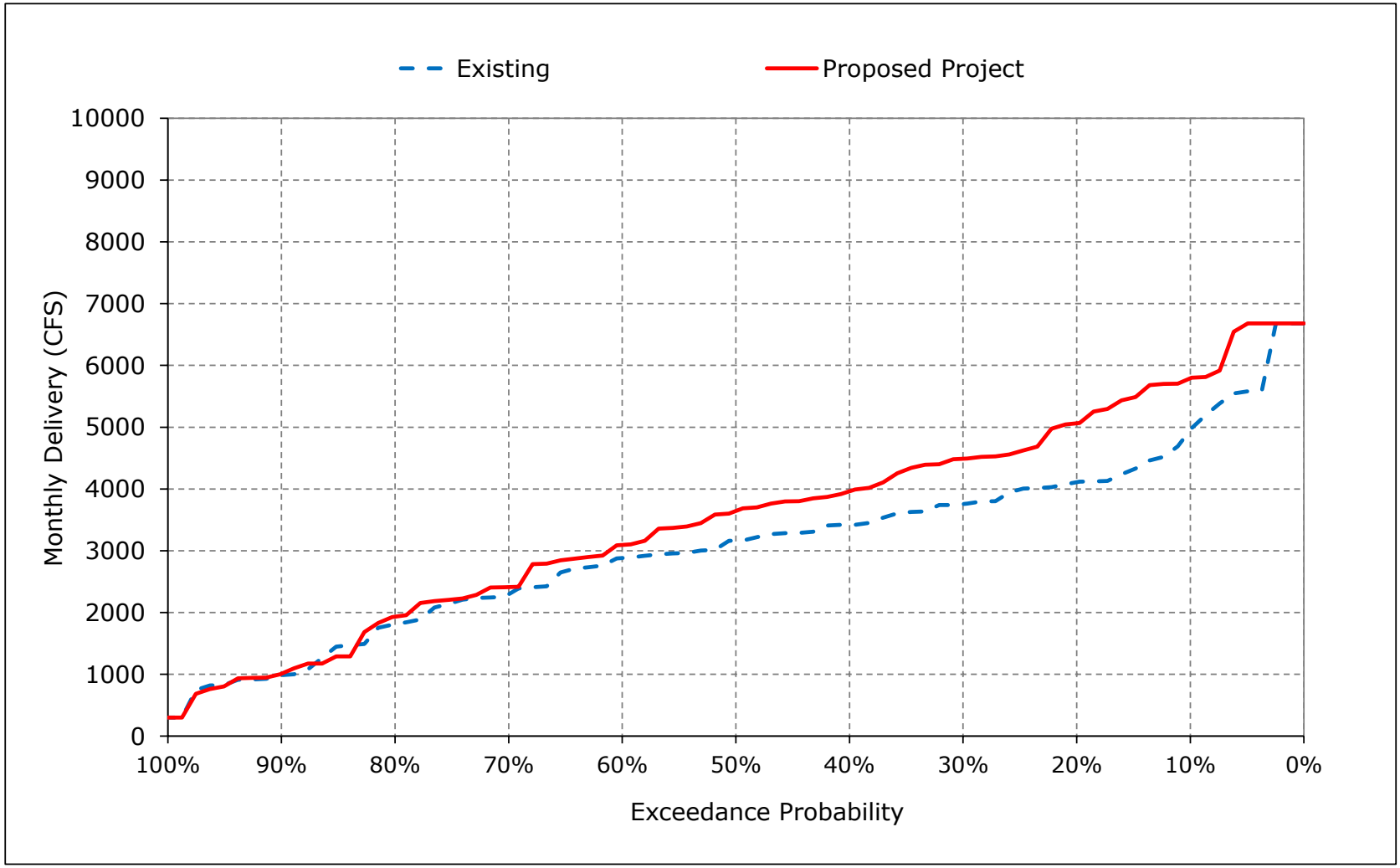


Figure 4-8. SWP Banks PP Exports, November

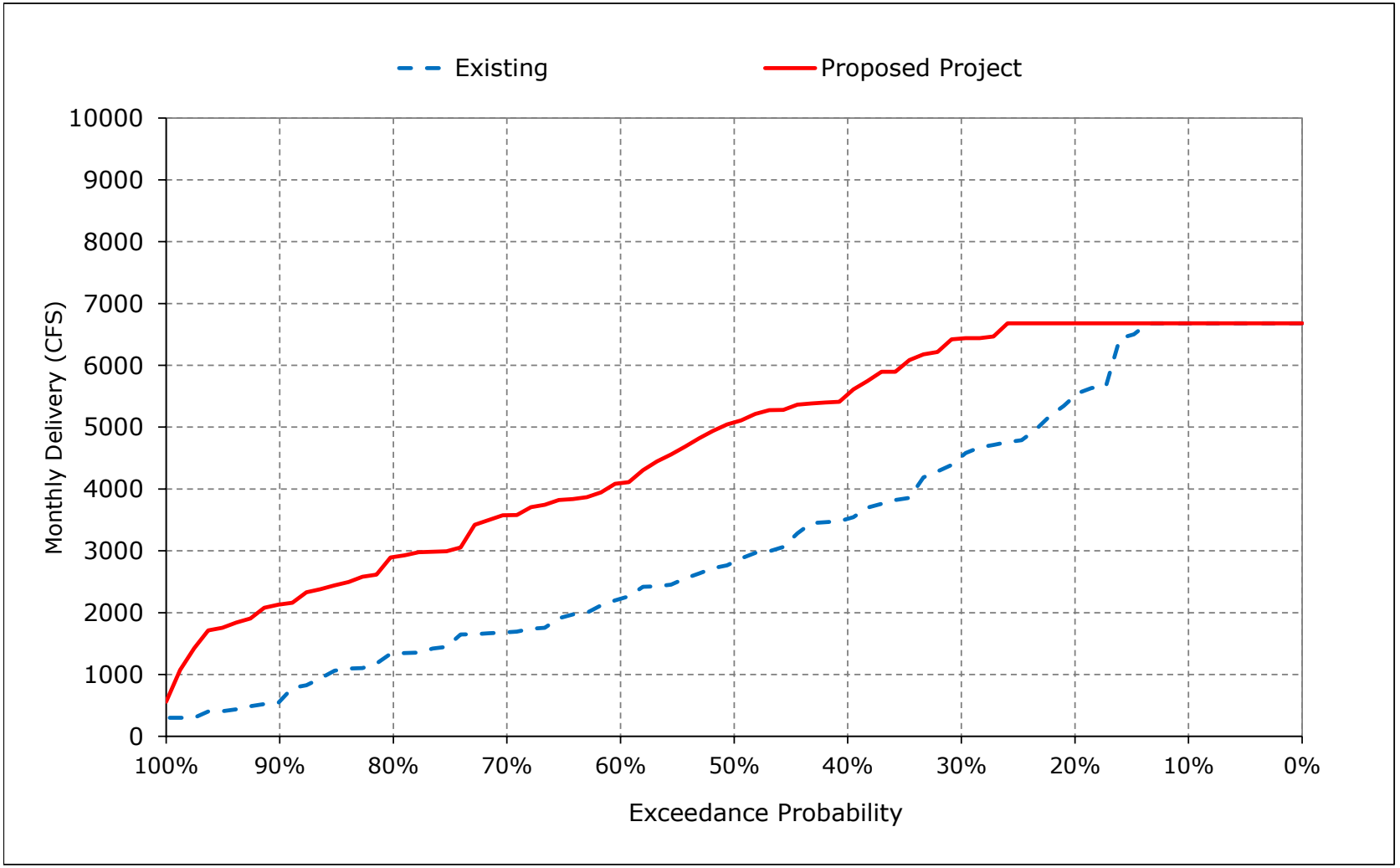


Figure 4-9. SWP Banks PP Exports, December

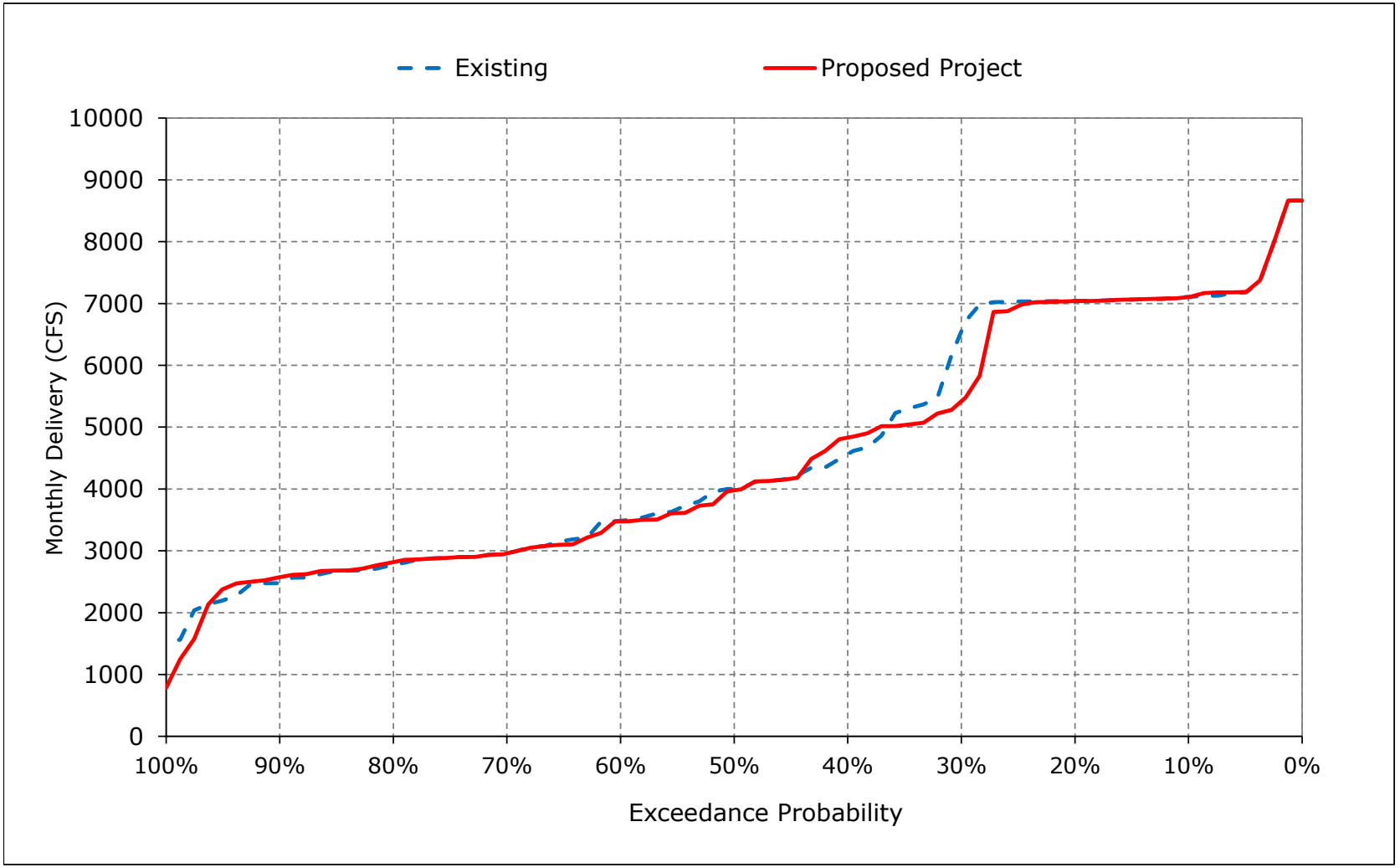


Figure 4-10. SWP Banks PP Exports, January

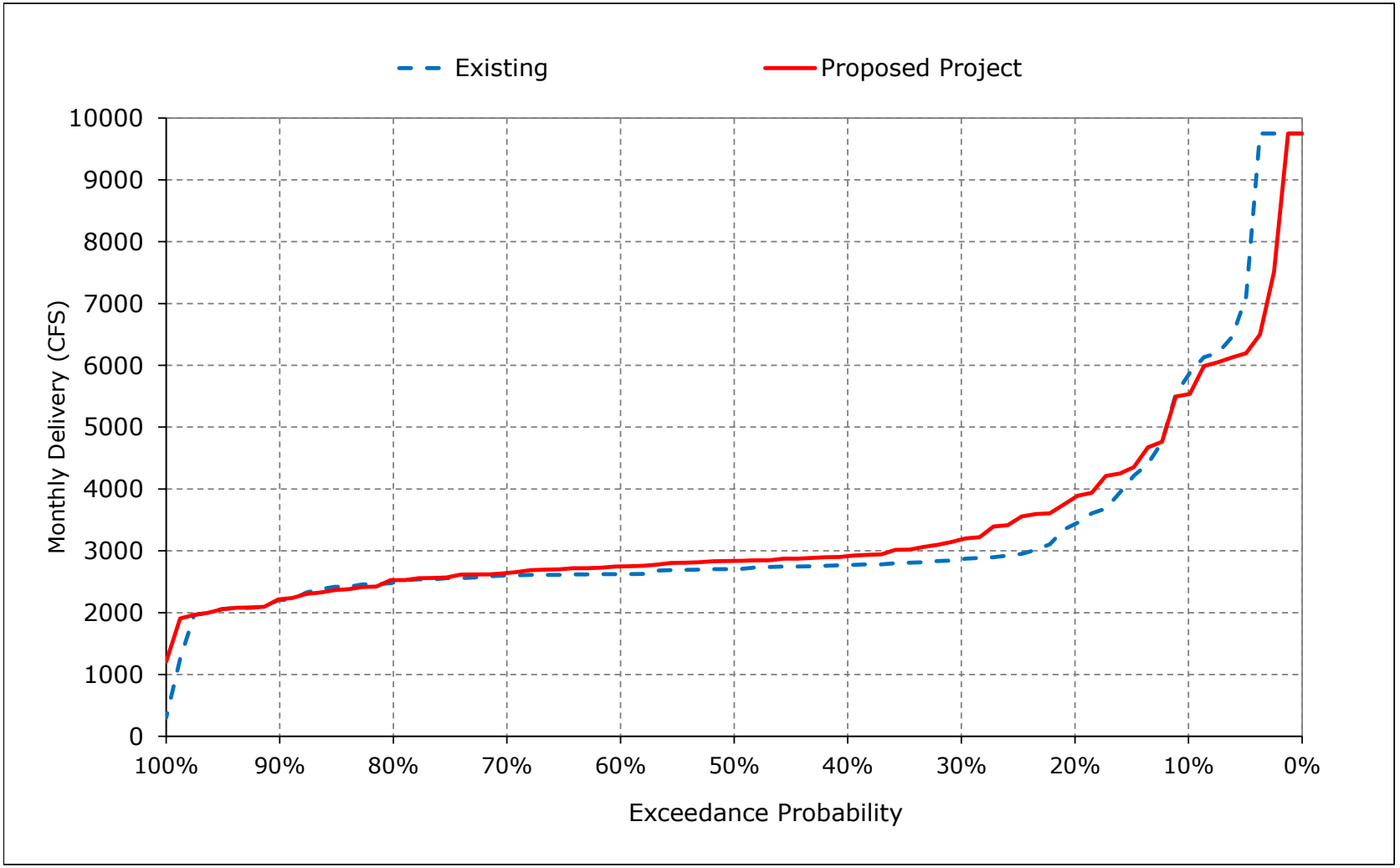


Figure 4-11. SWP Banks PP Exports, February

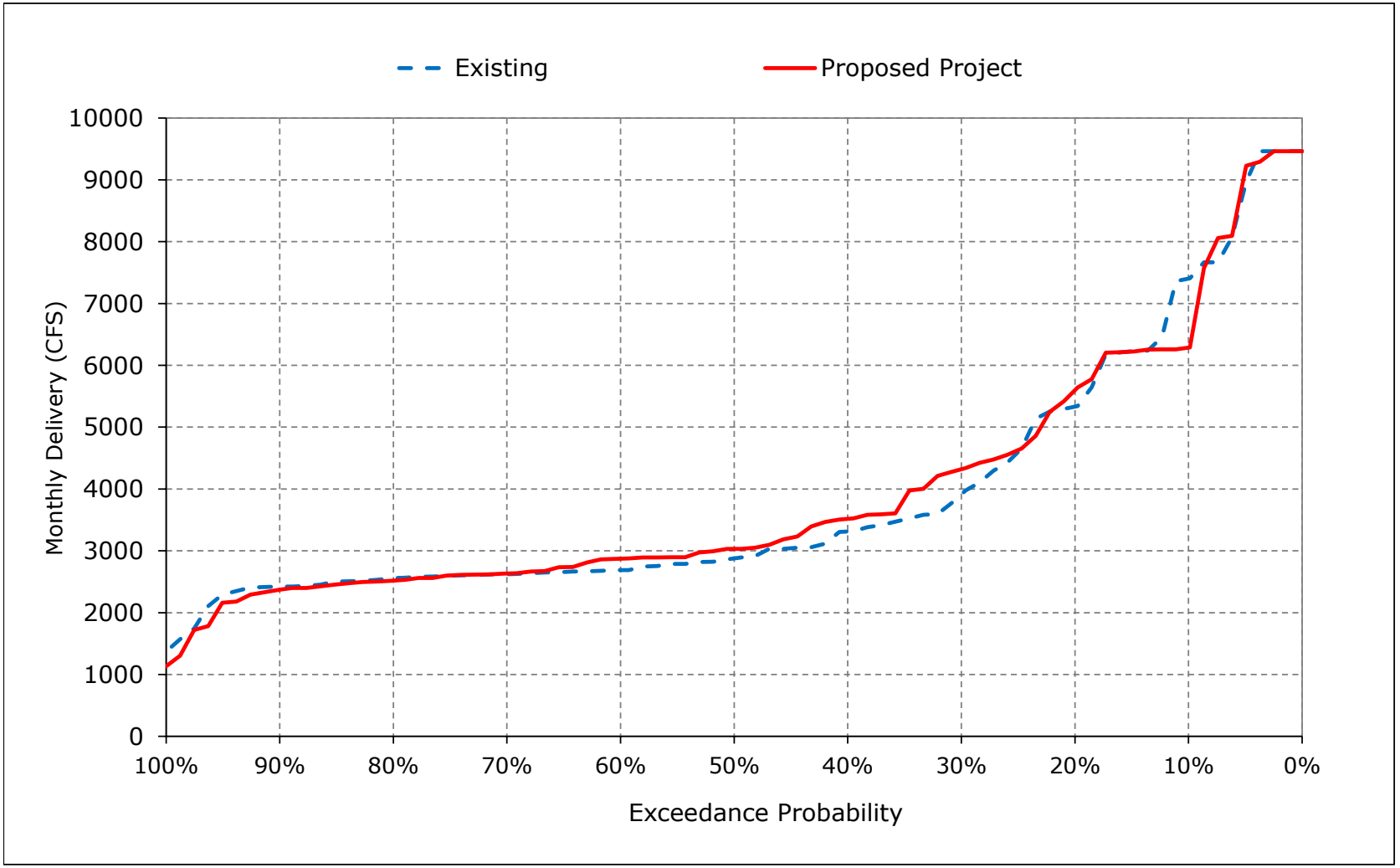


Figure 4-12. SWP Banks PP Exports, March

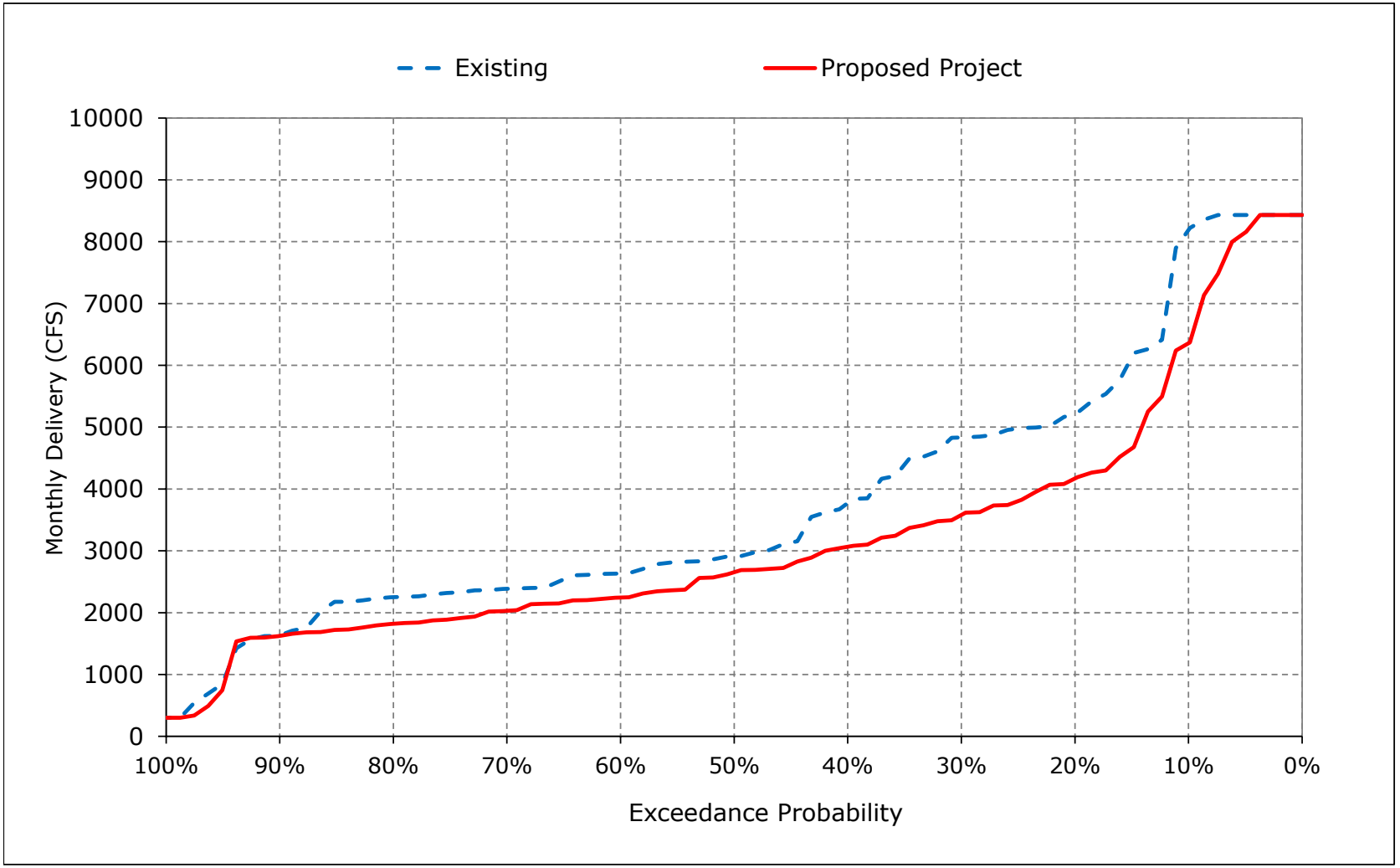


Figure 4-13. SWP Banks PP Exports, April

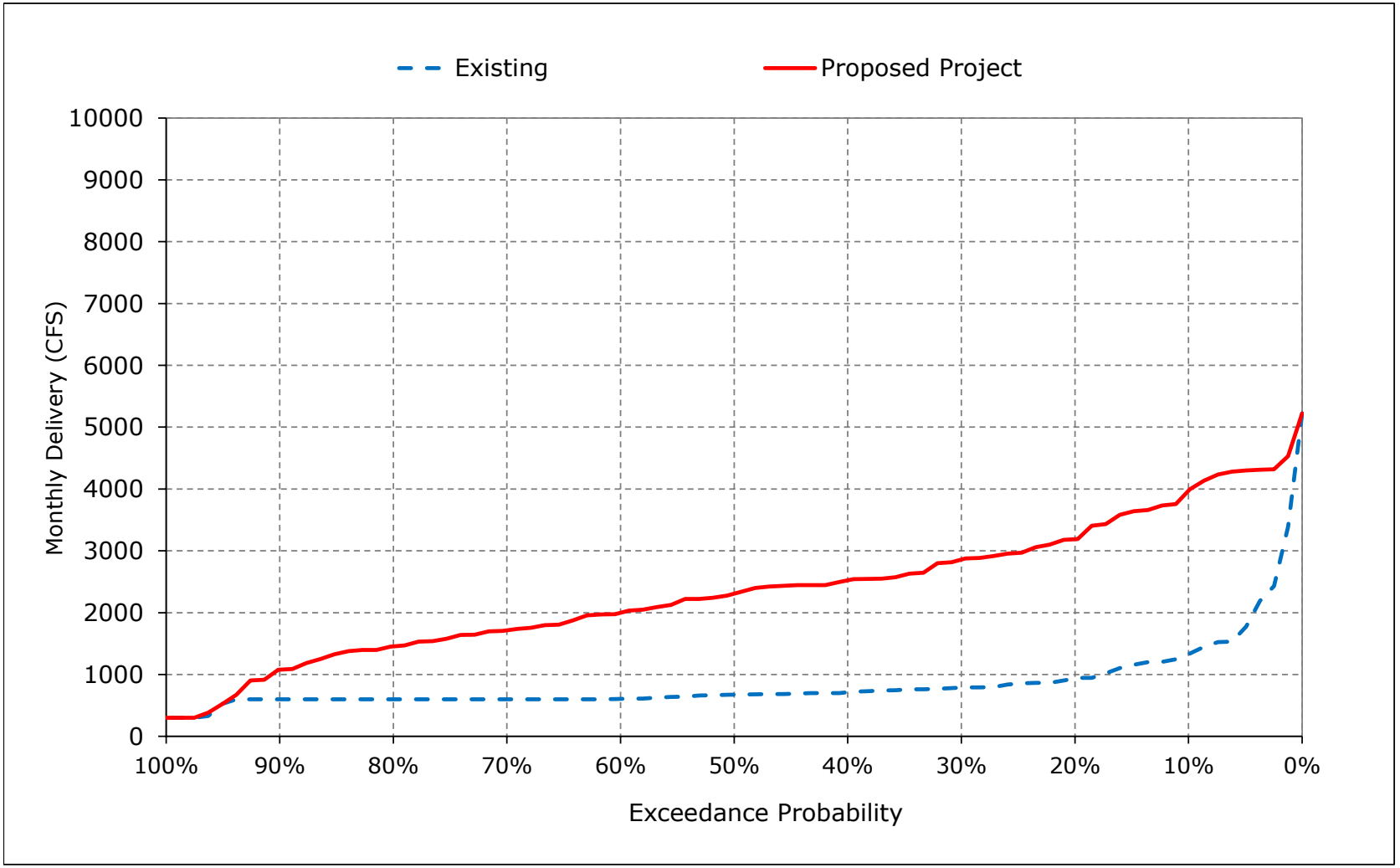


Figure 4-14. SWP Banks PP Exports, May

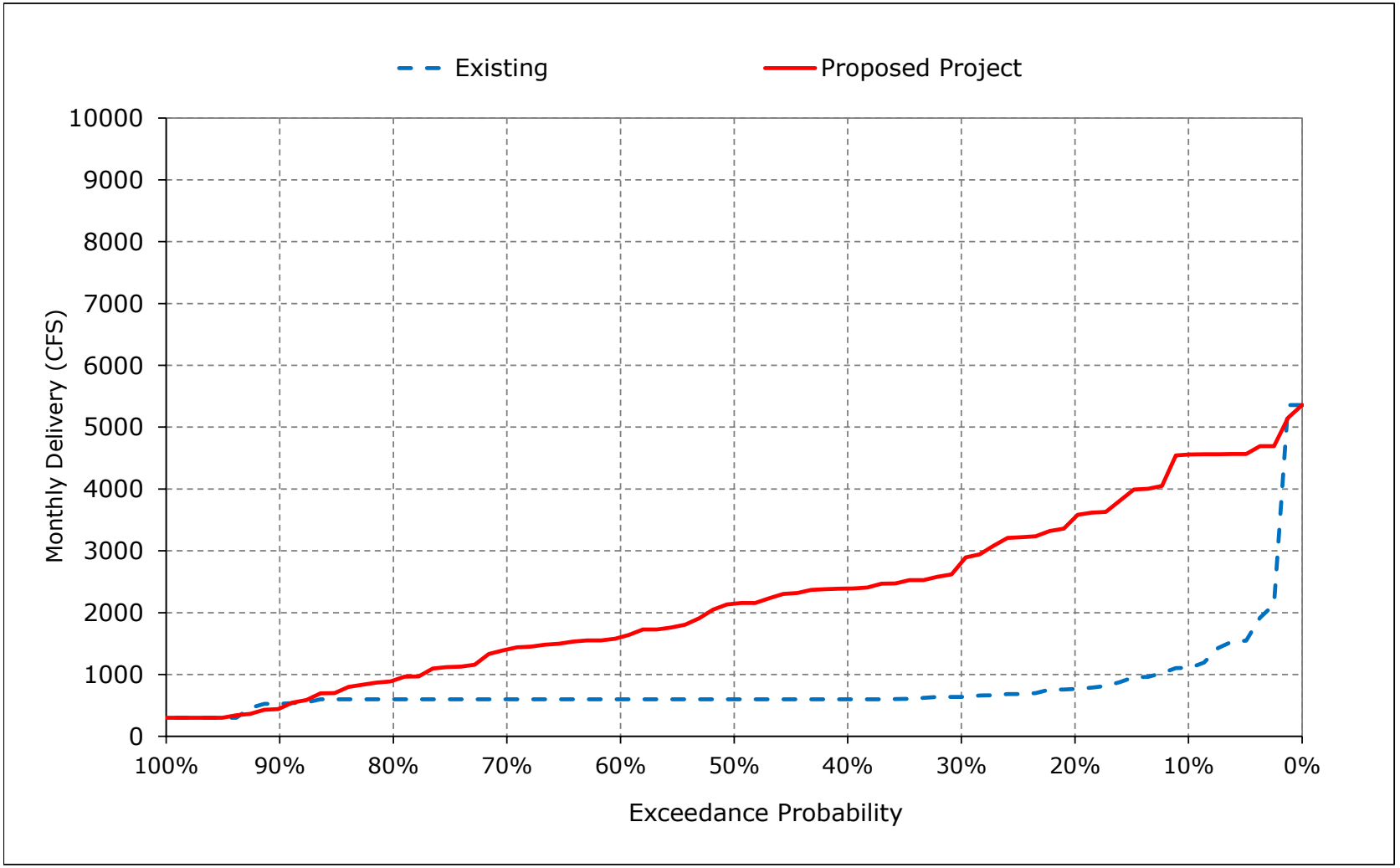


Figure 4-15. SWP Banks PP Exports, June

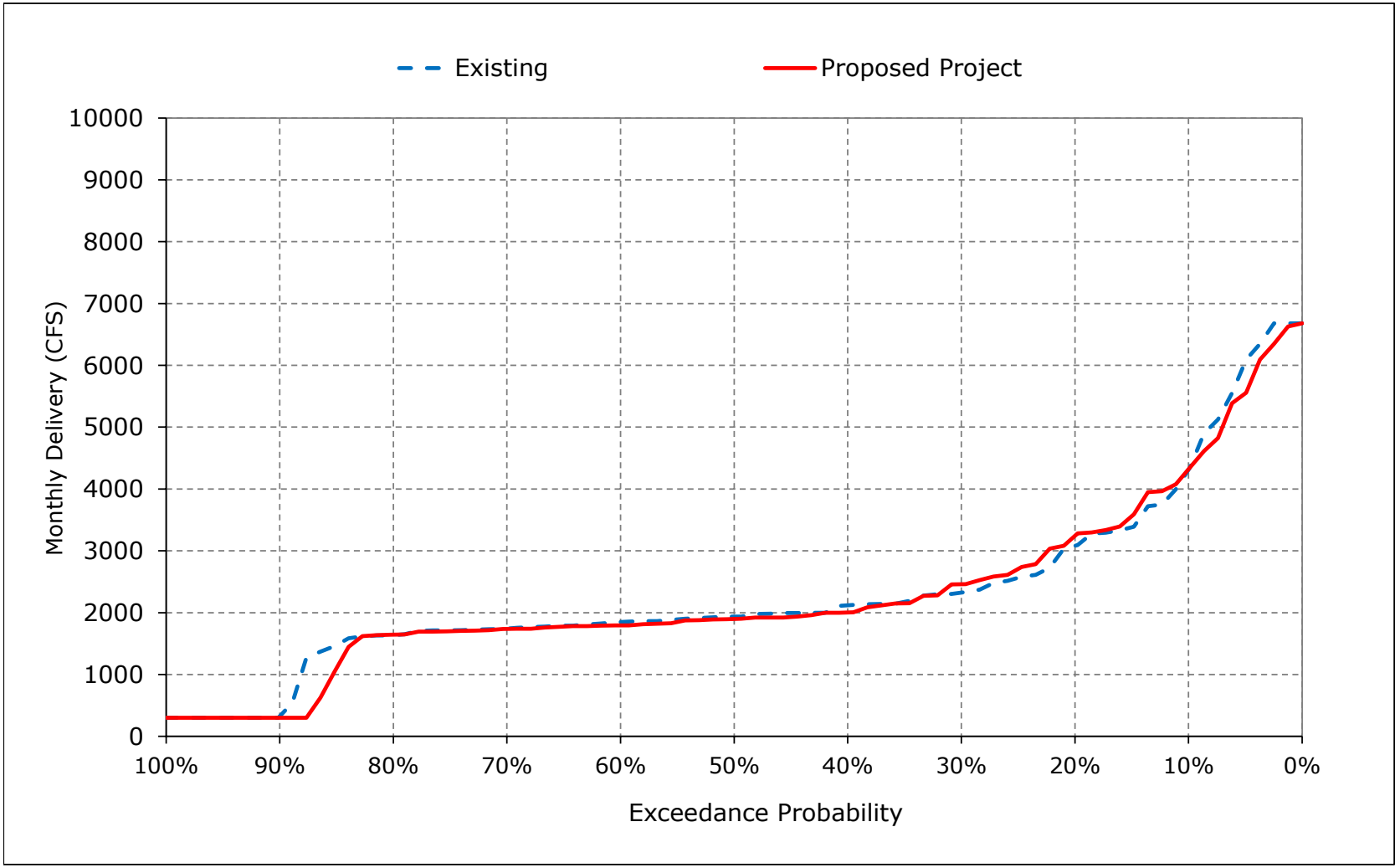


Figure 4-16. SWP Banks PP Exports, July

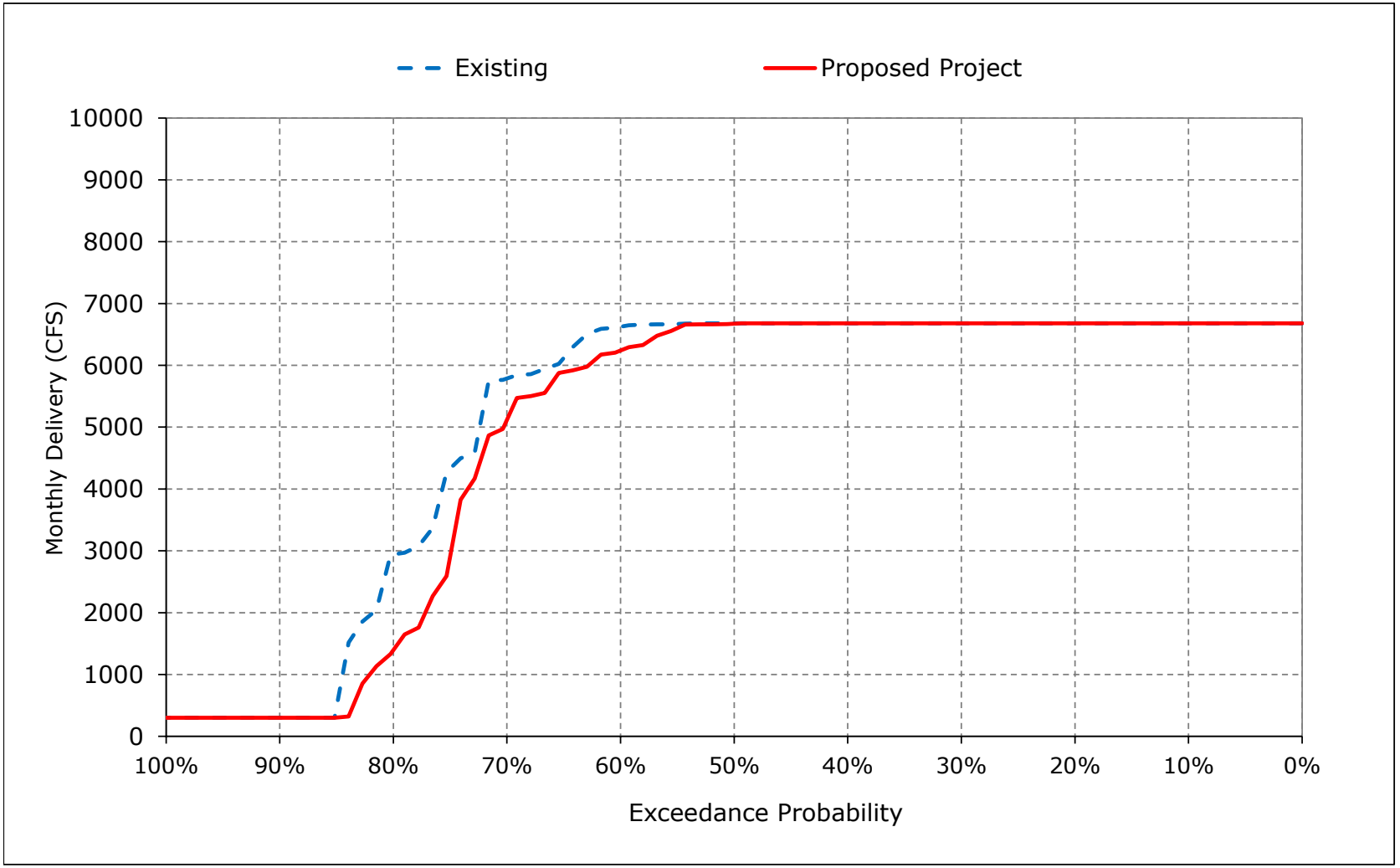


Figure 4-17. SWP Banks PP Exports, August

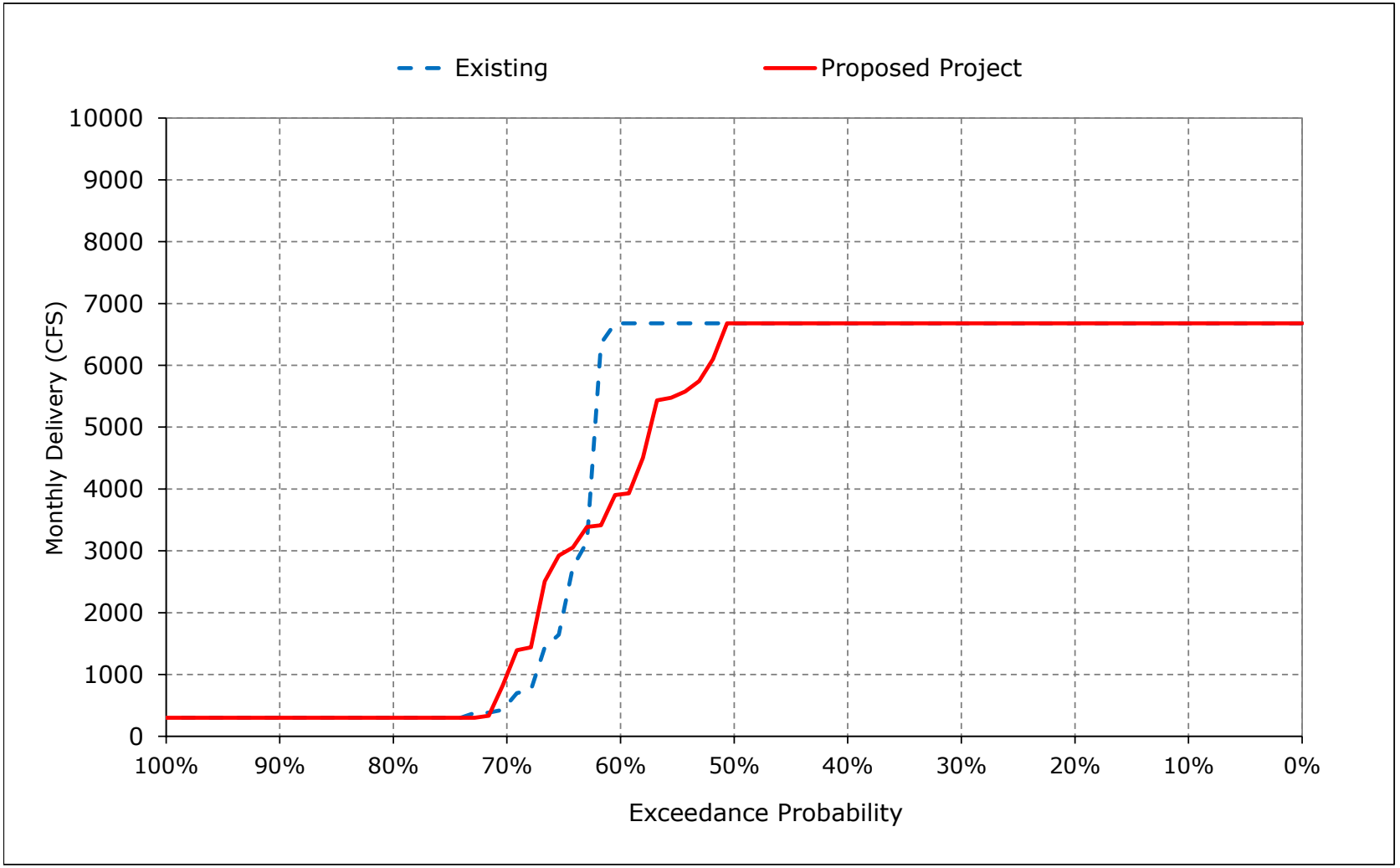


Figure 4-18. SWP Banks PP Exports, September

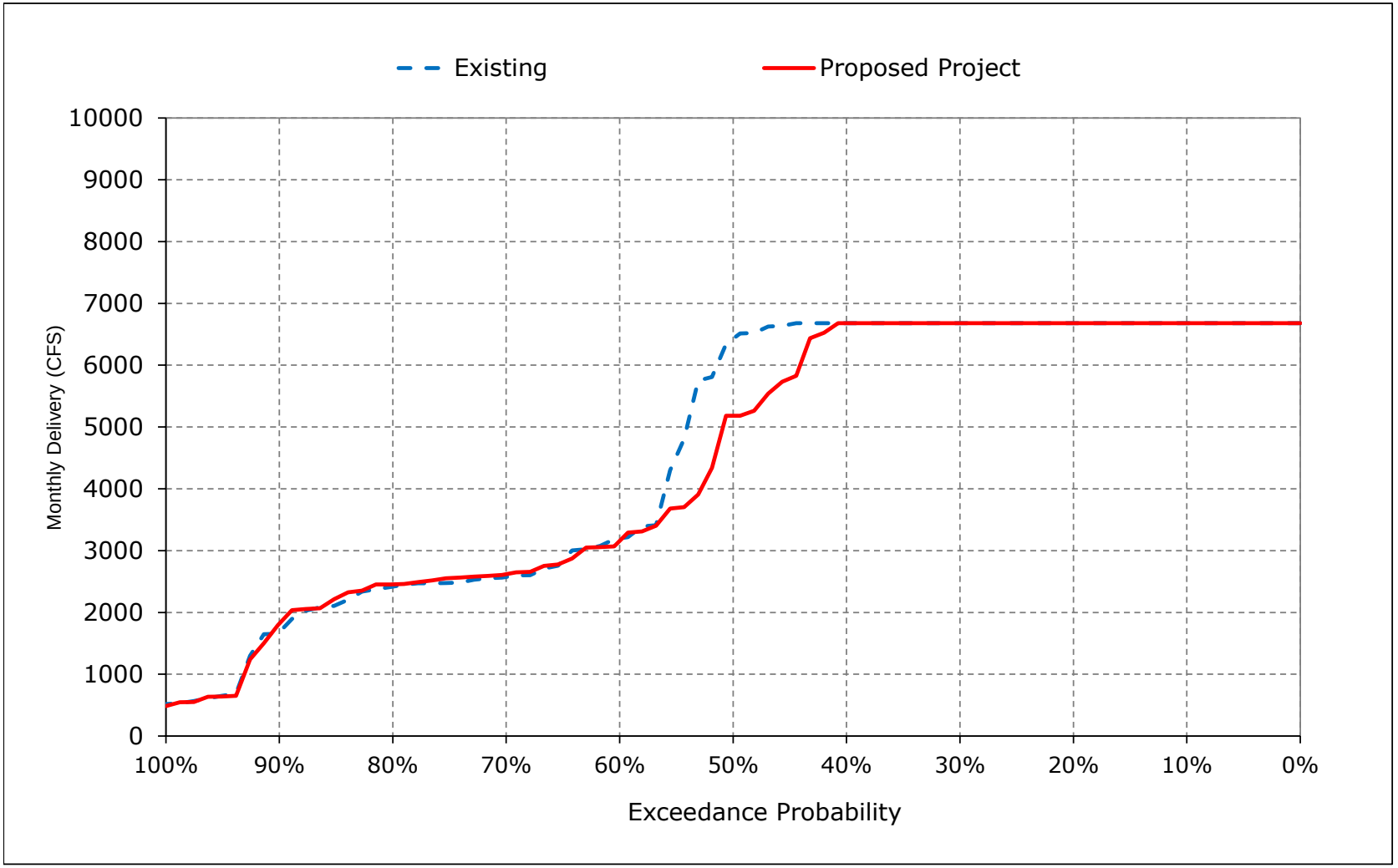


Table 5-1. CVP Banks PP Exports, Monthly Delivery

Existing

Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	1,875	0	0	0	0	0	0	0	915	293	0
20%	0	1,705	0	0	0	0	0	0	0	622	0	0
30%	0	1,454	0	0	0	0	0	0	0	76	0	0
40%	0	163	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[a]	69	660	19	0	41	10	0	0	0	224	95	103
Water Year Types[b,c]												
Wet (32%)	8	715	21	0	73	0	0	0	0	33	0	0
Above Normal (15%)	74	740	0	0	73	0	0	0	0	0	0	0
Below Normal (17%)	84	759	0	0	41	0	0	0	0	1	107	602
Dry (22%)	113	647	0	0	0	44	0	0	0	632	347	0
Critical (15%)	111	361	85	0	0	0	0	0	0	513	1	0

Proposed Project

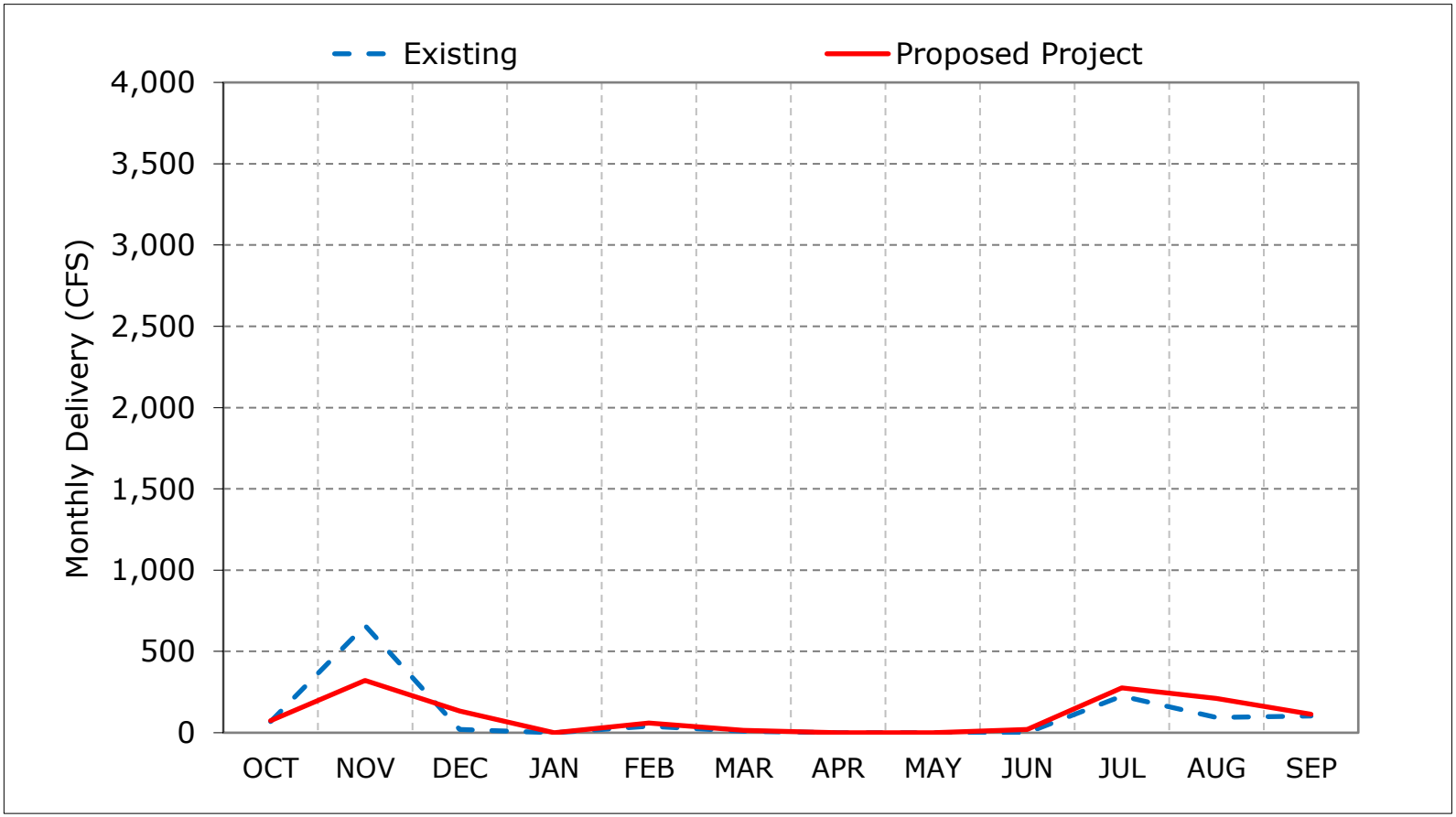
Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	1,297	211	0	0	0	0	0	0	1,074	975	14
20%	0	745	0	0	0	0	0	0	0	692	35	0
30%	0	91	0	0	0	0	0	0	0	235	0	0
40%	0	0	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[a]	74	322	134	0	60	15	0	0	20	276	212	114
Water Year Types[b,c]												
Wet (32%)	33	258	0	0	140	49	0	0	62	70	256	0
Above Normal (15%)	99	384	175	0	62	0	0	0	0	0	166	0
Below Normal (17%)	102	394	154	0	39	0	0	0	0	142	160	652
Dry (22%)	145	269	160	0	0	0	0	0	0	707	319	13
Critical (15%)	0	390	318	0	0	0	0	0	0	508	60	0

Proposed Project minus Existing

Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	**-579**	211	0	0	0	0	0	0	159	683	14
20%	0	**-960**	0	0	0	0	0	0	0	70	35	0
30%	0	**-1,363**	0	0	0	0	0	0	0	159	0	0
40%	0	**-163**	0	0	0	0	0	0	0	0	0	0
50%	0	0	0	0	0	0	0	0	0	0	0	0
60%	0	0	0	0	0	0	0	0	0	0	0	0
70%	0	0	0	0	0	0	0	0	0	0	0	0
80%	0	0	0	0	0	0	0	0	0	0	0	0
90%	0	0	0	0	0	0	0	0	0	0	0	0
Long Term												
Full Simulation Period[a]	6	**-338**	114	0	19	6	0	0	20	52	117	11
Water Year Types[b,c]												
Wet (32%)	25	**-456**	**-21**	0	67	49	0	0	62	37	256	0
Above Normal (15%)	25	**-357**	175	0	**-11**	0	0	0	0	0	166	0
Below Normal (17%)	18	**-365**	154	0	**-2**	0	0	0	0	140	52	50
Dry (22%)	32	**-378**	160	0	0	**-44**	0	0	0	75	**-28**	13
Critical (15%)	**-111**	29	232	0	0	0	0	0	0	**-5**	59	0

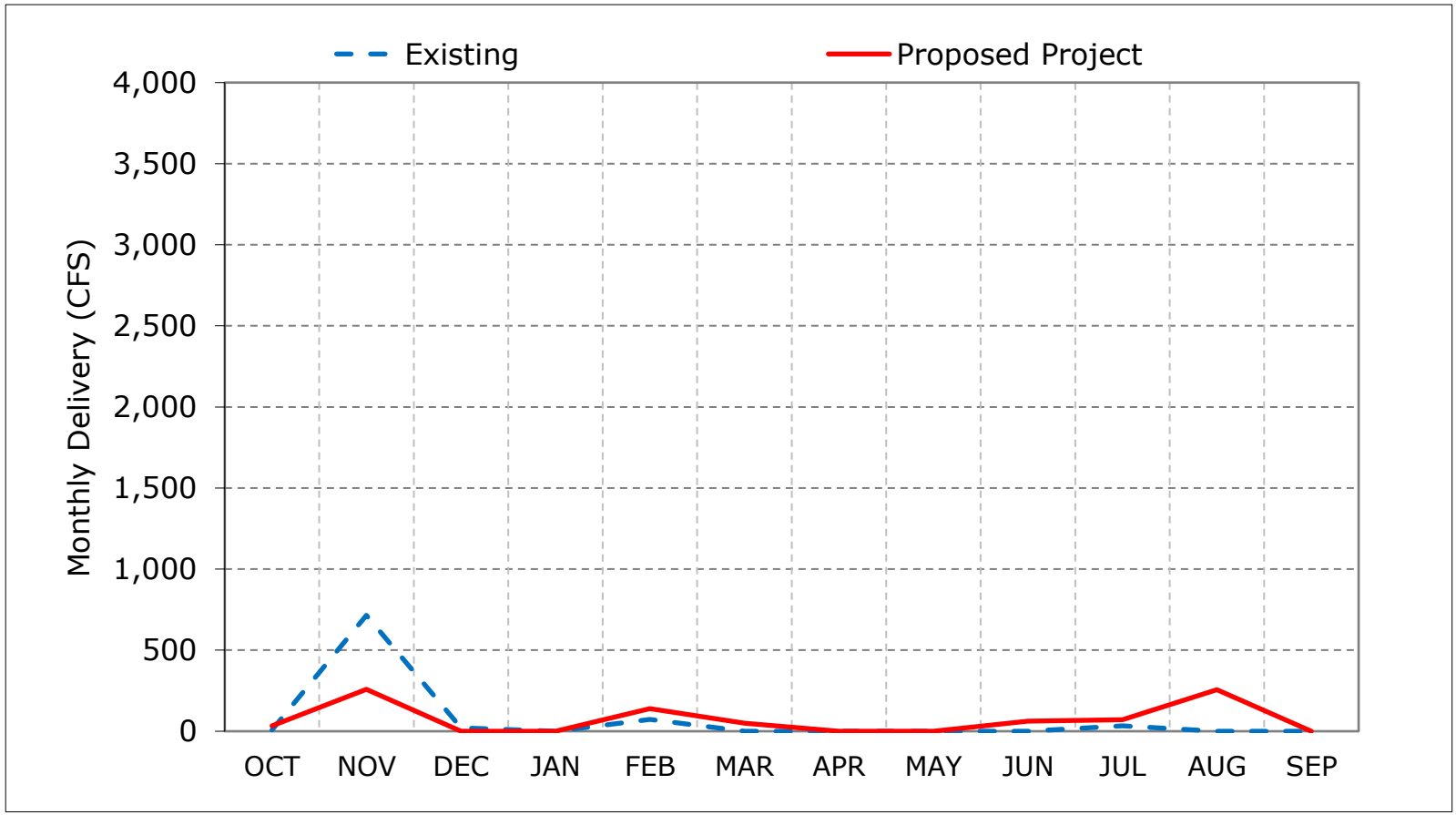
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

Figure 5-1. CVP Banks PP Exports, Long-Term Average Delivery



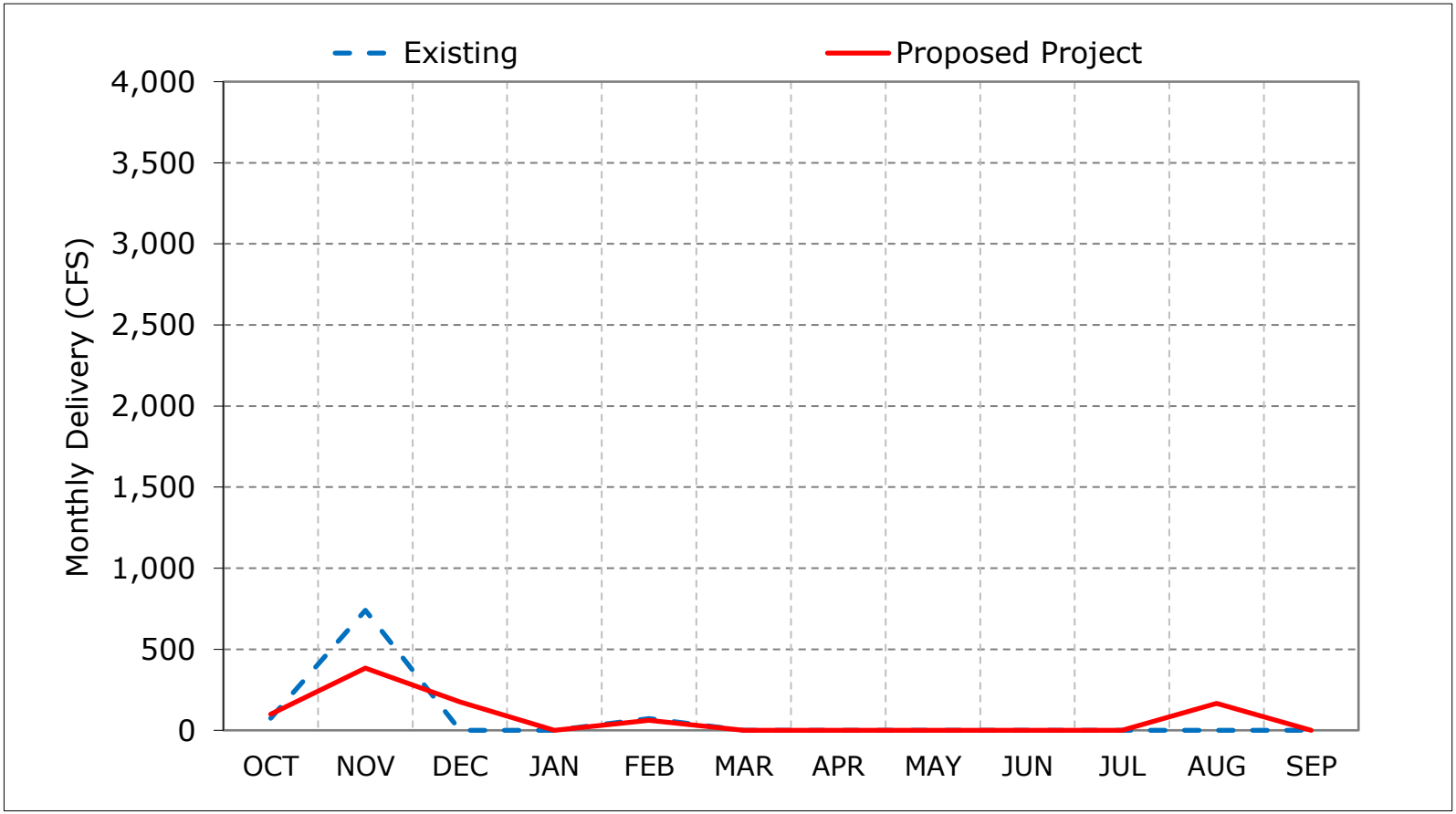
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 5-2. CVP Banks PP Exports, Wet Year Average Delivery



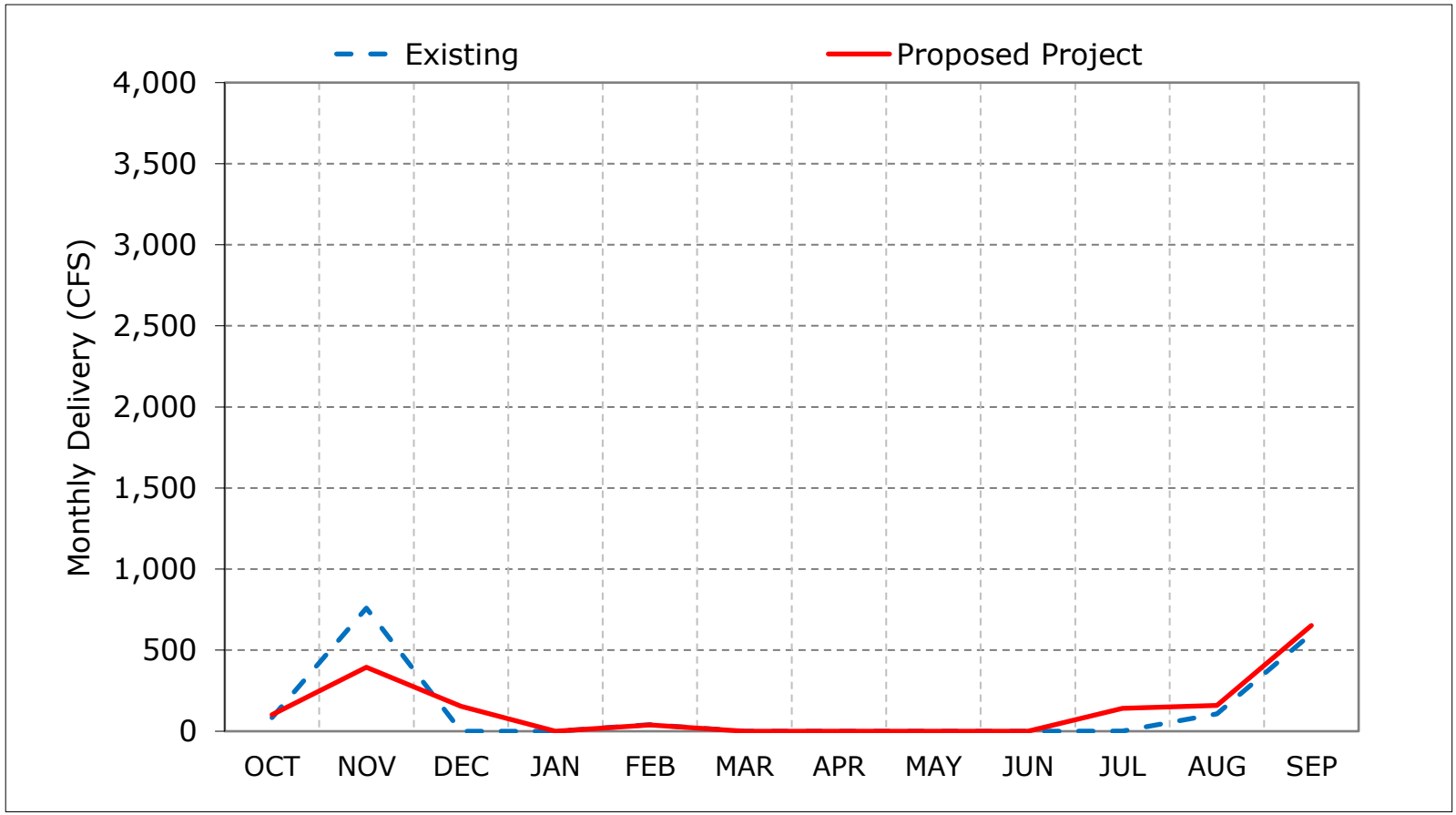
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 5-3. CVP Banks PP Exports, Above Normal Year Average Delivery



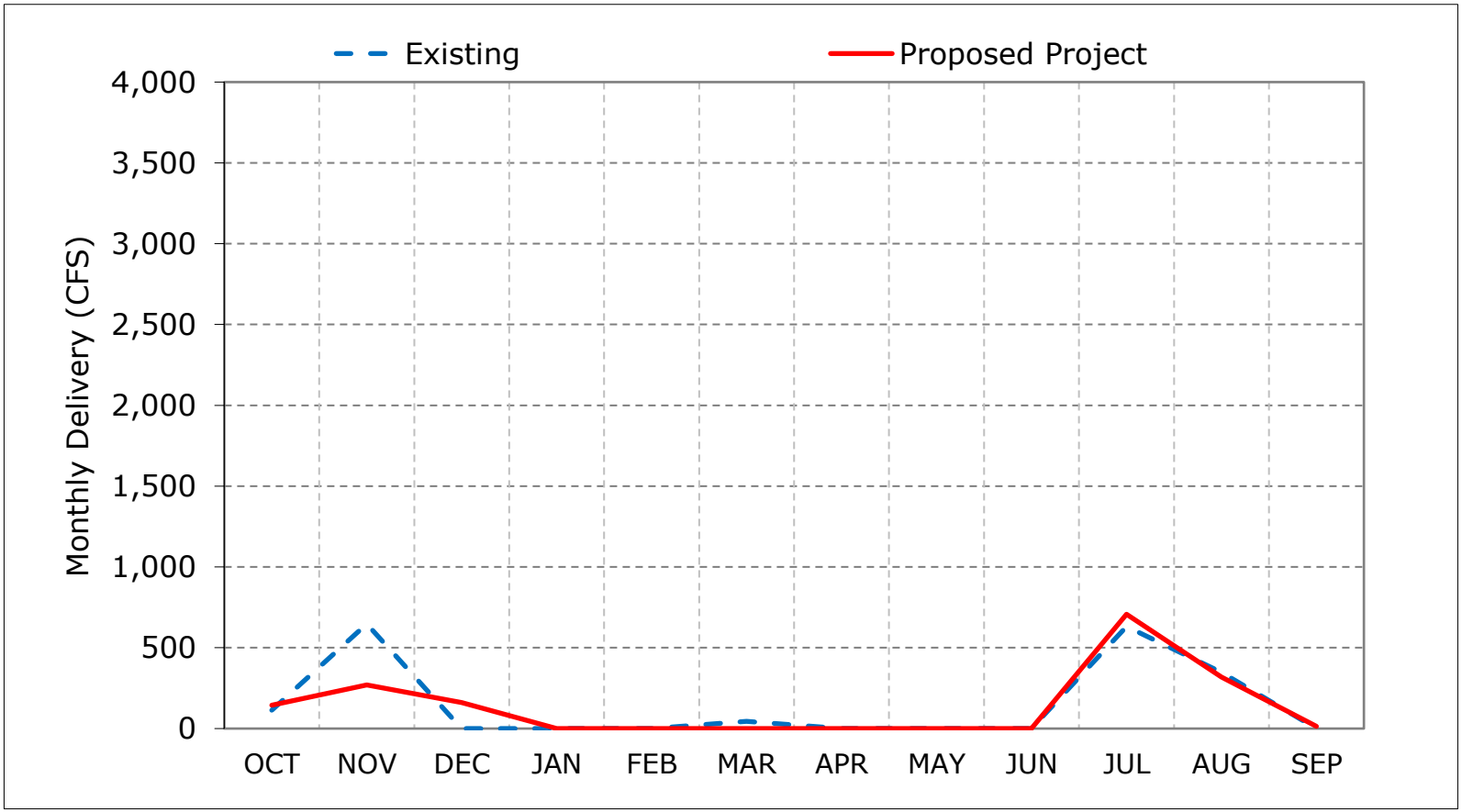
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 5-4. CVP Banks PP Exports, Below Normal Year Average Delivery



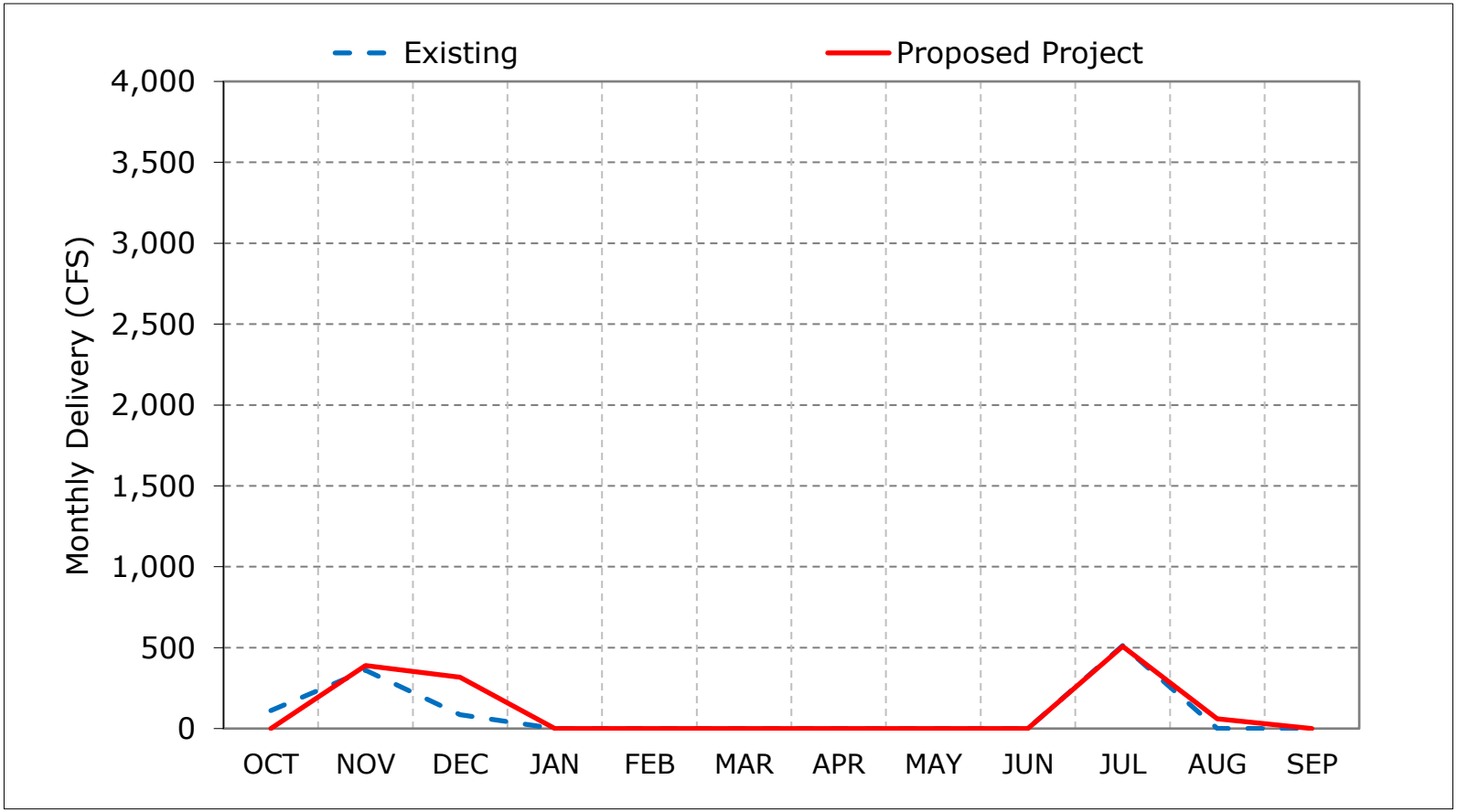
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 5-5. CVP Banks PP Exports, Dry Year Average Delivery



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 5-6. CVP Banks PP Exports, Critical Year Average Delivery



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 5-7. CVP Banks PP Exports, October

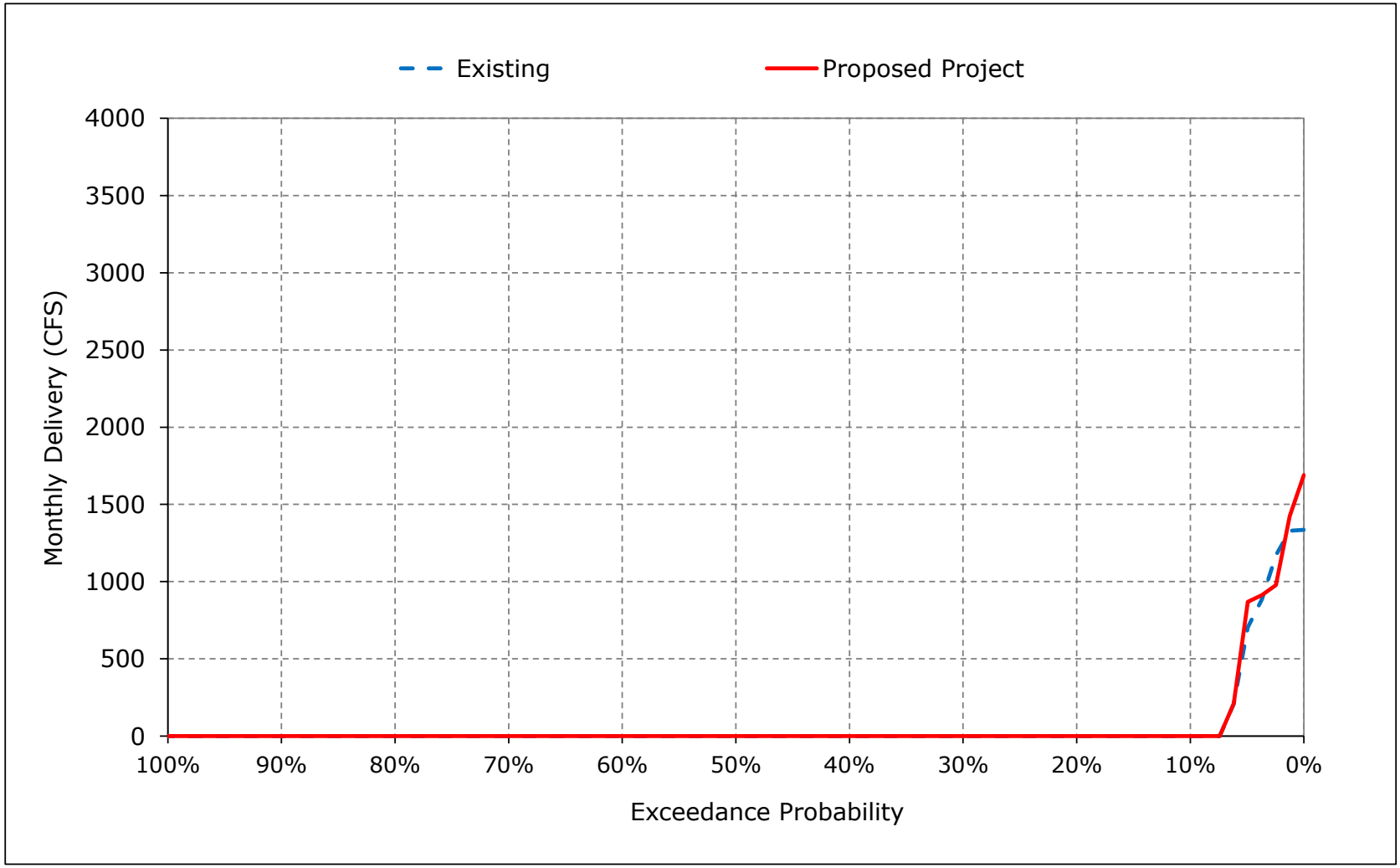


Figure 5-8. CVP Banks PP Exports, November

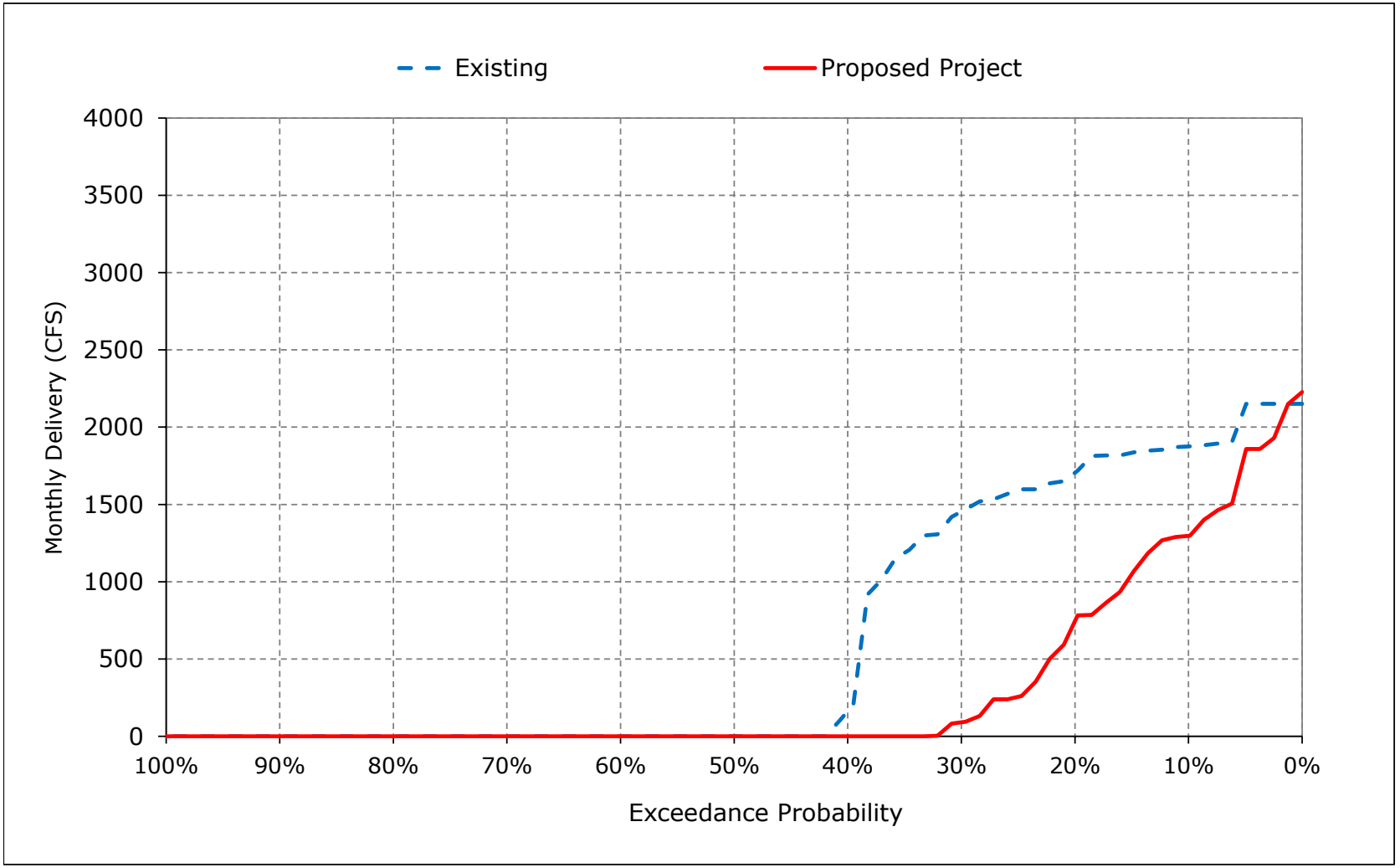


Figure 5-9. CVP Banks PP Exports, December

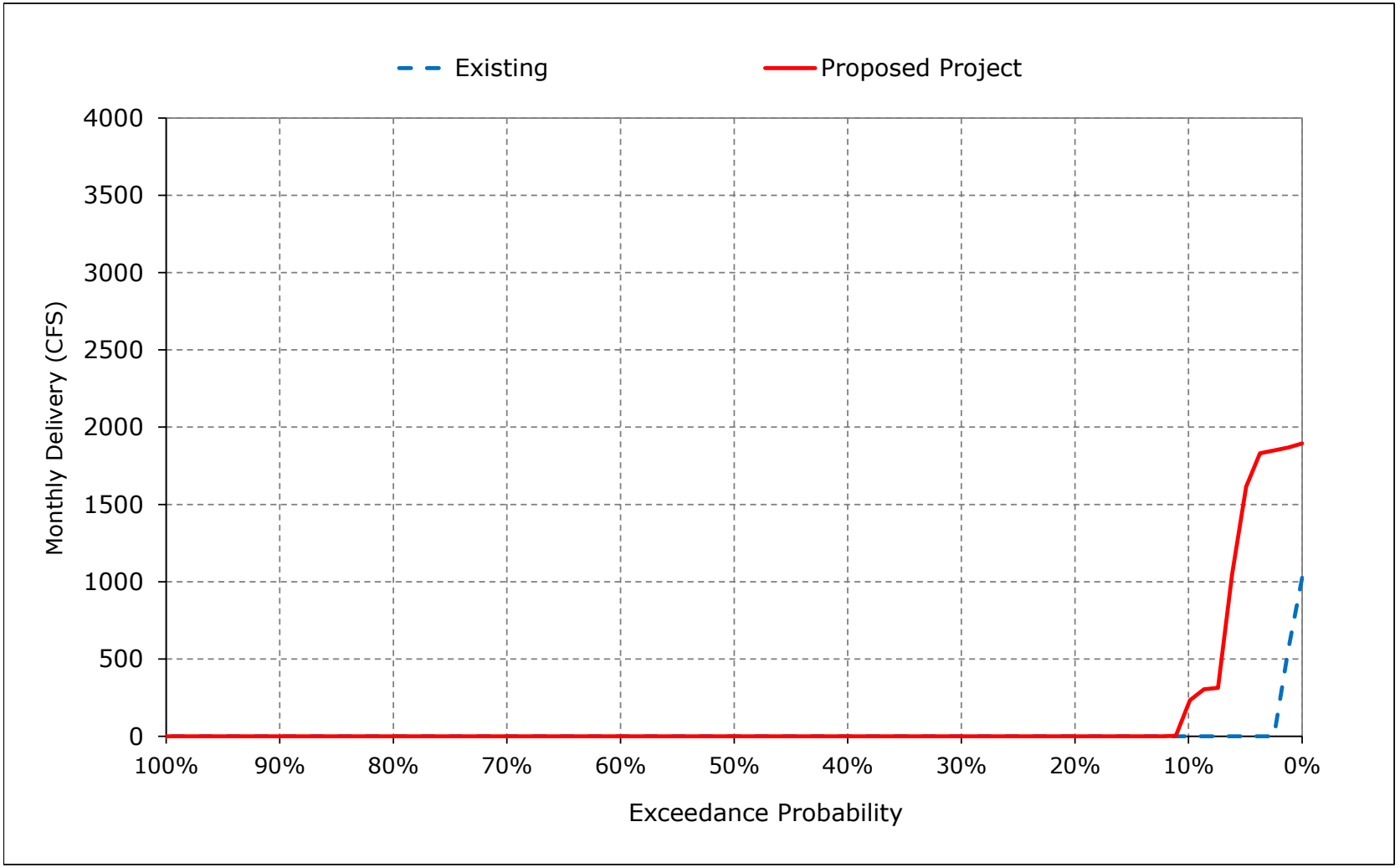


Figure 5-10. CVP Banks PP Exports, January

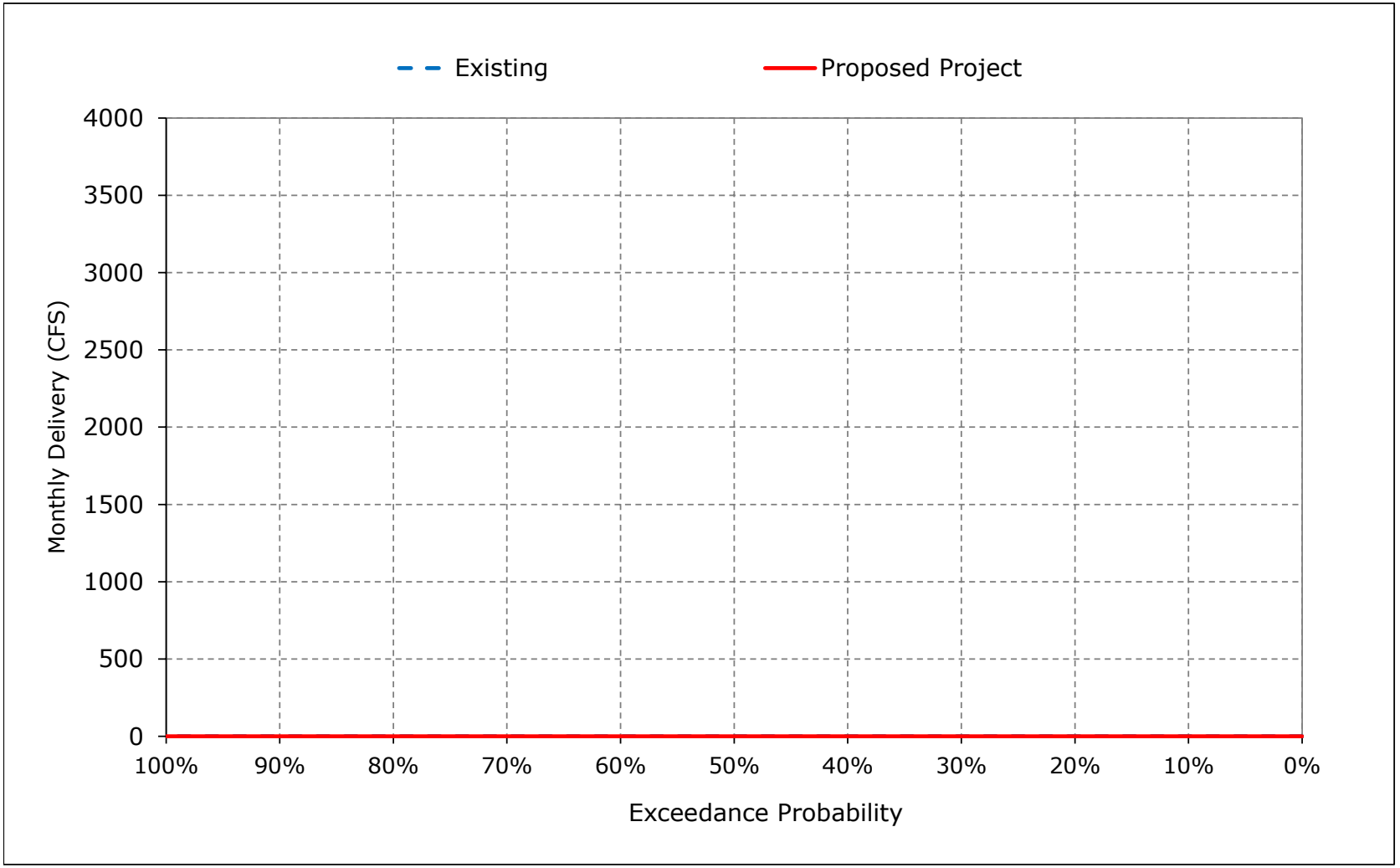


Figure 5-11. CVP Banks PP Exports, February

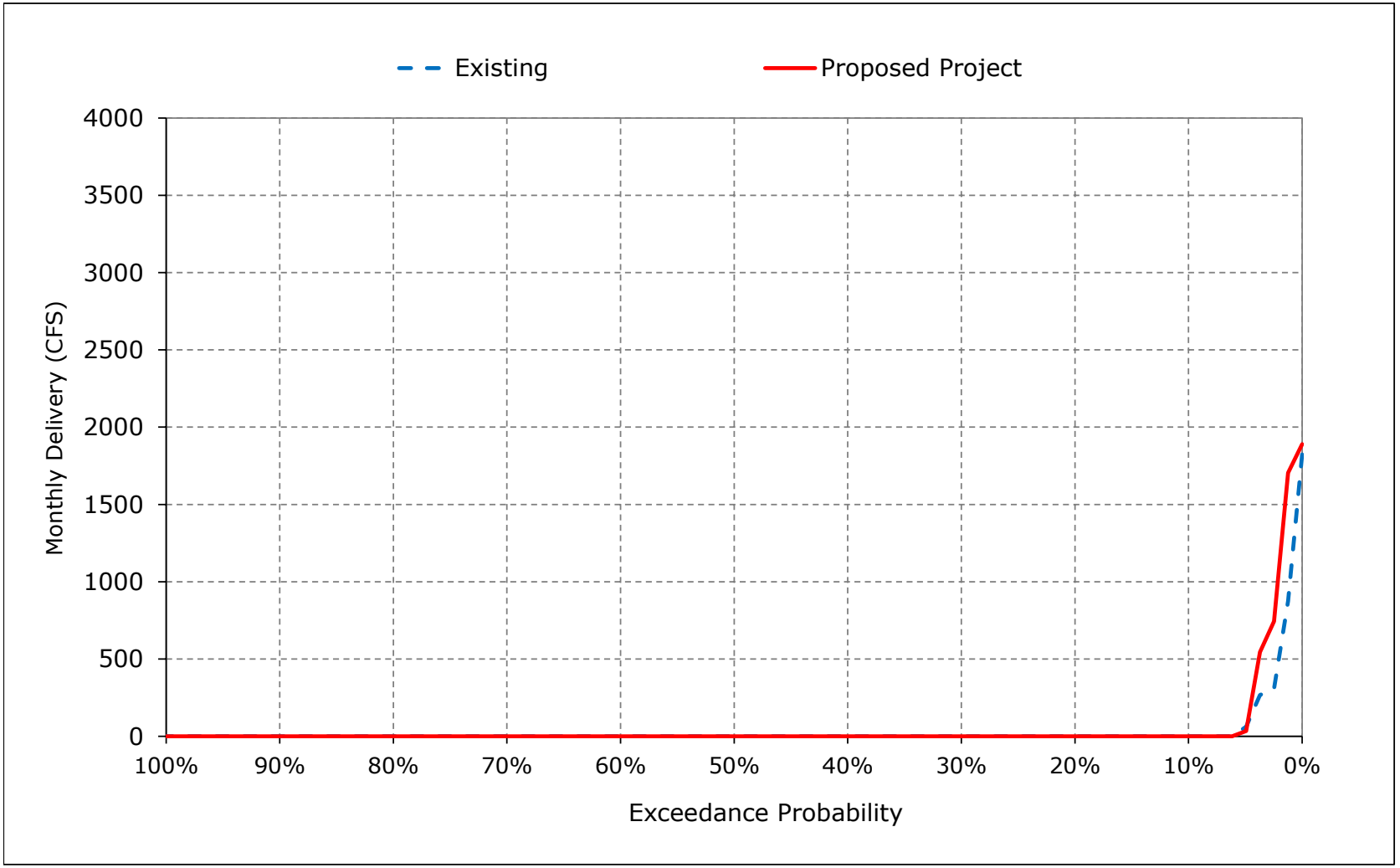


Figure 5-12. CVP Banks PP Exports, March

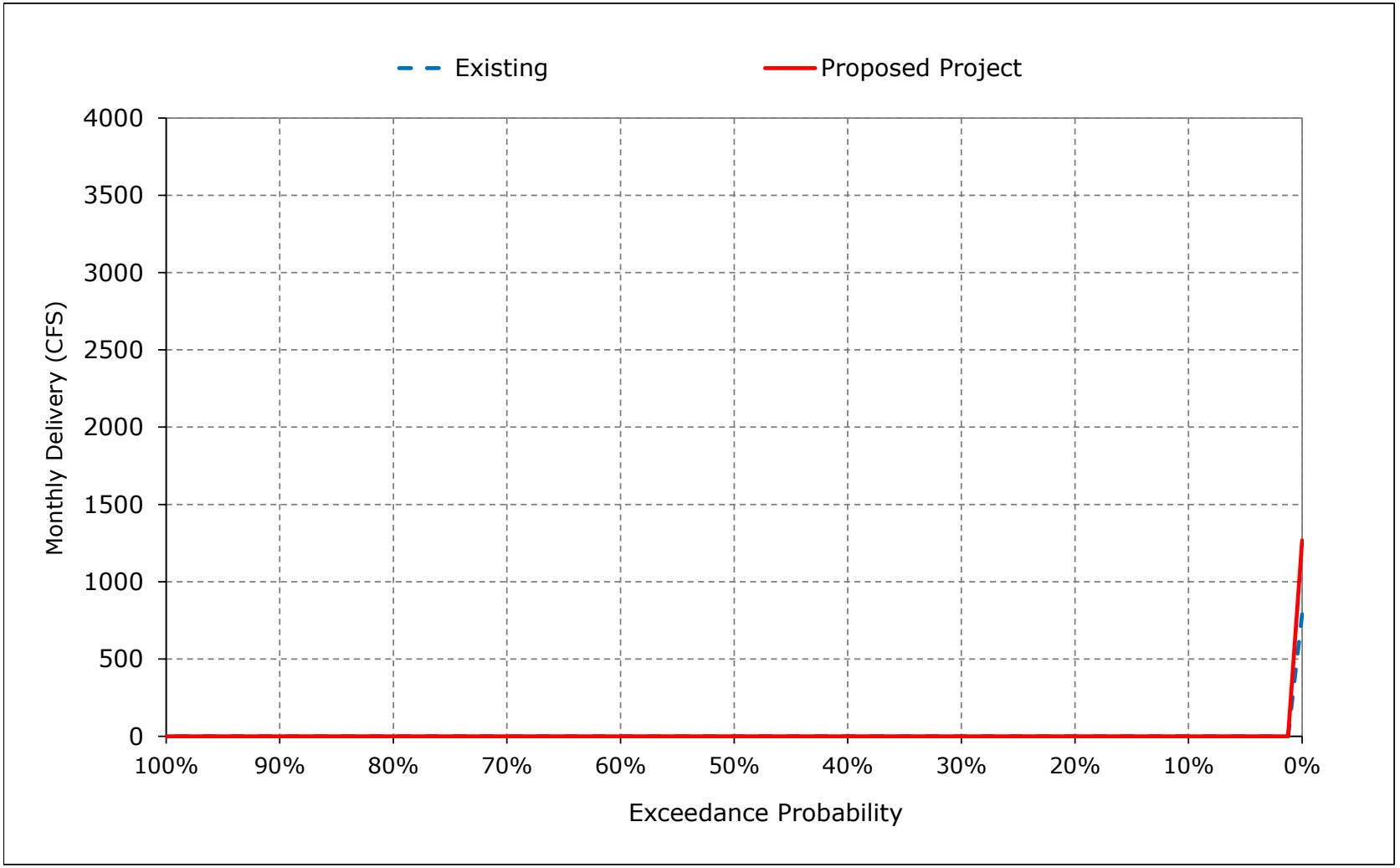


Figure 5-13. CVP Banks PP Exports, April

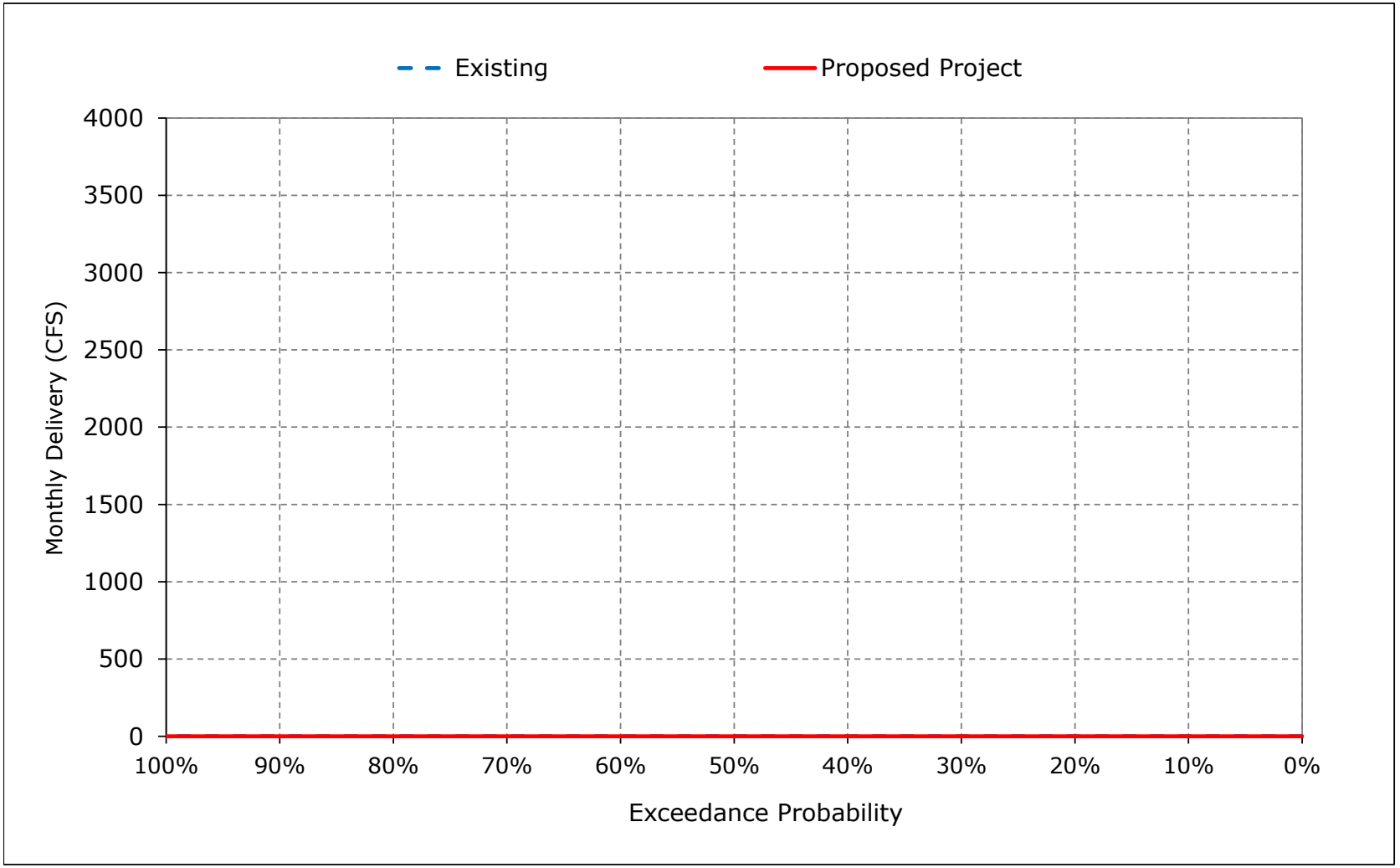


Figure 5-14. CVP Banks PP Exports, May

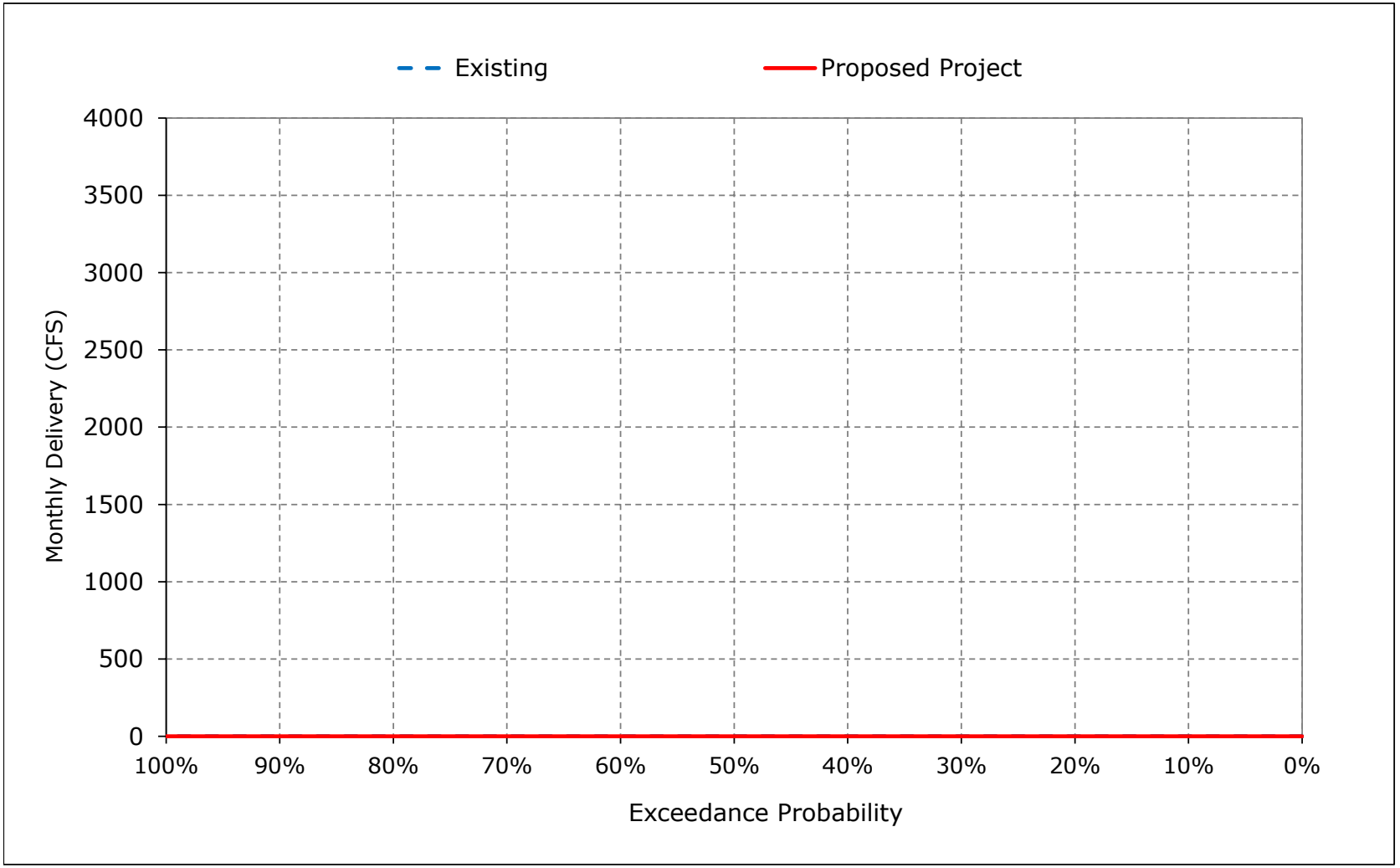


Figure 5-15. CVP Banks PP Exports, June

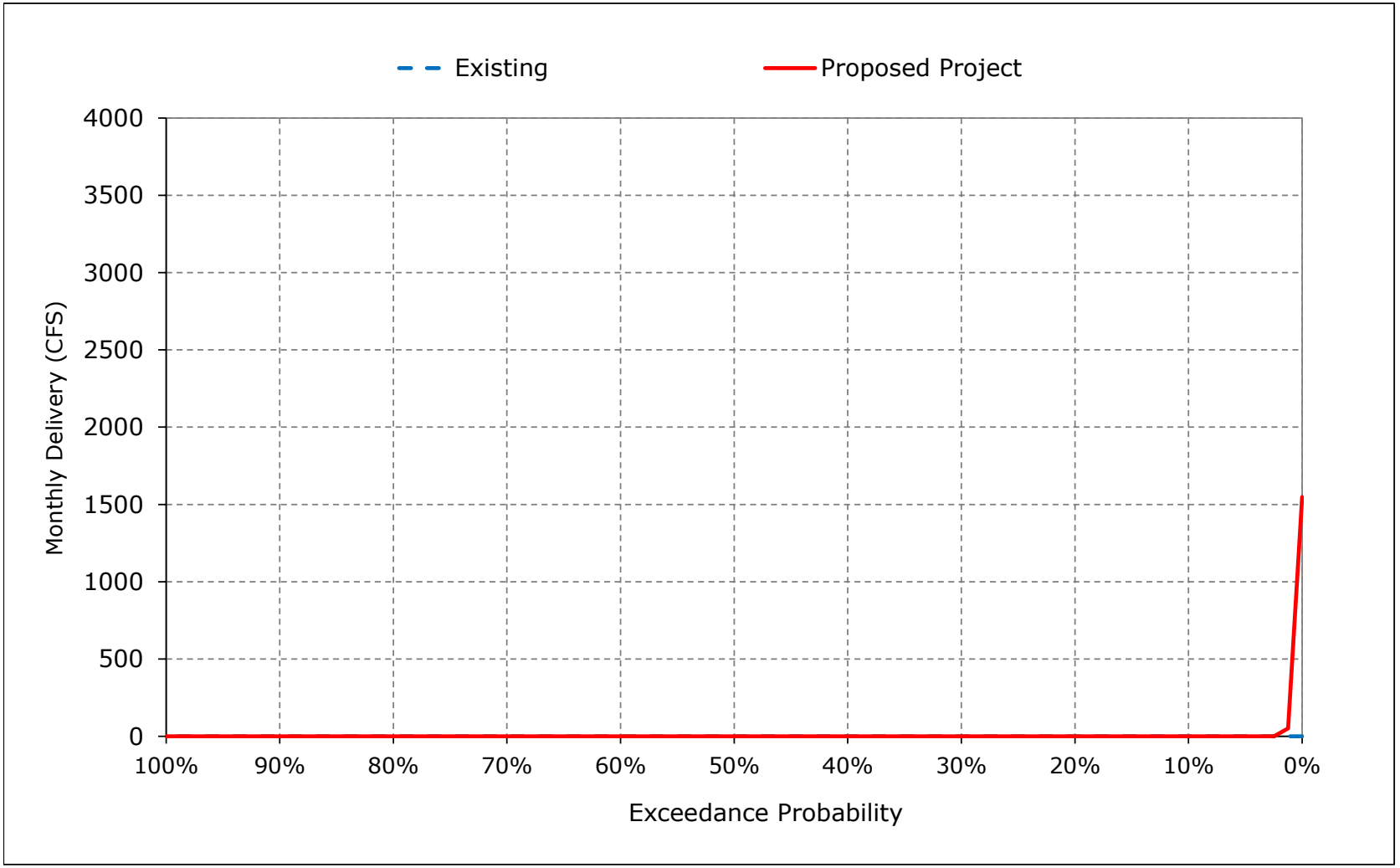


Figure 5-16. CVP Banks PP Exports, July

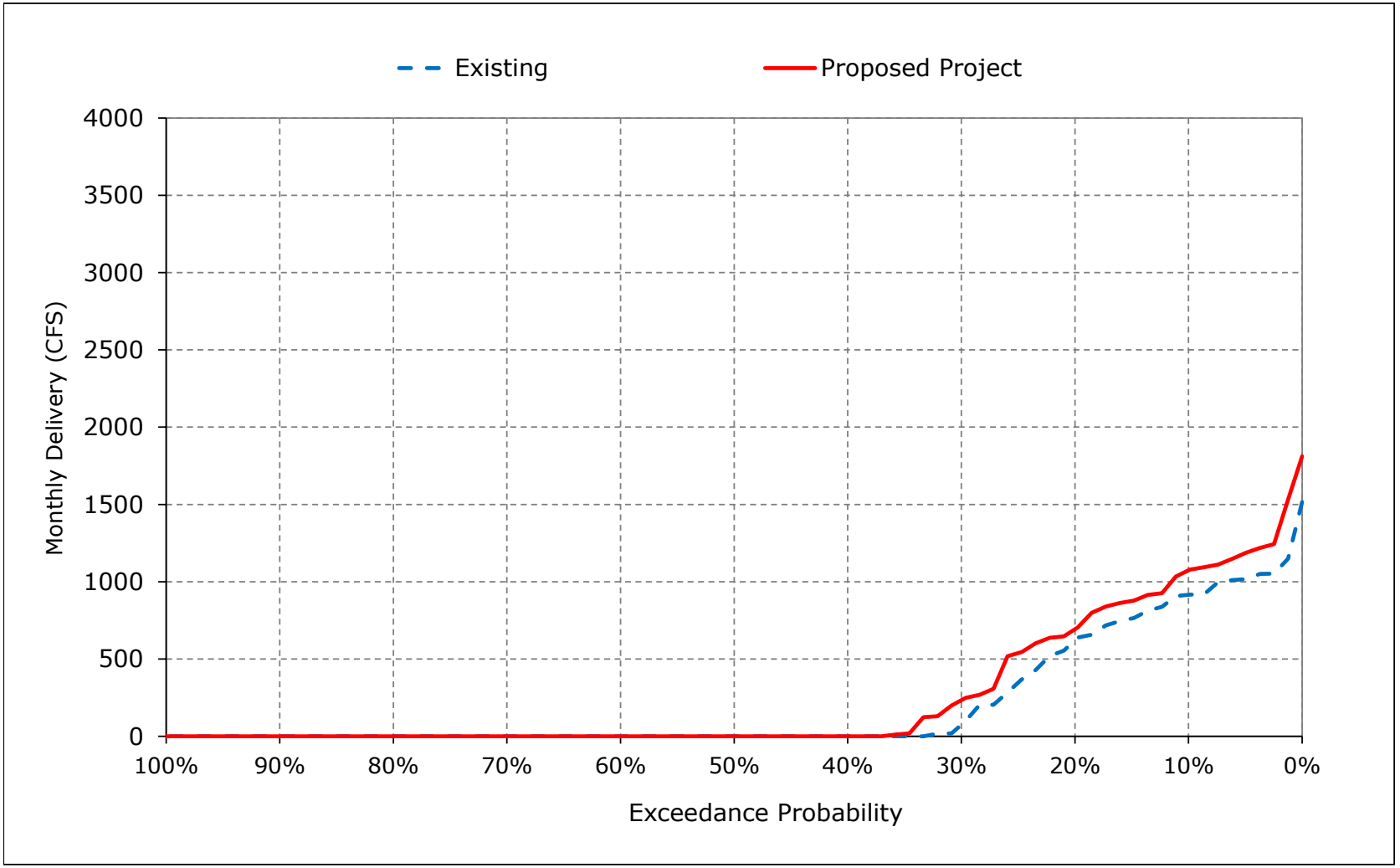


Figure 5-17. CVP Banks PP Exports, August

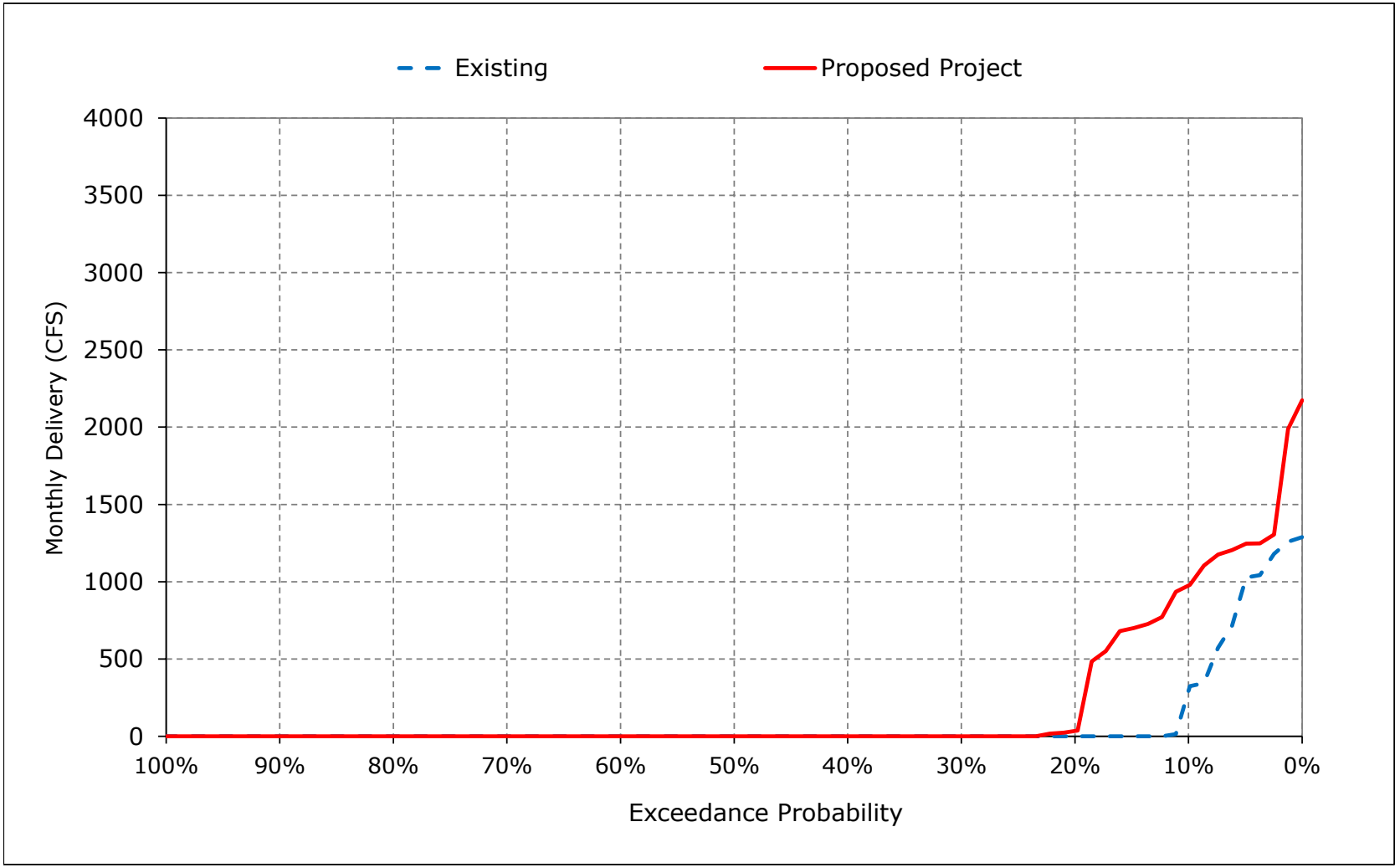


Figure 5-18. CVP Banks PP Exports, September

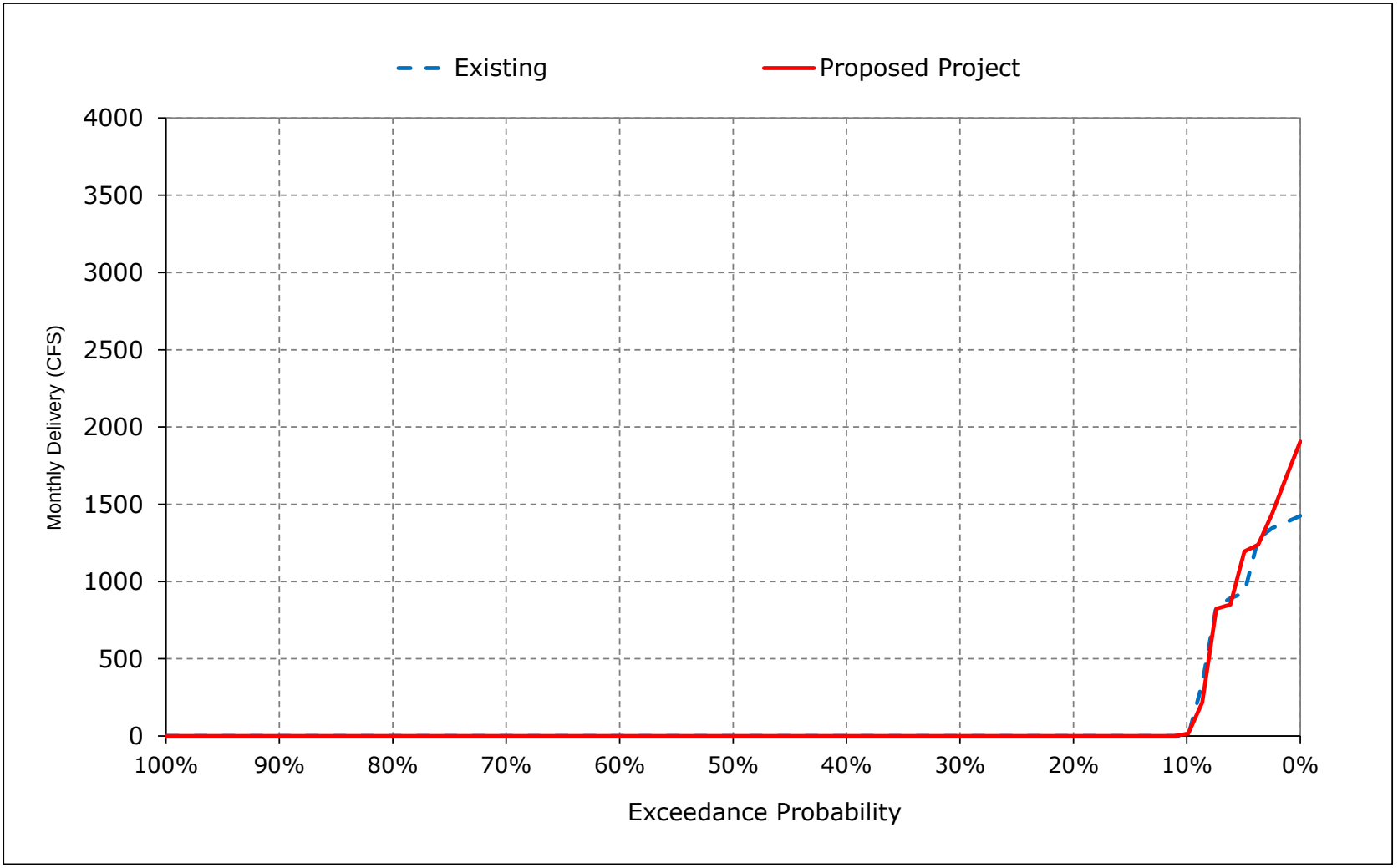


Table 6-1. Banks PP Exports, Monthly Delivery

Existing

Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	5,172	6,680	7,105	5,846	7,403	8,190	1,330	1,106	4,310	6,930	7,042	6,680
20%	4,189	6,460	7,043	3,432	5,331	5,223	935	766	3,083	6,903	7,008	6,680
30%	3,988	4,842	6,672	2,864	4,069	4,832	787	637	2,325	6,873	6,965	6,680
40%	3,576	4,299	4,565	2,770	3,356	3,773	712	600	2,119	6,782	6,930	6,680
50%	3,193	3,504	4,000	2,707	2,877	2,912	673	600	1,935	6,680	6,774	6,519
60%	2,882	3,106	3,487	2,621	2,689	2,634	606	600	1,848	6,680	6,680	4,063
70%	2,297	2,691	3,017	2,601	2,622	2,386	600	600	1,757	5,793	1,588	2,826
80%	1,813	2,277	2,819	2,485	2,559	2,249	600	600	1,663	4,160	628	2,543
90%	986	1,765	2,565	2,204	2,423	1,632	600	526	549	1,076	305	1,903
Long Term												
Full Simulation Period[a]	3,165	3,956	4,602	3,302	3,943	3,803	873	811	2,349	5,543	4,684	4,802
Water Year Types[b,c]												
Wet (32%)	3,688	4,850	4,542	4,574	5,413	5,783	1,264	1,270	3,555	6,722	6,901	6,617
Above Normal (15%)	3,152	3,621	5,362	3,151	4,187	3,956	706	656	2,482	6,513	6,990	6,680
Below Normal (17%)	3,198	4,171	4,908	2,768	3,891	3,682	672	632	2,049	6,892	6,775	5,404
Dry (22%)	2,902	3,799	4,607	2,692	2,683	2,427	695	628	1,721	4,996	1,105	2,748
Critical (15%)	2,400	2,341	3,610	2,234	2,464	1,566	692	454	894	1,268	503	1,372

Proposed Project

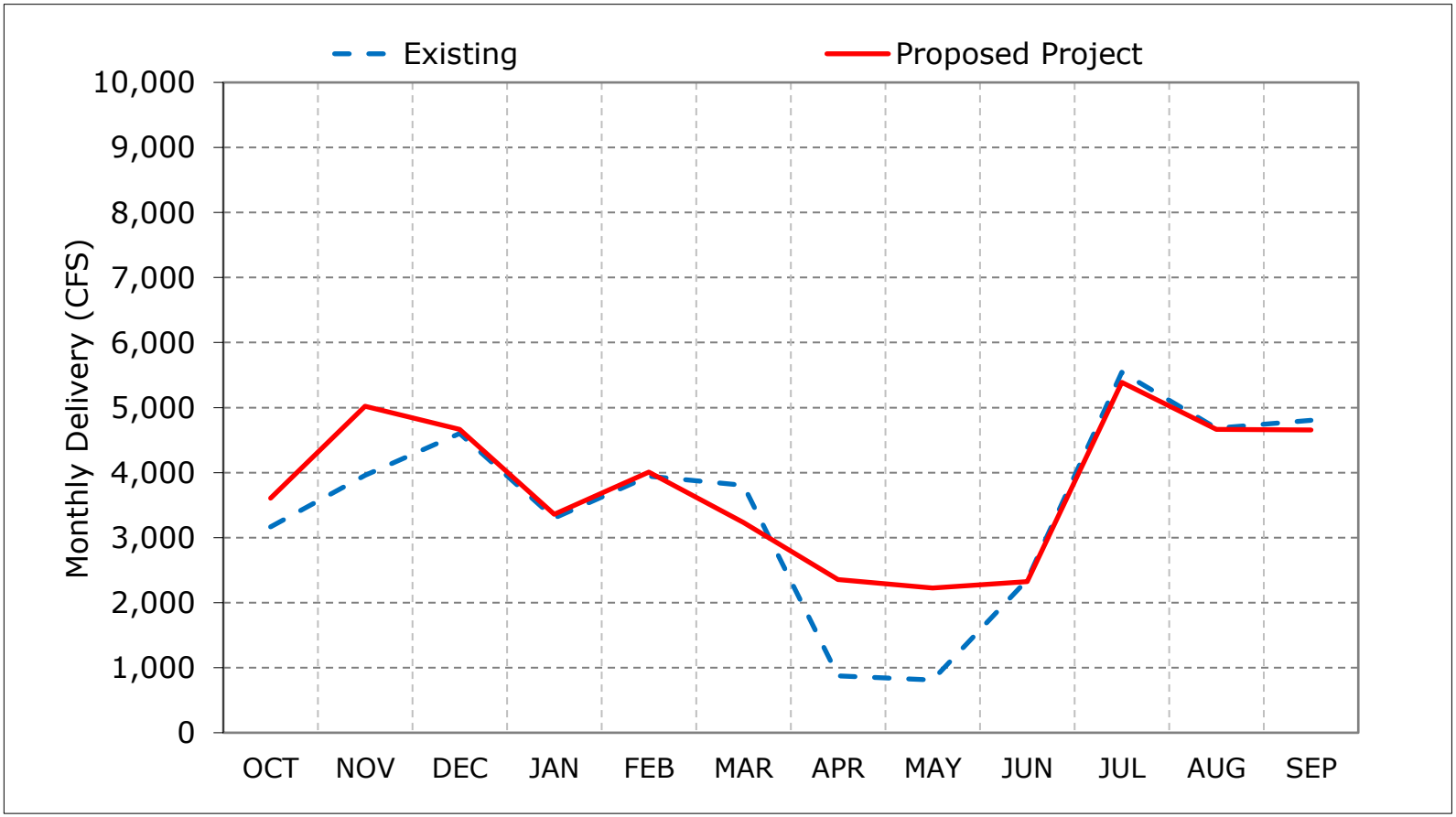
Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	6,481	6,680	7,110	5,534	7,795	6,357	3,972	4,558	4,318	6,935	7,038	6,680
20%	5,257	6,680	7,048	3,861	5,633	4,169	3,189	3,539	3,243	6,903	6,977	6,680
30%	4,549	6,680	6,994	3,214	4,321	3,582	2,859	2,810	2,461	6,868	6,945	6,680
40%	4,070	6,680	5,049	2,914	3,517	3,065	2,523	2,390	2,003	6,692	6,902	6,680
50%	3,725	6,057	4,047	2,837	3,031	2,655	2,305	2,144	1,898	6,680	6,680	5,283
60%	3,095	5,079	3,476	2,748	2,874	2,243	1,999	1,602	1,795	6,612	5,567	3,888
70%	2,412	3,730	2,960	2,642	2,634	2,029	1,714	1,405	1,738	5,518	1,586	2,820
80%	1,933	2,979	2,817	2,526	2,518	1,821	1,453	904	1,656	3,077	594	2,519
90%	1,009	2,171	2,574	2,216	2,371	1,623	1,078	451	404	1,144	332	1,820
Long Term												
Full Simulation Period[a]	3,609	5,022	4,665	3,357	4,006	3,233	2,353	2,225	2,326	5,388	4,666	4,655
Water Year Types[b,c]												
Wet (32%)	4,279	6,280	4,558	4,358	5,543	4,994	3,241	3,393	3,511	6,648	6,841	6,337
Above Normal (15%)	3,833	4,808	5,458	3,184	3,996	3,092	2,669	2,702	2,477	6,611	6,854	6,555
Below Normal (17%)	3,585	5,194	5,066	2,946	4,013	3,046	2,515	2,221	2,023	6,501	6,514	5,119
Dry (22%)	3,259	4,327	4,941	2,931	2,801	1,965	1,636	1,334	1,692	4,522	1,244	2,710
Critical (15%)	2,484	3,354	3,221	2,480	2,486	1,678	999	559	911	1,433	746	1,483

Proposed Project minus Existing

Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	1,309	0	5	**-312**	393	**-1,834**	2,642	3,452	8	6	**-5**	0
20%	1,068	220	5	429	302	**-1,054**	2,254	2,773	161	0	**-31**	0
30%	560	1,838	323	350	252	**-1,250**	2,072	2,173	137	**-6**	**-20**	0
40%	494	2,381	484	144	161	**-707**	1,810	1,790	**-115**	**-91**	**-28**	0
50%	532	2,553	47	130	154	**-257**	1,632	1,544	**-37**	0	**-94**	**-1,236**
60%	213	1,973	**-11**	126	185	**-391**	1,393	1,002	**-54**	**-68**	**-1,113**	**-175**
70%	115	1,039	**-56**	41	11	**-356**	1,114	805	**-20**	**-275**	**-2**	**-6**
80%	120	702	**-1**	42	**-42**	**-429**	853	304	**-8**	**-1,083**	**-35**	**-24**
90%	23	406	9	12	**-52**	**-9**	478	**-76**	**-145**	68	26	**-83**
Long Term												
Full Simulation Period[a]	444	1,066	63	55	63	**-570**	1,480	1,414	**-23**	**-156**	**-18**	**-148**
Water Year Types[b,c]												
Wet (32%)	591	1,430	16	**-216**	130	**-789**	1,977	2,123	**-44**	**-74**	**-60**	**-280**
Above Normal (15%)	682	1,186	96	33	**-190**	**-864**	1,963	2,046	**-5**	98	**-136**	**-125**
Below Normal (17%)	387	1,023	158	178	122	**-636**	1,844	1,590	**-25**	**-391**	**-262**	**-285**
Dry (22%)	357	528	334	239	118	**-462**	941	706	**-29**	**-474**	139	**-38**
Critical (15%)	84	1,013	**-389**	246	23	112	306	105	18	165	243	111

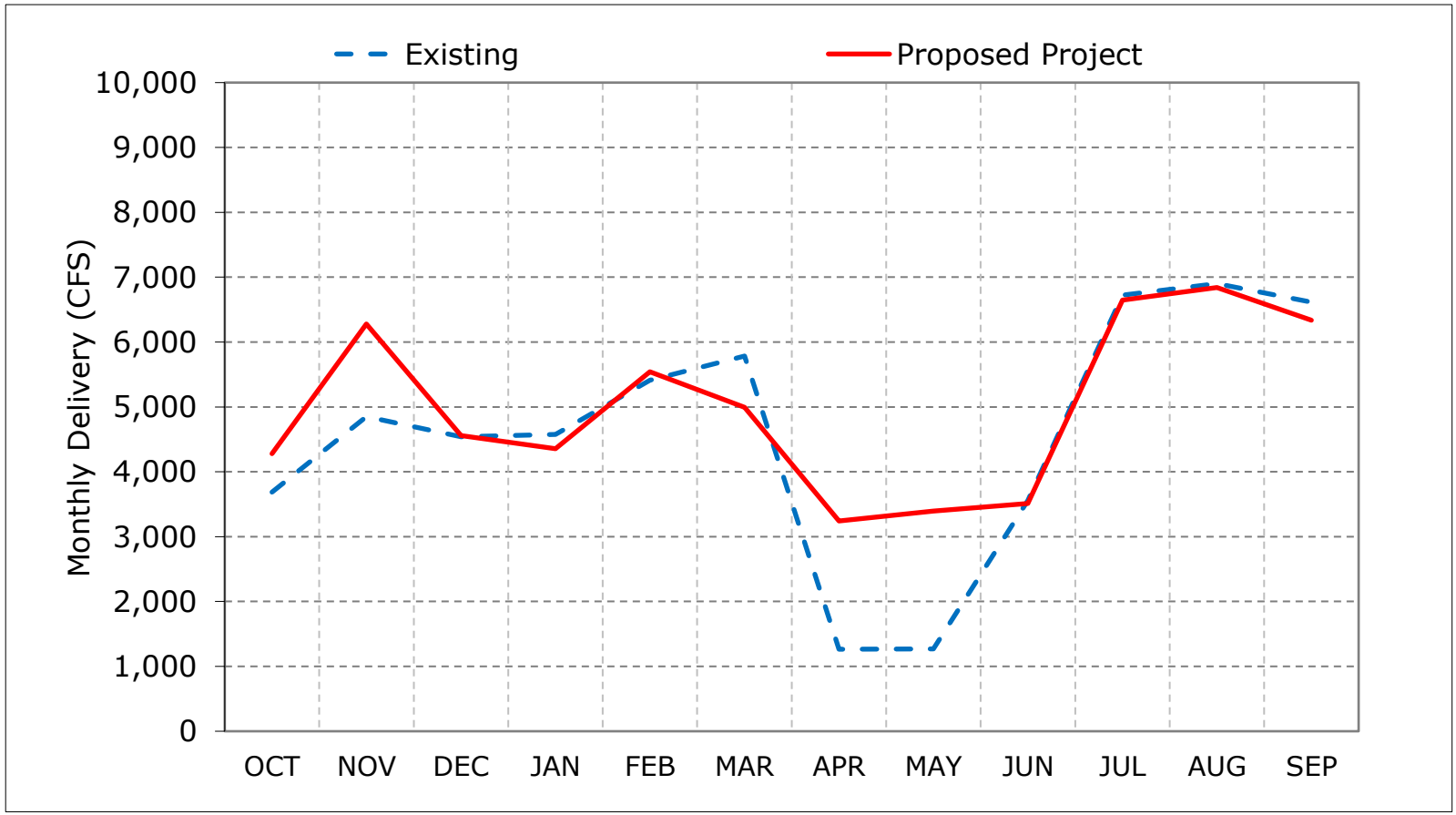
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

Figure 6-1. Banks PP Exports, Long-Term Average Delivery



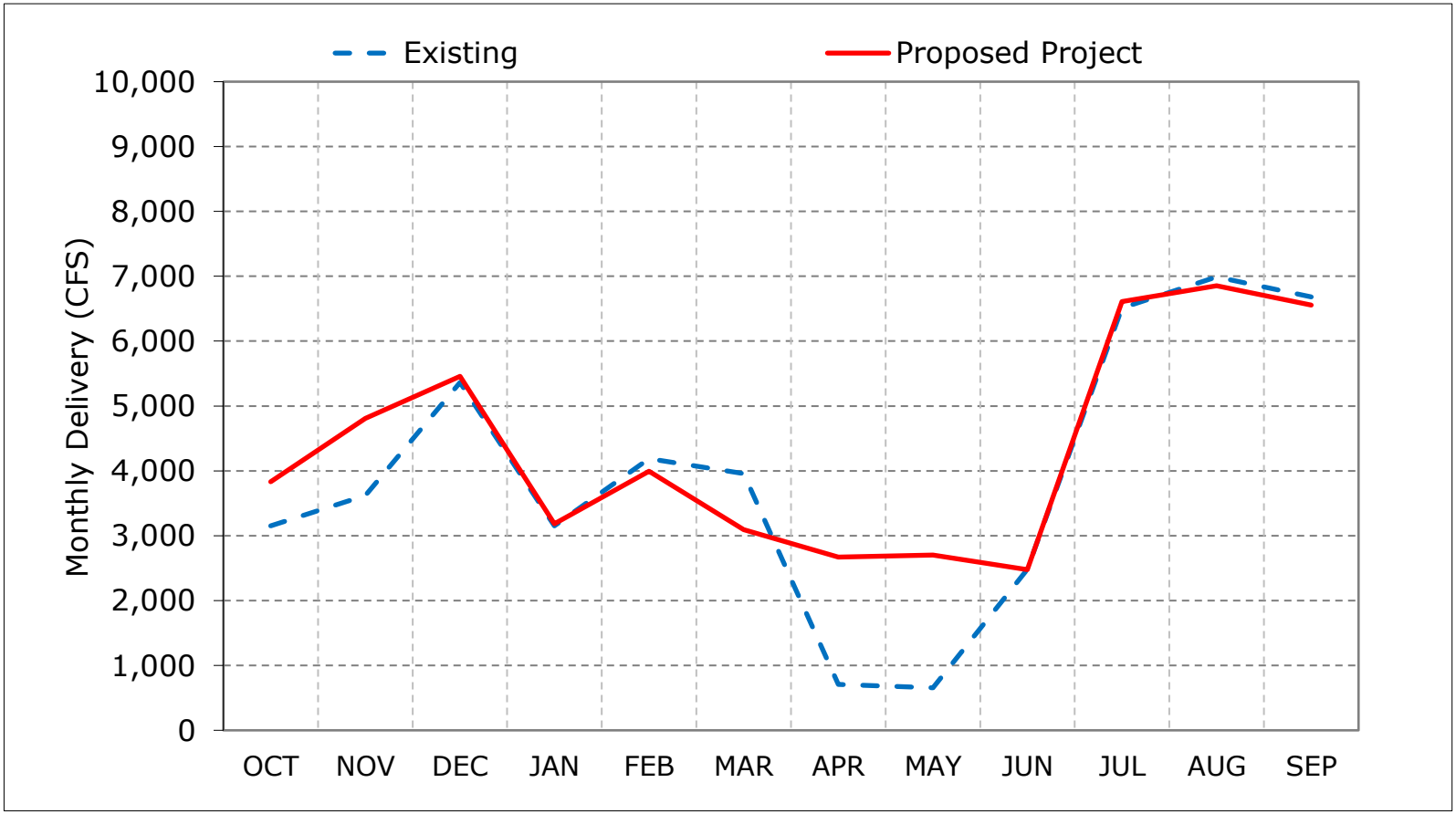
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 6-2. Banks PP Exports, Wet Year Average Delivery



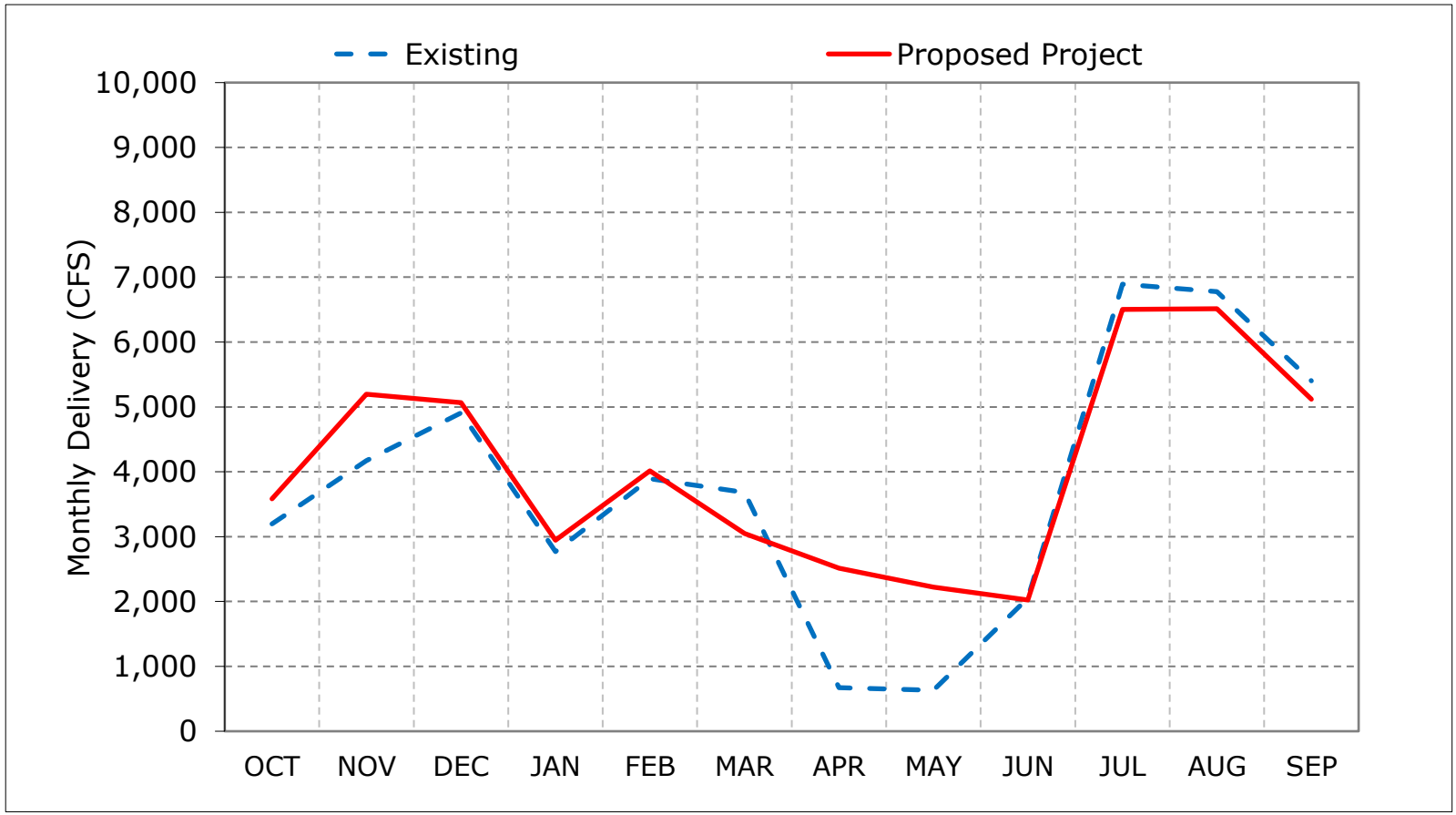
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 6-3. Banks PP Exports, Above Normal Year Average Delivery



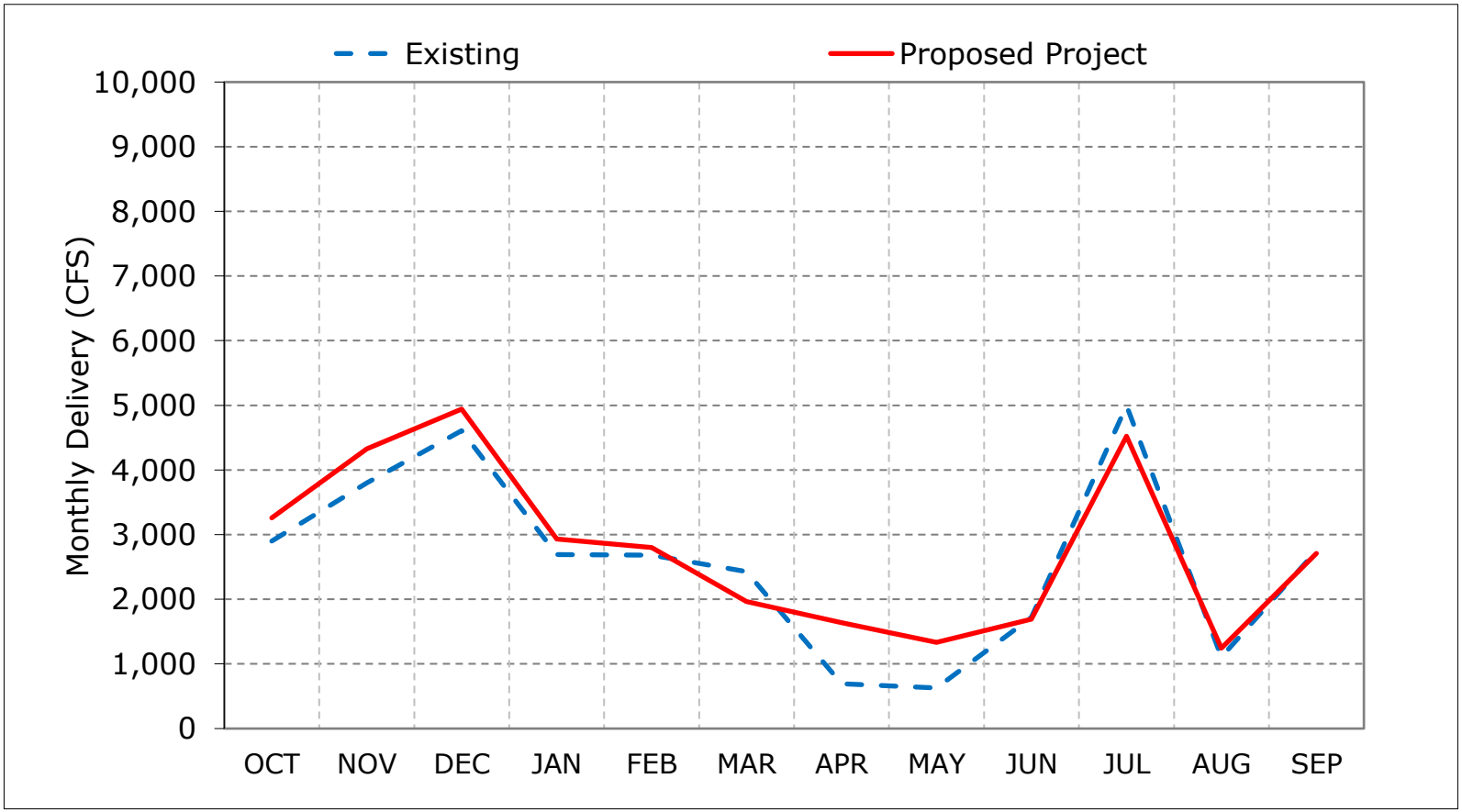
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 6-4. Banks PP Exports, Below Normal Year Average Delivery



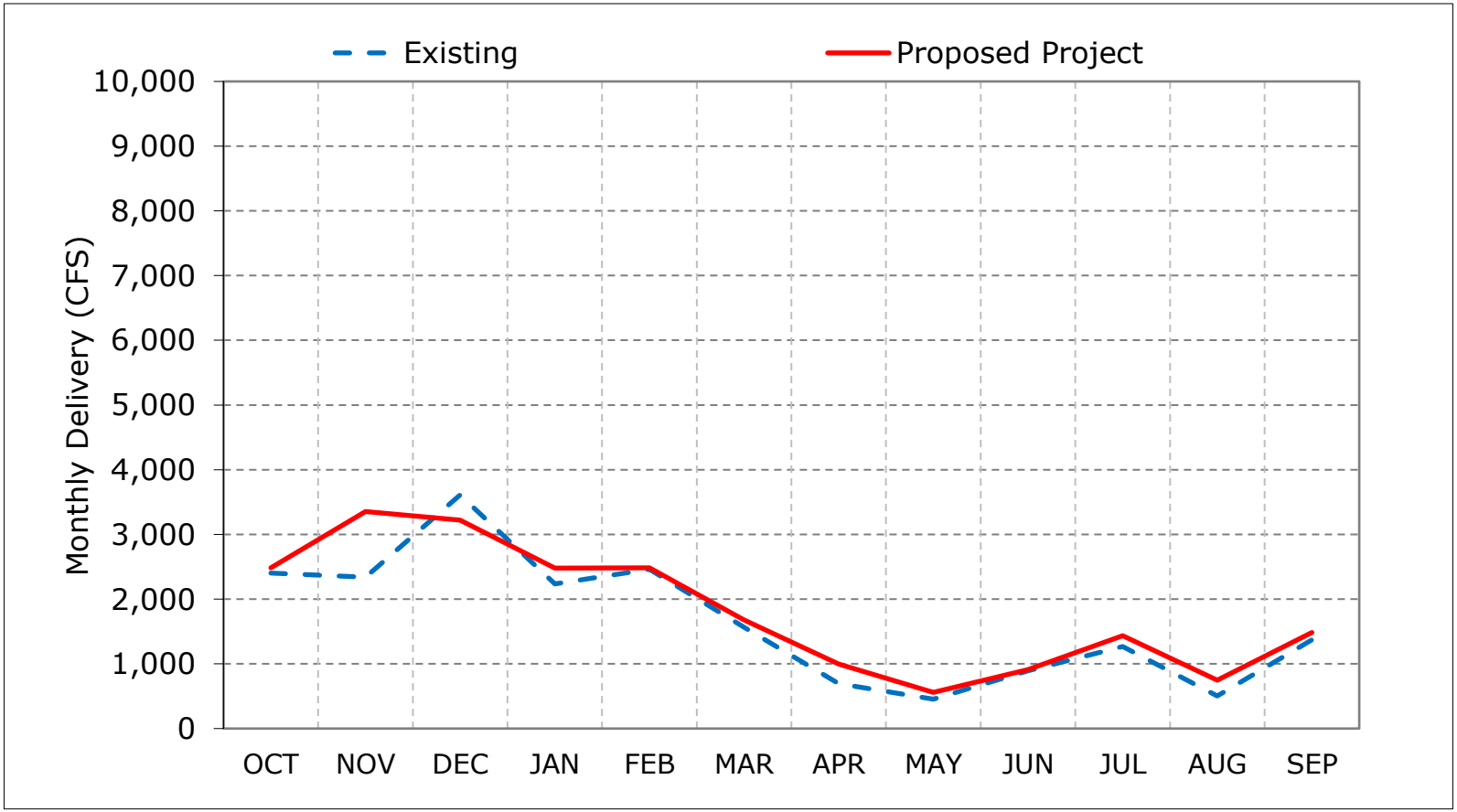
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 6-5. Banks PP Exports, Dry Year Average Delivery



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 6-6. Banks PP Exports, Critical Year Average Delivery



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 6-7. Banks PP Exports, October

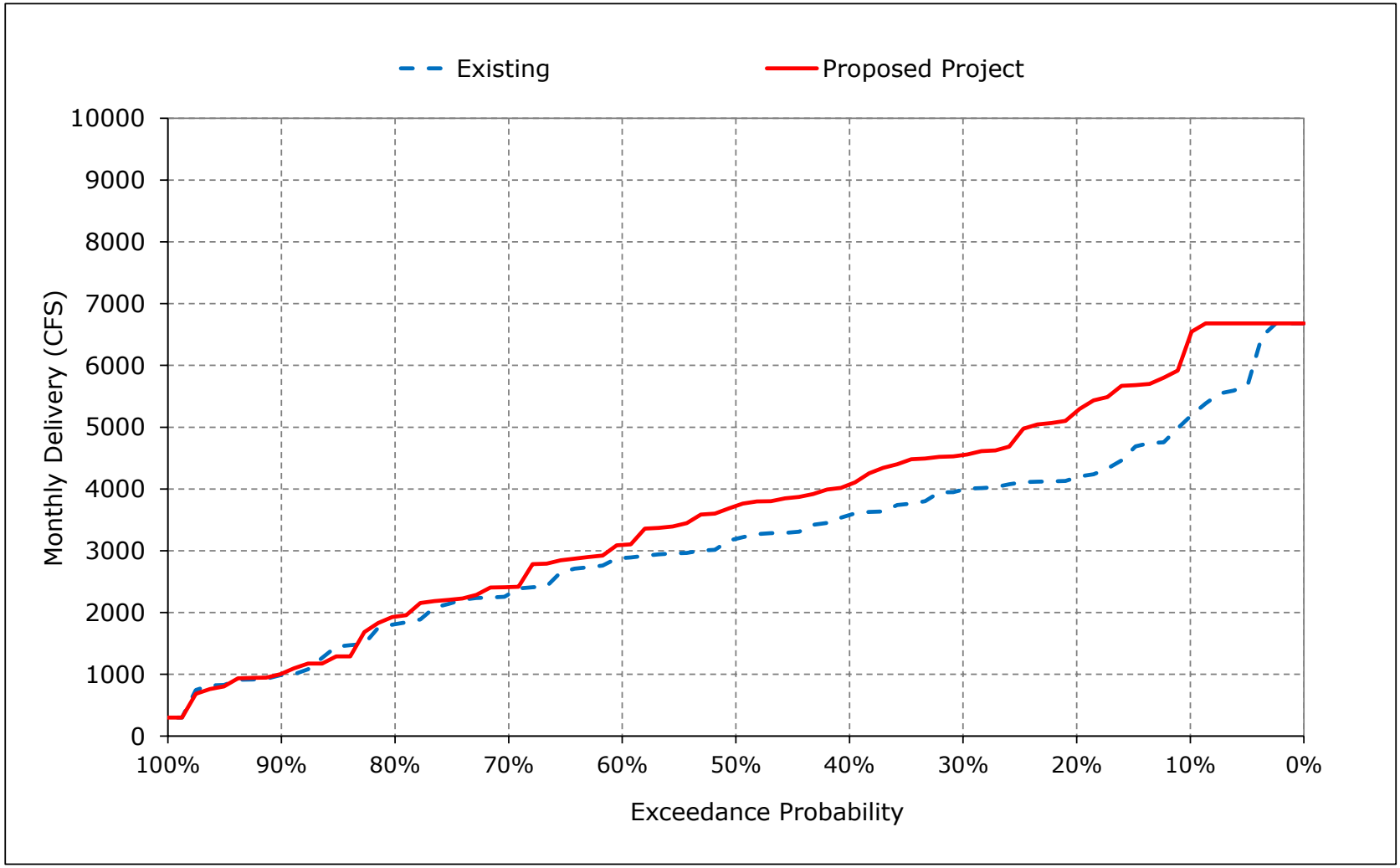


Figure 6-8. Banks PP Exports, November

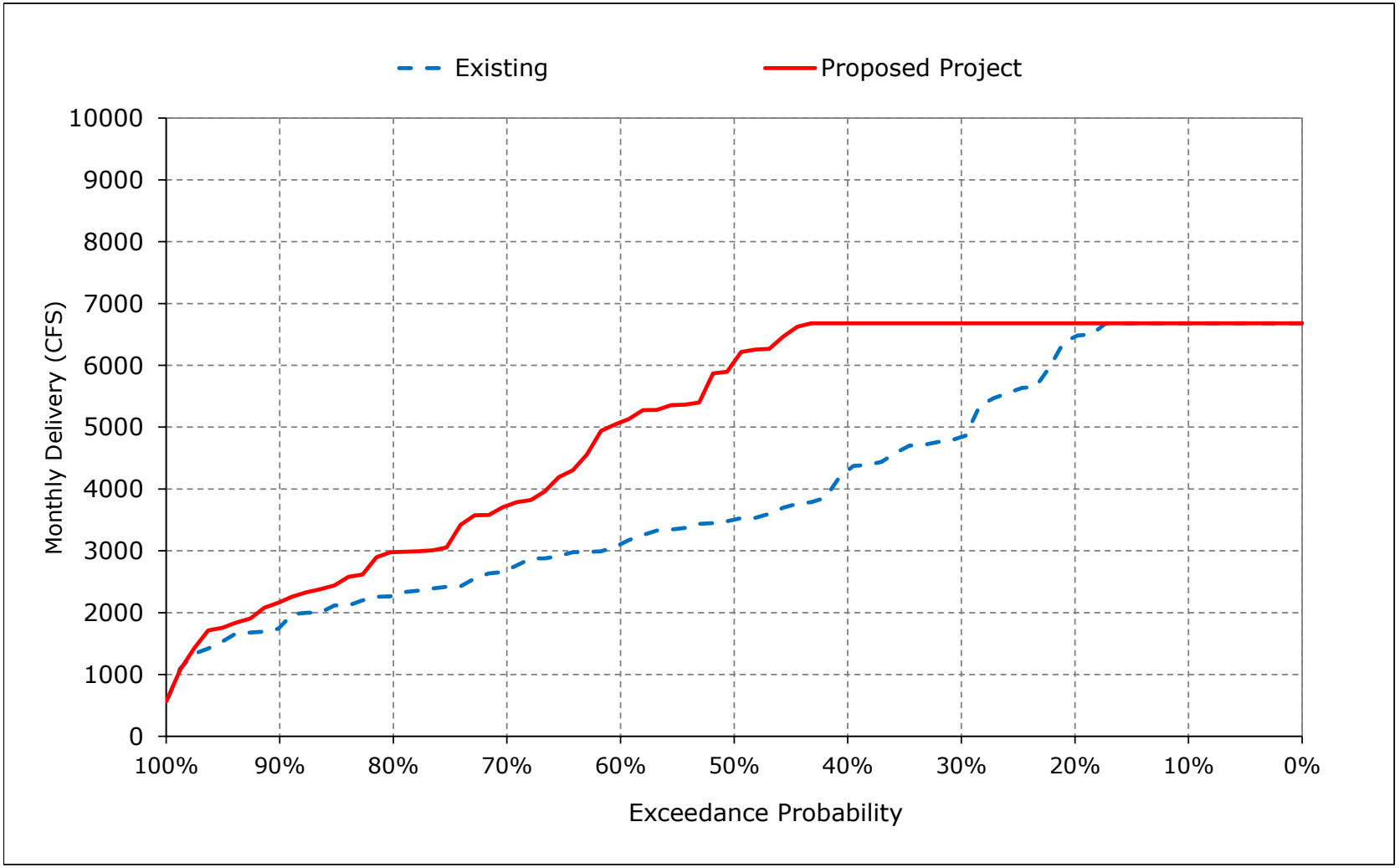


Figure 6-9. Banks PP Exports, December

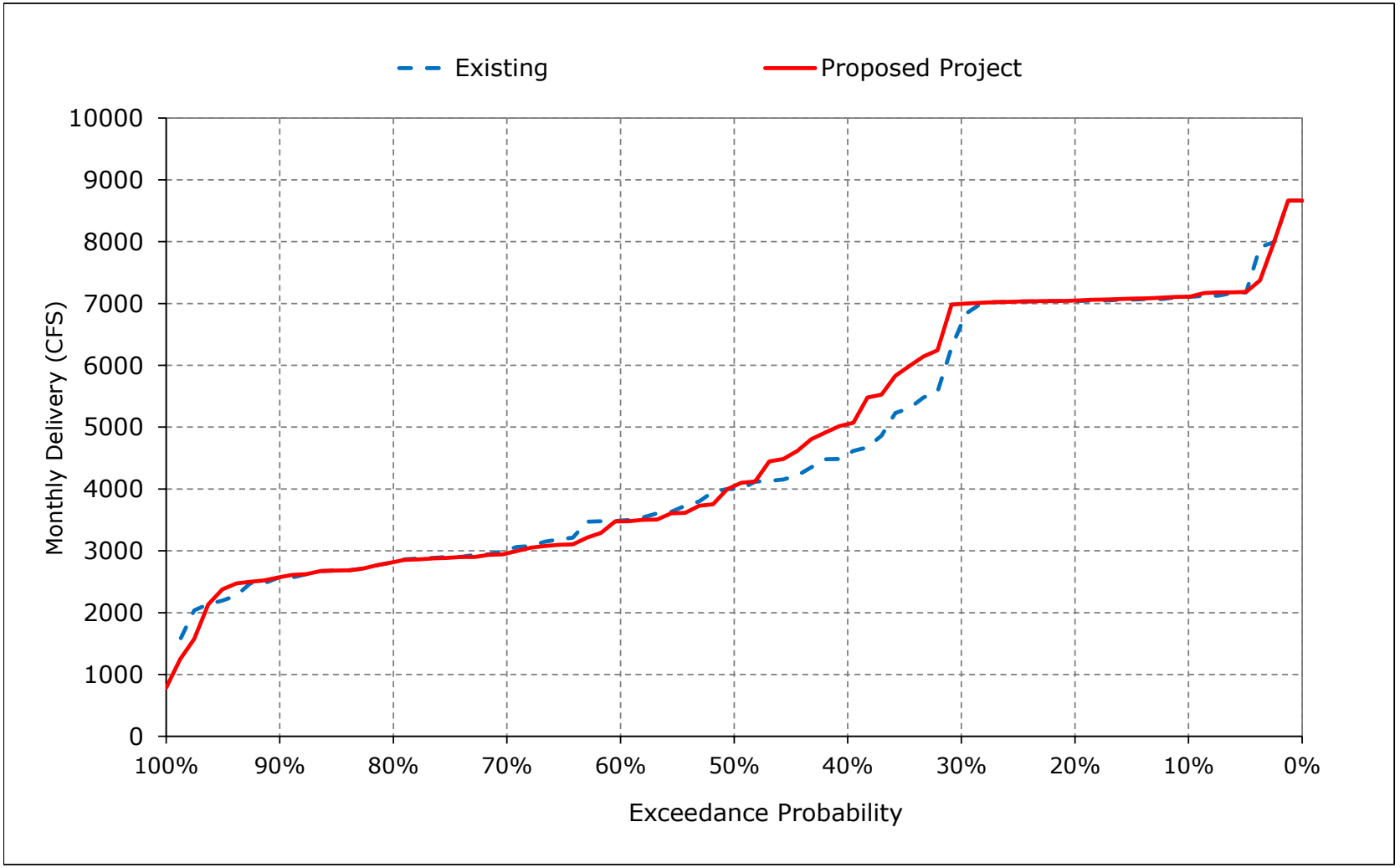


Figure 6-10. Banks PP Exports, January

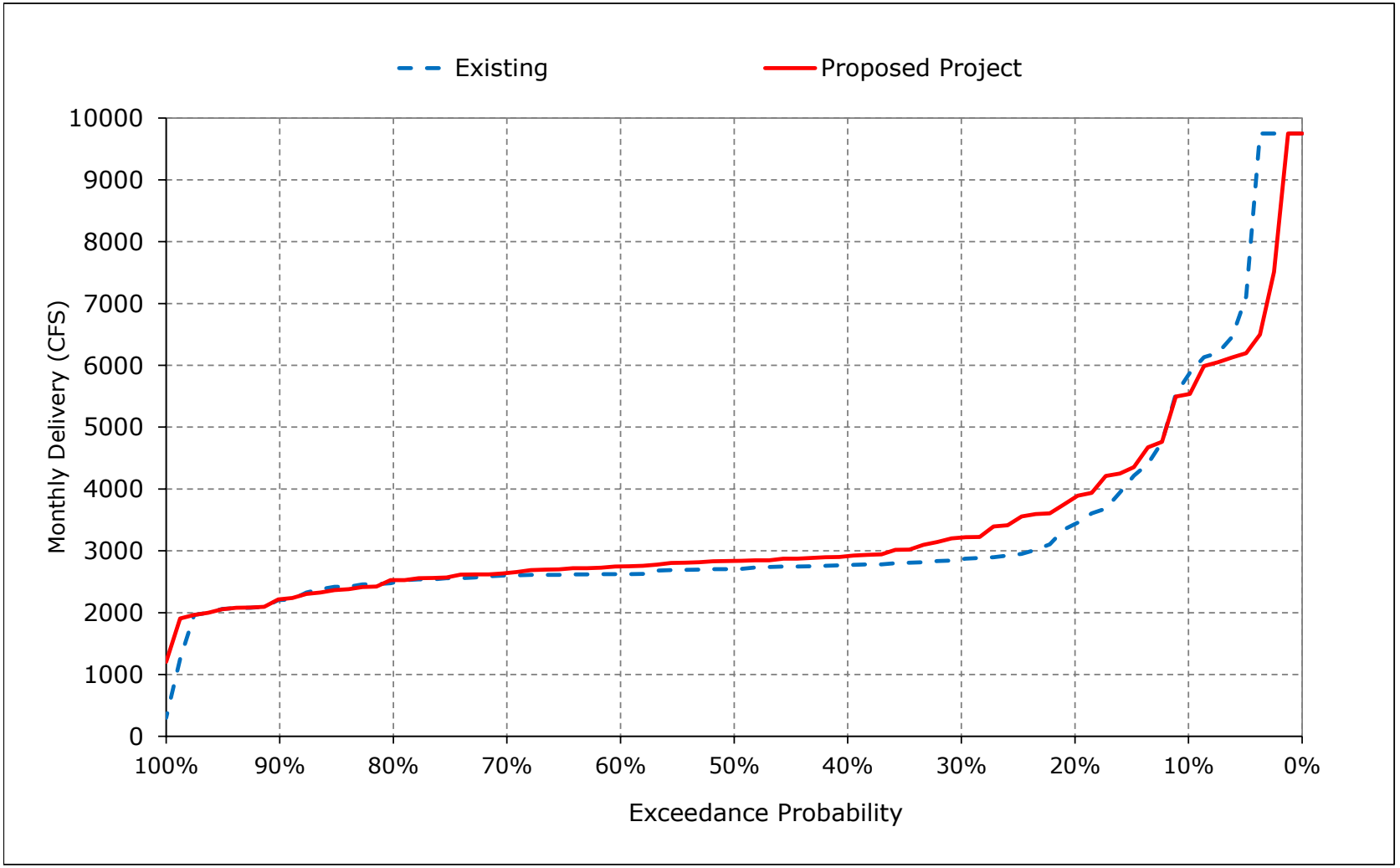


Figure 6-11. Banks PP Exports, February

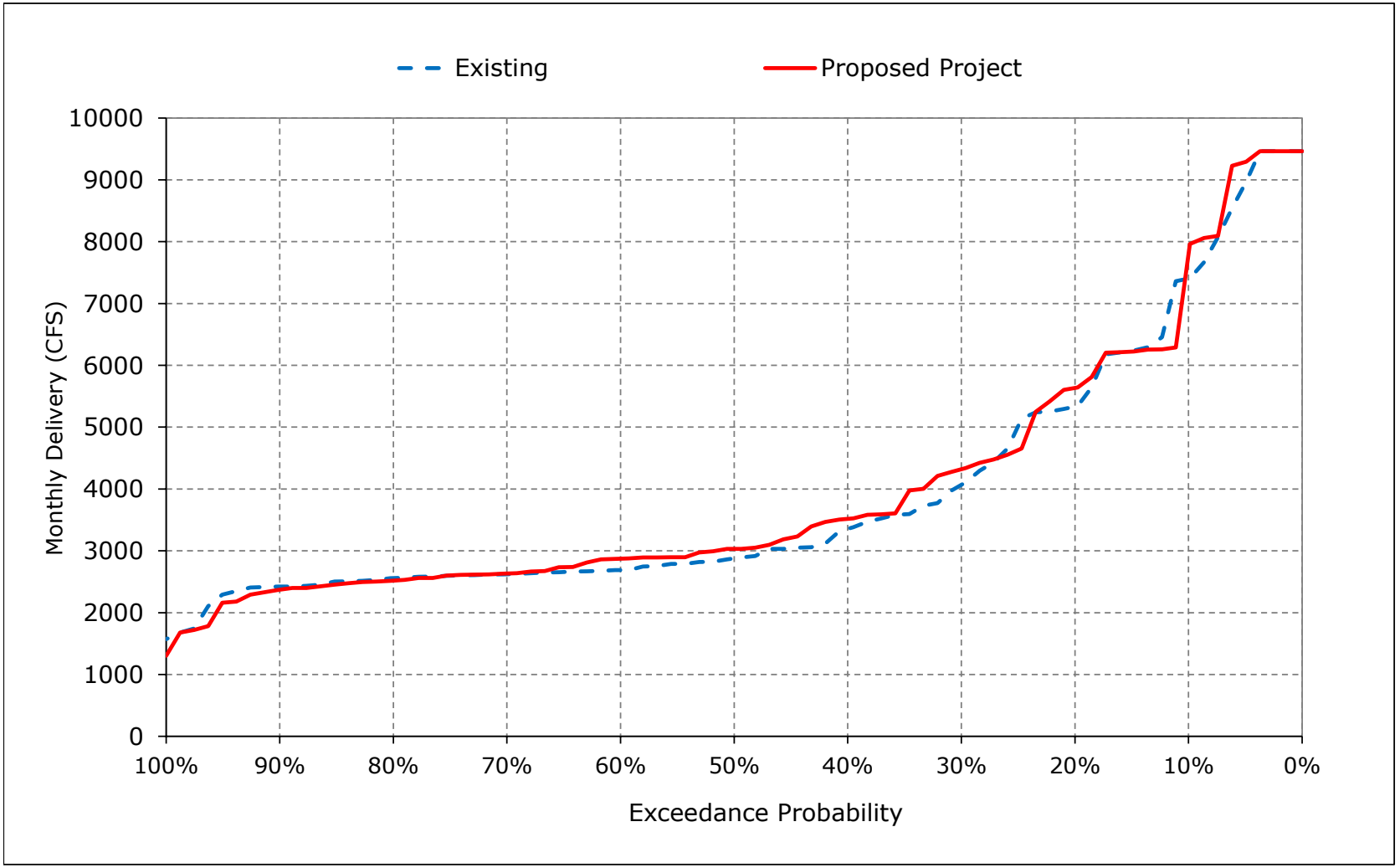


Figure 6-12. Banks PP Exports, March

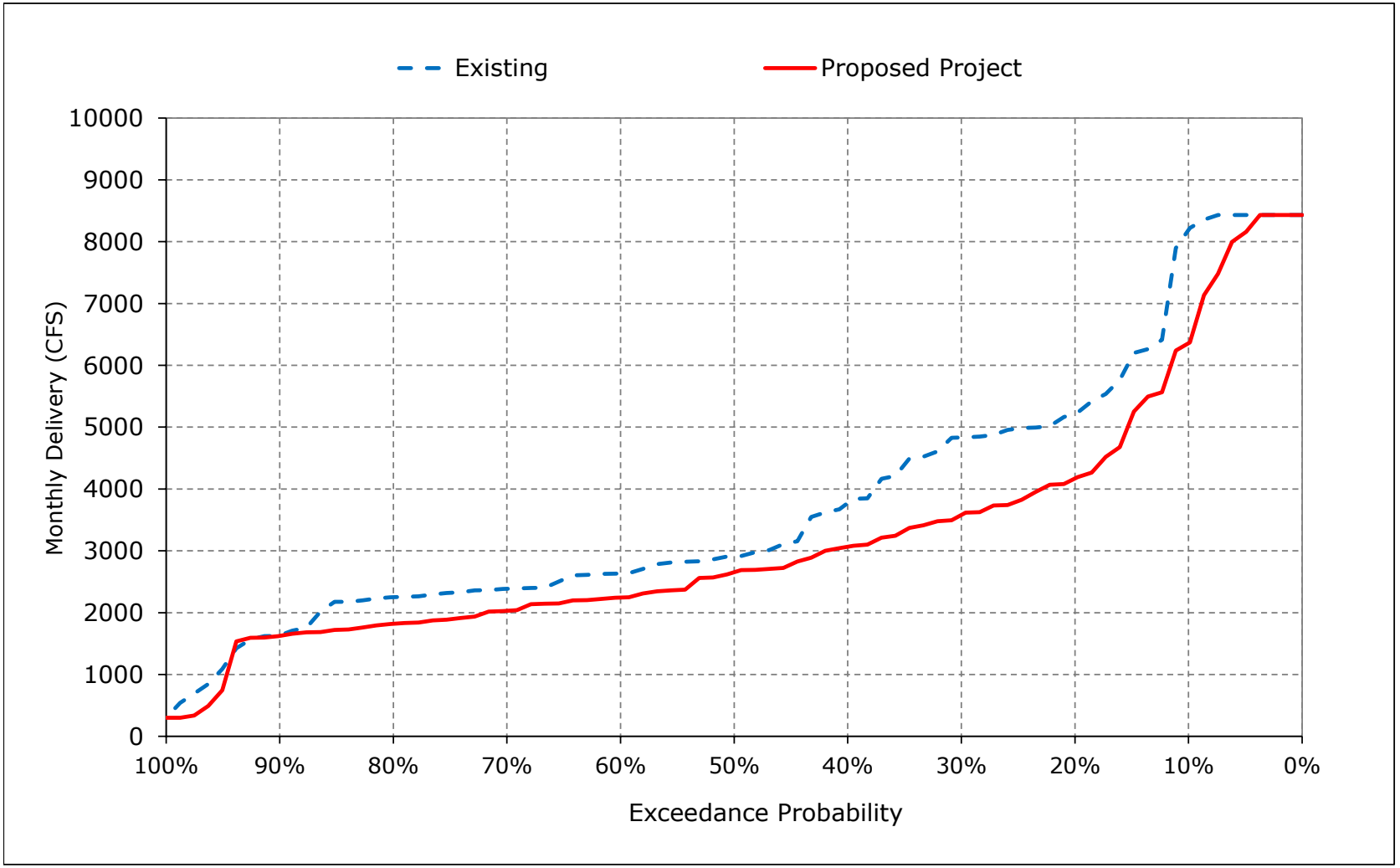


Figure 6-13. Banks PP Exports, April

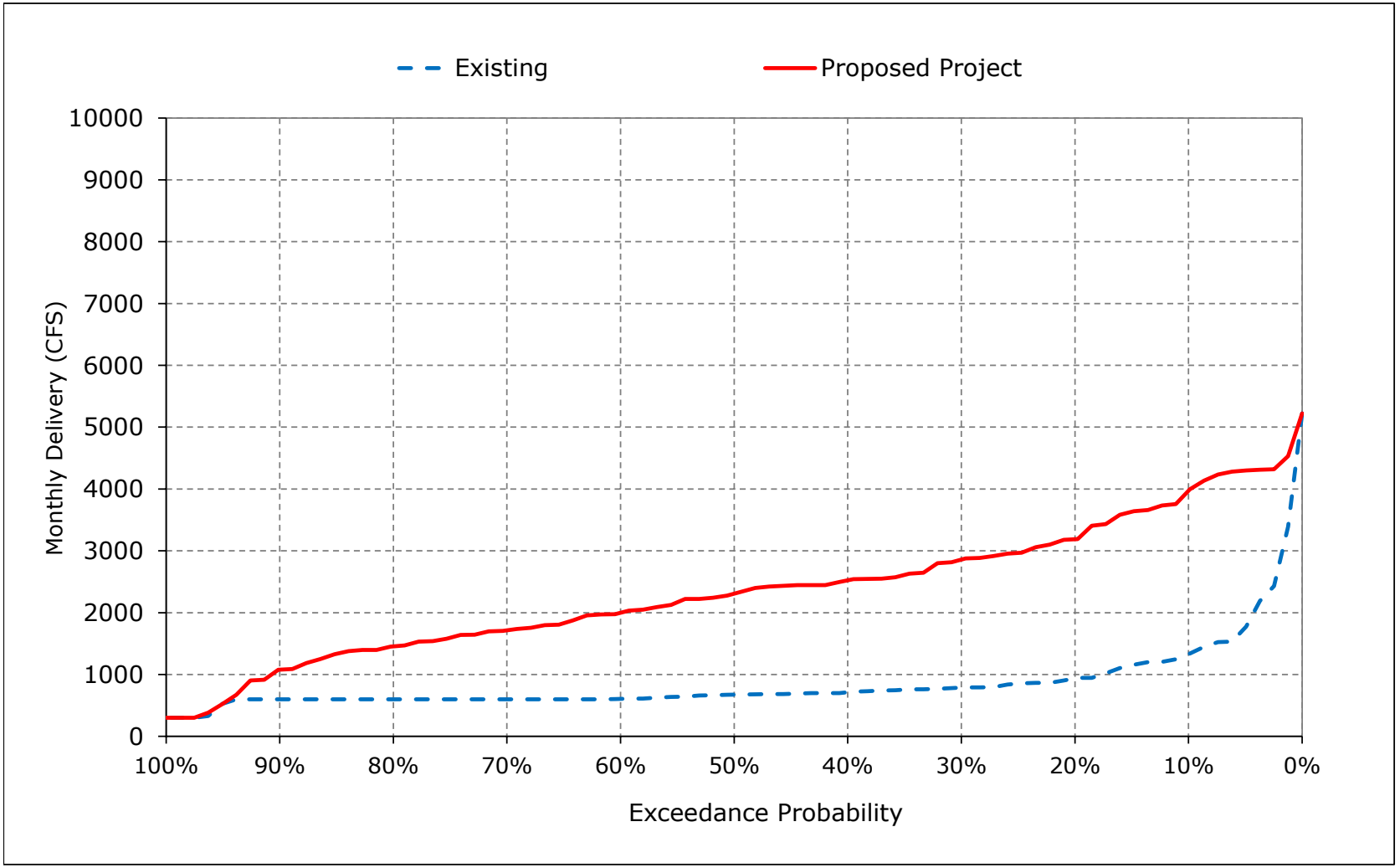


Figure 6-14. Banks PP Exports, May

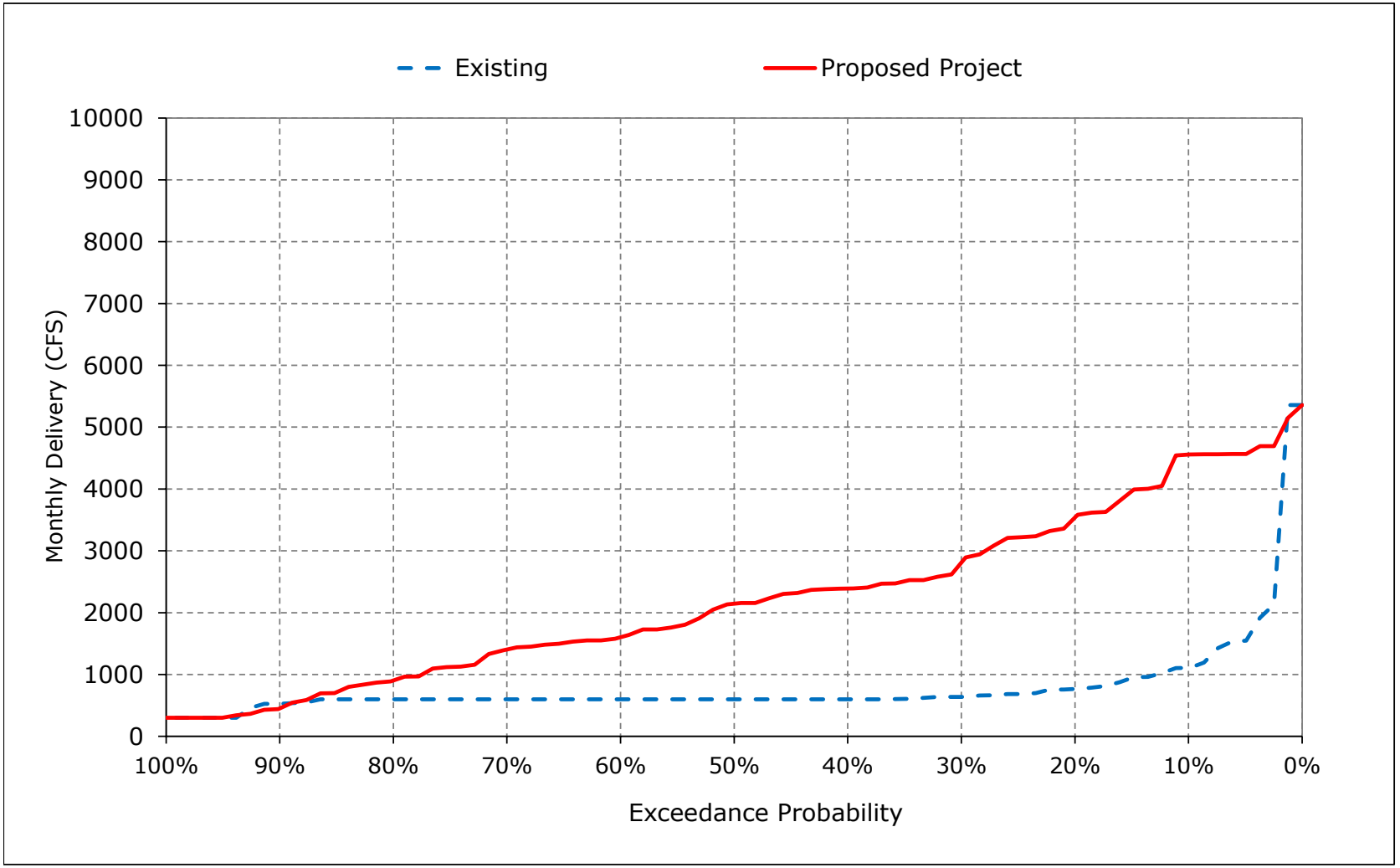


Figure 6-15. Banks PP Exports, June

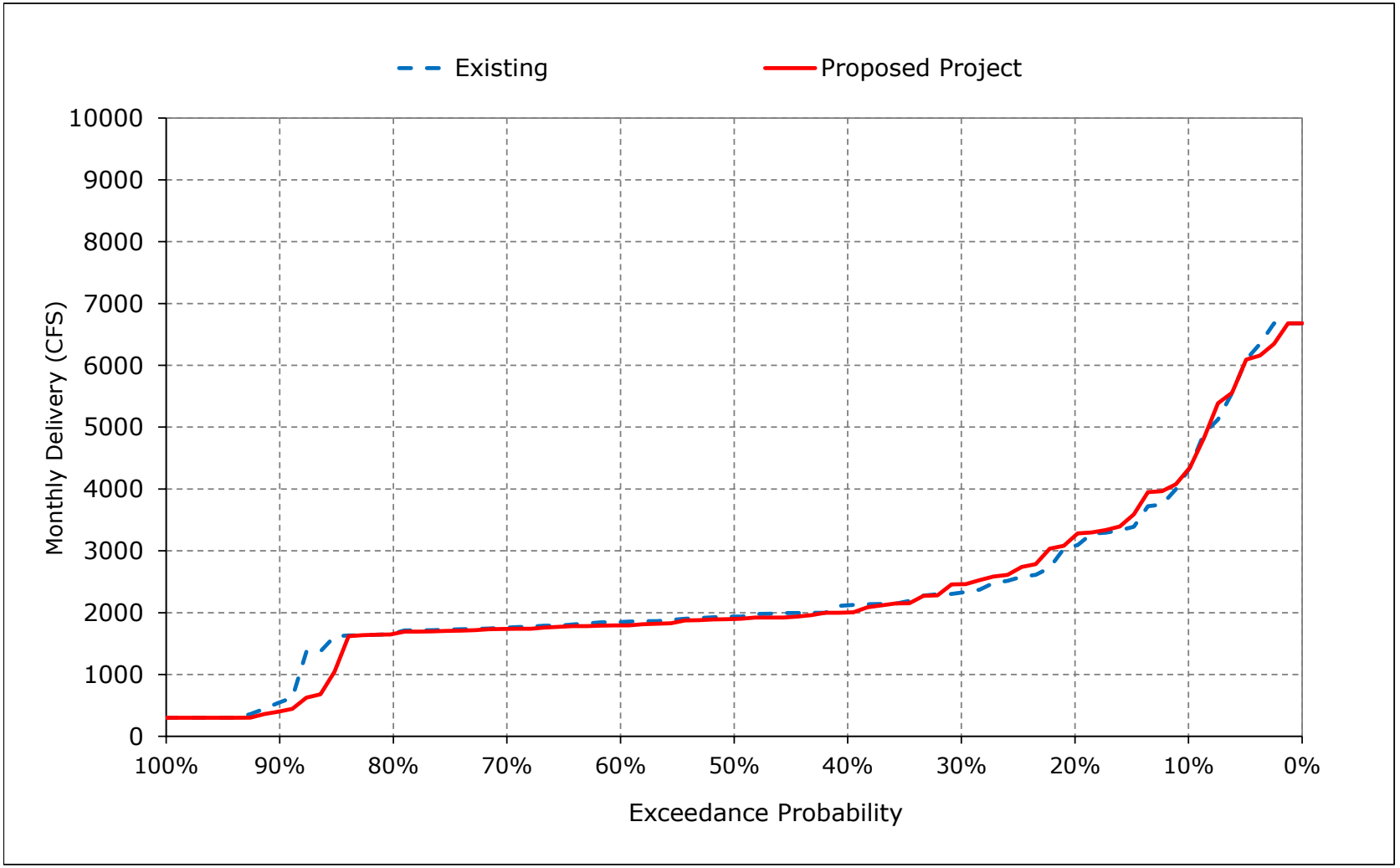


Figure 6-16. Banks PP Exports, July

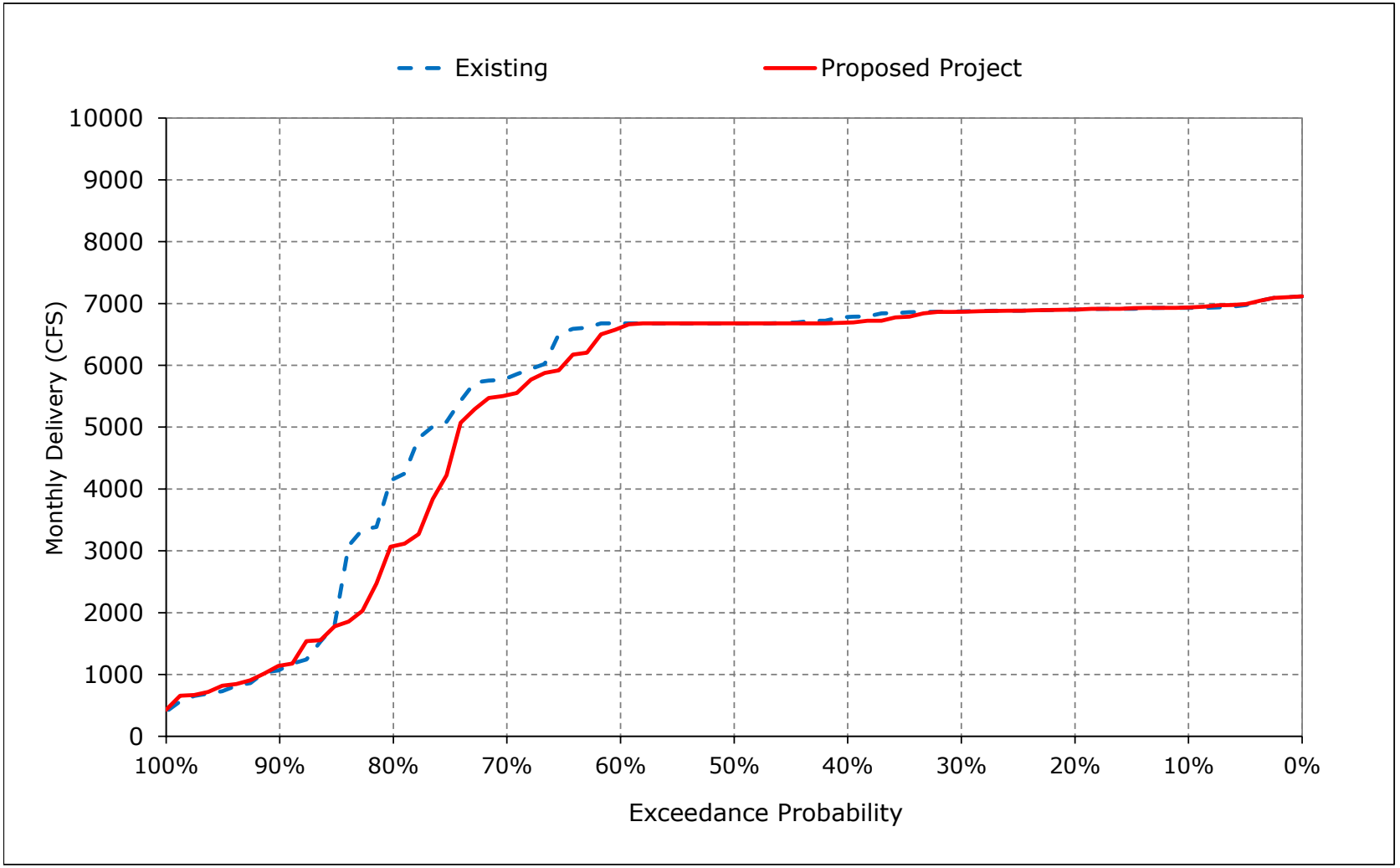


Figure 6-17. Banks PP Exports, August

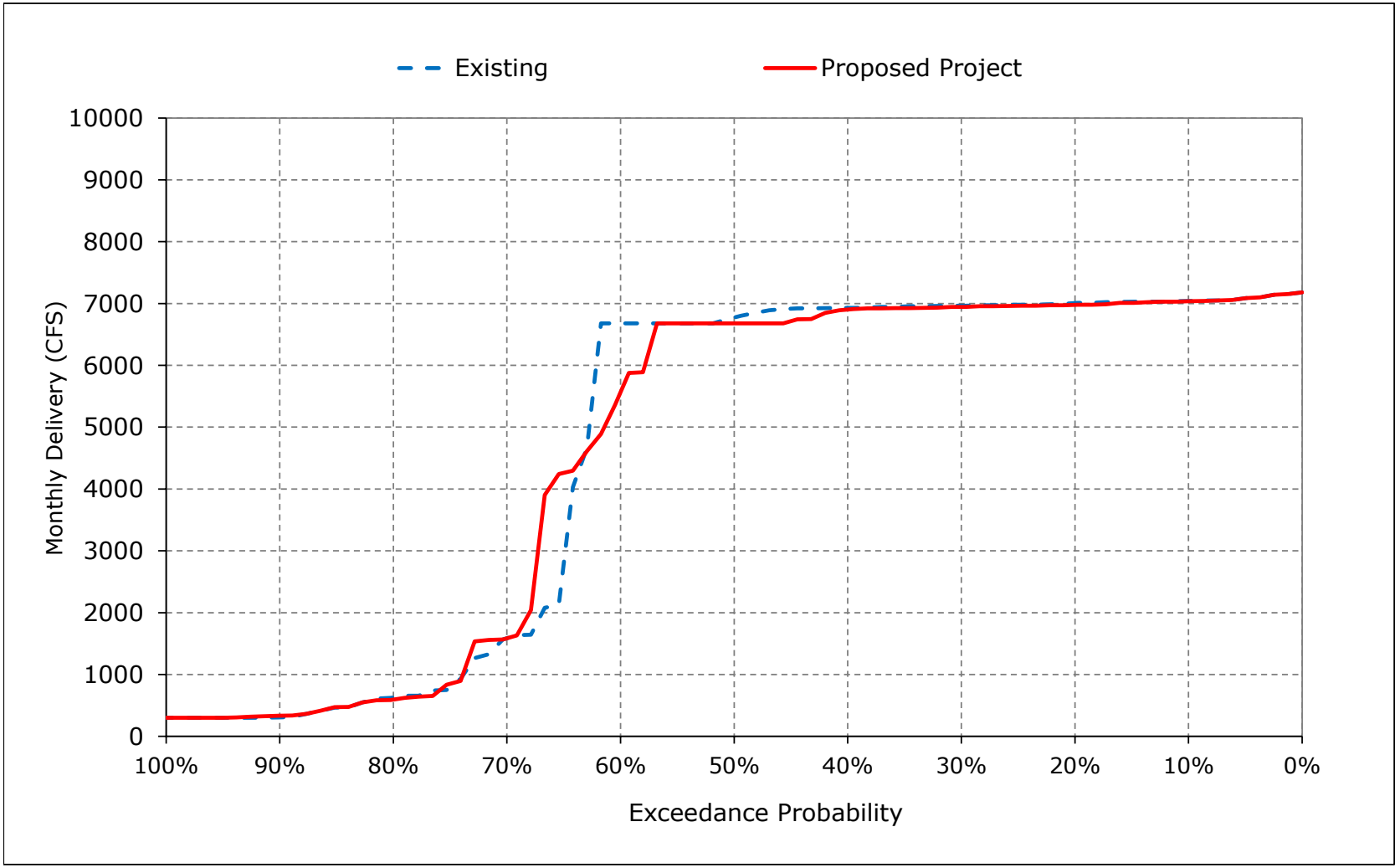


Figure 6-18. Banks PP Exports, September

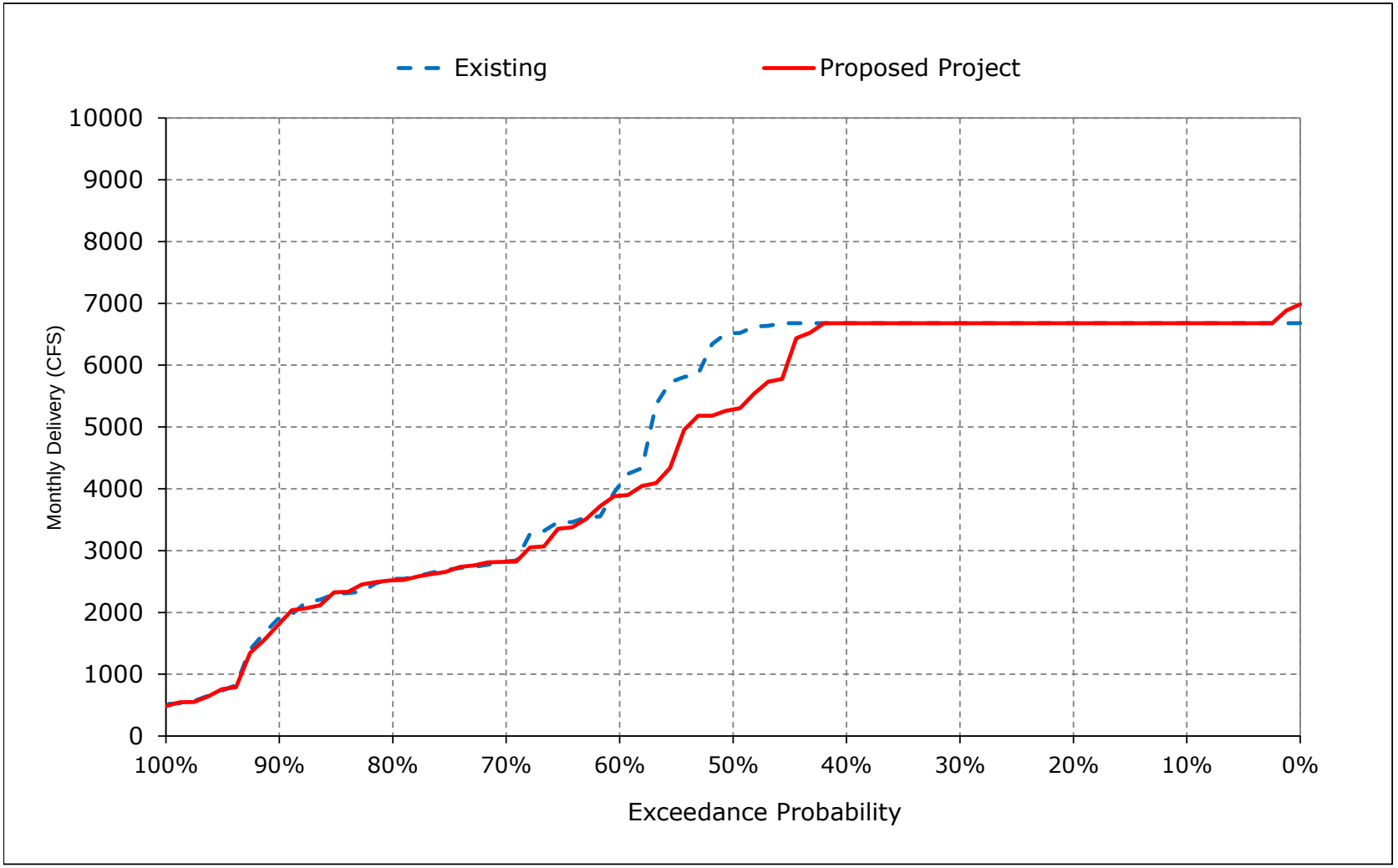


Table 7-1. Jones PP Exports, Monthly Delivery

Existing

Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	4,600	4,600	4,600	4,600	4,600	4,600	1,804	1,659	4,600	4,600	4,600	4,600
20%	4,393	4,600	4,600	4,600	4,600	4,371	1,341	1,346	4,433	4,600	4,600	4,600
30%	4,114	4,579	4,600	4,287	4,600	4,031	1,165	1,172	3,703	4,600	4,600	4,600
40%	3,631	4,201	4,411	4,134	4,386	3,809	1,043	975	3,491	4,397	4,600	4,524
50%	3,499	3,913	4,327	4,049	4,184	3,534	948	900	3,408	3,972	4,241	4,443
60%	3,337	3,333	4,174	3,929	3,986	3,377	900	900	3,237	3,465	3,919	4,293
70%	3,189	2,639	3,987	3,864	3,896	3,115	900	900	3,179	3,235	3,650	3,979
80%	3,064	2,063	3,614	3,685	3,762	2,552	900	900	2,728	2,110	3,198	3,544
90%	2,878	1,760	2,571	3,122	3,607	1,913	820	900	1,820	1,385	2,175	3,088
Long Term												
Full Simulation Period[a]	3,573	3,430	3,990	3,972	4,115	3,429	1,180	1,202	3,328	3,510	3,853	4,083
Water Year Types[b,c]												
Wet (32%)	3,683	3,665	4,164	4,199	4,328	3,612	1,527	1,591	4,135	4,489	4,600	4,475
Above Normal (15%)	3,409	3,543	4,101	3,983	4,132	3,917	1,059	984	3,771	3,815	4,360	4,422
Below Normal (17%)	3,541	3,525	4,023	3,912	4,285	3,515	980	948	3,317	3,625	3,518	4,401
Dry (22%)	3,670	3,331	4,064	3,881	3,870	3,416	1,118	992	2,963	3,251	3,308	4,006
Critical (15%)	3,389	2,843	3,357	3,673	3,807	2,461	878	1,190	1,698	1,335	2,936	2,639

Proposed Project

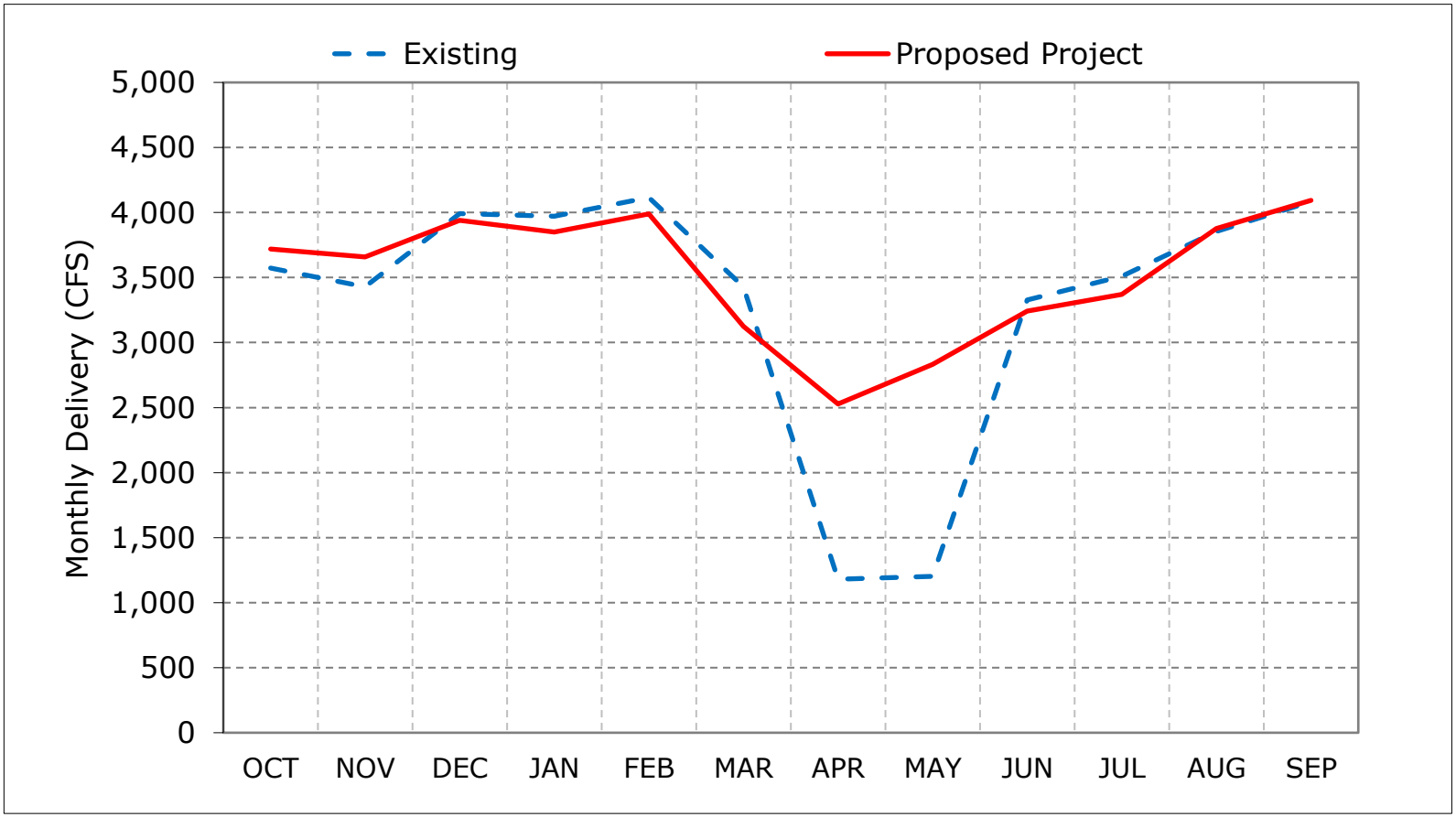
Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	4,600	4,600	4,600	4,600	4,600	4,600	3,781	3,942	4,600	4,600	4,600	4,600
20%	4,600	4,600	4,600	4,479	4,600	4,139	3,501	3,901	4,430	4,600	4,600	4,600
30%	4,600	4,600	4,600	4,297	4,600	3,560	3,143	3,459	3,568	4,600	4,600	4,600
40%	4,400	4,600	4,509	4,209	4,390	3,274	2,733	3,241	3,410	4,174	4,600	4,600
50%	3,765	4,243	4,321	4,079	4,107	3,027	2,511	2,879	3,300	3,816	4,348	4,584
60%	3,439	3,929	4,214	3,924	3,935	2,819	2,114	2,581	3,201	3,309	3,950	4,480
70%	3,166	3,127	3,929	3,636	3,761	2,701	1,877	2,309	3,057	2,852	3,737	3,923
80%	2,966	2,430	3,354	3,250	3,587	2,423	1,599	1,673	2,554	1,897	3,082	3,449
90%	2,790	1,860	2,490	2,949	3,032	1,879	1,258	1,435	1,685	1,235	2,515	3,033
Long Term												
Full Simulation Period[a]	3,719	3,659	3,940	3,850	3,990	3,124	2,528	2,833	3,242	3,370	3,877	4,093
Water Year Types[b,c]												
Wet (32%)	3,909	3,770	4,120	3,988	3,933	3,459	3,364	3,634	4,078	4,399	4,600	4,491
Above Normal (15%)	3,603	3,682	4,057	4,011	4,100	3,660	3,033	3,264	3,685	3,893	4,427	4,330
Below Normal (17%)	3,833	3,929	3,832	3,878	4,266	2,905	2,416	3,037	3,235	3,182	3,468	4,499
Dry (22%)	3,715	3,544	4,021	3,829	3,943	2,860	2,007	2,161	2,867	2,999	3,288	3,992
Critical (15%)	3,293	3,255	3,439	3,389	3,750	2,513	1,122	1,436	1,561	1,390	3,123	2,673

Proposed Project minus Existing

Statistic	Monthly Delivery (CFS)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0	0	0	0	0	0	1,978	2,283	0	0	0	0
20%	207	0	0	**-121**	0	**-232**	2,159	2,555	**-4**	0	0	0
30%	486	21	0	10	0	**-471**	1,978	2,286	**-134**	0	0	0
40%	769	399	98	76	4	**-536**	1,689	2,266	**-81**	**-223**	0	76
50%	266	330	**-6**	30	**-77**	**-507**	1,562	1,979	**-108**	**-156**	107	141
60%	102	597	40	**-6**	**-51**	**-558**	1,214	1,681	**-36**	**-157**	30	186
70%	**-23**	488	**-58**	**-228**	**-135**	**-414**	977	1,409	**-122**	**-384**	87	**-55**
80%	**-98**	367	**-260**	**-435**	**-175**	**-128**	699	773	**-174**	**-213**	**-116**	**-95**
90%	**-88**	100	**-80**	**-174**	**-576**	**-34**	438	535	**-135**	**-149**	340	**-55**
Long Term												
Full Simulation Period[a]	146	230	**-50**	**-122**	**-125**	**-305**	1,347	1,631	**-86**	**-140**	24	10
Water Year Types[b,c]												
Wet (32%)	227	105	**-44**	**-211**	**-395**	**-153**	1,837	2,043	**-58**	**-90**	0	16
Above Normal (15%)	195	139	**-44**	28	**-32**	**-257**	1,974	2,281	**-86**	78	67	**-92**
Below Normal (17%)	292	404	**-191**	**-34**	**-19**	**-610**	1,436	2,089	**-82**	**-443**	**-50**	99
Dry (22%)	44	213	**-44**	**-52**	74	**-556**	889	1,168	**-96**	**-252**	**-20**	**-14**
Critical (15%)	**-96**	412	82	**-284**	**-57**	52	244	246	**-137**	55	187	34

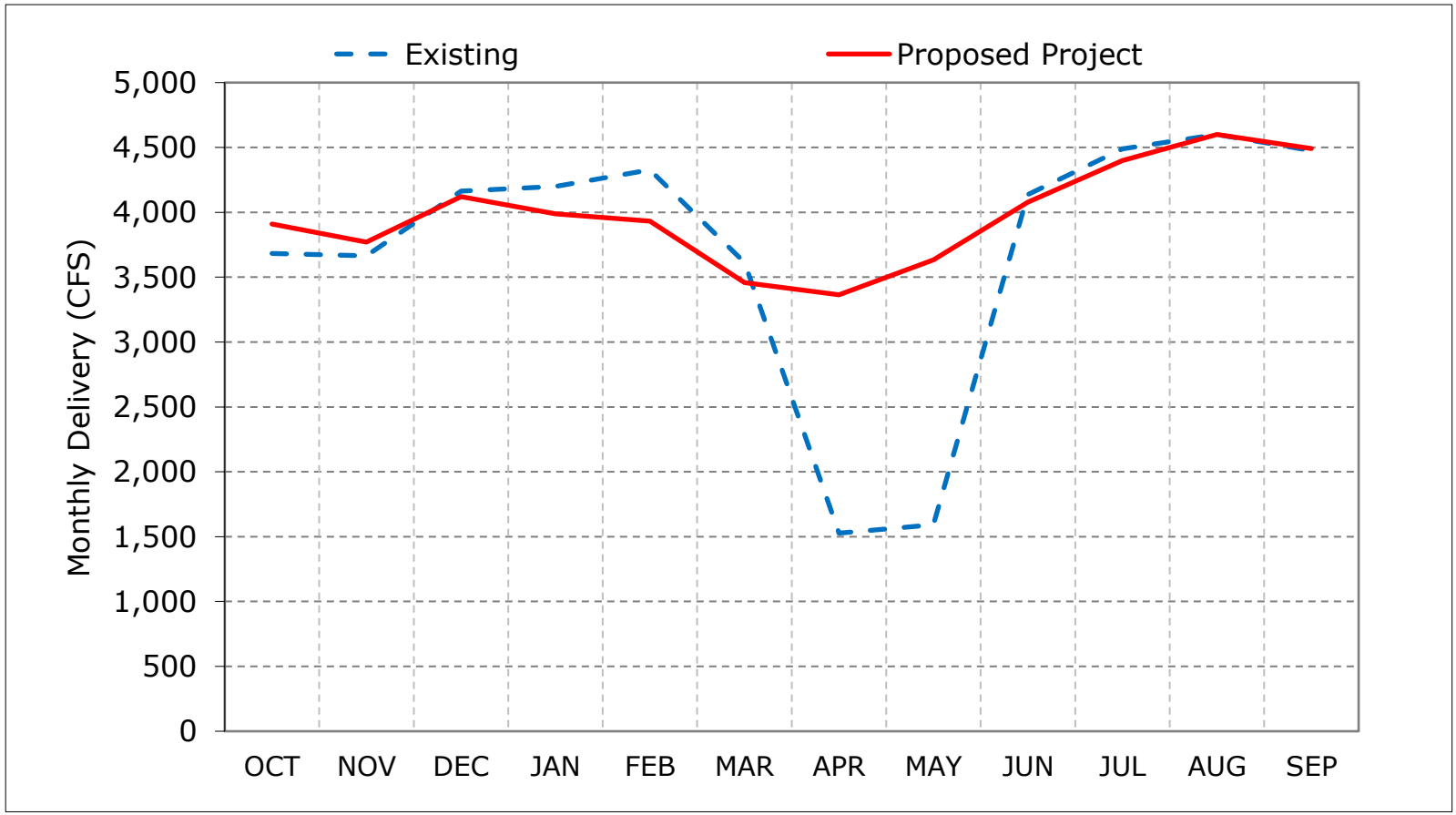
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.

Figure 7-1. Jones PP Exports, Long-Term Average Delivery



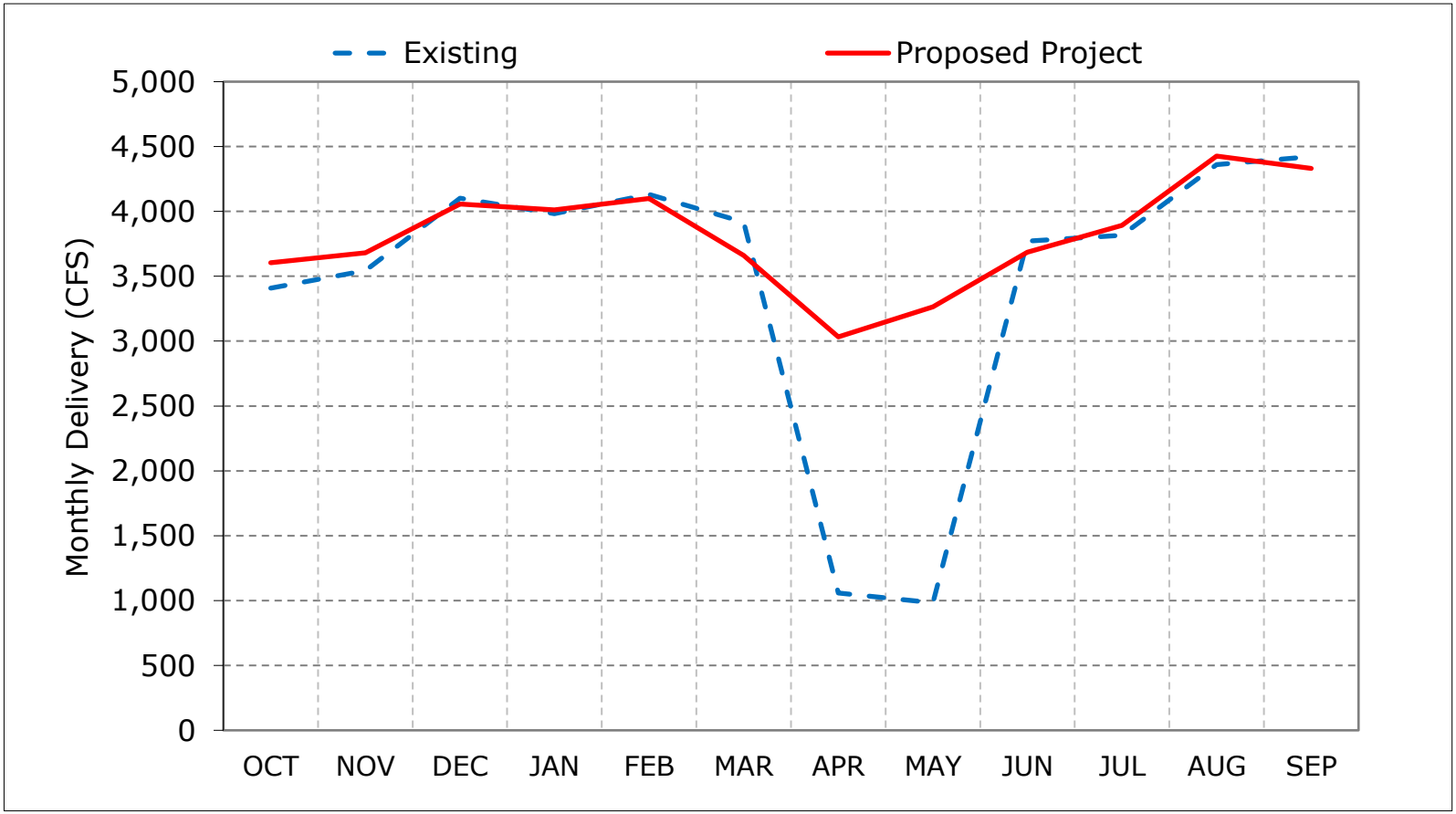
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 7-2. Jones PP Exports, Wet Year Average Delivery



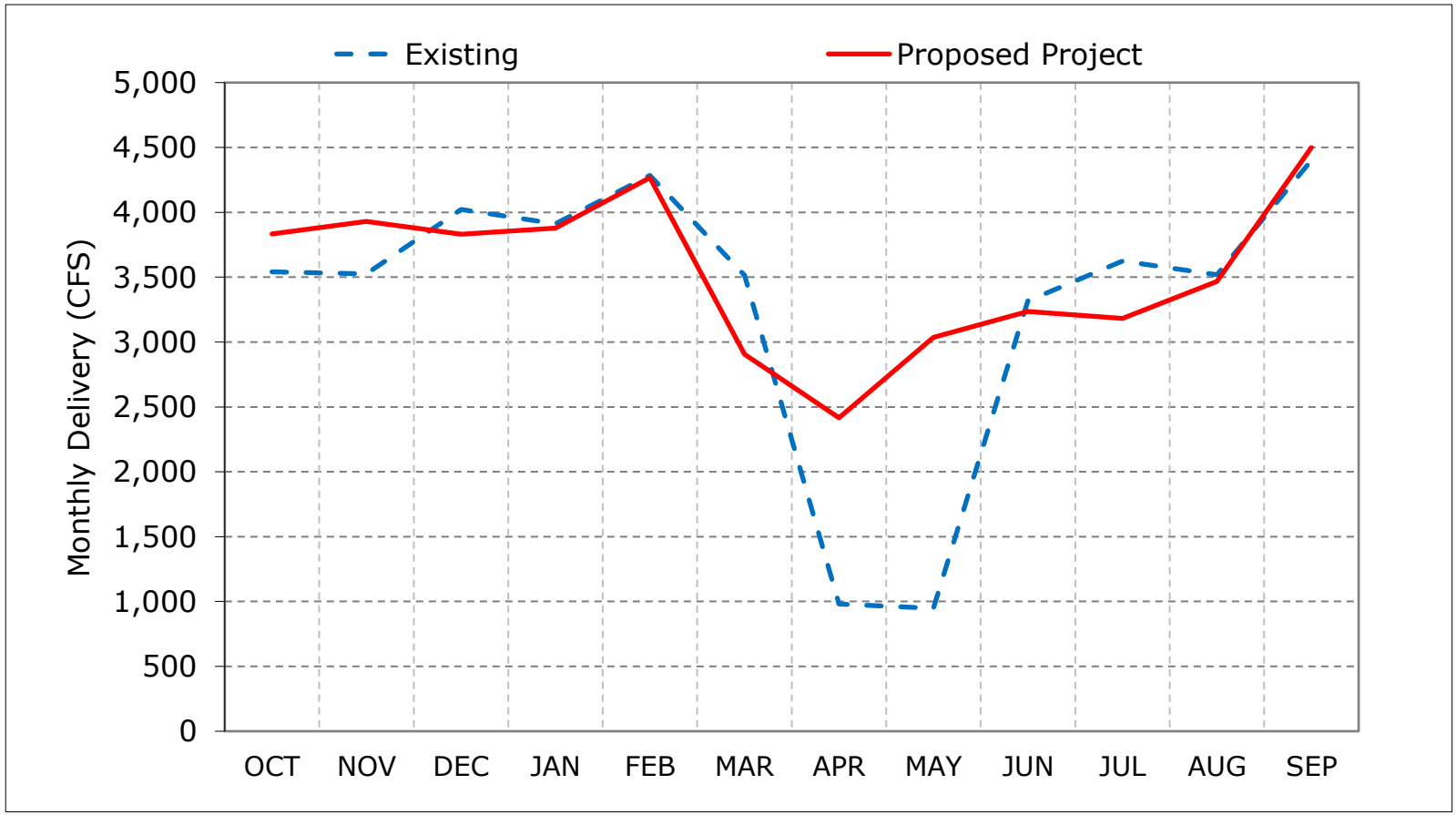
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 7-3. Jones PP Exports, Above Normal Year Average Delivery



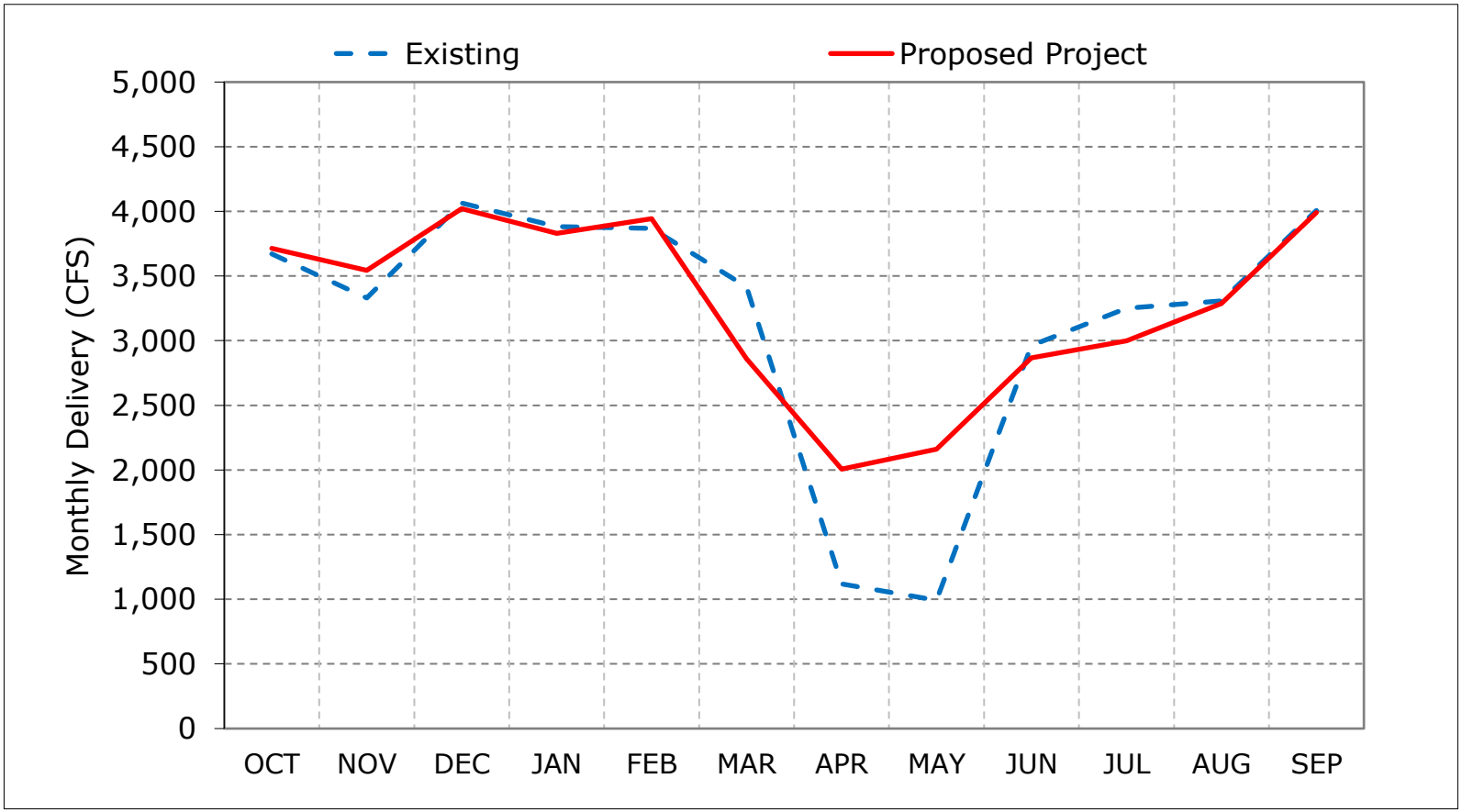
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 7-4. Jones PP Exports, Below Normal Year Average Delivery



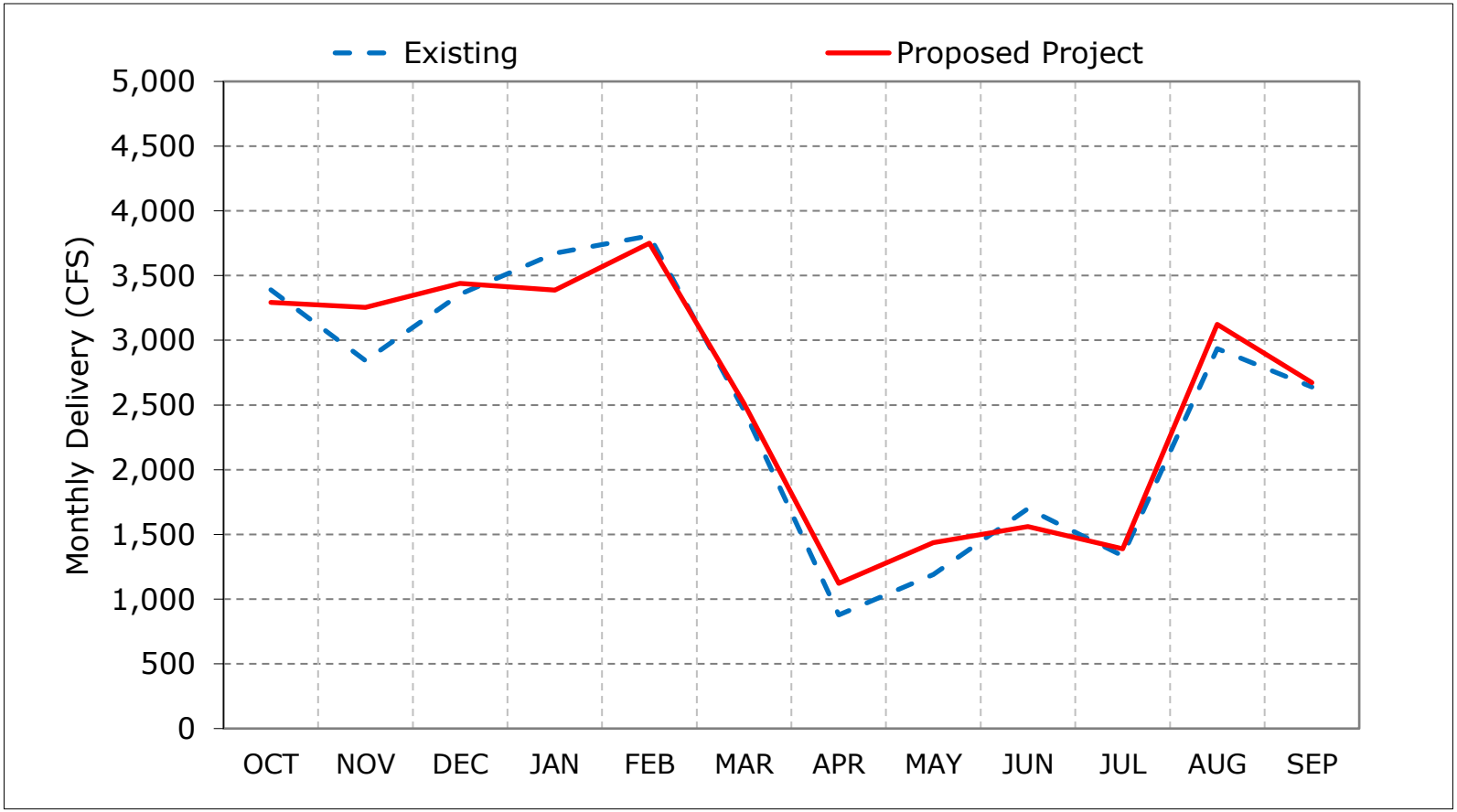
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 7-5. Jones PP Exports, Dry Year Average Delivery



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 7-6. Jones PP Exports, Critical Year Average Delivery



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 7-7. Jones PP Exports, October

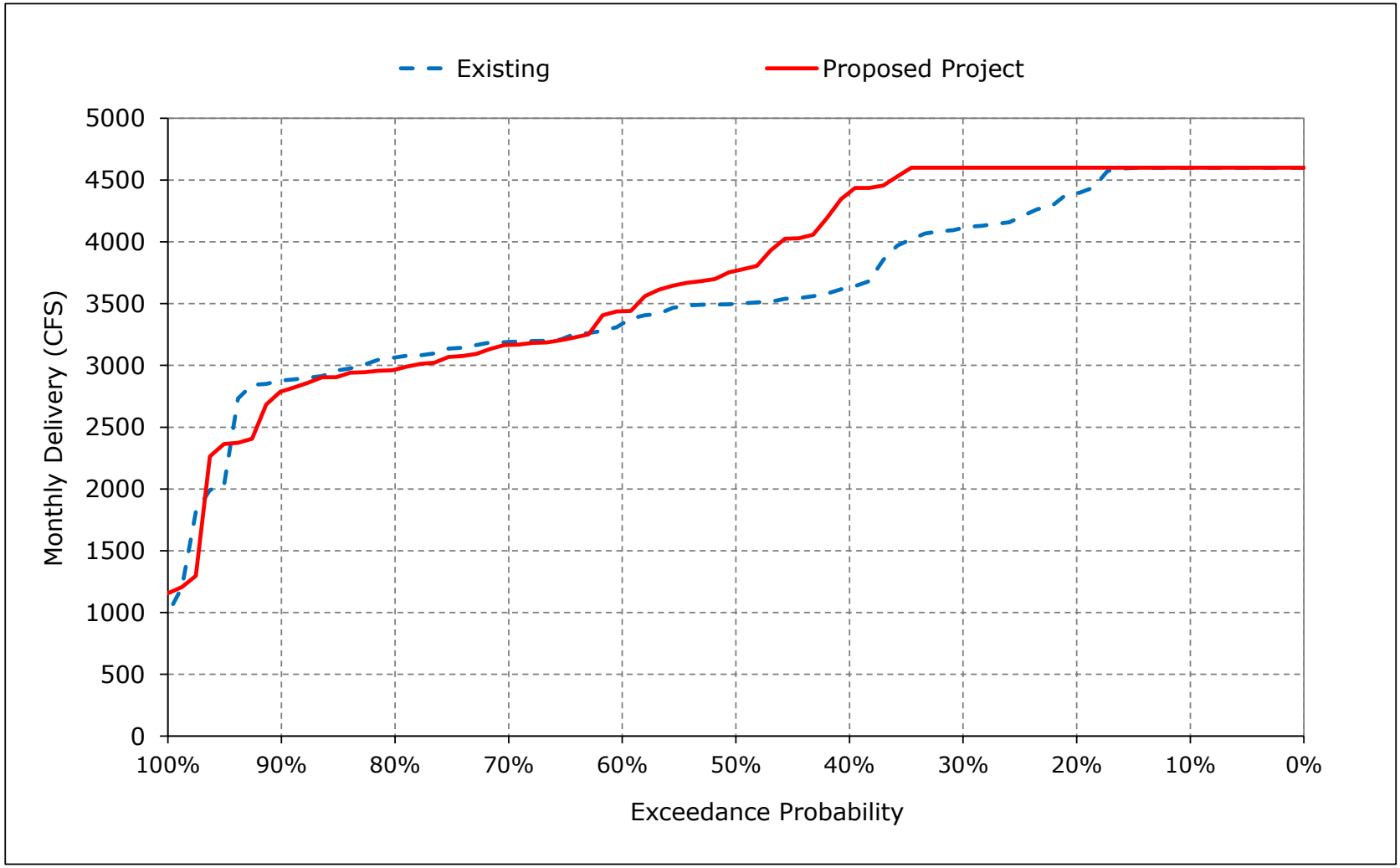


Figure 7-8. Jones PP Exports, November

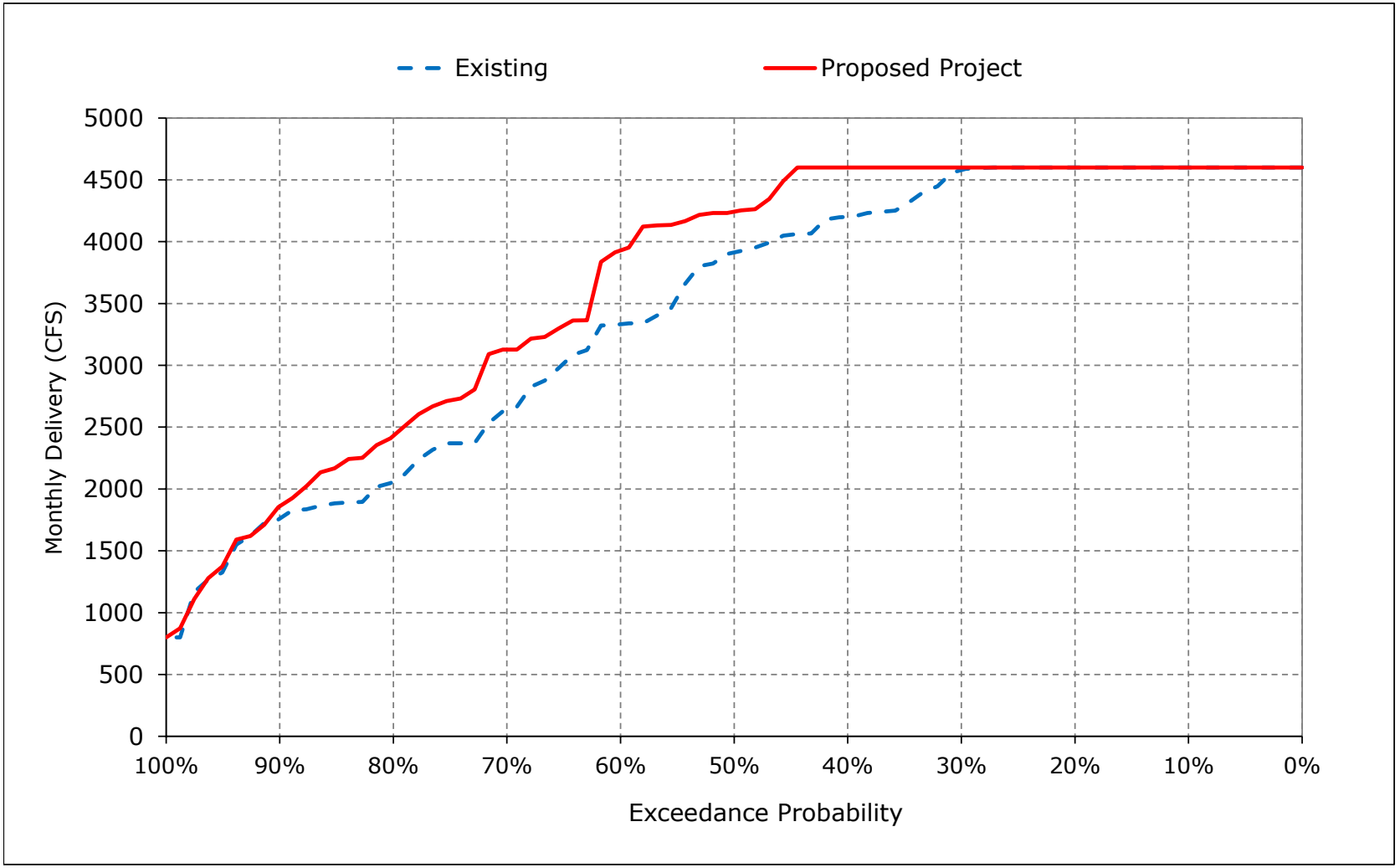


Figure 7-9. Jones PP Exports, December

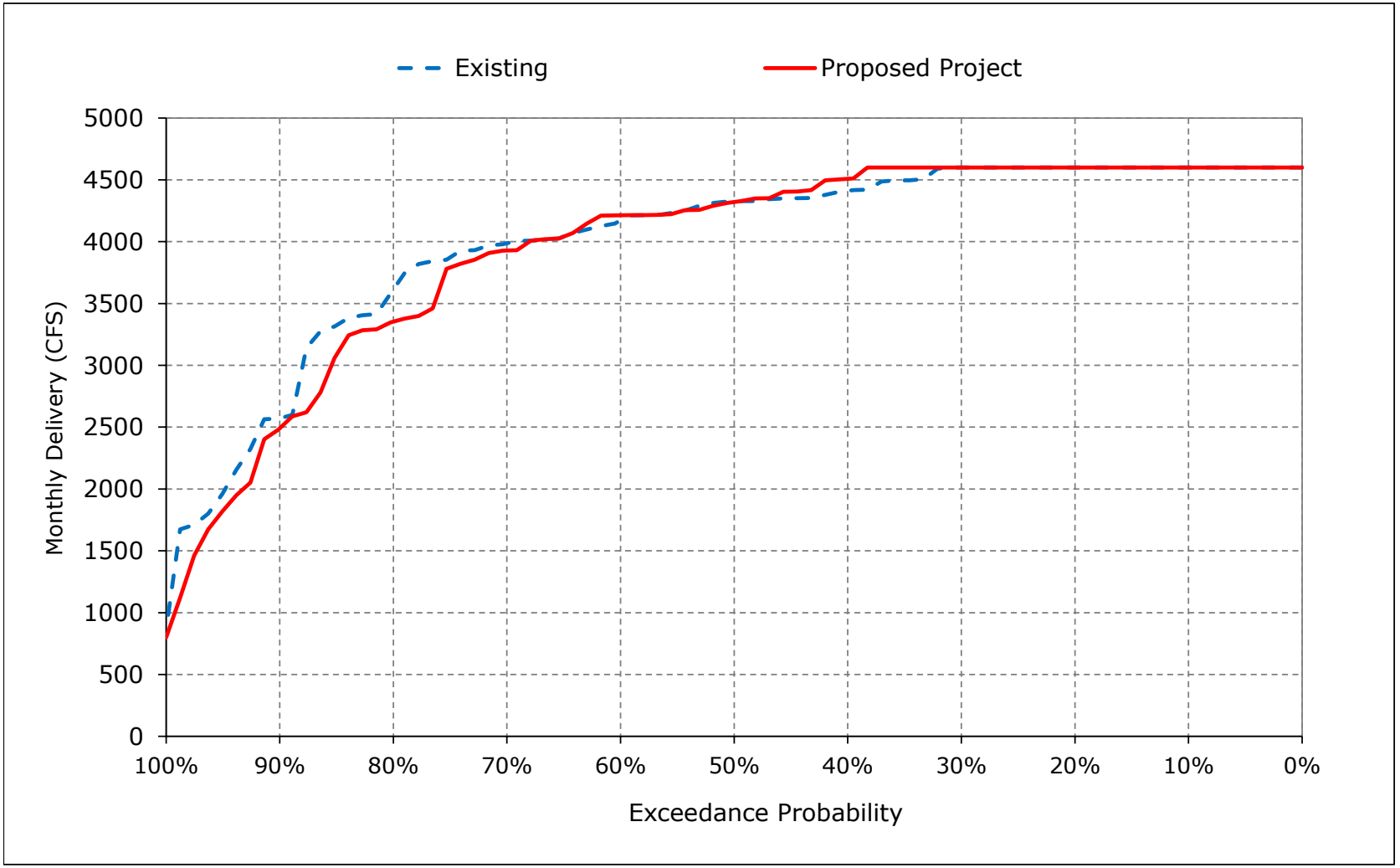


Figure 7-10. Jones PP Exports, January

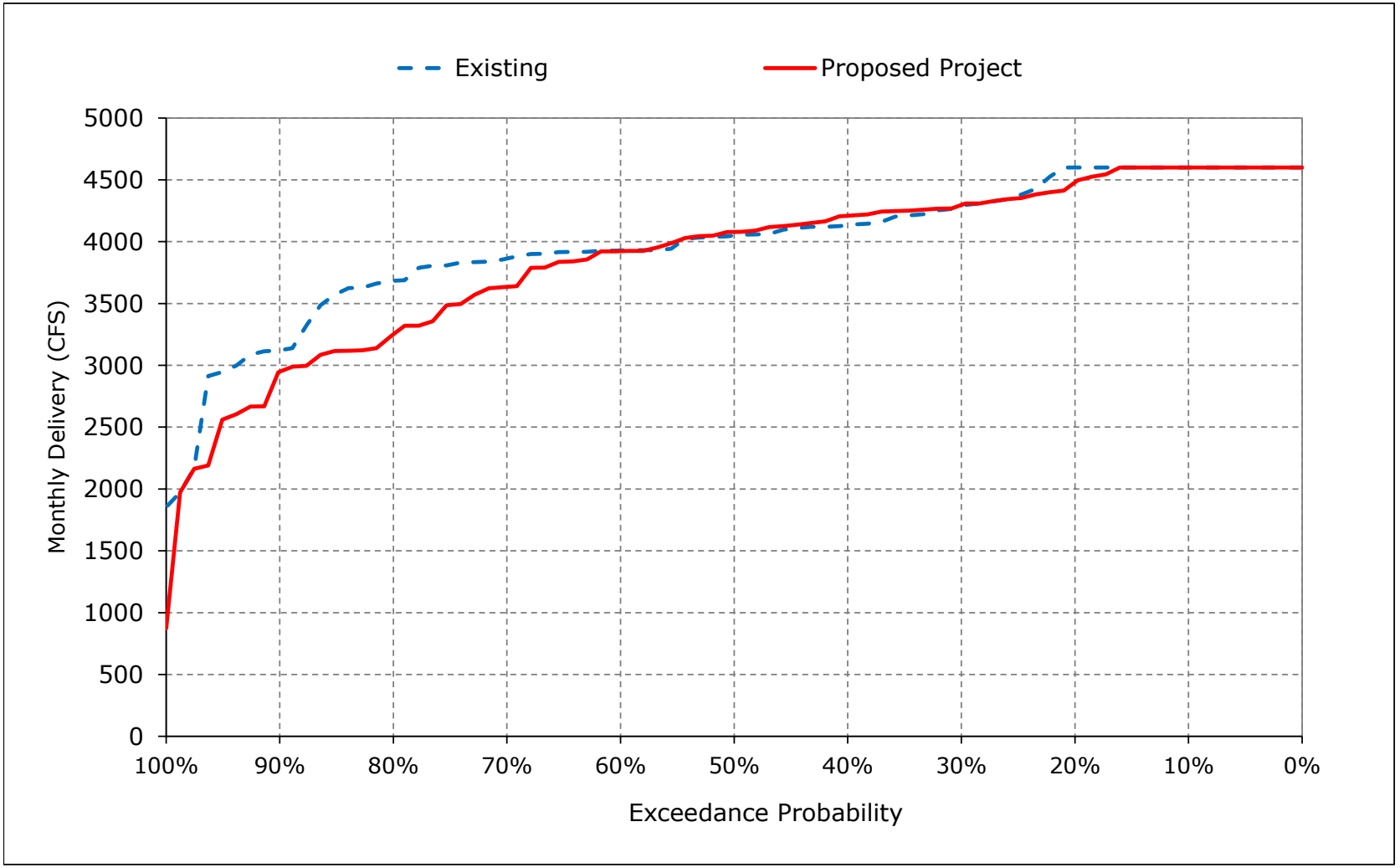


Figure 7-11. Jones PP Exports, February

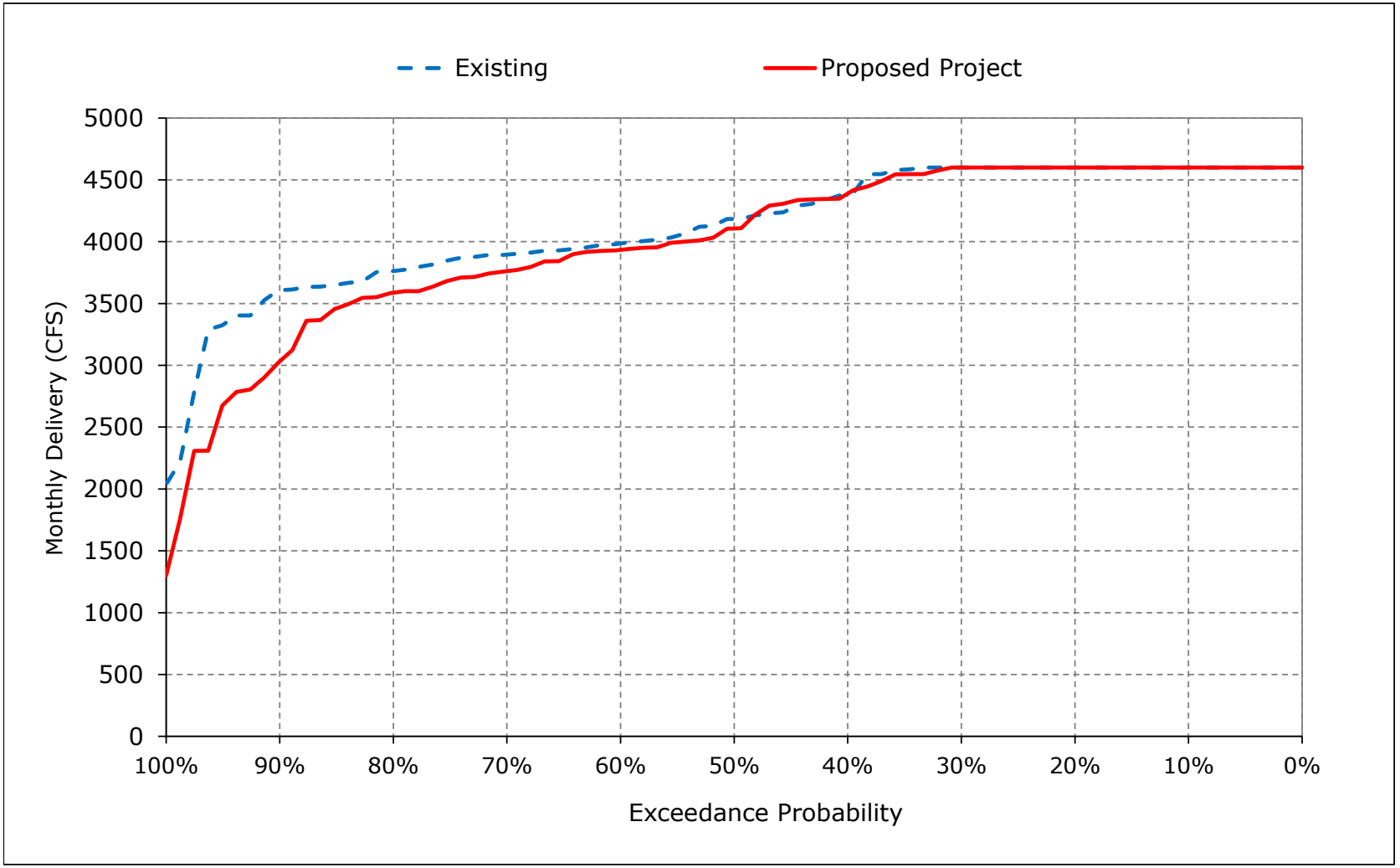


Figure 7-12. Jones PP Exports, March

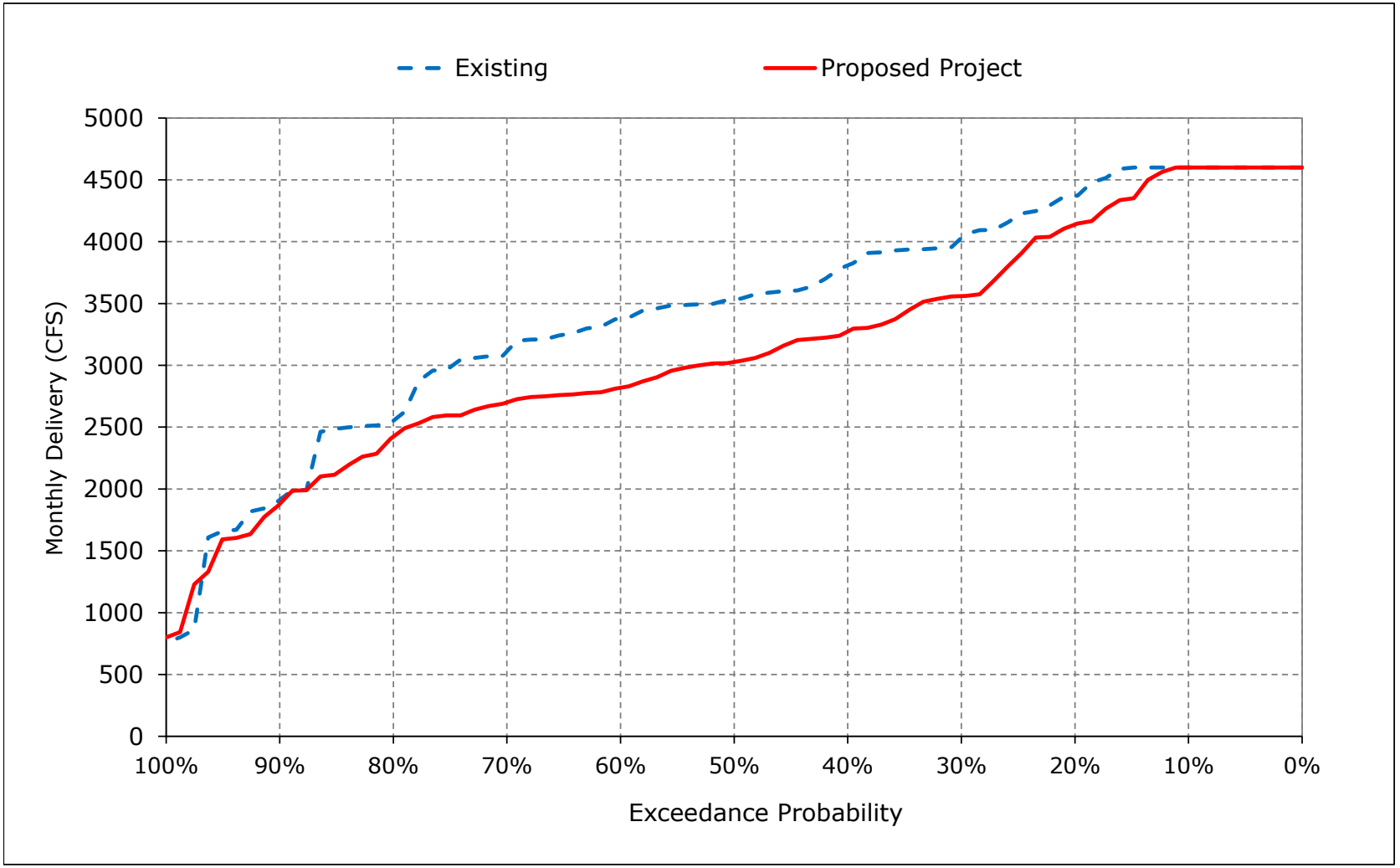


Figure 7-13. Jones PP Exports, April

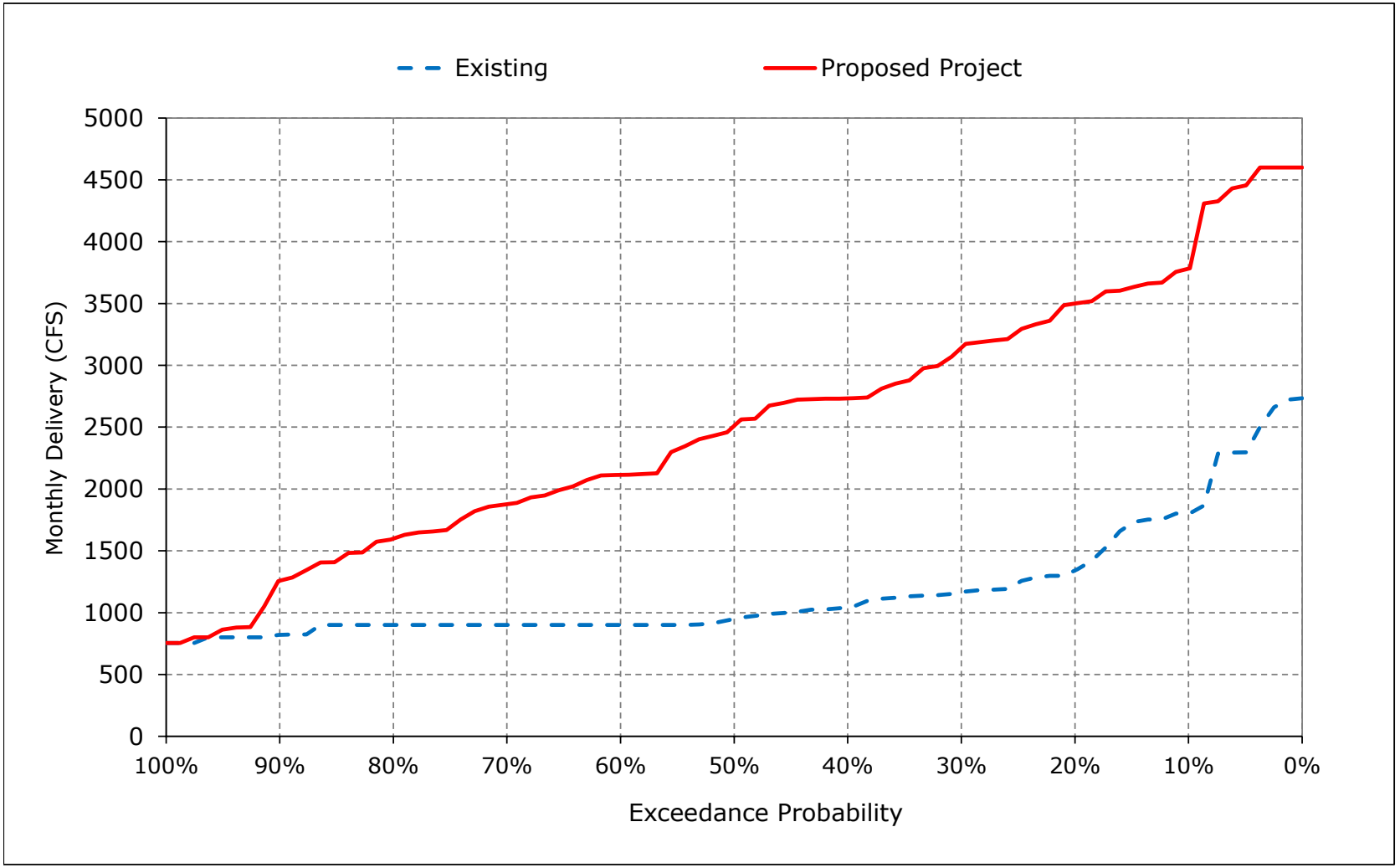


Figure 7-14. Jones PP Exports, May

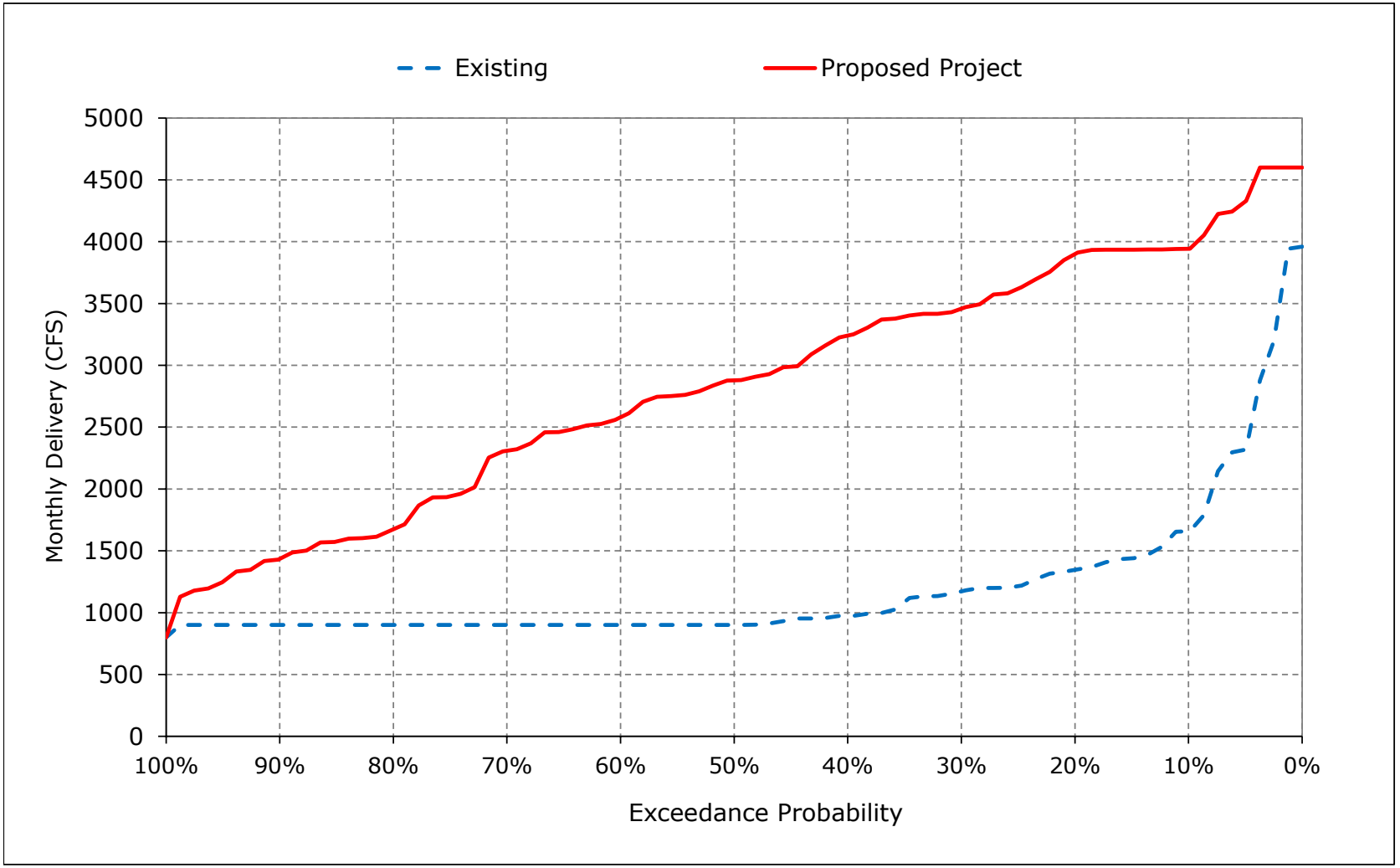


Figure 7-15. Jones PP Exports, June

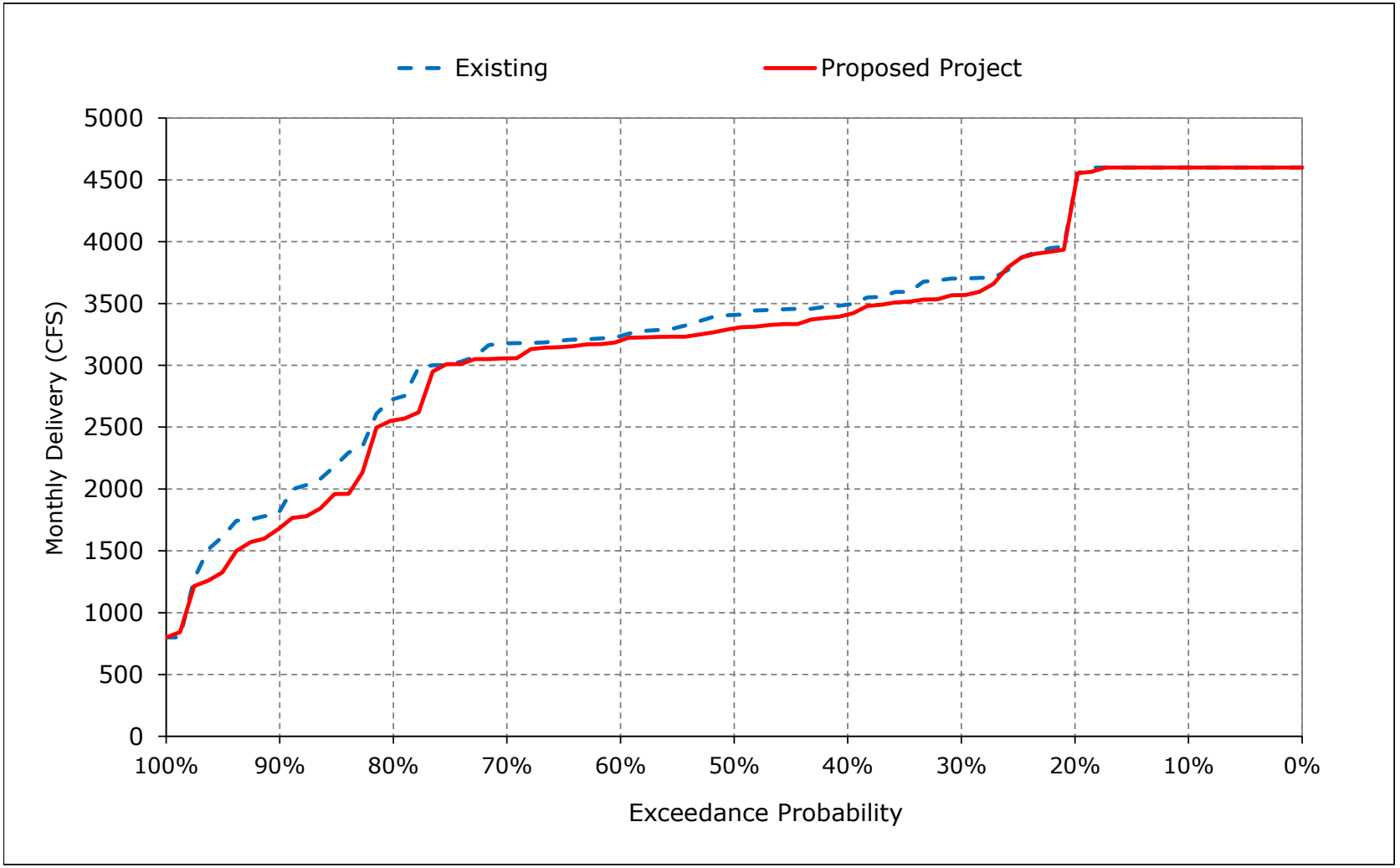


Figure 7-16. Jones PP Exports, July

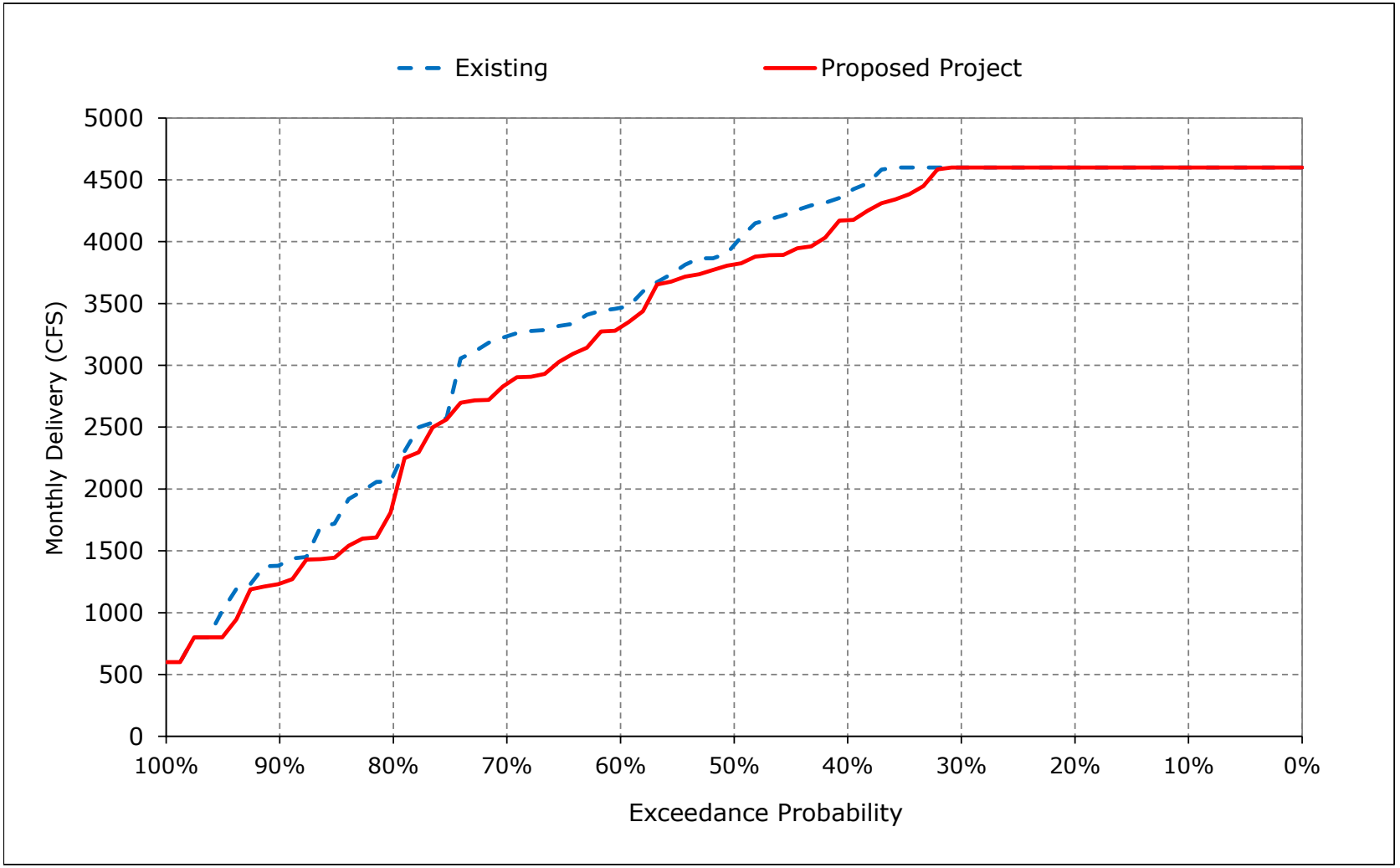


Figure 7-17. Jones PP Exports, August

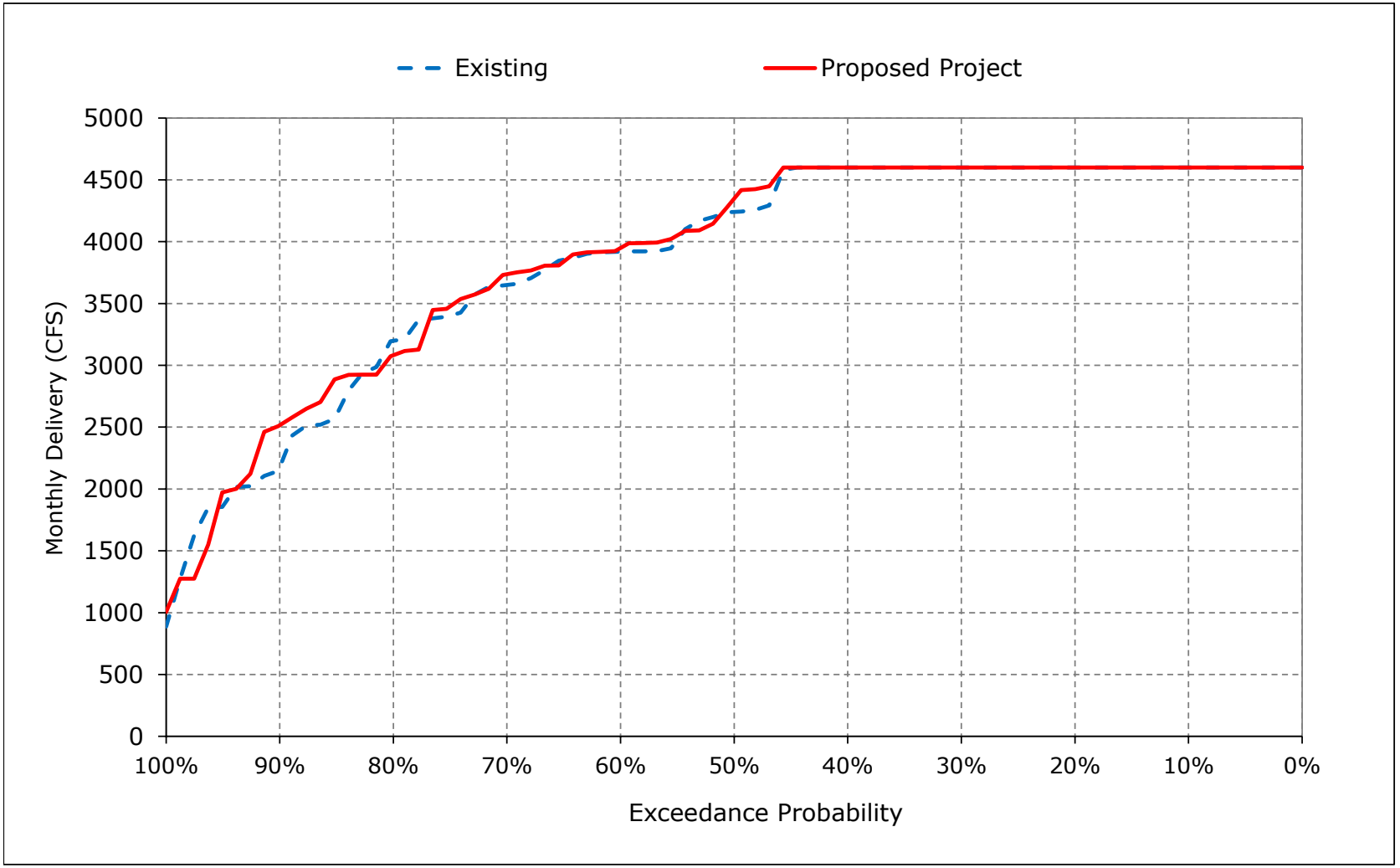
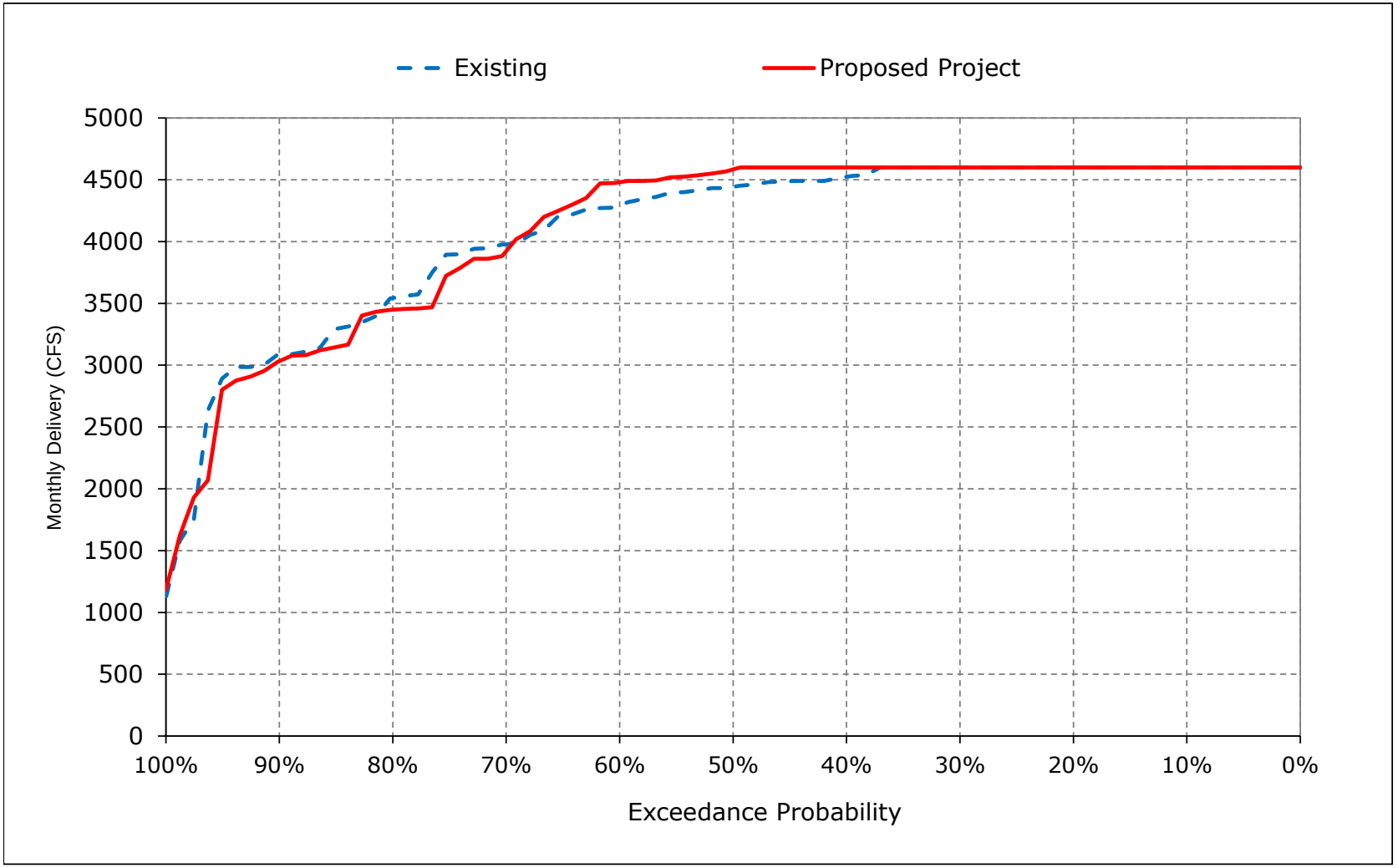


Figure 7-18. Jones PP Exports, September



Appendix C – Modeling

Attachment 2-4 – Water Supply Results (CalSim II)

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

- Existing Conditions
- Proposed Project

Table 2-4.1. Water Supply Results (CalSim II)

Title	Model Parameter	Table Numbers	Figure Numbers
CalSim II Water Supply Summary Report	NA	1-1 to 1-8	1-1 to 1-9
Total Delta Exports	TOTAL_EXP	-	2-1

Note: "-" indicates blank cell

Report formats

- Tables comparing water supply of two scenarios (water supply by region and type, and water supply by type)
- Annual exceedance charts including all scenarios

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

				Proposed Project	Existing	Proposed Project minus Existing
Water Supply Reliability						
Sacramento River Hydrologic Region						
CVP Settlement	Contract Delivery (annual average)	(TAF/year)	Long Term	1,600	1,610	-10
			Dry and Critical	1,576	1,585	-9
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	163	159	4
			Dry and Critical	144	140	3
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	227	225	2
			Dry and Critical	201	199	3
CVP Ag	Contract Delivery (annual average - does not include Settlement	(TAF/year)	Long Term	280	275	5
			Dry and Critical	190	181	9
SWP FRSA	Contract Delivery (annual average)	(TAF/year)	Long Term	952	952	0
			Dry and Critical	908	908	0
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	31	30	1
			Dry and Critical	22	20	2
San Joaquin River Hydrologic Region (not including Friant-Kern and Madera Canal water users)						
CVP Exchange	Contract Delivery (annual average)	(TAF/year)	Long Term	852	852	0
			Dry and Critical	814	814	0
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	261	261	0
			Dry and Critical	249	249	0
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	18	17	1
			Dry and Critical	15	15	0
CVP Ag	Contract Delivery (annual average; does not include Exchange	(TAF/year)	Long Term	404	352	52
			Dry and Critical	243	226	17
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term	4	3	0
			Dry and Critical	2	2	0
San Francisco Bay Hydrologic Region						
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	263	259	5
			Dry and Critical	284	281	2
CVP Ag	Contract Delivery (annual average)	(TAF/year)	Long Term	50	44	6
			Dry and Critical	30	28	2
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	215	202	13
			Dry and Critical	138	125	13
Central Coast Hydrologic Region						
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	43	40	3
			Dry and Critical	24	22	2
Tulare Lake Hydrologic Region (not including Friant-Kern Canal water users)						
CVP Refuge Level 2	Contract Delivery (annual average)	(TAF/year)	Long Term	12	12	0
			Dry and Critical	11	11	0
CVP Ag	Contract Delivery (annual average - includes Cross Valley Canal)	(TAF/year)	Long Term	820	728	91
			Dry and Critical	509	474	35
SWP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term	83	77	6
			Dry and Critical	47	42	4
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term	639	585	54
			Dry and Critical	342	310	31
South Lahontan Hydrologic Region						
SWP M&I	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term	281	260	21
			Dry and Critical	175	155	20
South Coast Hydrologic Region						
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term	1,363	1,242	121
			Dry and Critical	884	763	121
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term	8	7	1
			Dry and Critical	4	4	0
Total For All Regions						
Total Supplies	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term	8,568	8,193	375
			Dry and Critical	6,812	6,556	255

Notes:

1. Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
2. Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 192

Table 1-2. CALSIM II Water Supply Summary Report, by Type, Long-Term Average and Dry and Critical Year Averages

				Proposed Project	Existing	Proposed Project minus Existing
Water Supply Reliability						
North of Delta						
CVP Ag	Contract Delivery (annual average; does not include Exchange	(TAF/year)	Long Term Dry and Critical	280 190	275 181	5 9
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	379 388	376 386	2 3
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	0 0	0 0	0 0
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	102 70	101 68	1 2
Total CVP North of Delta						
Total CVP Ag and M&I NOD	Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term Dry and Critical	658 578	651 567	7 11
Total SWP North of Delta						
Total SWP Ag and M&I NOD	Contract Delivery (SWP) (annual average)	(TAF/year)	Long Term Dry and Critical	102 70	101 68	1 2
Total North of Delta						
Total North of Delta Ag and M&I Deliveries	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term Dry and Critical	761 648	752 635	9 13
South of Delta						
CVP Ag	Contract Delivery (annual average; does not include Exchange	(TAF/year)	Long Term Dry and Critical	1,273 782	1,124 729	149 53
CVP M&I	Contract Delivery (annual average)	(TAF/year)	Long Term Dry and Critical	130 112	124 109	5 3
SWP Ag	Contract Delivery (including Article 21) (annual average)	(TAF/year)	Long Term Dry and Critical	650 348	596 316	55 32
SWP M&I	Contract Delivery (including Article 21, includes transfers to SWP contractors) (annual average)	(TAF/year)	Long Term Dry and Critical	1,914 1,220	1,750 1,060	163 160
Total CVP South of Delta						
Total CVP Ag and M&I SOD	Contract Delivery (CVP) (annual average)	(TAF/year)	Long Term Dry and Critical	1,403 894	1,248 838	155 56
Total SWP South of Delta						
Total SWP Ag and M&I SOD	Contract Delivery (SWP) (annual average)	(TAF/year)	Long Term Dry and Critical	2,564 1,568	2,346 1,377	218 192
Total South of Delta						
Total South of Delta Ag and M&I Deliveries	Contract Delivery (CVP, SWP and other) (annual average)	(TAF/year)	Long Term Dry and Critical	3,967 2,462	3,594 2,215	373 248

Notes:

1. Long Term is the average quantity for the period of Oct 1921 - Sep 2003.
2. Dry and Critical Years Average is the average quantity for the combination of the SWRCB D-1641 40-30-30 Dry and Critical years for the period of Oct 192

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

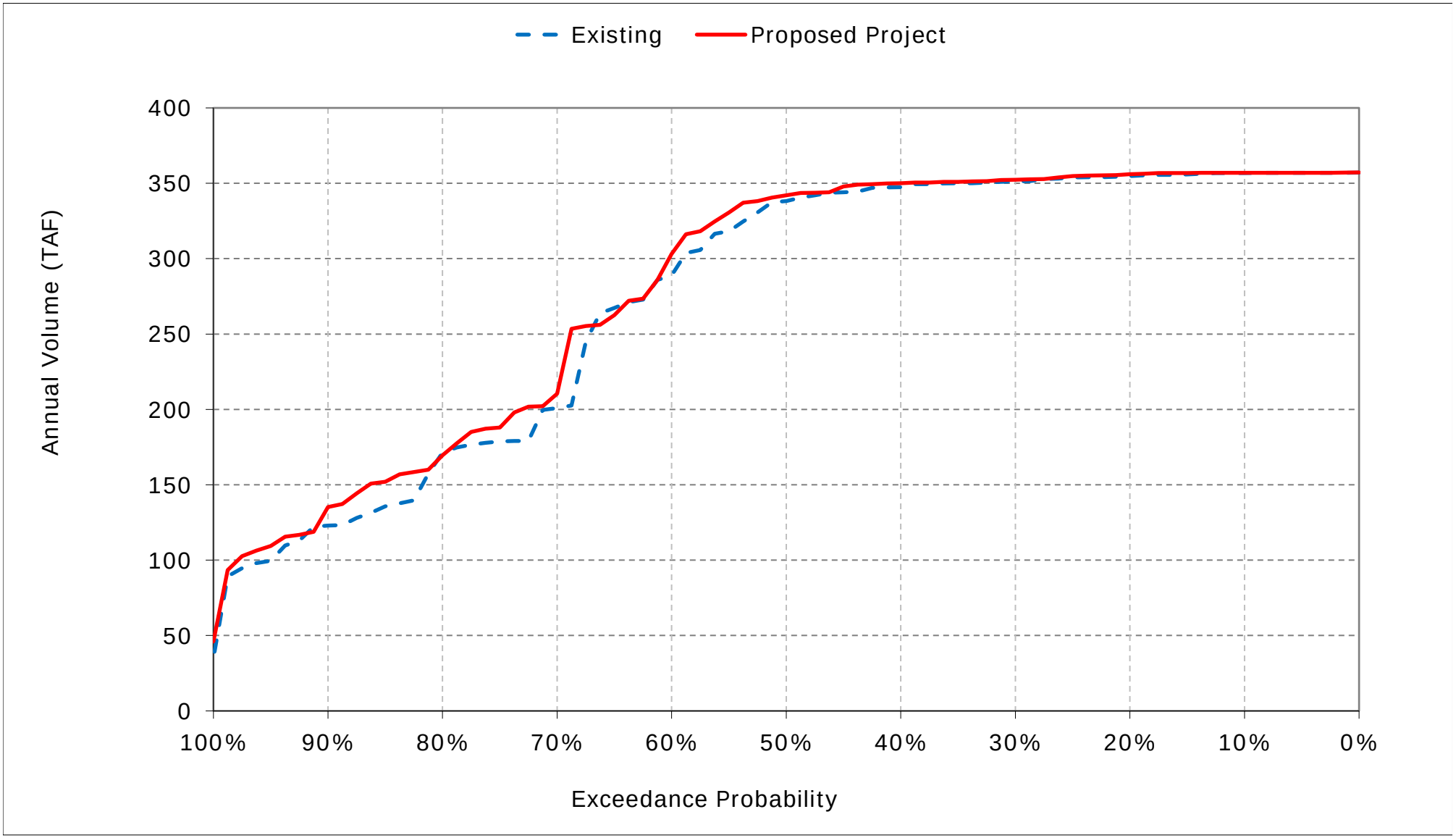


Figure 1-2. CVP South of Delta Agricultural Water Service Contract Deliveries, Annual (Mar-Feb)

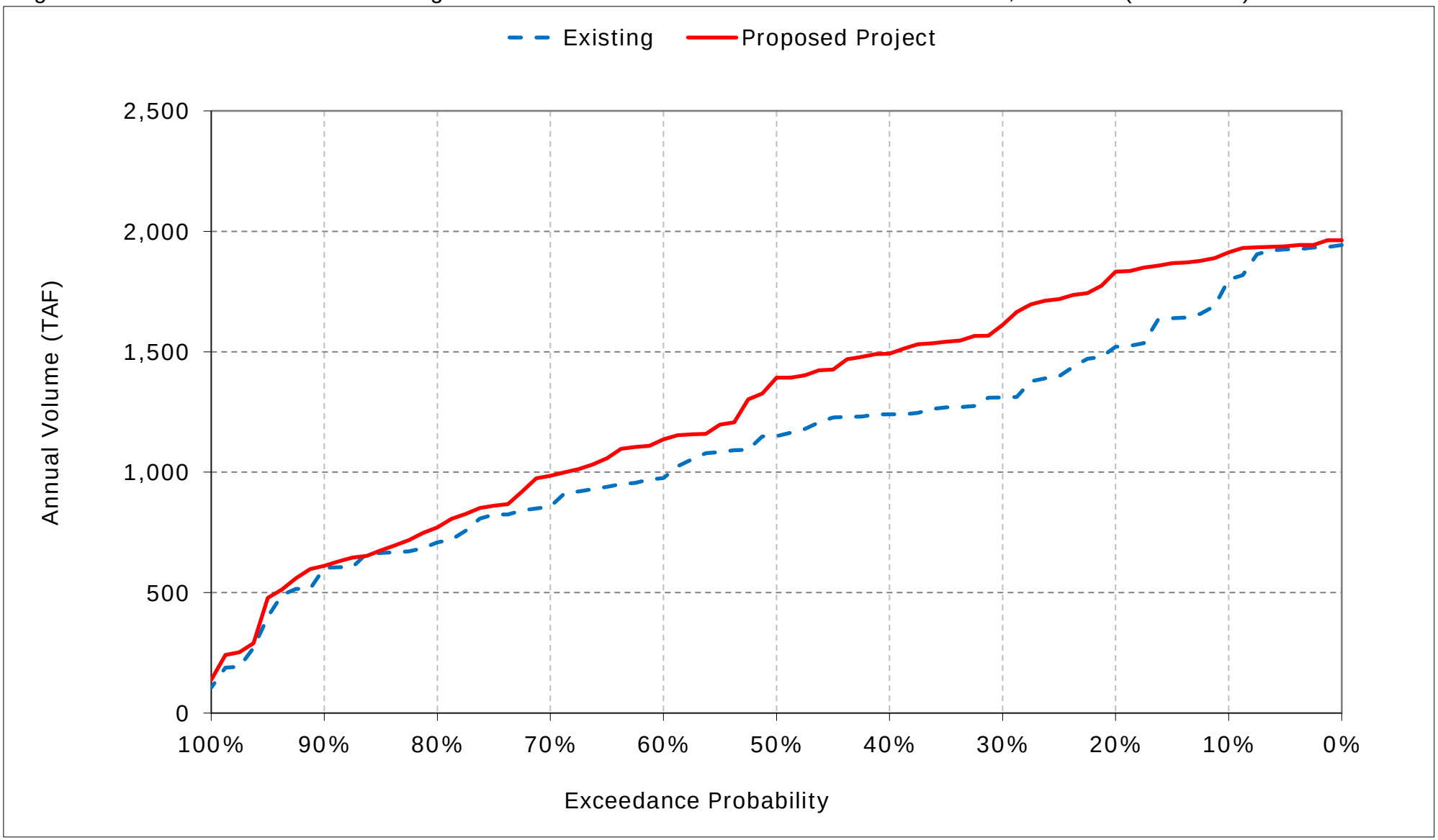


Figure 1-3. CVP North of Delta M&I Water Service Contract Deliveries, Annual (Mar-Feb)

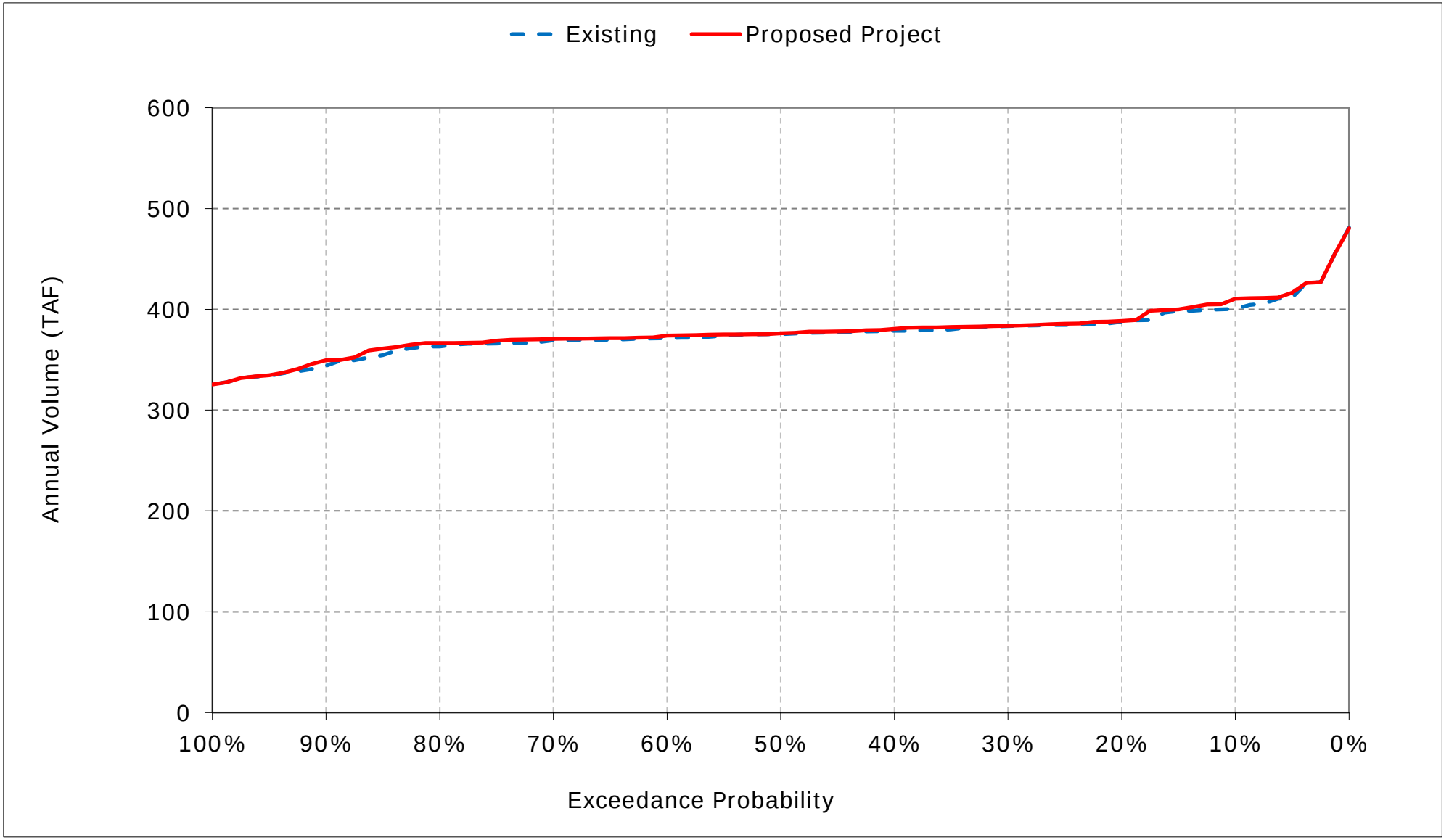


Figure 1-4. CVP South of Delta M&I Water Service Contract Deliveries, Annual (Mar-Feb)

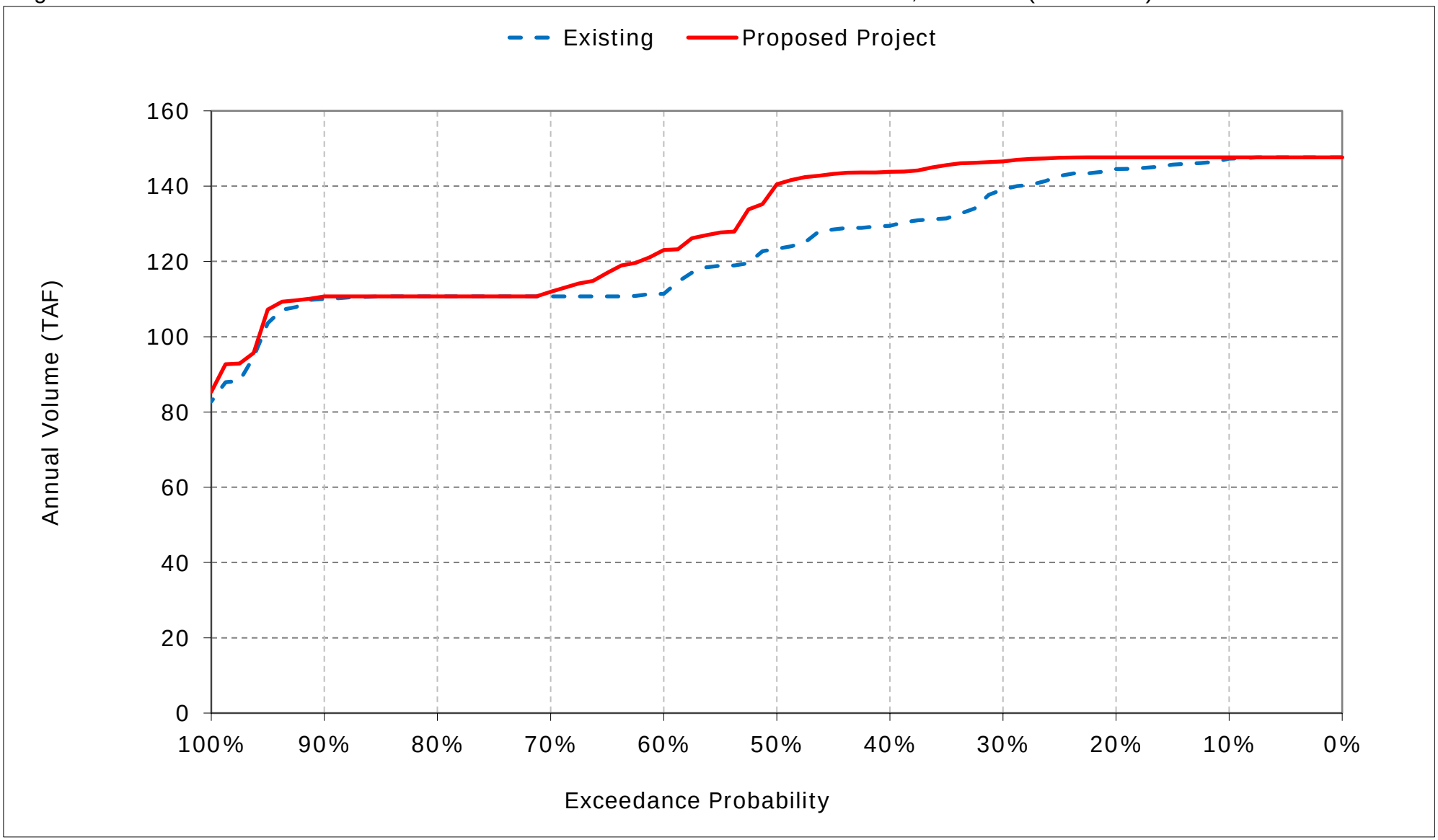


Figure 1-5. Total SWP Deliveries, Annual (Jan-Dec)

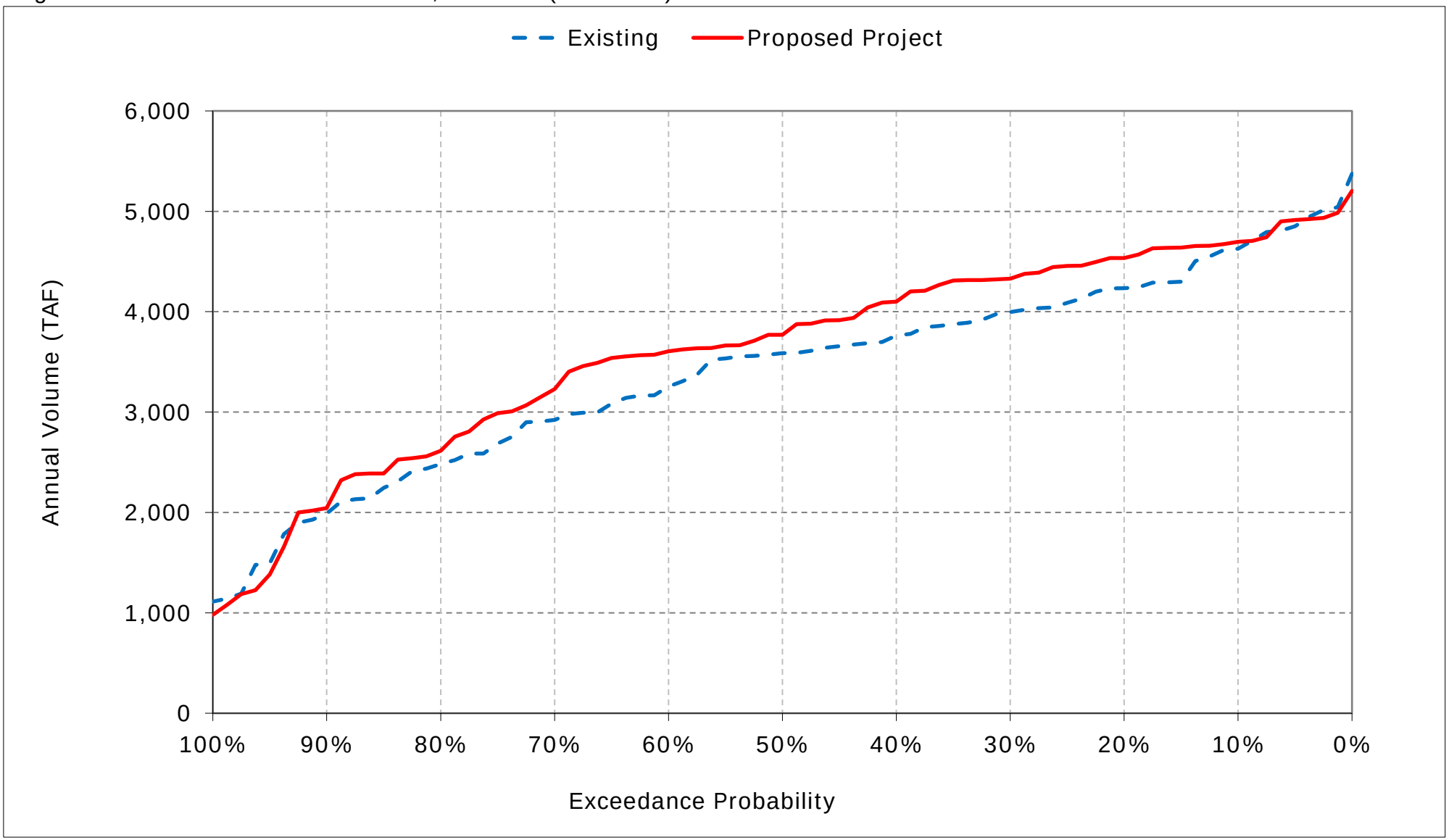


Figure 1-6. Total SWP South of Delta Deliveries including Article 21 and 56, Annual (Jan-Dec)

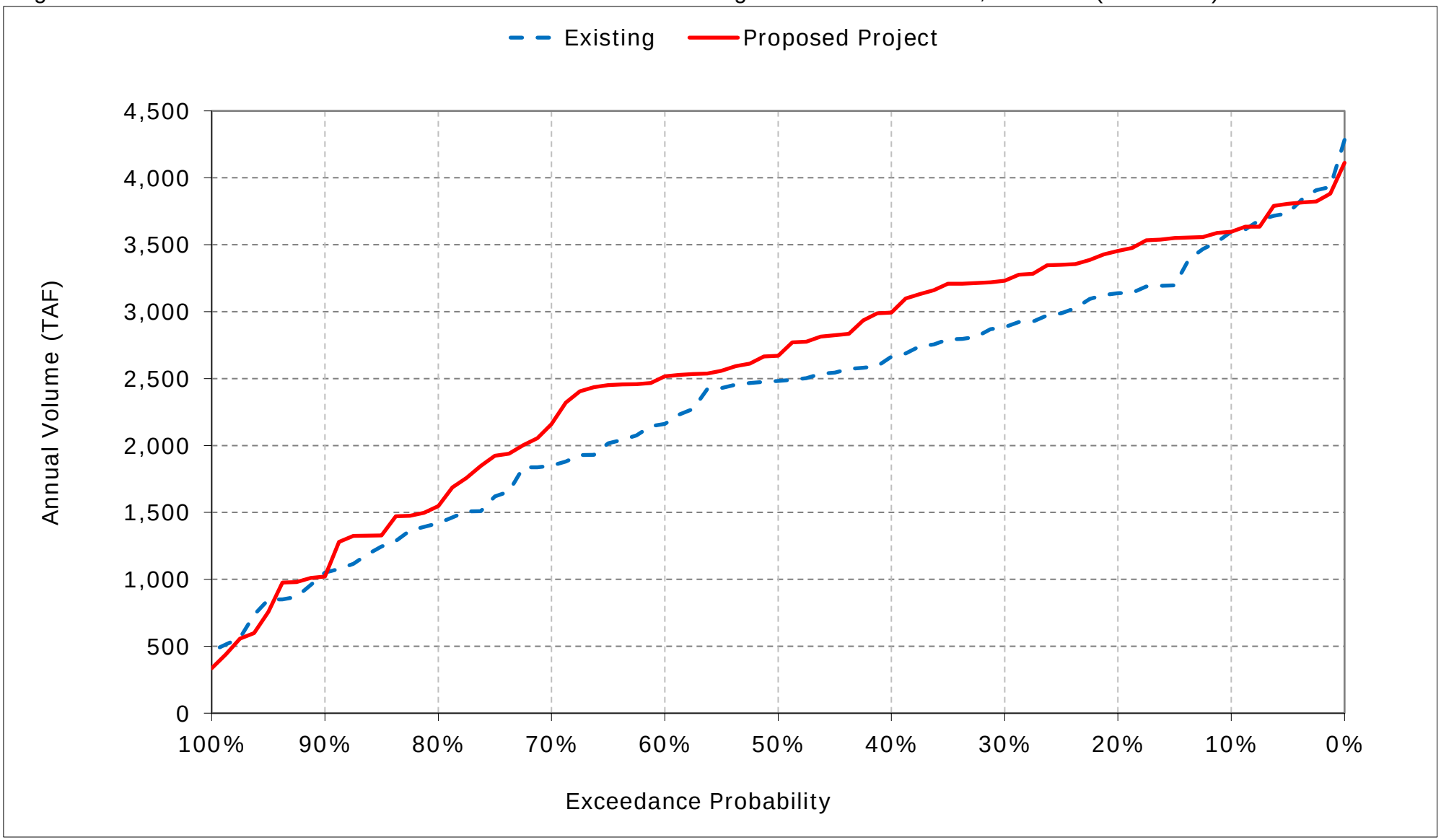


Figure 1-7. SWP Table A Deliveries with Article 56, Annual (Jan-Dec)

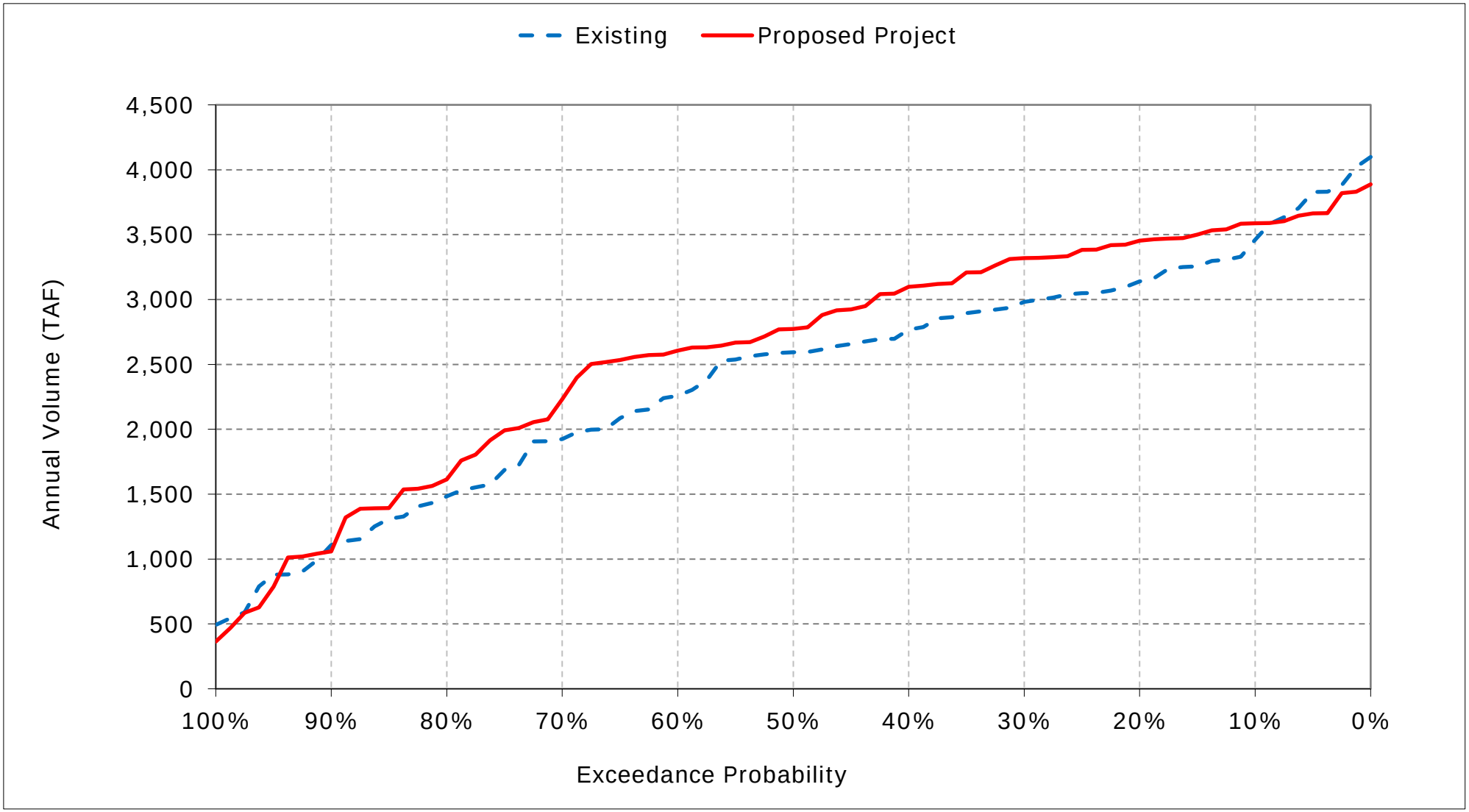


Figure 1-8. SWP South of Delta Table A Deliveries with Article 56, Annual (Jan-Dec)

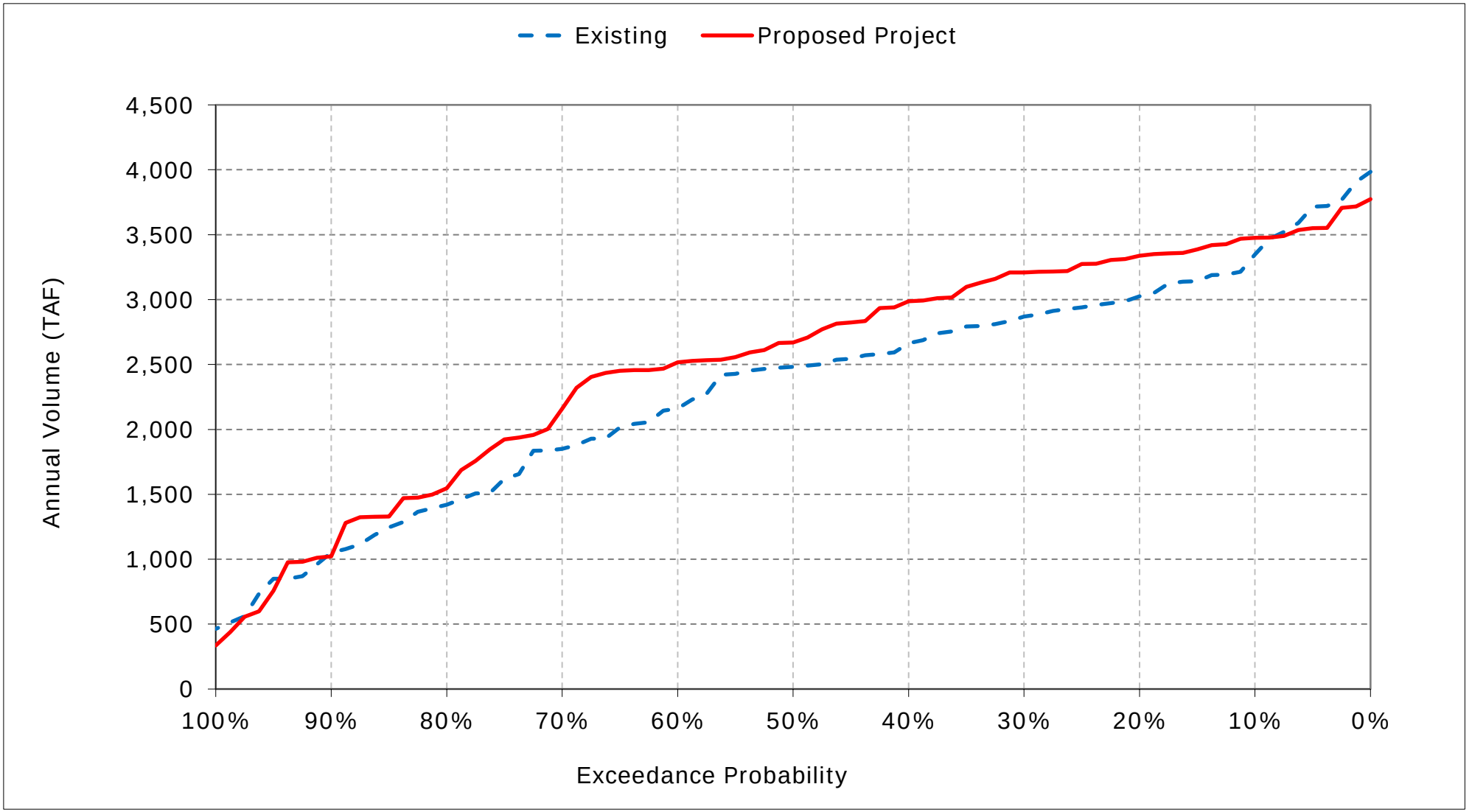


Figure 1-9. SWP Article 21 Deliveries, Annual (Jan-Dec)

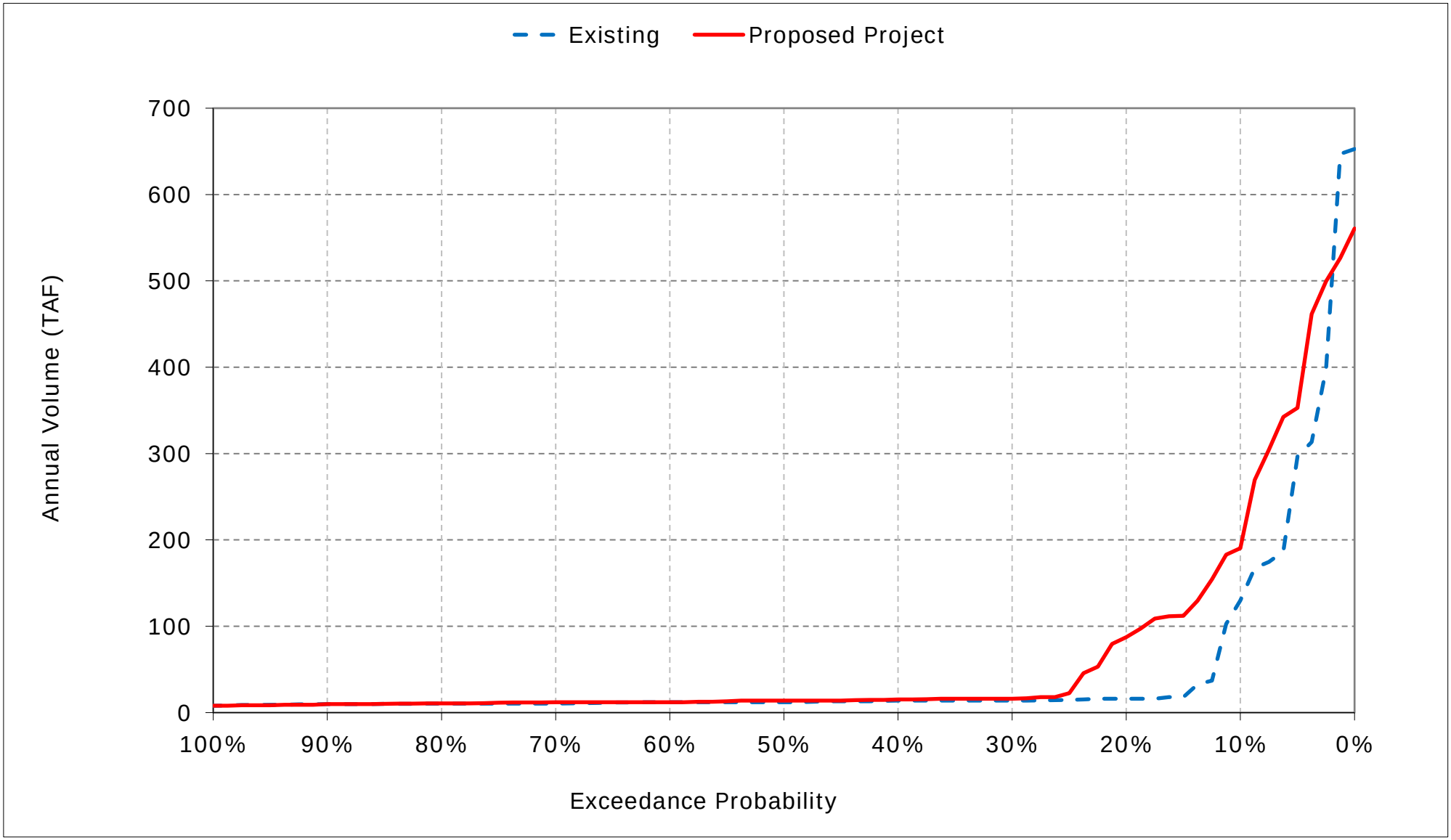
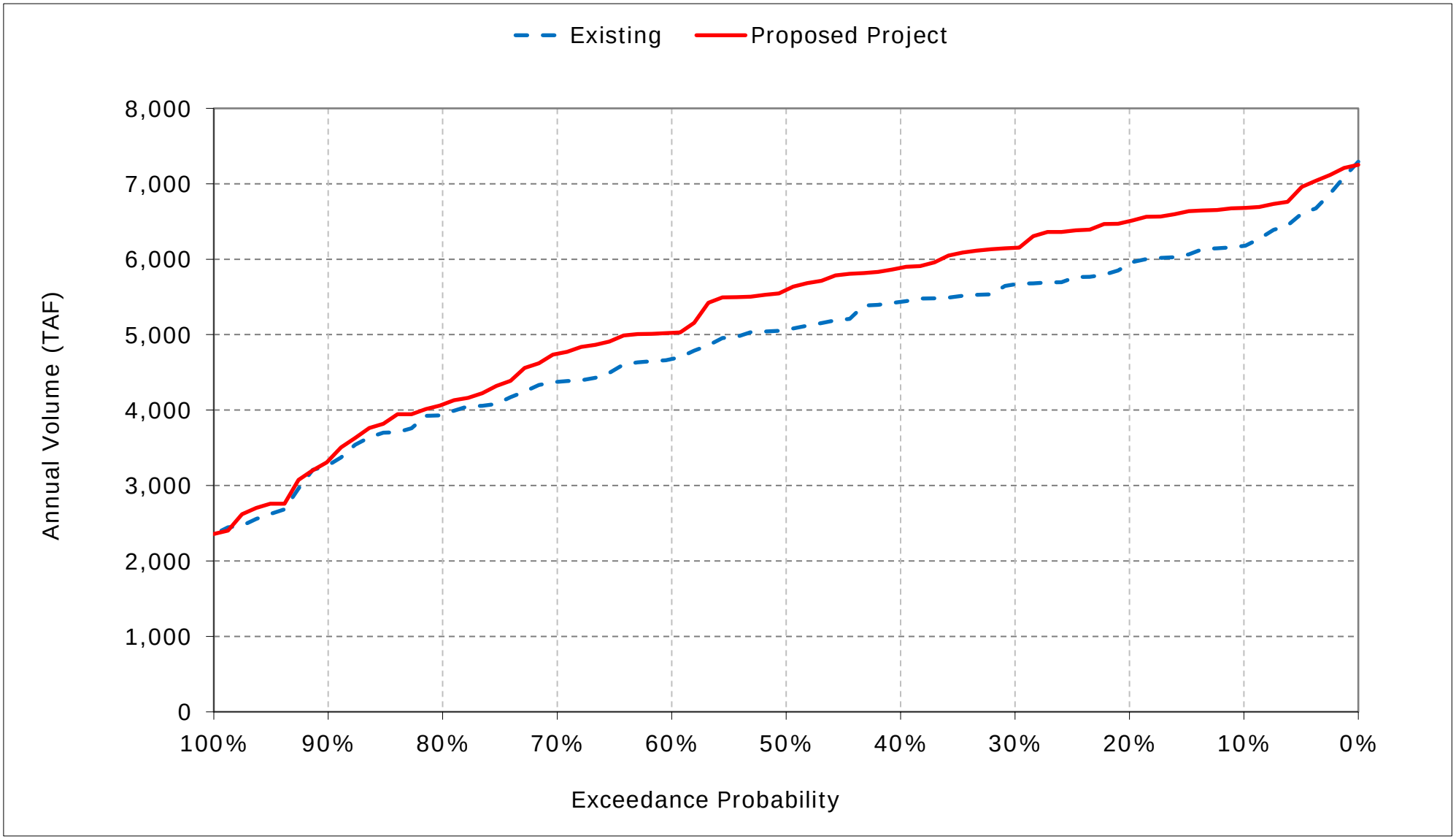


Figure 2-1. Total Delta Exports, Annual (Oct-Sep)



Appendix C – Modeling

Attachment 2-5 – X2 Position Results (CalSim II)

The following results of the CalSim II model are included for Delta X2 conditions for the following alternatives:

- Existing Conditions
- Proposed Project

Table 2-5.1. X2 Position Results (CalSim II)

Title	Model Parameter	Table Numbers	Figure Numbers
X2	X2_PRV_MOD	1-1	1-1 to 1-18

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 1-1. X2 Position, Monthly Position

Existing

Statistic	Monthly Position (KM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	92.8	91.8	90.7	84.5	78.2	77.3	78.1	80.9	83.4	86.4	90.3	92.3
20%	92.1	91.3	88.6	82.9	72.2	71.8	72.2	78.1	81.7	85.1	88.2	91.1
30%	91.7	90.9	84.0	79.8	67.4	65.1	67.8	75.1	81.0	84.5	87.7	90.6
40%	91.0	90.4	82.0	73.4	63.3	63.6	66.4	71.0	80.4	82.4	86.3	89.8
50%	89.9	81.1	80.1	71.5	58.9	60.3	62.4	66.9	77.0	80.9	85.7	88.5
60%	81.0	80.9	78.8	65.4	53.8	57.3	60.0	64.5	75.3	79.9	85.0	81.0
70%	74.0	75.4	71.5	55.4	51.0	54.0	57.9	62.0	72.2	78.6	84.6	74.1
80%	74.0	74.0	63.5	50.3	48.2	49.9	53.2	58.7	66.5	77.1	83.7	74.0
90%	74.0	73.3	52.5	48.4	47.7	48.1	49.1	53.1	59.7	73.9	82.4	74.0
Long Term												
Full Simulation Period[a]	84.1	82.4	76.3	67.9	60.7	60.9	63.2	67.7	74.9	80.5	85.6	83.9
Water Year Types[b,c]												
Wet (32%)	80.7	76.7	63.8	53.9	50.2	51.8	54.1	57.9	65.5	74.4	82.7	73.6
Above Normal (15%)	83.6	80.9	76.6	62.5	54.7	53.8	58.2	62.5	73.0	78.2	83.6	74.3
Below Normal (17%)	85.3	84.9	81.5	72.7	61.0	63.5	63.9	68.5	76.9	81.6	85.4	89.1
Dry (22%)	85.3	85.4	82.7	78.1	69.3	67.2	69.8	74.8	80.8	84.9	87.9	90.8
Critical (15%)	88.9	88.6	87.7	82.7	76.3	75.4	77.5	82.7	86.2	88.2	90.5	92.5

Proposed Project

Statistic	Monthly Position (KM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	92.5	91.9	90.6	86.4	77.6	77.4	78.6	81.3	83.4	86.4	90.3	92.6
20%	92.1	91.4	88.8	84.1	71.7	71.1	73.7	79.6	82.8	85.2	88.4	91.3
30%	91.6	90.8	88.0	80.8	67.6	64.4	69.4	77.2	81.6	84.6	87.9	90.9
40%	91.1	90.3	87.3	74.6	63.9	62.8	67.5	73.3	81.0	81.4	85.8	89.7
50%	89.7	86.7	84.8	71.0	58.8	59.7	64.1	69.5	77.9	80.3	85.4	88.6
60%	80.1	86.4	81.0	64.7	53.5	56.7	61.1	67.4	76.6	79.6	84.7	80.1
70%	80.0	86.2	73.2	55.0	51.1	53.6	58.8	63.7	73.4	78.3	84.2	80.0
80%	80.0	84.7	64.7	50.1	48.2	49.3	54.2	59.8	66.9	77.1	83.4	80.0
90%	79.9	73.2	52.6	48.2	47.7	48.0	49.5	54.3	59.8	73.7	82.4	80.0
Long Term												
Full Simulation Period[a]	85.6	85.7	78.1	68.2	60.8	60.6	64.2	69.5	75.6	80.3	85.5	85.6
Water Year Types[b,c]												
Wet (32%)	82.6	81.0	65.0	53.8	50.1	51.6	54.9	59.6	66.3	74.3	82.5	79.0
Above Normal (15%)	85.4	84.9	79.4	62.6	54.3	53.3	59.2	64.7	73.9	77.9	83.5	73.3
Below Normal (17%)	86.8	88.1	83.7	72.5	60.5	62.8	65.2	71.1	77.6	80.8	85.0	89.1
Dry (22%)	86.7	88.1	84.7	79.1	69.9	66.6	70.8	76.4	81.5	84.9	88.1	91.0
Critical (15%)	89.0	90.5	89.0	83.5	77.0	75.6	78.0	83.3	86.4	88.3	90.6	92.6

Proposed Project minus Existing

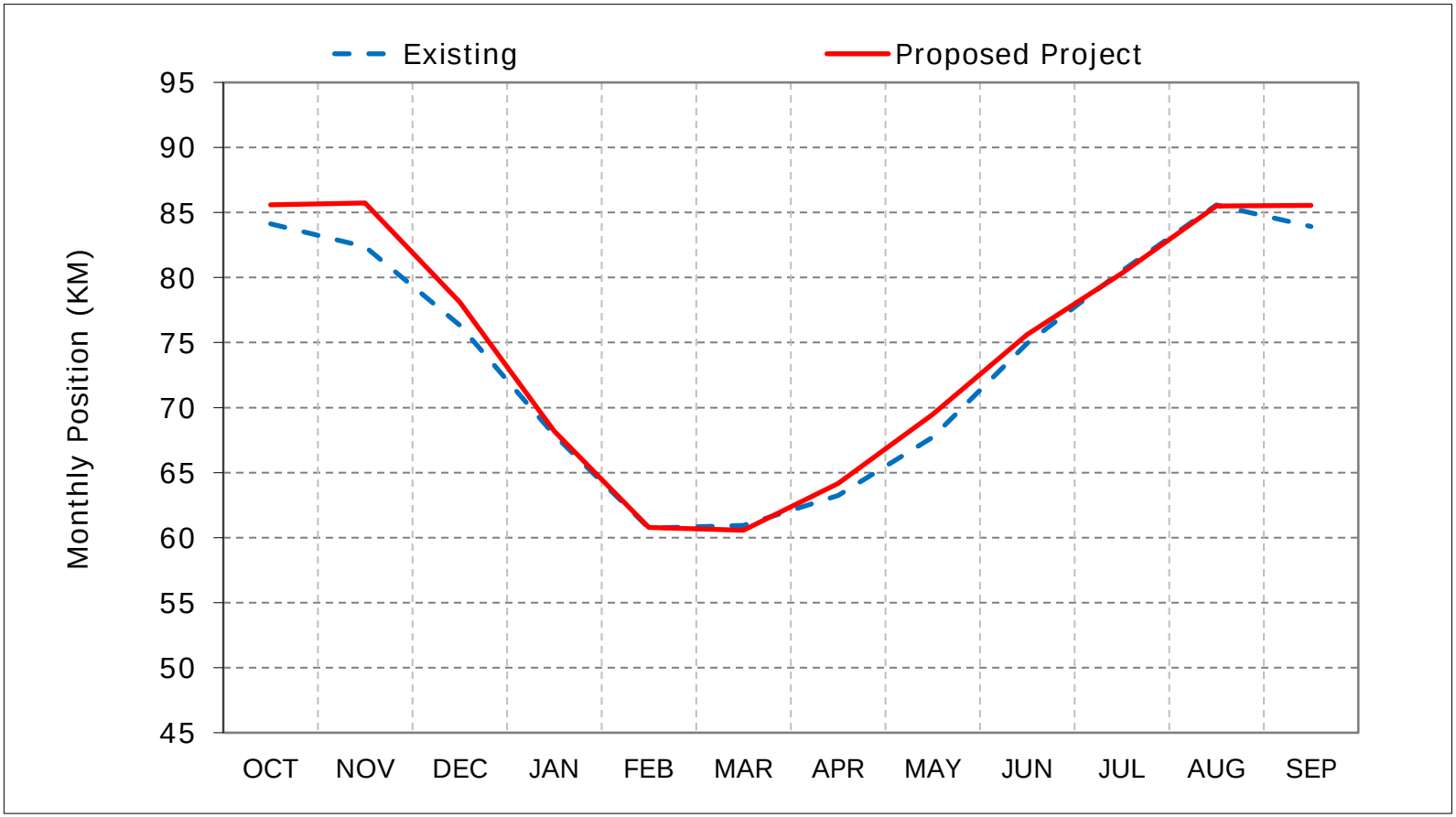
Statistic	Monthly Position (KM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-0.3	0.1	-0.1	1.9	-0.5	0.1	0.5	0.3	0.0	0.0	-0.1	0.3
20%	0.0	0.1	0.1	1.1	-0.5	-0.7	1.5	1.5	1.2	0.0	0.2	0.2
30%	-0.1	-0.1	4.0	1.0	0.2	-0.7	1.6	2.1	0.6	0.1	0.2	0.2
40%	0.0	-0.2	5.3	1.1	0.6	-0.8	1.1	2.3	0.5	-0.9	-0.4	-0.1
50%	-0.2	5.6	4.6	-0.5	-0.1	-0.6	1.7	2.6	0.9	-0.6	-0.3	0.1
60%	-0.9	5.5	2.2	-0.6	-0.3	-0.5	1.1	2.9	1.4	-0.4	-0.3	-0.9
70%	6.0	10.7	1.7	-0.4	0.1	-0.4	0.9	1.8	1.2	-0.2	-0.4	5.9
80%	6.0	10.7	1.2	-0.1	0.0	-0.6	0.9	1.1	0.4	0.1	-0.3	6.0
90%	6.0	-0.1	0.1	-0.2	-0.1	-0.1	0.4	1.2	0.1	-0.1	0.0	6.0
Long Term												
Full Simulation Period[a]	1.5	3.4	1.8	0.3	0.1	-0.4	0.9	1.8	0.7	-0.2	-0.1	1.6
Water Year Types[b,c]												
Wet (32%)	1.9	4.3	1.2	-0.1	-0.1	-0.3	0.9	1.7	0.8	-0.1	-0.2	5.3
Above Normal (15%)	1.9	4.0	2.8	0.1	-0.4	-0.5	1.0	2.3	0.9	-0.3	-0.1	-0.9
Below Normal (17%)	1.6	3.2	2.1	-0.1	-0.5	-0.7	1.2	2.6	0.7	-0.8	-0.4	0.0
Dry (22%)	1.5	2.7	2.0	1.0	0.6	-0.6	1.0	1.6	0.6	0.0	0.2	0.2
Critical (15%)	0.1	1.9	1.3	0.8	0.7	0.2	0.6	0.6	0.3	0.1	0.1	0.1

a Based on the 82-year simulation period.

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

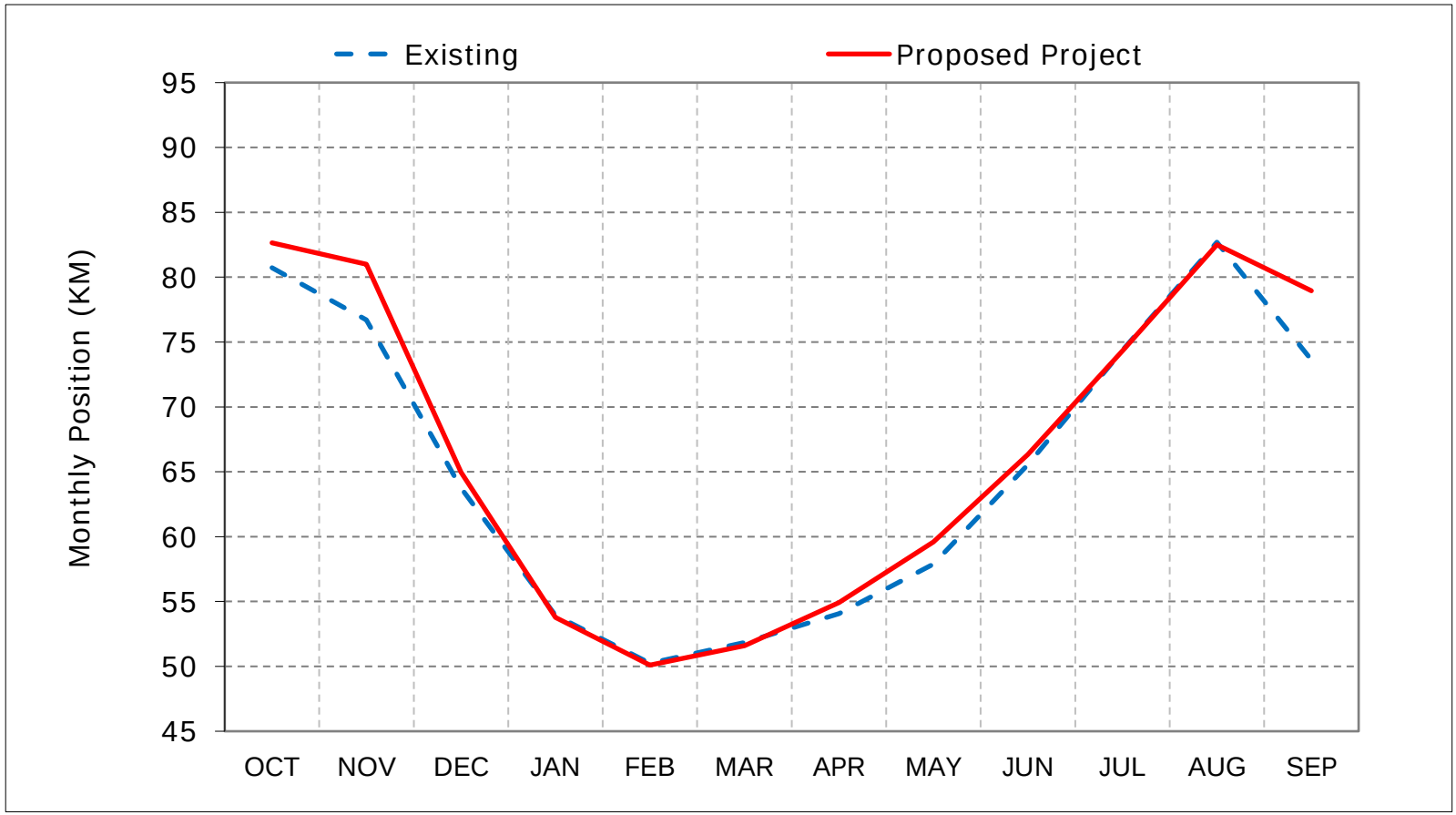
c These results are displayed with water year - year type sorting.

Figure 1-1. X2 Position, Long-Term Average Position



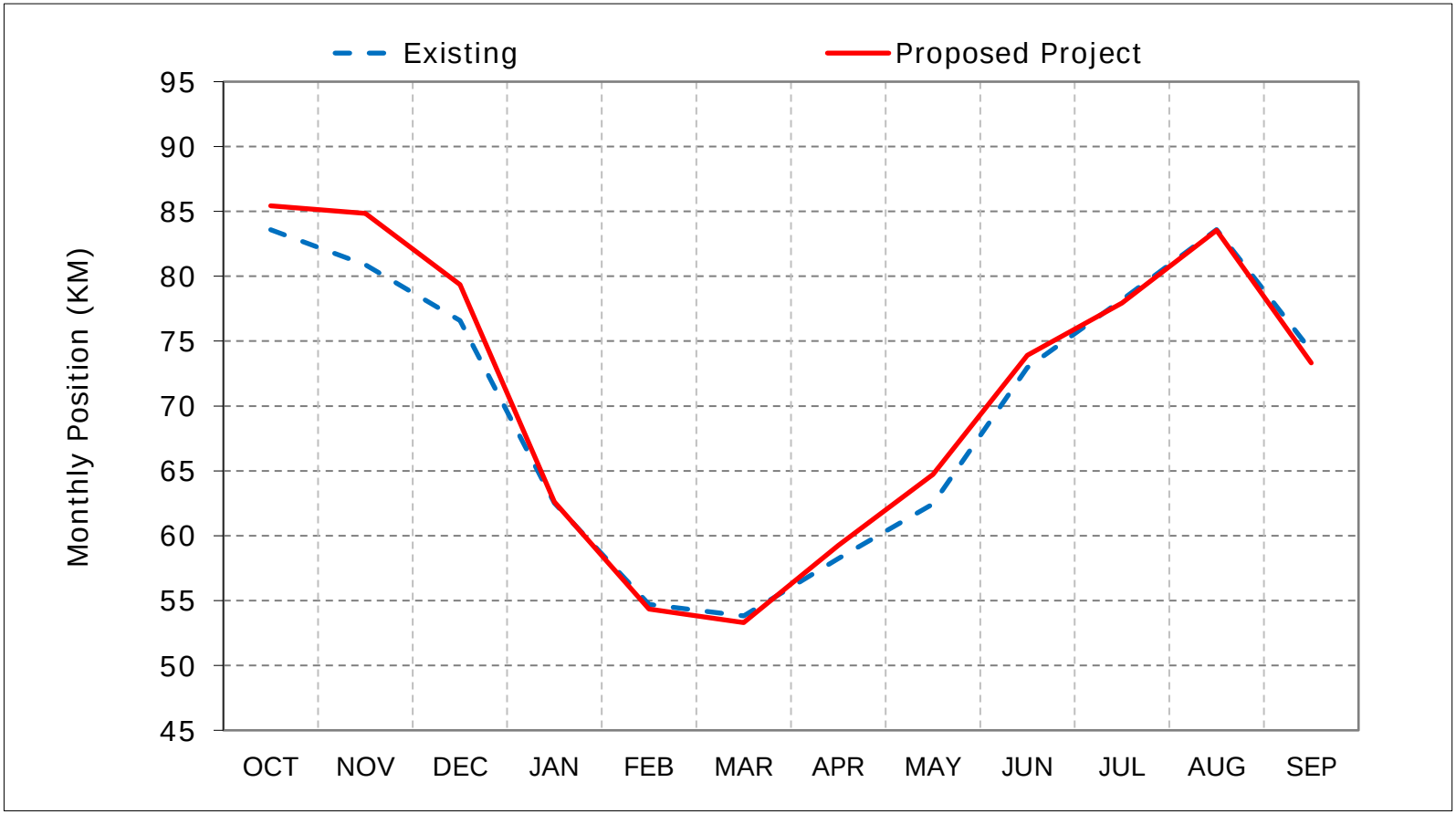
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 1-2. X2 Position, Wet Year Average Position



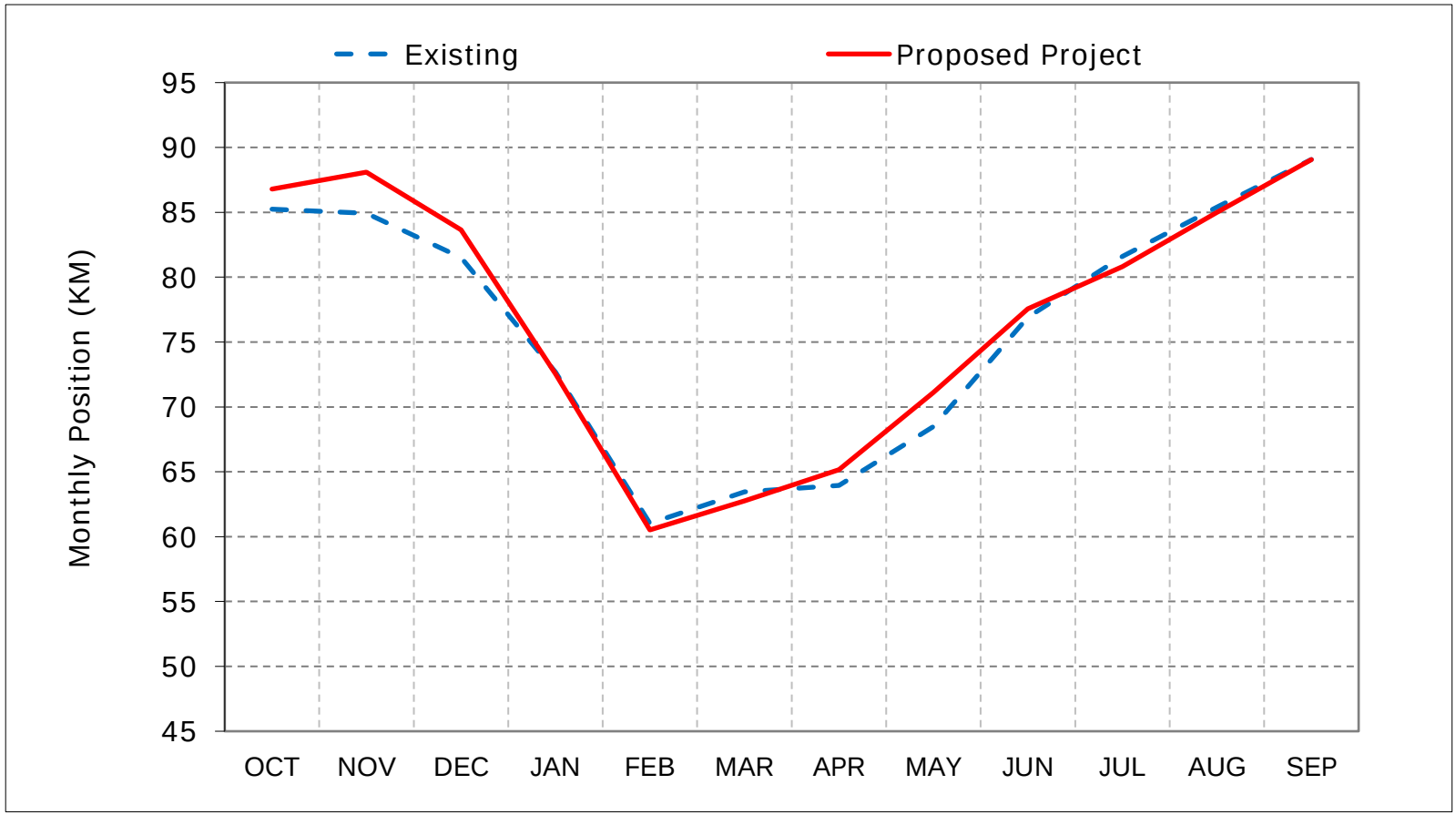
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 1-3. X2 Position, Above Normal Year Average Position



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

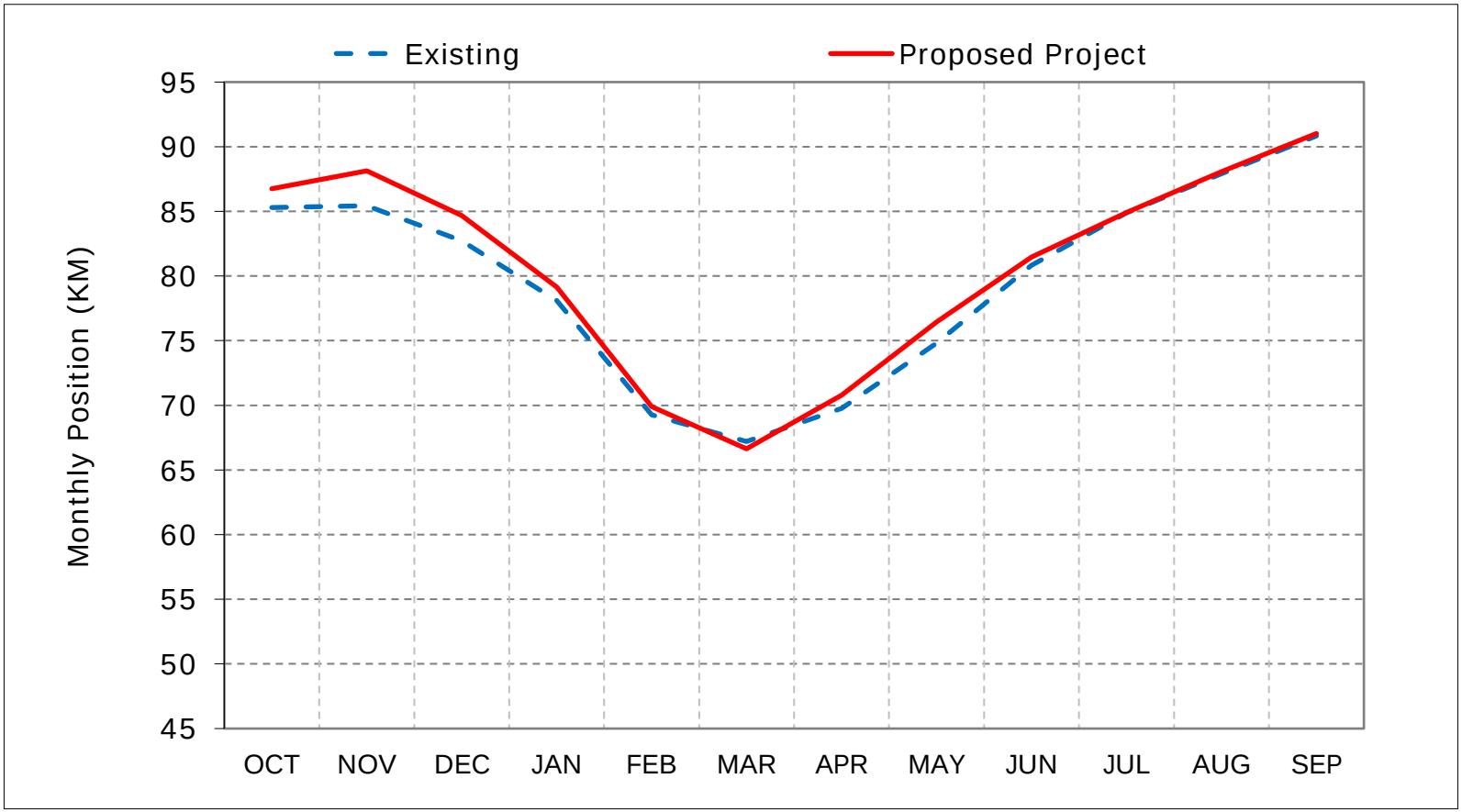
Figure 1-4. X2 Position, Below Normal Year Average Position



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164

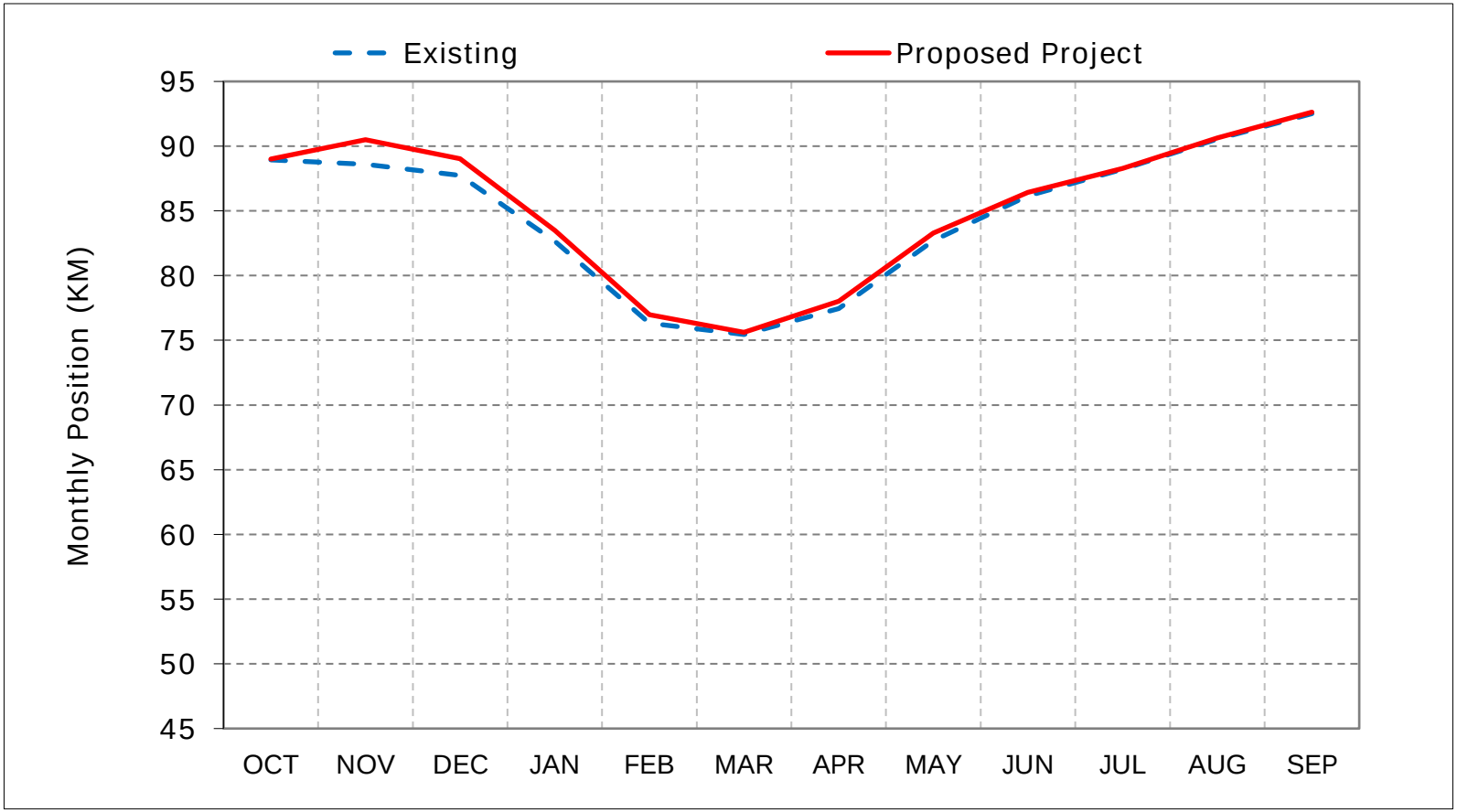
*These results are displayed with water year - year type sorting.

Figure 1-5. X2 Position, Dry Year Average Position



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 1-6. X2 Position, Critical Year Average Position



*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-164
*These results are displayed with water year - year type sorting.

Figure 1-7. X2 Position, October

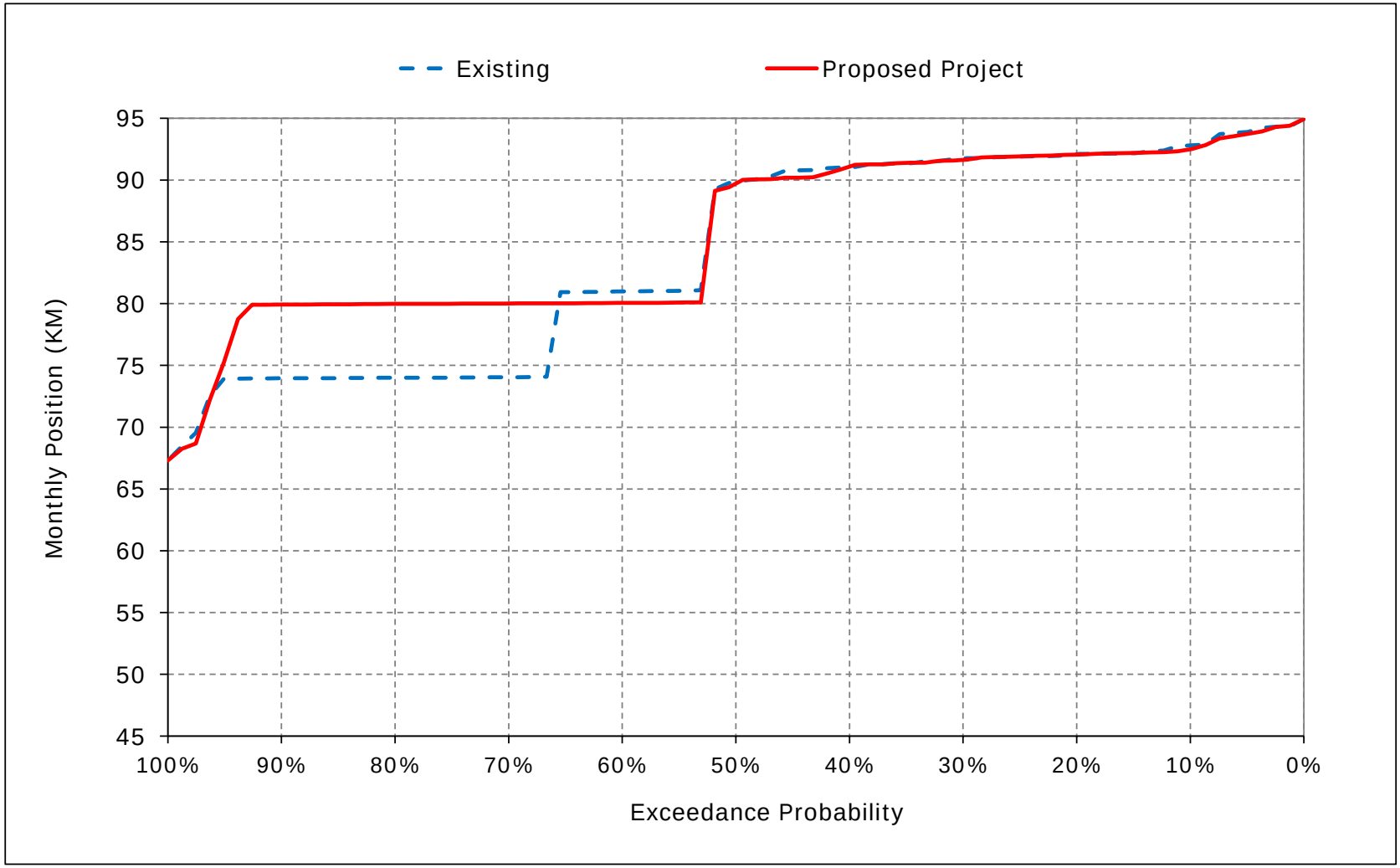


Figure 1-8. X2 Position, November

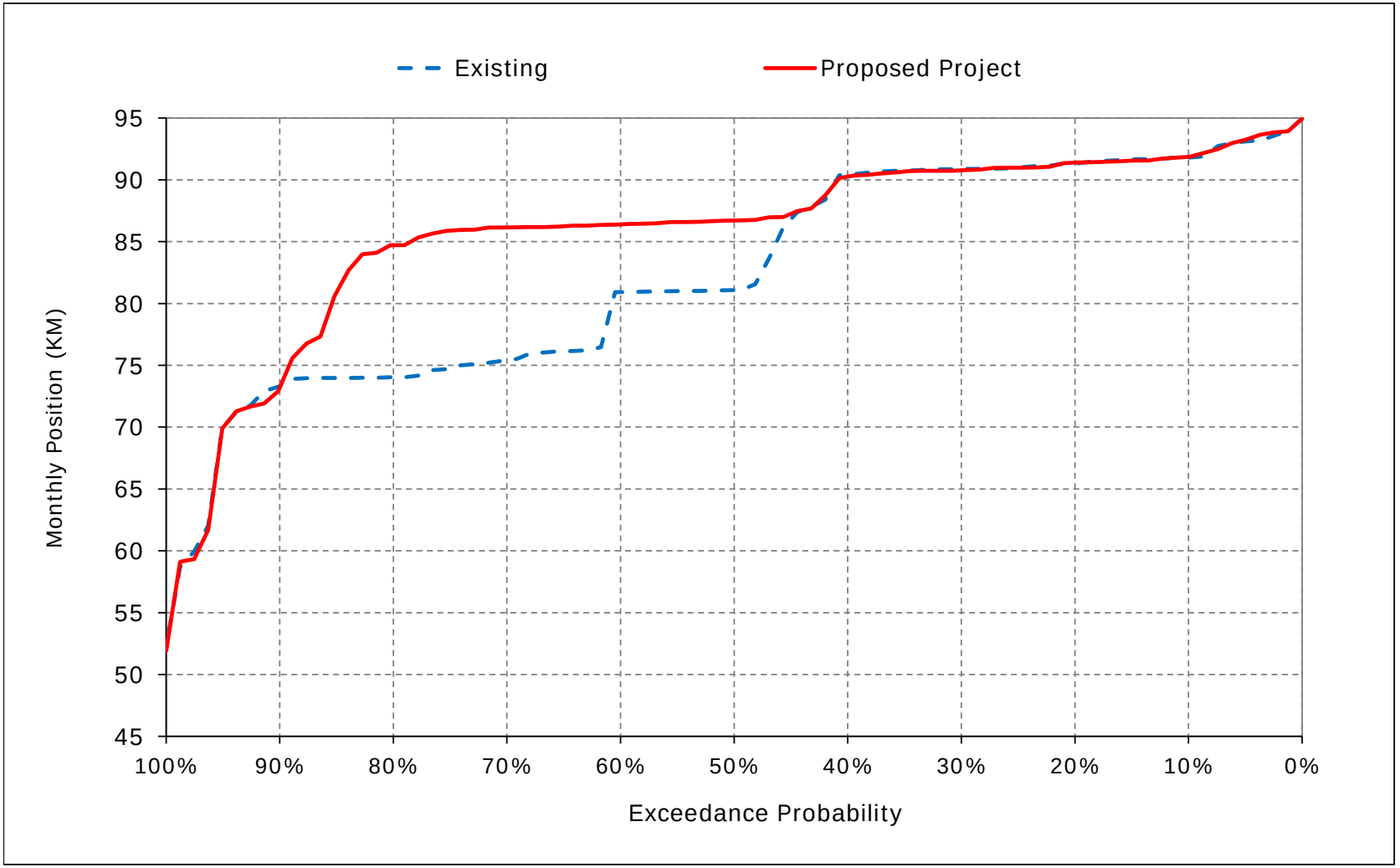


Figure 1-9. X2 Position, December

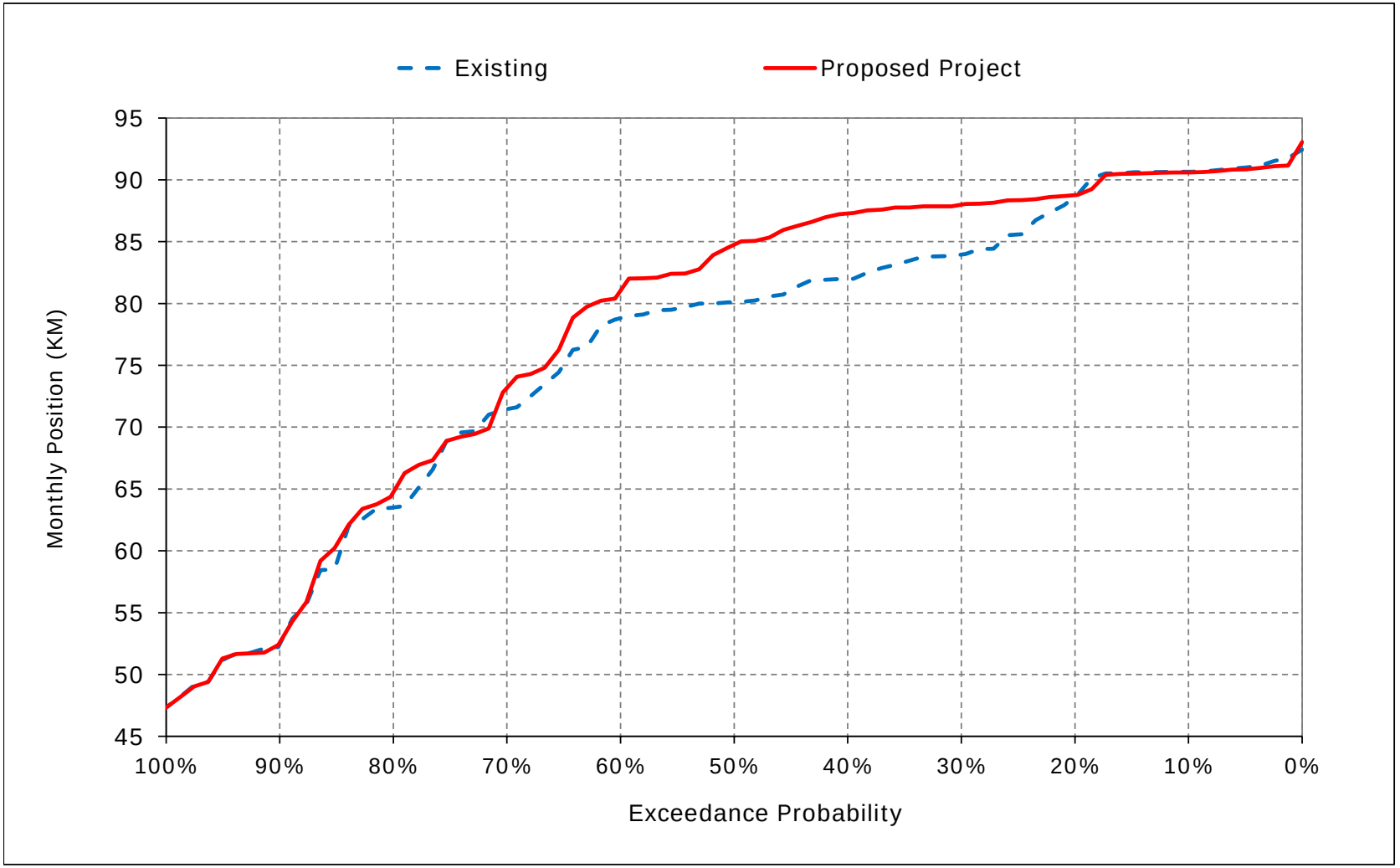


Figure 1-10. X2 Position, January

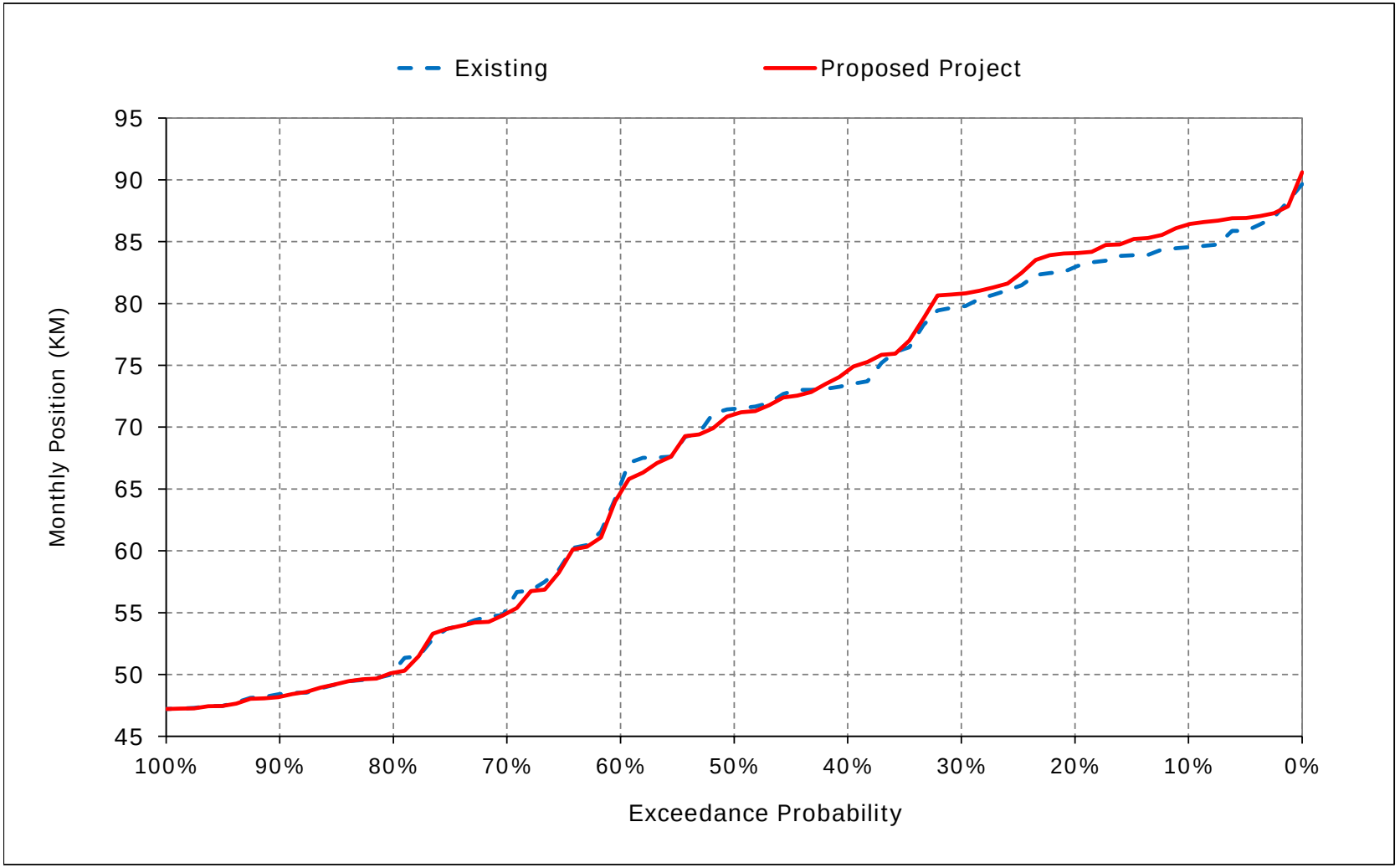


Figure 1-11. X2 Position, February

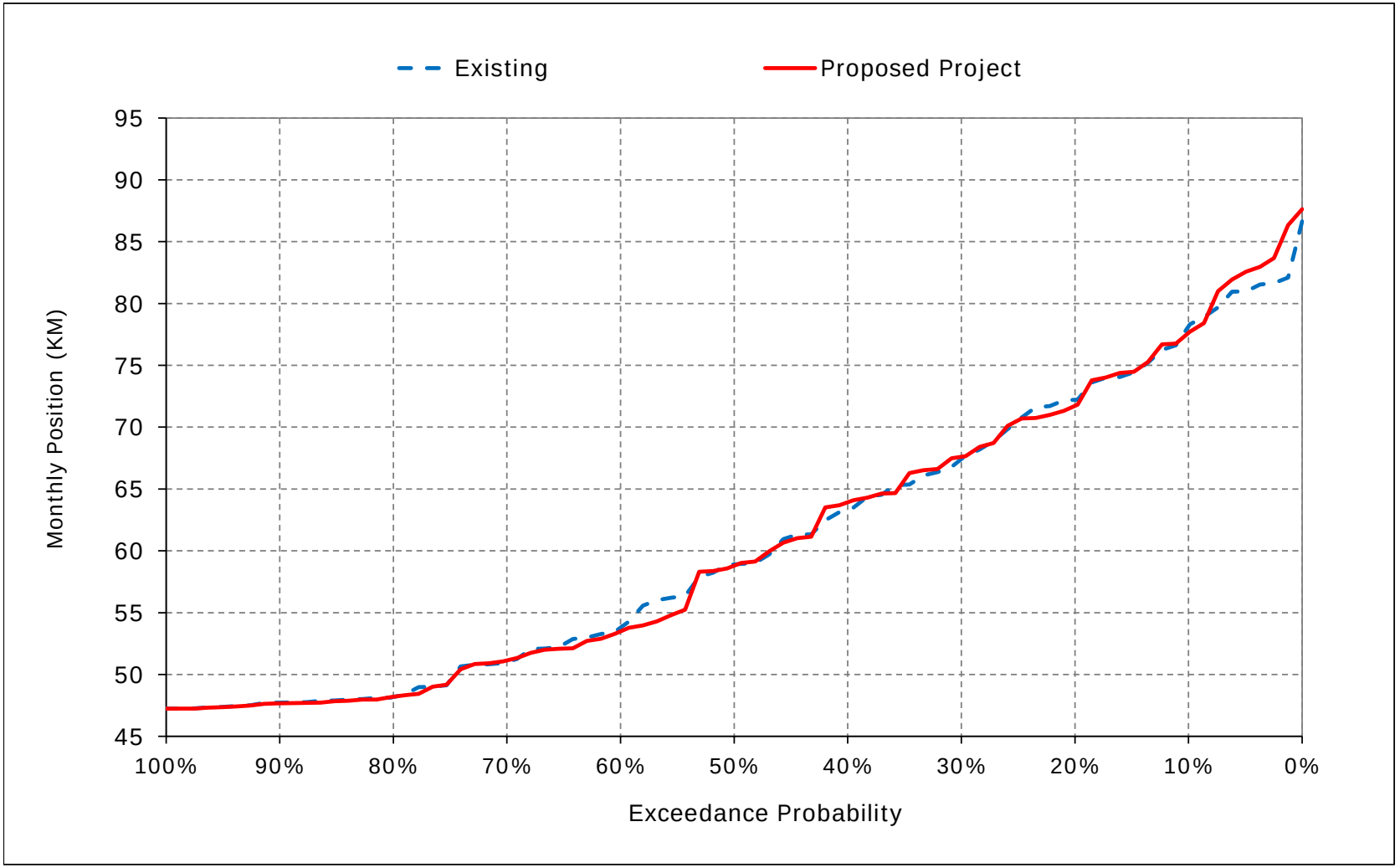


Figure 1-12. X2 Position, March

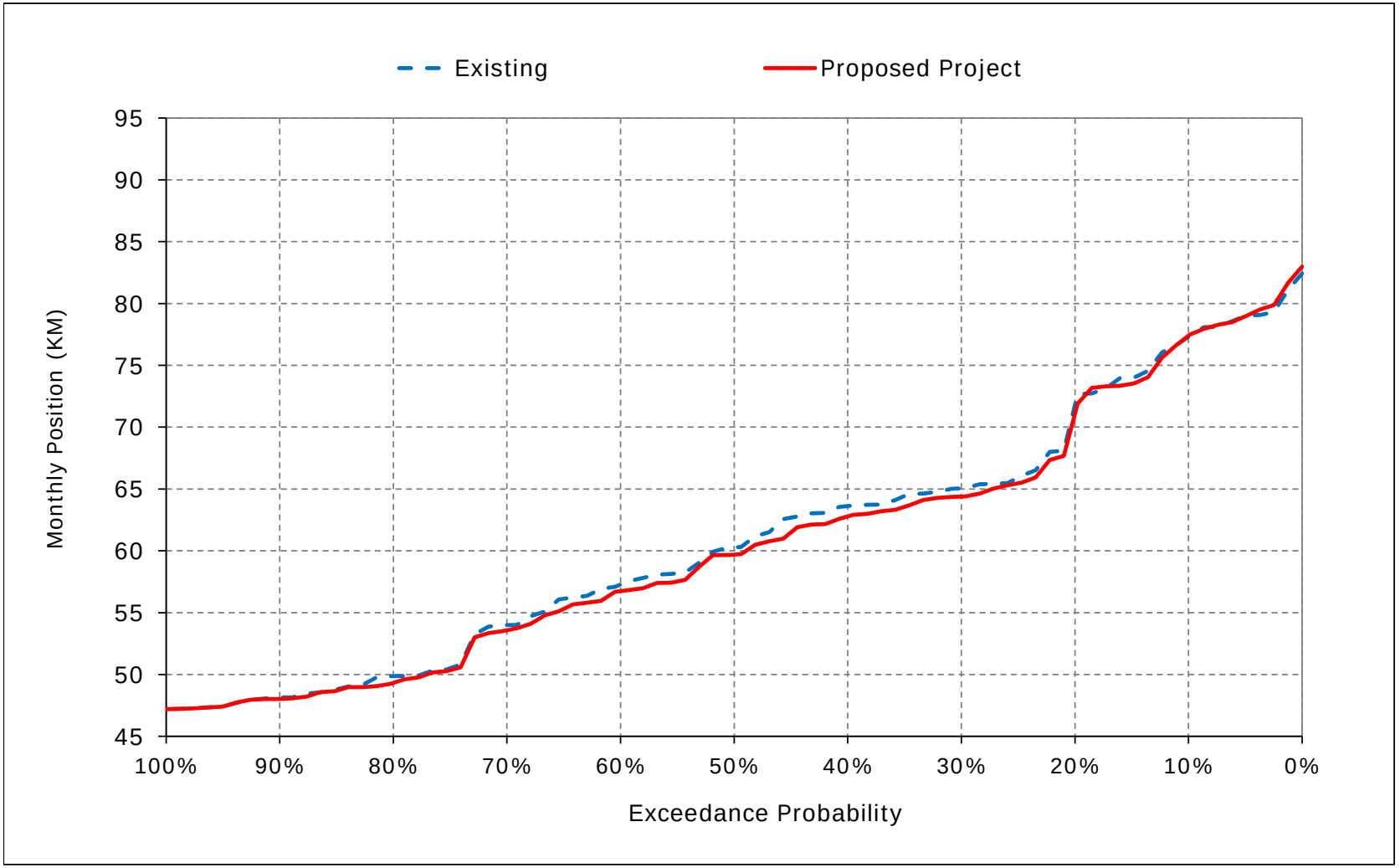


Figure 1-13. X2 Position, April

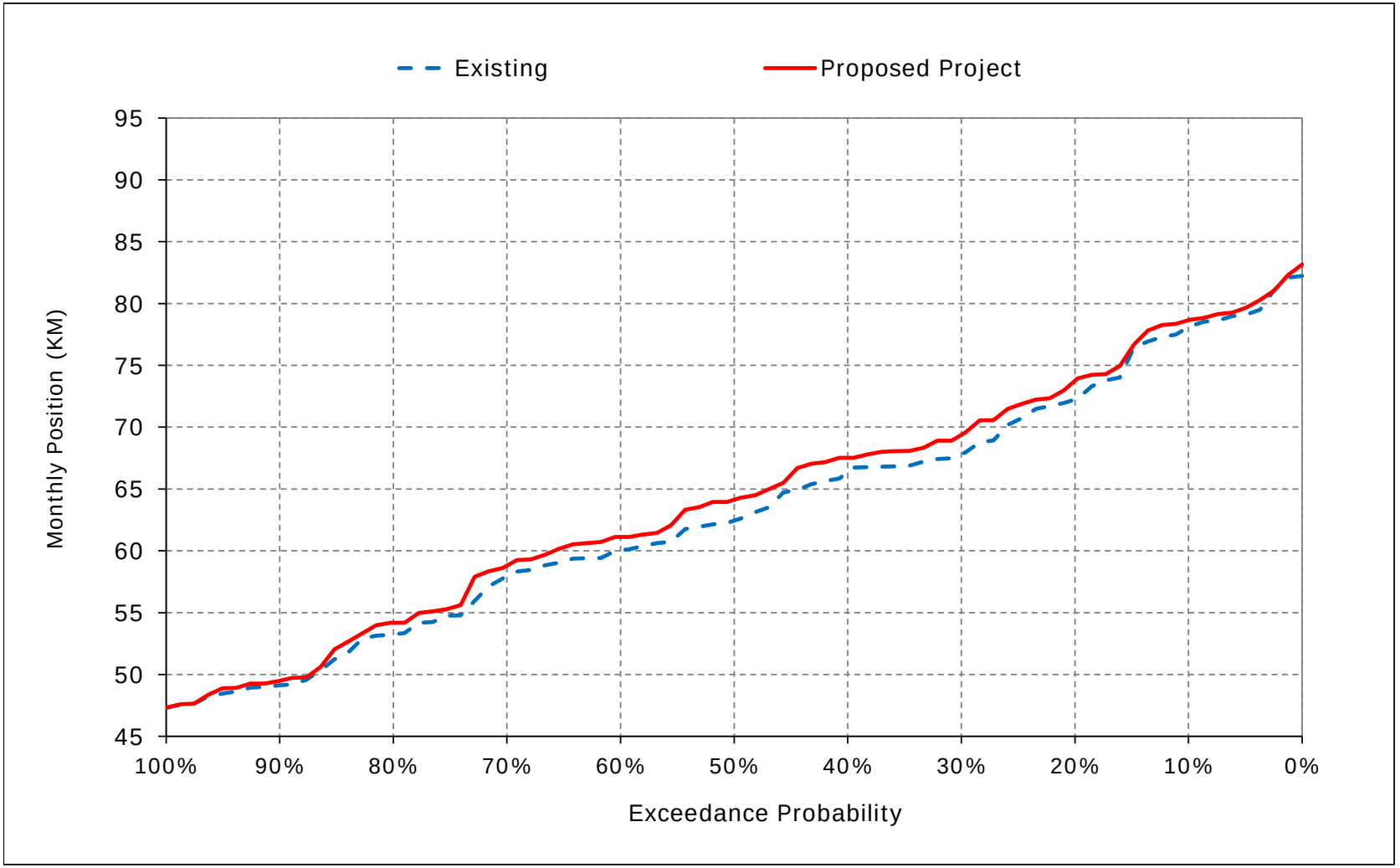


Figure 1-14. X2 Position, May

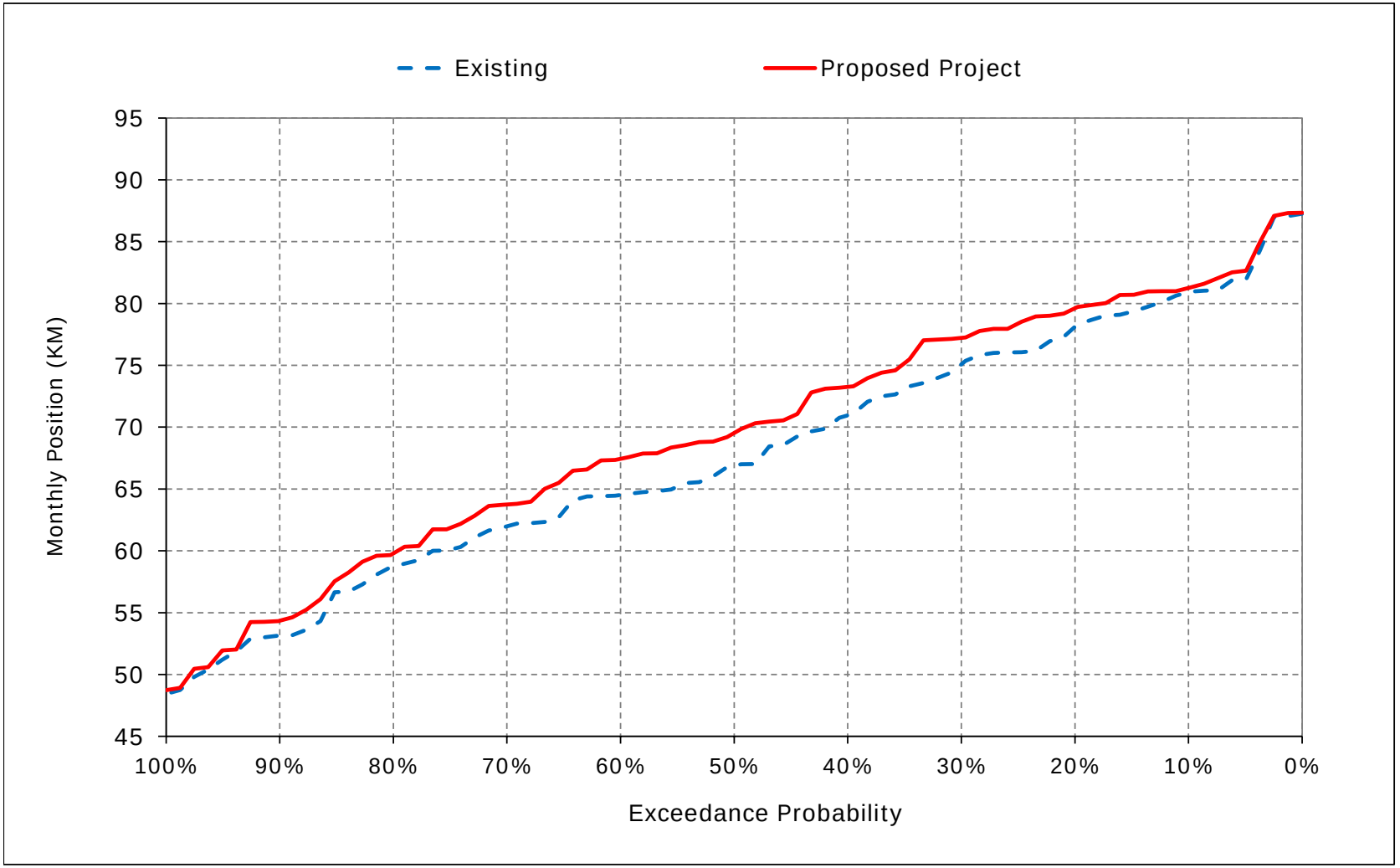


Figure 1-15. X2 Position, June

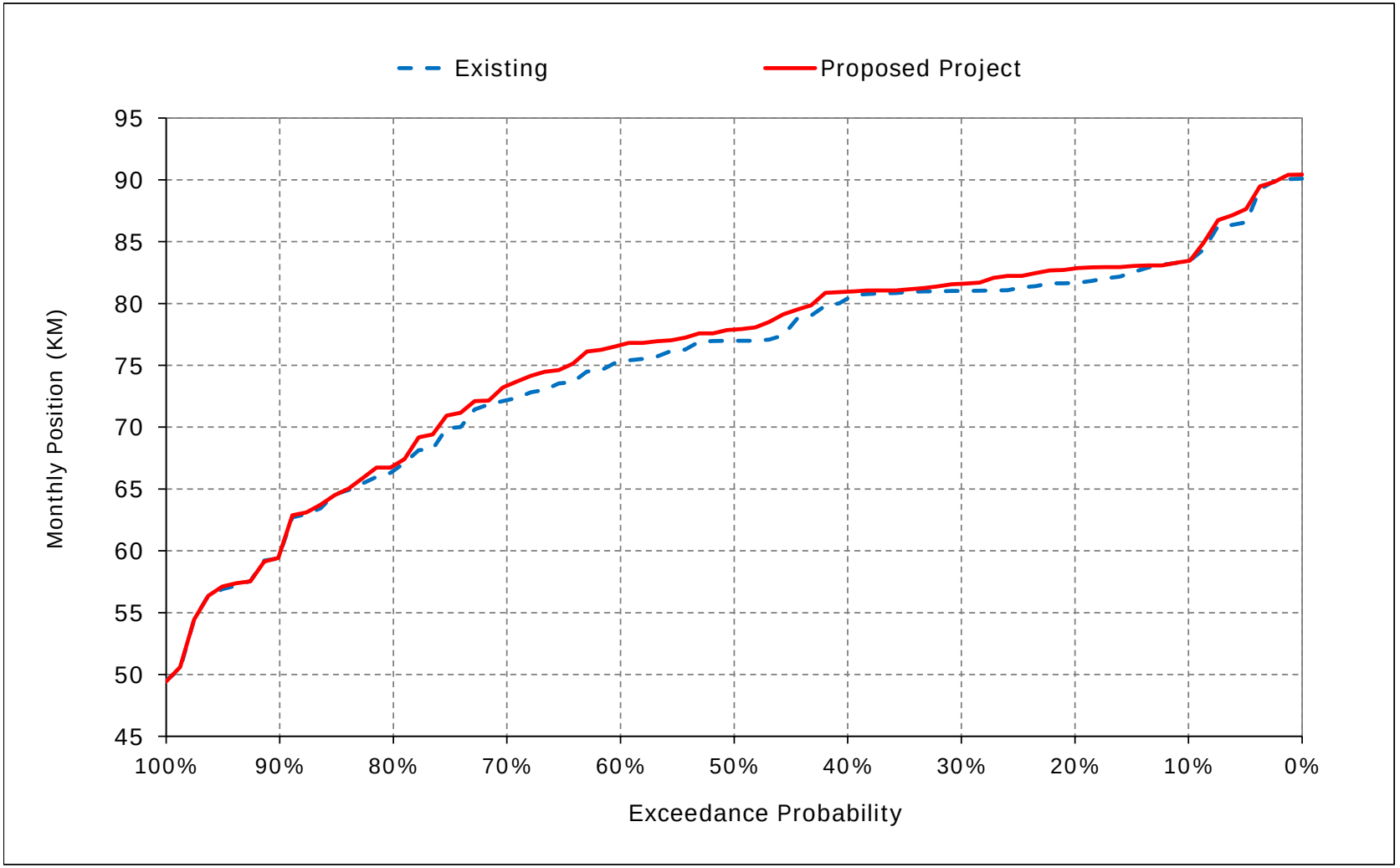


Figure 1-16. X2 Position, July

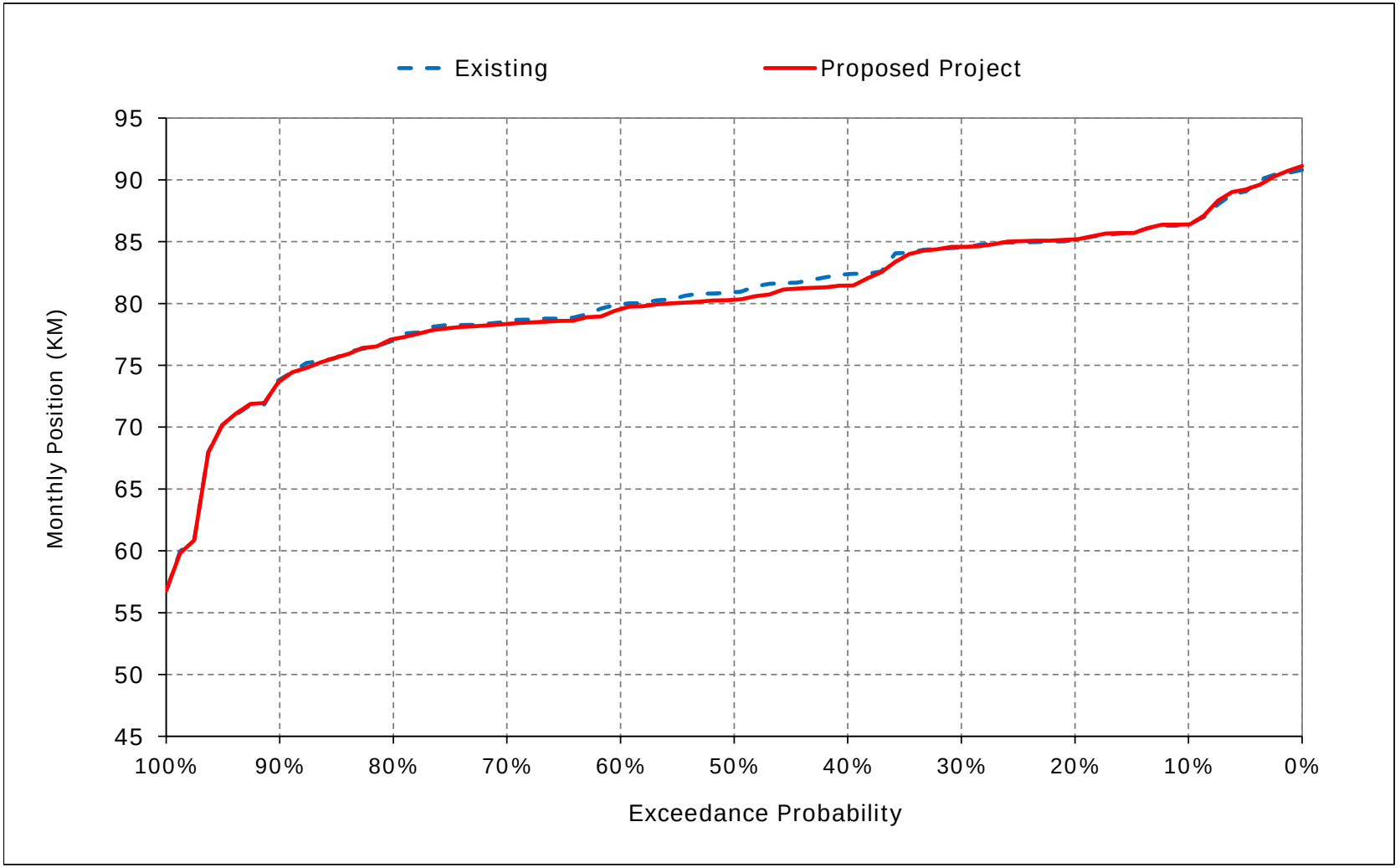


Figure 1-17. X2 Position, August

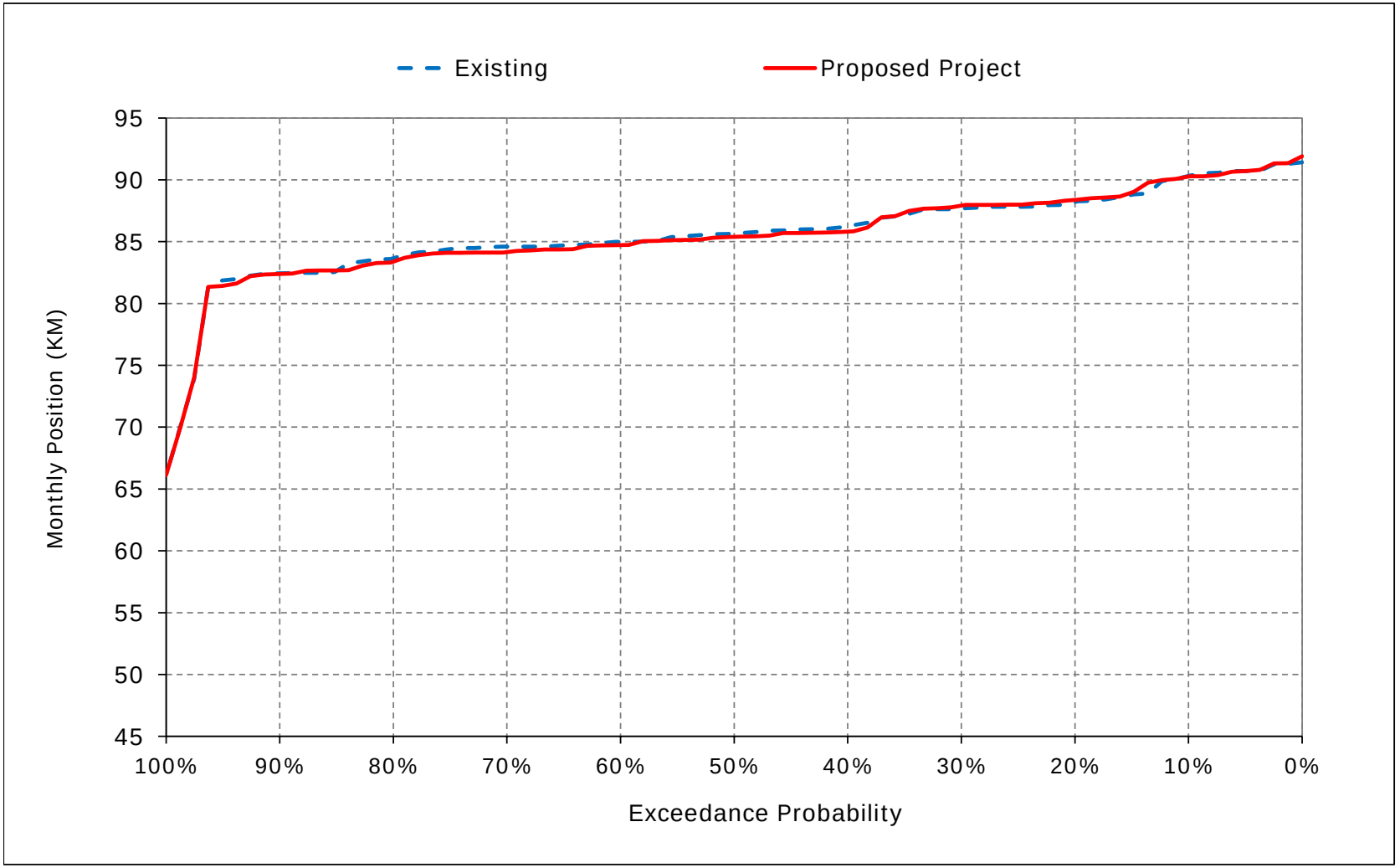
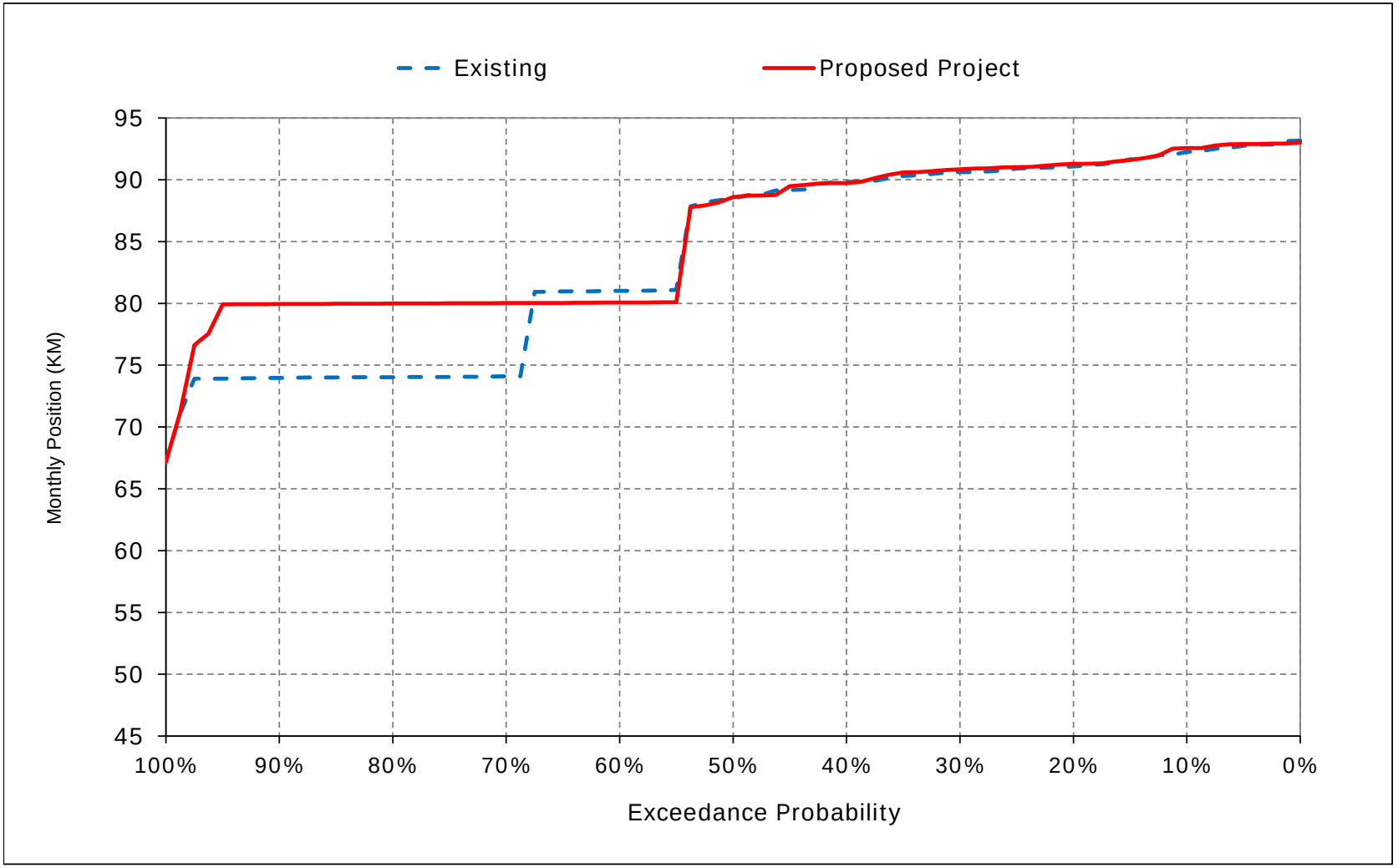


Figure 1-18. X2 Position, September



Appendix C – Modeling

Attachment 2-6 – Water Surface Elevation Results (DSM2-HYDRO)

The following results of the DSM2-HYDRO model are included for Delta water surface elevation conditions for the following alternatives:

- Existing Conditions
- Proposed Project

Table 2-6.1. Water Surface Elevation Results (DSM2-HYDRO)

Title	Model Parameter	Table Numbers	Figure Numbers
Sacramento River at Freeport Water Surface Elevation	RSAC155	1-1 to 1-2	NA
Sacramento River downstream of Steamboat Slough Water Surface Elevation	SAC_DS_STMBTSL	2-1 to 2-2	NA
Sacramento River at Rio Vista Water Surface Elevation	RSAC101	3-1 to 3-2	NA
San Joaquin River at Jersey Point Water Surface Elevation	RSAN018	4-1 to 4-2	NA
San Joaquin River at Prisoners Point Water Surface Elevation	RSAN037	5-1 to 5-2	NA
Old River at Tracy Boulevard Water Surface Elevation	ROLD059	6-1 to 6-2	NA

Report formats

- Monthly tables comparing two scenarios (exceedance values, long-term average, and average by water year type)

Table 1-1-1. Sacramento River at Freeport, Monthly Averaged Daily Maximum Elevation

Existing

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3.8	5.6	5.9	7.5	15.0	12.0	10.8	5.7	4.7	5.3	4.6	6.5
20%	3.6	4.8	5.0	6.9	12.0	8.9	6.7	4.3	4.5	5.0	4.5	4.3
30%	3.6	4.0	4.6	6.0	9.0	7.5	6.1	4.3	4.4	4.9	4.3	4.0
40%	3.5	3.7	4.3	5.5	6.0	6.5	6.0	4.2	4.4	4.7	4.1	3.8
50%	3.5	3.7	3.9	5.1	5.0	4.8	5.6	4.0	4.2	4.6	4.0	3.8
60%	3.4	3.6	3.8	4.9	4.7	4.0	4.2	3.8	4.1	4.5	3.9	3.7
70%	3.3	3.4	3.8	4.3	4.5	3.8	3.7	3.8	3.9	4.2	3.9	3.6
80%	3.3	3.3	3.7	4.0	4.4	3.4	3.6	3.6	3.8	4.0	3.8	3.5
90%	3.2	3.3	3.7	3.9	4.2	3.3	3.4	3.4	3.8	3.9	3.7	3.5
Long Term												
Full Simulation Period[a]	3.5	4.1	4.9	5.5	7.7	6.6	6.0	4.6	4.4	4.6	4.1	4.3
Water Year Types[b]												
Wet (32%)	3.5	3.7	4.0	4.5	4.6	4.6	3.6	3.6	4.0	4.2	3.9	3.6
Above Normal (16%)	3.2	4.3	4.4	5.8	14.3	7.3	8.7	5.1	4.4	5.0	4.2	5.6
Below Normal (13%)	3.5	3.6	3.8	4.9	9.5	4.7	5.4	3.7	4.2	4.5	3.7	3.5
Dry (24%)	3.5	3.9	4.4	6.2	7.3	7.3	5.0	4.0	4.2	4.9	4.3	4.4
Critical (15%)	3.5	4.6	6.3	5.6	7.6	7.7	7.7	5.9	5.0	4.6	4.2	4.5

Proposed Project

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3.9	4.8	6.0	7.6	15.0	12.6	10.8	5.7	4.8	5.3	4.6	5.8
20%	3.7	4.0	5.1	6.8	11.5	8.8	6.7	4.3	4.5	5.0	4.5	4.3
30%	3.6	3.8	4.6	5.9	9.0	7.5	6.2	4.3	4.4	4.7	4.3	4.0
40%	3.6	3.6	4.3	5.6	6.1	6.5	6.0	4.2	4.4	4.6	4.0	3.8
50%	3.5	3.6	4.0	5.1	5.1	4.7	5.6	4.1	4.2	4.4	4.0	3.7
60%	3.5	3.5	3.9	4.8	4.8	4.0	4.2	3.8	4.1	4.3	3.9	3.7
70%	3.3	3.4	3.8	4.2	4.7	3.8	3.7	3.8	3.9	4.1	3.9	3.7
80%	3.3	3.3	3.7	4.0	4.5	3.6	3.6	3.6	3.9	4.0	3.8	3.5
90%	3.2	3.3	3.7	3.9	4.3	3.4	3.4	3.4	3.8	3.9	3.7	3.5
Long Term												
Full Simulation Period[a]	3.5	3.9	4.9	5.4	7.7	6.7	6.0	4.6	4.5	4.6	4.1	4.1
Water Year Types[b]												
Wet (32%)	3.5	3.6	4.0	4.5	4.6	4.6	3.6	3.5	4.0	4.2	3.9	3.6
Above Normal (16%)	3.2	4.2	4.4	5.8	14.1	7.3	8.7	5.1	4.4	4.9	4.3	4.8
Below Normal (13%)	3.5	3.5	3.9	4.8	9.5	4.5	5.4	4.2	4.1	4.5	3.7	3.4
Dry (24%)	3.5	3.5	4.4	6.1	7.3	7.6	5.0	4.0	4.3	4.8	4.3	4.4
Critical (15%)	3.6	4.4	6.3	5.6	7.7	7.7	7.8	5.9	5.1	4.5	4.1	4.1

Proposed Project minus Existing

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0.1	-0.9	0.1	0.0	0.0	0.6	0.0	0.0	0.1	0.0	0.0	-0.7
20%	0.1	-0.8	0.1	0.0	-0.5	0.0	0.0	0.0	0.1	0.0	0.0	0.1
30%	0.0	-0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.2	-0.1	-0.1
40%	0.0	-0.1	-0.1	0.1	0.1	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0
50%	0.0	0.0	0.1	-0.1	0.1	-0.1	0.0	0.2	0.0	-0.2	0.0	0.0
60%	0.0	0.0	0.0	-0.1	0.1	0.0	0.0	0.0	0.0	-0.2	0.0	0.0
70%	0.0	0.0	0.0	-0.1	0.2	0.0	0.0	0.0	0.0	-0.2	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[a]	0.0	-0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	-0.1	0.0	-0.2
Water Year Types[b]												
Wet (32%)	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	-0.1	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	-0.1	0.0	-0.9
Below Normal (13%)	0.0	0.0	0.0	-0.1	0.0	-0.2	0.0	0.5	-0.1	0.0	0.0	0.0
Dry (24%)	0.0	-0.4	0.0	0.0	0.1	0.3	0.0	0.0	0.0	-0.1	0.0	0.1
Critical (15%)	0.1	-0.3	0.1	0.0	0.1	0.0	0.1	0.0	0.1	-0.1	0.0	-0.4

a Based on the 16-year simulation period

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

c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 1-2-1. Sacramento River at Freeport, Monthly Averaged Daily Minimum Elevation

Existing

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2.1	4.7	5.0	6.8	14.6	11.5	10.4	4.7	3.3	4.1	3.2	5.7
20%	1.8	3.7	4.0	6.0	11.5	8.4	5.9	2.9	2.8	3.8	3.0	2.8
30%	1.6	2.3	3.2	5.2	8.5	6.9	5.5	2.7	2.8	3.5	2.8	2.4
40%	1.5	1.9	2.8	4.4	5.2	5.7	5.2	2.7	2.7	3.2	2.3	1.9
50%	1.4	1.7	2.1	4.1	4.0	3.7	4.7	2.3	2.5	3.0	1.7	1.8
60%	1.3	1.3	1.9	3.6	3.7	2.7	2.7	1.9	2.1	2.9	1.7	1.6
70%	1.1	1.2	1.8	2.7	3.3	2.3	2.1	1.8	2.0	2.2	1.6	1.3
80%	1.0	0.9	1.7	2.5	3.1	2.1	1.9	1.5	1.9	1.6	1.6	1.2
90%	0.9	0.9	1.6	2.3	2.8	1.9	1.6	1.2	1.6	1.6	1.4	1.1
Long Term												
Full Simulation Period[a]	1.5	2.3	3.3	4.3	6.8	5.6	4.9	3.0	2.7	2.9	2.2	2.5
Water Year Types[b]												
Wet (32%)	1.4	1.5	2.1	3.0	3.4	3.2	1.9	1.4	2.0	2.0	1.5	1.3
Above Normal (16%)	1.1	2.8	3.1	4.6	13.9	6.5	8.2	3.9	2.7	3.7	2.5	4.4
Below Normal (13%)	1.5	1.7	1.7	3.6	9.0	3.6	4.5	1.9	2.5	3.0	1.4	1.4
Dry (24%)	1.4	1.9	2.9	5.3	6.3	6.3	3.7	2.3	2.5	3.3	2.4	2.7
Critical (15%)	1.7	3.2	4.9	4.5	6.7	6.9	6.9	4.6	3.5	3.1	2.5	2.9

Proposed Project

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2.3	3.5	5.1	6.8	14.6	12.1	10.4	4.7	3.4	4.2	3.2	4.9
20%	2.1	2.5	3.9	6.0	11.0	8.4	5.8	2.9	3.1	3.7	2.9	2.9
30%	1.8	2.2	3.2	5.1	8.5	6.9	5.5	2.8	2.8	3.2	2.8	2.3
40%	1.5	1.7	2.7	4.6	5.2	5.8	5.3	2.8	2.7	3.1	2.2	1.9
50%	1.4	1.5	2.2	4.0	4.1	3.6	4.7	2.6	2.5	2.9	1.7	1.8
60%	1.3	1.3	2.0	3.5	3.8	2.7	2.7	2.0	2.3	2.6	1.6	1.6
70%	1.1	1.2	1.8	2.6	3.6	2.4	2.1	1.7	2.0	1.8	1.6	1.3
80%	1.0	0.9	1.7	2.4	3.3	2.4	2.0	1.6	1.9	1.6	1.5	1.2
90%	0.9	0.9	1.6	2.3	2.8	1.9	1.6	1.2	1.6	1.6	1.3	1.1
Long Term												
Full Simulation Period[a]	1.5	2.0	3.3	4.3	6.9	5.7	4.9	3.0	2.7	2.8	2.1	2.3
Water Year Types[b]												
Wet (32%)	1.5	1.4	2.1	3.0	3.4	3.3	2.0	1.4	2.0	2.0	1.5	1.3
Above Normal (16%)	1.1	2.6	3.1	4.6	13.6	6.5	8.2	3.9	2.8	3.6	2.5	3.4
Below Normal (13%)	1.5	1.6	1.7	3.5	9.0	3.3	4.5	2.8	2.4	3.1	1.3	1.4
Dry (24%)	1.4	1.4	2.8	5.2	6.4	6.6	3.7	2.3	2.6	3.1	2.4	2.7
Critical (15%)	1.8	2.8	5.0	4.5	6.8	6.9	7.0	4.6	3.6	2.9	2.4	2.5

Proposed Project minus Existing

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0.2	-1.2	0.1	0.0	0.0	0.6	0.0	0.0	0.0	0.1	0.0	-0.8
20%	0.4	-1.3	-0.1	0.0	-0.5	0.0	0.0	0.0	0.3	-0.1	-0.1	0.1
30%	0.1	-0.2	0.0	-0.1	0.0	0.0	0.1	0.0	0.0	-0.3	-0.1	-0.2
40%	0.0	-0.2	-0.1	0.2	0.1	0.0	0.1	0.1	0.0	-0.1	-0.1	-0.1
50%	0.0	-0.1	0.1	-0.1	0.2	-0.2	0.0	0.3	0.0	-0.2	0.1	0.0
60%	0.0	0.0	0.1	-0.1	0.1	0.0	0.0	0.0	0.2	-0.4	0.0	0.0
70%	0.0	0.0	0.0	-0.1	0.2	0.0	0.0	0.0	0.0	-0.4	0.0	0.0
80%	0.0	0.0	0.1	-0.1	0.2	0.3	0.1	0.1	0.0	0.0	-0.1	0.0
90%	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	-0.1	0.0
Long Term												
Full Simulation Period[a]	0.1	-0.3	0.0	0.0	0.1	0.1	0.0	0.1	0.1	-0.1	0.0	-0.2
Water Year Types[b]												
Wet (32%)	0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	-0.2	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	-0.1	0.1	-1.0
Below Normal (13%)	0.0	-0.1	0.1	-0.1	0.0	-0.3	0.0	0.8	-0.1	0.0	-0.1	0.0
Dry (24%)	0.0	-0.5	-0.1	-0.1	0.1	0.3	0.0	0.0	0.1	-0.2	0.0	0.1
Critical (15%)	0.1	-0.4	0.1	0.0	0.1	0.0	0.1	0.0	0.1	-0.2	-0.1	-0.5

a Based on the 16-year simulation period

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

c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 2-1-1. Sacramento River d/s of Steamboat Slough, Monthly Averaged Daily Maximum Elevation

Existing

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3.3	4.1	4.2	4.9	9.1	7.1	6.4	4.1	3.9	4.1	3.9	4.3
20%	3.2	3.6	3.8	4.6	7.1	5.5	4.3	3.8	3.8	4.1	3.8	3.7
30%	3.2	3.4	3.8	4.2	5.6	4.7	4.1	3.7	3.8	4.0	3.7	3.6
40%	3.2	3.4	3.7	4.1	4.2	4.3	4.0	3.6	3.7	4.0	3.6	3.5
50%	3.2	3.3	3.5	4.0	3.9	3.7	3.9	3.5	3.7	3.9	3.6	3.4
60%	3.1	3.2	3.5	3.8	3.8	3.4	3.5	3.4	3.7	3.9	3.5	3.3
70%	3.0	3.1	3.4	3.7	3.7	3.3	3.3	3.4	3.5	3.7	3.5	3.3
80%	2.9	3.0	3.3	3.6	3.6	3.0	3.2	3.2	3.5	3.6	3.5	3.2
90%	2.9	2.9	3.3	3.5	3.6	3.0	3.1	3.1	3.5	3.6	3.3	3.1
Long Term Full Simulation Period[a]	3.1	3.4	3.9	4.1	5.2	4.5	4.2	3.7	3.8	3.9	3.6	3.5
Water Year Types[b]												
Wet (32%)	3.1	3.2	3.5	3.8	3.7	3.6	3.2	3.2	3.6	3.7	3.5	3.3
Above Normal (16%)	2.9	3.4	3.5	4.1	8.6	4.7	5.3	3.9	3.7	4.0	3.6	4.1
Below Normal (13%)	3.1	3.2	3.5	4.0	5.8	3.7	4.0	3.3	3.7	3.8	3.3	3.1
Dry (24%)	3.1	3.3	3.7	4.3	5.1	4.9	3.7	3.6	3.7	4.0	3.7	3.6
Critical (15%)	3.2	3.6	4.5	4.1	5.2	5.1	5.0	4.3	4.0	3.9	3.6	3.6

Proposed Project

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3.4	3.8	4.2	4.9	9.1	7.5	6.4	4.1	4.0	4.1	3.9	3.9
20%	3.2	3.4	3.8	4.6	6.9	5.4	4.3	3.8	3.8	4.0	3.8	3.7
30%	3.2	3.3	3.8	4.2	5.6	4.7	4.1	3.7	3.8	4.0	3.7	3.5
40%	3.2	3.3	3.7	4.0	4.2	4.3	4.0	3.6	3.7	3.9	3.6	3.5
50%	3.2	3.3	3.6	4.0	3.9	3.7	3.9	3.6	3.7	3.8	3.6	3.4
60%	3.1	3.2	3.5	3.8	3.8	3.4	3.5	3.5	3.6	3.8	3.5	3.3
70%	3.0	3.1	3.4	3.7	3.7	3.3	3.3	3.4	3.5	3.7	3.5	3.3
80%	2.9	3.0	3.3	3.6	3.6	3.1	3.3	3.2	3.5	3.6	3.5	3.2
90%	2.9	2.9	3.3	3.5	3.6	3.0	3.1	3.1	3.5	3.6	3.3	3.1
Long Term Full Simulation Period[a]	3.1	3.3	3.9	4.1	5.2	4.6	4.2	3.7	3.8	3.8	3.6	3.4
Water Year Types[b]												
Wet (32%)	3.2	3.2	3.5	3.8	3.7	3.6	3.2	3.2	3.6	3.7	3.5	3.3
Above Normal (16%)	2.9	3.4	3.5	4.1	8.5	4.7	5.3	3.9	3.8	3.9	3.7	3.6
Below Normal (13%)	3.1	3.2	3.5	4.0	5.9	3.6	4.0	3.5	3.6	3.8	3.3	3.1
Dry (24%)	3.1	3.1	3.7	4.3	5.1	5.1	3.7	3.6	3.8	3.9	3.7	3.6
Critical (15%)	3.2	3.5	4.6	4.1	5.2	5.1	5.0	4.3	4.0	3.8	3.6	3.4

Proposed Project minus Existing

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0.0	-0.3	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	-0.4
20%	0.0	-0.2	0.0	0.0	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
40%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
50%	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
60%	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Full Simulation Period[a]	0.0	-0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-0.1
Water Year Types[b]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.4
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.2	0.0	0.0	0.0	0.0
Dry (24%)	0.0	-0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	-0.1	0.0	0.0
Critical (15%)	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2

a Based on the 16-year simulation period

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

c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 2-2-1. Sacramento River d/s of Steamboat Slough, Monthly Averaged Daily Minimum Elevation

Existing

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0.6	2.0	2.2	3.2	8.4	6.2	5.4	2.0	1.1	1.4	1.0	2.4
20%	0.5	1.4	1.6	2.8	6.2	4.3	2.7	1.1	0.9	1.2	1.0	0.9
30%	0.4	0.7	1.2	2.3	4.3	3.3	2.4	1.1	0.8	1.2	0.9	0.8
40%	0.3	0.5	1.0	1.9	2.3	2.7	2.3	1.0	0.8	1.0	0.7	0.6
50%	0.3	0.4	0.6	1.7	1.7	1.6	2.1	0.8	0.7	0.9	0.5	0.5
60%	0.3	0.3	0.5	1.5	1.5	0.9	1.0	0.6	0.5	0.9	0.5	0.5
70%	0.1	0.1	0.5	1.0	1.4	0.8	0.7	0.5	0.5	0.6	0.4	0.3
80%	0.1	0.0	0.4	0.9	1.2	0.6	0.5	0.3	0.5	0.4	0.4	0.3
90%	0.0	-0.1	0.3	0.8	1.1	0.5	0.4	0.2	0.3	0.4	0.3	0.2
Long Term Full Simulation Period[a]	0.3	0.7	1.3	1.9	3.5	2.7	2.2	1.2	0.8	0.9	0.6	0.9
Water Year Types[b]												
Wet (32%)	0.3	0.3	0.6	1.2	1.3	1.3	0.6	0.3	0.5	0.5	0.4	0.3
Above Normal (16%)	0.1	1.0	1.1	2.0	7.8	3.1	4.1	1.7	0.9	1.2	0.7	1.9
Below Normal (13%)	0.4	0.4	0.5	1.5	4.6	1.6	2.0	0.6	0.7	0.9	0.3	0.3
Dry (24%)	0.3	0.5	1.0	2.3	3.2	3.1	1.5	0.8	0.7	1.0	0.8	0.9
Critical (15%)	0.4	1.2	2.3	2.0	3.4	3.5	3.4	2.1	1.3	1.0	0.8	1.1

Proposed Project

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0.7	1.4	2.2	3.2	8.4	6.6	5.4	2.0	1.1	1.4	1.0	1.8
20%	0.6	0.7	1.6	2.8	5.9	4.2	2.6	1.1	1.0	1.2	1.0	1.0
30%	0.4	0.6	1.2	2.3	4.3	3.3	2.5	1.1	0.8	1.0	0.9	0.7
40%	0.4	0.5	0.9	2.0	2.4	2.7	2.3	1.0	0.8	0.9	0.7	0.6
50%	0.3	0.3	0.6	1.6	1.7	1.5	2.1	1.0	0.7	0.9	0.5	0.5
60%	0.3	0.3	0.6	1.5	1.5	0.9	1.0	0.6	0.6	0.8	0.4	0.5
70%	0.1	0.1	0.5	1.0	1.5	0.8	0.7	0.5	0.6	0.5	0.4	0.3
80%	0.1	0.0	0.5	0.9	1.4	0.7	0.6	0.4	0.4	0.4	0.4	0.3
90%	0.0	-0.1	0.3	0.8	1.1	0.5	0.4	0.3	0.3	0.4	0.3	0.2
Long Term Full Simulation Period[a]	0.3	0.6	1.3	1.8	3.5	2.7	2.2	1.2	0.9	0.9	0.6	0.7
Water Year Types[b]												
Wet (32%)	0.3	0.3	0.6	1.2	1.3	1.3	0.6	0.3	0.5	0.5	0.4	0.3
Above Normal (16%)	0.1	0.9	1.1	2.0	7.7	3.1	4.1	1.6	0.9	1.1	0.8	1.1
Below Normal (13%)	0.4	0.3	0.6	1.5	4.6	1.4	2.0	1.0	0.6	0.9	0.3	0.3
Dry (24%)	0.3	0.2	1.0	2.3	3.2	3.3	1.5	0.8	0.7	1.0	0.7	0.9
Critical (15%)	0.5	1.0	2.3	2.0	3.5	3.5	3.5	2.1	1.4	0.9	0.7	0.8

Proposed Project minus Existing

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0.0	-0.6	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	-0.7
20%	0.1	-0.7	0.0	0.0	-0.3	0.0	0.0	0.0	0.1	-0.1	0.0	0.0
30%	0.1	-0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	-0.1	0.0	-0.1
40%	0.1	0.0	-0.1	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	0.2	0.0	-0.1	0.0	0.0
60%	0.0	0.0	0.1	-0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	-0.2	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Full Simulation Period[a]	0.0	-0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	-0.1	0.0	-0.2
Water Year Types[b]												
Wet (32%)	0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	-0.1	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	-0.8
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	0.4	-0.1	0.0	0.0	0.0
Dry (24%)	0.0	-0.3	0.0	0.0	0.1	0.2	0.0	0.0	0.0	-0.1	0.0	0.0
Critical (15%)	0.0	-0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.1	-0.1	0.0	-0.3

a Based on the 16-year simulation period

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

c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 3-1-1. Sacramento River at Rio Vista, Monthly Averaged Daily Maximum Elevation

Existing

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3.3	3.4	3.5	3.6	4.0	3.5	3.4	3.5	3.6	3.7	3.6	3.5
20%	3.2	3.3	3.4	3.5	3.7	3.4	3.3	3.4	3.6	3.7	3.6	3.4
30%	3.2	3.3	3.4	3.5	3.6	3.3	3.2	3.4	3.6	3.7	3.6	3.4
40%	3.1	3.2	3.4	3.5	3.5	3.2	3.1	3.3	3.6	3.7	3.5	3.3
50%	3.1	3.2	3.4	3.4	3.4	3.1	3.1	3.3	3.5	3.7	3.5	3.3
60%	3.1	3.2	3.3	3.4	3.4	3.0	3.1	3.3	3.5	3.6	3.5	3.3
70%	3.1	3.1	3.3	3.3	3.3	3.0	3.0	3.2	3.5	3.6	3.5	3.3
80%	3.0	3.1	3.2	3.3	3.1	2.9	3.0	3.1	3.5	3.6	3.5	3.3
90%	3.0	3.0	3.1	3.2	3.1	2.7	2.9	3.0	3.4	3.5	3.4	3.2
Long Term Full Simulation Period[a]	3.1	3.2	3.4	3.4	3.5	3.1	3.1	3.3	3.5	3.6	3.5	3.3
Water Year Types[b]												
Wet (32%)	3.2	3.2	3.3	3.4	3.2	3.0	3.0	3.2	3.5	3.7	3.5	3.4
Above Normal (16%)	3.0	3.1	3.1	3.2	3.8	3.1	3.2	3.3	3.5	3.6	3.5	3.4
Below Normal (13%)	3.2	3.2	3.5	3.5	3.7	3.2	3.3	3.1	3.5	3.5	3.5	3.1
Dry (24%)	3.1	3.2	3.4	3.4	3.5	3.2	3.1	3.4	3.5	3.7	3.6	3.4
Critical (15%)	3.1	3.2	3.4	3.4	3.4	3.2	3.2	3.4	3.5	3.6	3.4	3.3

Proposed Project

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3.3	3.4	3.5	3.6	4.0	3.5	3.4	3.5	3.6	3.7	3.6	3.5
20%	3.2	3.3	3.4	3.5	3.7	3.4	3.3	3.4	3.6	3.7	3.6	3.4
30%	3.2	3.3	3.4	3.5	3.6	3.3	3.2	3.4	3.6	3.7	3.6	3.4
40%	3.1	3.2	3.4	3.5	3.5	3.2	3.1	3.3	3.6	3.7	3.5	3.3
50%	3.1	3.2	3.4	3.4	3.4	3.1	3.1	3.3	3.5	3.7	3.5	3.3
60%	3.1	3.1	3.3	3.4	3.4	3.0	3.1	3.2	3.5	3.6	3.5	3.3
70%	3.1	3.1	3.3	3.3	3.3	3.0	3.0	3.2	3.5	3.6	3.5	3.3
80%	3.0	3.1	3.2	3.2	3.1	2.9	3.0	3.2	3.5	3.6	3.4	3.3
90%	3.0	3.0	3.1	3.2	3.1	2.7	2.9	3.0	3.4	3.5	3.4	3.2
Long Term Full Simulation Period[a]	3.1	3.2	3.4	3.4	3.5	3.1	3.1	3.3	3.5	3.6	3.5	3.3
Water Year Types[b]												
Wet (32%)	3.2	3.2	3.3	3.4	3.2	3.0	3.0	3.2	3.5	3.7	3.5	3.4
Above Normal (16%)	3.0	3.1	3.1	3.2	3.8	3.1	3.2	3.3	3.5	3.6	3.5	3.3
Below Normal (13%)	3.2	3.2	3.5	3.5	3.7	3.2	3.3	3.2	3.5	3.5	3.4	3.1
Dry (24%)	3.1	3.1	3.4	3.4	3.5	3.2	3.1	3.4	3.5	3.7	3.6	3.4
Critical (15%)	3.1	3.2	3.4	3.4	3.4	3.2	3.2	3.4	3.5	3.6	3.4	3.2

Proposed Project minus Existing

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Full Simulation Period[a]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[b]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Based on the 16-year simulation period

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

c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 3-2-1. Sacramento River at Rio Vista, Monthly Averaged Daily Minimum Elevation

Existing

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-0.8	-0.9	-0.9	-0.8	0.3	-0.4	-0.5	-0.8	-0.9	-0.8	-0.7	-0.6
20%	-0.8	-0.9	-1.0	-0.9	-0.2	-0.6	-0.7	-0.9	-0.9	-0.8	-0.7	-0.6
30%	-0.9	-1.0	-1.1	-0.9	-0.4	-0.7	-0.8	-0.9	-1.0	-0.9	-0.8	-0.7
40%	-0.9	-1.1	-1.1	-1.0	-0.8	-0.8	-0.9	-1.1	-1.0	-0.9	-0.8	-0.8
50%	-1.0	-1.1	-1.2	-1.0	-0.8	-0.8	-1.0	-1.1	-1.0	-0.9	-0.8	-0.8
60%	-1.0	-1.2	-1.2	-1.1	-0.9	-0.9	-1.0	-1.1	-1.0	-0.9	-0.8	-0.8
70%	-1.1	-1.3	-1.2	-1.1	-0.9	-1.1	-1.1	-1.1	-1.0	-0.9	-0.9	-0.8
80%	-1.1	-1.3	-1.2	-1.1	-0.9	-1.2	-1.1	-1.2	-1.1	-1.0	-0.9	-0.8
90%	-1.1	-1.3	-1.3	-1.2	-1.1	-1.2	-1.2	-1.2	-1.1	-1.0	-0.9	-0.9
Long Term Full Simulation Period[a]	-1.0	-1.1	-1.1	-1.0	-0.6	-0.8	-0.9	-1.0	-1.0	-0.9	-0.8	-0.8
Water Year Types[b]												
Wet (32%)	-1.0	-1.2	-1.2	-1.1	-1.0	-1.1	-1.1	-1.2	-1.1	-0.9	-0.9	-0.8
Above Normal (16%)	-1.1	-1.1	-1.3	-1.1	0.2	-0.8	-0.7	-1.0	-0.9	-0.9	-0.8	-0.7
Below Normal (13%)	-0.8	-1.1	-1.0	-0.9	-0.3	-0.7	-0.7	-1.2	-1.0	-1.0	-0.9	-1.0
Dry (24%)	-1.0	-1.2	-1.1	-1.1	-0.7	-0.8	-1.0	-1.0	-1.0	-0.9	-0.8	-0.7
Critical (15%)	-0.9	-1.0	-0.9	-1.0	-0.5	-0.5	-0.7	-0.9	-0.9	-0.8	-0.8	-0.7

Proposed Project

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-0.8	-0.9	-0.9	-0.8	0.3	-0.3	-0.6	-0.9	-0.9	-0.8	-0.7	-0.6
20%	-0.8	-1.0	-1.0	-0.9	-0.2	-0.6	-0.7	-0.9	-0.9	-0.8	-0.7	-0.7
30%	-0.9	-1.0	-1.1	-0.9	-0.4	-0.7	-0.8	-0.9	-1.0	-0.9	-0.8	-0.7
40%	-0.9	-1.1	-1.1	-1.0	-0.8	-0.8	-0.9	-1.1	-1.0	-0.9	-0.8	-0.8
50%	-1.0	-1.1	-1.2	-1.1	-0.8	-0.8	-1.0	-1.1	-1.0	-0.9	-0.8	-0.8
60%	-1.0	-1.2	-1.2	-1.1	-0.9	-1.0	-1.1	-1.1	-1.0	-0.9	-0.8	-0.8
70%	-1.1	-1.3	-1.2	-1.1	-0.9	-1.1	-1.1	-1.1	-1.0	-0.9	-0.9	-0.8
80%	-1.1	-1.3	-1.2	-1.1	-0.9	-1.2	-1.1	-1.2	-1.1	-1.0	-0.9	-0.8
90%	-1.1	-1.3	-1.3	-1.2	-1.1	-1.2	-1.2	-1.2	-1.1	-1.0	-0.9	-0.9
Long Term Full Simulation Period[a]	-1.0	-1.1	-1.1	-1.0	-0.6	-0.8	-0.9	-1.0	-1.0	-0.9	-0.8	-0.8
Water Year Types[b]												
Wet (32%)	-1.0	-1.2	-1.2	-1.1	-1.0	-1.1	-1.1	-1.2	-1.1	-0.9	-0.9	-0.8
Above Normal (16%)	-1.1	-1.2	-1.3	-1.1	0.2	-0.8	-0.8	-1.0	-0.9	-0.9	-0.8	-0.8
Below Normal (13%)	-0.8	-1.1	-1.0	-0.9	-0.3	-0.7	-0.7	-1.1	-1.0	-1.0	-0.9	-1.0
Dry (24%)	-1.0	-1.2	-1.1	-1.1	-0.7	-0.8	-1.0	-1.0	-1.0	-0.9	-0.8	-0.7
Critical (15%)	-0.9	-1.0	-0.9	-1.0	-0.5	-0.5	-0.7	-0.9	-0.9	-0.8	-0.8	-0.7

Proposed Project minus Existing

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Full Simulation Period[a]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[b]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Based on the 16-year simulation period

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

c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 4-1-1. San Joaquin River at Jersey Point, Monthly Averaged Daily Maximum Elevation

Existing

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3.0	3.0	3.1	3.2	3.5	3.0	2.9	3.2	3.3	3.4	3.3	3.2
20%	2.9	2.9	3.1	3.1	3.2	3.0	2.8	3.1	3.3	3.4	3.3	3.1
30%	2.9	2.9	3.0	3.1	3.2	2.9	2.8	3.1	3.3	3.4	3.2	3.0
40%	2.8	2.9	3.0	3.0	3.1	2.8	2.8	3.0	3.2	3.3	3.2	3.0
50%	2.8	2.8	3.0	3.0	3.0	2.7	2.8	3.0	3.2	3.3	3.2	3.0
60%	2.8	2.8	3.0	3.0	3.0	2.7	2.7	2.8	3.1	3.3	3.2	3.0
70%	2.8	2.8	2.9	2.9	2.9	2.6	2.7	2.8	3.1	3.3	3.1	2.9
80%	2.7	2.8	2.9	2.9	2.8	2.6	2.7	2.8	3.1	3.2	3.1	2.9
90%	2.7	2.7	2.8	2.8	2.7	2.4	2.6	2.7	3.1	3.1	3.0	2.9
Long Term Full Simulation Period[a]	2.8	2.8	3.0	3.0	3.0	2.7	2.8	2.9	3.2	3.3	3.2	3.0
Water Year Types[b]												
Wet (32%)	2.9	2.9	3.0	3.1	2.9	2.7	2.7	2.9	3.2	3.4	3.2	3.1
Above Normal (16%)	2.6	2.7	2.7	2.8	3.3	2.7	2.8	2.9	3.2	3.2	3.2	3.0
Below Normal (13%)	2.9	2.8	3.1	3.1	3.2	2.8	2.9	2.8	3.1	3.1	3.1	2.8
Dry (24%)	2.8	2.8	3.0	3.0	3.1	2.8	2.7	3.0	3.2	3.3	3.3	3.1
Critical (15%)	2.8	2.9	3.0	3.0	3.0	2.8	2.8	3.0	3.2	3.3	3.1	2.9

Proposed Project

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3.0	3.0	3.1	3.2	3.5	3.1	2.9	3.1	3.3	3.4	3.3	3.2
20%	2.9	2.9	3.1	3.1	3.2	3.0	2.8	3.1	3.3	3.4	3.3	3.1
30%	2.9	2.9	3.0	3.1	3.1	2.9	2.8	3.1	3.3	3.4	3.2	3.0
40%	2.8	2.9	3.0	3.0	3.1	2.8	2.8	3.0	3.2	3.3	3.2	3.0
50%	2.8	2.8	3.0	3.0	3.0	2.7	2.7	3.0	3.2	3.3	3.2	3.0
60%	2.8	2.8	3.0	3.0	3.0	2.7	2.7	2.8	3.2	3.3	3.2	3.0
70%	2.8	2.8	2.9	2.9	2.9	2.6	2.7	2.8	3.1	3.3	3.1	2.9
80%	2.7	2.8	2.9	2.9	2.8	2.6	2.7	2.8	3.1	3.2	3.1	2.9
90%	2.7	2.6	2.8	2.8	2.7	2.4	2.6	2.7	3.1	3.1	3.0	2.8
Long Term Full Simulation Period[a]	2.8	2.8	3.0	3.0	3.0	2.7	2.7	2.9	3.2	3.3	3.2	3.0
Water Year Types[b]												
Wet (32%)	2.9	2.9	3.0	3.1	2.9	2.7	2.7	2.9	3.2	3.4	3.2	3.1
Above Normal (16%)	2.6	2.7	2.7	2.8	3.3	2.7	2.8	2.9	3.2	3.2	3.2	3.0
Below Normal (13%)	2.9	2.8	3.1	3.1	3.2	2.8	2.9	2.8	3.1	3.1	3.1	2.8
Dry (24%)	2.8	2.8	3.0	3.0	3.1	2.8	2.7	3.0	3.2	3.3	3.3	3.1
Critical (15%)	2.8	2.9	3.0	3.0	3.0	2.8	2.8	3.0	3.2	3.3	3.1	2.9

Proposed Project minus Existing

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Full Simulation Period[a]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[b]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Based on the 16-year simulation period

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

c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 4-2-1. San Joaquin River at Jersey Point, Monthly Averaged Daily Minimum Elevation

Existing

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-0.5	-0.6	-0.6	-0.5	0.2	-0.2	-0.3	-0.5	-0.5	-0.4	-0.3	-0.3
20%	-0.5	-0.6	-0.7	-0.6	-0.1	-0.3	-0.4	-0.5	-0.5	-0.5	-0.4	-0.3
30%	-0.5	-0.7	-0.7	-0.6	-0.2	-0.4	-0.5	-0.5	-0.6	-0.5	-0.4	-0.4
40%	-0.6	-0.7	-0.7	-0.7	-0.5	-0.5	-0.5	-0.7	-0.6	-0.5	-0.4	-0.4
50%	-0.6	-0.8	-0.8	-0.7	-0.5	-0.6	-0.7	-0.7	-0.6	-0.5	-0.5	-0.4
60%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.7	-0.7	-0.7	-0.6	-0.6	-0.5	-0.4
70%	-0.7	-0.9	-0.9	-0.7	-0.6	-0.8	-0.7	-0.8	-0.7	-0.6	-0.5	-0.5
80%	-0.7	-0.9	-0.9	-0.8	-0.6	-0.8	-0.8	-0.8	-0.7	-0.6	-0.5	-0.5
90%	-0.7	-0.9	-0.9	-0.8	-0.7	-0.8	-0.8	-0.9	-0.7	-0.6	-0.5	-0.5
Long Term Full Simulation Period[a]	-0.6	-0.8	-0.7	-0.7	-0.4	-0.5	-0.6	-0.7	-0.6	-0.5	-0.4	-0.4
Water Year Types[b]												
Wet (32%)	-0.6	-0.8	-0.8	-0.7	-0.7	-0.7	-0.8	-0.8	-0.7	-0.5	-0.5	-0.4
Above Normal (16%)	-0.7	-0.8	-0.9	-0.8	0.0	-0.6	-0.5	-0.6	-0.5	-0.6	-0.5	-0.4
Below Normal (13%)	-0.4	-0.7	-0.6	-0.5	-0.1	-0.3	-0.3	-0.8	-0.7	-0.6	-0.5	-0.6
Dry (24%)	-0.7	-0.8	-0.8	-0.7	-0.4	-0.5	-0.7	-0.6	-0.6	-0.6	-0.4	-0.4
Critical (15%)	-0.5	-0.7	-0.6	-0.6	-0.3	-0.3	-0.4	-0.5	-0.5	-0.5	-0.4	-0.4

Proposed Project

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-0.5	-0.6	-0.6	-0.5	0.2	-0.2	-0.3	-0.5	-0.5	-0.4	-0.3	-0.3
20%	-0.5	-0.6	-0.7	-0.6	-0.1	-0.3	-0.4	-0.5	-0.5	-0.5	-0.4	-0.3
30%	-0.5	-0.7	-0.7	-0.6	-0.2	-0.4	-0.5	-0.6	-0.6	-0.5	-0.4	-0.4
40%	-0.6	-0.7	-0.8	-0.7	-0.5	-0.5	-0.6	-0.7	-0.6	-0.5	-0.4	-0.4
50%	-0.6	-0.8	-0.8	-0.7	-0.5	-0.6	-0.7	-0.7	-0.6	-0.5	-0.5	-0.4
60%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.7	-0.7	-0.7	-0.6	-0.6	-0.5	-0.4
70%	-0.7	-0.9	-0.9	-0.7	-0.6	-0.8	-0.7	-0.8	-0.7	-0.6	-0.5	-0.5
80%	-0.7	-0.9	-0.9	-0.8	-0.6	-0.8	-0.8	-0.8	-0.7	-0.6	-0.5	-0.5
90%	-0.7	-0.9	-0.9	-0.8	-0.7	-0.8	-0.8	-0.8	-0.7	-0.6	-0.5	-0.5
Long Term Full Simulation Period[a]	-0.6	-0.8	-0.7	-0.7	-0.4	-0.5	-0.6	-0.7	-0.6	-0.5	-0.4	-0.4
Water Year Types[b]												
Wet (32%)	-0.6	-0.8	-0.8	-0.7	-0.7	-0.7	-0.8	-0.8	-0.7	-0.5	-0.5	-0.4
Above Normal (16%)	-0.7	-0.8	-0.9	-0.8	0.0	-0.5	-0.5	-0.6	-0.5	-0.6	-0.5	-0.4
Below Normal (13%)	-0.4	-0.7	-0.6	-0.5	-0.1	-0.3	-0.4	-0.8	-0.7	-0.6	-0.5	-0.6
Dry (24%)	-0.7	-0.9	-0.8	-0.7	-0.4	-0.5	-0.7	-0.6	-0.6	-0.5	-0.4	-0.4
Critical (15%)	-0.5	-0.7	-0.6	-0.6	-0.3	-0.3	-0.5	-0.6	-0.5	-0.5	-0.4	-0.4

Proposed Project minus Existing

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Full Simulation Period[a]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[b]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Based on the 16-year simulation period

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

c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 5-1-1. San Joaquin River at Prisoners Point, Monthly Averaged Daily Maximum Elevation

Existing

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3.1	3.1	3.2	3.3	3.7	3.2	3.1	3.3	3.4	3.5	3.4	3.3
20%	3.1	3.0	3.2	3.2	3.4	3.1	3.0	3.2	3.4	3.5	3.4	3.2
30%	3.0	3.0	3.1	3.2	3.3	3.0	3.0	3.2	3.4	3.5	3.4	3.2
40%	2.9	3.0	3.1	3.1	3.2	2.9	2.9	3.2	3.4	3.5	3.3	3.1
50%	2.9	2.9	3.1	3.1	3.2	2.8	2.9	3.1	3.3	3.4	3.3	3.1
60%	2.9	2.9	3.1	3.1	3.1	2.8	2.8	3.0	3.3	3.4	3.3	3.1
70%	2.9	2.9	3.0	3.0	3.0	2.7	2.8	2.9	3.2	3.4	3.3	3.1
80%	2.8	2.9	3.0	3.0	2.9	2.7	2.8	2.9	3.2	3.3	3.2	3.0
90%	2.8	2.8	2.9	2.9	2.8	2.5	2.7	2.8	3.2	3.2	3.1	3.0
Long Term Full Simulation Period[a]	2.9	2.9	3.1	3.1	3.2	2.9	2.9	3.1	3.3	3.4	3.3	3.1
Water Year Types[b]												
Wet (32%)	3.0	3.0	3.1	3.2	3.0	2.8	2.8	3.0	3.3	3.5	3.3	3.2
Above Normal (16%)	2.8	2.8	2.8	2.9	3.4	2.8	2.9	3.0	3.3	3.3	3.3	3.1
Below Normal (13%)	3.0	2.9	3.2	3.2	3.4	2.9	3.1	2.9	3.2	3.2	3.2	2.9
Dry (24%)	2.9	2.9	3.1	3.1	3.3	2.9	2.9	3.1	3.3	3.4	3.4	3.2
Critical (15%)	2.9	3.0	3.2	3.1	3.2	2.9	2.9	3.1	3.3	3.4	3.2	3.0

Proposed Project

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3.1	3.1	3.2	3.3	3.7	3.2	3.1	3.2	3.4	3.5	3.4	3.3
20%	3.1	3.0	3.2	3.2	3.4	3.1	3.0	3.2	3.4	3.5	3.4	3.2
30%	3.0	3.0	3.1	3.2	3.3	3.0	2.9	3.1	3.4	3.5	3.4	3.2
40%	2.9	3.0	3.1	3.1	3.2	2.9	2.9	3.1	3.3	3.5	3.3	3.1
50%	2.9	2.9	3.1	3.1	3.2	2.8	2.9	3.1	3.3	3.5	3.3	3.1
60%	2.9	2.9	3.1	3.1	3.1	2.8	2.8	2.9	3.3	3.4	3.3	3.1
70%	2.9	2.9	3.0	3.0	3.0	2.8	2.8	2.9	3.2	3.4	3.3	3.1
80%	2.8	2.9	3.0	3.0	2.9	2.7	2.8	2.9	3.2	3.3	3.2	3.0
90%	2.8	2.8	2.9	2.9	2.8	2.5	2.7	2.8	3.2	3.2	3.1	3.0
Long Term Full Simulation Period[a]	2.9	2.9	3.1	3.1	3.2	2.9	2.9	3.0	3.3	3.4	3.3	3.1
Water Year Types[b]												
Wet (32%)	3.0	3.0	3.1	3.2	3.0	2.8	2.8	3.0	3.3	3.5	3.3	3.2
Above Normal (16%)	2.8	2.8	2.8	2.9	3.4	2.8	2.9	3.0	3.3	3.3	3.3	3.1
Below Normal (13%)	3.0	2.9	3.2	3.2	3.4	2.9	3.0	2.9	3.2	3.2	3.2	2.9
Dry (24%)	2.9	2.9	3.1	3.1	3.3	3.0	2.9	3.1	3.3	3.4	3.4	3.2
Critical (15%)	2.9	3.0	3.2	3.1	3.2	2.9	2.9	3.1	3.3	3.4	3.2	3.0

Proposed Project minus Existing

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term Full Simulation Period[a]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[b]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Based on the 16-year simulation period

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

c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 5-2-1. San Joaquin River at Prisoners Point, Monthly Averaged Daily Minimum Elevation

Existing

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-0.6	-0.7	-0.6	-0.6	0.1	-0.3	-0.3	-0.5	-0.6	-0.5	-0.5	-0.4
20%	-0.6	-0.7	-0.8	-0.6	-0.2	-0.4	-0.4	-0.6	-0.6	-0.6	-0.5	-0.4
30%	-0.6	-0.8	-0.8	-0.7	-0.3	-0.5	-0.5	-0.6	-0.7	-0.6	-0.5	-0.5
40%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.5	-0.6	-0.7	-0.7	-0.6	-0.5	-0.5
50%	-0.7	-0.9	-0.9	-0.8	-0.6	-0.6	-0.7	-0.8	-0.7	-0.6	-0.5	-0.5
60%	-0.7	-0.9	-0.9	-0.8	-0.7	-0.7	-0.7	-0.8	-0.7	-0.6	-0.5	-0.5
70%	-0.7	-0.9	-0.9	-0.8	-0.7	-0.9	-0.8	-0.8	-0.7	-0.6	-0.6	-0.6
80%	-0.8	-1.0	-0.9	-0.9	-0.7	-0.9	-0.8	-0.8	-0.7	-0.7	-0.6	-0.6
90%	-0.8	-1.0	-1.0	-0.9	-0.8	-0.9	-0.9	-0.9	-0.8	-0.7	-0.6	-0.6
Long Term												
Full Simulation Period[a]	-0.7	-0.9	-0.8	-0.7	-0.4	-0.6	-0.6	-0.7	-0.7	-0.6	-0.5	-0.5
Water Year Types[b]												
Wet (32%)	-0.7	-0.9	-0.9	-0.8	-0.8	-0.8	-0.8	-0.9	-0.7	-0.6	-0.6	-0.5
Above Normal (16%)	-0.8	-0.9	-1.0	-0.9	0.0	-0.6	-0.5	-0.6	-0.6	-0.7	-0.6	-0.5
Below Normal (13%)	-0.5	-0.8	-0.7	-0.6	-0.2	-0.4	-0.4	-0.8	-0.7	-0.7	-0.5	-0.7
Dry (24%)	-0.7	-0.9	-0.9	-0.8	-0.4	-0.6	-0.7	-0.7	-0.7	-0.6	-0.5	-0.5
Critical (15%)	-0.6	-0.8	-0.7	-0.7	-0.4	-0.4	-0.5	-0.6	-0.6	-0.6	-0.5	-0.5

Proposed Project

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-0.6	-0.7	-0.6	-0.6	0.1	-0.2	-0.4	-0.6	-0.6	-0.5	-0.4	-0.4
20%	-0.6	-0.7	-0.8	-0.6	-0.2	-0.4	-0.5	-0.6	-0.6	-0.5	-0.5	-0.4
30%	-0.6	-0.8	-0.8	-0.7	-0.3	-0.5	-0.6	-0.6	-0.7	-0.6	-0.5	-0.5
40%	-0.6	-0.8	-0.8	-0.7	-0.6	-0.5	-0.6	-0.7	-0.7	-0.6	-0.5	-0.5
50%	-0.7	-0.9	-0.9	-0.8	-0.6	-0.6	-0.7	-0.8	-0.7	-0.6	-0.5	-0.5
60%	-0.7	-0.9	-0.9	-0.8	-0.7	-0.7	-0.7	-0.8	-0.7	-0.6	-0.5	-0.5
70%	-0.8	-1.0	-0.9	-0.8	-0.7	-0.9	-0.8	-0.9	-0.7	-0.6	-0.6	-0.5
80%	-0.8	-1.0	-0.9	-0.9	-0.7	-0.9	-0.8	-0.9	-0.7	-0.6	-0.6	-0.6
90%	-0.8	-1.0	-1.0	-0.9	-0.8	-0.9	-0.9	-0.9	-0.8	-0.7	-0.6	-0.6
Long Term												
Full Simulation Period[a]	-0.7	-0.9	-0.8	-0.8	-0.4	-0.6	-0.7	-0.7	-0.7	-0.6	-0.5	-0.5
Water Year Types[b]												
Wet (32%)	-0.7	-0.9	-0.9	-0.8	-0.8	-0.8	-0.8	-0.9	-0.7	-0.6	-0.6	-0.5
Above Normal (16%)	-0.8	-0.9	-1.0	-0.9	0.0	-0.6	-0.6	-0.7	-0.6	-0.7	-0.6	-0.5
Below Normal (13%)	-0.5	-0.8	-0.7	-0.6	-0.2	-0.4	-0.5	-0.9	-0.7	-0.7	-0.5	-0.7
Dry (24%)	-0.7	-0.9	-0.9	-0.8	-0.4	-0.6	-0.7	-0.7	-0.7	-0.6	-0.5	-0.5
Critical (15%)	-0.6	-0.8	-0.7	-0.7	-0.4	-0.4	-0.5	-0.6	-0.6	-0.5	-0.5	-0.5

Proposed Project minus Existing

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0.0	0.0	0.0	0.0	0.0	0.1	0.0	-0.1	0.0	0.0	0.0	0.0
20%	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
30%	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0
40%	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
50%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[a]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Water Year Types[b]												
Wet (32%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above Normal (16%)	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0
Below Normal (13%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry (24%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical (15%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

a Based on the 16-year simulation period

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

c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 6-1-1. Old River at Tracy Blvd, Monthly Averaged Daily Maximum Elevation

Existing

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2.4	2.4	2.8	2.8	3.6	3.1	3.3	3.2	2.8	2.8	2.7	2.7
20%	2.4	2.3	2.8	2.8	3.3	2.8	3.2	3.1	2.8	2.7	2.7	2.6
30%	2.4	2.3	2.6	2.7	2.9	2.7	3.1	2.8	2.7	2.6	2.6	2.6
40%	2.3	2.3	2.5	2.7	2.7	2.5	3.0	2.8	2.7	2.6	2.6	2.4
50%	2.3	2.2	2.4	2.6	2.7	2.5	2.8	2.7	2.7	2.5	2.5	2.4
60%	2.2	2.2	2.4	2.5	2.6	2.4	2.6	2.6	2.7	2.4	2.5	2.3
70%	2.2	2.1	2.3	2.5	2.5	2.3	2.5	2.4	2.6	2.3	2.5	2.3
80%	2.2	2.1	2.3	2.5	2.5	2.3	2.5	2.4	2.5	2.3	2.5	2.3
90%	2.2	2.0	2.2	2.4	2.2	2.2	2.4	2.3	2.4	2.1	2.3	2.2
Long Term Full Simulation Period[a]	2.3	2.2	2.5	2.6	2.9	2.7	2.8	2.8	2.7	2.5	2.5	2.4
Water Year Types[b]												
Wet (32%)	2.4	2.4	2.5	2.7	2.4	2.4	2.5	2.5	2.6	2.6	2.7	2.6
Above Normal (16%)	2.2	2.1	2.2	2.4	3.0	2.3	3.1	2.8	2.7	2.2	2.4	2.3
Below Normal (13%)	2.4	2.1	2.8	2.7	3.0	2.4	3.0	2.4	2.2	2.0	2.6	2.3
Dry (24%)	2.3	2.3	2.4	2.6	2.9	2.7	2.7	2.7	2.7	2.4	2.5	2.4
Critical (15%)	2.2	2.1	2.6	2.6	3.1	3.2	3.1	3.1	2.8	2.7	2.5	2.3

Proposed Project

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2.7	2.6	2.8	2.8	3.5	3.3	3.1	2.9	2.8	2.8	2.8	2.8
20%	2.6	2.6	2.7	2.7	3.3	2.8	2.9	2.8	2.7	2.8	2.7	2.8
30%	2.5	2.5	2.6	2.7	2.9	2.8	2.7	2.7	2.7	2.7	2.6	2.7
40%	2.5	2.5	2.5	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.6	2.5
50%	2.5	2.4	2.4	2.6	2.7	2.5	2.6	2.6	2.7	2.5	2.5	2.5
60%	2.5	2.4	2.3	2.5	2.6	2.4	2.6	2.5	2.6	2.4	2.5	2.5
70%	2.5	2.4	2.3	2.5	2.5	2.4	2.6	2.4	2.6	2.3	2.5	2.4
80%	2.4	2.3	2.3	2.5	2.4	2.4	2.6	2.3	2.4	2.3	2.5	2.4
90%	2.4	2.2	2.2	2.4	2.2	2.1	2.5	2.3	2.4	2.1	2.3	2.3
Long Term Full Simulation Period[a]	2.5	2.4	2.5	2.6	2.9	2.7	2.7	2.7	2.7	2.6	2.6	2.5
Water Year Types[b]												
Wet (32%)	2.6	2.5	2.5	2.7	2.4	2.4	2.6	2.6	2.6	2.6	2.7	2.7
Above Normal (16%)	2.4	2.3	2.2	2.3	3.0	2.4	2.6	2.5	2.7	2.2	2.4	2.4
Below Normal (13%)	2.6	2.4	2.7	2.7	3.0	2.7	2.7	2.3	2.2	2.0	2.7	2.4
Dry (24%)	2.5	2.5	2.4	2.6	2.9	2.7	2.7	2.6	2.7	2.5	2.6	2.6
Critical (15%)	2.5	2.4	2.6	2.6	3.1	3.2	3.0	2.9	2.8	2.7	2.5	2.5

Proposed Project minus Existing

Statistic	Monthly Averaged Daily Maximum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0.3	0.2	0.0	0.0	0.0	0.2	-0.2	-0.2	0.0	0.1	0.0	0.1
20%	0.2	0.2	0.0	0.0	0.0	0.0	-0.3	-0.3	0.0	0.1	0.0	0.1
30%	0.2	0.2	0.0	0.0	0.0	0.1	-0.4	-0.2	0.0	0.1	0.0	0.1
40%	0.2	0.3	0.0	0.0	0.0	0.1	-0.4	-0.1	0.0	0.0	-0.1	0.1
50%	0.2	0.2	0.0	0.0	0.0	0.0	-0.2	-0.1	0.0	0.0	0.0	0.1
60%	0.3	0.2	-0.1	0.0	0.0	0.1	0.0	-0.1	0.0	0.0	0.0	0.1
70%	0.2	0.2	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1
80%	0.2	0.3	0.0	0.0	0.0	0.1	0.1	-0.1	0.0	0.1	0.0	0.1
90%	0.2	0.2	0.0	0.0	0.0	-0.1	0.1	0.0	0.0	0.0	0.0	0.1
Long Term Full Simulation Period[a]	0.2	0.2	0.0	0.0	0.0	0.1	-0.1	-0.1	0.0	0.0	0.0	0.1
Water Year Types[b]												
Wet (32%)	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1
Above Normal (16%)	0.2	0.3	0.0	0.0	0.0	0.1	-0.5	-0.3	0.0	0.0	-0.1	0.1
Below Normal (13%)	0.2	0.3	0.0	0.0	0.0	0.3	-0.3	-0.1	0.0	0.0	0.0	0.1
Dry (24%)	0.2	0.2	0.0	0.0	0.0	0.1	0.0	-0.1	0.0	0.1	0.0	0.1
Critical (15%)	0.3	0.3	0.0	0.0	0.0	0.0	-0.1	-0.2	0.0	0.0	0.0	0.1

a Based on the 16-year simulation period

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

c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Table 6-2-1. Old River at Tracy Blvd, Monthly Averaged Daily Minimum Elevation

Existing

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	1.5	1.4	-0.2	-0.2	1.1	0.4	0.4	0.6	1.7	1.5	1.6	1.5
20%	1.4	1.3	-0.5	-0.4	0.3	0.0	0.4	0.3	1.7	1.5	1.6	1.5
30%	1.4	1.3	-0.6	-0.4	-0.1	-0.3	0.3	0.0	1.6	1.4	1.5	1.5
40%	1.4	1.3	-0.6	-0.5	-0.1	-0.4	0.1	-0.1	1.5	1.2	1.4	1.5
50%	1.4	1.3	-0.7	-0.5	-0.3	-0.4	-0.2	-0.3	1.2	1.2	1.4	1.4
60%	1.3	1.3	-0.7	-0.6	-0.4	-0.4	-0.5	-0.4	1.2	1.2	1.3	1.4
70%	1.3	1.2	-0.7	-0.6	-0.4	-0.5	-0.6	-0.4	1.1	1.2	1.3	1.4
80%	1.3	1.2	-0.7	-0.6	-0.5	-0.6	-0.7	-0.4	1.1	1.1	1.3	1.4
90%	1.3	1.2	-0.8	-0.7	-0.6	-0.7	-0.7	-0.5	1.1	1.1	1.3	1.4
Long Term												
Full Simulation Period[a]	1.4	1.3	-0.5	-0.5	0.1	0.0	-0.1	0.0	1.4	1.4	1.4	1.4
Water Year Types[b]												
Wet (32%)	1.4	1.3	-0.6	-0.6	-0.6	-0.6	-0.7	-0.4	1.2	1.2	1.3	1.4
Above Normal (16%)	1.3	1.2	-0.7	-0.7	0.1	-0.5	0.2	0.0	1.6	1.2	1.4	1.4
Below Normal (13%)	1.5	1.3	-0.3	-0.4	-0.1	-0.4	0.1	-0.4	1.0	1.0	1.3	1.4
Dry (24%)	1.4	1.3	-0.7	-0.6	0.0	-0.2	-0.3	-0.1	1.4	1.3	1.4	1.4
Critical (15%)	1.4	1.3	-0.4	-0.3	0.6	0.8	0.5	0.6	1.5	1.7	1.5	1.5

Proposed Project

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	1.7	1.5	-0.3	-0.2	1.1	0.6	0.4	0.4	1.6	1.6	1.6	1.7
20%	1.7	1.5	-0.4	-0.4	0.3	0.1	0.2	0.1	1.5	1.5	1.6	1.6
30%	1.6	1.5	-0.6	-0.5	-0.1	-0.3	0.1	0.0	1.5	1.4	1.5	1.6
40%	1.6	1.4	-0.6	-0.5	-0.1	-0.3	-0.1	-0.1	1.4	1.2	1.4	1.5
50%	1.6	1.4	-0.7	-0.6	-0.3	-0.4	-0.2	-0.2	1.2	1.2	1.4	1.5
60%	1.5	1.4	-0.7	-0.6	-0.4	-0.5	-0.3	-0.3	1.2	1.2	1.3	1.4
70%	1.5	1.4	-0.7	-0.6	-0.5	-0.5	-0.5	-0.3	1.1	1.1	1.3	1.4
80%	1.4	1.3	-0.7	-0.6	-0.5	-0.6	-0.6	-0.4	1.1	1.1	1.3	1.4
90%	1.4	1.3	-0.7	-0.7	-0.6	-0.7	-0.6	-0.4	1.0	1.1	1.2	1.4
Long Term												
Full Simulation Period[a]	1.5	1.4	-0.6	-0.5	0.1	0.0	-0.1	0.0	1.3	1.4	1.4	1.5
Water Year Types[b]												
Wet (32%)	1.5	1.4	-0.6	-0.6	-0.6	-0.6	-0.6	-0.4	1.1	1.2	1.3	1.5
Above Normal (16%)	1.4	1.4	-0.7	-0.7	0.1	-0.4	0.0	0.0	1.5	1.2	1.4	1.5
Below Normal (13%)	1.6	1.4	-0.4	-0.4	-0.1	-0.4	-0.1	-0.4	1.0	1.0	1.4	1.4
Dry (24%)	1.5	1.4	-0.7	-0.6	0.0	-0.2	-0.2	-0.1	1.3	1.3	1.4	1.5
Critical (15%)	1.6	1.4	-0.4	-0.3	0.6	0.8	0.4	0.6	1.4	1.7	1.5	1.6

Proposed Project minus Existing

Statistic	Monthly Averaged Daily Minimum Elevation (FEET)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	0.2	0.2	0.0	0.0	0.0	0.2	-0.1	-0.1	-0.1	0.1	0.0	0.1
20%	0.2	0.2	0.0	0.0	0.0	0.1	-0.2	-0.2	-0.2	0.0	0.0	0.1
30%	0.2	0.2	0.0	0.0	0.0	0.0	-0.2	0.0	-0.2	0.0	0.0	0.1
40%	0.2	0.1	0.0	0.0	0.0	0.1	-0.2	0.0	0.0	0.0	0.0	0.1
50%	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
60%	0.2	0.1	0.0	0.0	0.0	-0.1	0.2	0.1	0.0	0.0	0.0	0.1
70%	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1
80%	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
90%	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Long Term												
Full Simulation Period[a]	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.1
Water Year Types[b]												
Wet (32%)	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
Above Normal (16%)	0.1	0.1	0.0	0.0	0.0	0.1	-0.3	-0.1	-0.1	0.0	0.0	0.1
Below Normal (13%)	0.2	0.2	0.0	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	0.1
Dry (24%)	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	-0.1	0.0	0.0	0.1
Critical (15%)	0.2	0.2	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	0.0	0.0	0.1

a Based on the 16-year simulation period

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

c The Elevations are based on National Geodetic Vertical Datum of 1929 (NGVD 29)

Appendix C – Modeling

Attachment 2-7 – Salinity Results (DSM2-QUAL)

The following results of the DSM2-QUAL model are included for Delta salinity conditions for the following alternatives:

- Existing Conditions
- Proposed Project

Table 2-7.1. Salinity Results (DSM2-QUAL)

Title	Model Parameter	Table Numbers	Figure Numbers
Sacramento River downstream of Steamboat Slough Salinity	SAC_DS_STMBTSL	1-1	1-1 to 1-18
Cache Slough at Ryer Island Salinity	CACHE_RYER	2-1	2-1 to 2-18
Sacramento River downstream of Georgiana Slough Salinity	RSAC123	3-1	3-1 to 3-18
Sacramento River at Rio Vista Salinity	RSAC101	4-1	4-1 to 4-18
Sacramento River at Emmaton Salinity	RSAC092	5-1	5-1 to 5-18
Sacramento River at Collinsville Salinity	RSAC081	6-1	6-1 to 6-18
Sacramento River at Mallard Slough Salinity	RSAC075	7-1	7-1 to 7-18
Chipps Island North Channel Salinity	CHIPS_N_437	8-1	8-1 to 8-18
Chipps Island South Channel Salinity	CHIPS_S_442	9-1	9-1 to 9-18
Sacramento River at Port Chicago Salinity	RSAC064	10-1	10-1 to 10-18
San Joaquin River at Antioch Salinity	RSAN007	11-1	11-1 to 11-18
San Joaquin River at Jersey Point Salinity	RSAN018	12-1	12-1 to 12-18
San Joaquin River at San Andreas Salinity	RSAN032	13-1	13-1 to 13-18
San Joaquin River at Prisoners Point Salinity	RSAN037	14-1	14-1 to 14-18
Old River at Rock Slough Salinity	ROLD024	15-1	15-1 to 15-18
Banks Pumping Plant South Delta Exports Salinity	CLIFTON_COURT	16-1	16-1 to 16-18
Jones Pumping Plant South Delta Exports Salinity	CHDMC006	17-1	17-1 to 17-18
Old River at Highway 4	ROLD034	18-1	18-1 to 18-18
Victoria Canal	CHVCT000	19-1	19-1 to 19-18

Title	Model Parameter	Table Numbers	Figure Numbers
Montezuma Slough at Hunter Cut	SLMZU003	20-1	20-1 to 20-18
Montezuma Slough at Beldons Landing	SLMZU011	21-1	21-1 to 21-18
Montezuma Slough at National Steel	SLMZU025	22-1	22-1 to 22-18
Suisun Bay near Ryer	RYC	24-1	24-1 to 24-18
Goodyear Slough Outfall at Naval Fleet	GYS	25-1	25-1 to 25-18

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 1-1. Sacramento River downstream of Steamboat Slough Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	176	177	179	181	179	177	176	176	176	176	176	176
20%	176	176	178	180	178	176	176	176	176	176	176	176
30%	176	176	177	179	177	176	176	176	176	176	176	176
40%	176	176	177	178	177	176	176	176	176	175	176	176
50%	176	176	176	178	177	176	176	176	176	175	176	175
60%	176	176	176	178	176	176	176	176	176	175	176	175
70%	176	175	176	177	176	176	175	175	176	175	176	175
80%	175	175	175	177	176	176	175	175	176	175	175	175
90%	175	175	175	177	176	175	175	175	175	175	175	175
Long Term												
Full Simulation Period[a]	176	176	177	178	177	176	176	176	176	176	176	176
Water Year Types[b]												
Wet (32%)	176	176	177	178	176	176	175	175	176	175	176	175
Above Normal (15%)	176	176	177	178	177	176	176	175	176	175	175	175
Below Normal (17%)	176	176	177	179	177	176	176	176	176	175	176	176
Dry (22%)	176	176	177	179	177	176	176	176	176	176	176	176
Critical (15%)	176	176	176	178	177	176	176	176	176	176	176	176

Proposed Project

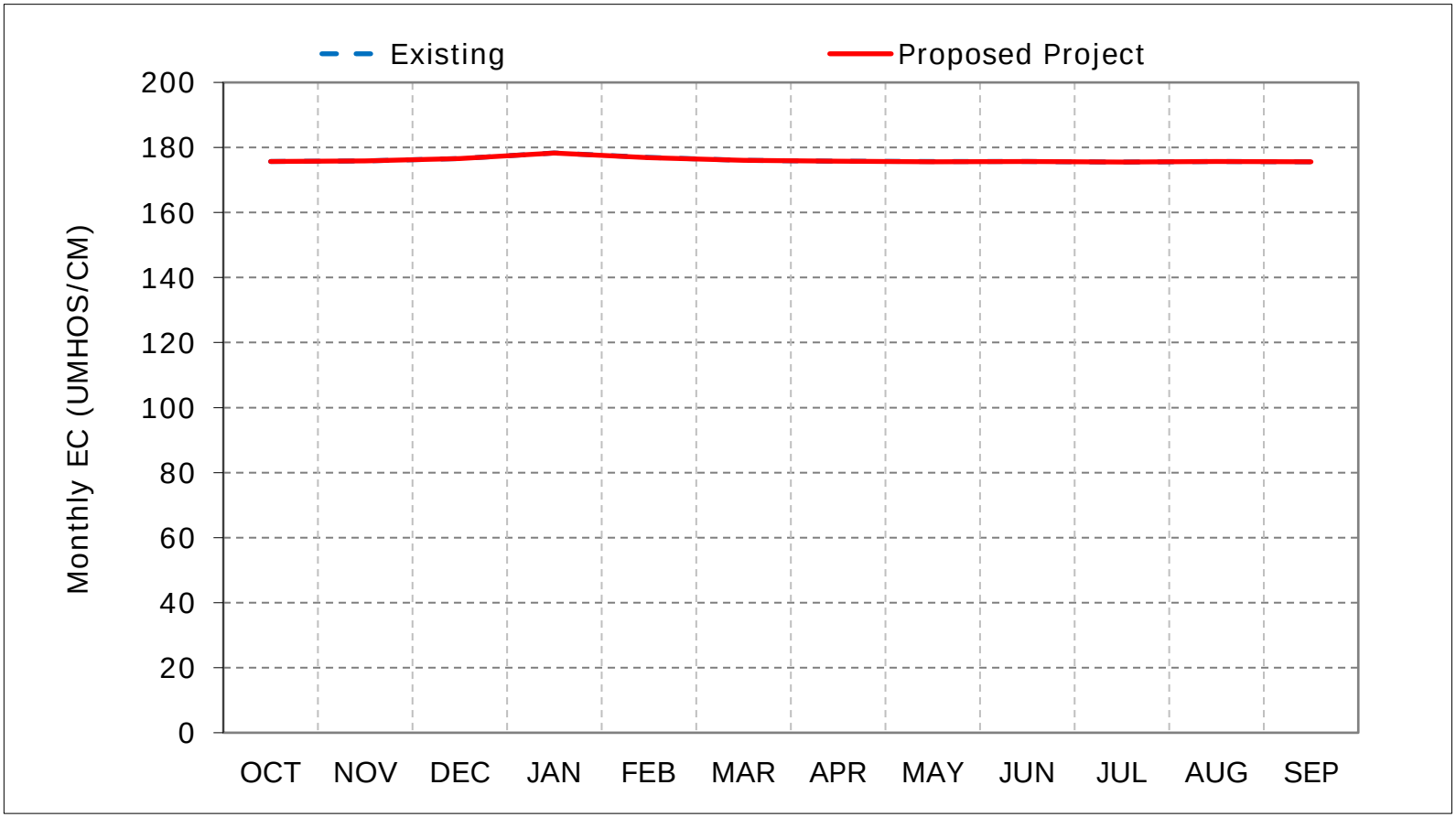
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	176	177	178	181	179	177	176	176	176	176	176	176
20%	176	176	177	180	178	176	176	176	176	176	176	176
30%	176	176	177	179	177	176	176	176	176	176	176	176
40%	176	176	177	178	177	176	176	176	176	175	176	176
50%	176	176	176	178	177	176	176	176	176	175	176	175
60%	176	176	176	178	176	176	176	176	176	175	176	175
70%	176	175	176	177	176	176	175	175	176	175	176	175
80%	175	175	176	177	176	176	175	175	176	175	176	175
90%	175	175	175	177	176	175	175	175	175	175	175	175
Long Term												
Full Simulation Period[a]	176	176	177	178	177	176	176	176	176	176	176	176
Water Year Types[b]												
Wet (32%)	176	176	177	178	176	176	175	175	176	175	176	175
Above Normal (15%)	176	176	177	178	177	176	176	175	176	175	176	175
Below Normal (17%)	176	176	177	179	177	176	176	176	176	175	176	176
Dry (22%)	176	176	177	179	177	176	176	176	176	176	176	176
Critical (15%)	176	176	176	179	177	176	176	176	176	176	176	176

Proposed Project minus Existing

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

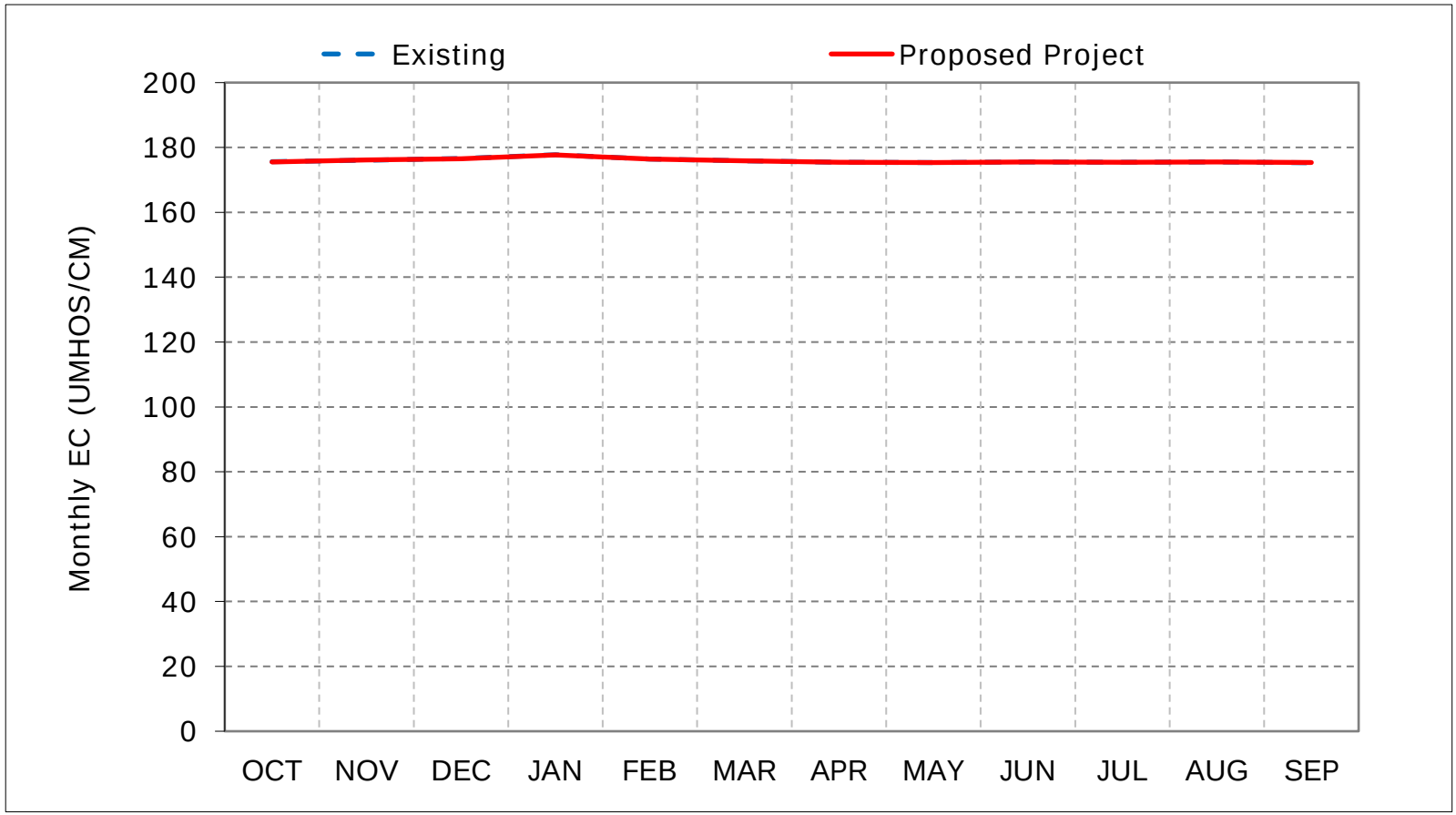
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 1-1. Sacramento River downstream of Steamboat Slough Salinity, Long-Ter



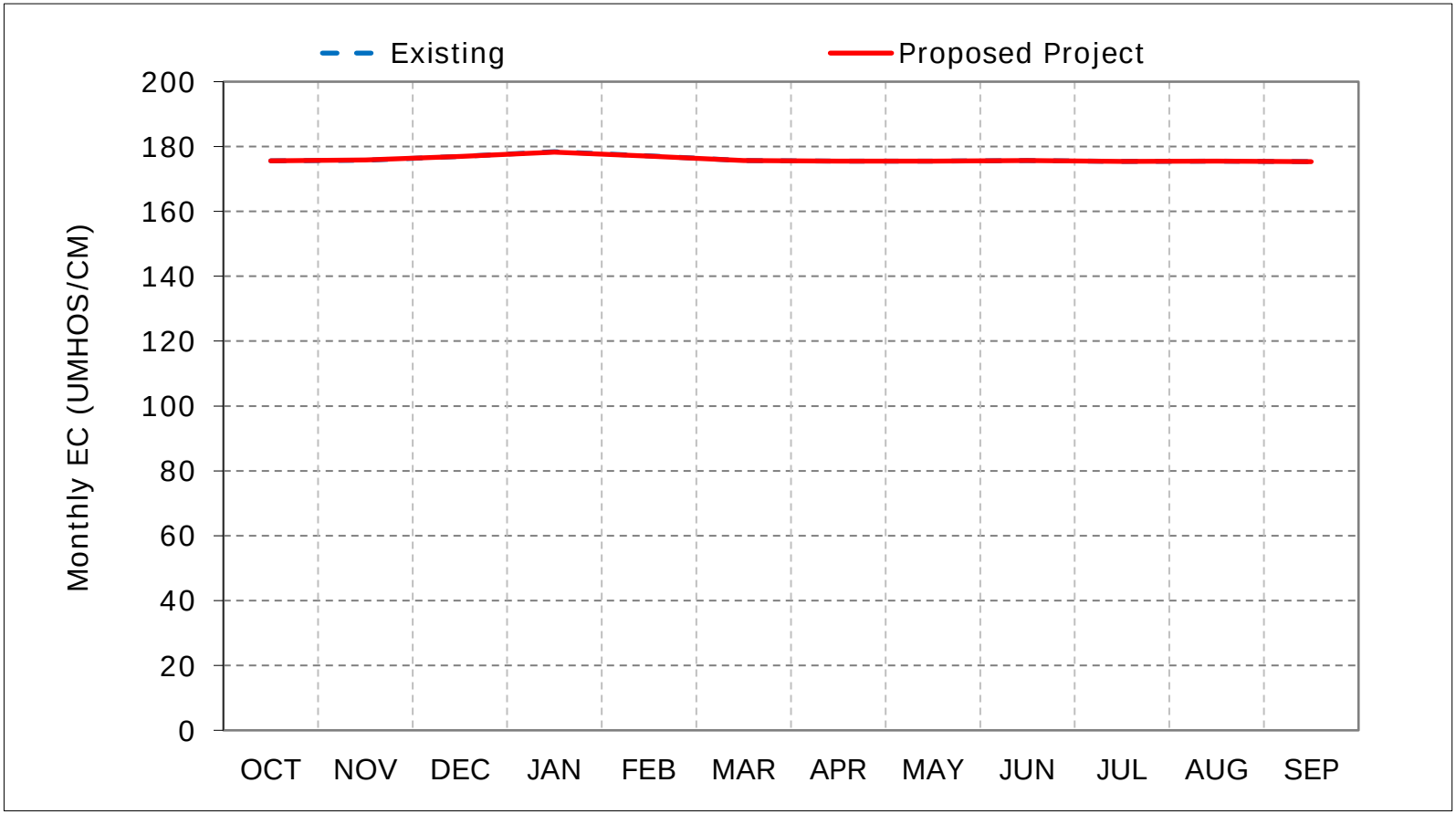
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-2. Sacramento River downstream of Steamboat Slough Salinity, Wet Yea



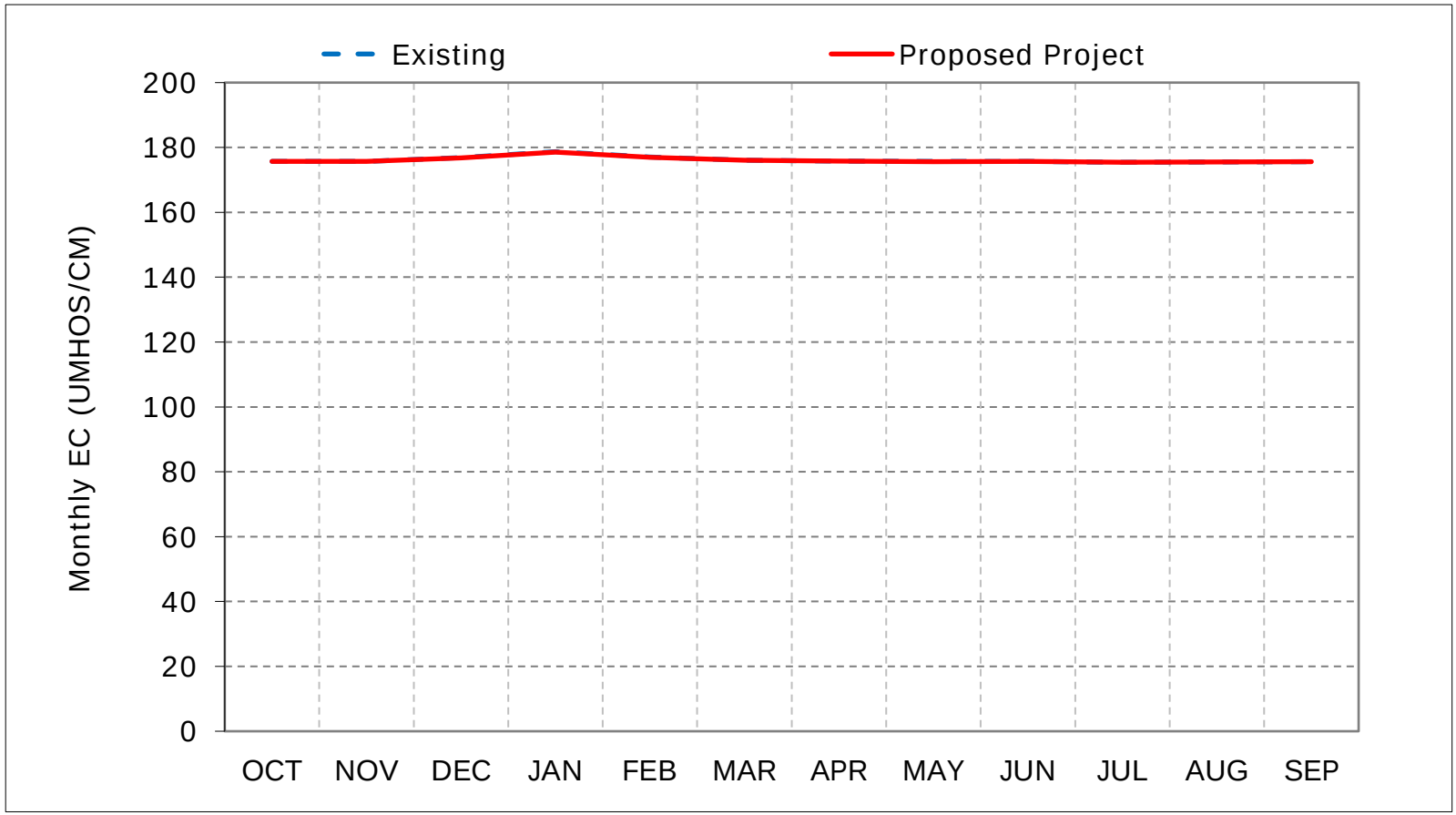
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-3. Sacramento River downstream of Steamboat Slough Salinity, Above N



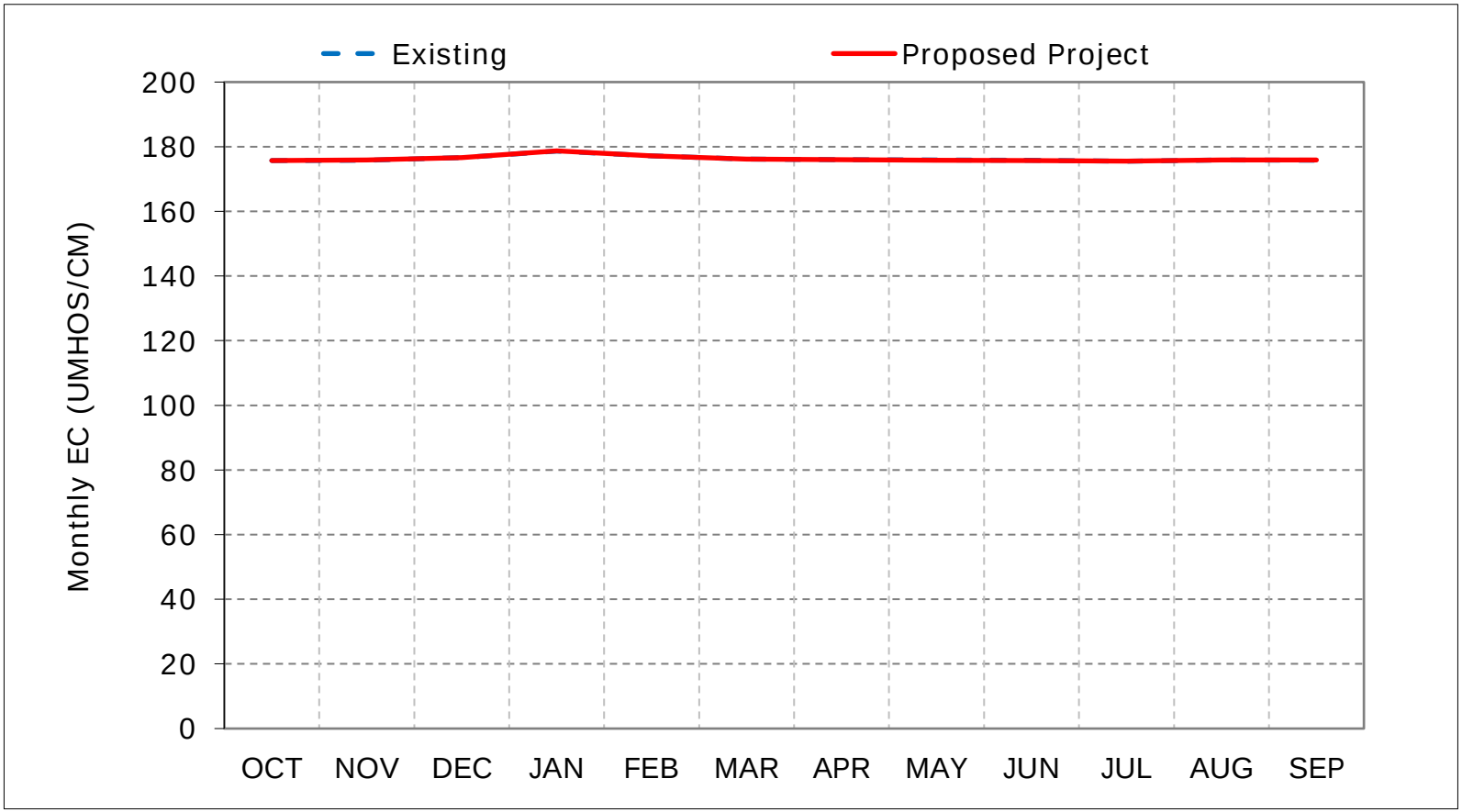
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-4. Sacramento River downstream of Steamboat Slough Salinity, Below N



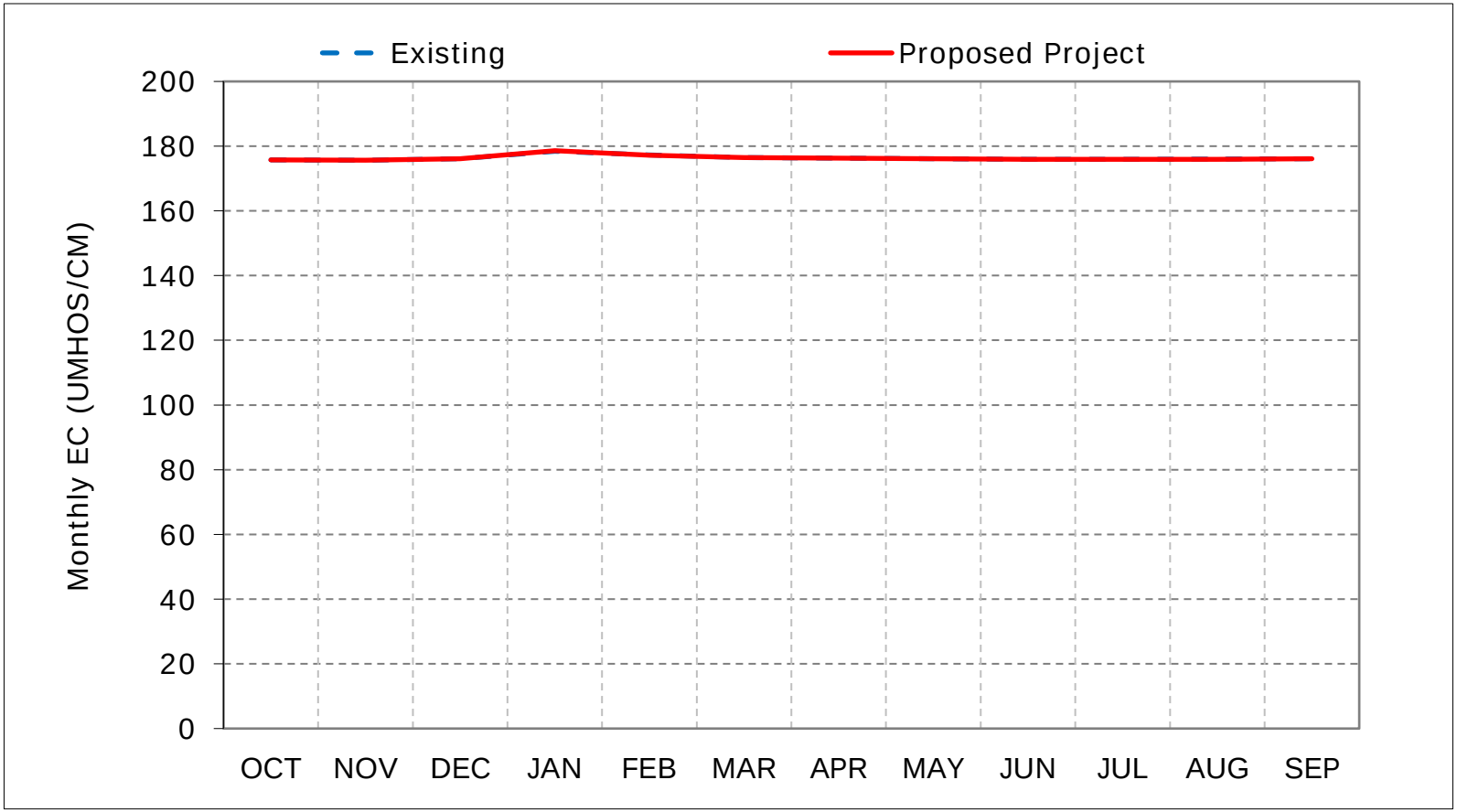
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-5. Sacramento River downstream of Steamboat Slough Salinity, Dry Year



*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.

Figure 1-6. Sacramento River downstream of Steamboat Slough Salinity, Critical Y



*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.

Figure 1-7. Sacramento River downstream of Steamboat Slough Salinity, January EC

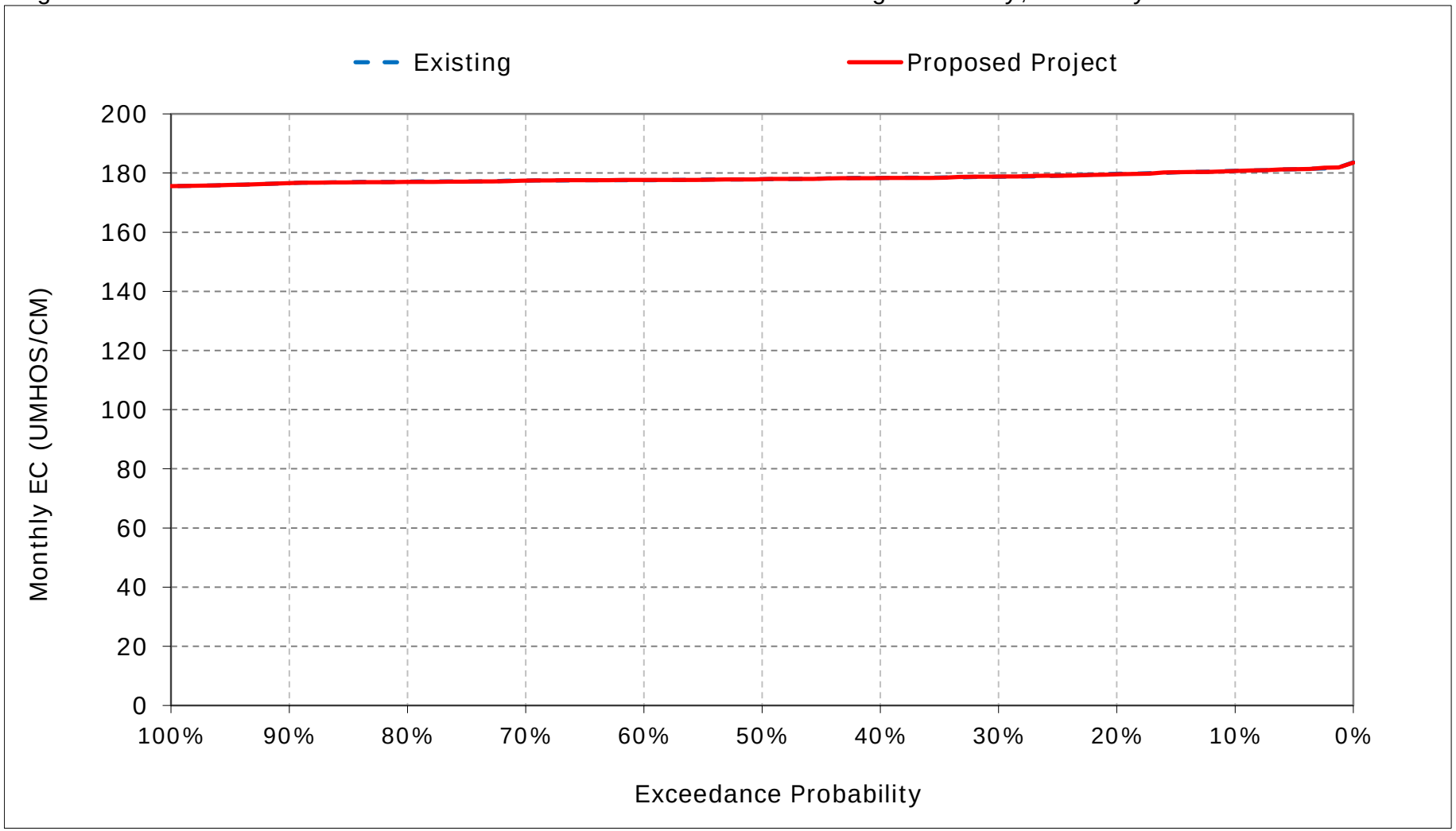


Figure 1-8. Sacramento River downstream of Steamboat Slough Salinity, February EC

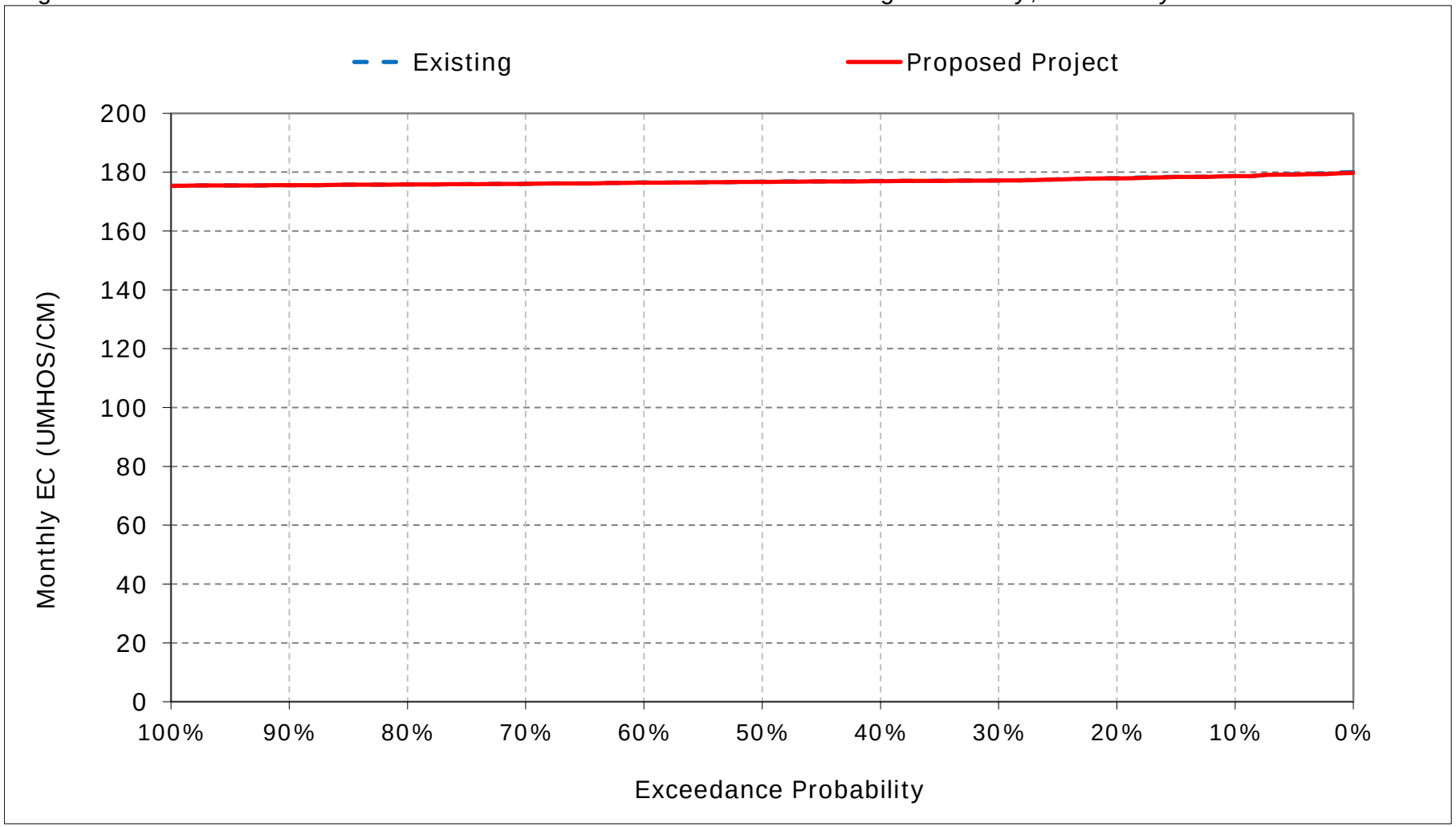


Figure 1-9. Sacramento River downstream of Steamboat Slough Salinity, March EC

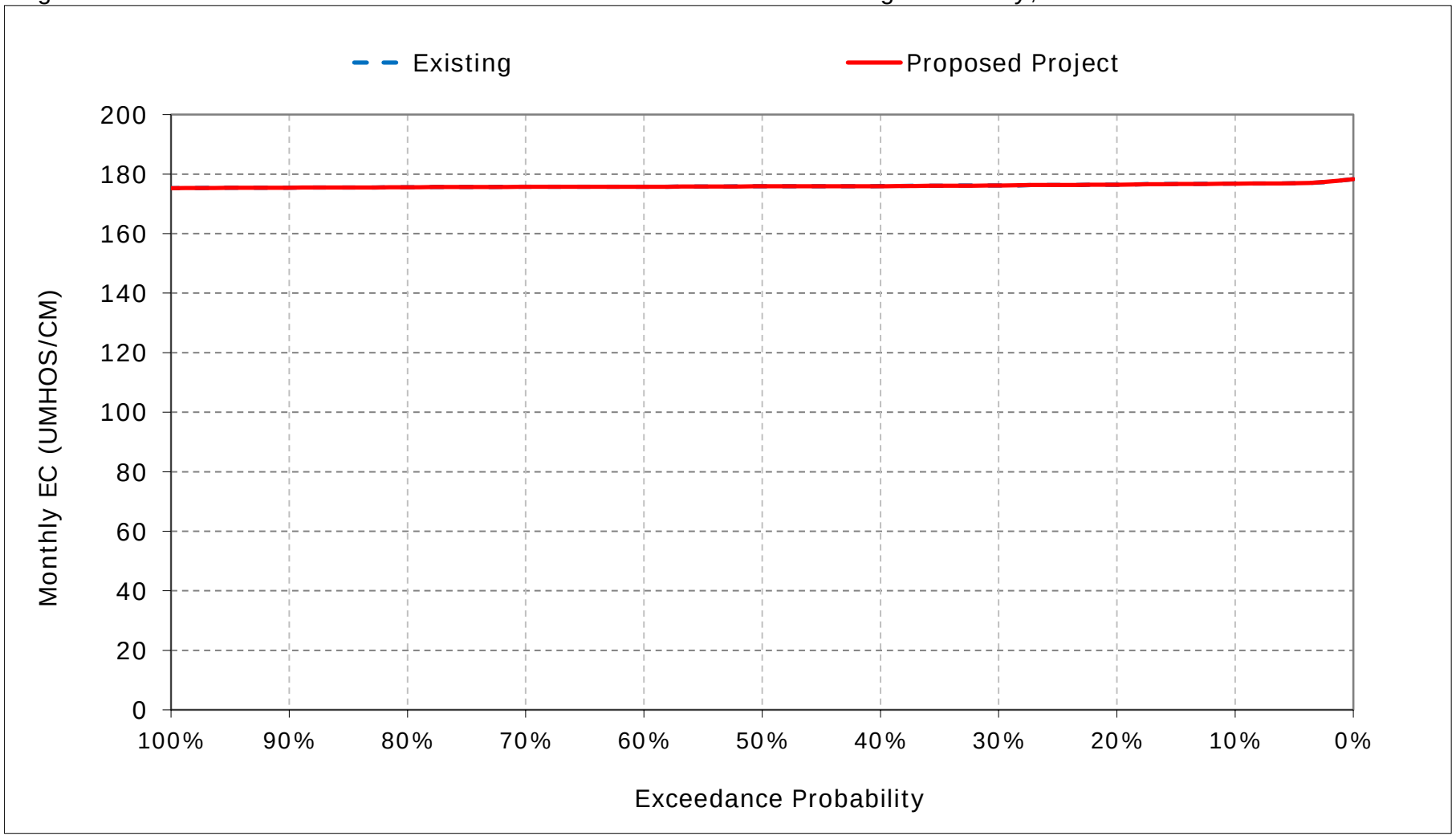


Figure 1-10. Sacramento River downstream of Steamboat Slough Salinity, April EC

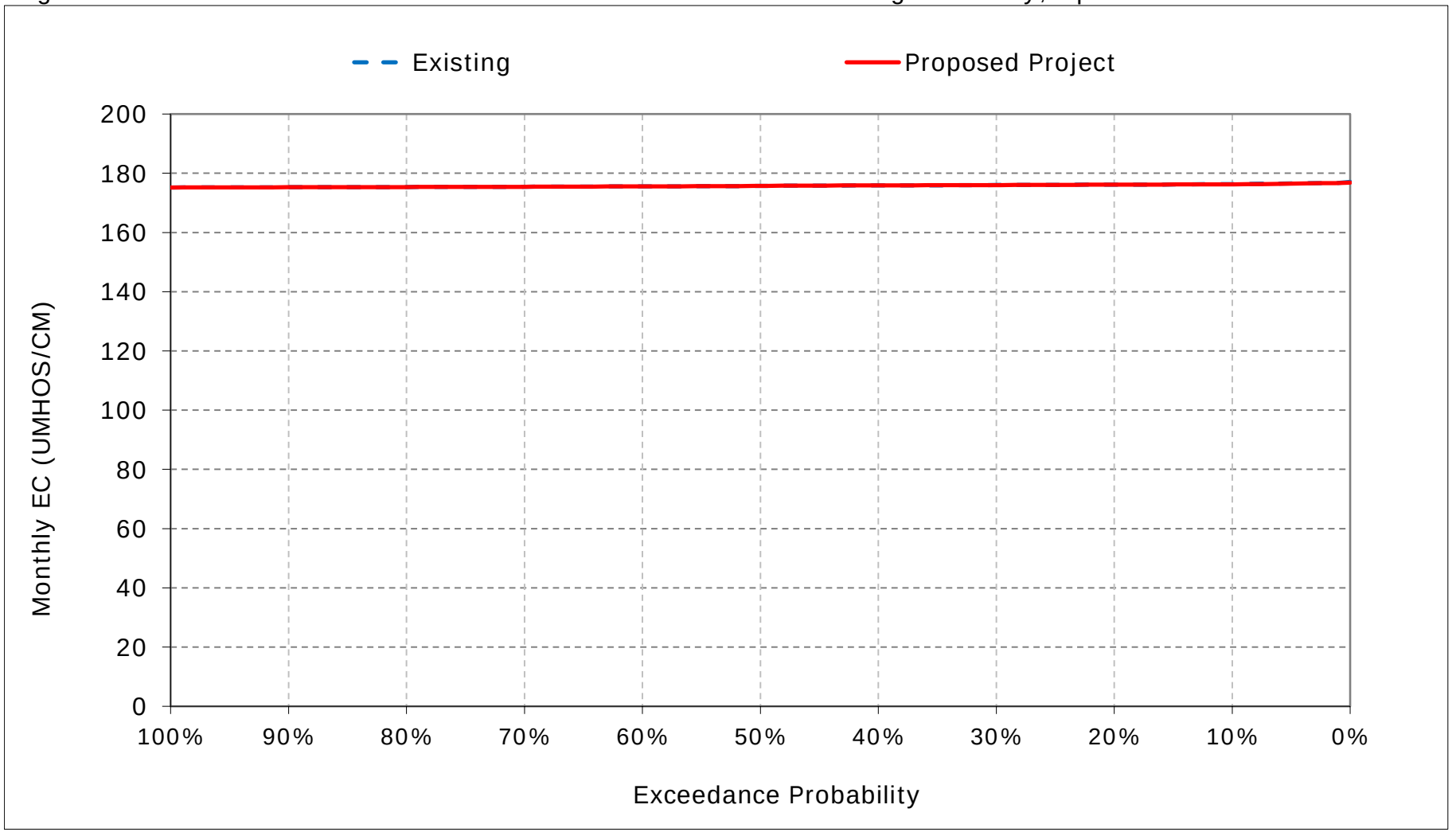


Figure 1-11. Sacramento River downstream of Steamboat Slough Salinity, May EC

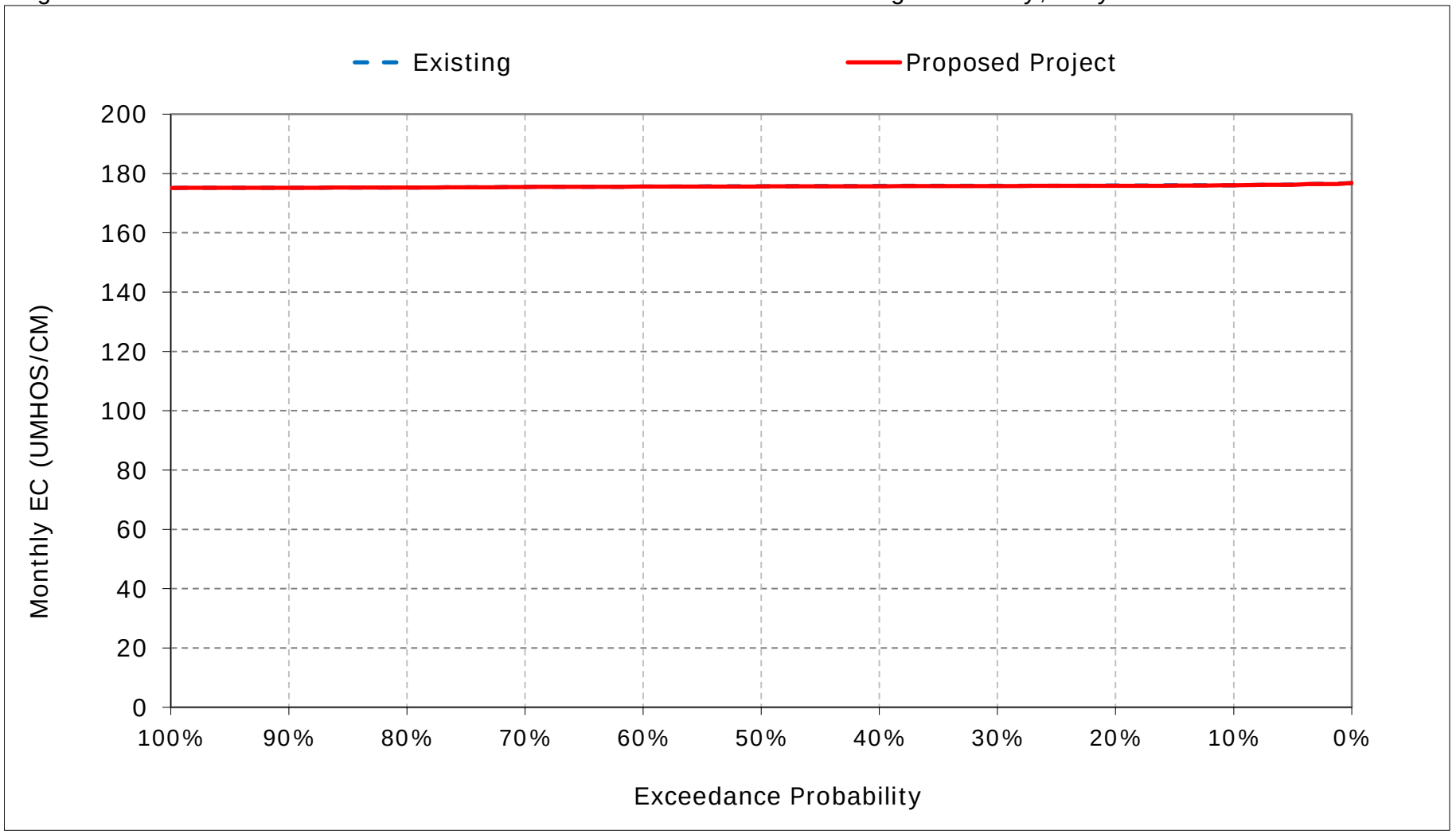


Figure 1-12. Sacramento River downstream of Steamboat Slough Salinity, June EC

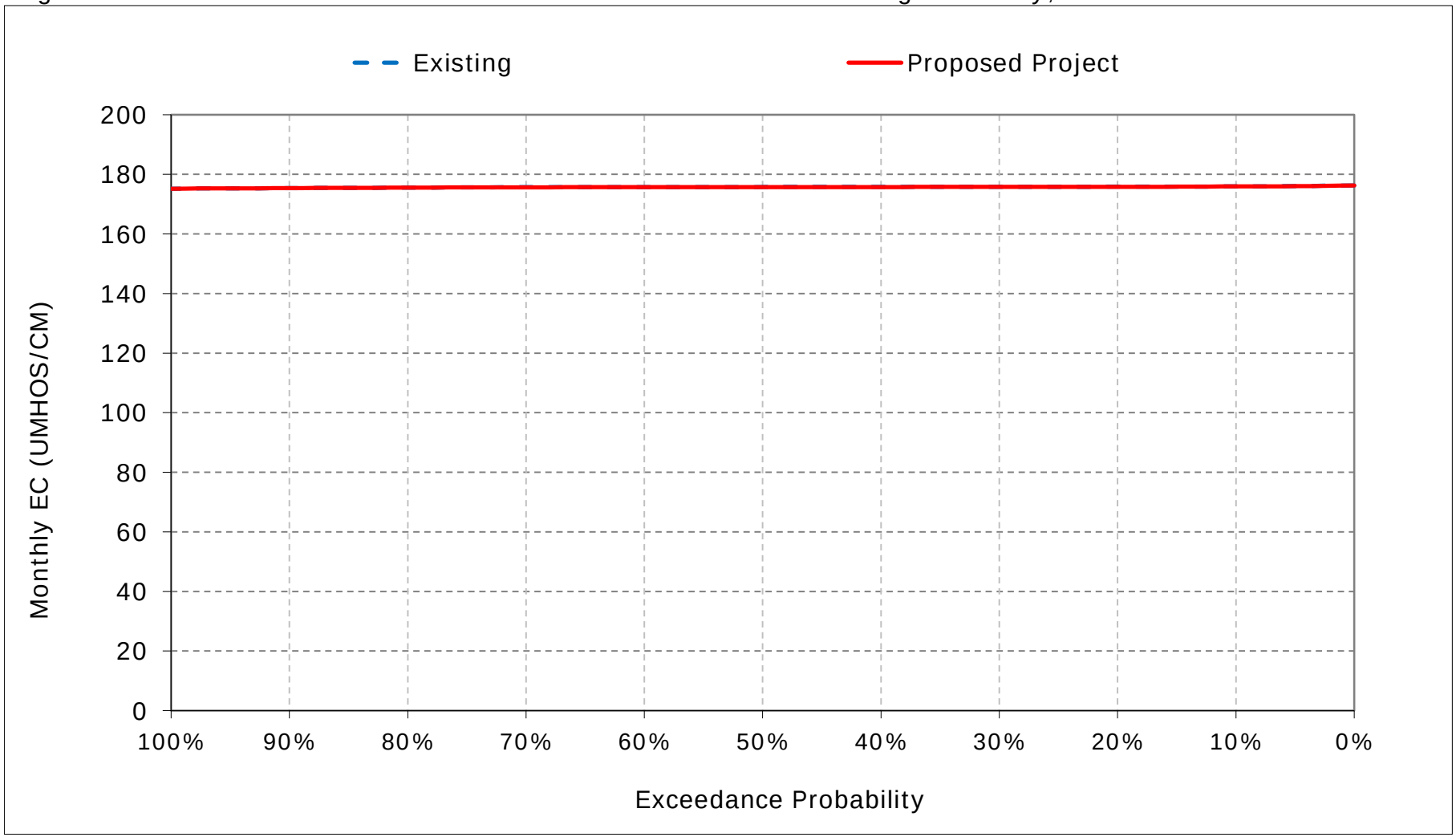


Figure 1-13. Sacramento River downstream of Steamboat Slough Salinity, July EC

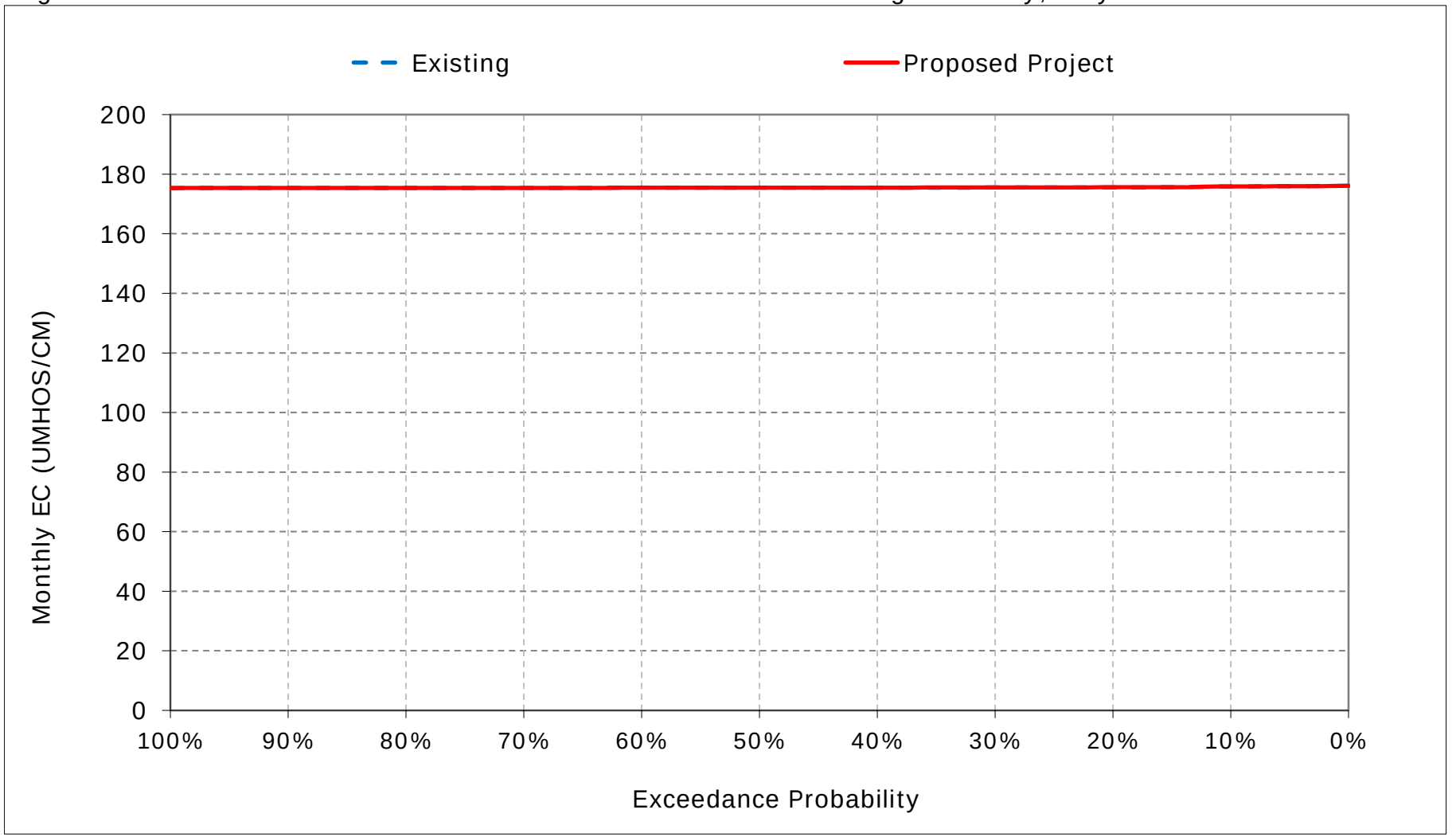


Figure 1-14. Sacramento River downstream of Steamboat Slough Salinity, August EC

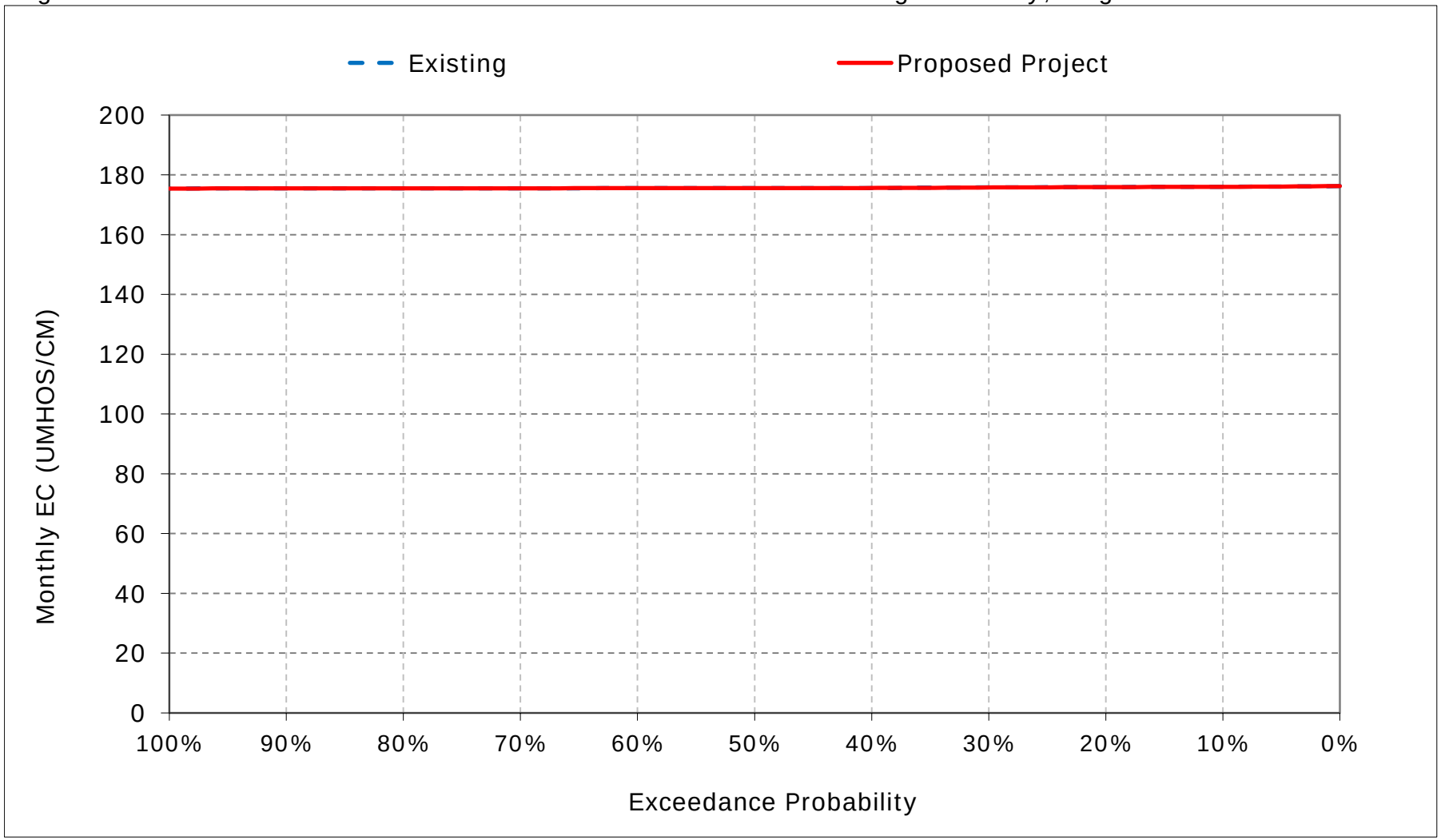


Figure 1-15. Sacramento River downstream of Steamboat Slough Salinity, September EC

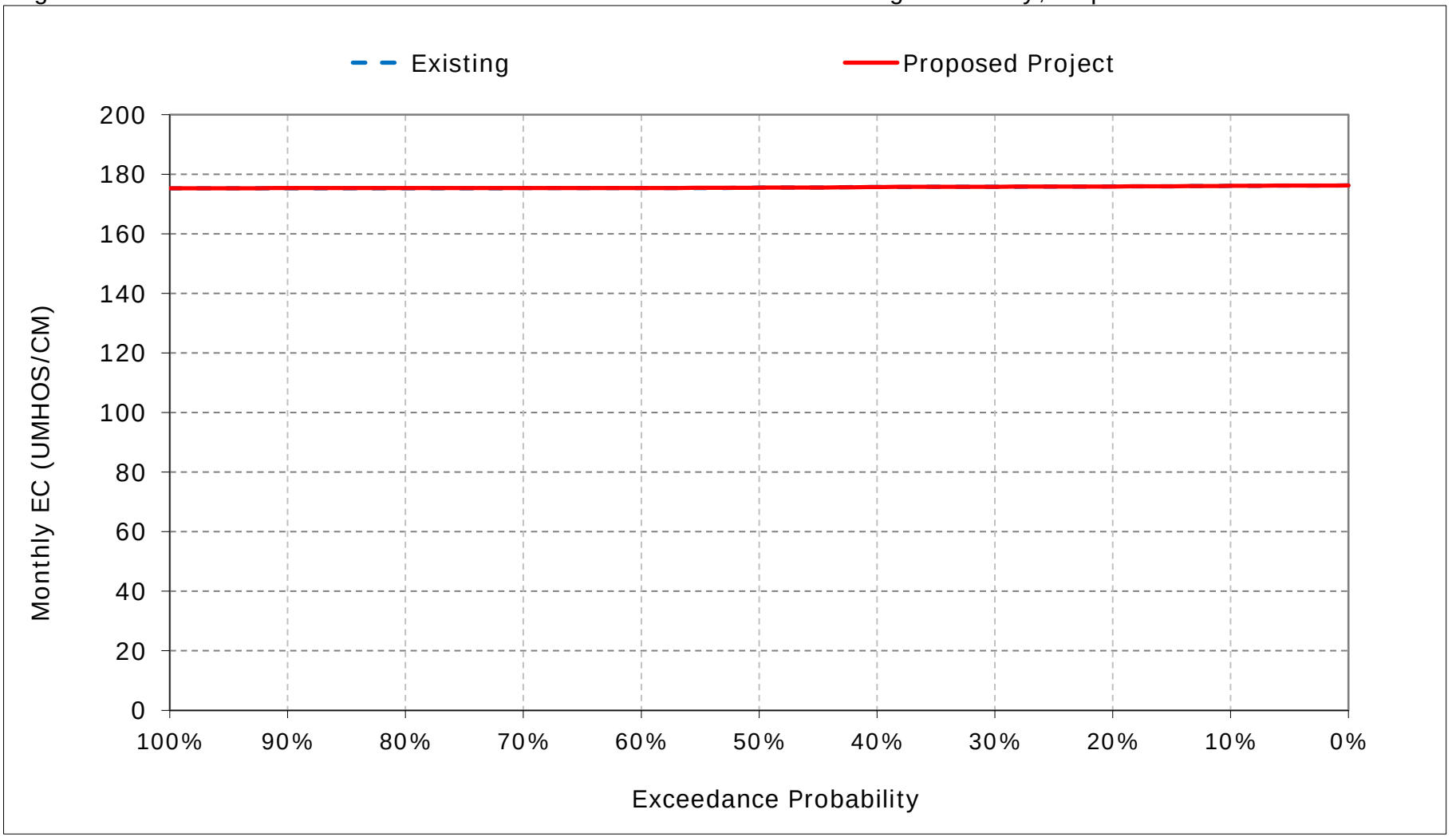


Figure 1-16. Sacramento River downstream of Steamboat Slough Salinity, October EC

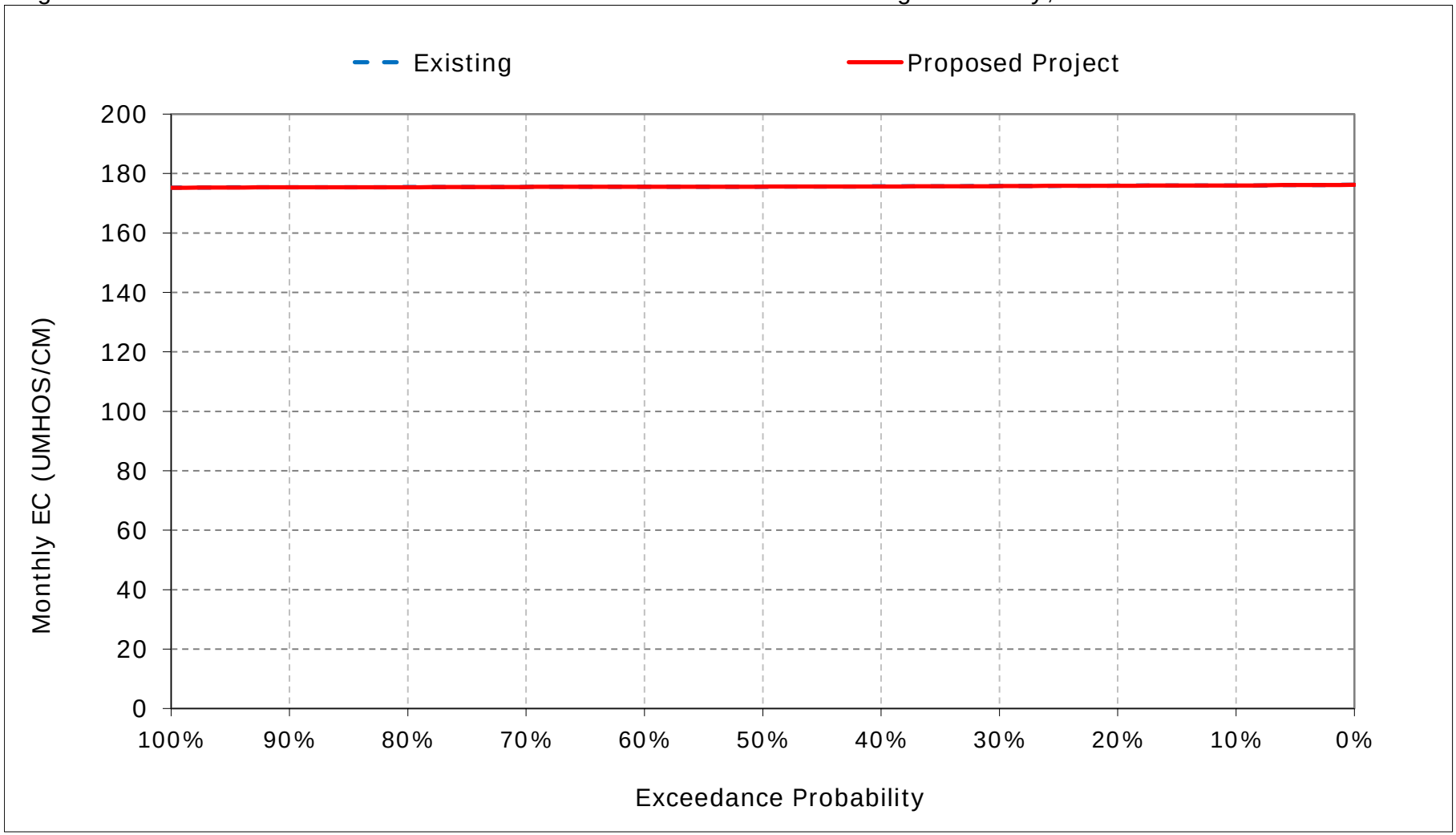


Figure 1-17. Sacramento River downstream of Steamboat Slough Salinity, November EC

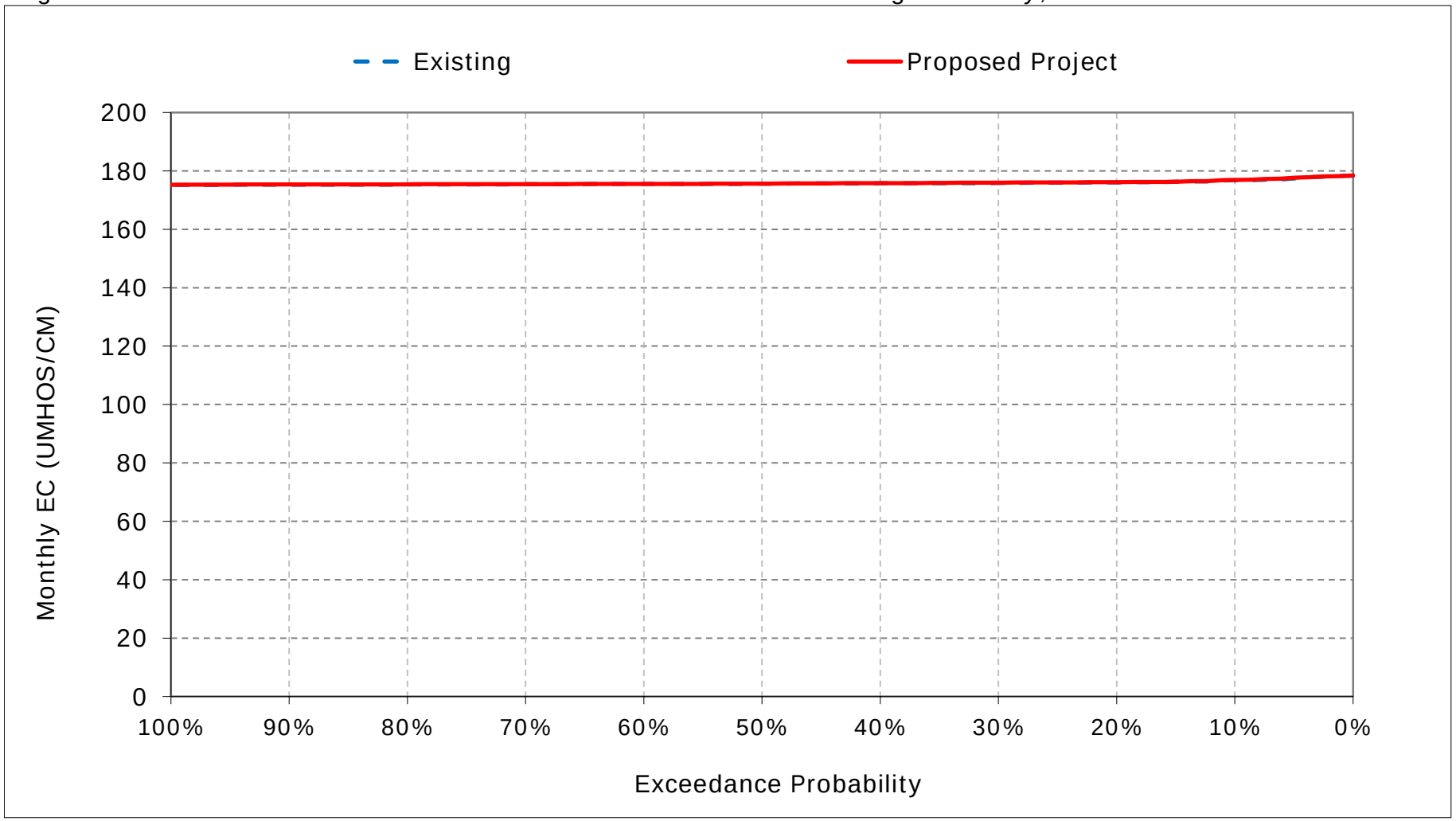


Figure 1-18. Sacramento River downstream of Steamboat Slough Salinity, December EC

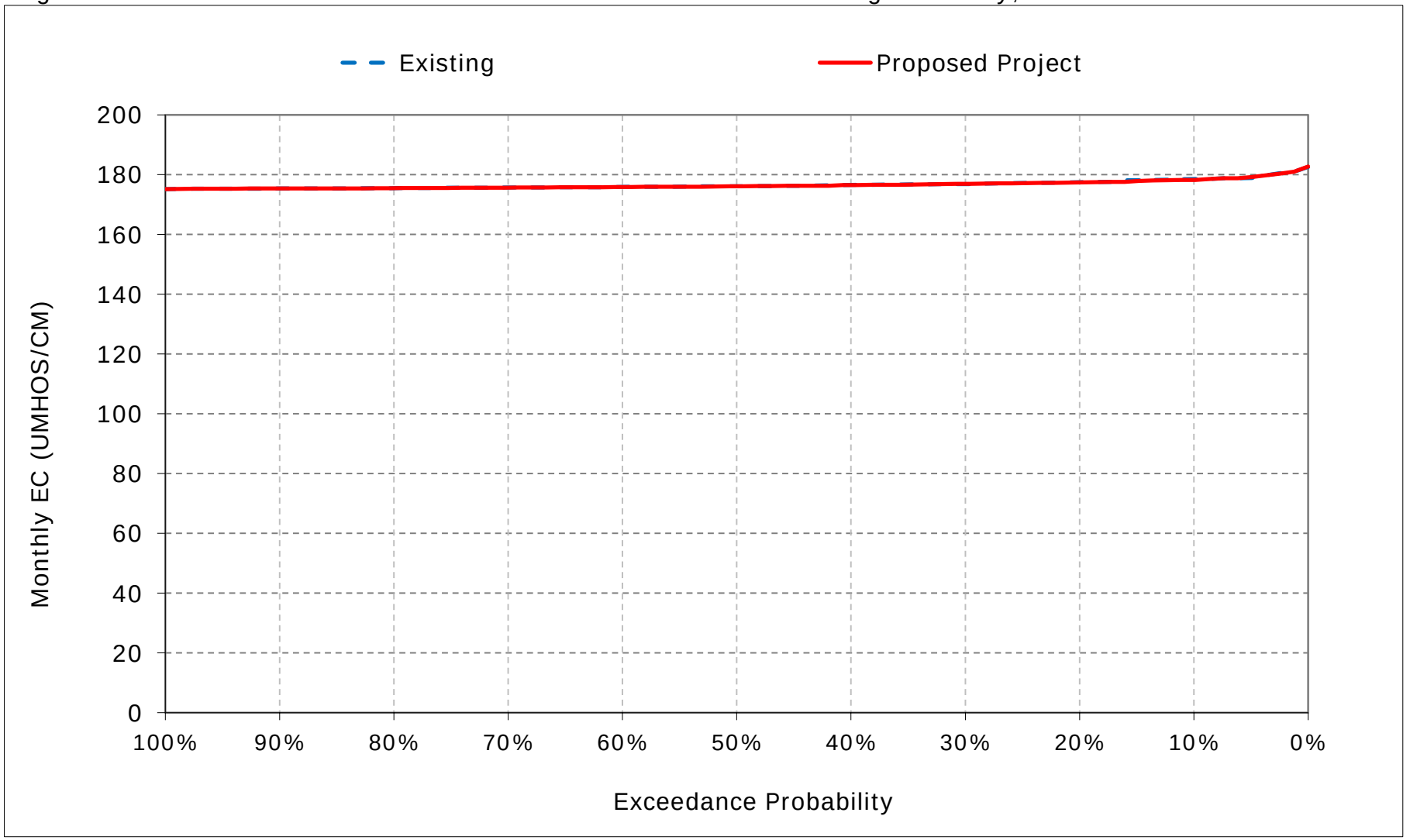


Table 2-1. Cache Slough at Ryer Island Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	189	190	191	203	201	194	187	184	184	185	186	187
20%	185	186	188	197	197	192	186	183	183	181	184	183
30%	184	184	186	193	192	190	185	183	182	181	183	182
40%	183	183	185	191	189	186	184	182	182	180	181	181
50%	181	181	184	190	188	185	183	182	182	180	180	180
60%	180	180	182	189	187	184	183	181	181	180	180	179
70%	180	180	181	187	185	183	182	180	181	180	180	179
80%	180	179	180	186	184	182	181	179	180	179	180	178
90%	179	179	180	184	182	181	180	178	179	179	179	178
Long Term												
Full Simulation Period[a]	183	183	185	192	190	187	184	181	182	181	182	181
Water Year Types[b]												
Wet (32%)	181	181	183	190	184	183	182	180	180	180	180	178
Above Normal (15%)	183	183	185	194	192	185	182	180	181	180	180	179
Below Normal (17%)	183	182	186	193	193	189	184	182	181	180	180	180
Dry (22%)	184	185	185	193	193	188	185	183	182	181	184	183
Critical (15%)	185	187	186	191	193	190	186	184	185	186	186	188

Proposed Project

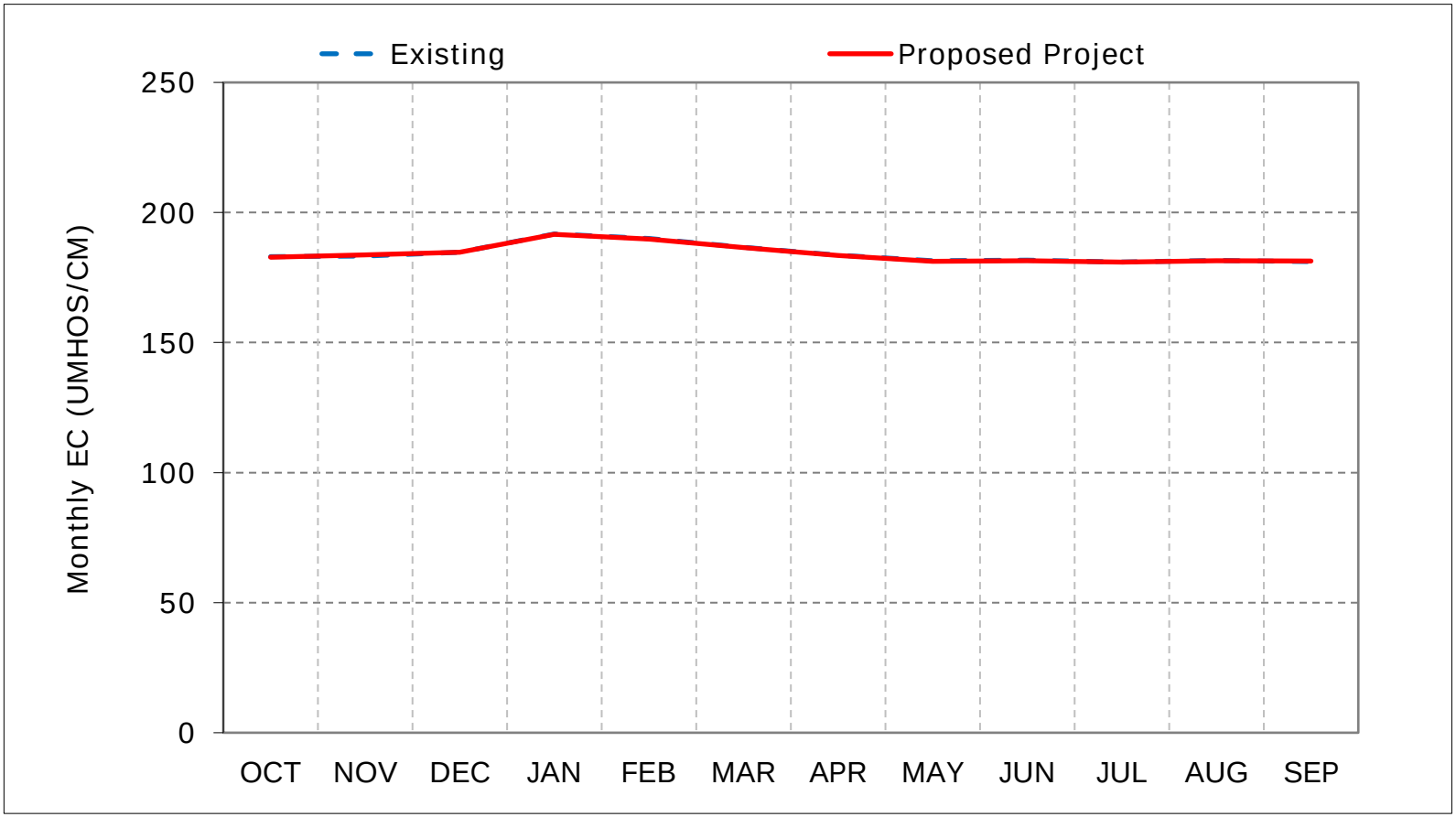
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	188	190	191	202	200	194	187	184	184	185	185	187
20%	185	186	188	197	197	192	186	183	182	181	184	183
30%	184	184	186	193	192	190	185	182	182	181	182	182
40%	182	183	185	191	188	186	184	182	182	180	181	181
50%	181	182	184	190	187	185	183	181	181	180	180	180
60%	180	181	182	188	187	184	182	181	181	180	180	179
70%	180	181	181	187	185	183	182	180	181	180	180	179
80%	180	180	180	186	184	182	181	179	180	179	179	179
90%	179	179	180	183	182	180	180	178	179	179	179	179
Long Term												
Full Simulation Period[a]	183	184	185	192	190	187	183	181	181	181	181	181
Water Year Types[b]												
Wet (32%)	181	182	183	189	184	183	182	180	180	180	180	179
Above Normal (15%)	182	184	185	193	192	185	182	180	181	180	180	179
Below Normal (17%)	183	182	186	192	192	189	184	181	181	180	180	181
Dry (22%)	184	185	186	193	193	188	185	182	182	181	184	183
Critical (15%)	185	187	187	191	193	190	186	184	186	186	185	188

Proposed Project minus Existing

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

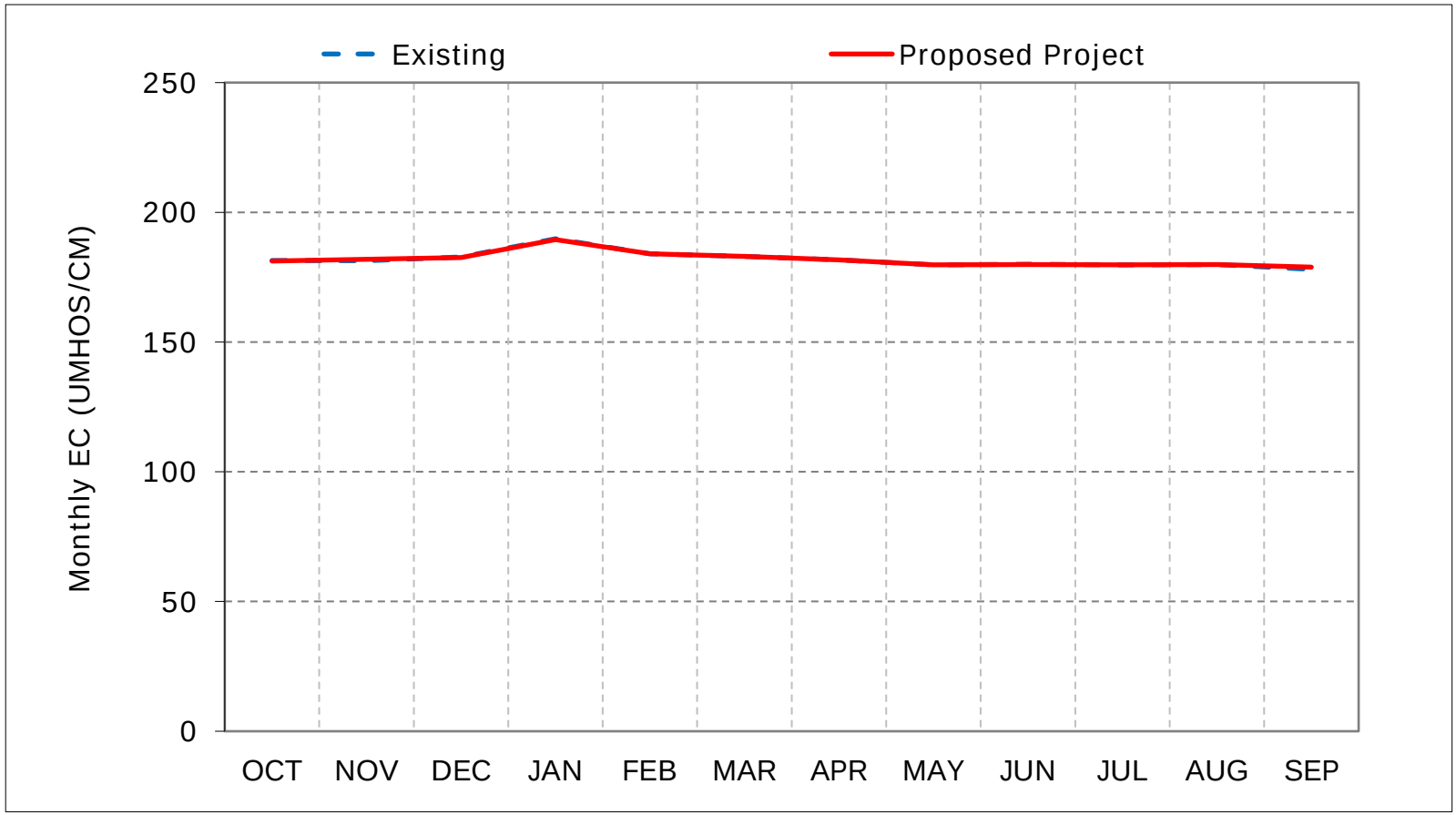
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 2-1. Cache Slough at Ryer Island Salinity, Long-Term Average EC



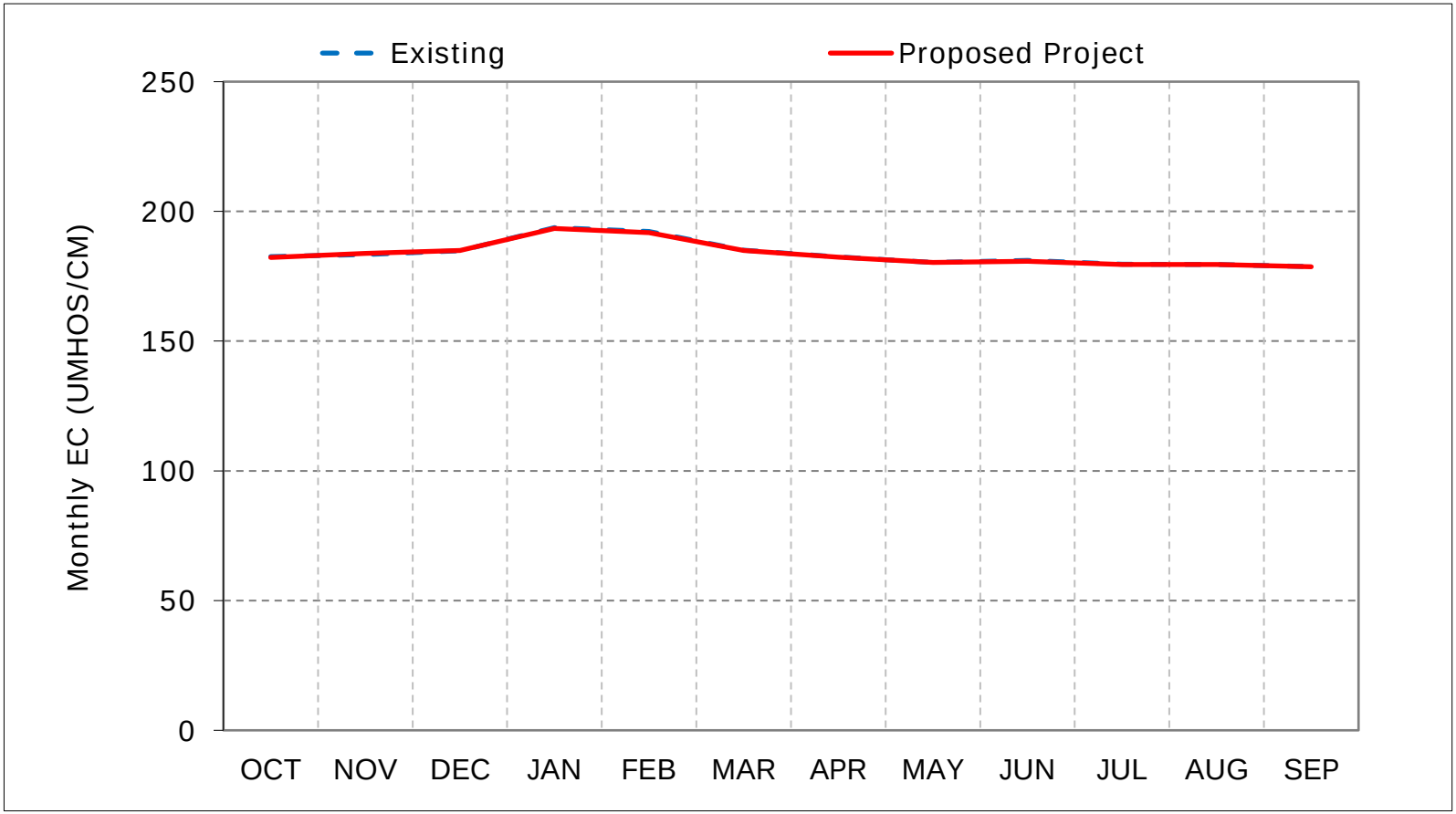
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-2. Cache Slough at Ryer Island Salinity, Wet Year Average EC



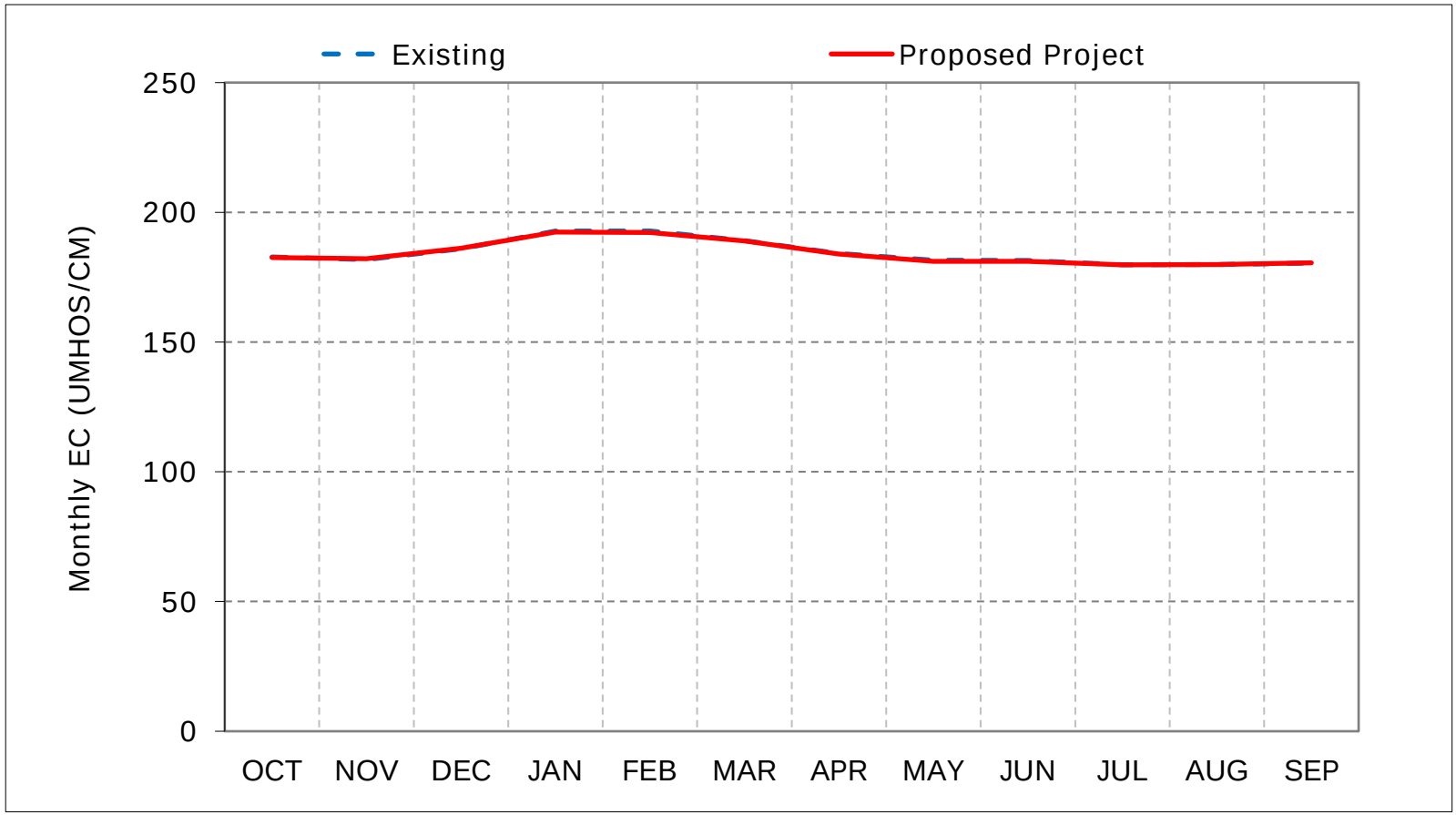
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-3. Cache Slough at Ryer Island Salinity, Above Normal Year Average EC



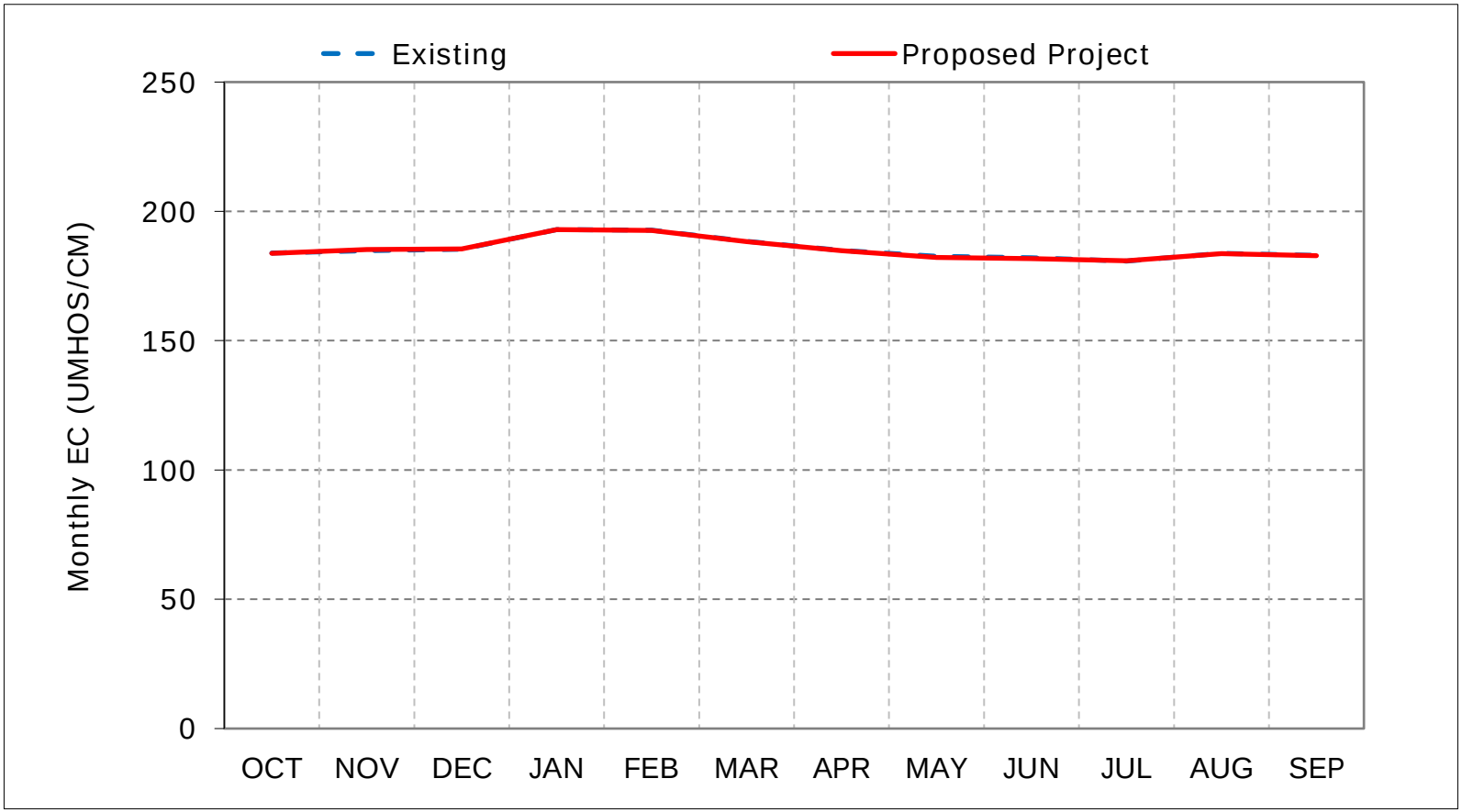
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-4. Cache Slough at Ryer Island Salinity, Below Normal Year Average EC



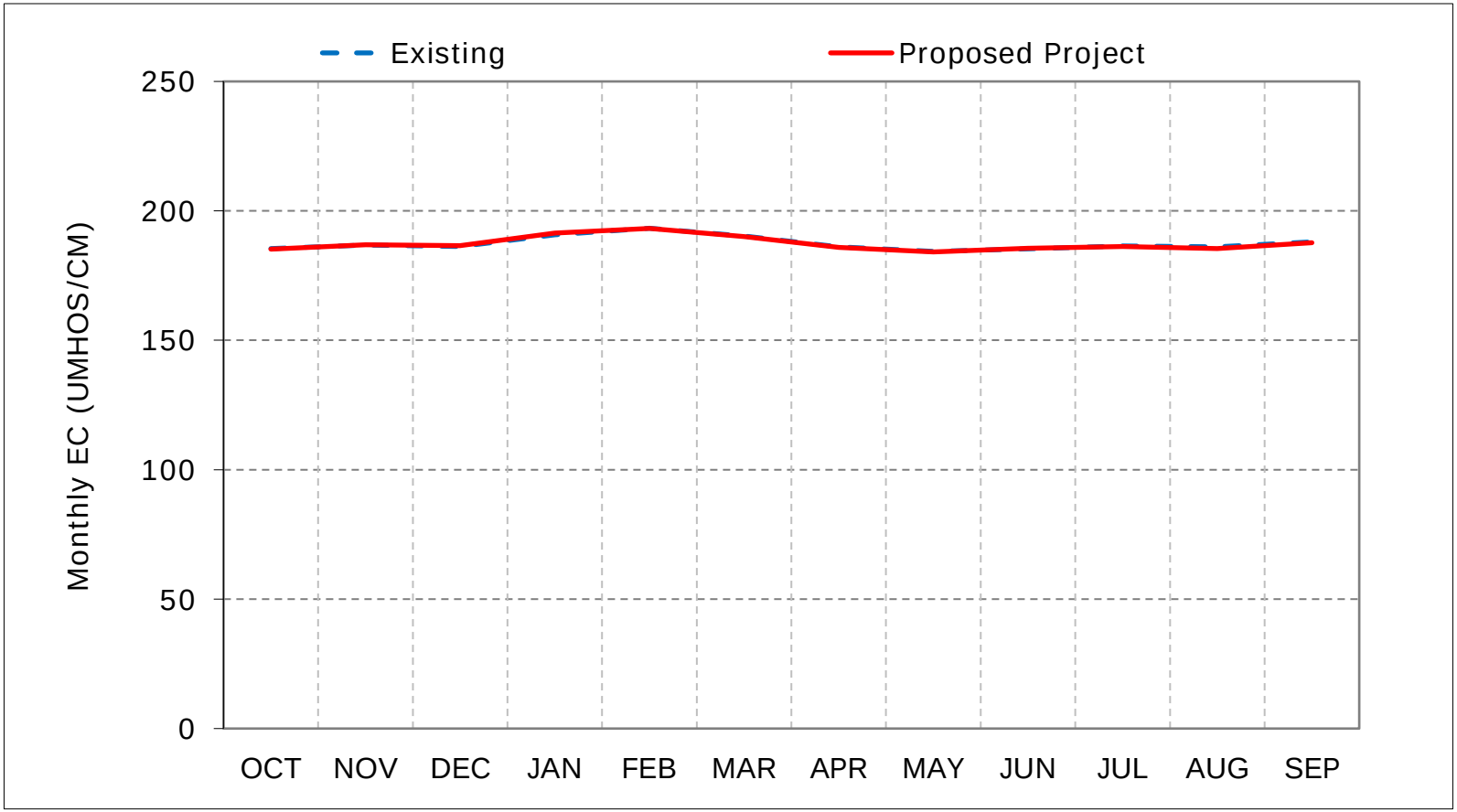
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-5. Cache Slough at Ryer Island Salinity, Dry Year Average EC



*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.

Figure 2-6. Cache Slough at Ryer Island Salinity, Critical Year Average EC



*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.

Figure 2-7. Cache Slough at Ryer Island Salinity, January EC

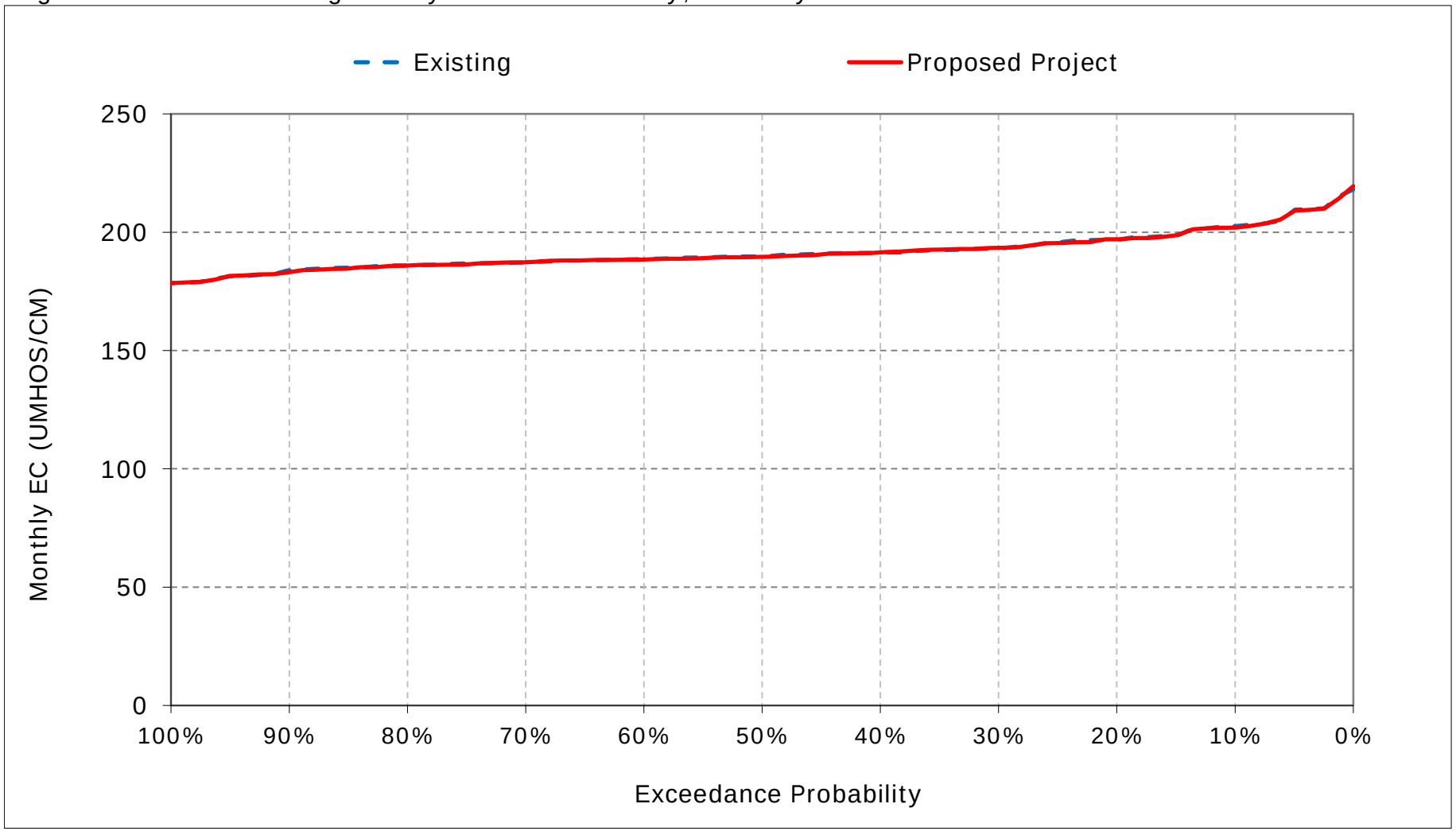


Figure 2-8. Cache Slough at Ryer Island Salinity, February EC

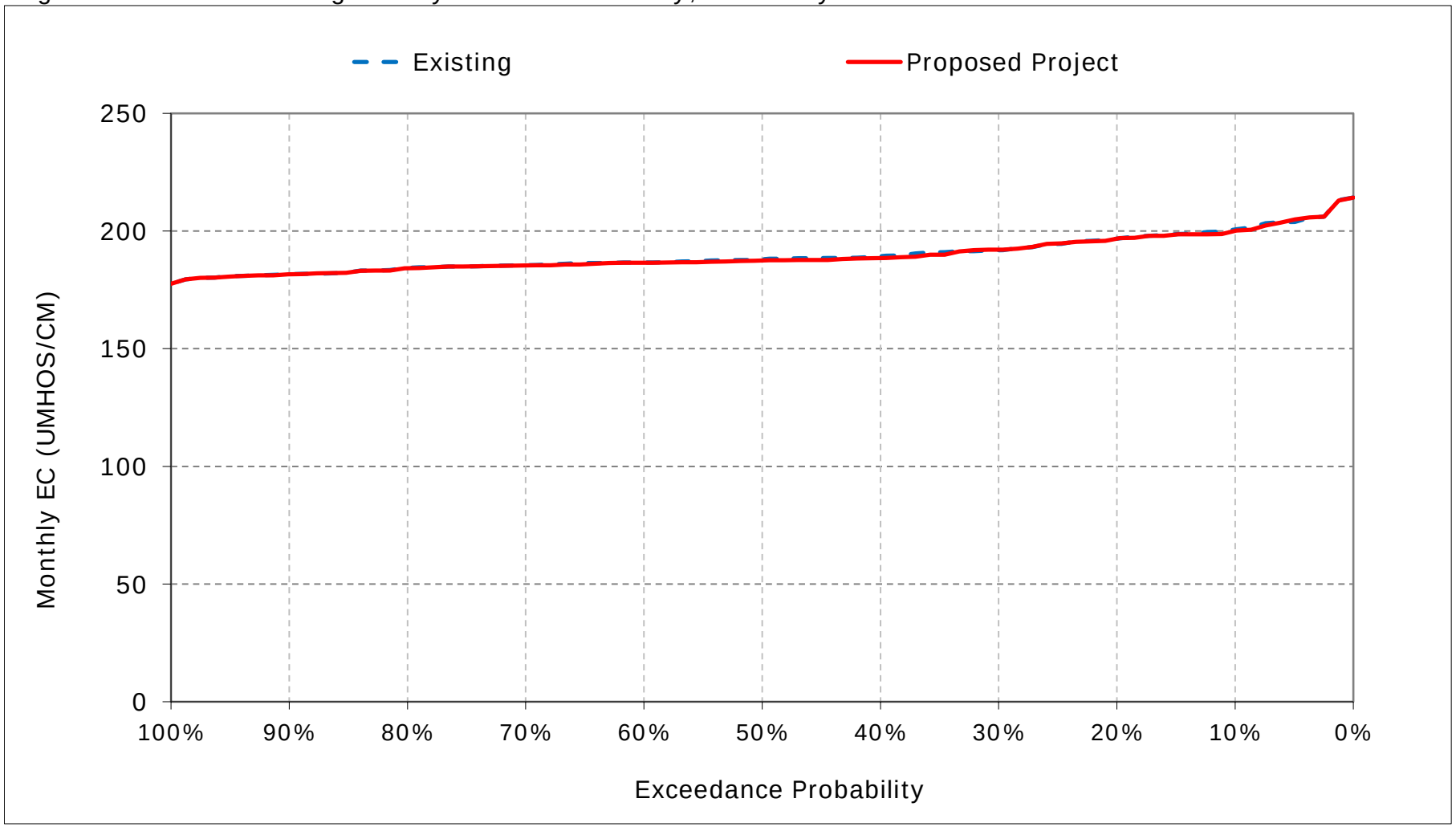


Figure 2-9. Cache Slough at Ryer Island Salinity, March EC

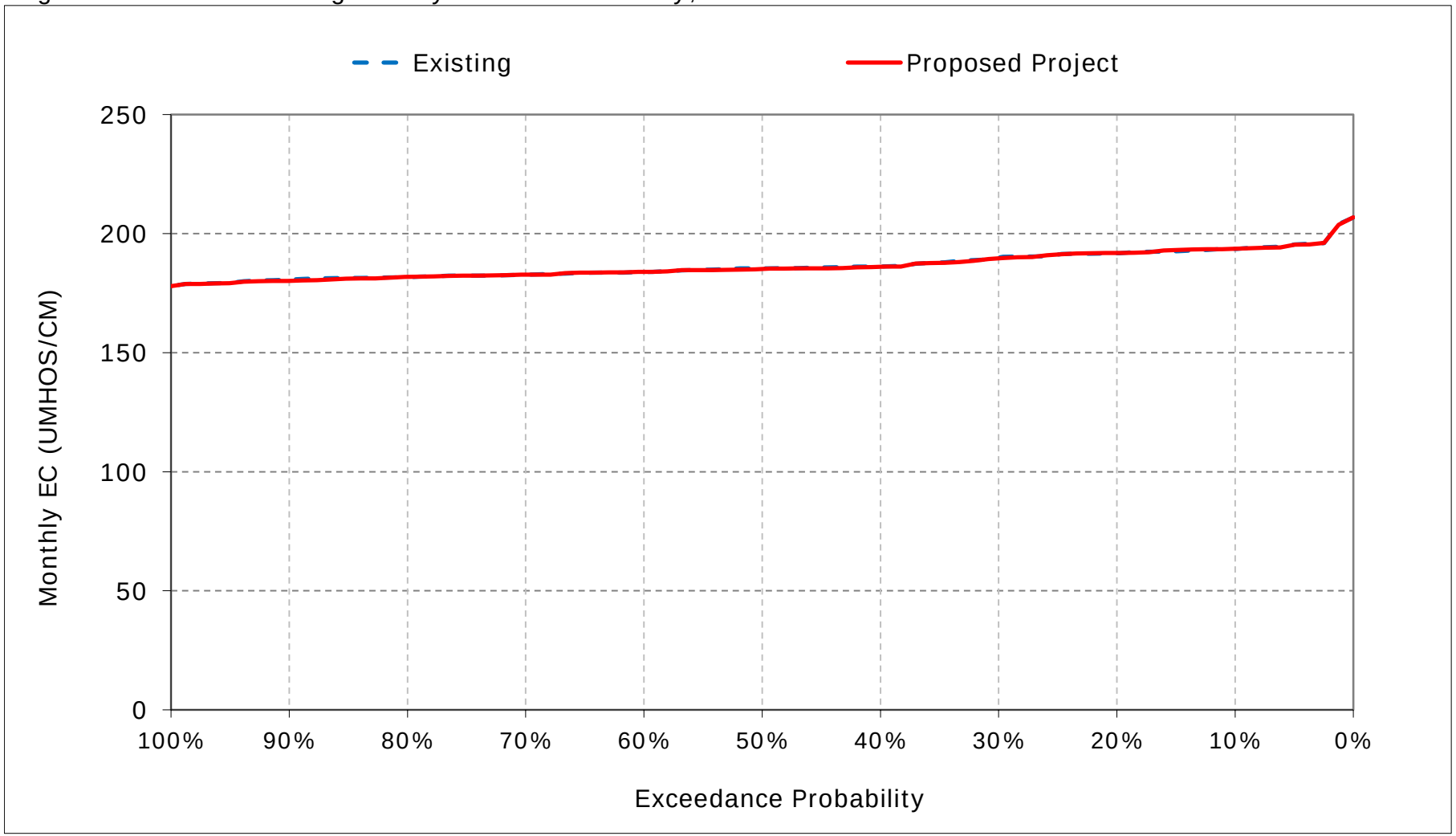


Figure 2-10. Cache Slough at Ryer Island Salinity, April EC

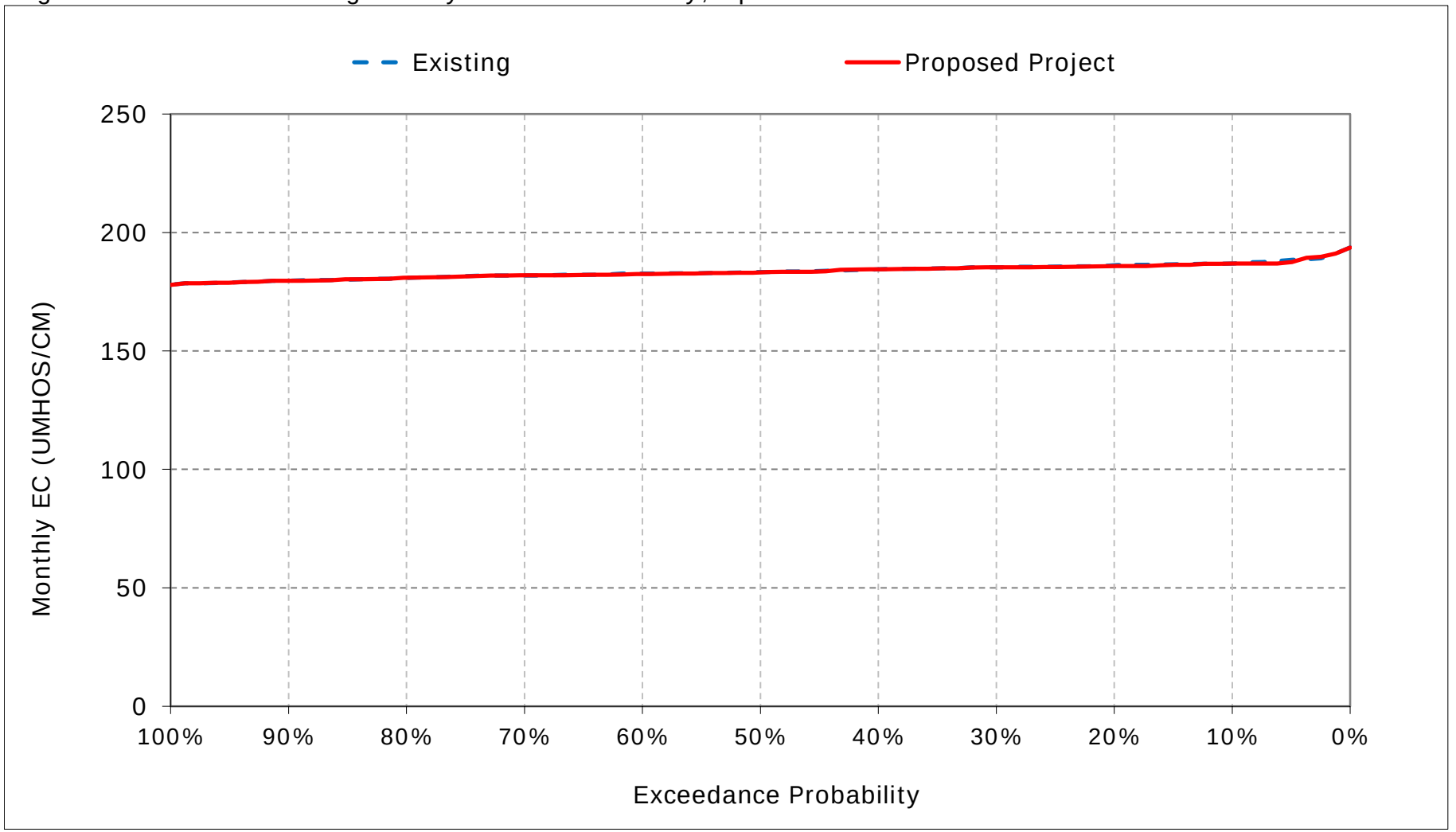


Figure 2-11. Cache Slough at Ryer Island Salinity, May EC

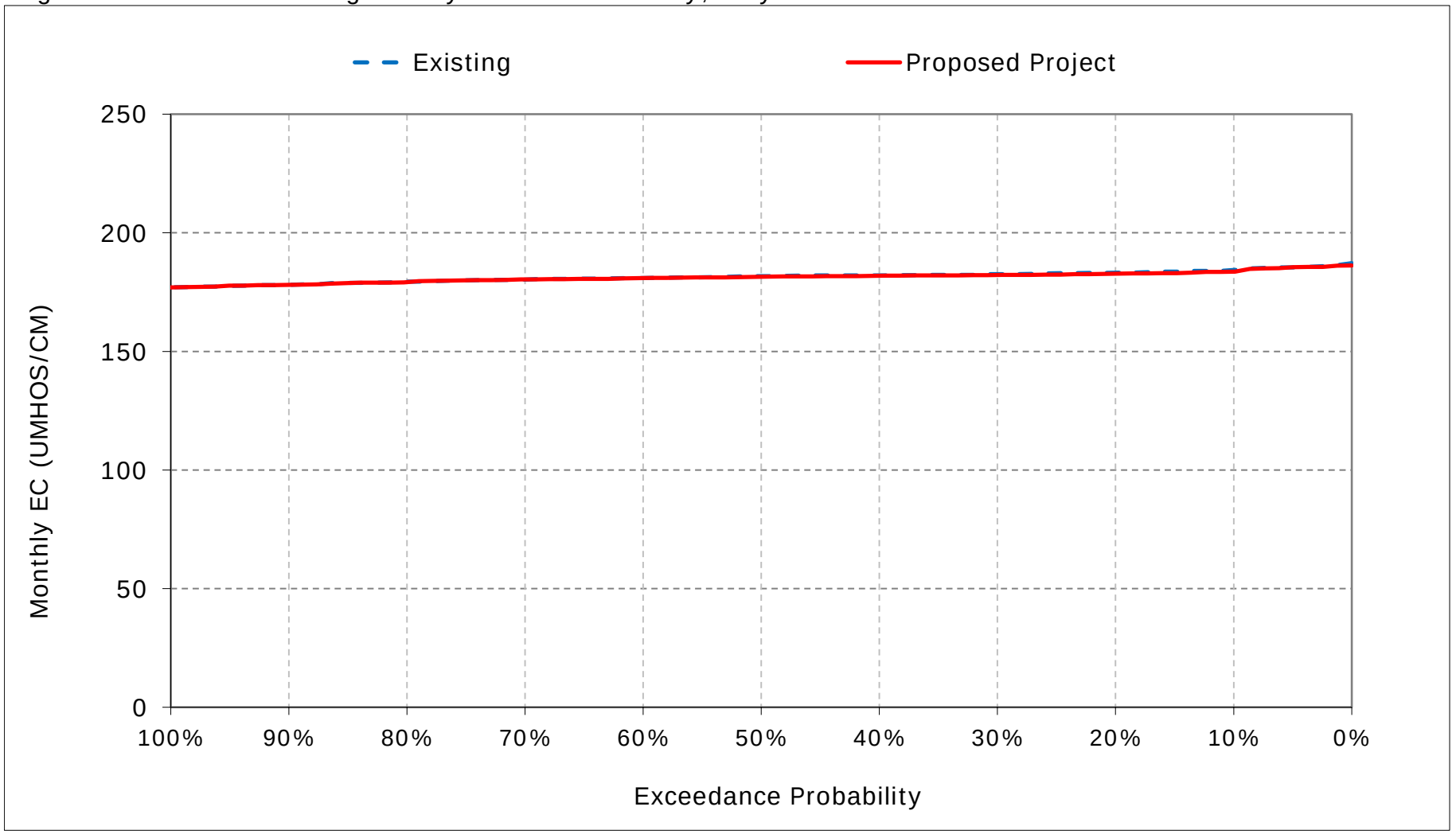


Figure 2-12. Cache Slough at Ryer Island Salinity, June EC

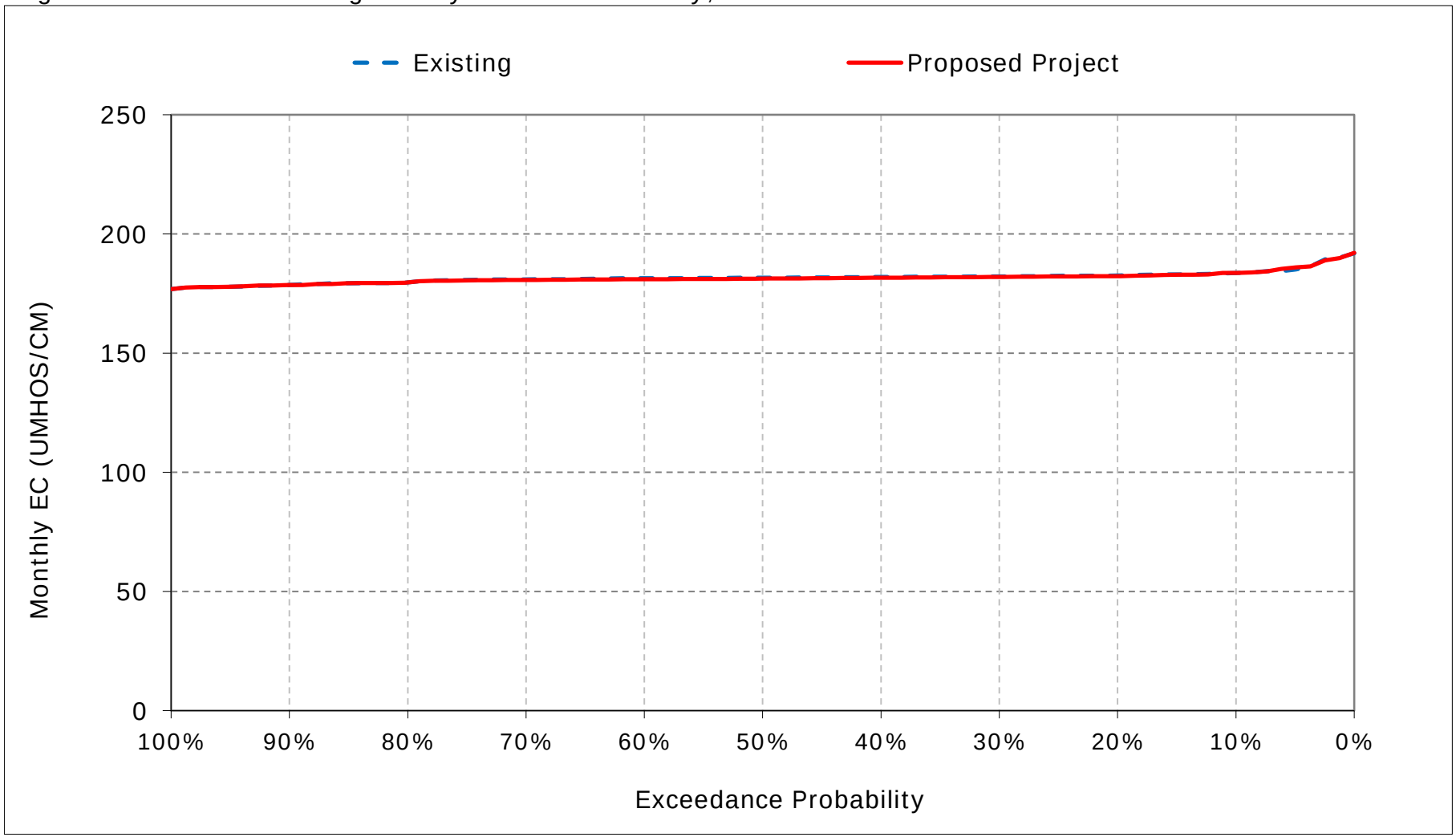


Figure 2-13. Cache Slough at Ryer Island Salinity, July EC

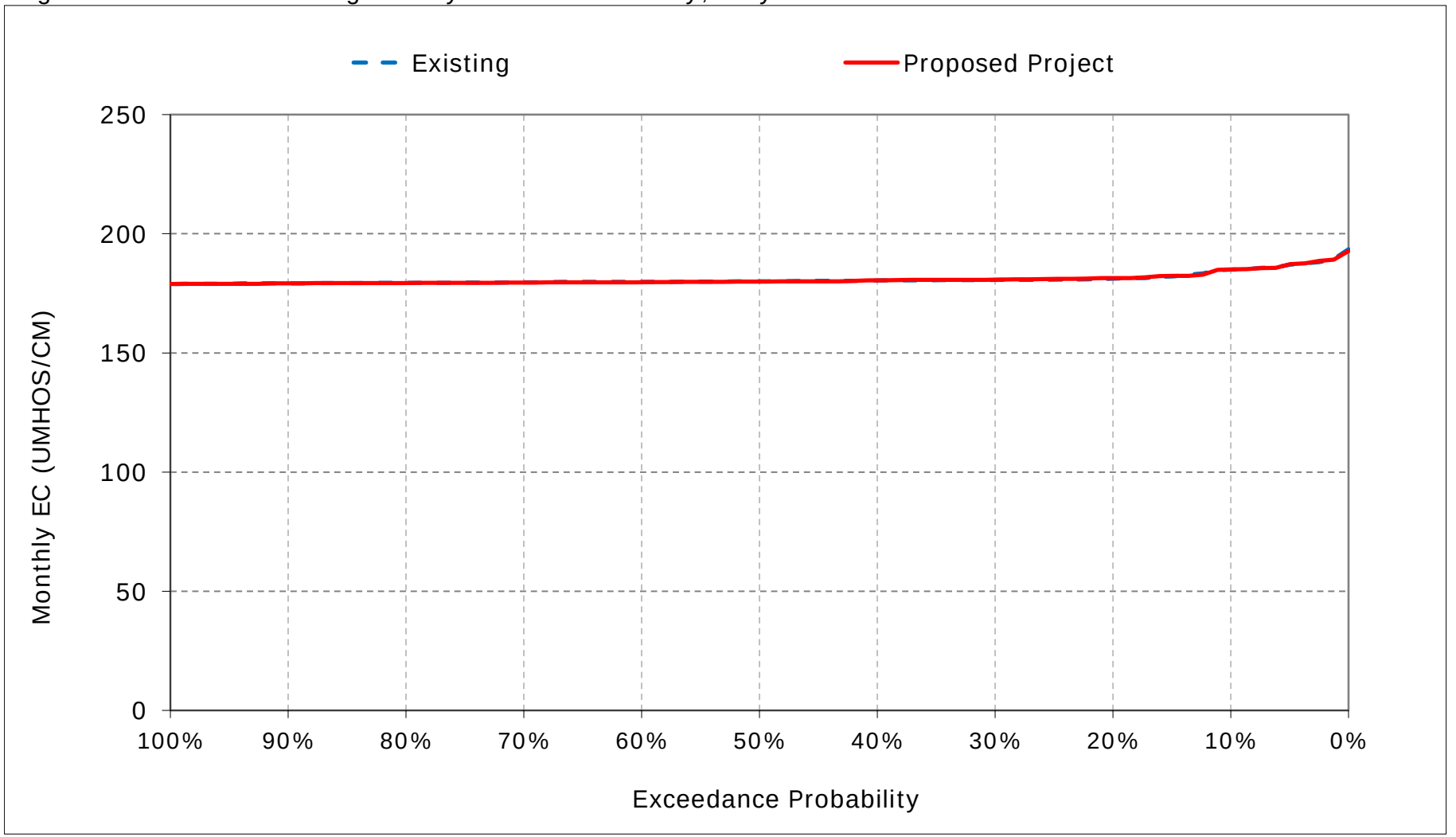


Figure 2-14. Cache Slough at Ryer Island Salinity, August EC

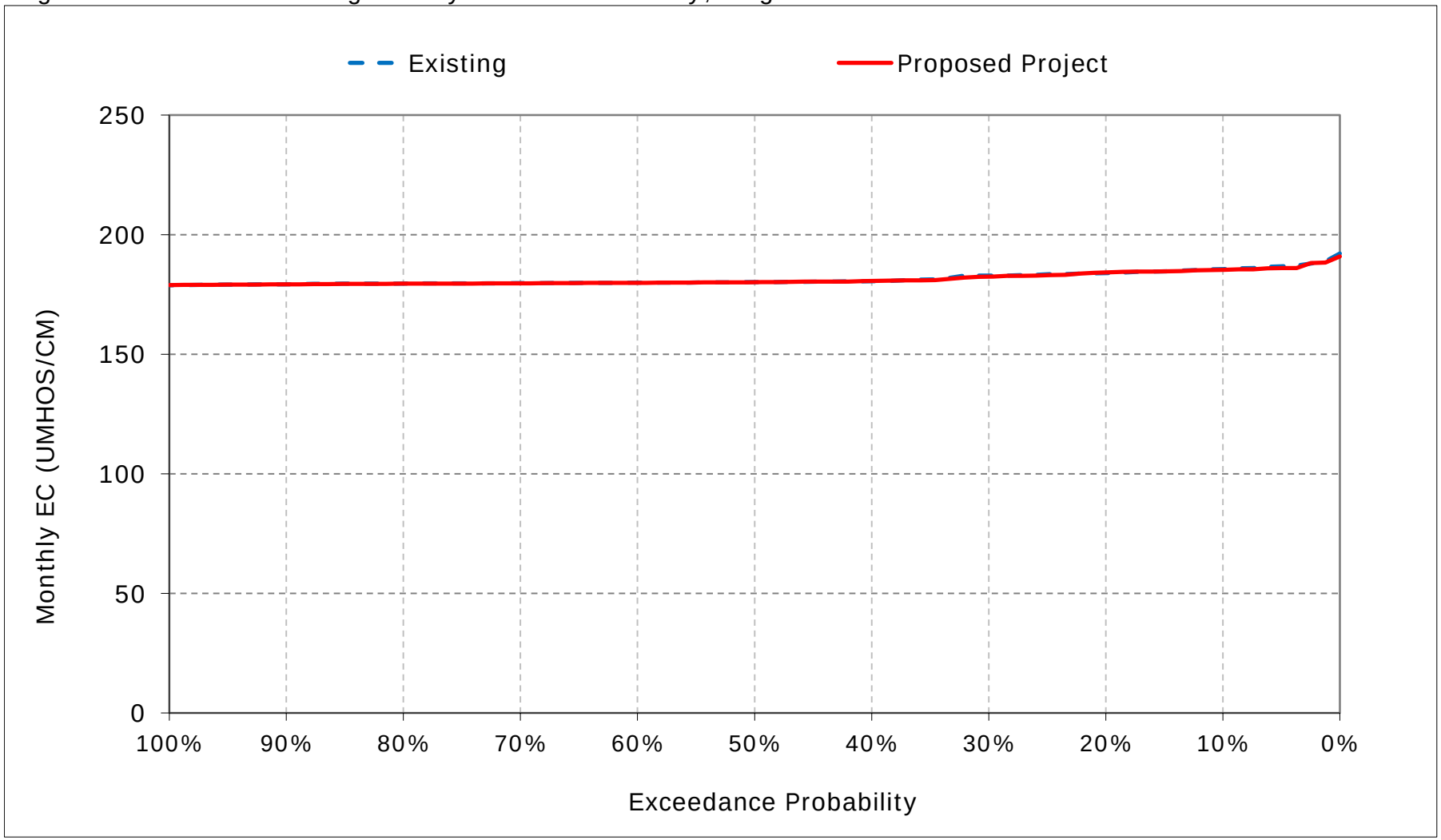


Figure 2-15. Cache Slough at Ryer Island Salinity, September EC

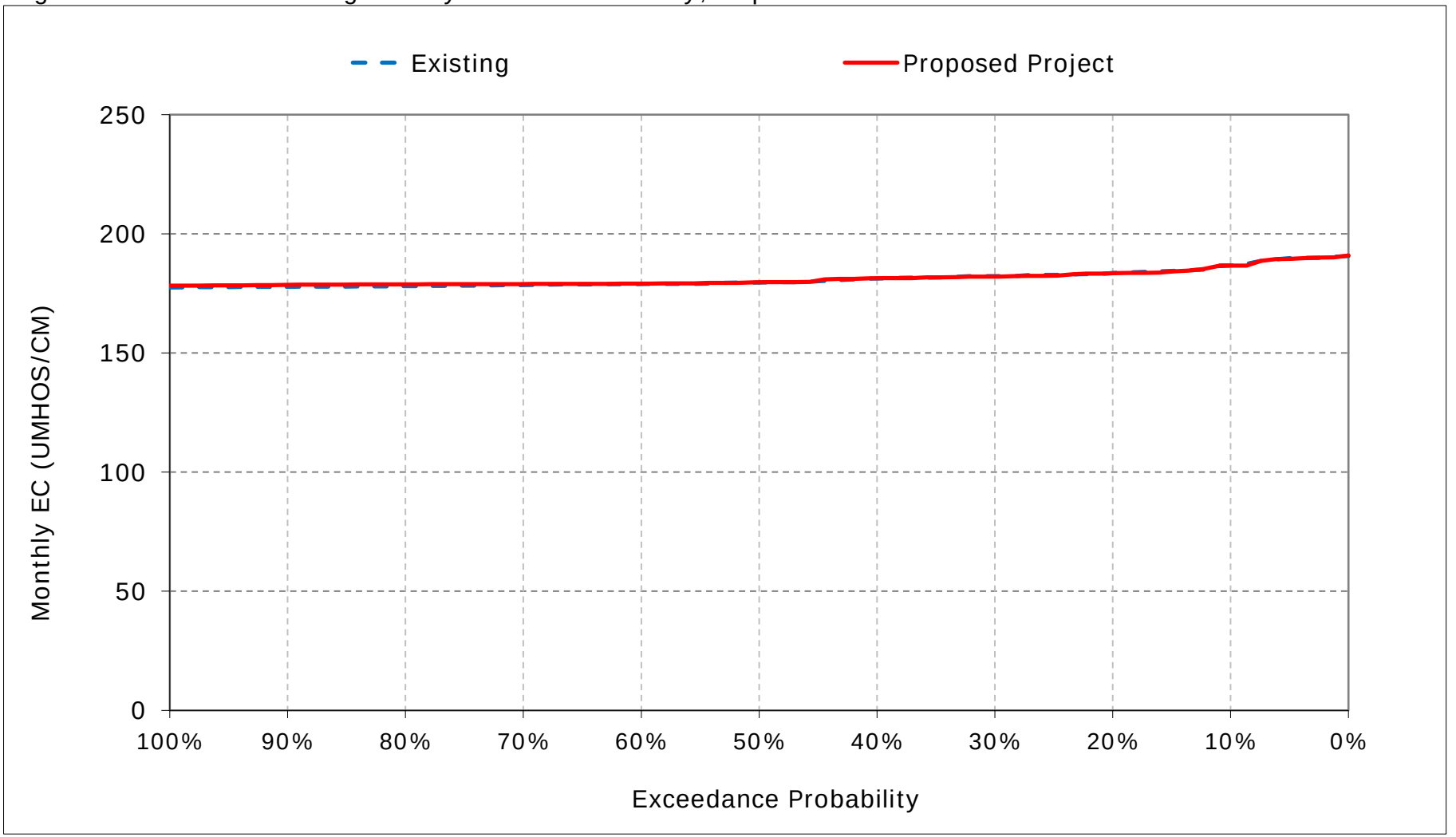


Figure 2-16. Cache Slough at Ryer Island Salinity, October EC

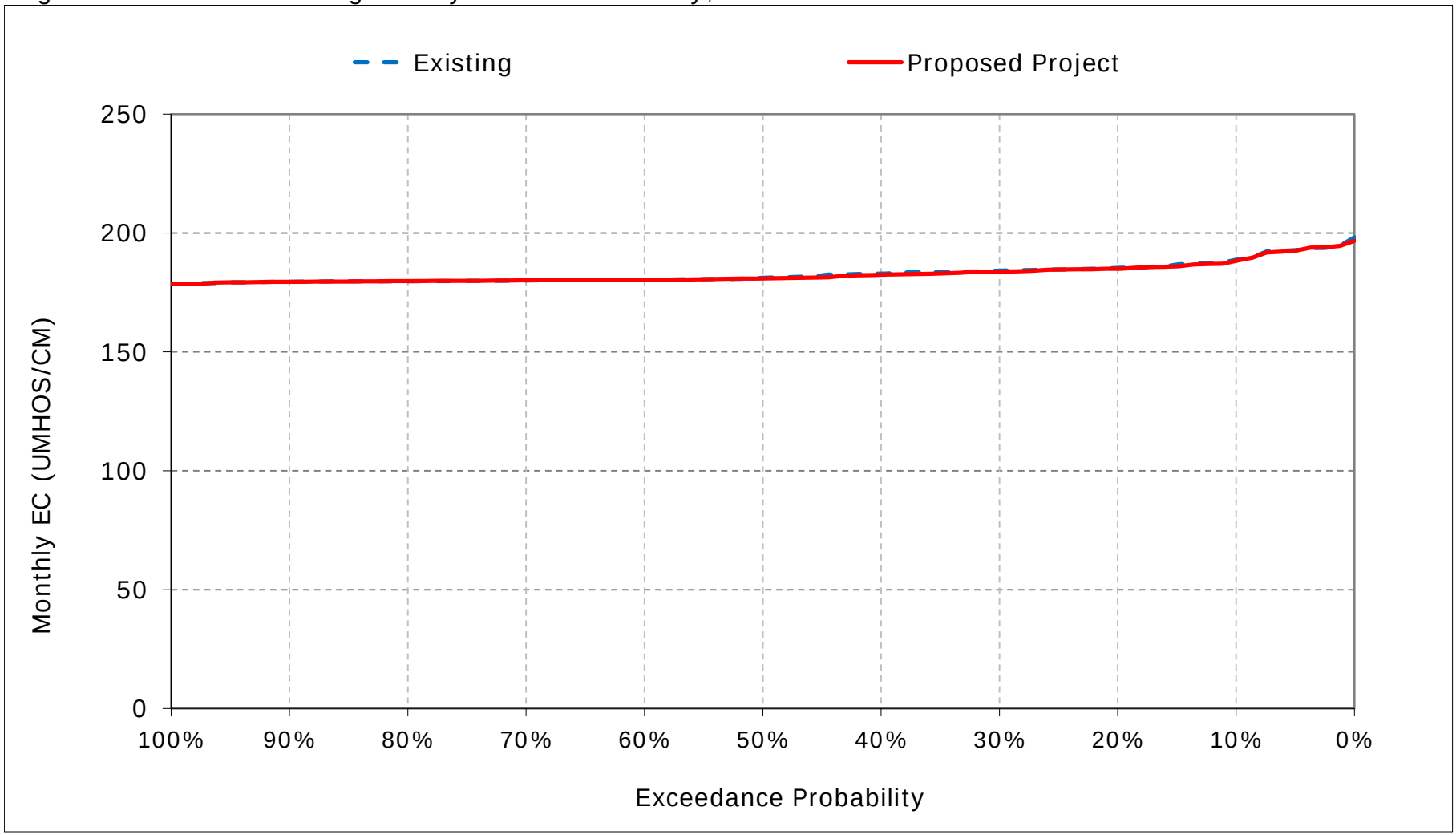


Figure 2-17. Cache Slough at Ryer Island Salinity, November EC

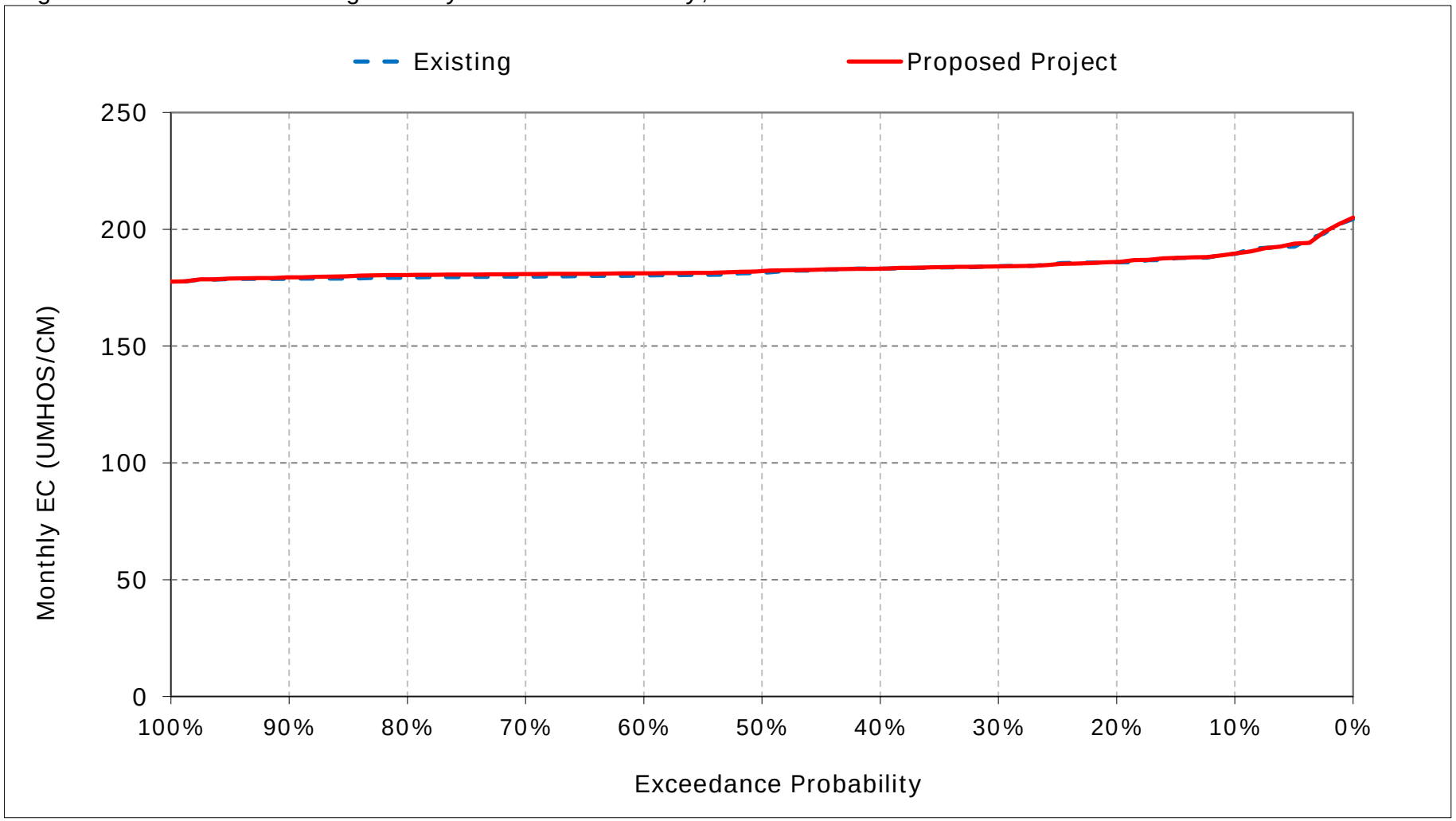


Figure 2-18. Cache Slough at Ryer Island Salinity, December EC

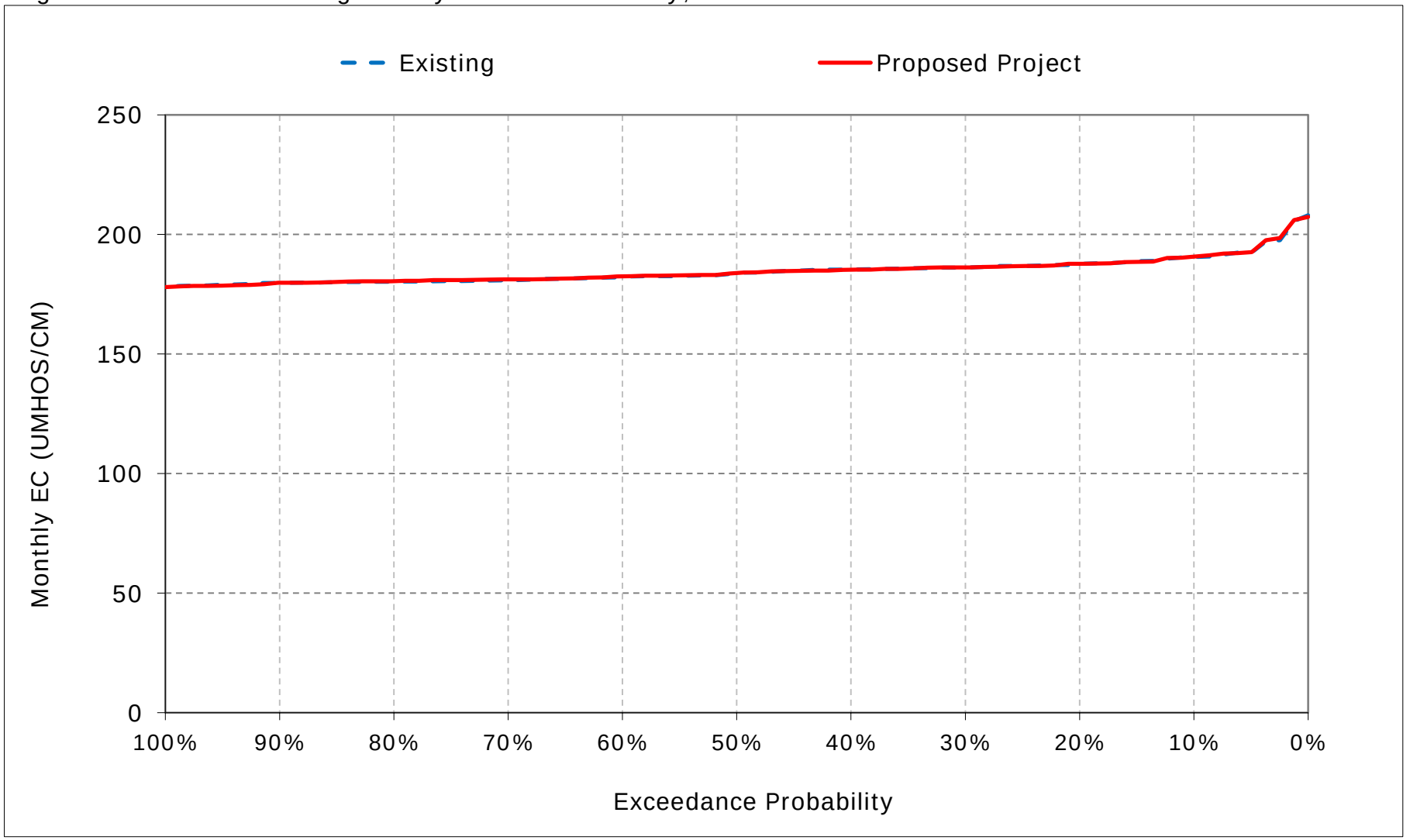


Table 3-1. Sacramento River downstream of Georgiana Slough Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	176	177	179	181	179	177	176	176	176	176	176	176
20%	176	176	178	180	178	177	176	176	176	176	176	176
30%	176	176	177	179	177	176	176	176	176	176	176	176
40%	176	176	177	179	177	176	176	176	176	176	176	176
50%	176	176	176	178	177	176	176	176	176	175	176	176
60%	176	176	176	178	177	176	176	176	176	175	176	175
70%	176	175	176	178	176	176	176	175	176	175	176	175
80%	176	175	176	177	176	176	175	175	176	175	176	175
90%	175	175	175	177	176	175	175	175	175	175	176	175
Long Term												
Full Simulation Period[a]	176	176	177	179	177	176	176	176	176	176	176	176
Water Year Types[b]												
Wet (32%)	176	176	177	178	177	176	176	175	176	175	176	175
Above Normal (15%)	176	176	177	179	177	176	176	176	176	175	176	175
Below Normal (17%)	176	176	177	179	177	176	176	176	176	175	176	176
Dry (22%)	176	176	177	179	177	176	176	176	176	176	176	176
Critical (15%)	176	176	176	179	177	177	176	176	176	176	176	176

Proposed Project

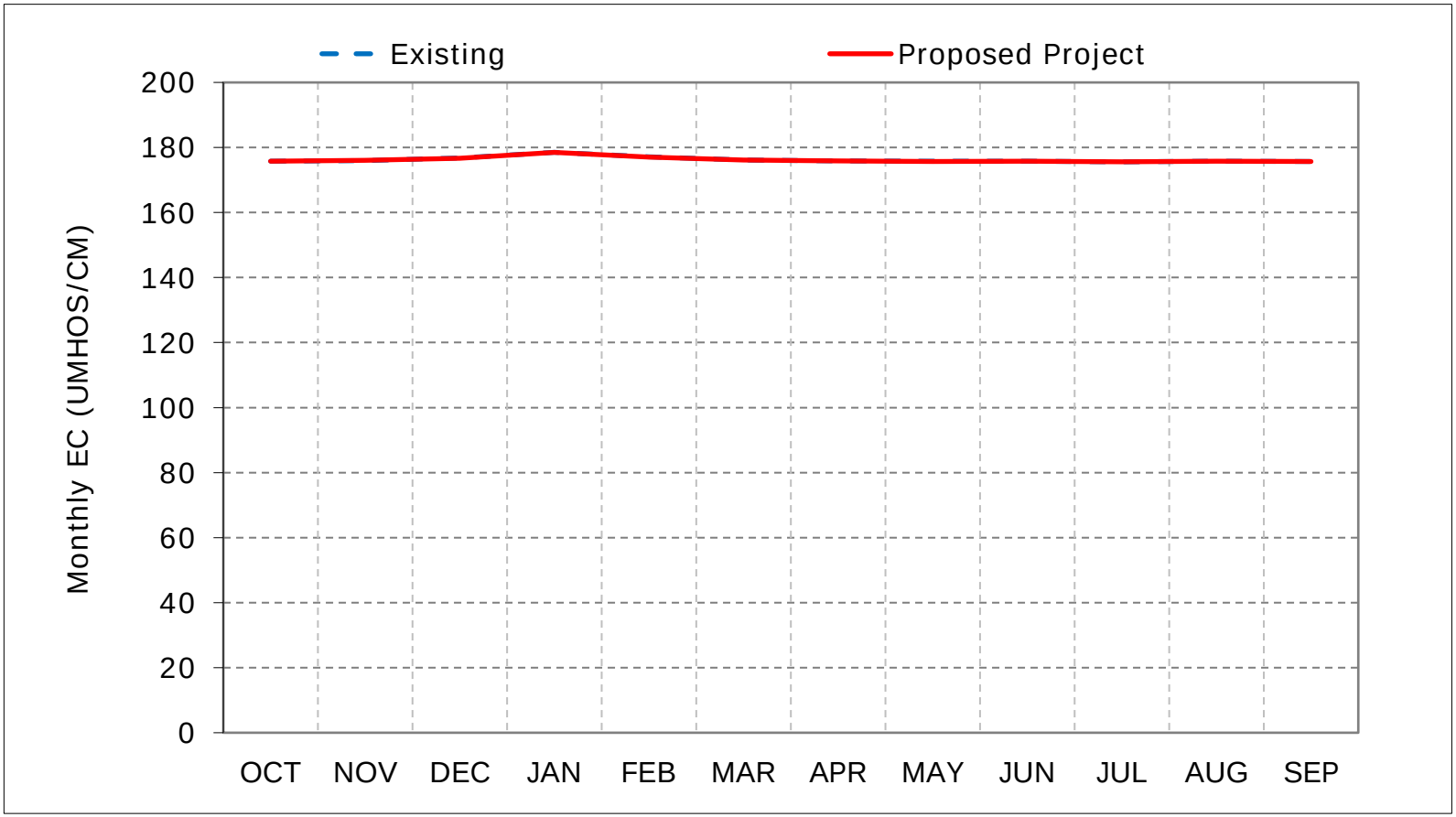
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	176	177	178	181	179	177	176	176	176	176	176	176
20%	176	176	178	180	178	177	176	176	176	176	176	176
30%	176	176	177	179	177	176	176	176	176	176	176	176
40%	176	176	177	179	177	176	176	176	176	176	176	176
50%	176	176	176	178	177	176	176	176	176	176	176	176
60%	176	176	176	178	177	176	176	176	176	175	176	175
70%	176	176	176	178	176	176	176	175	176	175	176	175
80%	175	175	176	177	176	176	175	175	176	175	176	175
90%	175	175	175	177	176	175	175	175	175	175	176	175
Long Term												
Full Simulation Period[a]	176	176	177	178	177	176	176	176	176	176	176	176
Water Year Types[b]												
Wet (32%)	176	176	177	178	177	176	176	175	176	175	176	175
Above Normal (15%)	176	176	177	178	177	176	176	176	176	175	176	175
Below Normal (17%)	176	176	177	179	177	176	176	176	176	175	176	176
Dry (22%)	176	176	177	179	177	176	176	176	176	176	176	176
Critical (15%)	176	176	176	179	177	177	176	176	176	176	176	176

Proposed Project minus Existing

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

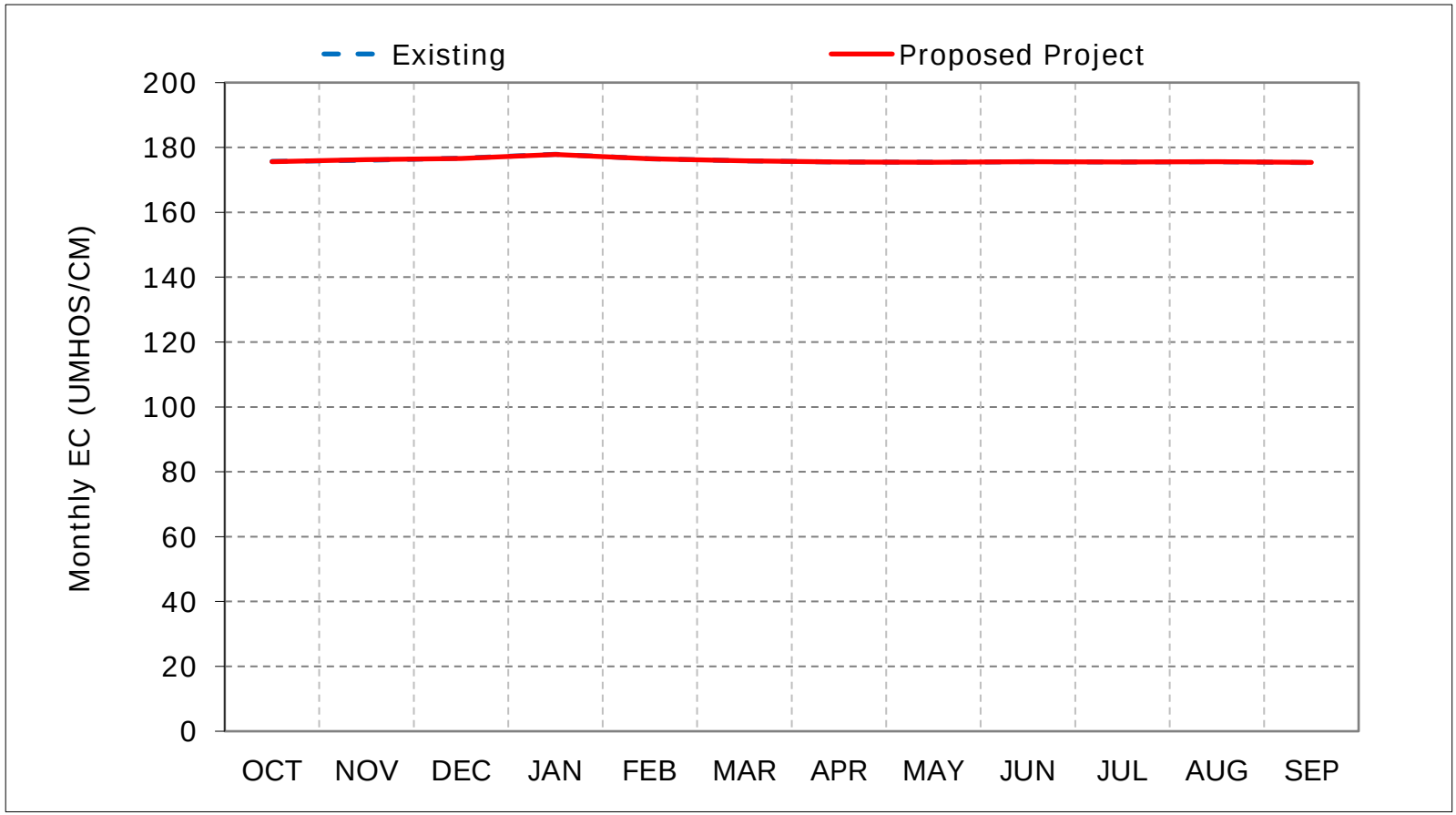
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 3-1. Sacramento River downstream of Georgiana Slough Salinity, Long-Ter



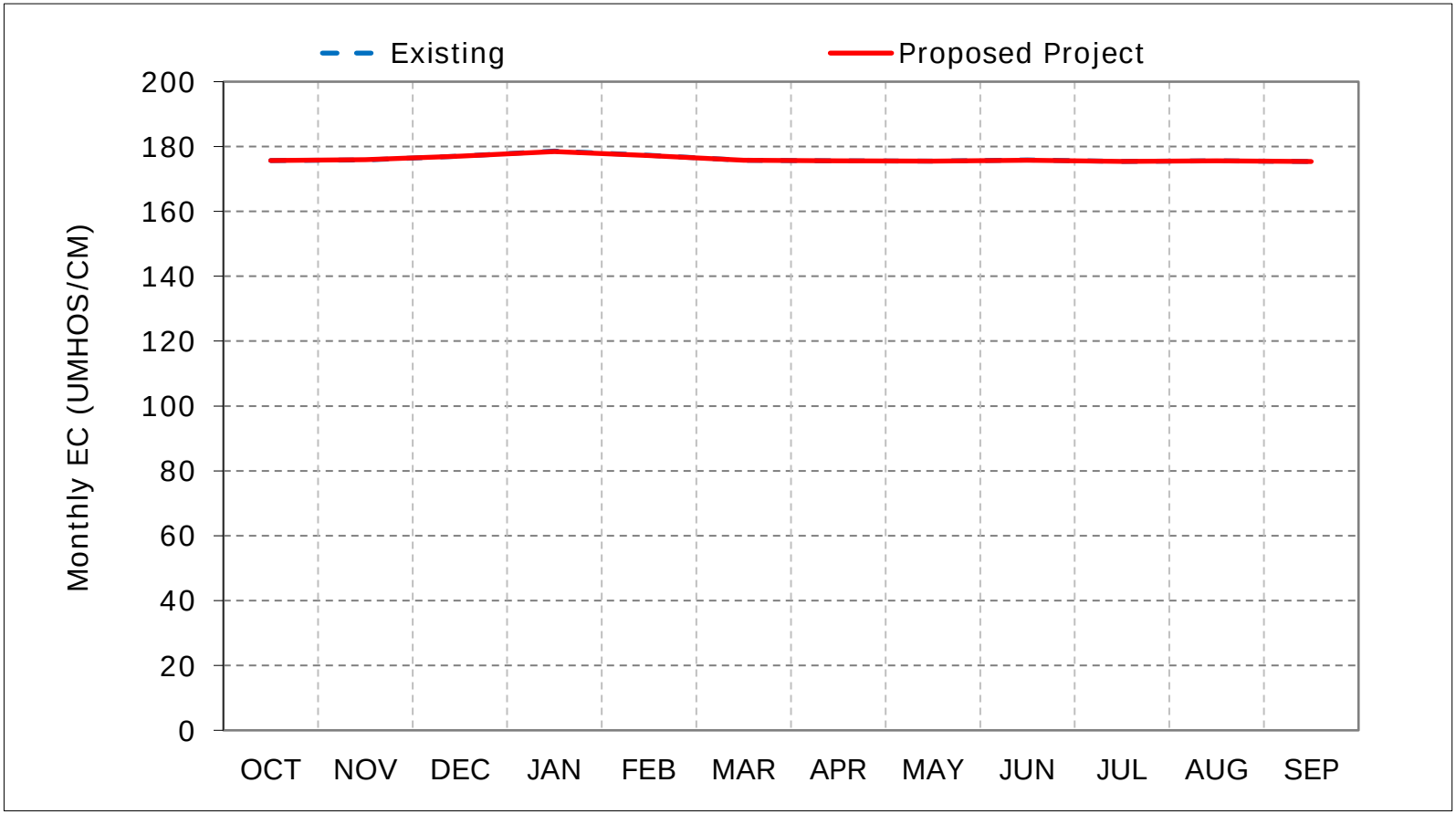
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-2. Sacramento River downstream of Georgiana Slough Salinity, Wet Year



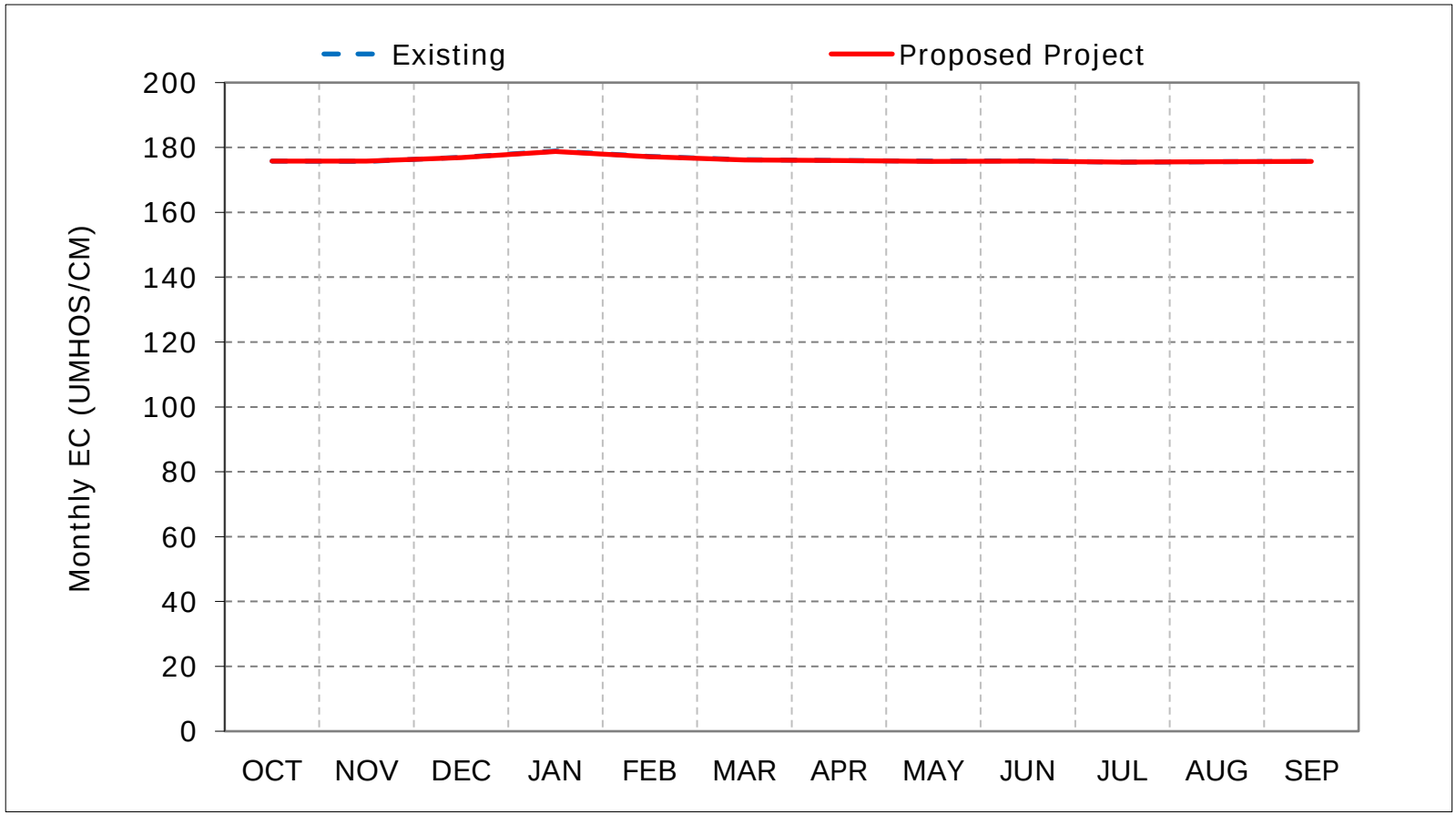
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-3. Sacramento River downstream of Georgiana Slough Salinity, Above No



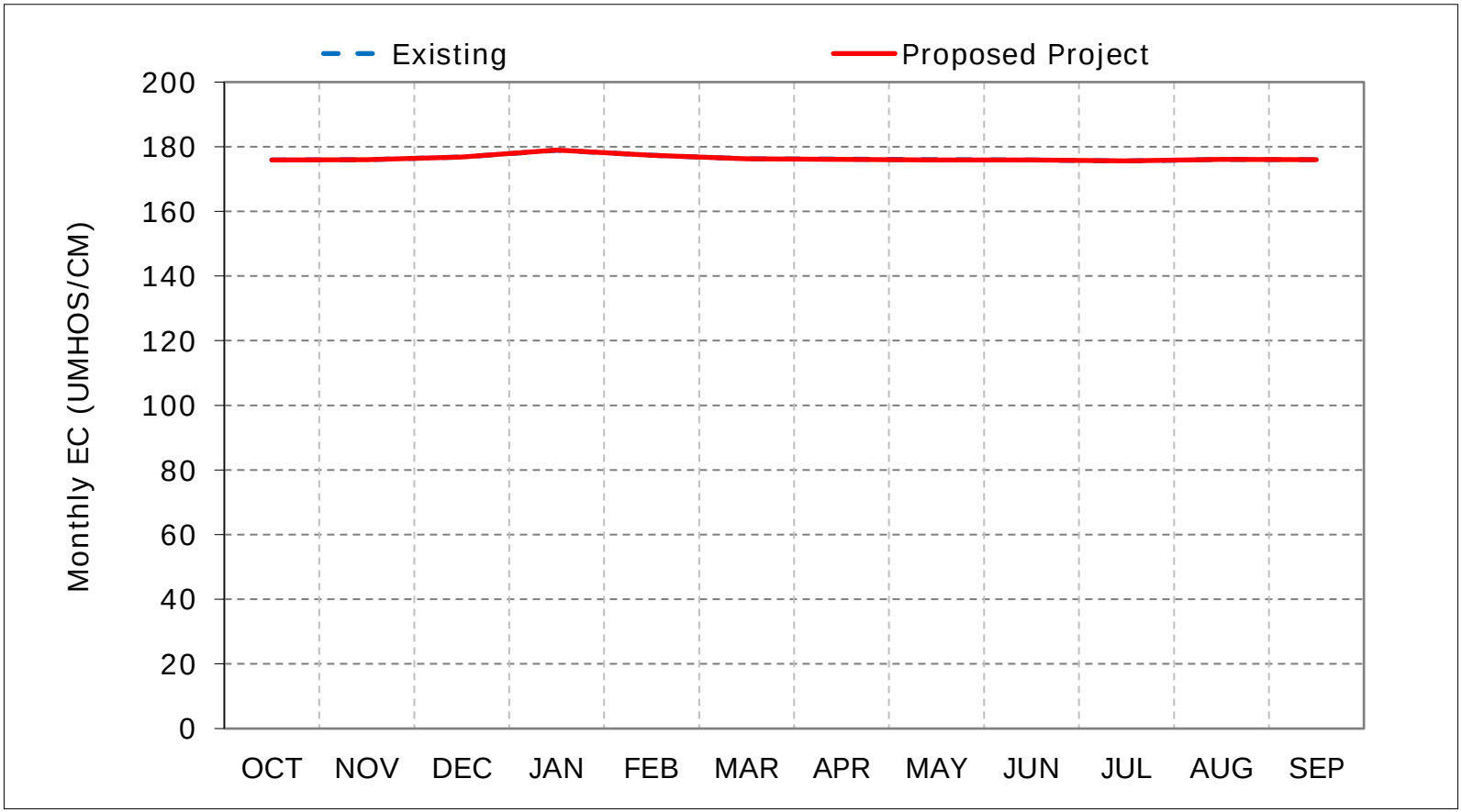
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-4. Sacramento River downstream of Georgiana Slough Salinity, Below No



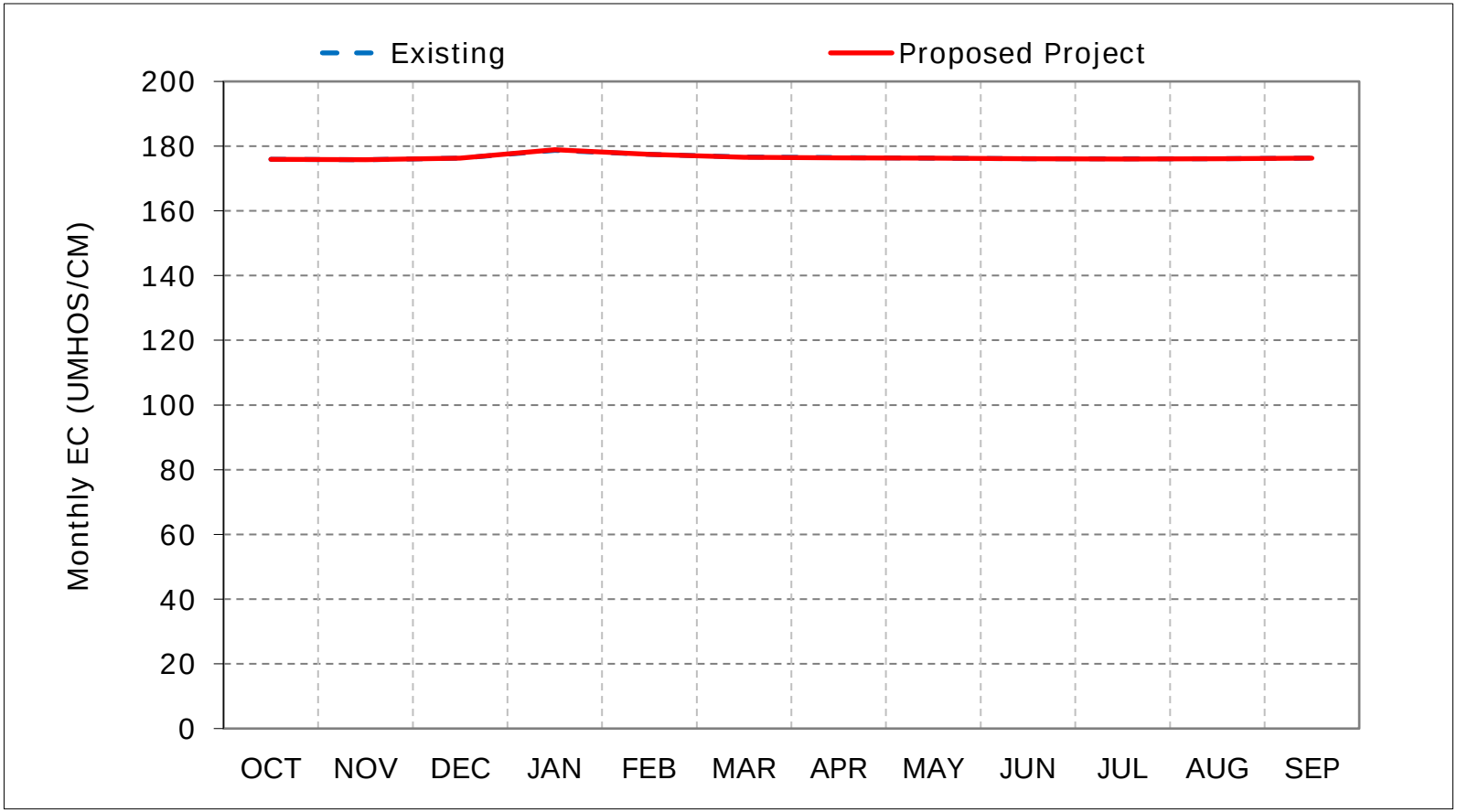
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-5. Sacramento River downstream of Georgiana Slough Salinity, Dry Year



*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.

Figure 3-6. Sacramento River downstream of Georgiana Slough Salinity, Critical Y



*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.

Figure 3-7. Sacramento River downstream of Georgiana Slough Salinity, January EC

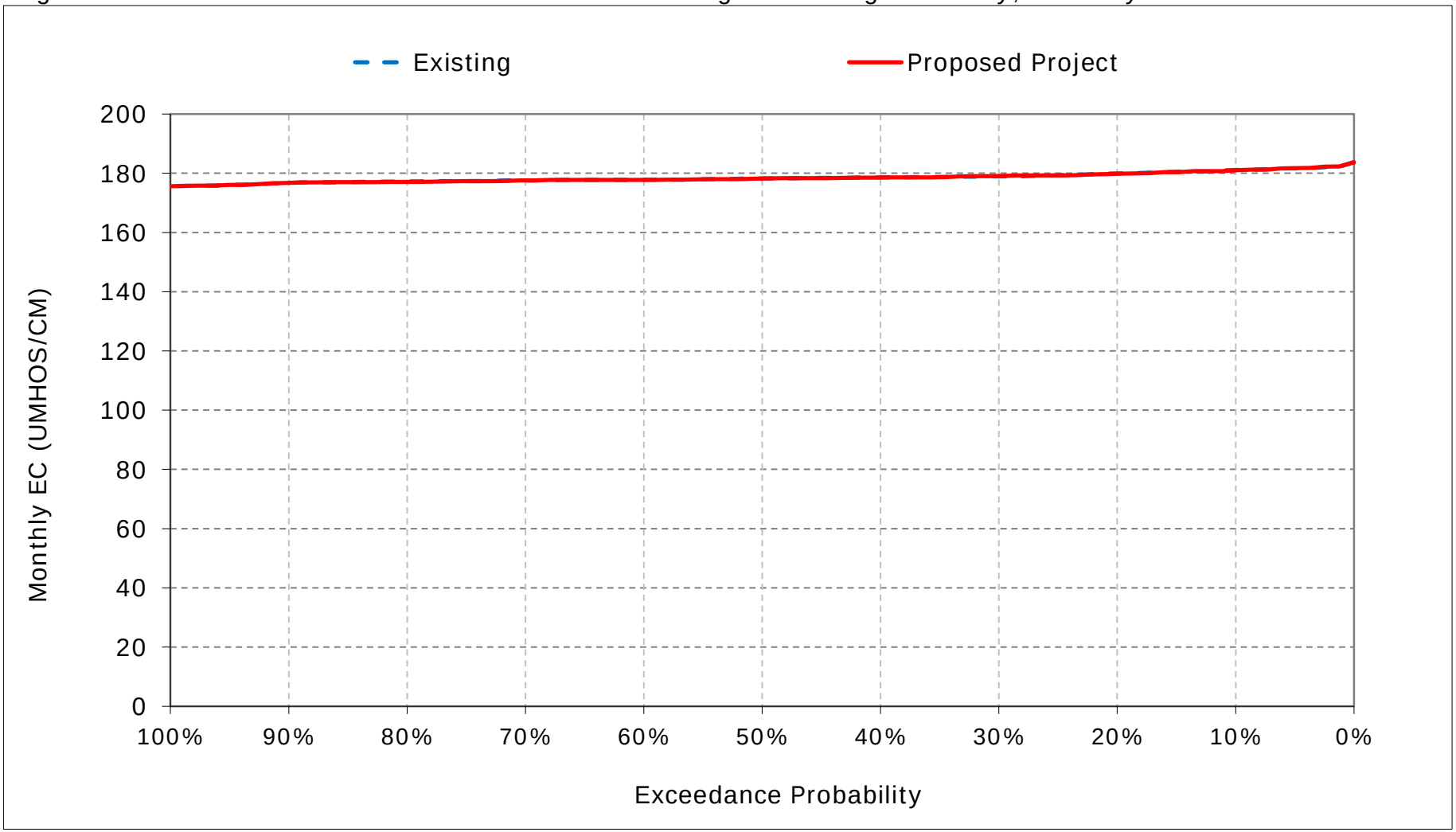


Figure 3-8. Sacramento River downstream of Georgiana Slough Salinity, February EC

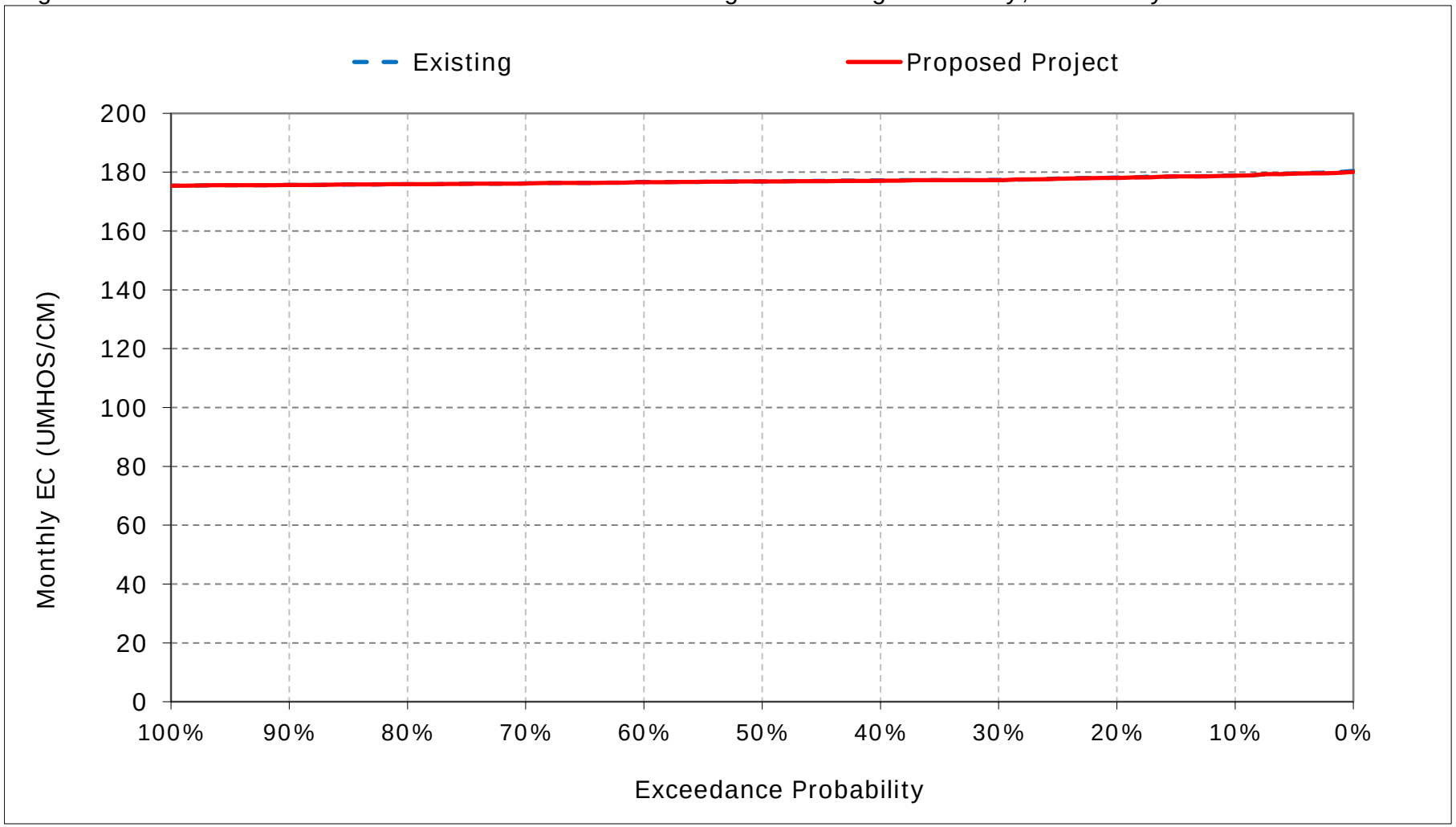


Figure 3-9. Sacramento River downstream of Georgiana Slough Salinity, March EC

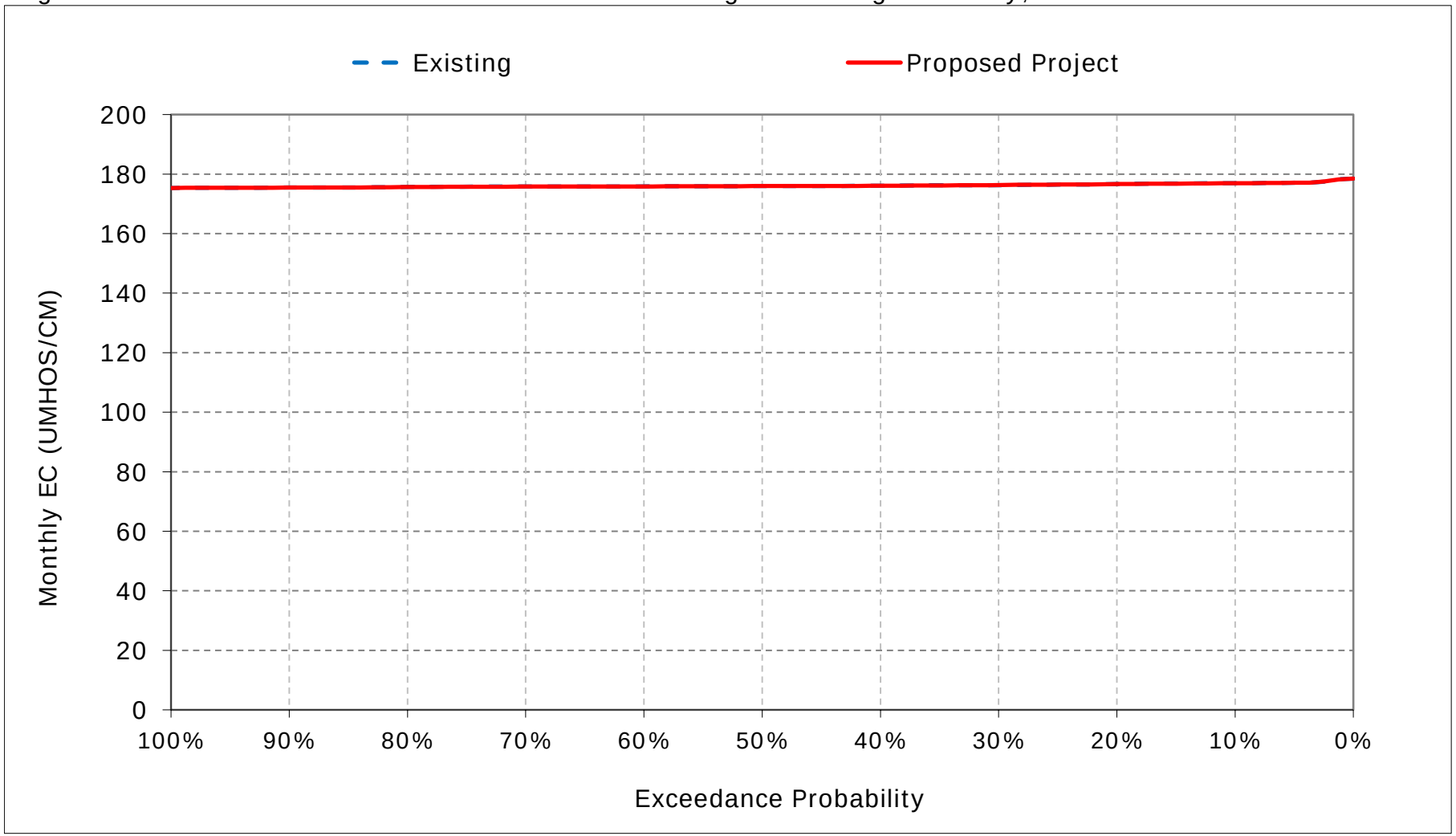


Figure 3-10. Sacramento River downstream of Georgiana Slough Salinity, April EC

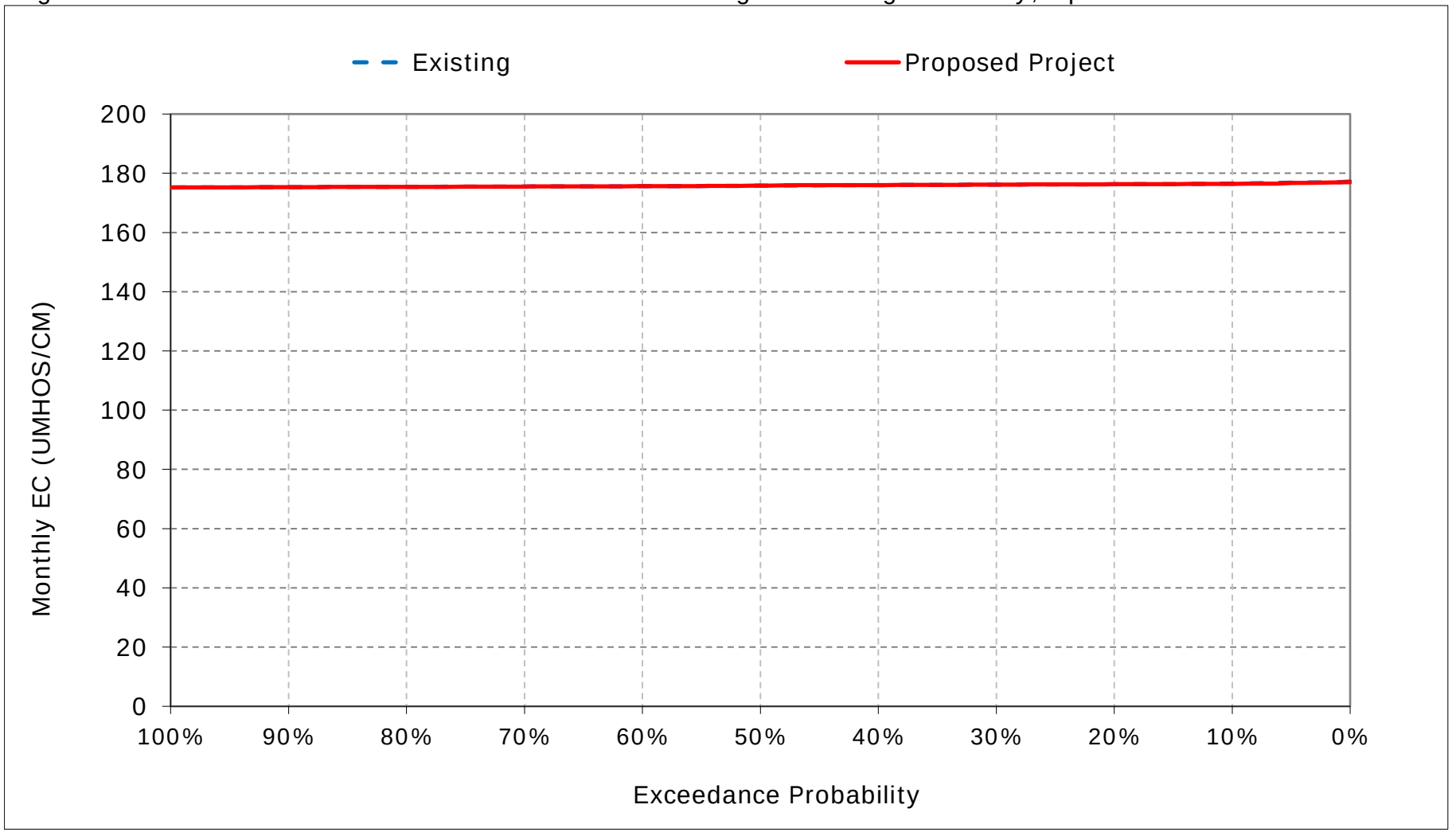


Figure 3-11. Sacramento River downstream of Georgiana Slough Salinity, May EC

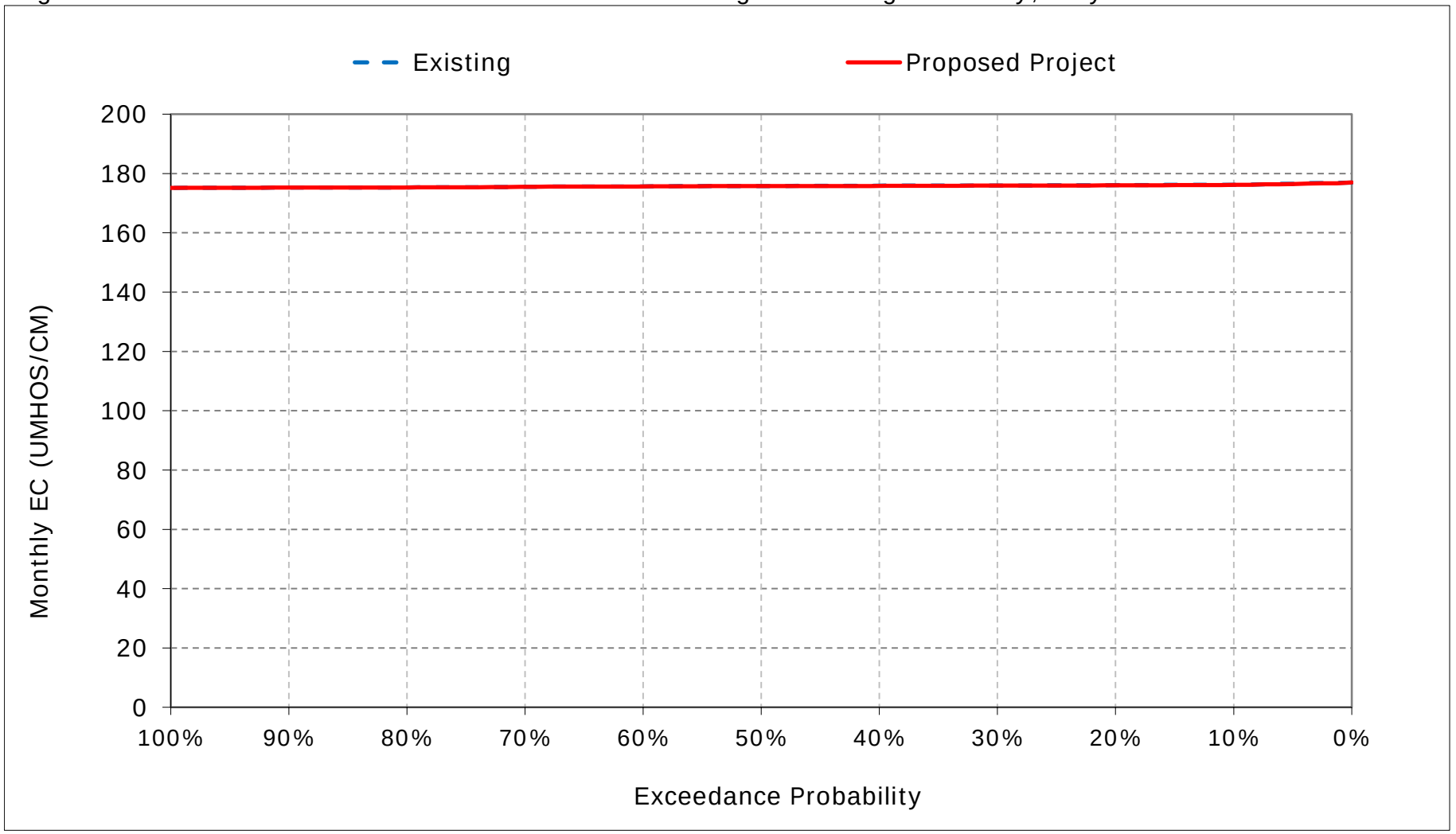


Figure 3-12. Sacramento River downstream of Georgiana Slough Salinity, June EC

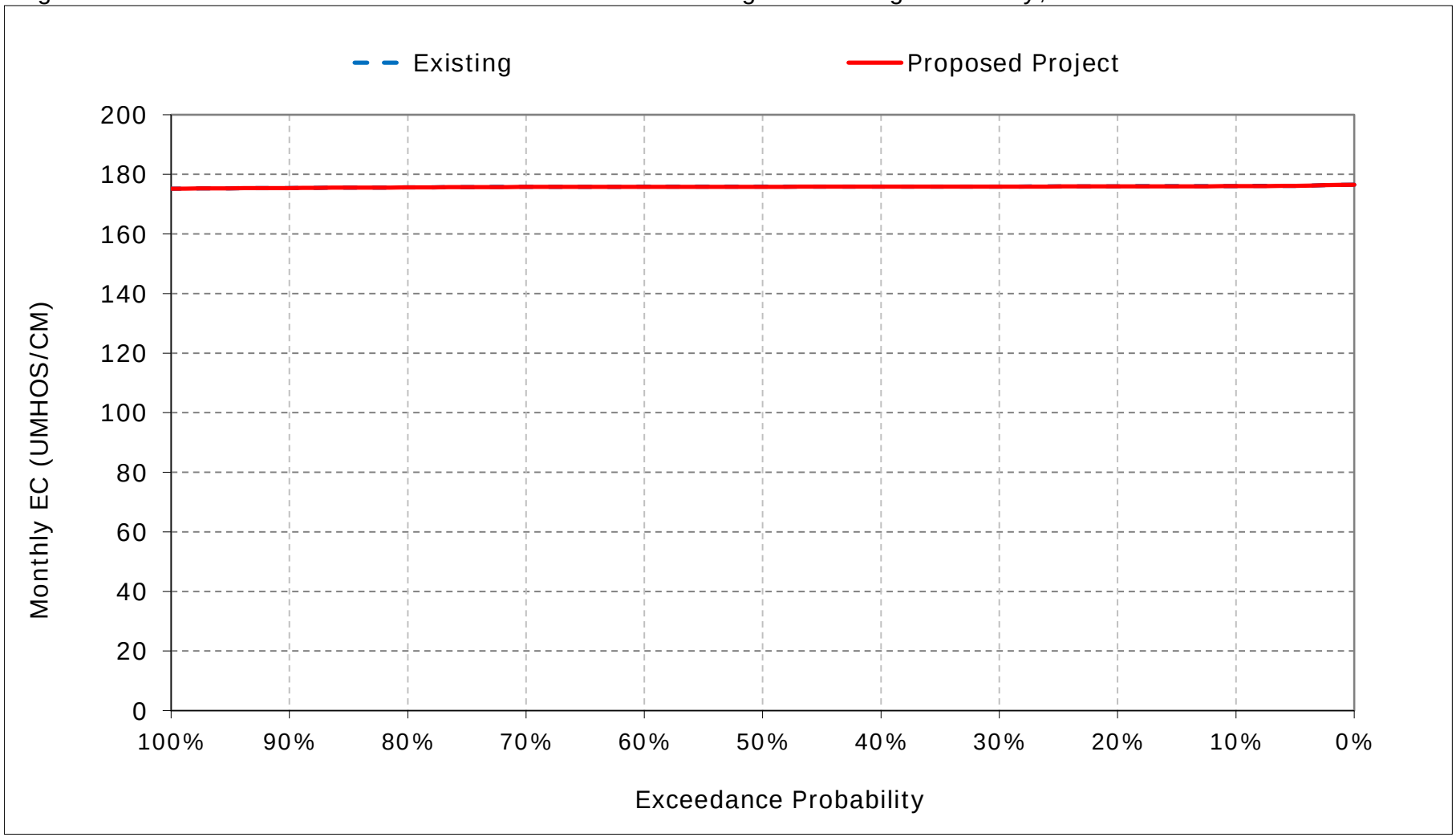


Figure 3-13. Sacramento River downstream of Georgiana Slough Salinity, July EC

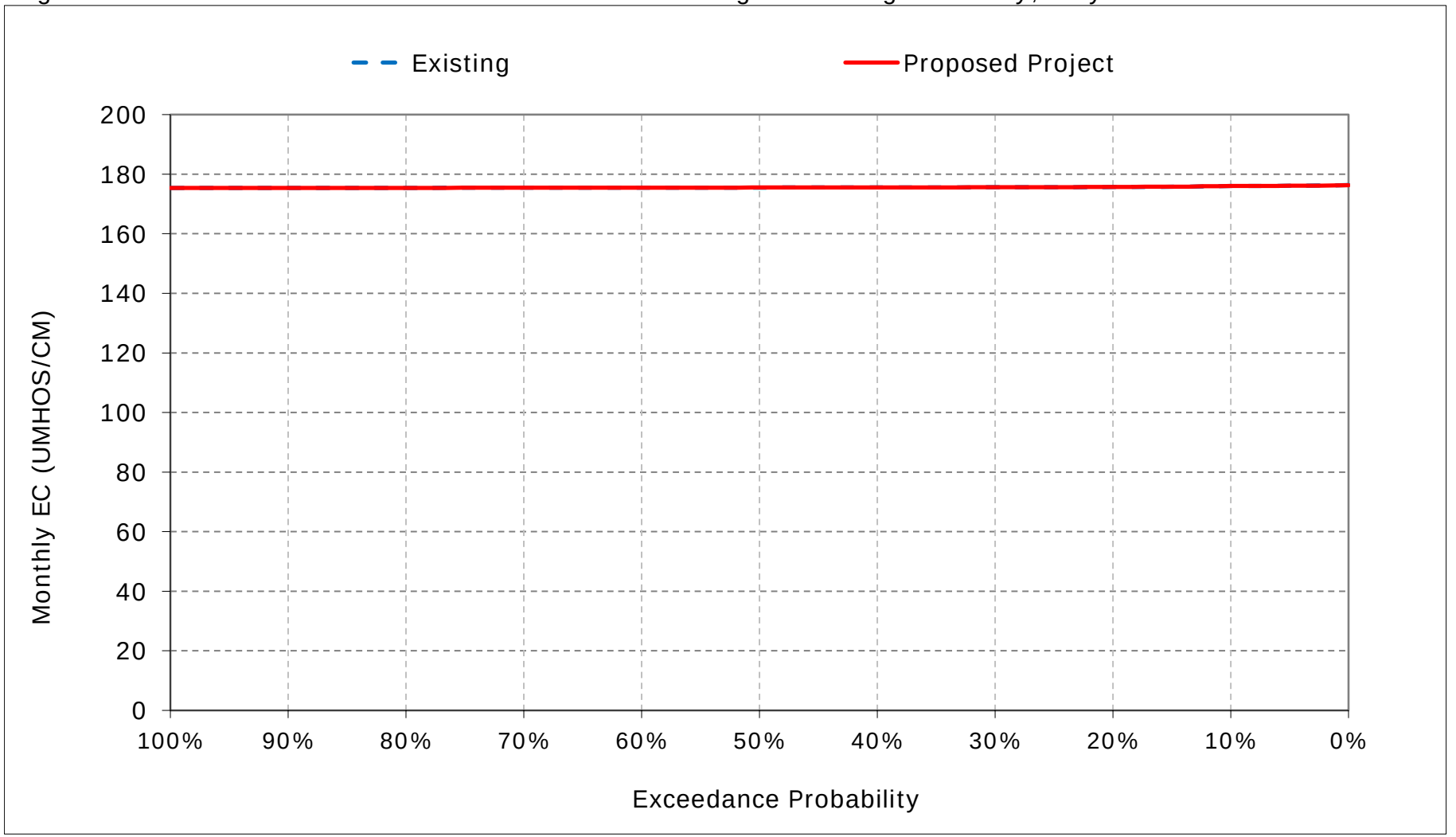


Figure 3-14. Sacramento River downstream of Georgiana Slough Salinity, August EC

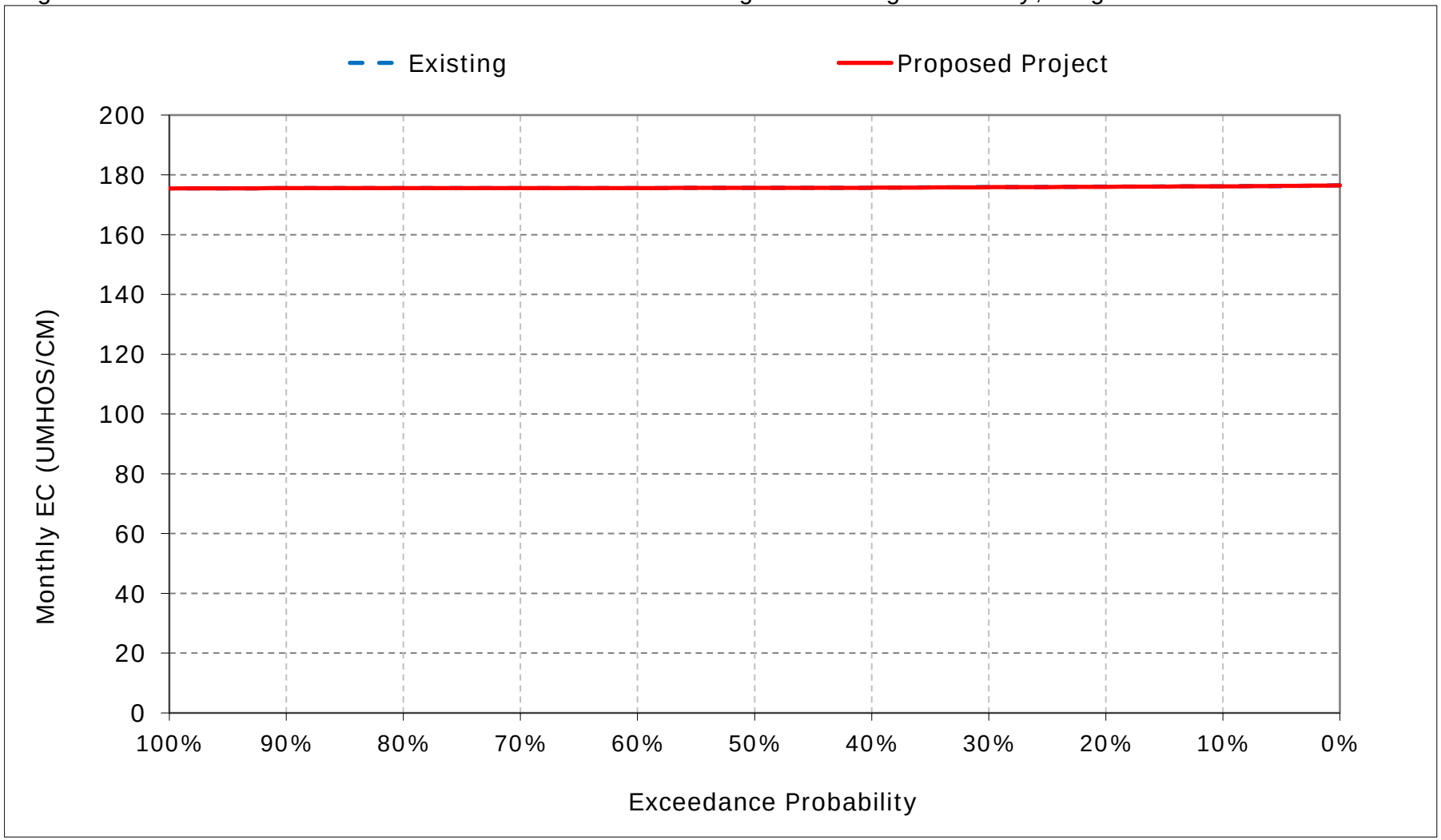


Figure 3-15. Sacramento River downstream of Georgiana Slough Salinity, September EC

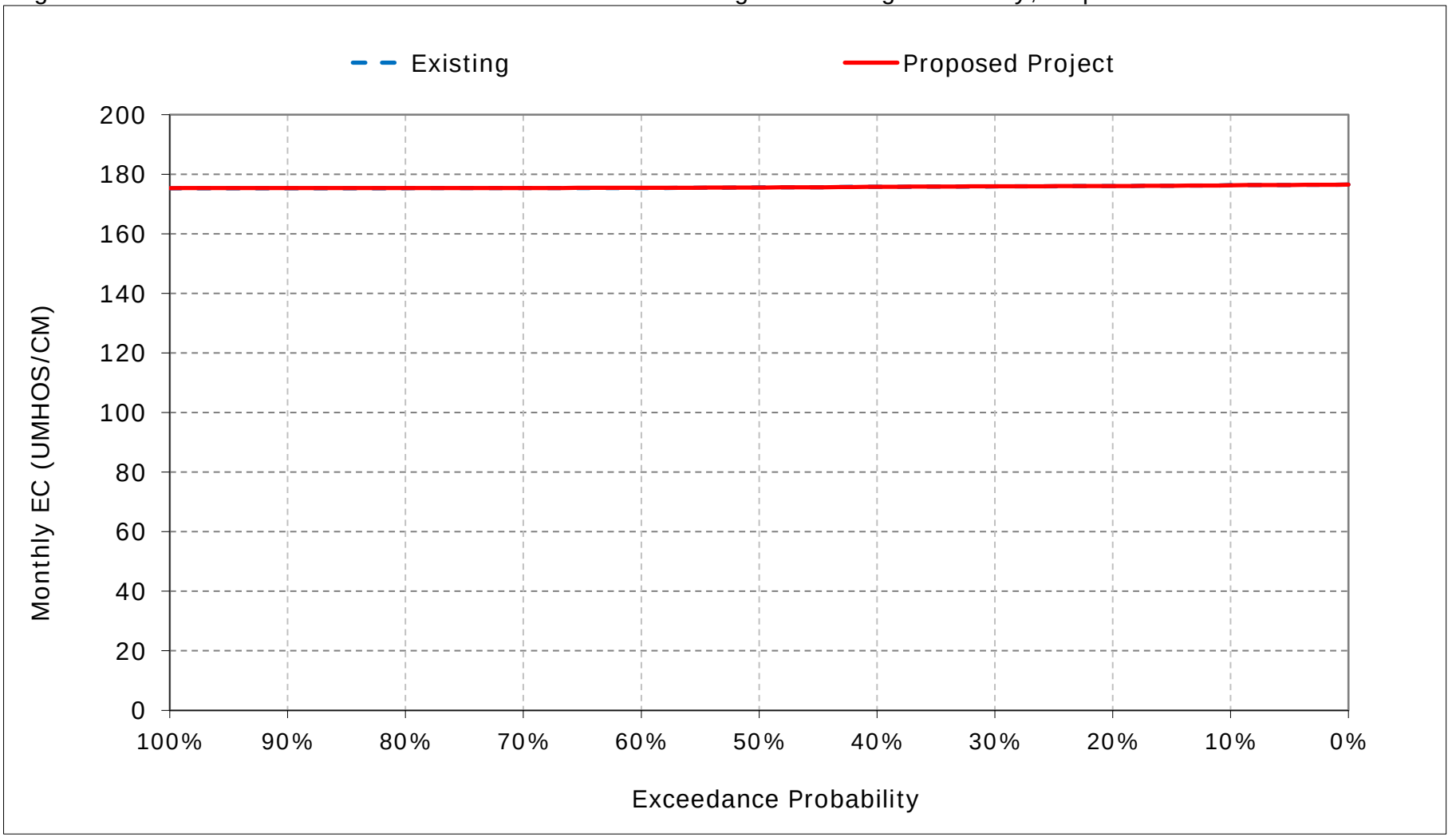


Figure 3-16. Sacramento River downstream of Georgiana Slough Salinity, October EC

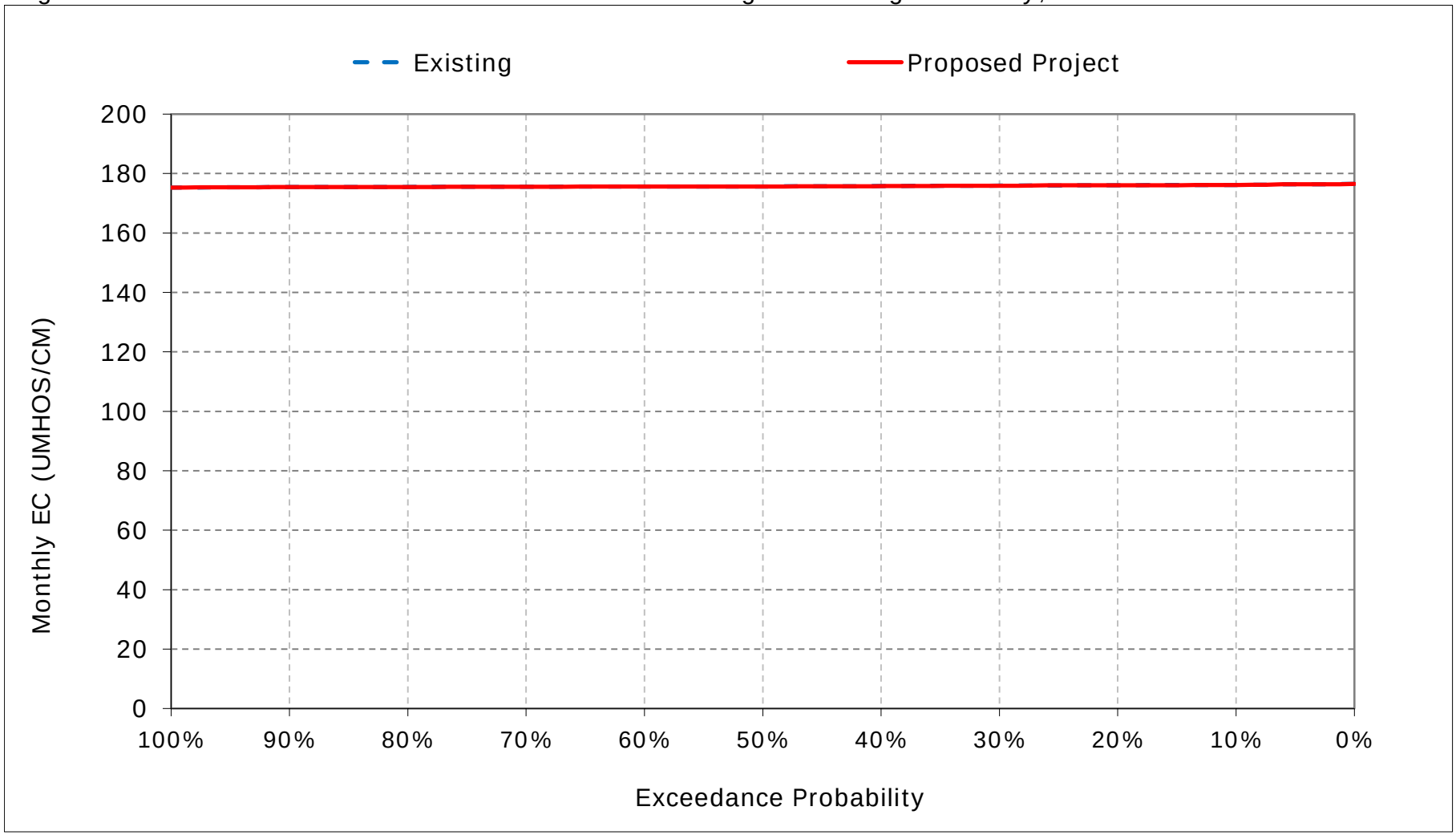


Figure 3-17. Sacramento River downstream of Georgiana Slough Salinity, November EC

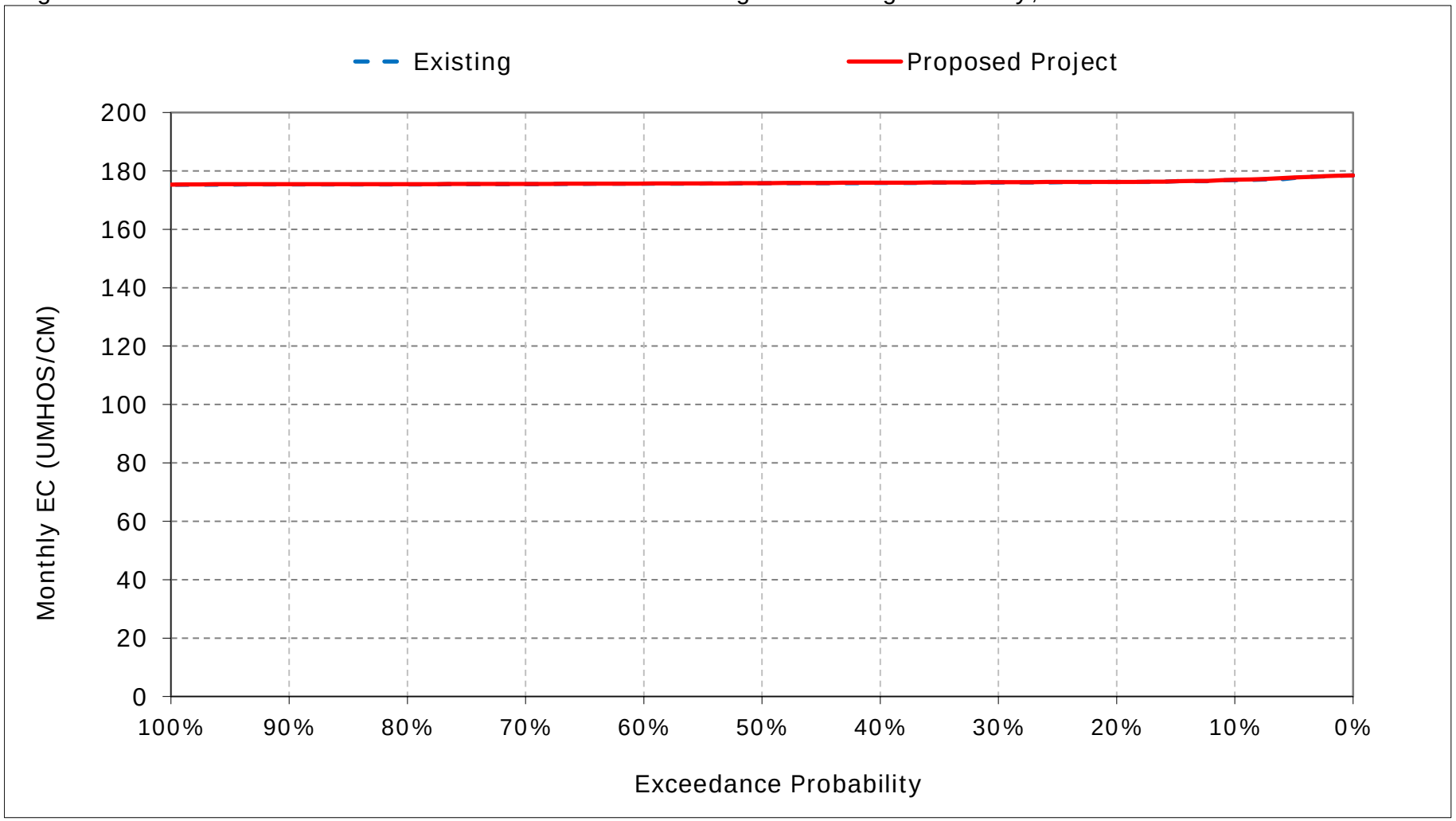


Figure 3-18. Sacramento River downstream of Georgiana Slough Salinity, December EC

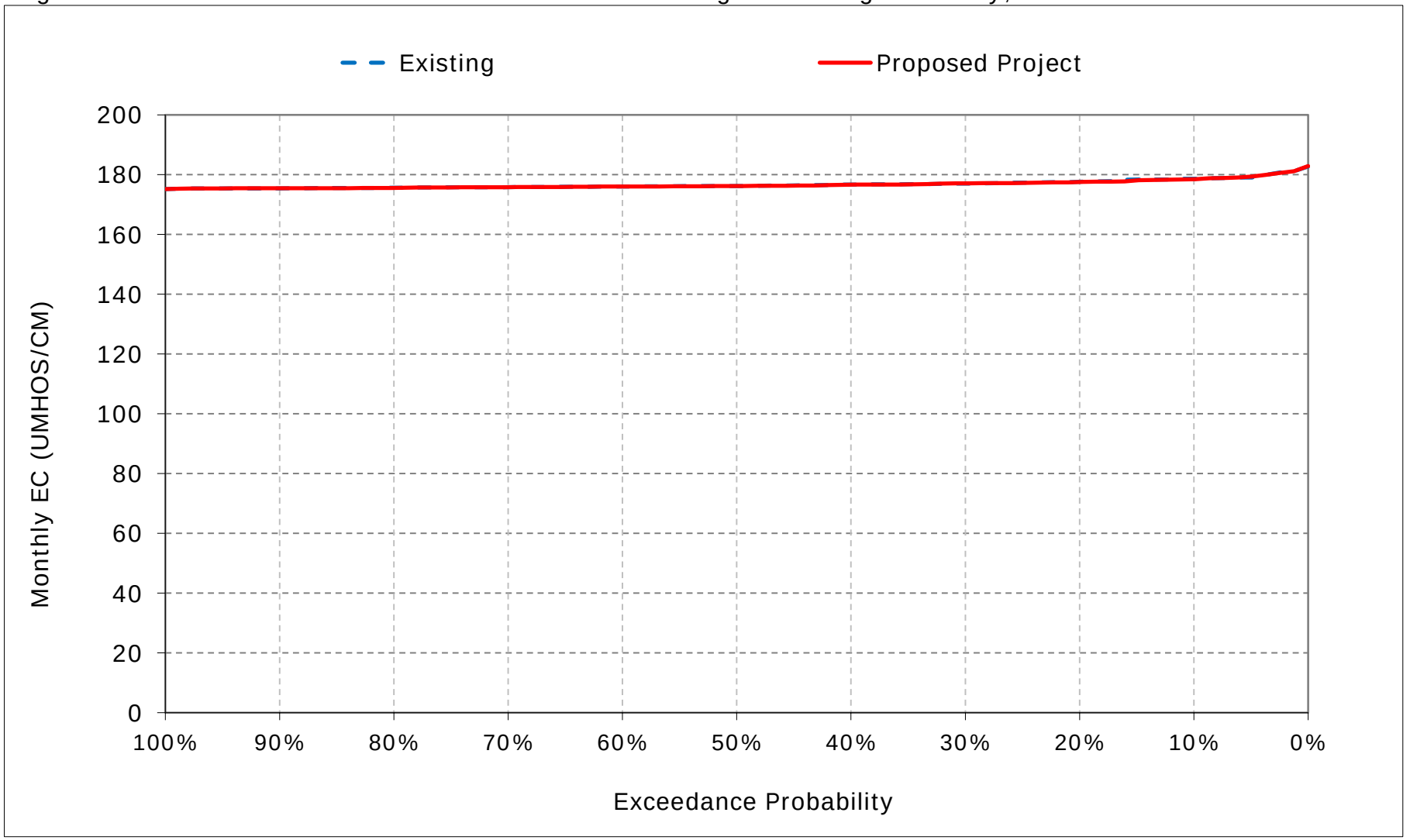


Table 4-1. Sacramento River at Rio Vista Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	491	422	367	244	201	195	191	198	215	278	369	457
20%	420	359	295	227	196	189	188	192	199	233	329	387
30%	401	337	234	213	193	187	186	188	195	221	314	371
40%	371	300	217	204	191	185	184	186	192	198	240	330
50%	322	201	204	198	186	183	183	184	190	194	233	282
60%	198	189	198	194	184	182	181	183	187	186	226	195
70%	188	182	187	190	183	180	180	181	184	185	221	183
80%	186	181	185	185	182	180	179	178	180	184	215	180
90%	185	180	180	181	180	179	178	177	178	182	212	180
Long Term												
Full Simulation Period[a]	311	274	239	207	190	185	184	189	200	216	267	291
Water Year Types[b]												
Wet (32%)	264	217	190	188	182	181	180	179	182	183	213	180
Above Normal (15%)	317	277	221	197	188	181	181	181	187	185	218	194
Below Normal (17%)	311	264	263	206	189	186	184	185	190	196	236	309
Dry (22%)	331	308	246	218	194	187	186	189	197	225	321	376
Critical (15%)	379	358	323	242	204	195	194	220	271	330	387	480

Proposed Project

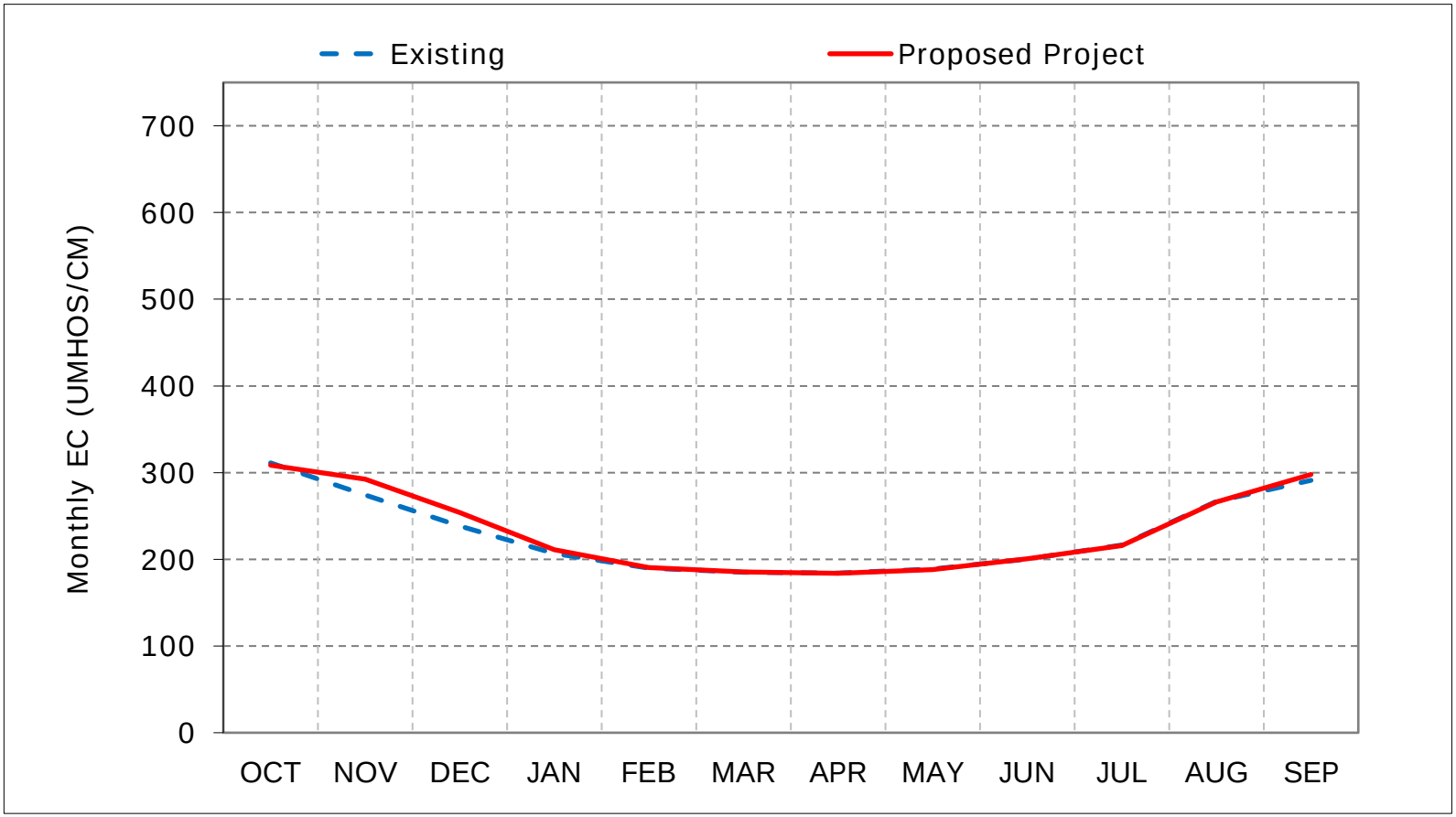
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	468	420	365	261	201	196	191	199	217	277	370	446
20%	422	361	309	236	196	189	188	190	202	234	327	385
30%	397	339	279	218	193	187	185	187	197	221	311	373
40%	353	303	261	203	190	185	184	183	192	196	249	355
50%	310	243	234	199	186	183	182	182	187	191	237	297
60%	195	237	216	193	184	182	181	181	185	186	224	195
70%	193	232	191	190	183	180	180	179	182	185	219	193
80%	192	220	185	184	182	180	179	178	180	184	215	190
90%	189	187	180	181	180	179	178	177	178	182	211	187
Long Term												
Full Simulation Period[a]	309	292	254	211	190	185	184	188	201	216	266	298
Water Year Types[b]												
Wet (32%)	262	238	195	188	182	181	180	179	181	183	211	190
Above Normal (15%)	309	296	243	200	187	181	181	180	184	185	219	192
Below Normal (17%)	310	280	284	207	189	185	183	183	188	194	241	327
Dry (22%)	330	326	267	227	195	187	186	188	198	226	319	380
Critical (15%)	375	369	338	253	208	196	194	222	277	328	380	482

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-23	-2	-2	17	0	1	1	0	2	-2	2	-11
20%	1	2	14	9	0	0	0	-2	3	1	-2	-2
30%	-5	2	44	5	0	0	0	-1	2	0	-3	2
40%	-18	3	45	0	0	0	0	-3	-1	-2	9	25
50%	-12	43	31	1	0	0	0	-2	-3	-3	5	15
60%	-3	48	18	-1	0	0	-1	-2	-2	0	-2	0
70%	5	50	3	0	0	0	0	-1	-2	0	-2	10
80%	5	39	0	-1	0	0	0	0	0	0	0	10
90%	4	6	-1	0	0	0	0	0	0	0	-1	8
Long Term												
Full Simulation Period[a]	-3	18	15	4	1	0	0	-1	0	-1	-1	7
Water Year Types[b]												
Wet (32%)	-2	22	5	0	0	0	0	0	0	0	-2	10
Above Normal (15%)	-8	19	22	3	-1	0	0	-1	-2	0	1	-3
Below Normal (17%)	-1	17	21	1	-1	0	0	-2	-2	-2	6	18
Dry (22%)	-1	18	22	9	1	0	-1	-1	1	1	-2	3
Critical (15%)	-4	11	15	11	4	1	0	2	6	-2	-7	1

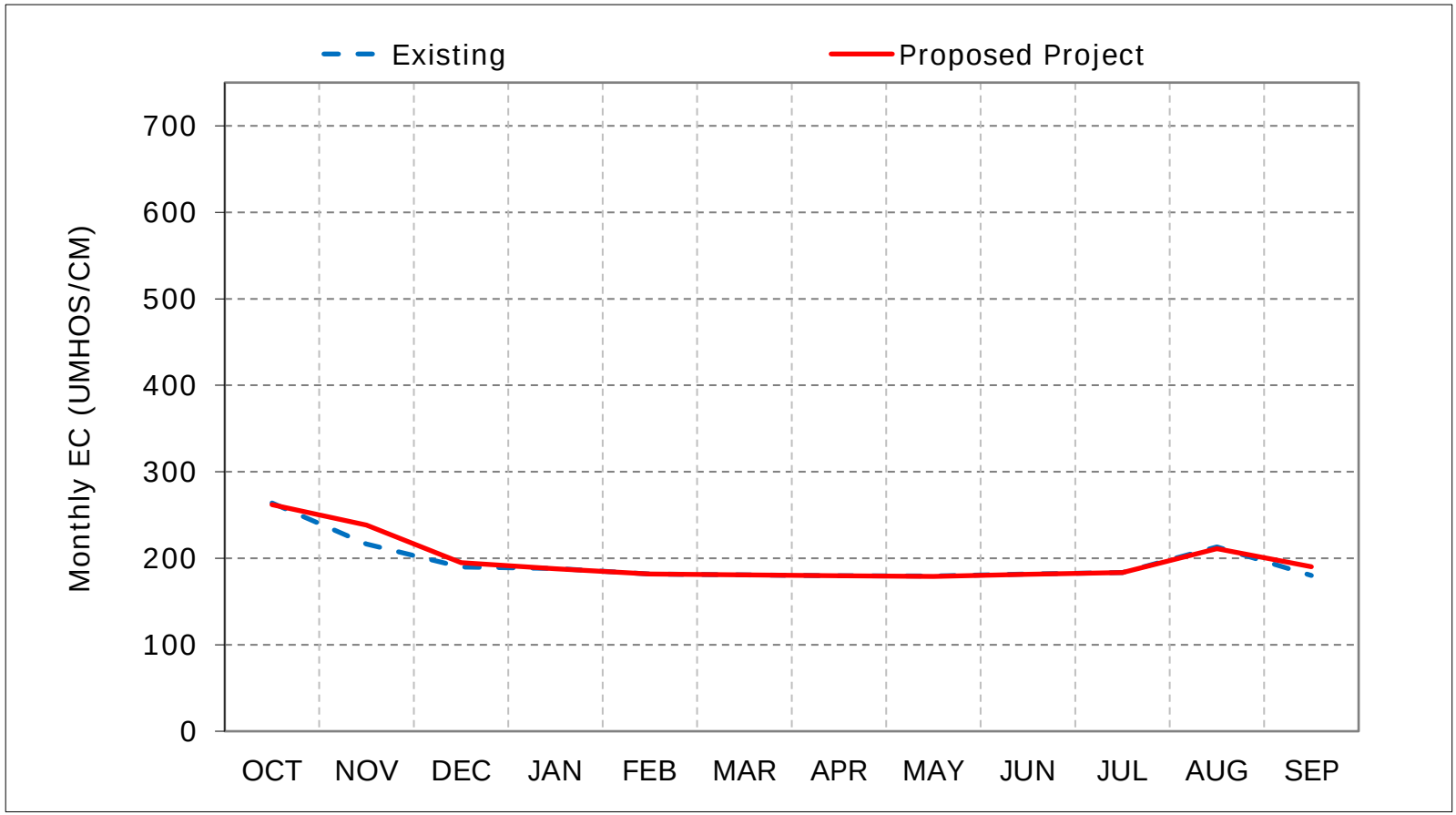
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 4-1. Sacramento River at Rio Vista Salinity, Long-Term Average EC



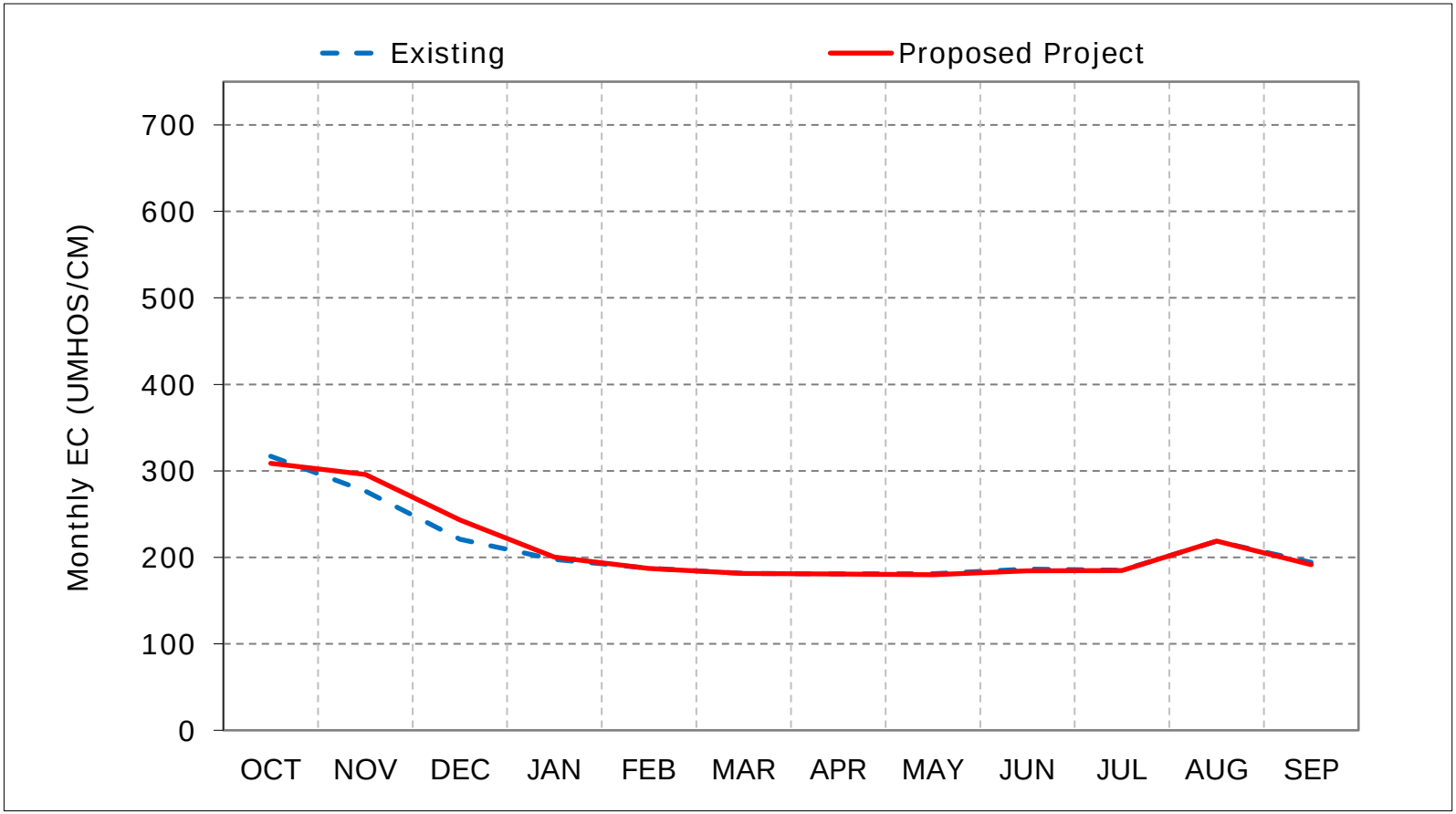
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-2. Sacramento River at Rio Vista Salinity, Wet Year Average EC



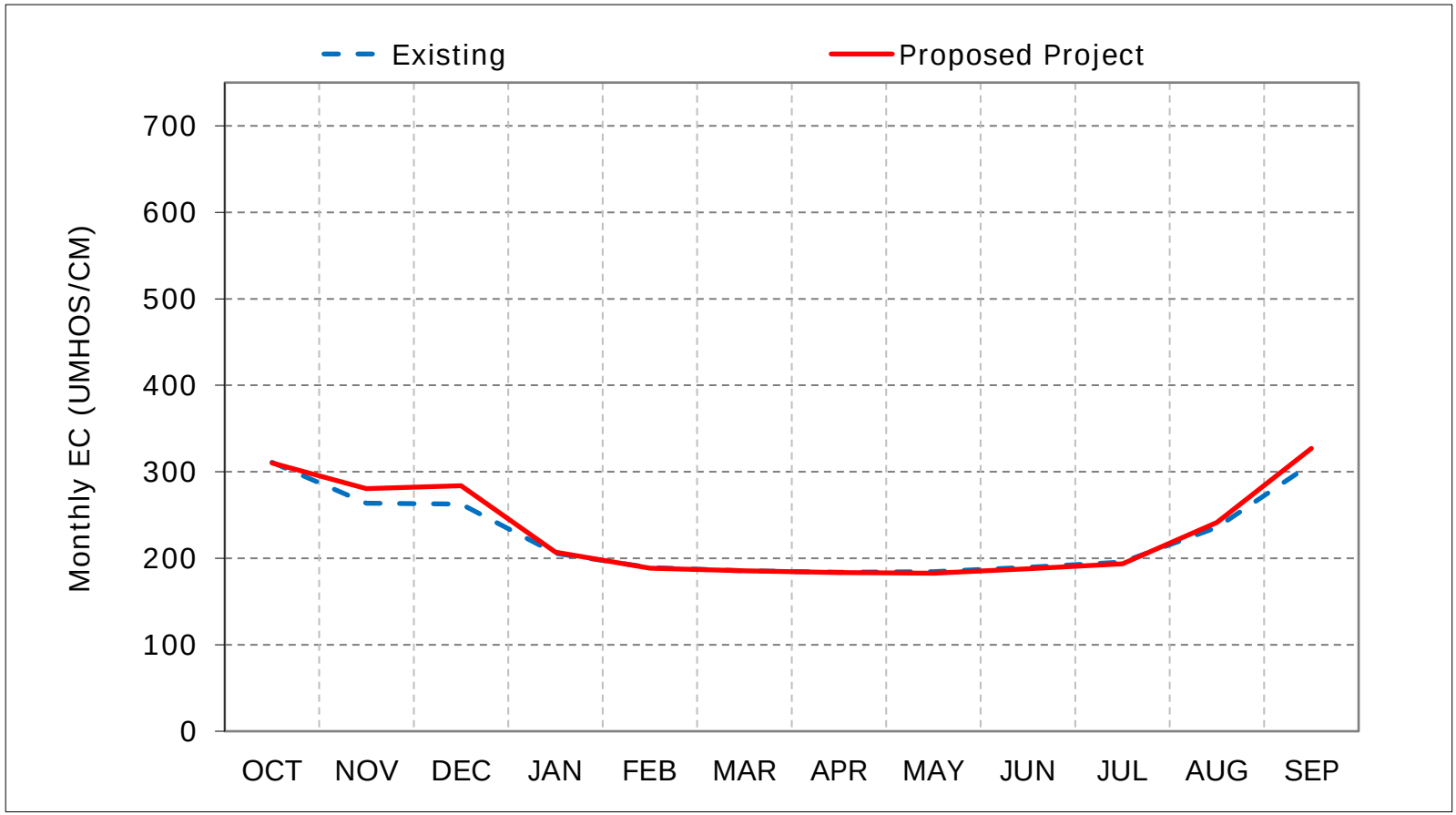
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-3. Sacramento River at Rio Vista Salinity, Above Normal Year Average EC



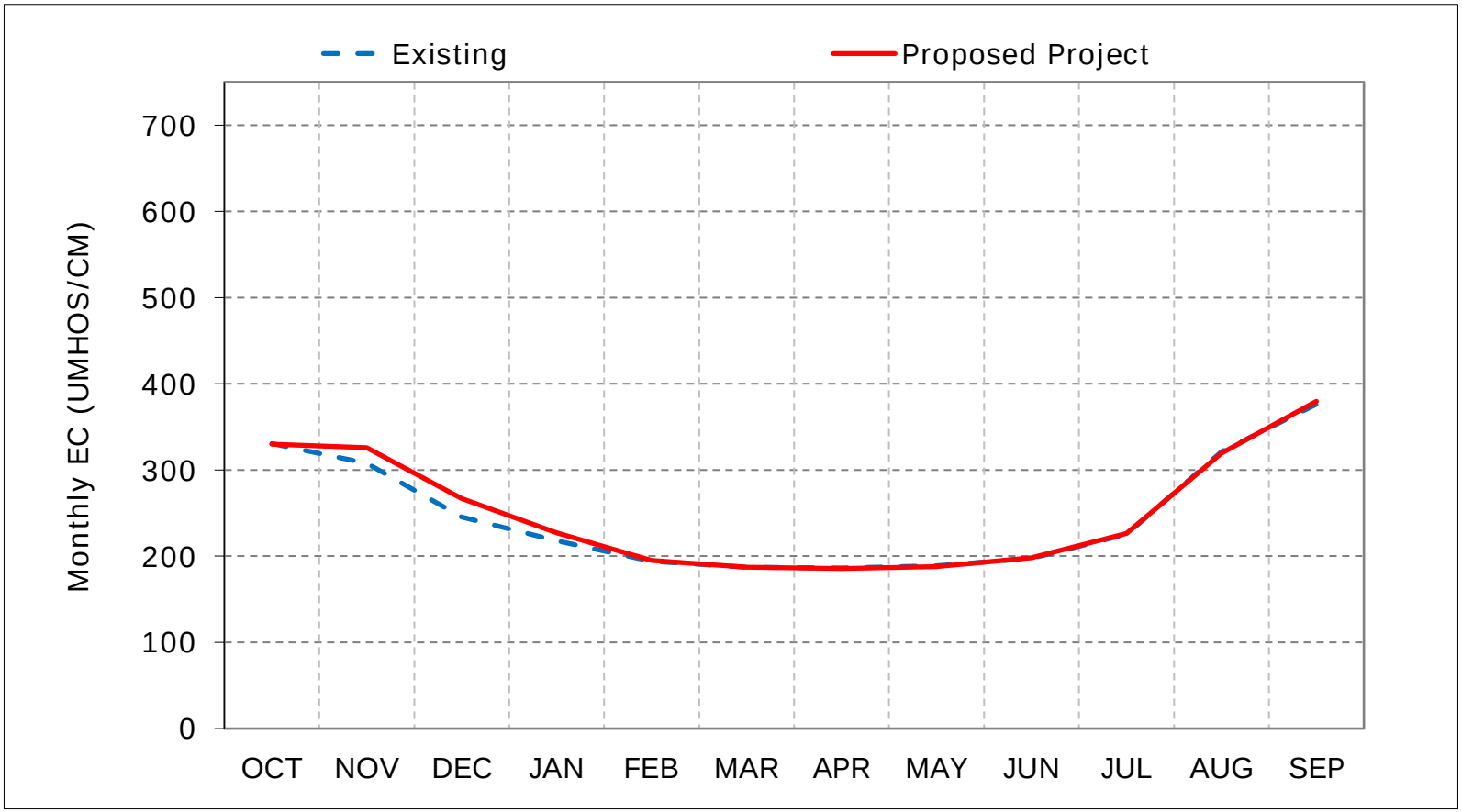
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-4. Sacramento River at Rio Vista Salinity, Below Normal Year Average EC



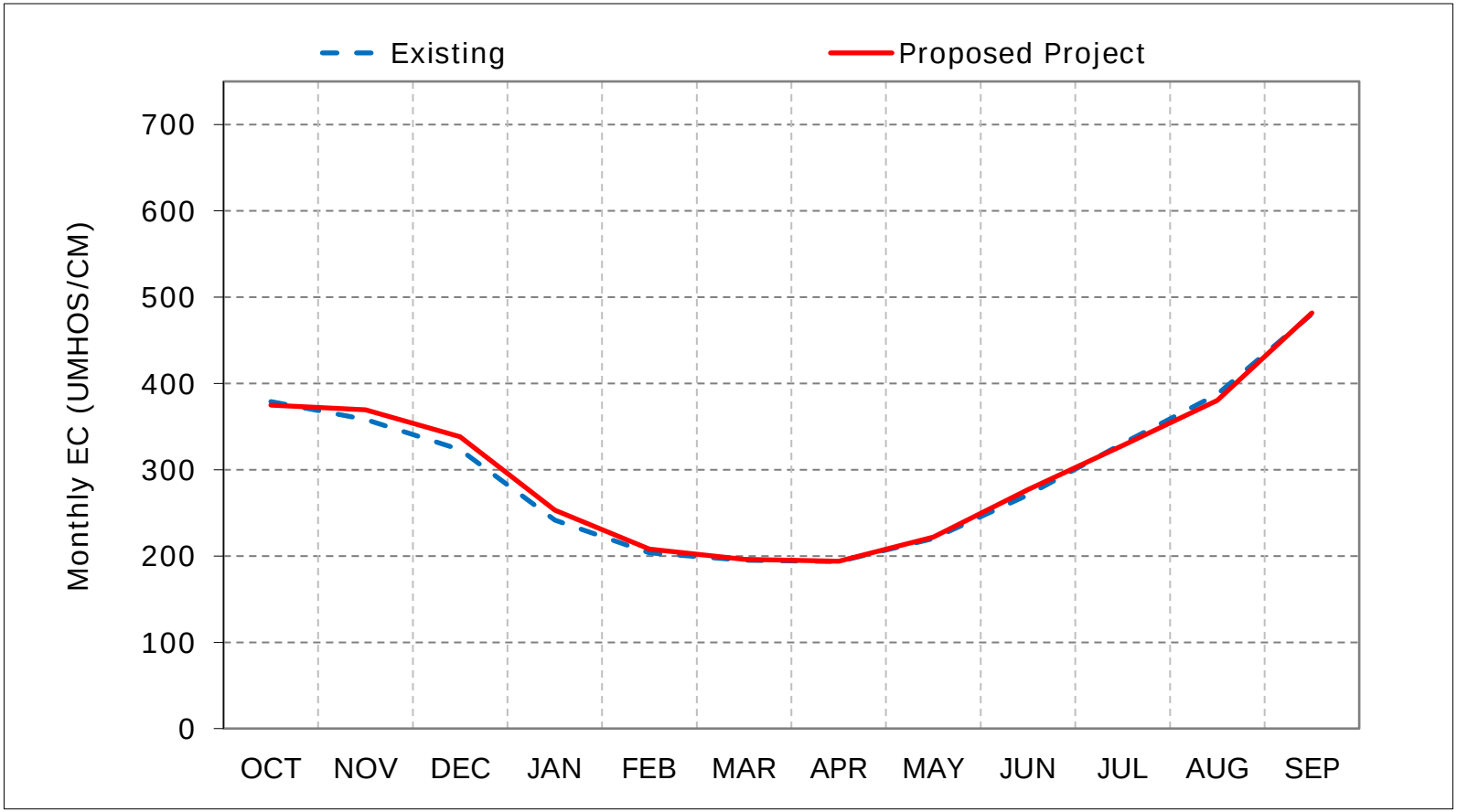
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-5. Sacramento River at Rio Vista Salinity, Dry Year Average EC



*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.

Figure 4-6. Sacramento River at Rio Vista Salinity, Critical Year Average EC



*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.

Figure 4-7. Sacramento River at Rio Vista Salinity, January EC

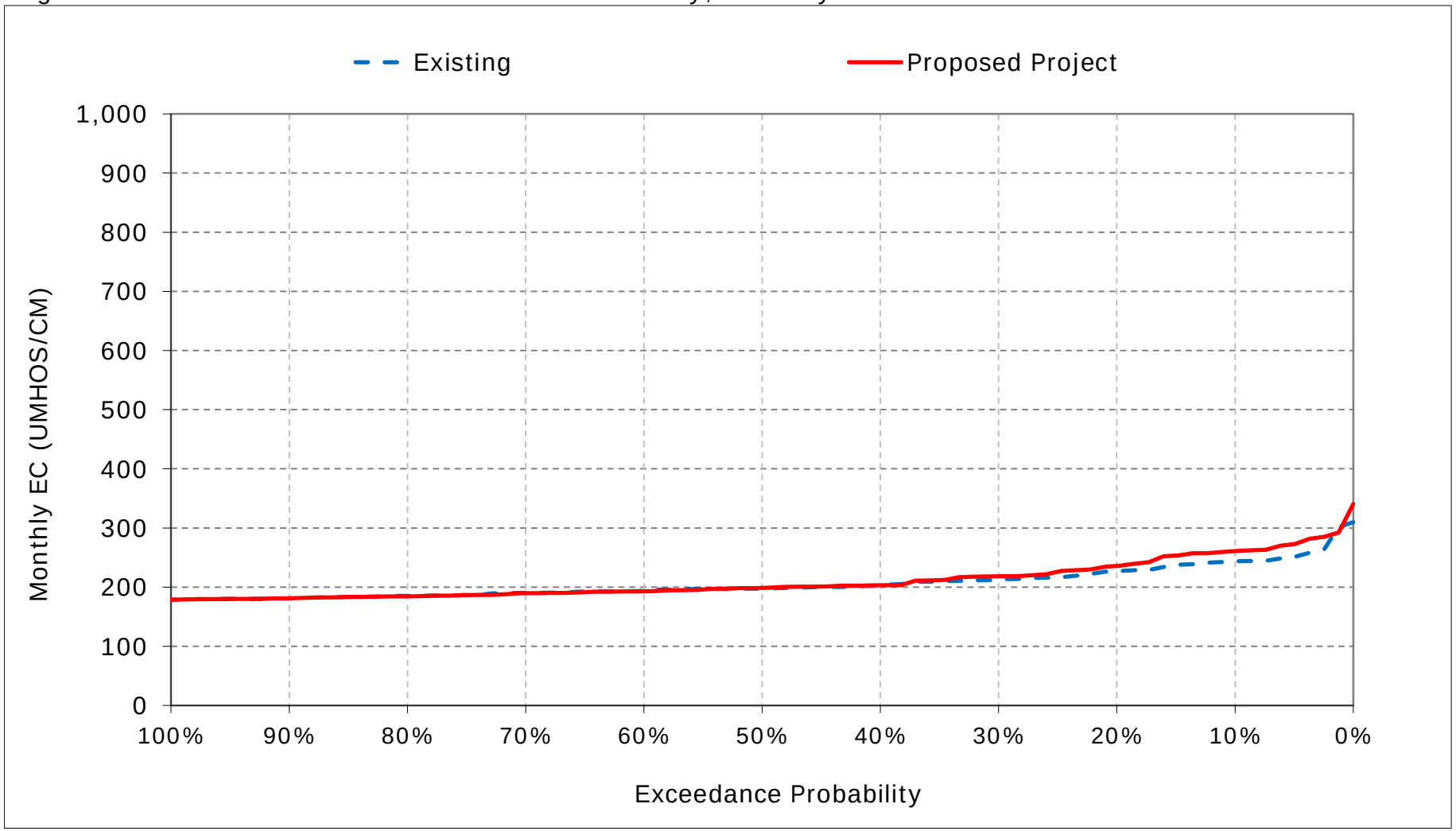


Figure 4-8. Sacramento River at Rio Vista Salinity, February EC

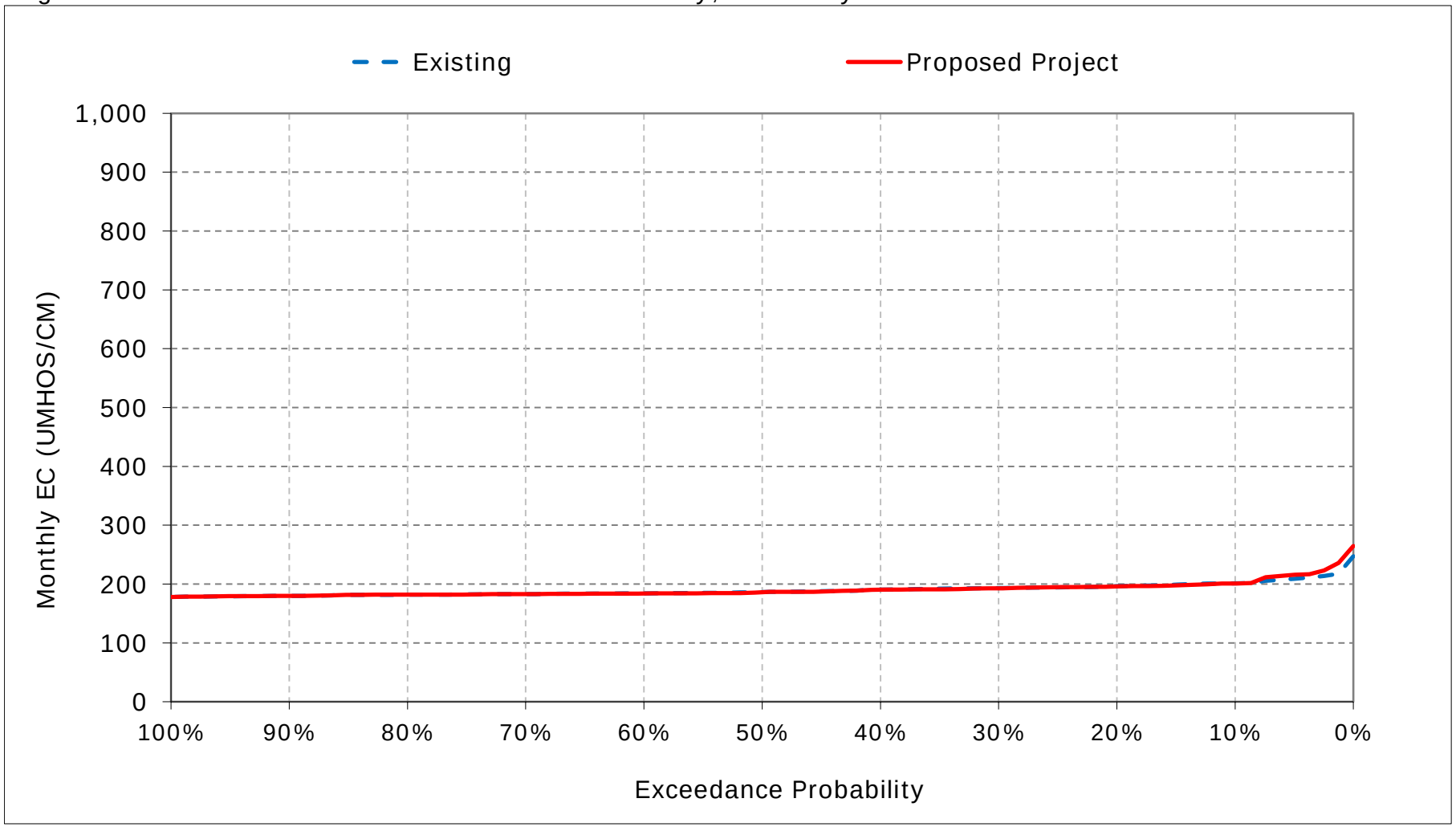


Figure 4-9. Sacramento River at Rio Vista Salinity, March EC

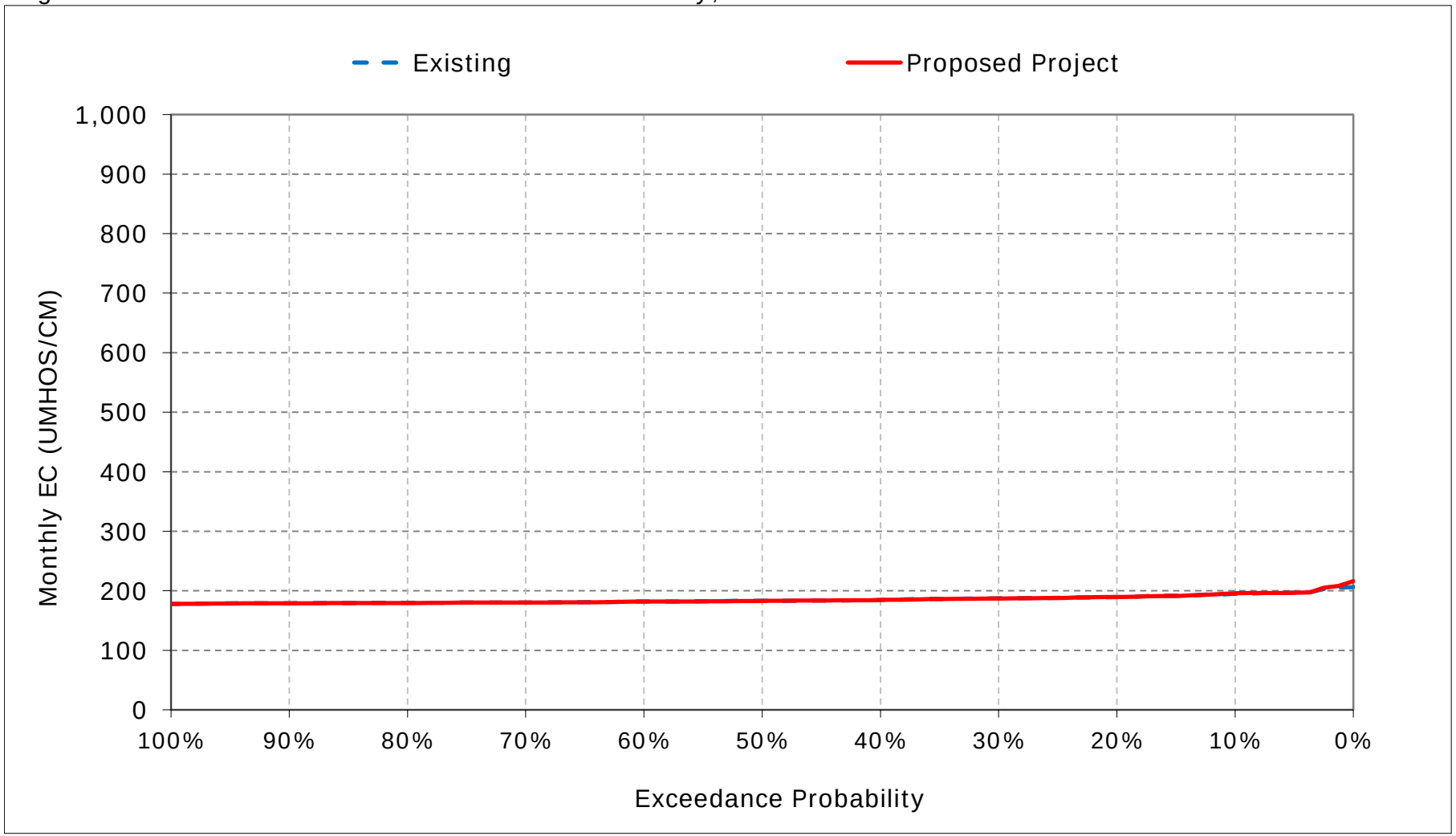


Figure 4-10. Sacramento River at Rio Vista Salinity, April EC

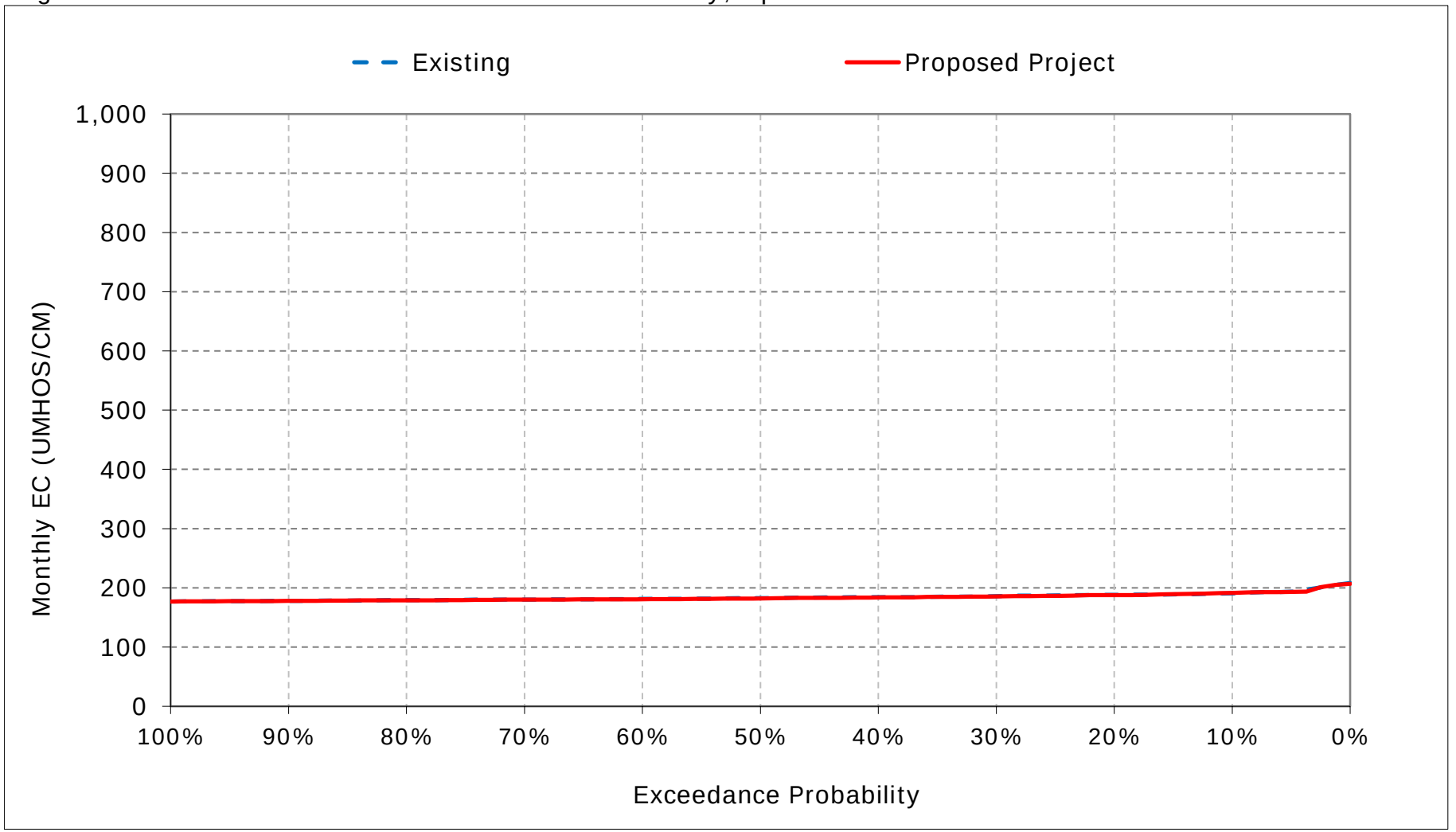


Figure 4-11. Sacramento River at Rio Vista Salinity, May EC

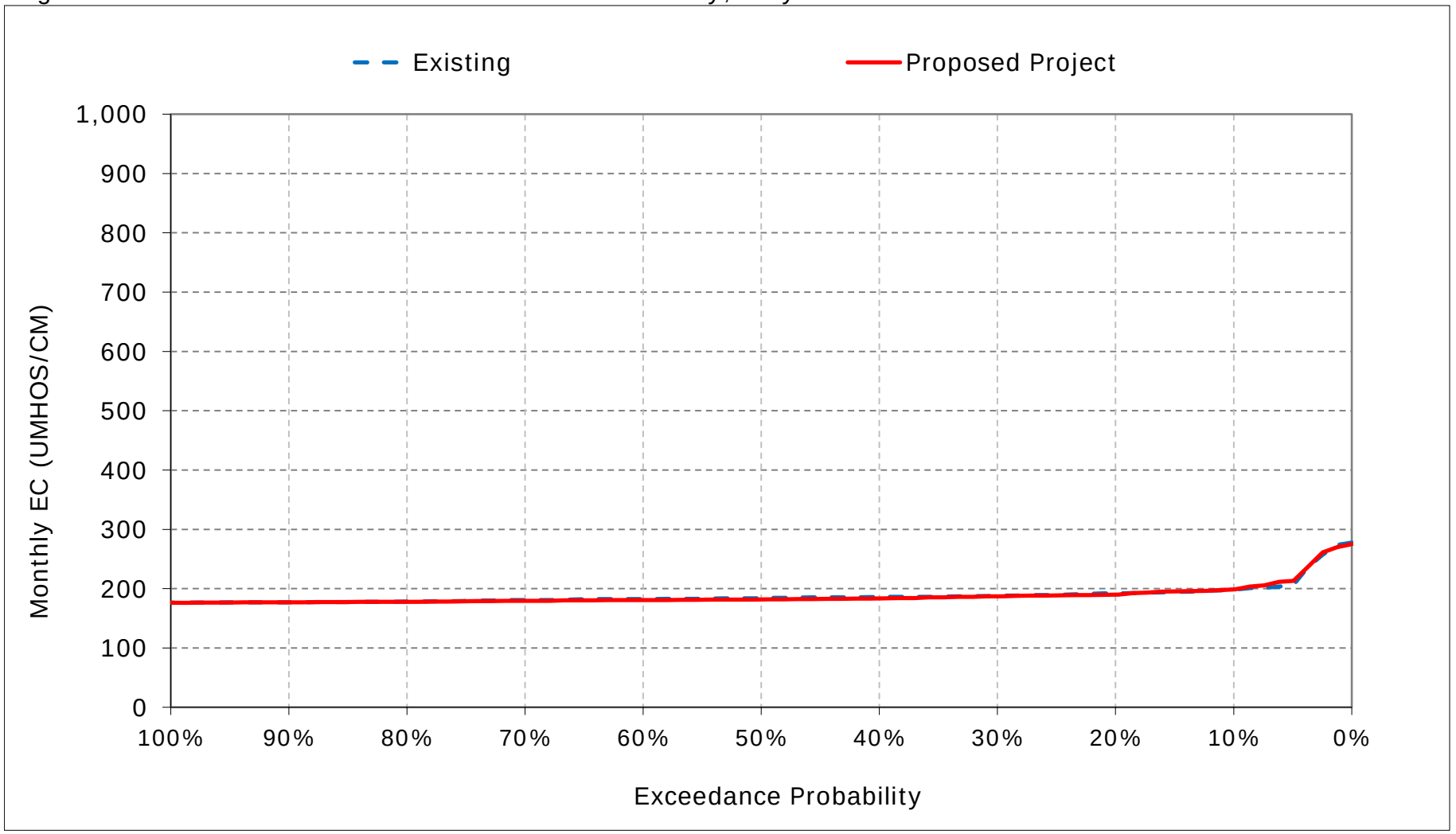


Figure 4-12. Sacramento River at Rio Vista Salinity, June EC

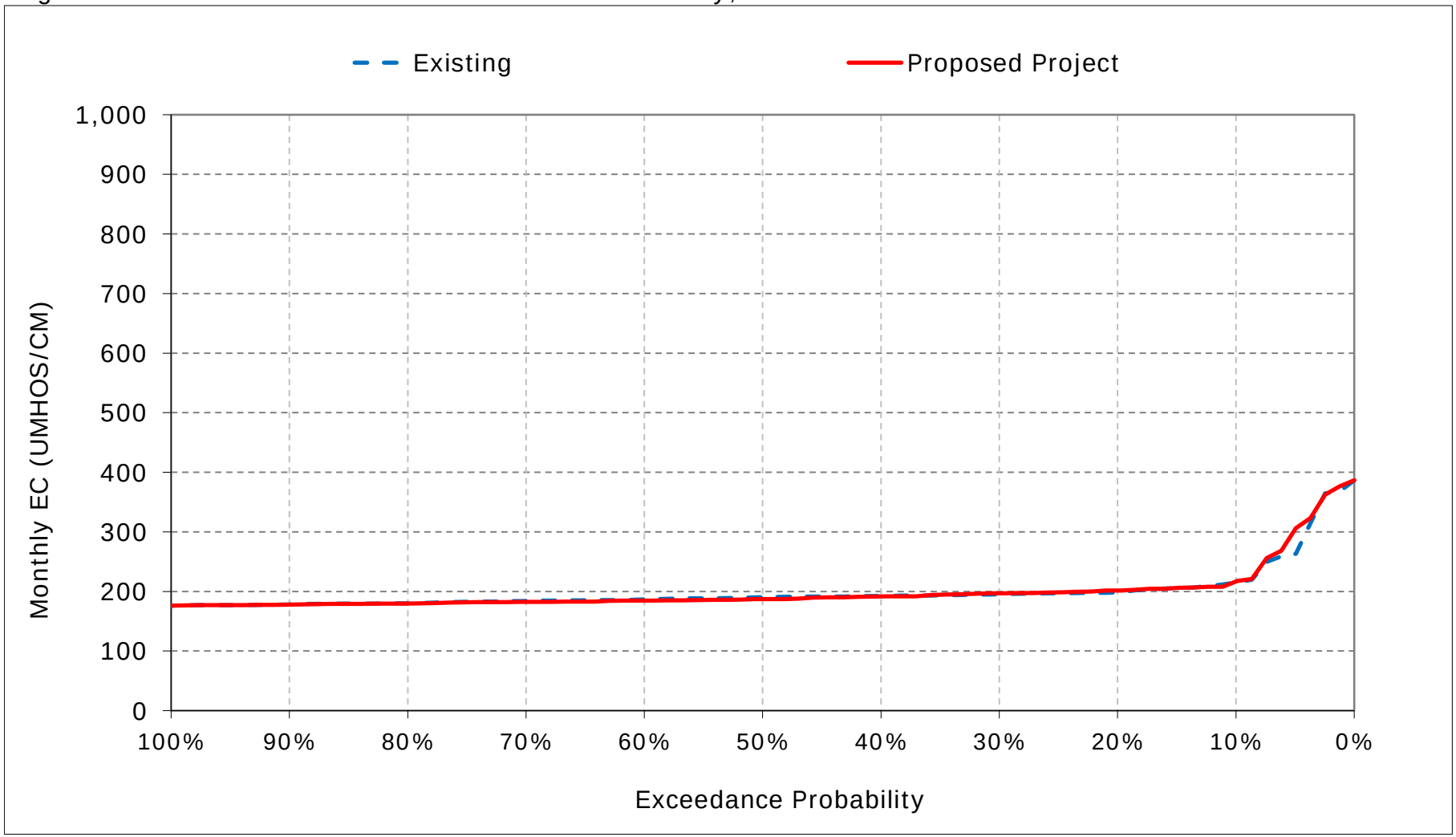


Figure 4-13. Sacramento River at Rio Vista Salinity, July EC

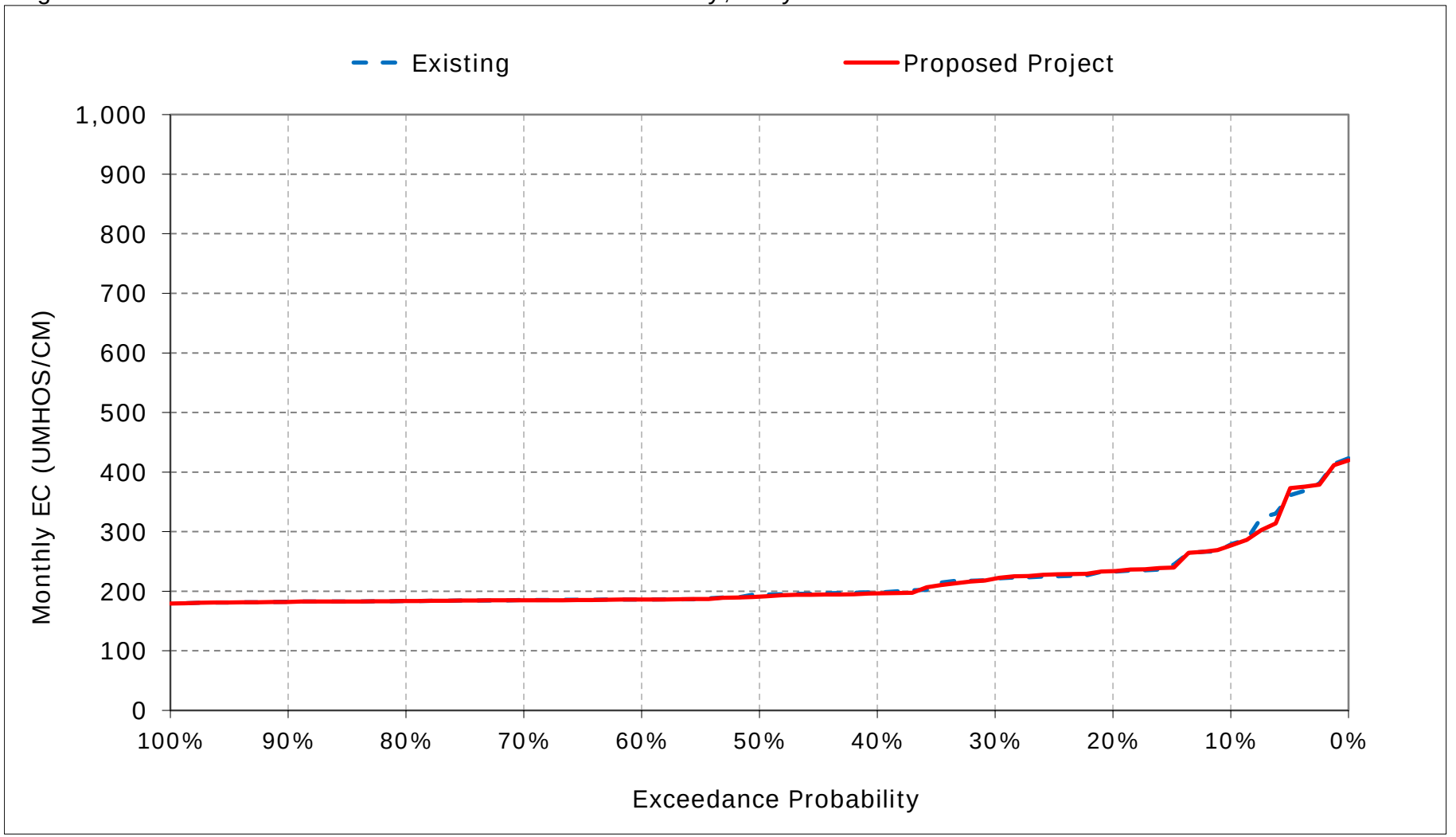


Figure 4-14. Sacramento River at Rio Vista Salinity, August EC

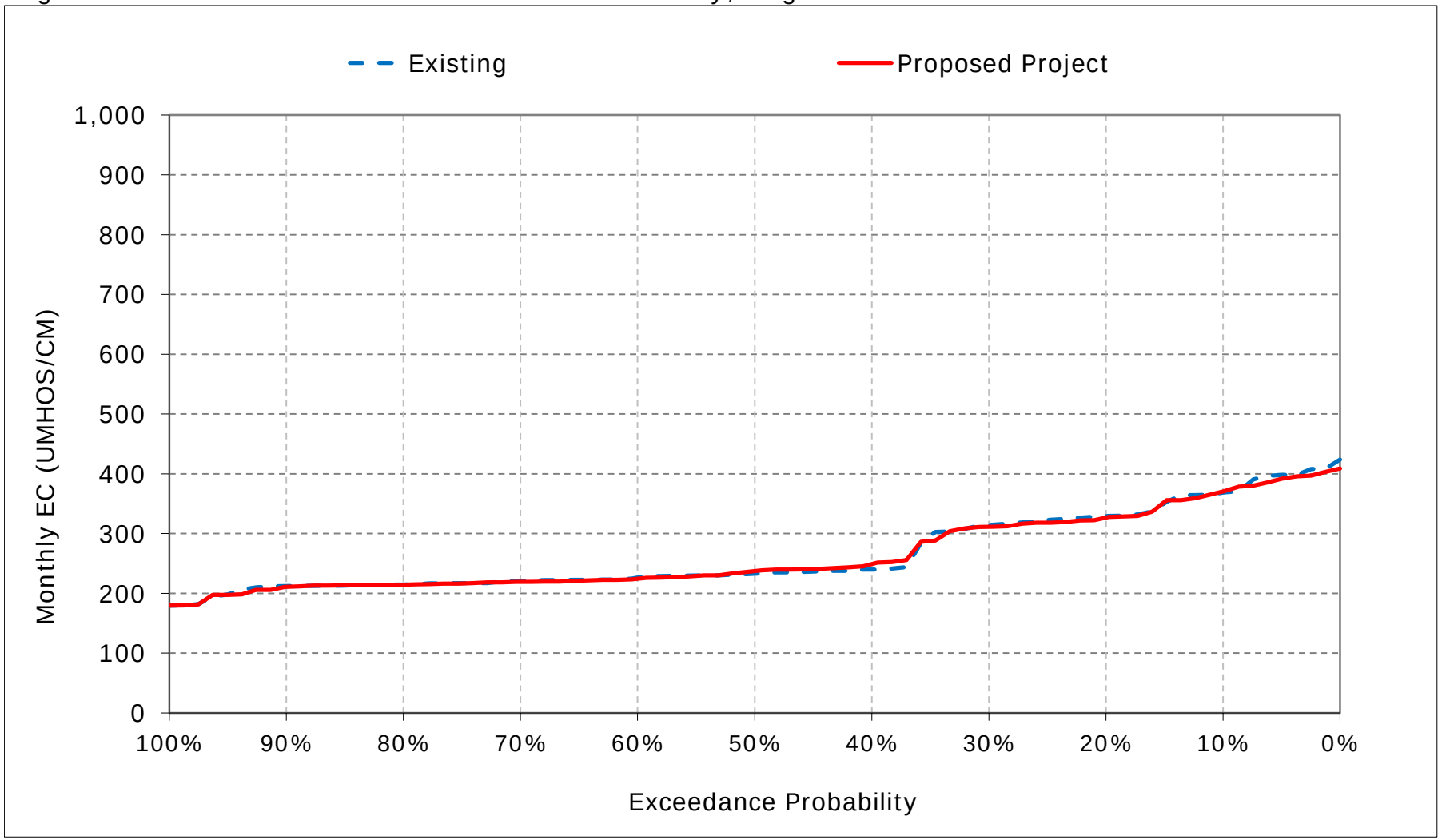


Figure 4-15. Sacramento River at Rio Vista Salinity, September EC

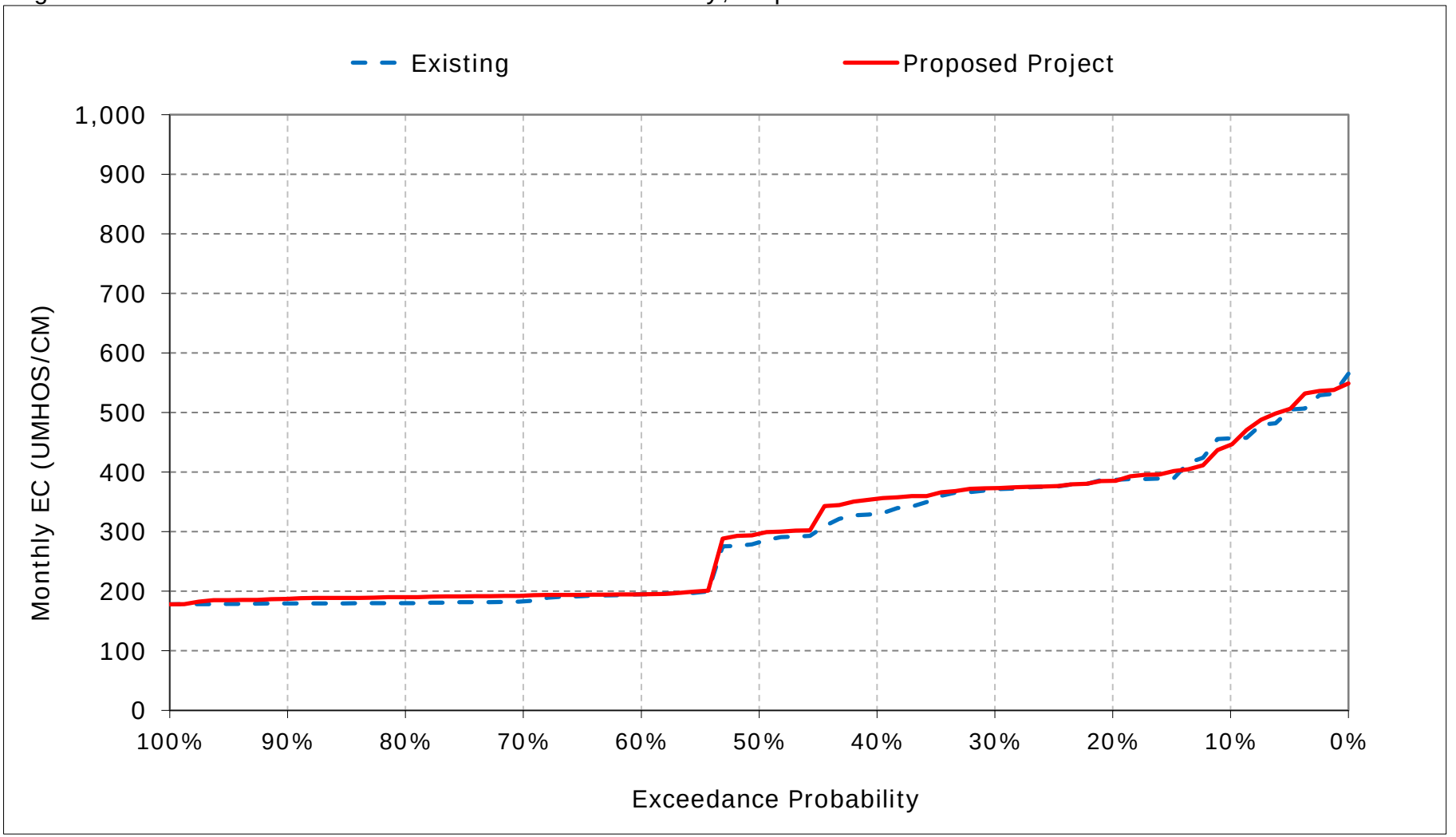


Figure 4-16. Sacramento River at Rio Vista Salinity, October EC

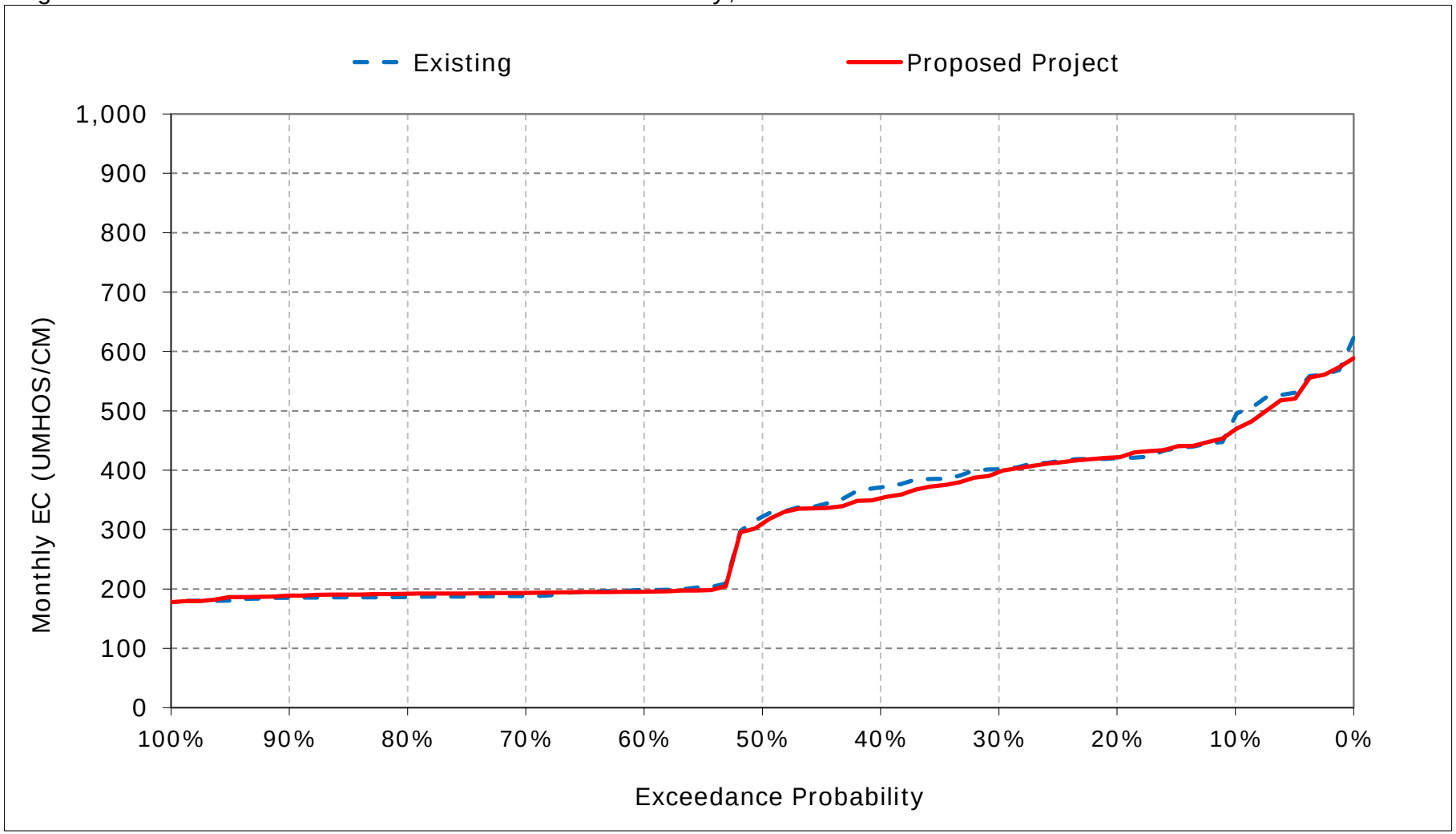


Figure 4-17. Sacramento River at Rio Vista Salinity, November EC

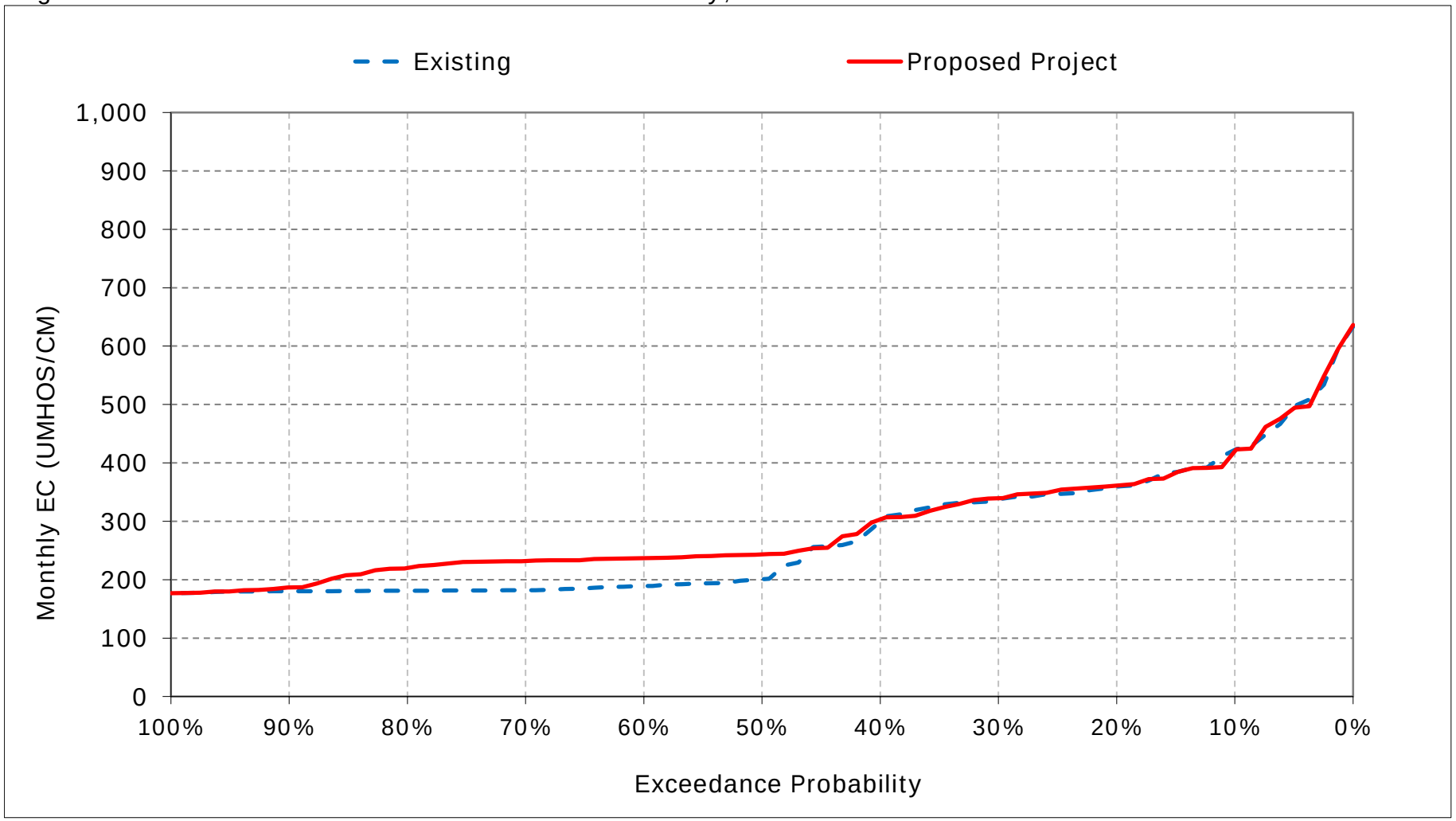


Figure 4-18. Sacramento River at Rio Vista Salinity, December EC

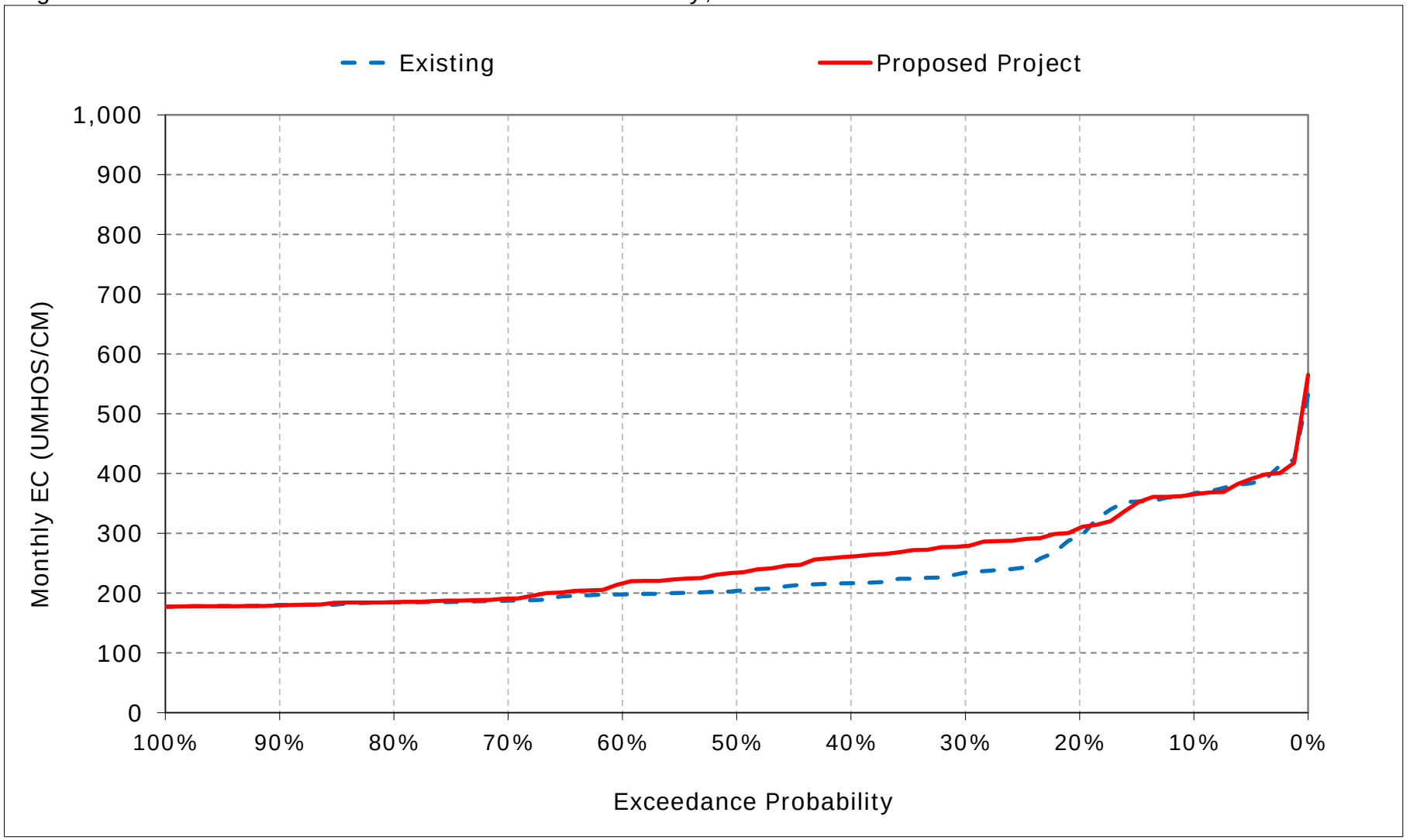


Table 5-1. Sacramento River at Emmaton Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,495	2,968	2,416	934	343	312	348	559	832	1,536	2,564	3,311
20%	3,015	2,476	1,573	736	252	238	247	399	595	1,007	2,001	2,732
30%	2,933	2,366	878	518	226	197	207	304	555	814	1,887	2,644
40%	2,724	1,968	712	352	206	193	198	232	461	535	1,085	2,188
50%	2,082	539	533	288	195	189	193	206	391	442	957	1,544
60%	644	426	493	227	190	187	189	198	300	348	912	472
70%	385	275	252	196	185	183	186	192	253	317	840	321
80%	342	247	211	188	183	181	182	183	194	293	796	302
90%	314	238	182	182	182	181	181	180	182	266	731	278
Long Term												
Full Simulation Period[a]	1,787	1,370	891	448	249	222	234	323	514	712	1,345	1,561
Water Year Types[b]												
Wet (32%)	1,273	710	302	209	184	183	185	190	230	281	748	283
Above Normal (15%)	1,870	1,412	735	301	199	184	188	195	316	328	809	464
Below Normal (17%)	1,848	1,367	1,153	437	211	199	206	235	390	485	1,020	1,843
Dry (22%)	1,958	1,695	1,017	590	285	233	240	326	562	901	1,951	2,694
Critical (15%)	2,492	2,273	1,828	913	432	353	408	839	1,398	2,011	2,644	3,399

Proposed Project

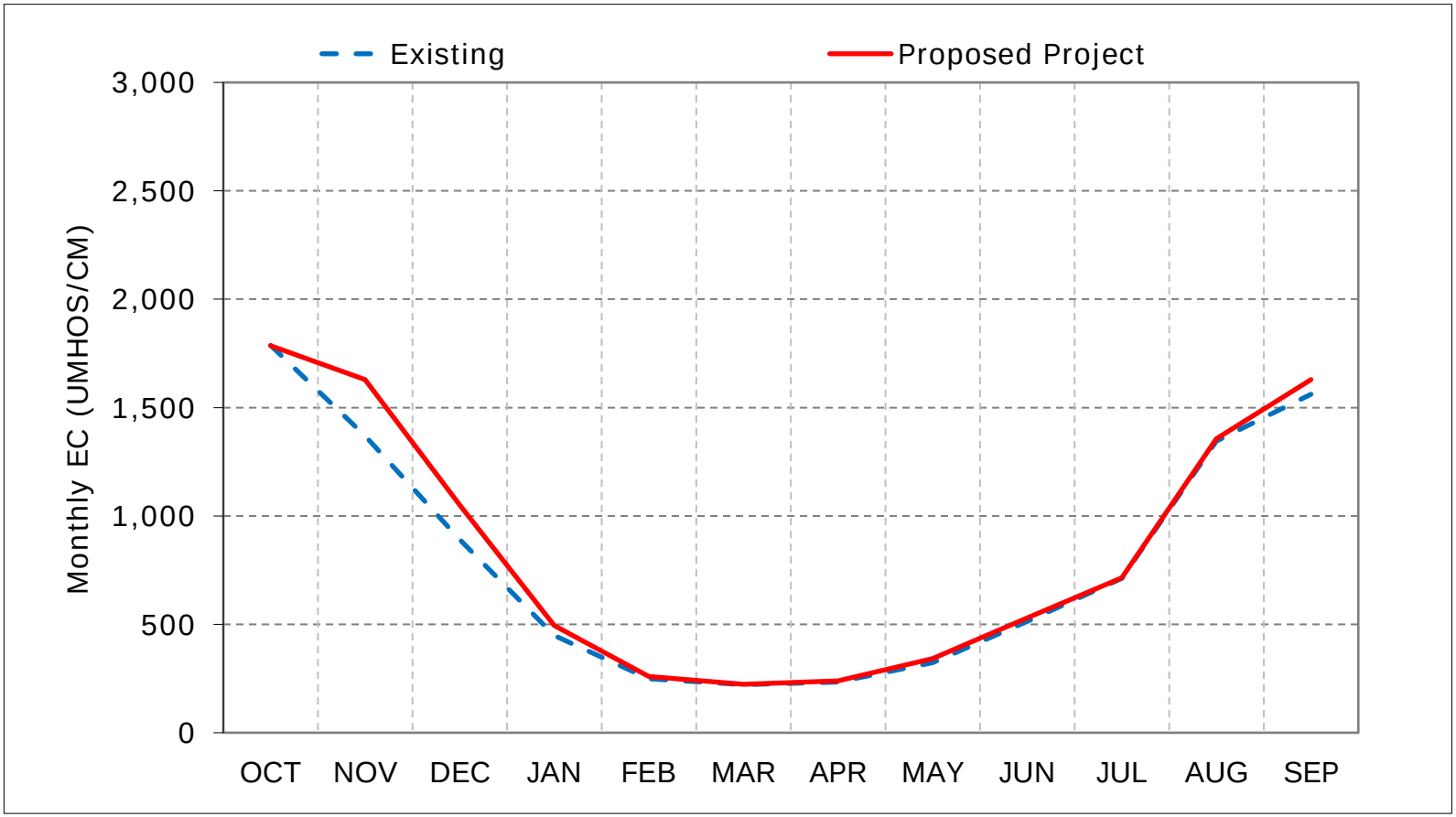
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,471	2,889	2,408	1,126	344	315	388	588	851	1,517	2,470	3,171
20%	3,051	2,554	1,627	844	262	230	267	428	651	1,065	2,004	2,775
30%	2,909	2,336	1,423	578	227	196	216	372	584	838	1,938	2,639
40%	2,452	1,938	1,191	378	205	193	199	251	475	525	1,315	2,409
50%	1,894	1,228	873	300	196	189	191	211	375	429	1,046	1,672
60%	615	1,086	602	221	189	187	186	197	302	338	907	461
70%	556	1,023	316	196	185	183	183	187	247	314	818	444
80%	492	837	246	189	183	181	182	180	192	288	777	413
90%	413	340	188	182	182	181	180	178	181	267	704	376
Long Term												
Full Simulation Period[a]	1,785	1,630	1,051	495	260	223	239	341	530	714	1,356	1,630
Water Year Types[b]												
Wet (32%)	1,293	1,034	371	209	184	183	184	195	240	282	727	398
Above Normal (15%)	1,822	1,661	966	338	196	185	187	197	304	320	818	426
Below Normal (17%)	1,859	1,607	1,372	456	209	199	212	251	386	486	1,151	2,027
Dry (22%)	1,985	1,967	1,233	682	300	233	250	365	593	929	1,956	2,719
Critical (15%)	2,430	2,409	1,959	1,037	486	363	422	874	1,456	1,988	2,597	3,403

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-23	-79	-8	192	1	2	40	29	20	-19	-94	-140
20%	36	79	54	108	10	-8	20	29	56	58	3	43
30%	-24	-31	545	61	1	-1	9	69	29	23	51	-5
40%	-273	-30	479	26	-1	0	1	19	14	-10	230	221
50%	-188	689	339	13	1	0	-2	5	-16	-14	89	128
60%	-29	660	109	-6	-1	1	-3	-2	1	-10	-5	-11
70%	171	748	64	1	0	0	-2	-5	-6	-3	-22	122
80%	150	590	35	1	0	0	-1	-4	-2	-4	-19	111
90%	98	102	6	0	0	0	-1	-2	-2	2	-27	99
Long Term												
Full Simulation Period[a]	-2	260	160	47	11	2	5	18	16	2	11	69
Water Year Types[b]												
Wet (32%)	20	323	69	0	0	0	0	5	10	1	-21	115
Above Normal (15%)	-49	249	232	37	-3	0	-1	1	-12	-8	10	-38
Below Normal (17%)	11	240	218	19	-2	0	7	16	-4	2	131	183
Dry (22%)	27	273	216	92	16	0	10	39	31	28	6	26
Critical (15%)	-62	136	130	124	55	10	13	35	58	-22	-47	4

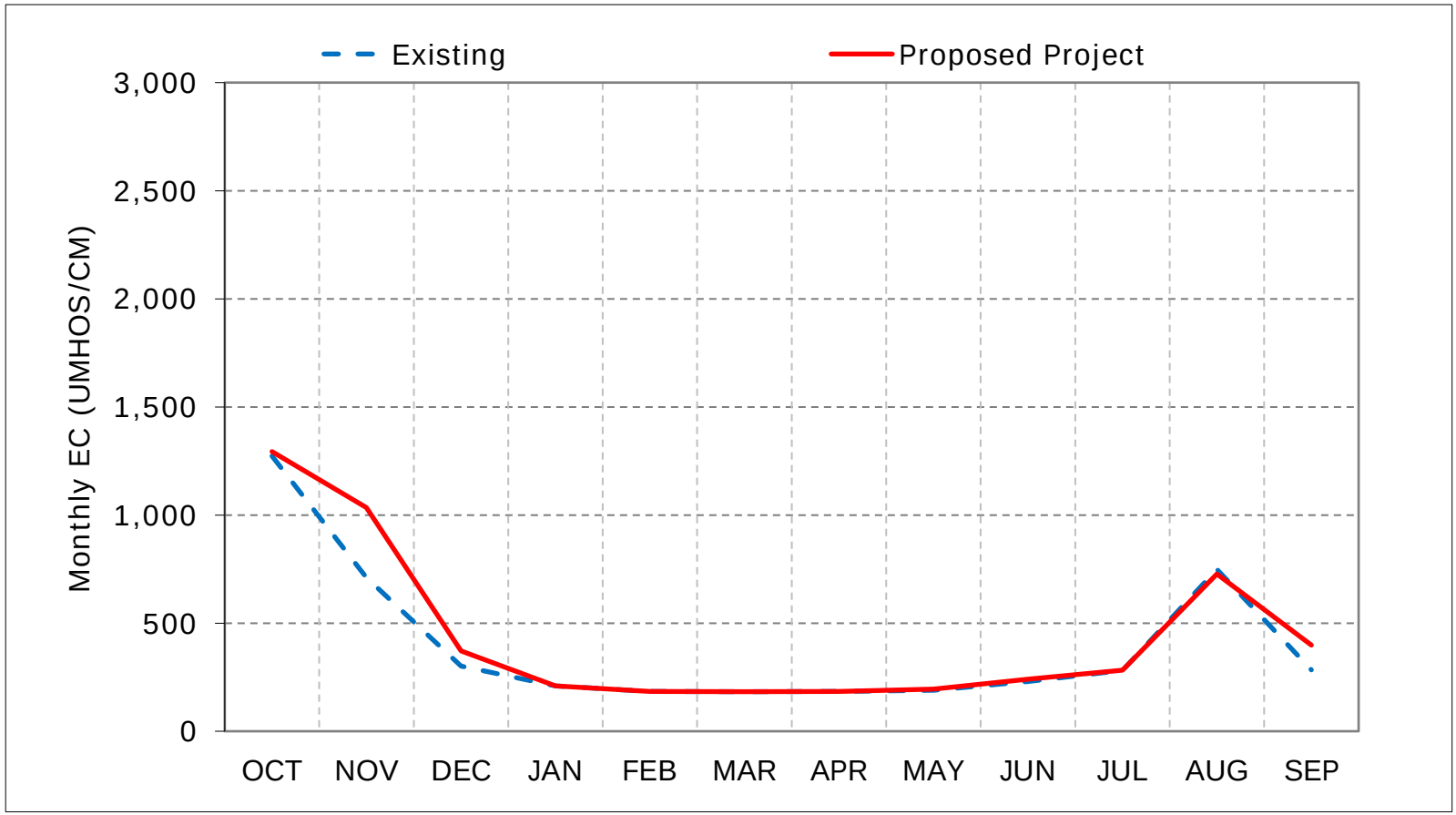
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 5-1. Sacramento River at Emmaton Salinity, Long-Term Average EC



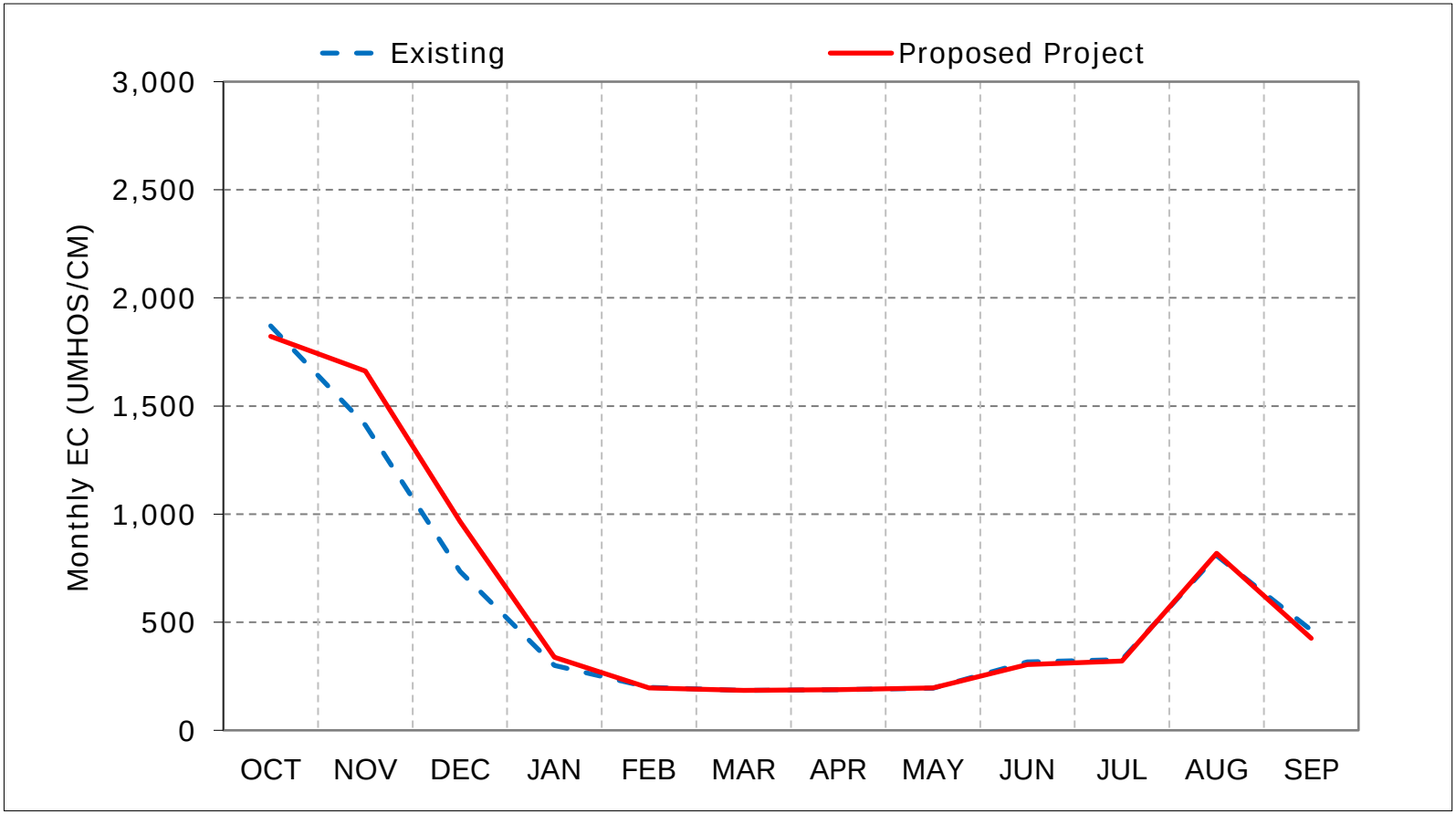
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-2. Sacramento River at Emmaton Salinity, Wet Year Average EC



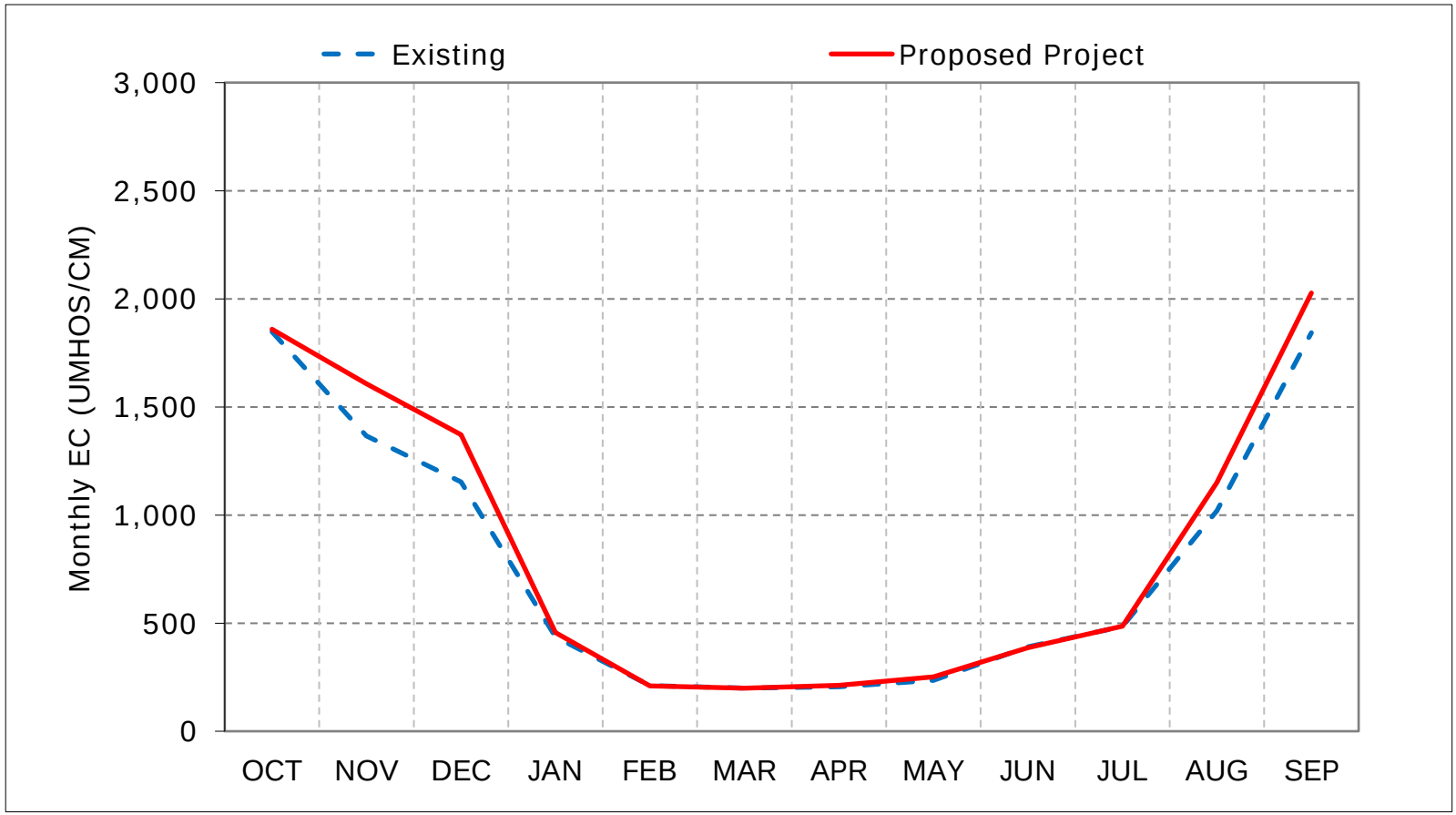
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-3. Sacramento River at Emmaton Salinity, Above Normal Year Average EC



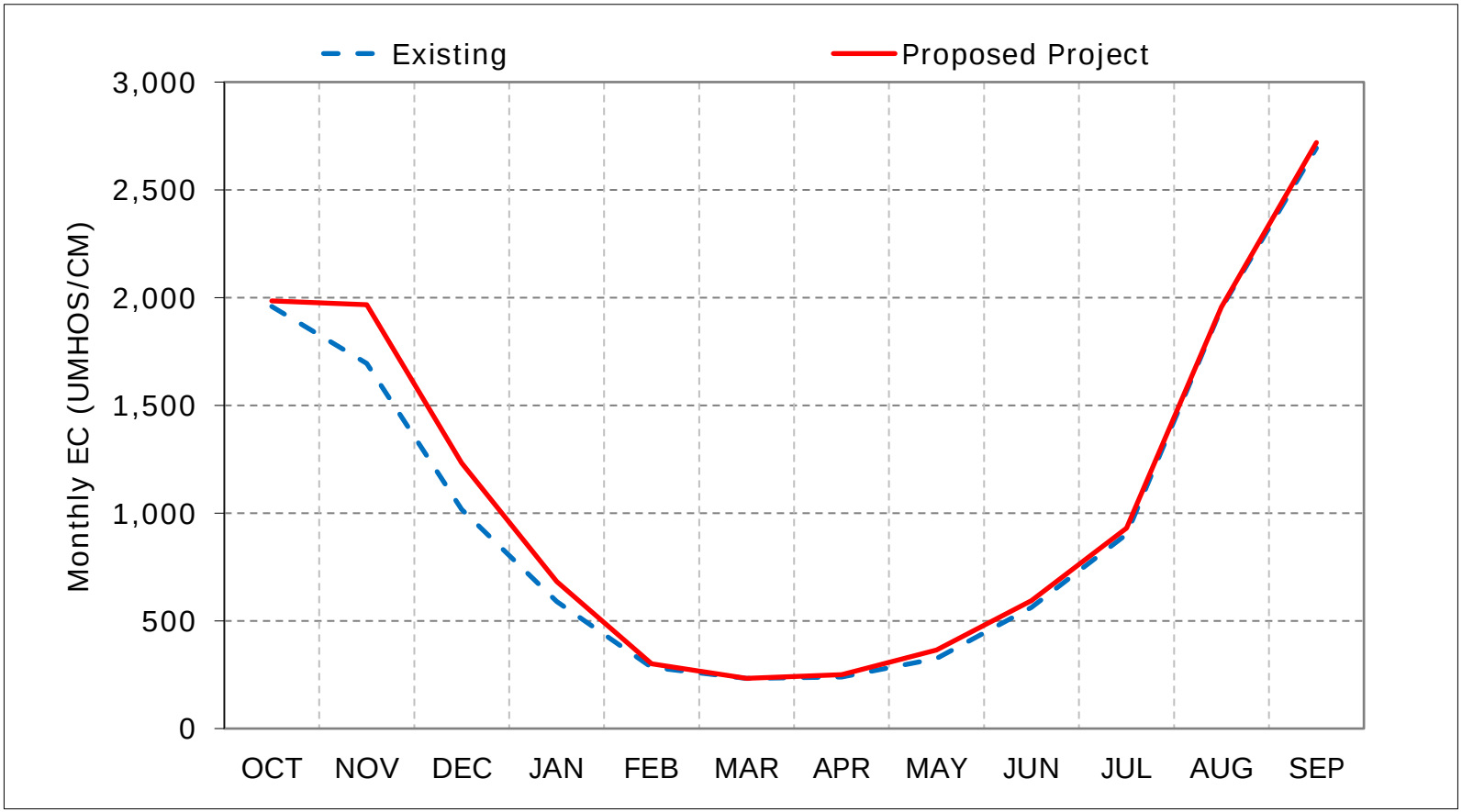
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-4. Sacramento River at Emmaton Salinity, Below Normal Year Average EC



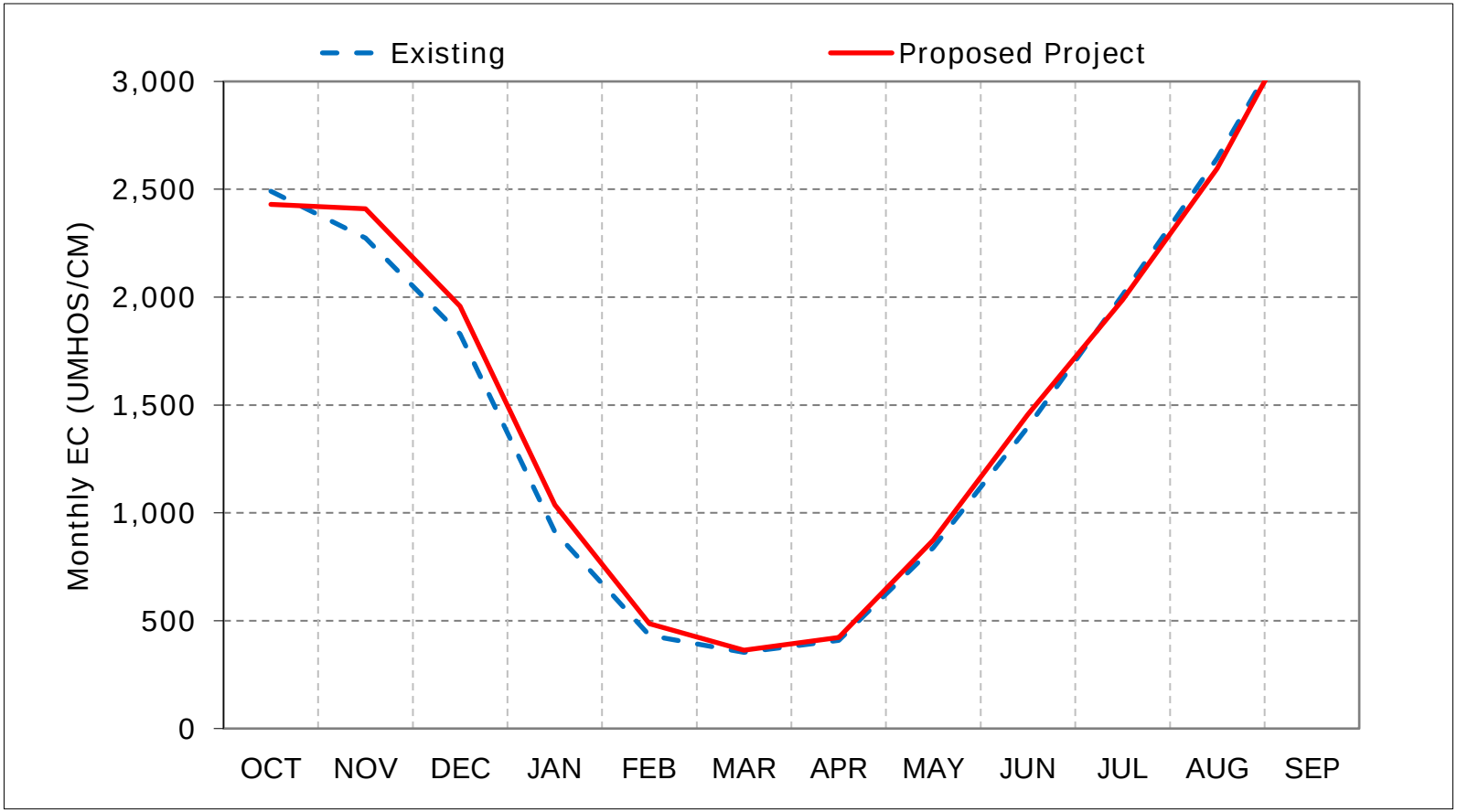
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-5. Sacramento River at Emmaton Salinity, Dry Year Average EC



*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.

Figure 5-6. Sacramento River at Emmaton Salinity, Critical Year Average EC



*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.

Figure 5-7. Sacramento River at Emmaton Salinity, January EC

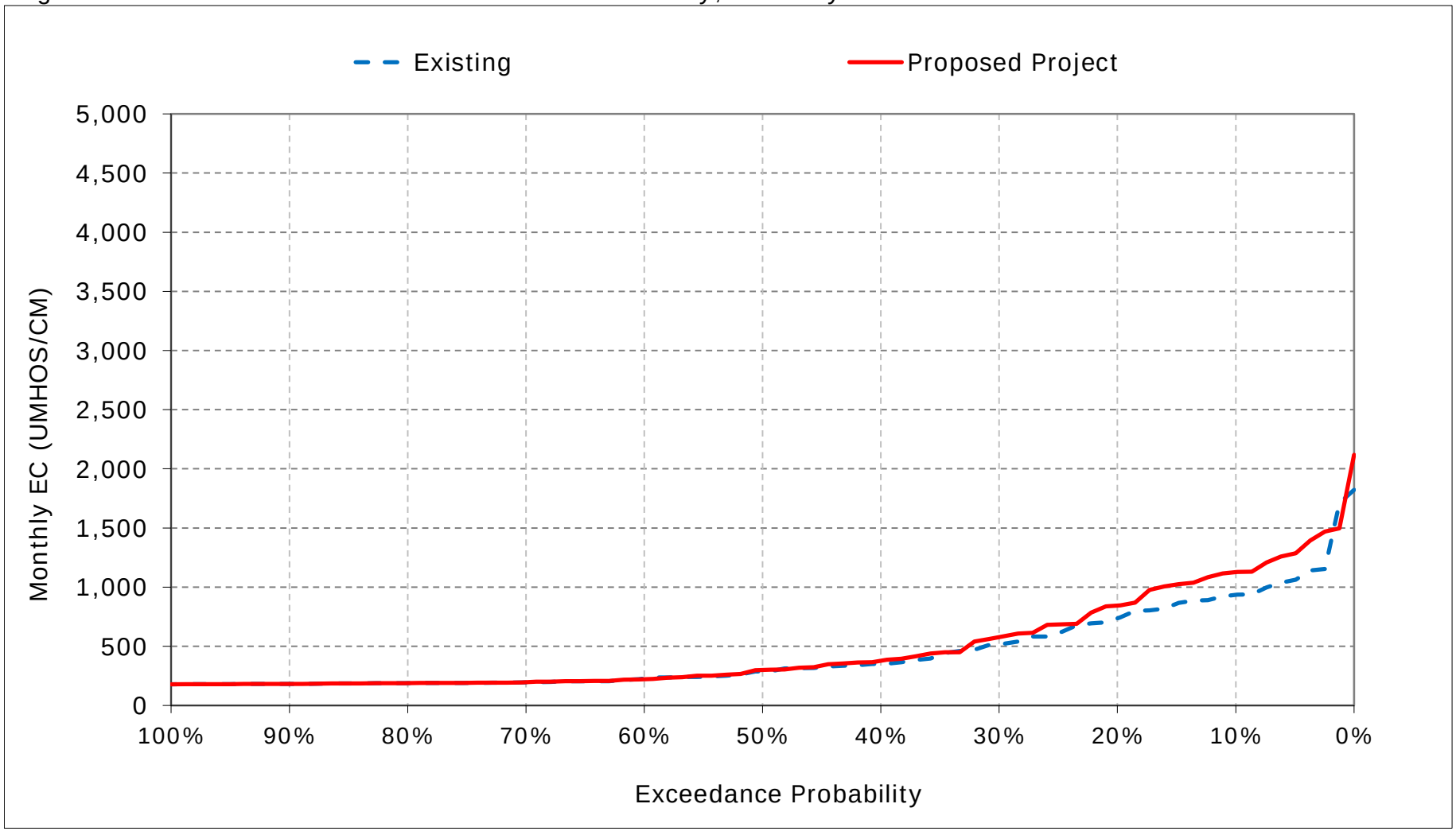


Figure 5-8. Sacramento River at Emmaton Salinity, February EC

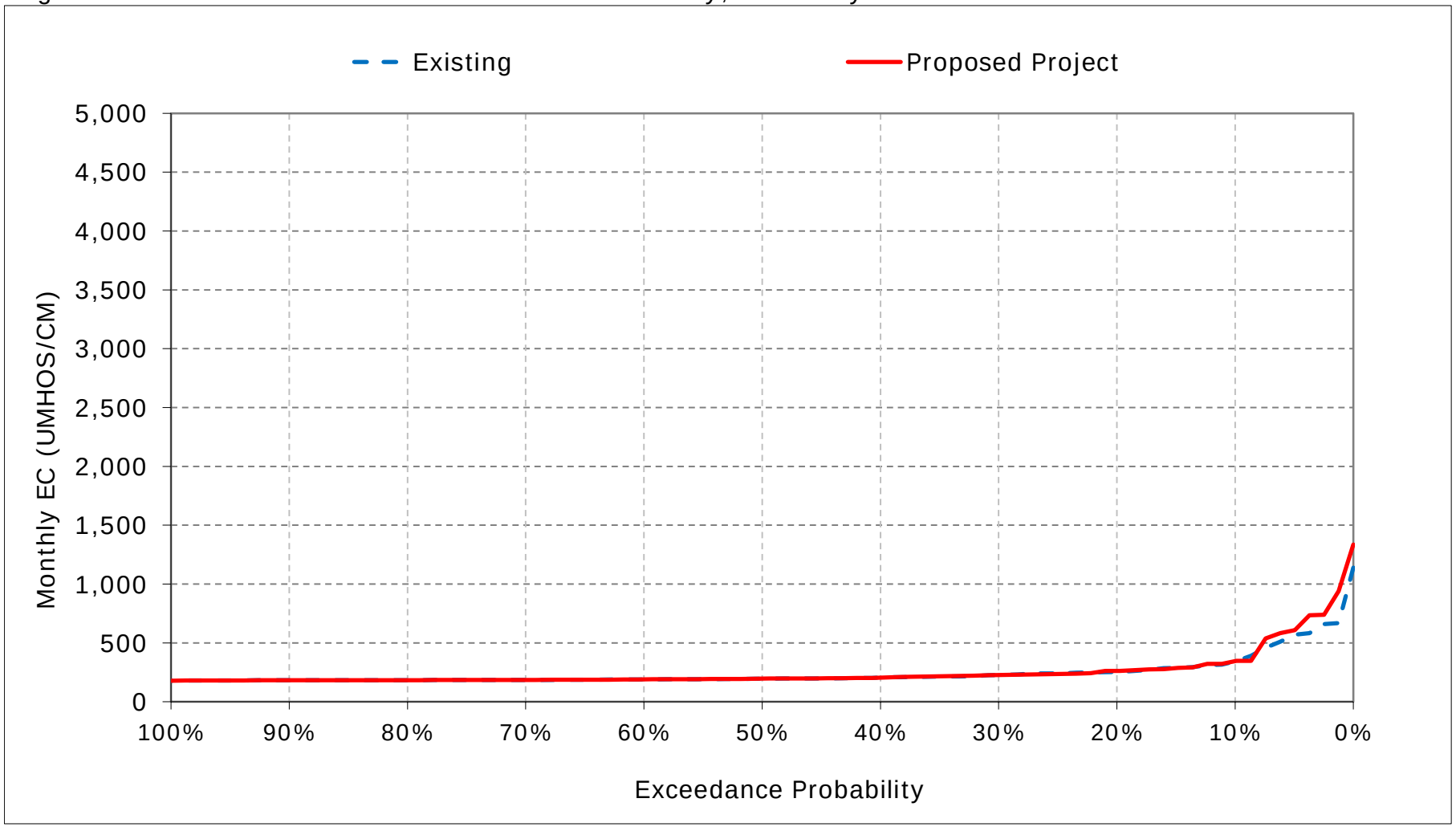


Figure 5-9. Sacramento River at Emmaton Salinity, March EC

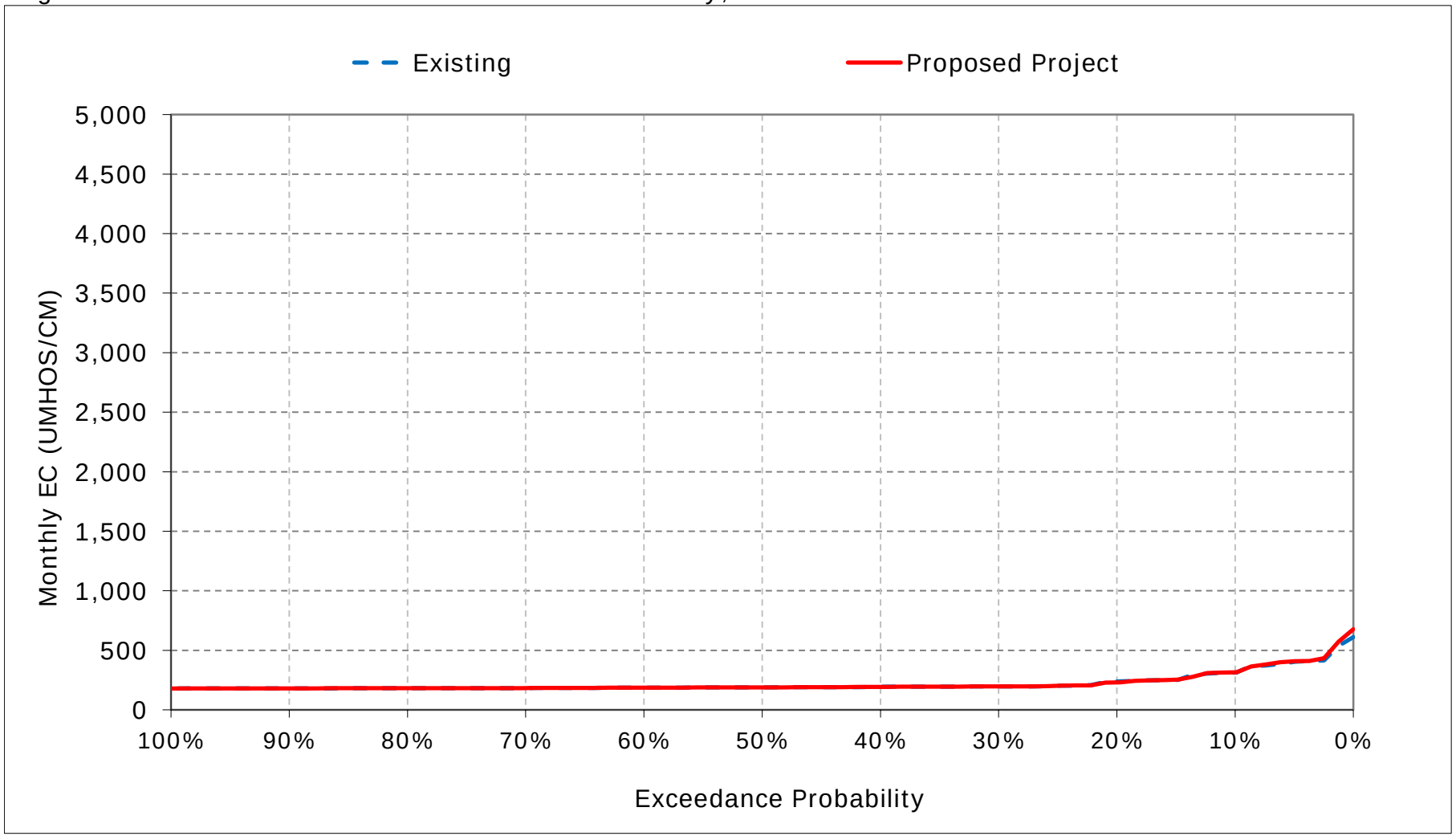


Figure 5-10. Sacramento River at Emmaton Salinity, April EC

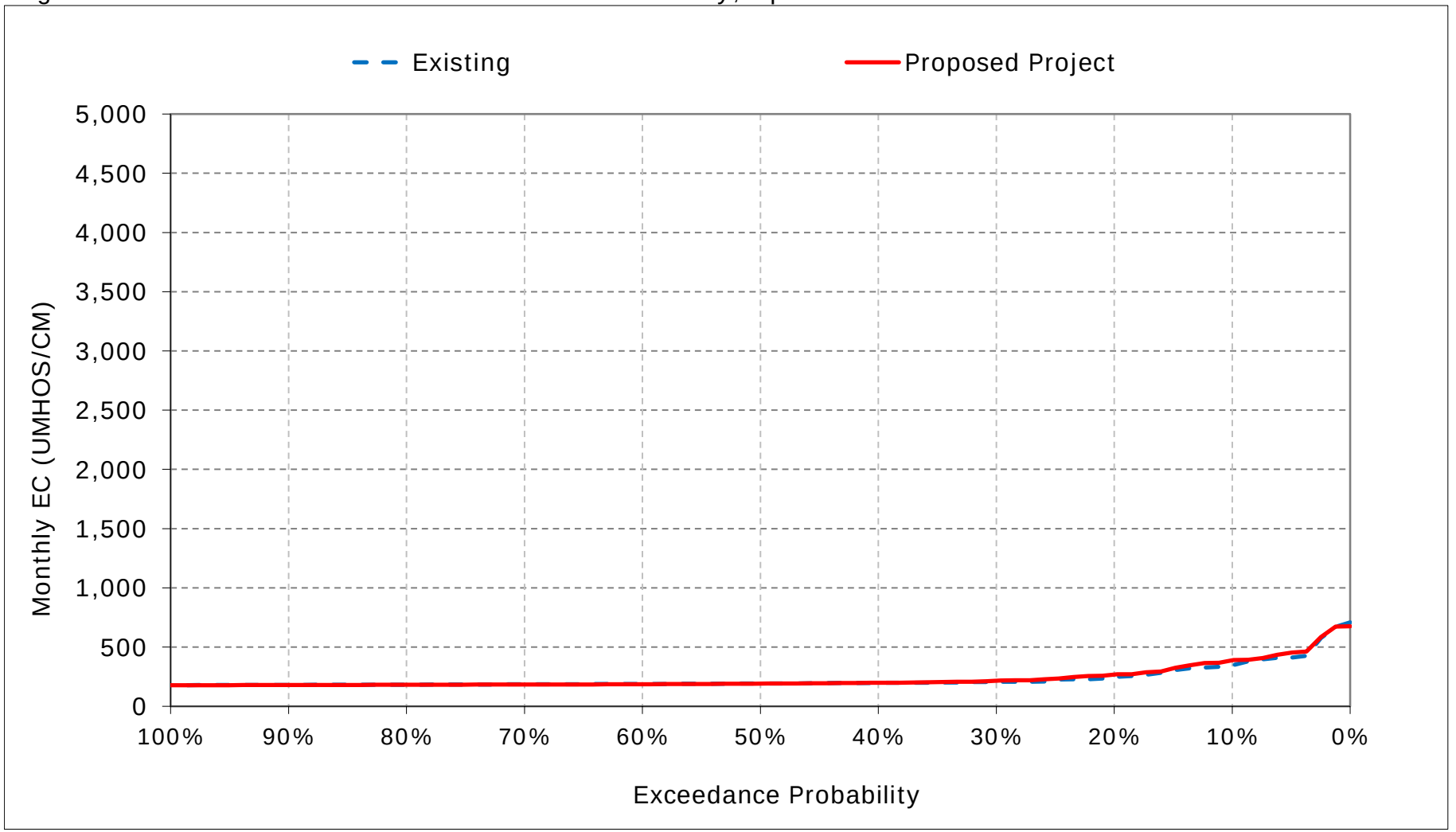


Figure 5-11. Sacramento River at Emmaton Salinity, May EC

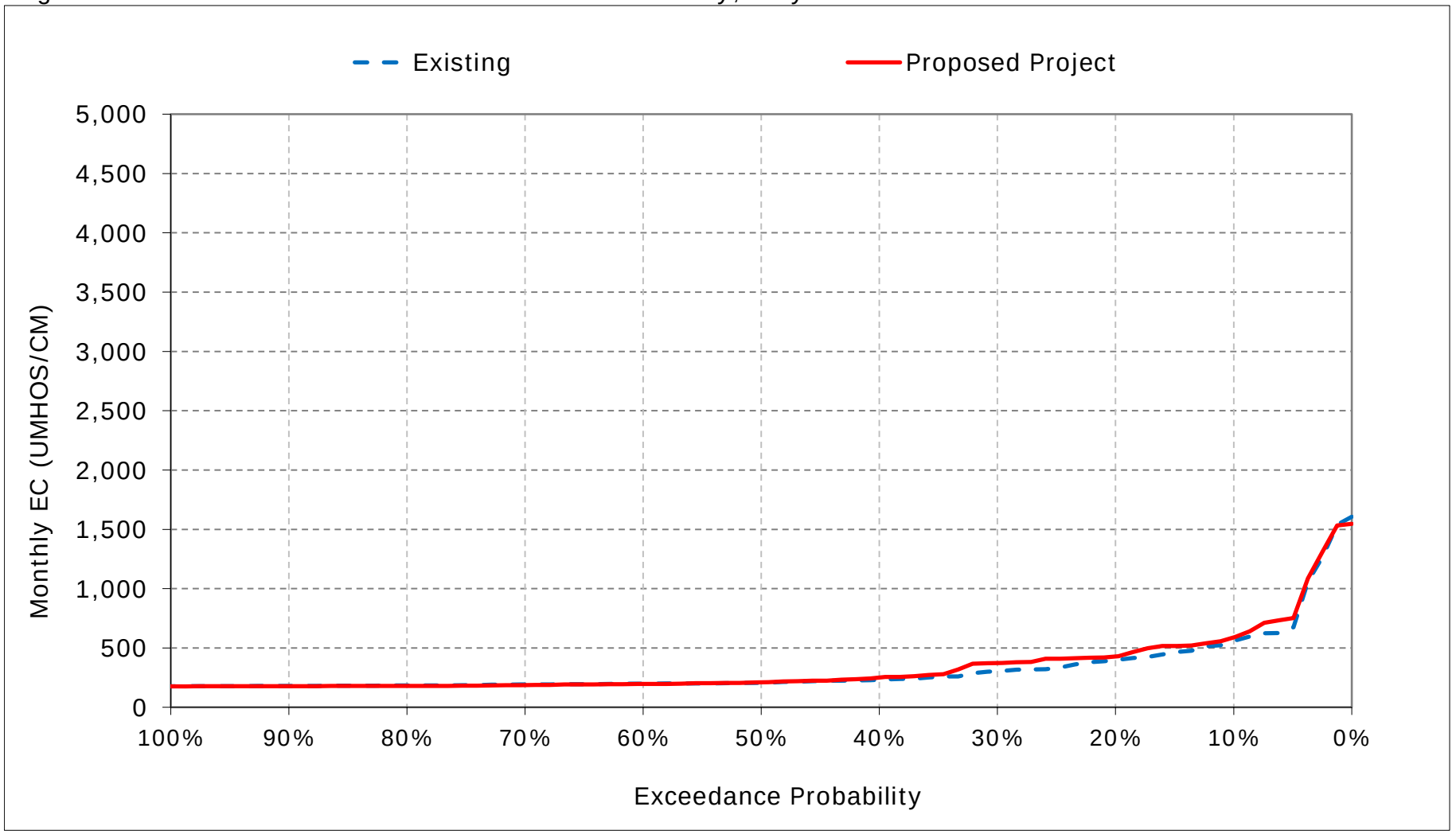


Figure 5-12. Sacramento River at Emmaton Salinity, June EC

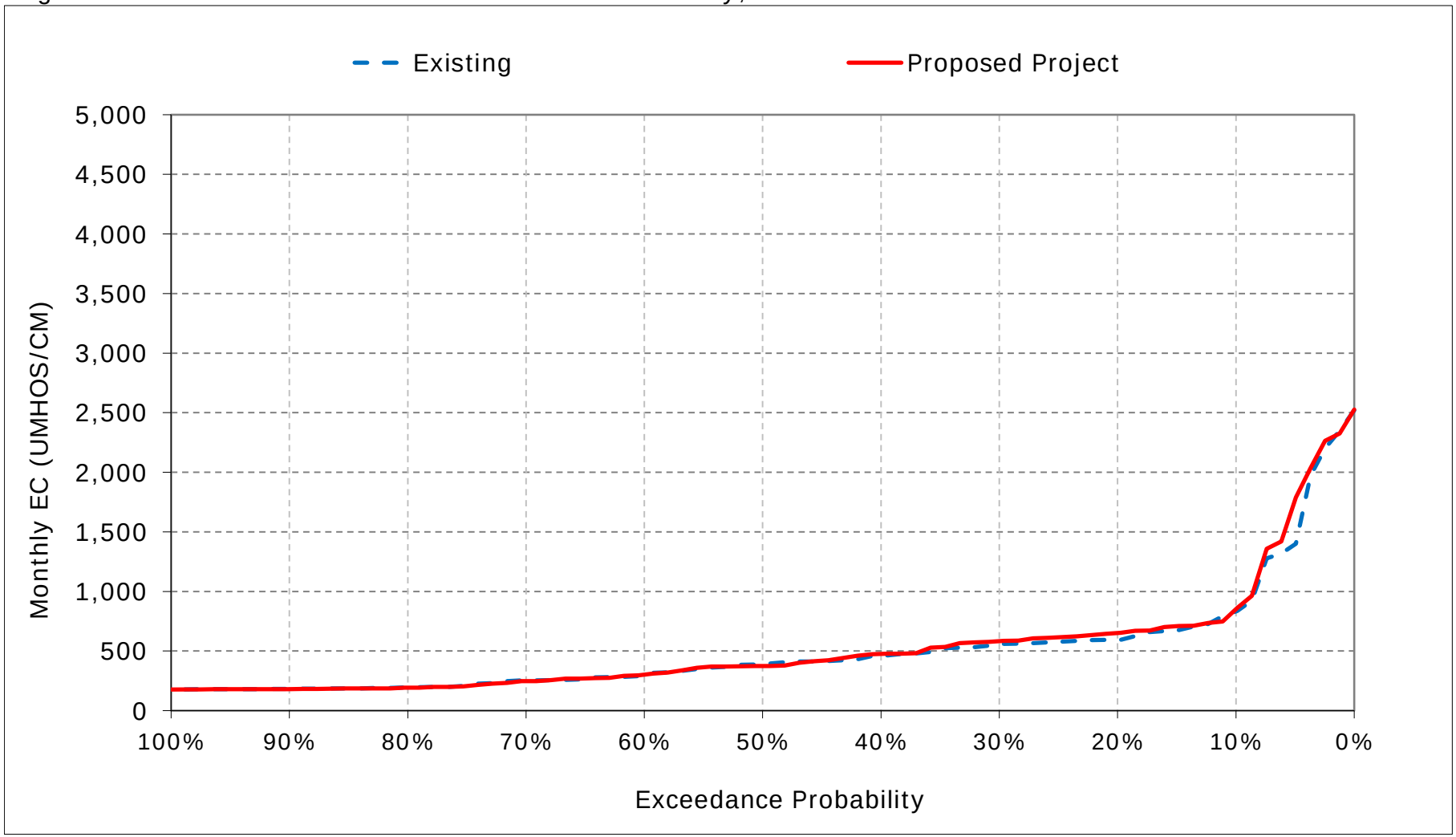


Figure 5-13. Sacramento River at Emmaton Salinity, July EC

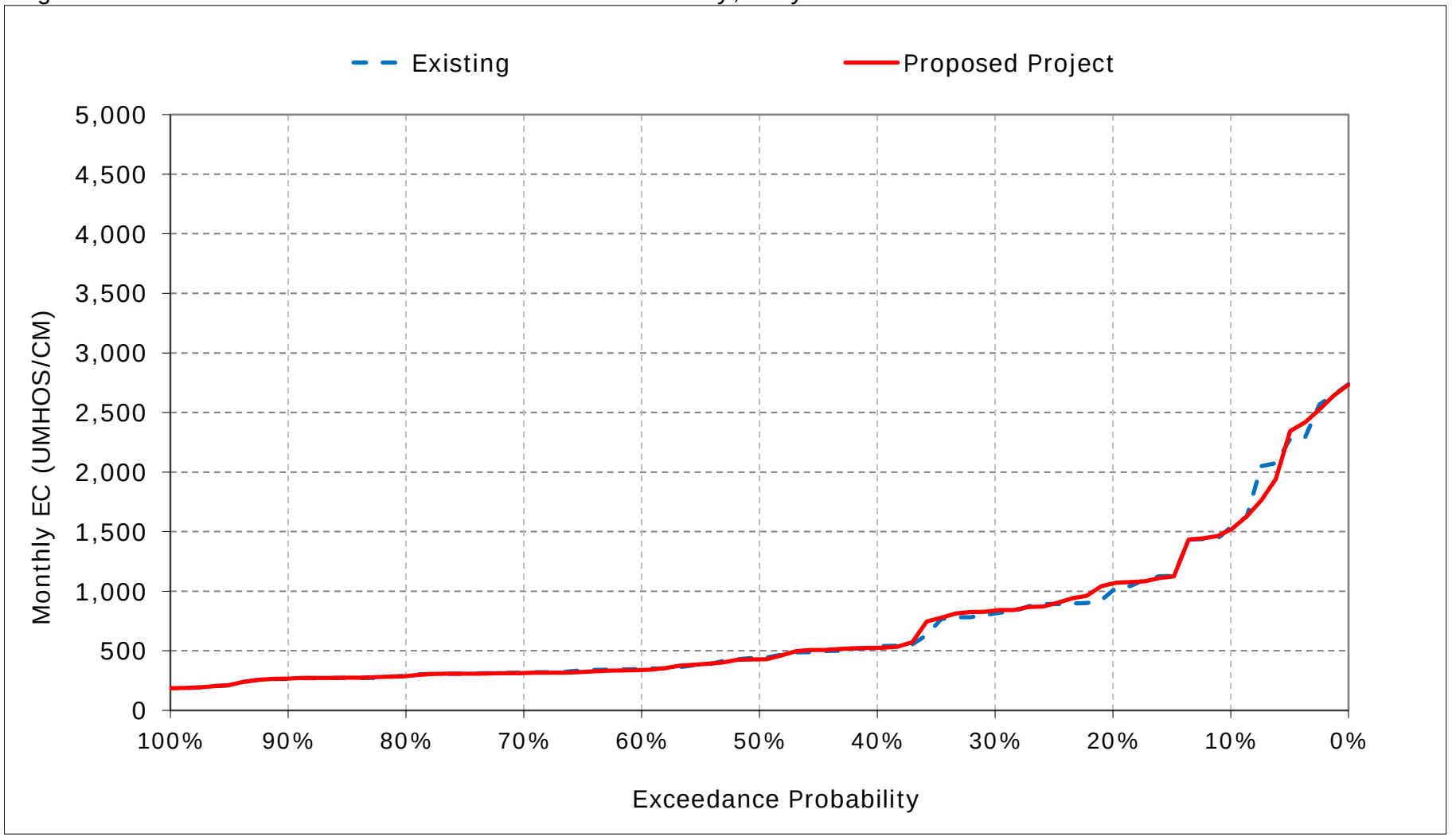


Figure 5-14. Sacramento River at Emmaton Salinity, August EC

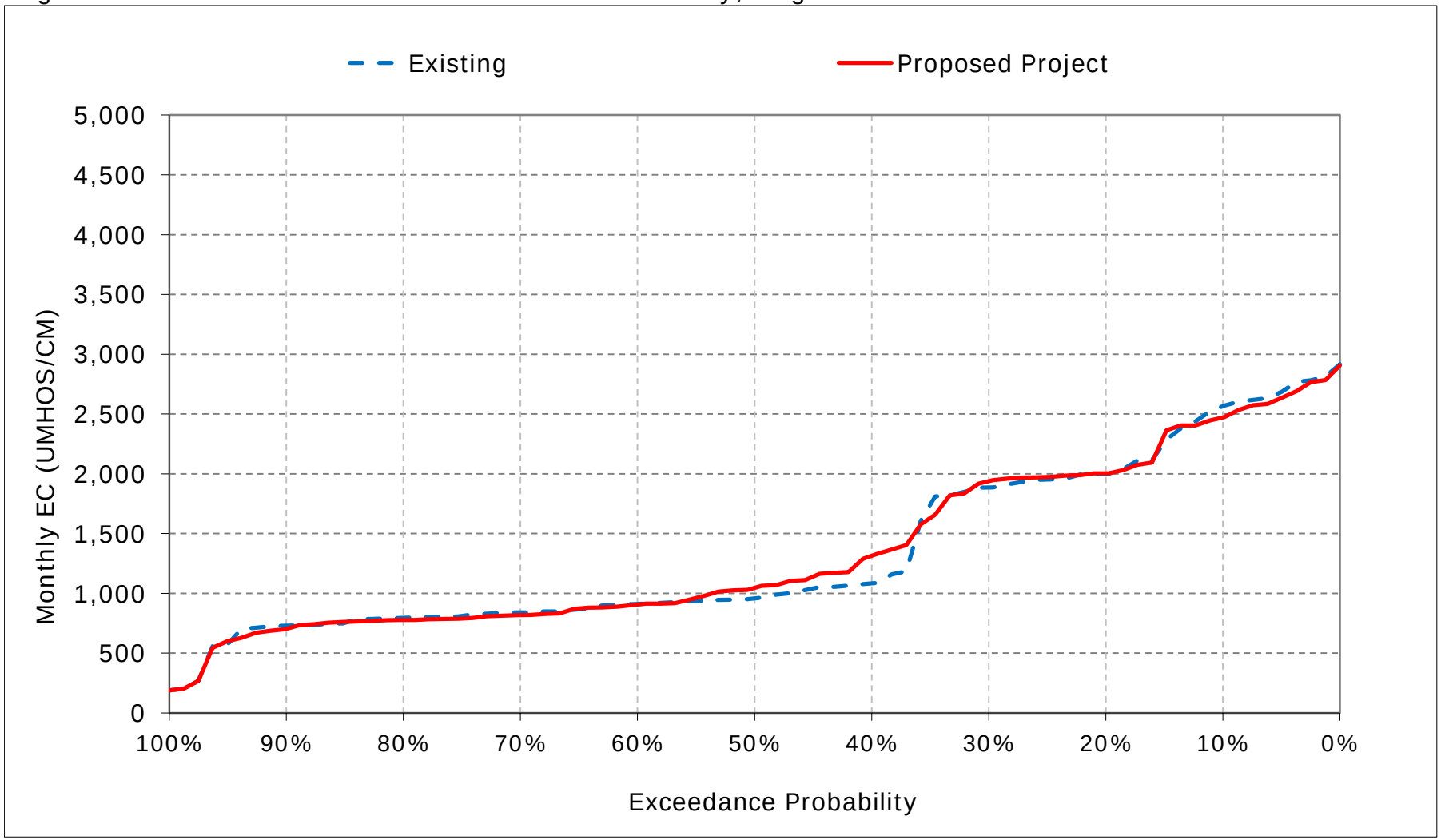


Figure 5-15. Sacramento River at Emmaton Salinity, September EC

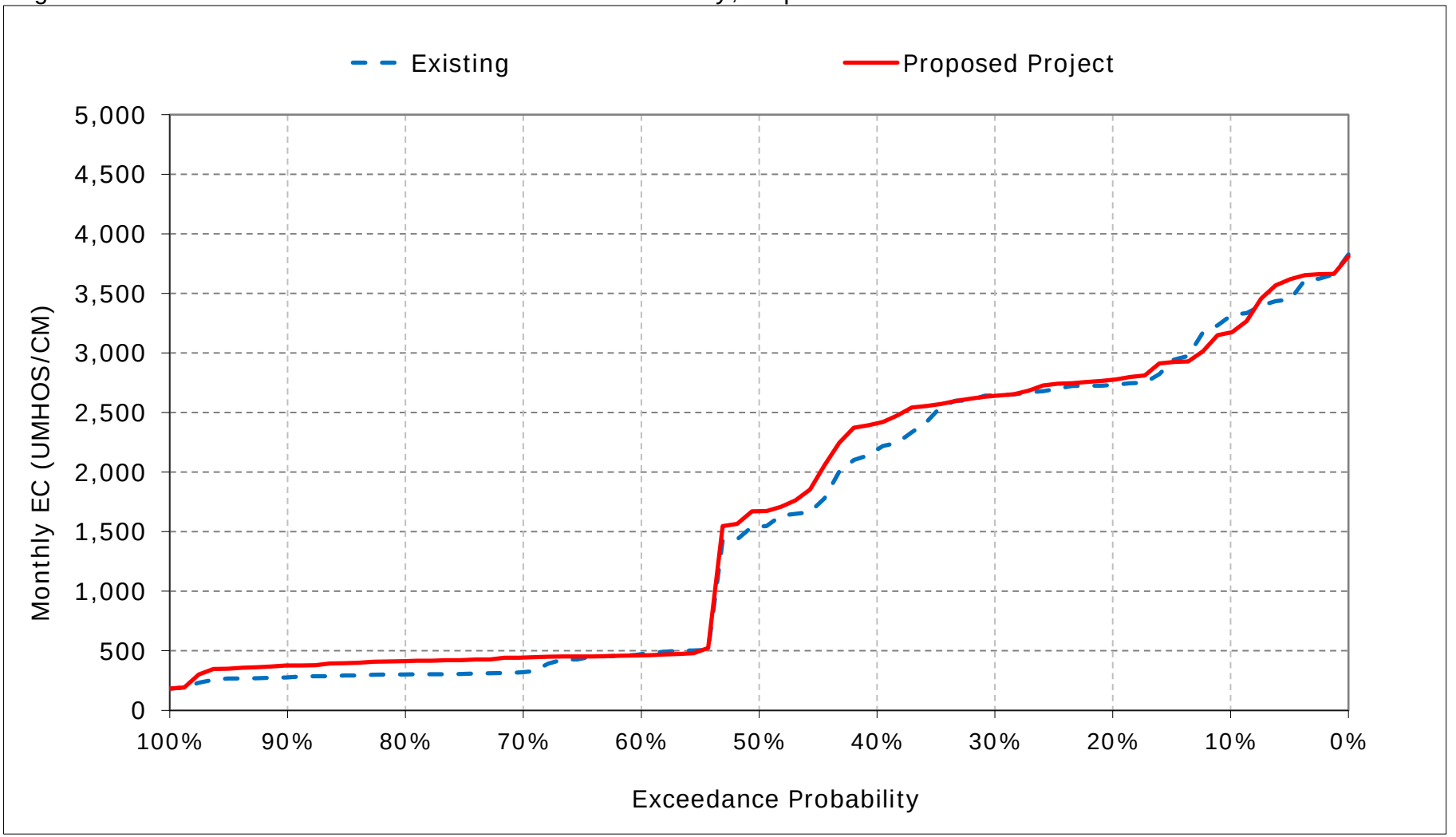


Figure 5-16. Sacramento River at Emmaton Salinity, October EC

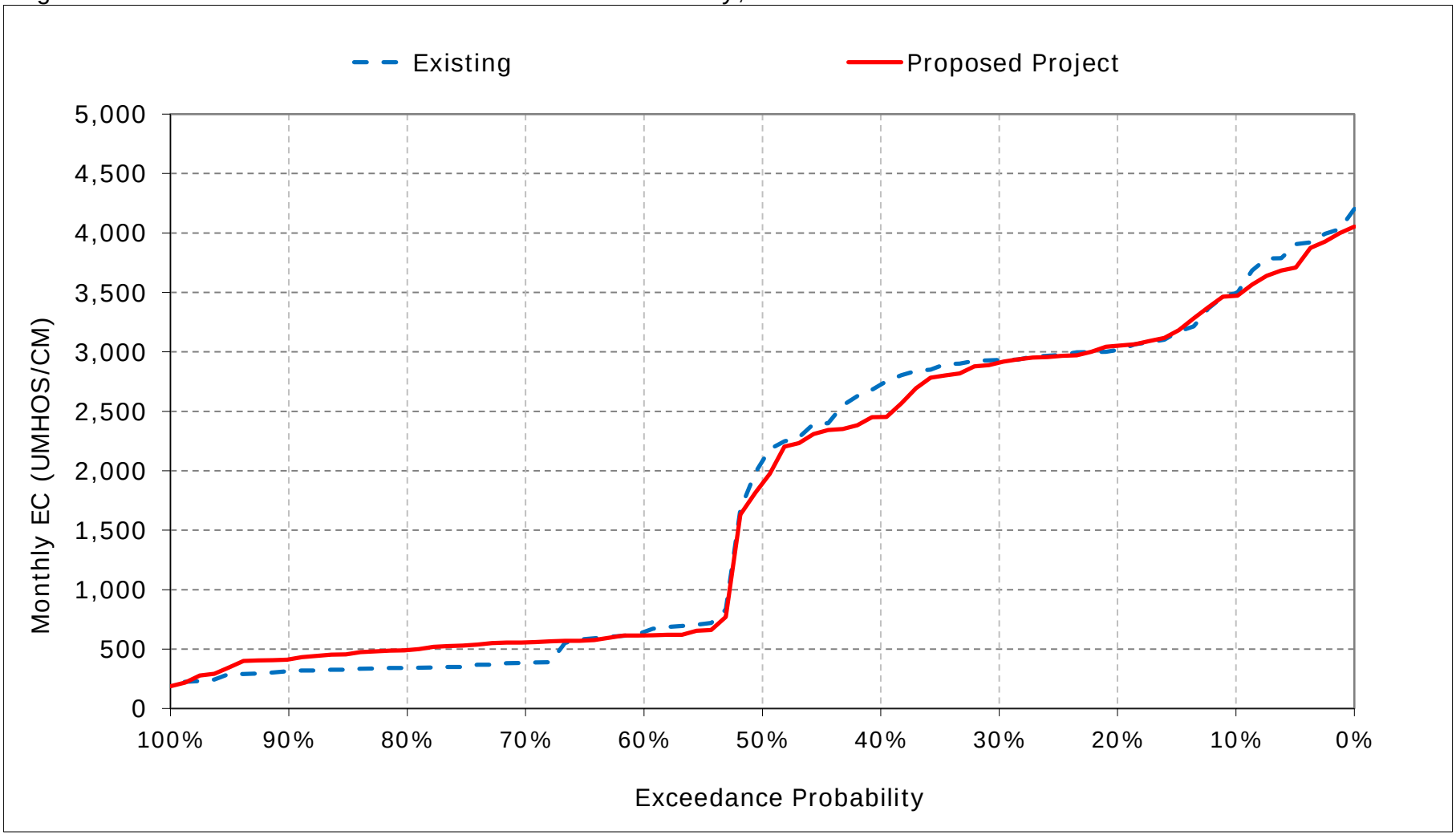


Figure 5-17. Sacramento River at Emmaton Salinity, November EC

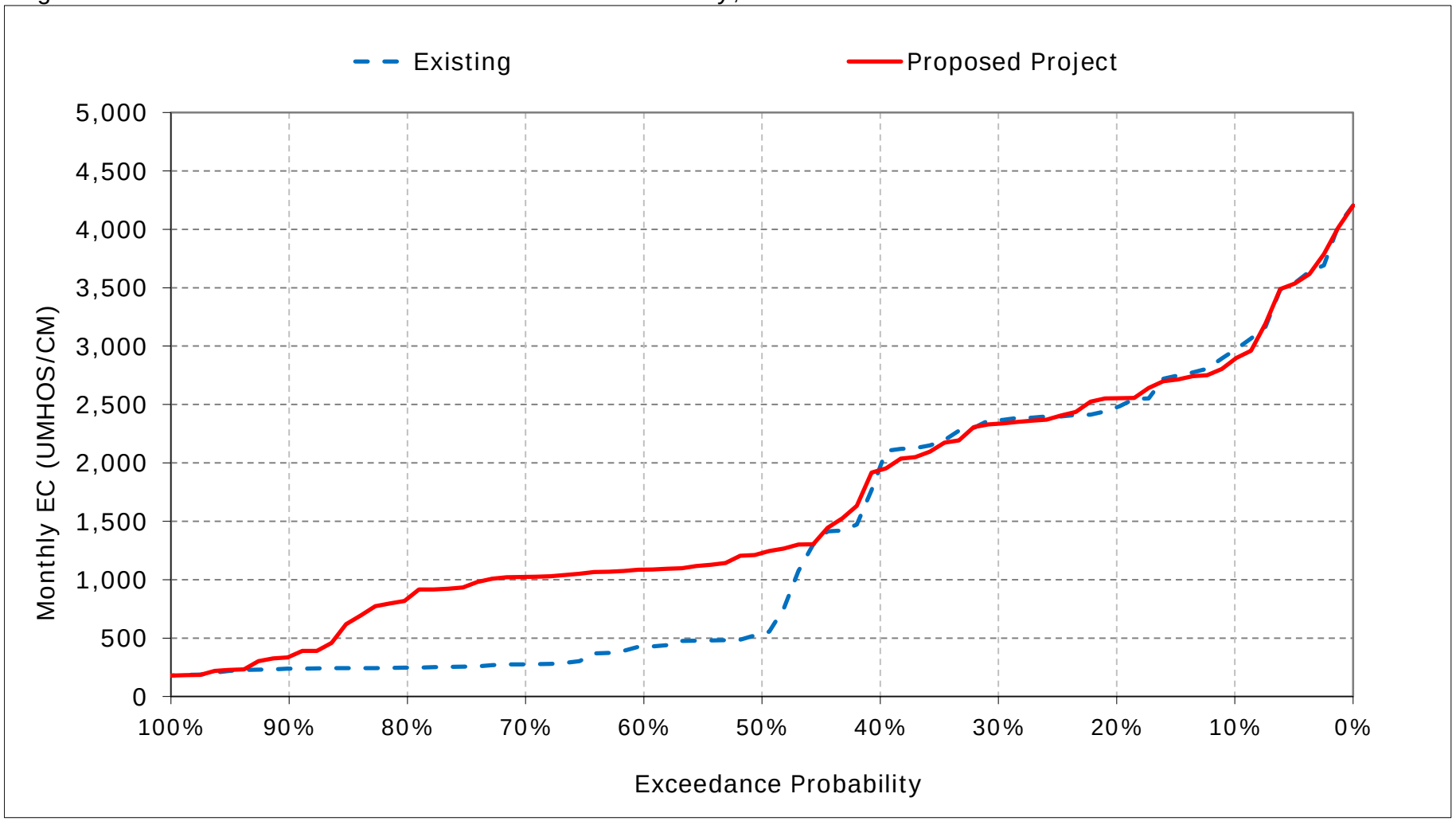


Figure 5-18. Sacramento River at Emmaton Salinity, December EC

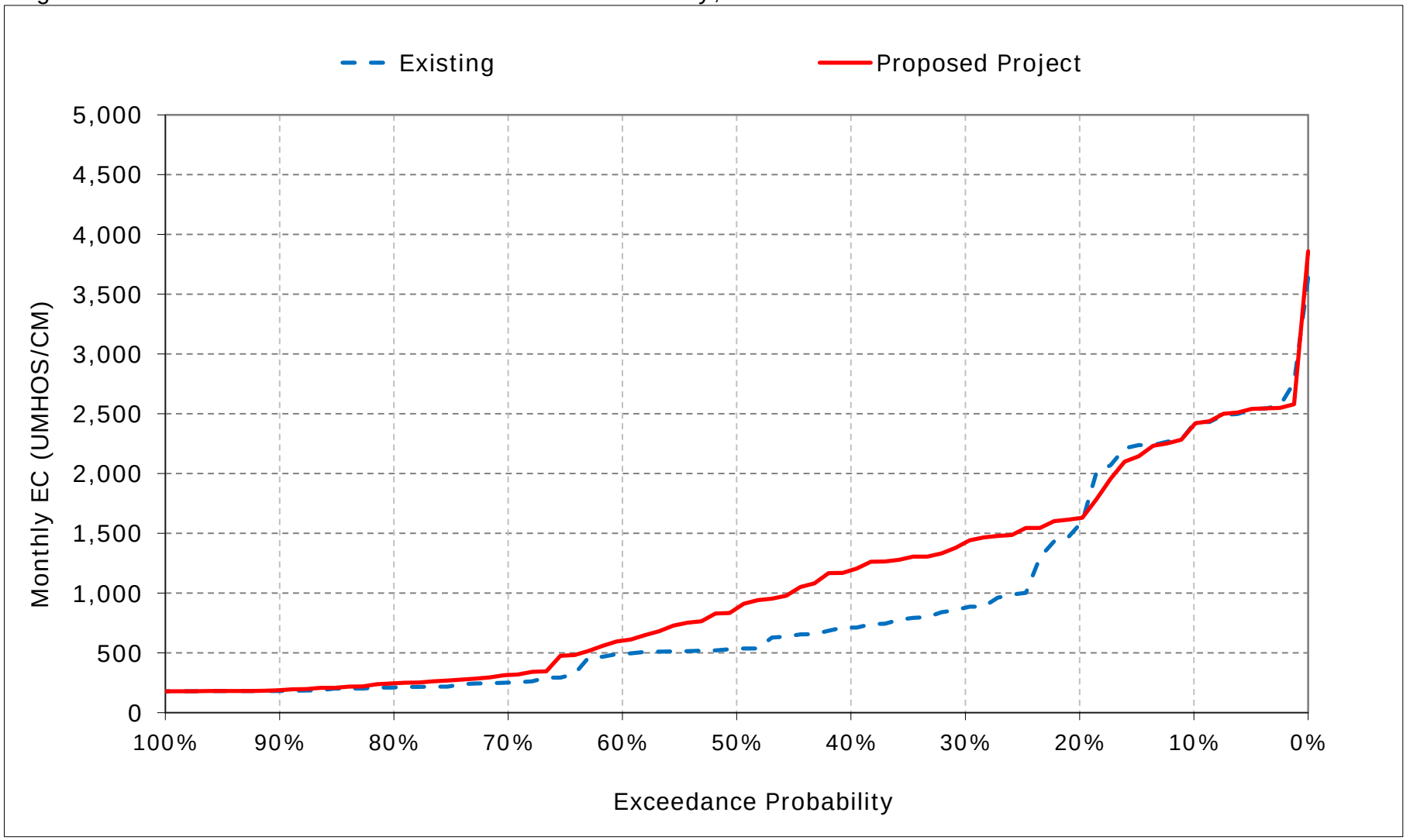


Table 6-1. Sacramento River at Collinsville Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	10,576	9,848	9,110	5,105	2,153	1,842	2,026	3,079	4,154	6,137	8,347	9,582
20%	9,842	9,273	7,373	4,259	1,341	965	1,027	2,112	3,307	5,010	7,170	8,936
30%	9,646	9,043	4,970	3,105	672	409	536	1,575	3,161	4,557	6,921	8,738
40%	9,323	8,431	4,102	1,656	393	313	407	851	2,547	3,240	5,285	7,855
50%	8,256	3,431	3,308	1,242	307	241	282	507	2,124	2,813	4,844	6,723
60%	3,721	2,939	3,073	649	215	209	221	349	1,490	2,140	4,720	2,769
70%	1,999	1,622	1,015	236	200	193	205	258	1,082	1,957	4,400	1,435
80%	1,856	1,375	518	205	192	189	195	200	468	1,696	4,159	1,261
90%	1,734	1,254	228	189	188	187	188	188	202	1,244	3,922	1,150
Long Term												
Full Simulation Period[a]	6,225	5,334	3,898	2,034	825	598	694	1,198	2,287	3,353	5,506	5,364
Water Year Types[b]												
Wet (32%)	4,702	3,187	1,148	404	202	200	220	295	726	1,457	3,869	1,153
Above Normal (15%)	6,525	5,298	3,716	1,157	344	206	239	342	1,446	1,943	4,256	2,698
Below Normal (17%)	6,541	5,825	5,091	2,147	511	414	447	787	2,047	3,006	5,064	7,241
Dry (22%)	6,655	6,322	4,797	3,160	1,238	759	877	1,623	3,094	4,725	7,025	8,834
Critical (15%)	8,210	7,970	7,294	4,624	2,401	1,826	2,188	3,854	5,577	7,217	8,538	9,762

Proposed Project

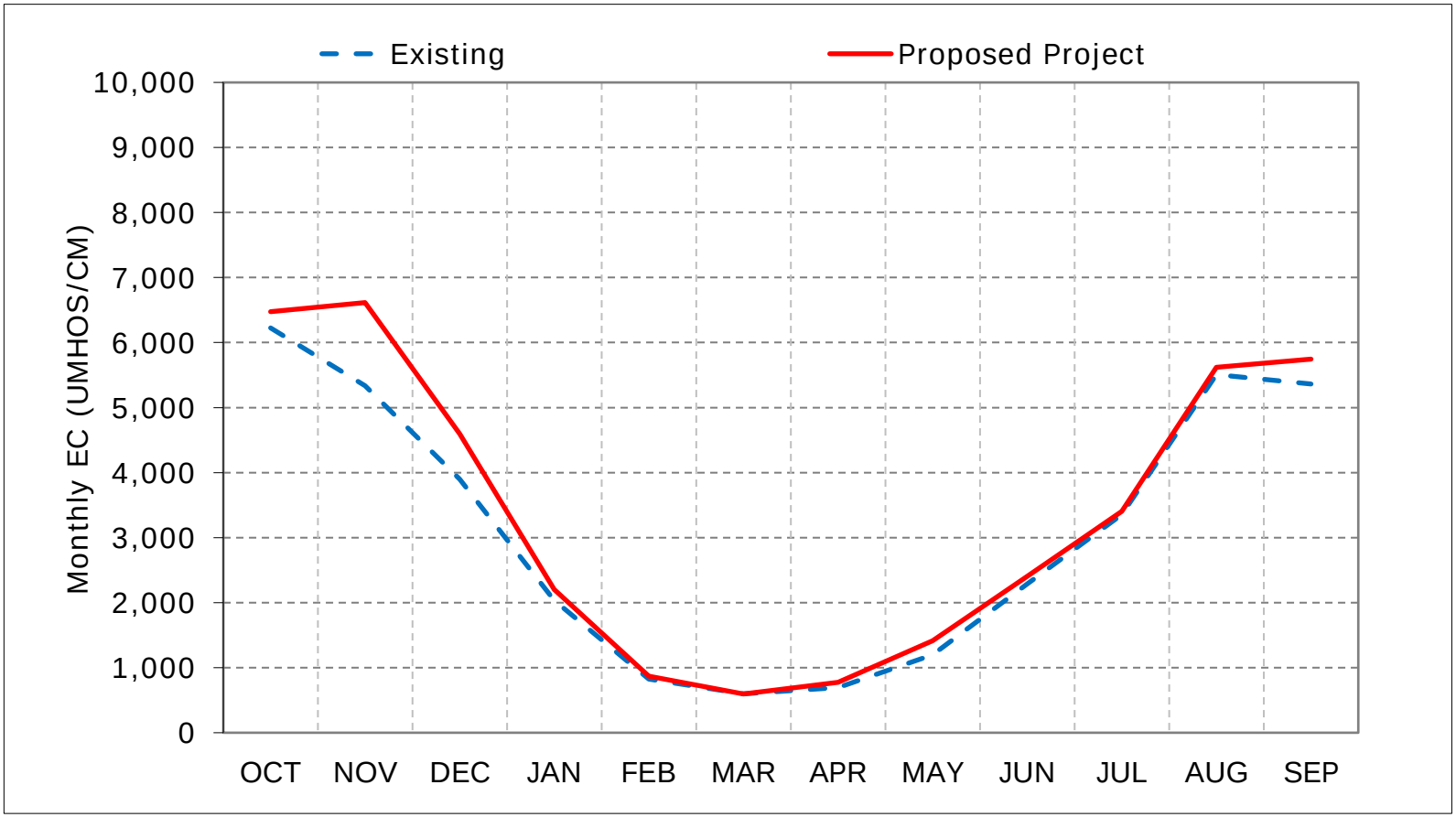
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	10,439	9,621	9,107	5,883	2,047	1,861	2,202	3,282	4,219	6,086	8,218	9,547
20%	9,793	9,299	7,403	4,723	1,312	896	1,291	2,579	3,594	5,118	7,184	8,992
30%	9,615	9,068	6,897	3,477	690	366	719	2,184	3,262	4,508	6,964	8,759
40%	8,944	8,377	6,353	1,821	378	289	513	1,187	2,832	3,513	6,273	8,297
50%	7,945	6,073	5,110	1,210	314	229	343	753	2,148	2,980	5,421	6,850
60%	3,501	5,702	3,633	590	215	206	229	547	1,722	2,104	4,669	2,638
70%	3,281	5,530	1,351	240	199	194	209	332	1,261	1,929	4,375	2,518
80%	3,097	4,846	855	201	193	189	191	199	484	1,721	4,096	2,358
90%	2,779	2,000	297	189	188	187	186	183	201	1,248	3,877	2,114
Long Term												
Full Simulation Period[a]	6,476	6,615	4,596	2,202	868	596	775	1,413	2,405	3,404	5,618	5,744
Water Year Types[b]												
Wet (32%)	5,073	4,815	1,527	399	199	198	244	400	834	1,462	3,785	2,222
Above Normal (15%)	6,786	6,662	4,783	1,266	285	203	275	508	1,497	1,905	4,284	2,443
Below Normal (17%)	6,811	7,029	5,973	2,194	489	395	554	1,084	2,123	3,246	5,806	7,611
Dry (22%)	6,954	7,488	5,682	3,544	1,343	737	1,021	1,983	3,283	4,794	7,073	8,879
Critical (15%)	8,096	8,673	7,822	5,044	2,628	1,874	2,315	4,040	5,727	7,211	8,519	9,796

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-138	-228	-3	778	-106	20	176	203	65	-51	-129	-35
20%	-48	26	29	464	-29	-68	264	467	287	108	14	57
30%	-31	24	1,928	372	18	-43	183	610	101	-49	43	21
40%	-379	-54	2,251	165	-14	-23	105	336	285	273	988	442
50%	-311	2,642	1,802	-32	7	-13	61	246	25	167	577	127
60%	-219	2,764	561	-59	0	-4	7	198	232	-36	-51	-131
70%	1,282	3,909	336	5	-1	1	3	74	179	-28	-25	1,083
80%	1,241	3,471	337	-4	0	0	-4	-1	16	25	-63	1,097
90%	1,046	746	70	0	1	1	-2	-5	-1	4	-46	965
Long Term												
Full Simulation Period[a]	251	1,280	699	168	43	-2	81	215	118	51	112	380
Water Year Types[b]												
Wet (32%)	371	1,628	379	-5	-3	-2	24	104	108	5	-84	1,069
Above Normal (15%)	261	1,364	1,067	109	-58	-3	36	166	51	-39	28	-255
Below Normal (17%)	270	1,204	882	47	-22	-19	107	297	76	240	742	370
Dry (22%)	299	1,166	885	384	105	-22	145	360	189	69	49	45
Critical (15%)	-114	703	528	420	227	48	126	186	151	-6	-19	33

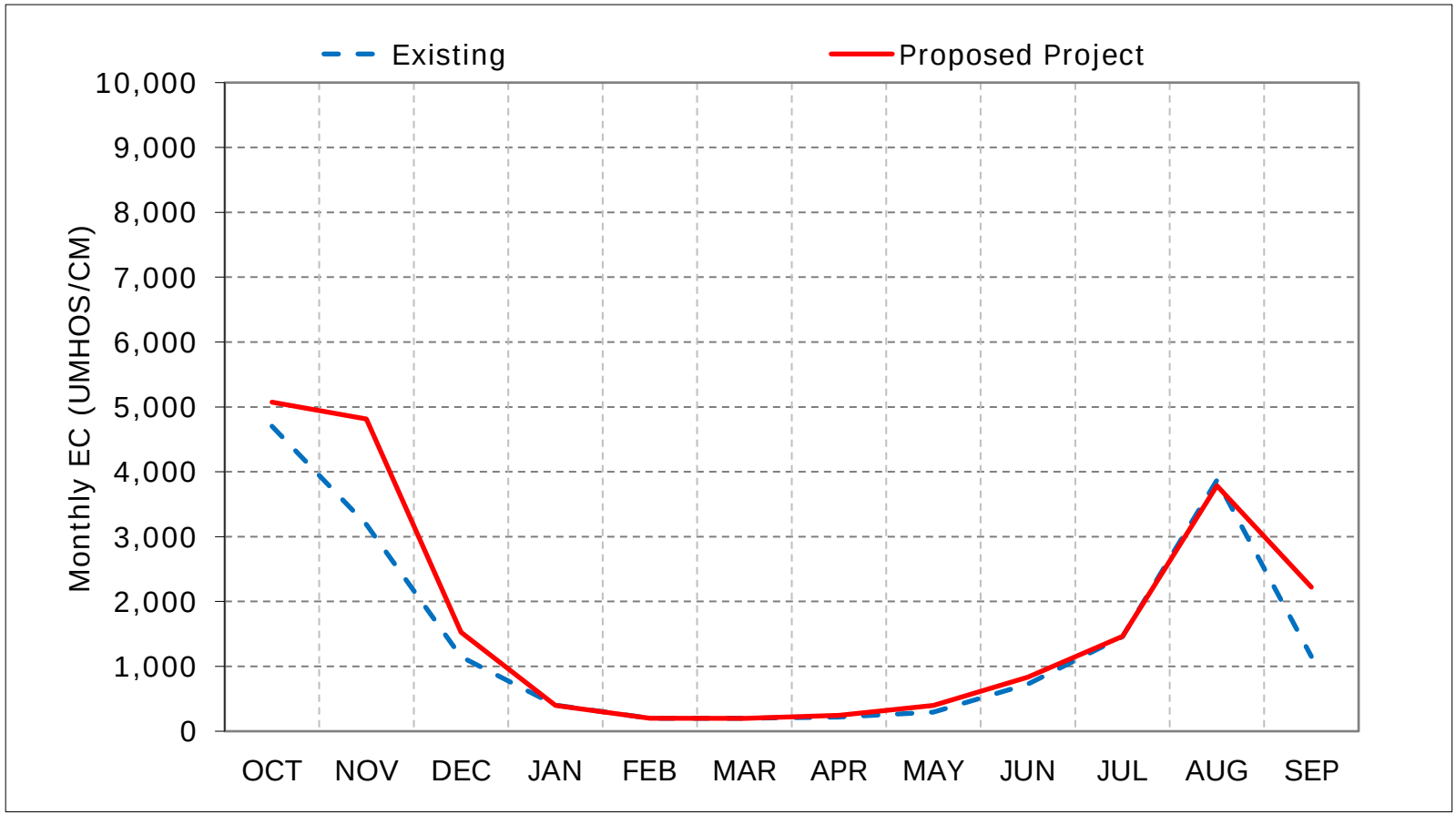
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 6-1. Sacramento River at Collinsville Salinity, Long-Term Average EC



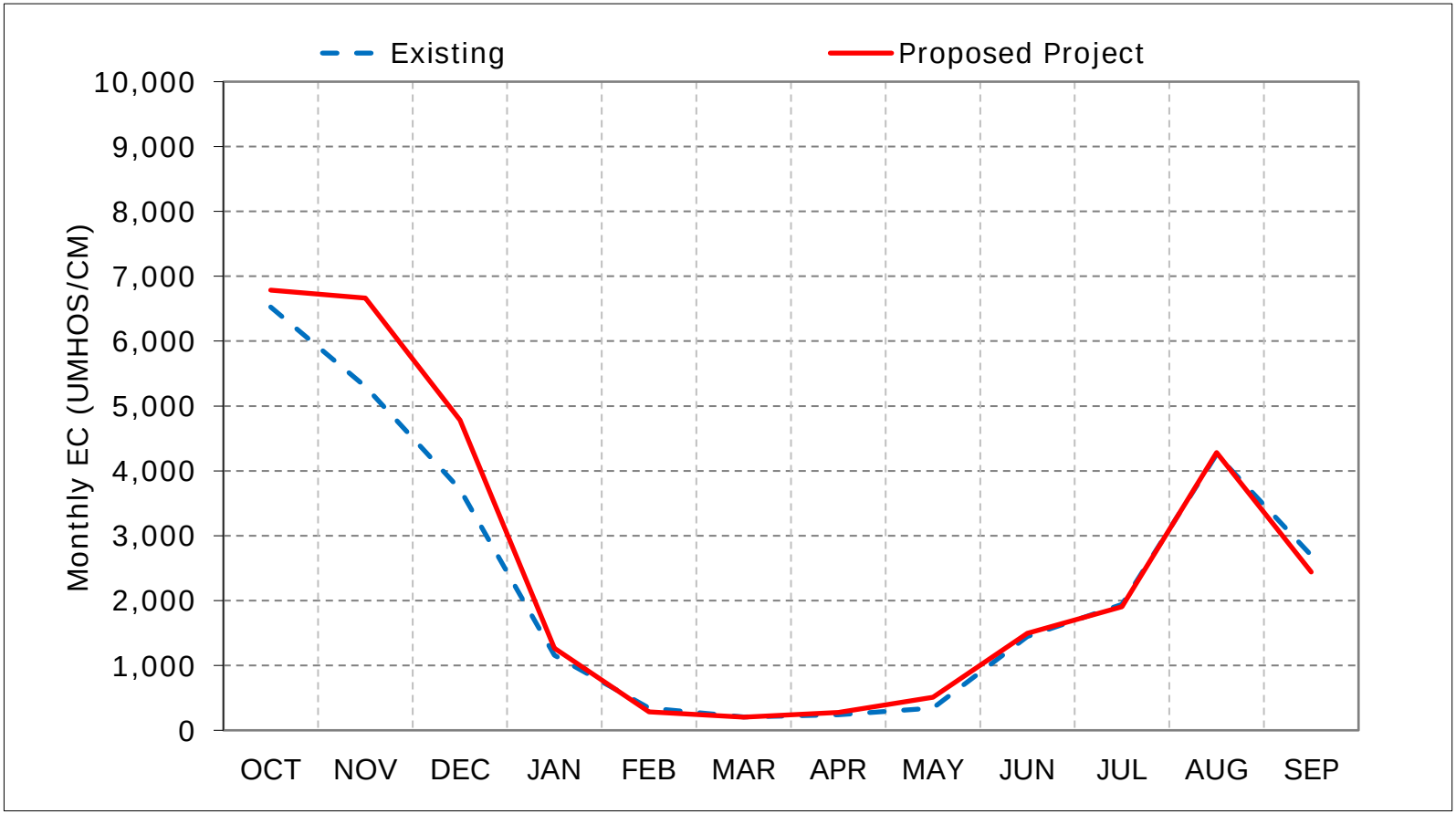
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 6-2. Sacramento River at Collinsville Salinity, Wet Year Average EC



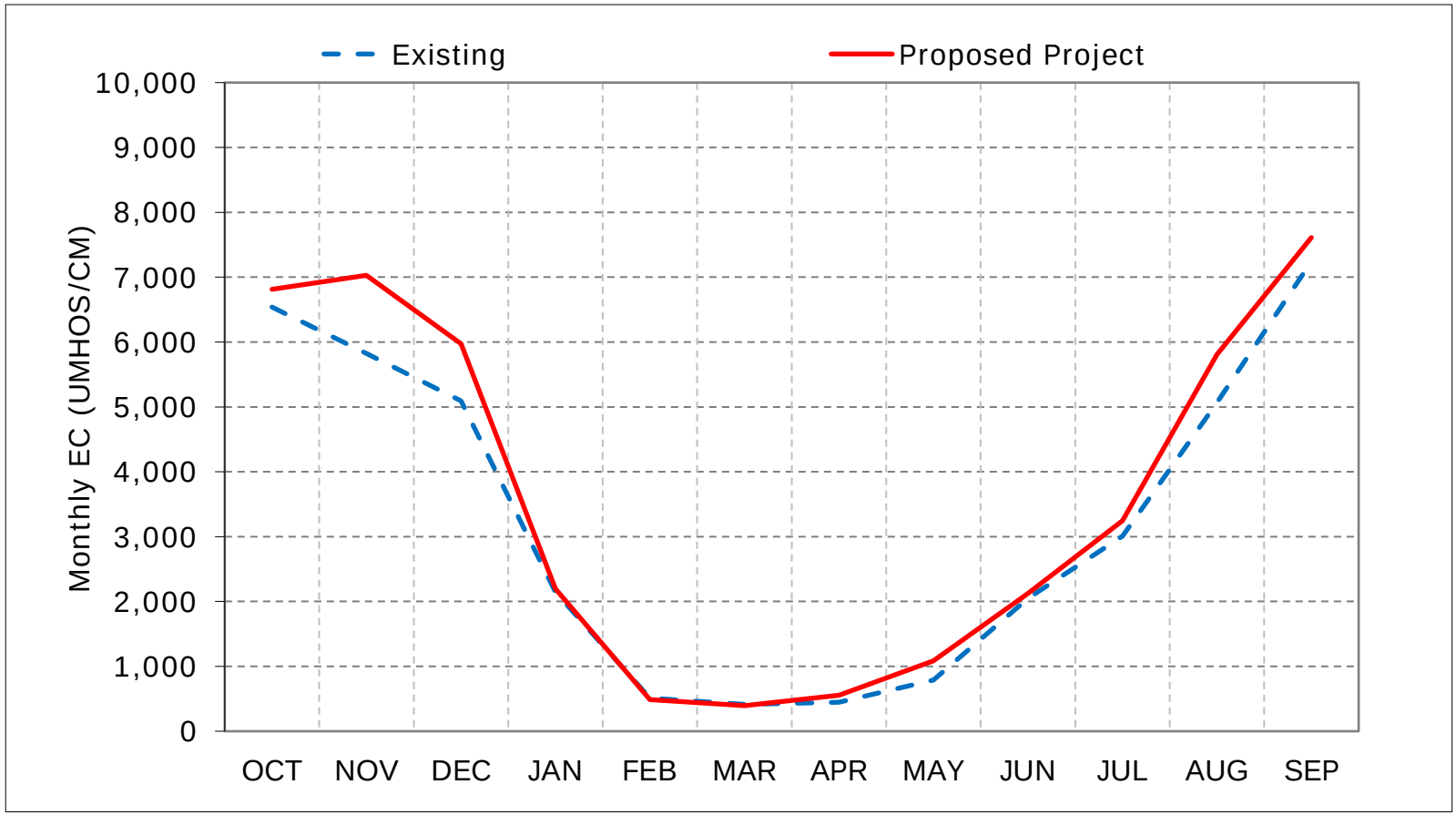
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 6-3. Sacramento River at Collinsville Salinity, Above Normal Year Average E



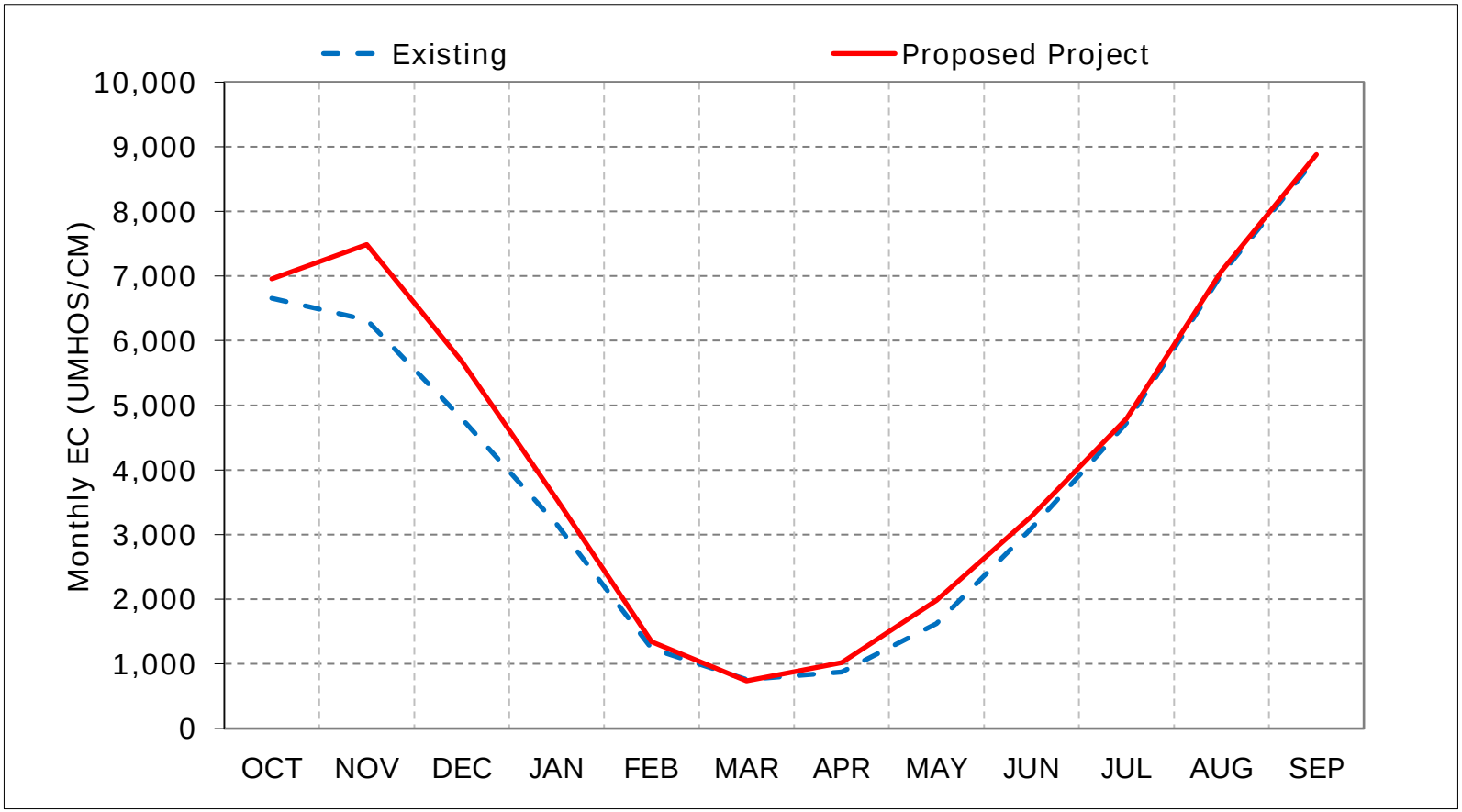
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 6-4. Sacramento River at Collinsville Salinity, Below Normal Year Average E



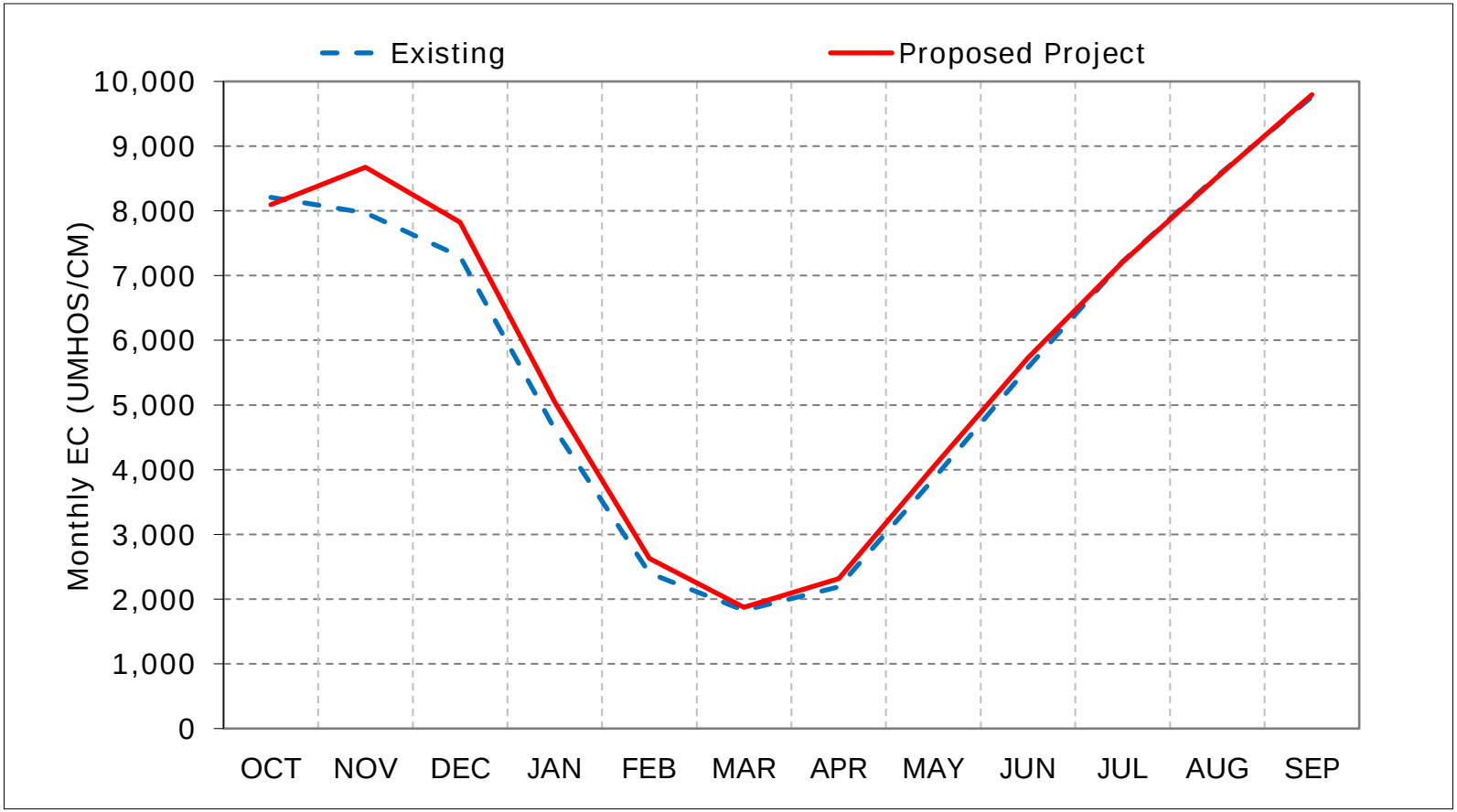
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 6-5. Sacramento River at Collinsville Salinity, Dry Year Average EC



*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.

Figure 6-6. Sacramento River at Collinsville Salinity, Critical Year Average EC



*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.

Figure 6-7. Sacramento River at Collinsville Salinity, January EC

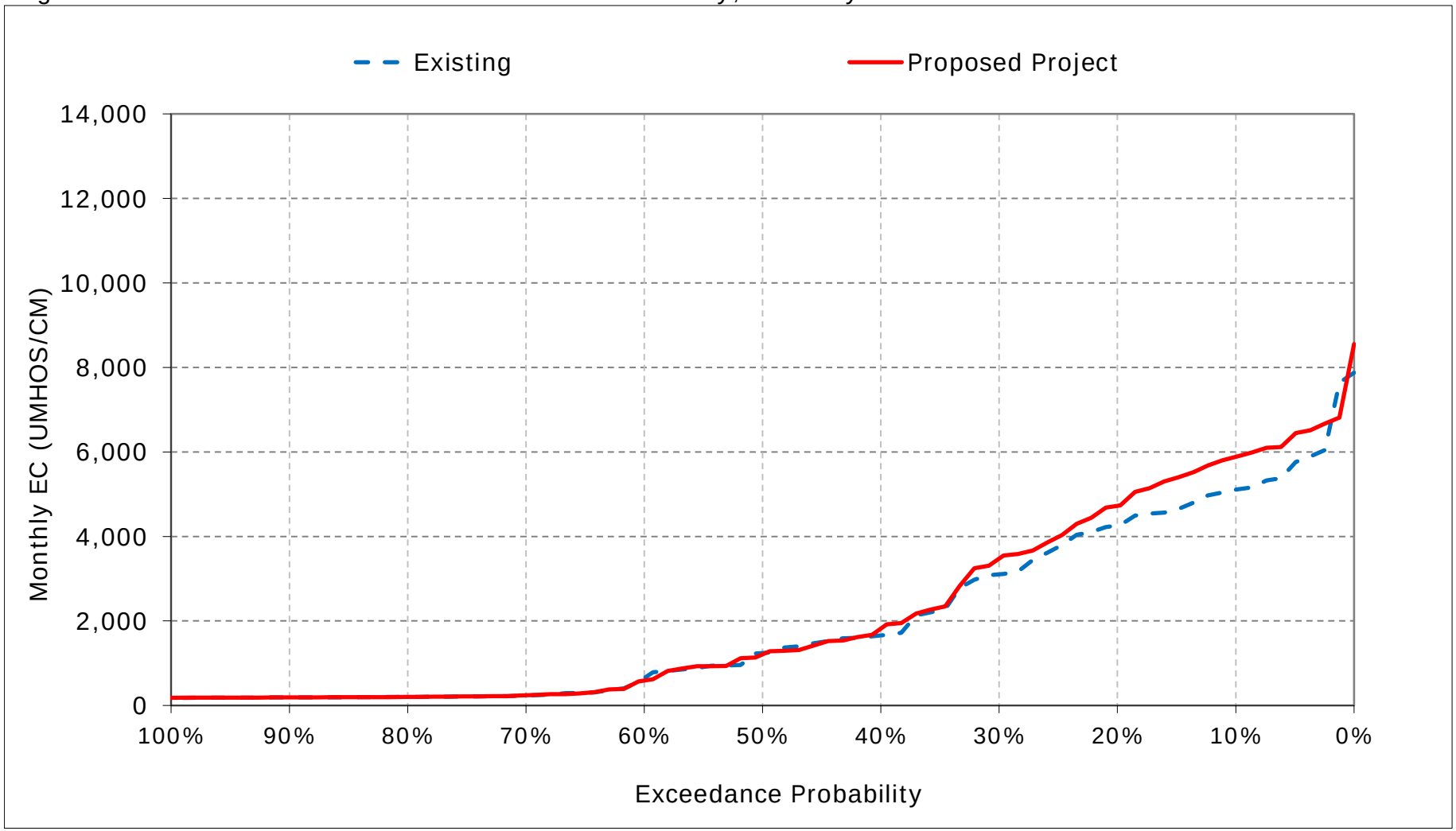


Figure 6-8. Sacramento River at Collinsville Salinity, February EC

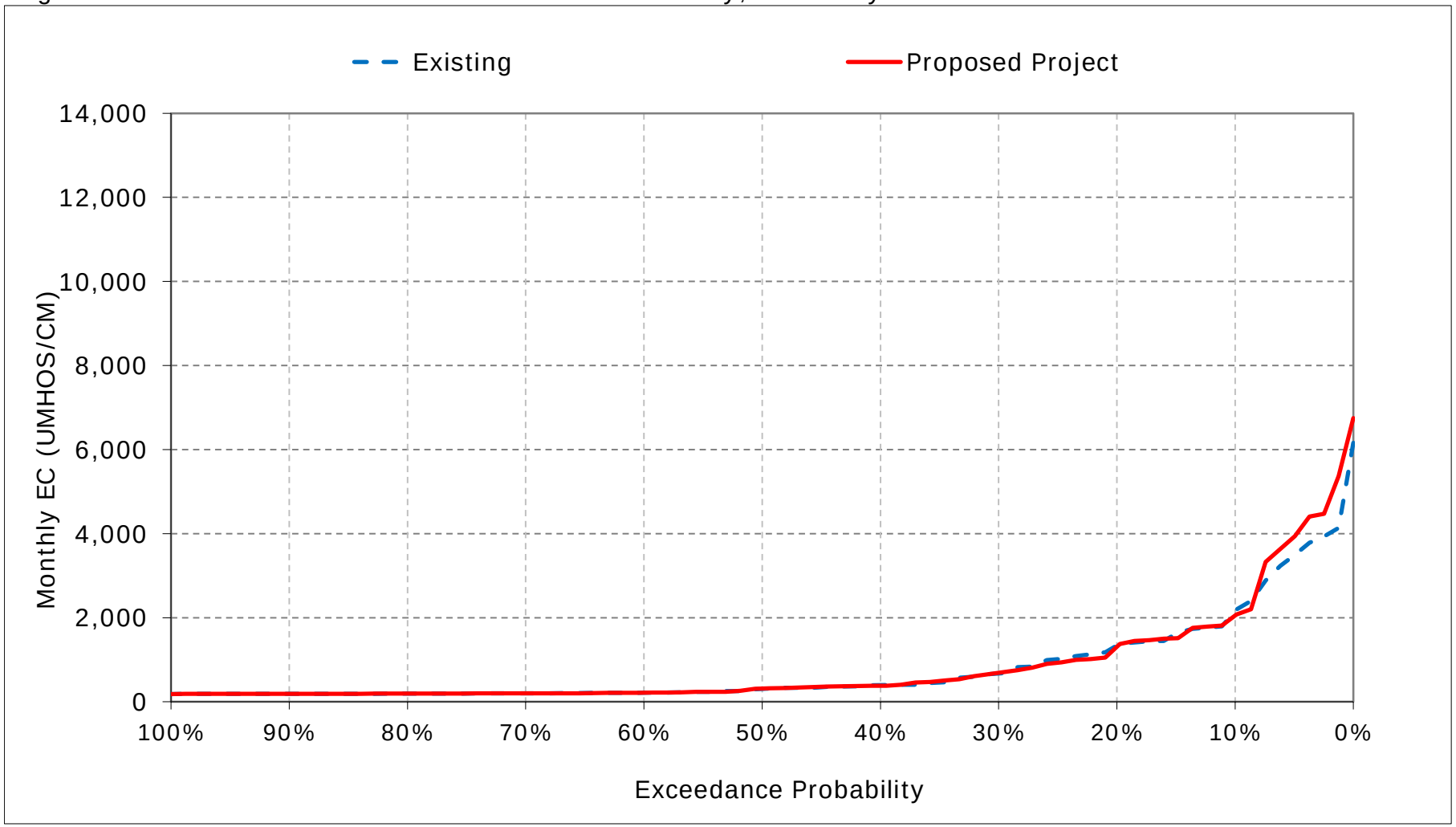


Figure 6-9. Sacramento River at Collinsville Salinity, March EC

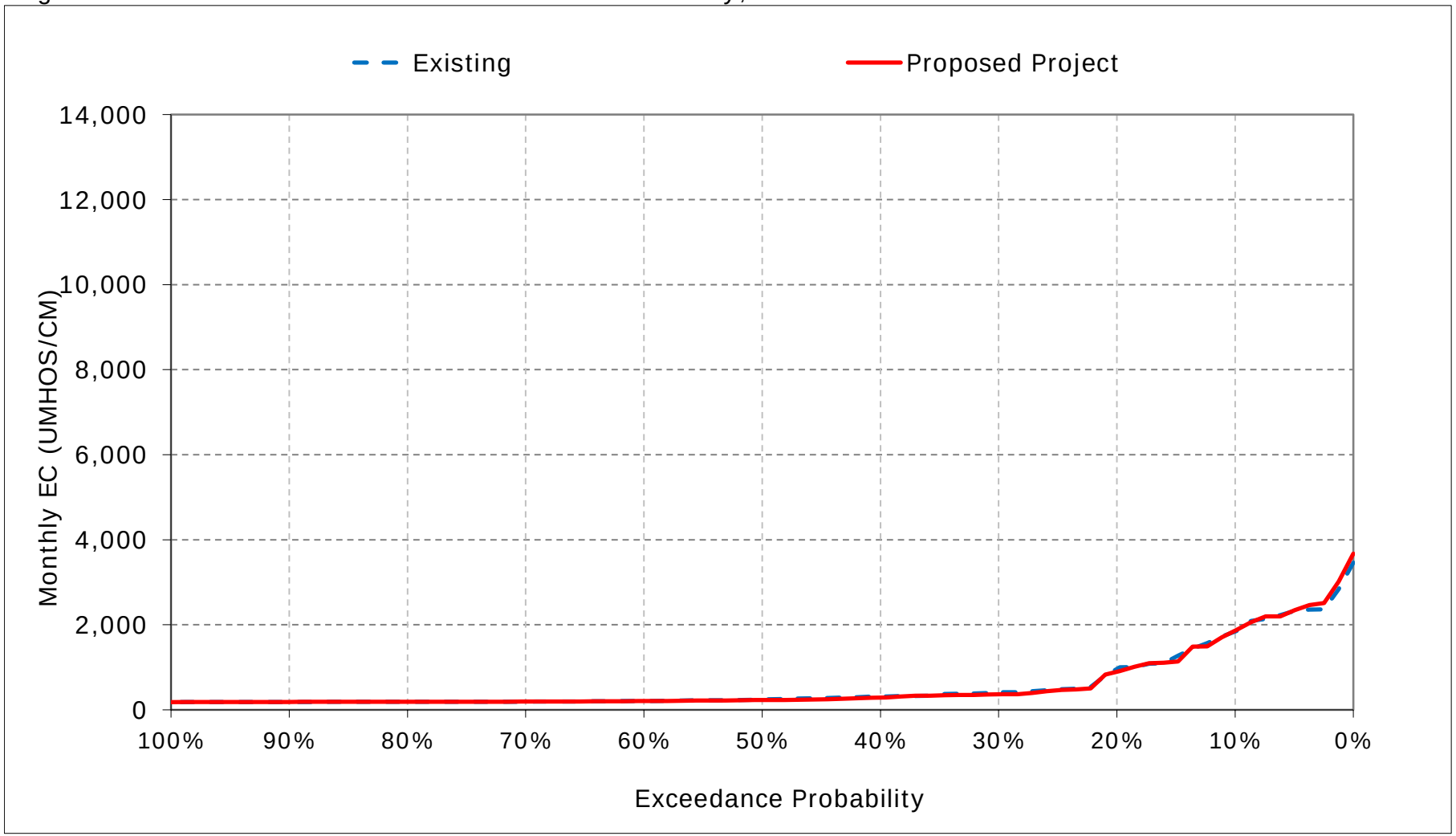


Figure 6-10. Sacramento River at Collinsville Salinity, April EC

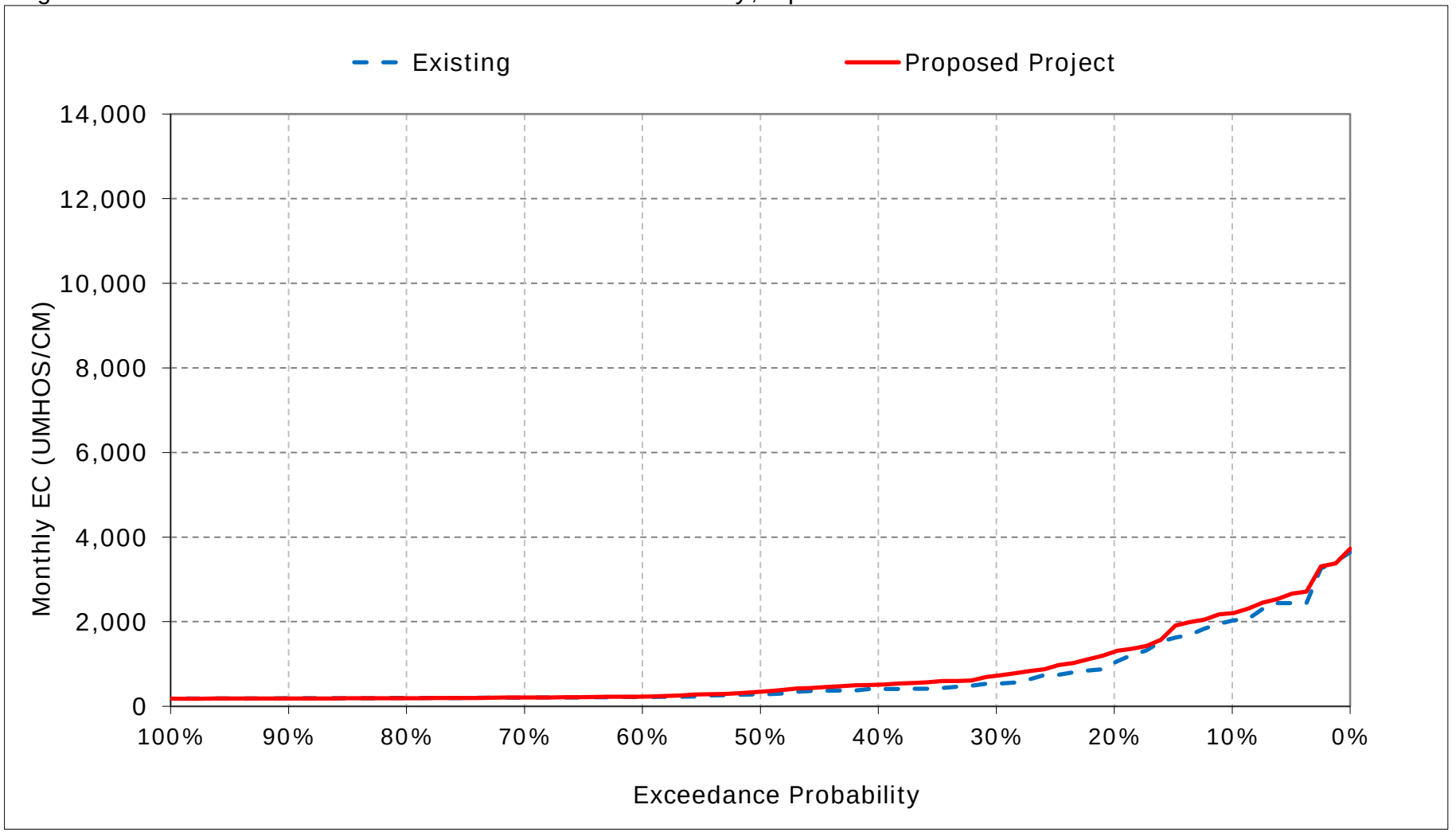


Figure 6-11. Sacramento River at Collinsville Salinity, May EC

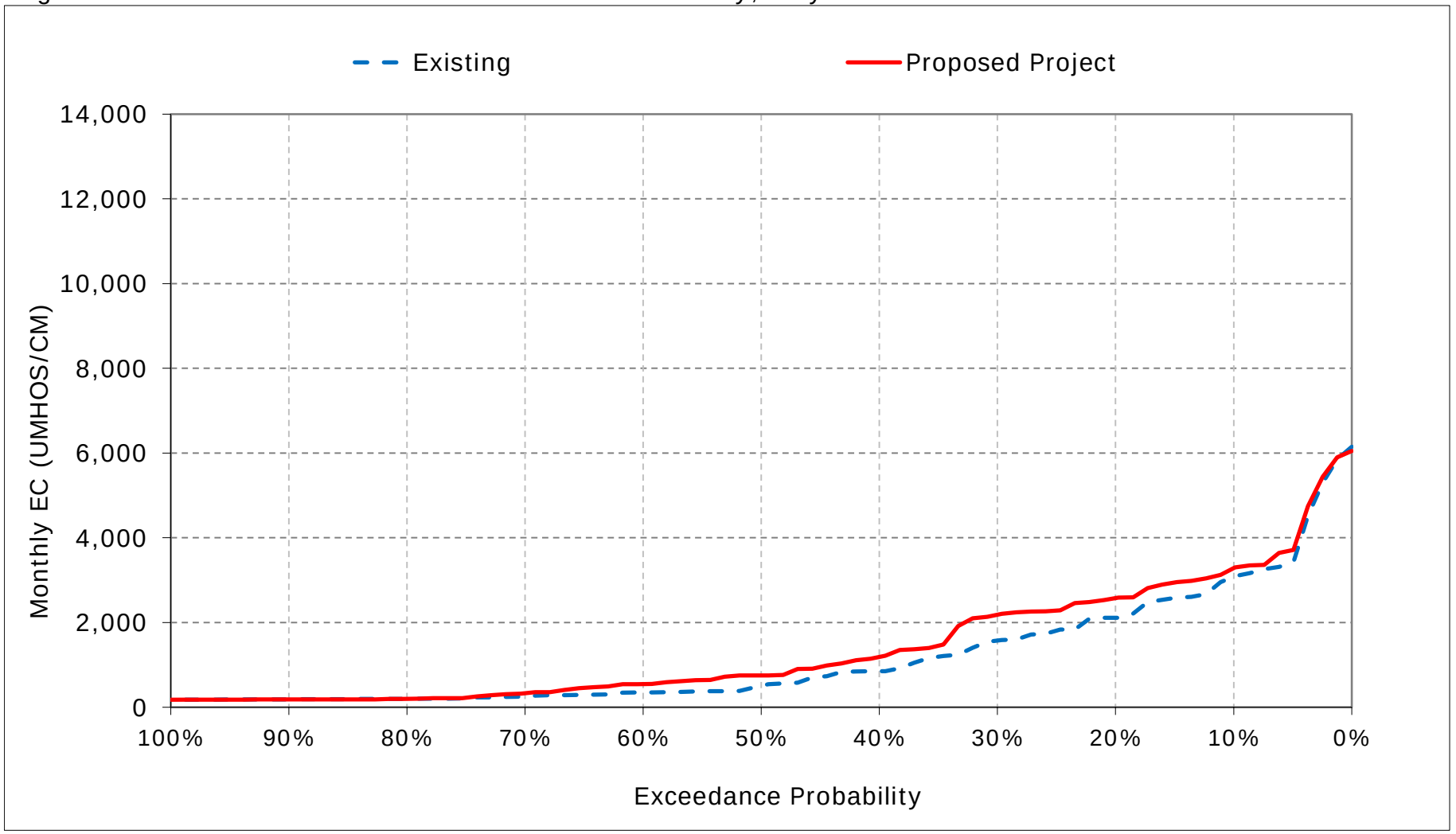


Figure 6-12. Sacramento River at Collinsville Salinity, June EC

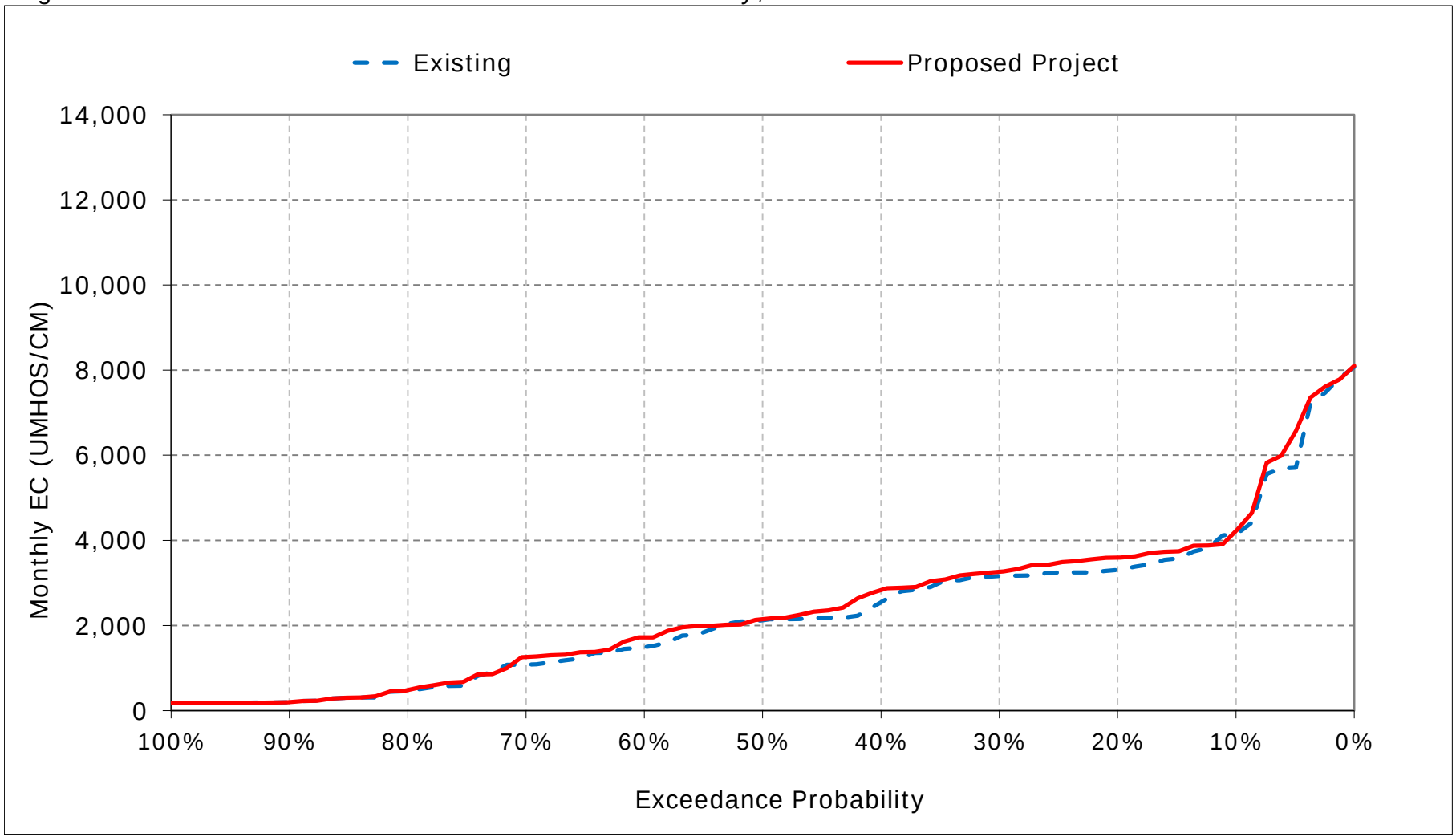


Figure 6-13. Sacramento River at Collinsville Salinity, July EC

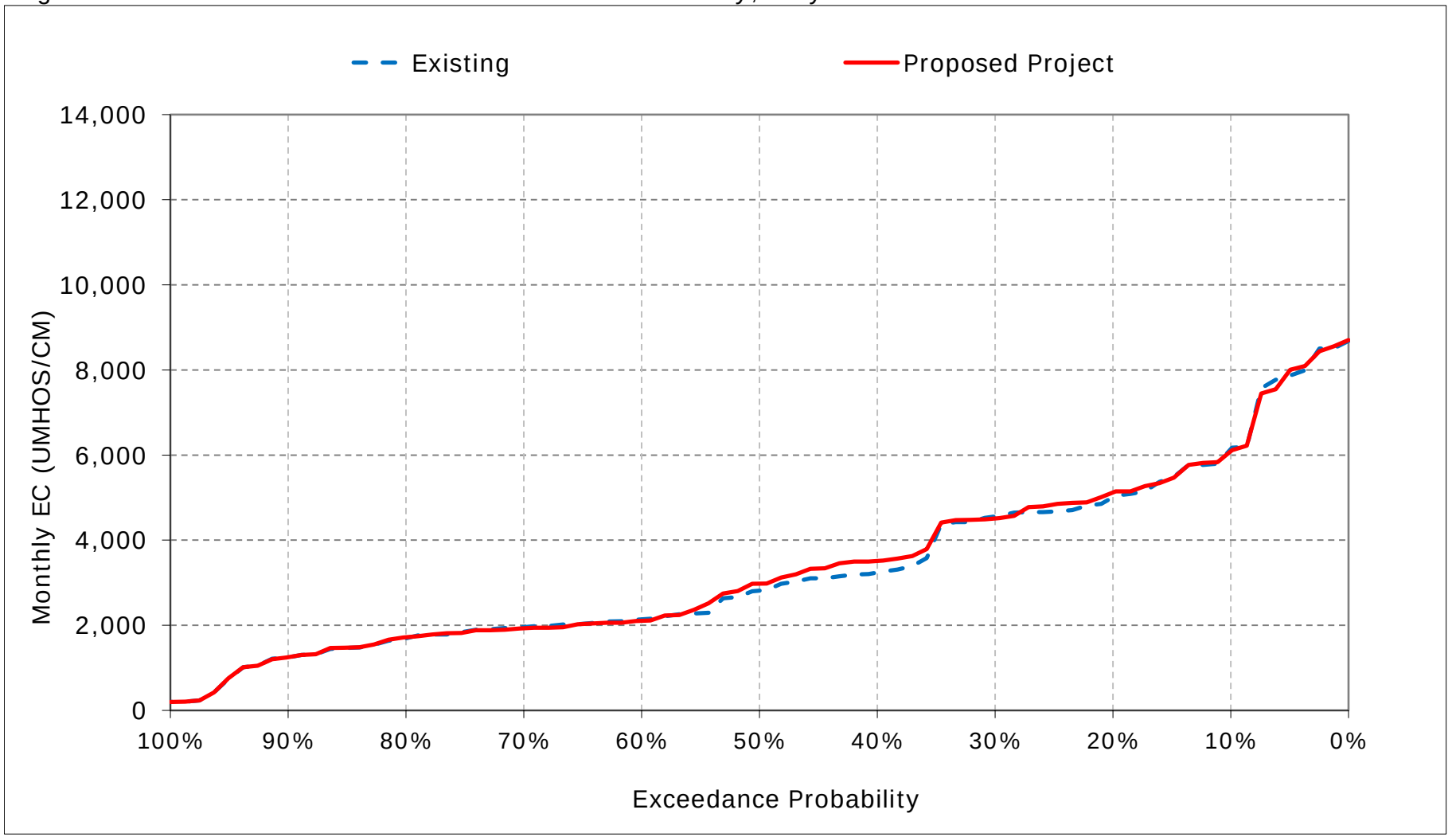


Figure 6-14. Sacramento River at Collinsville Salinity, August EC

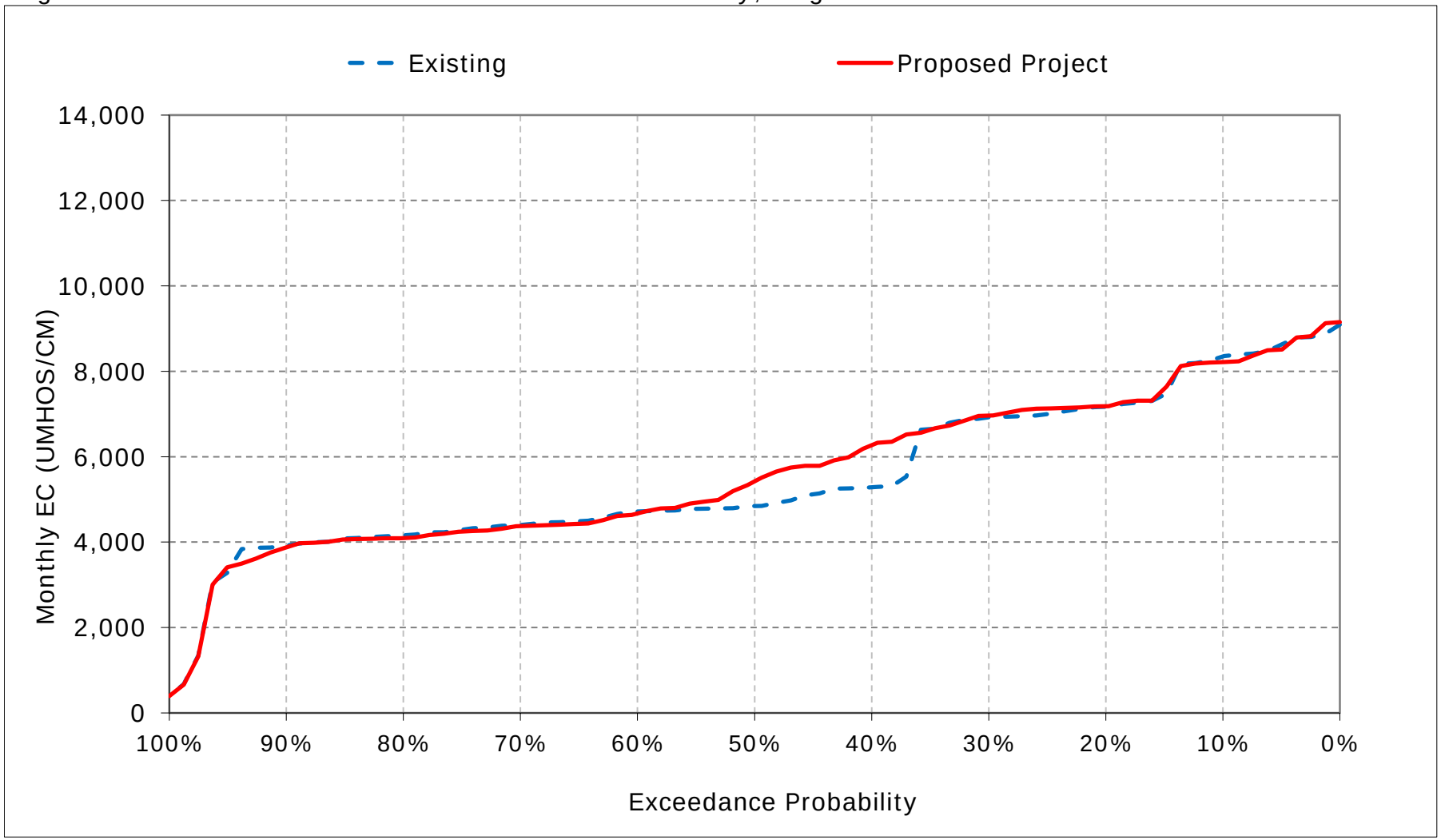


Figure 6-15. Sacramento River at Collinsville Salinity, September EC

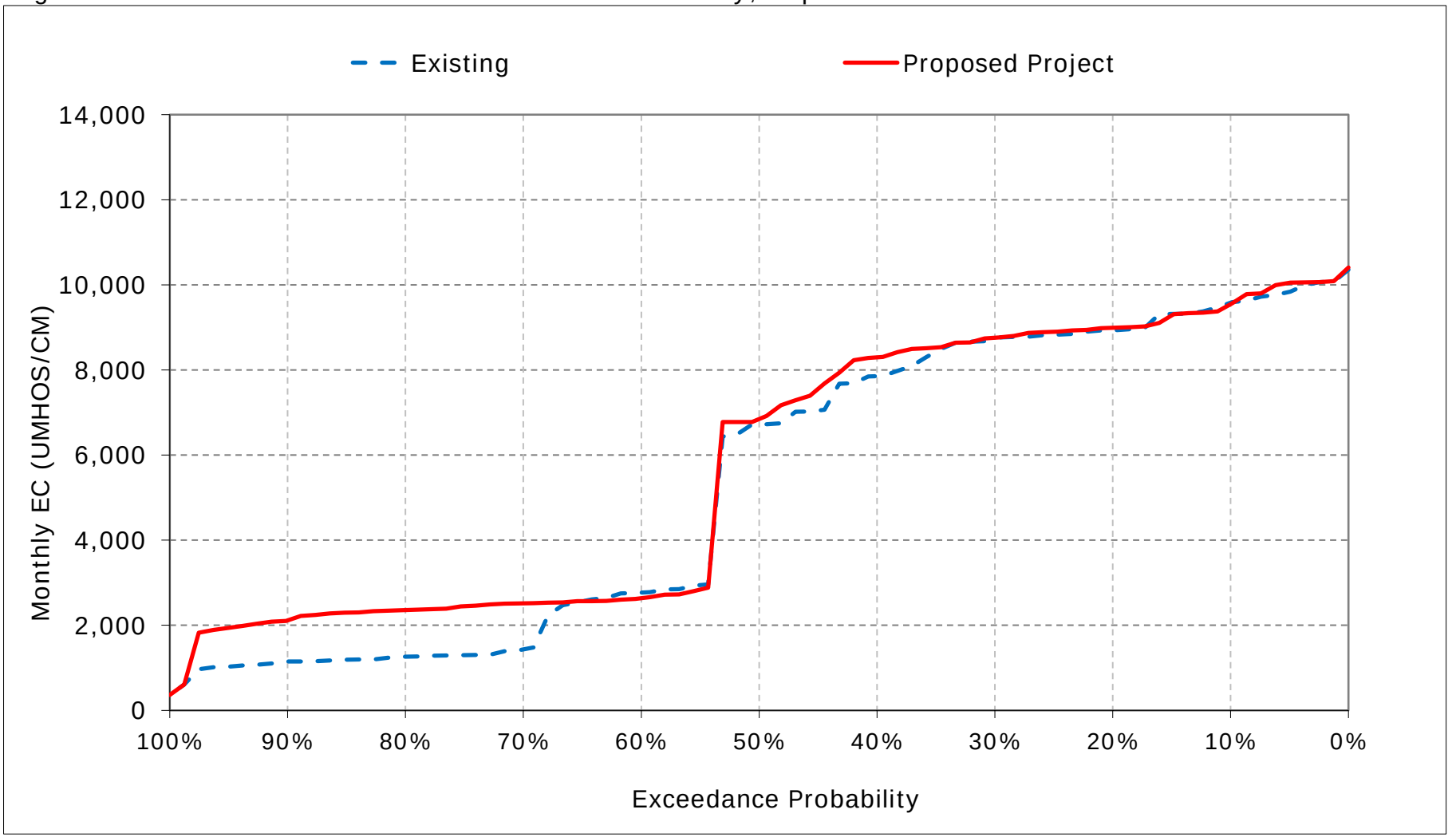


Figure 6-16. Sacramento River at Collinsville Salinity, October EC

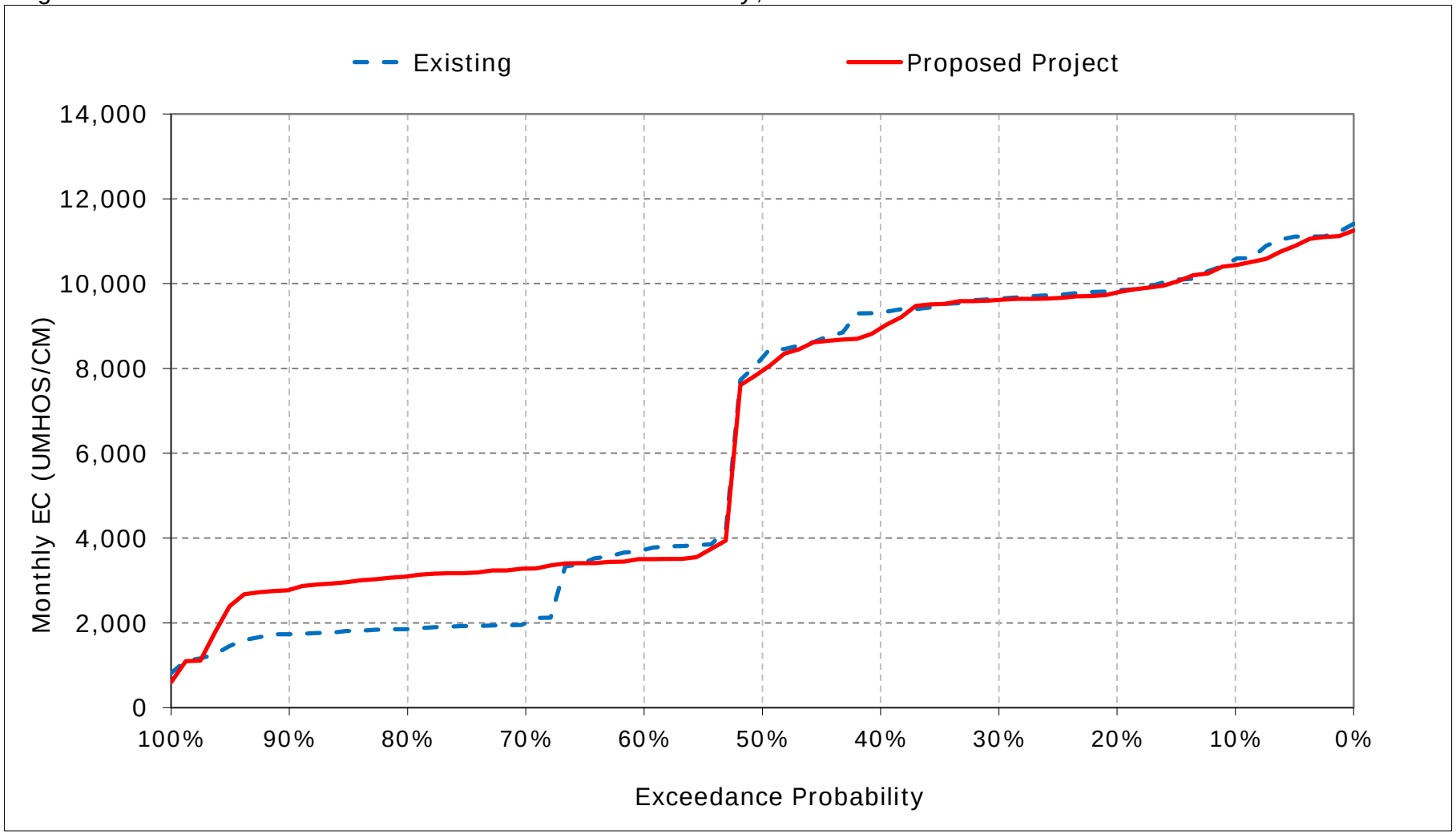


Figure 6-17. Sacramento River at Collinsville Salinity, November EC

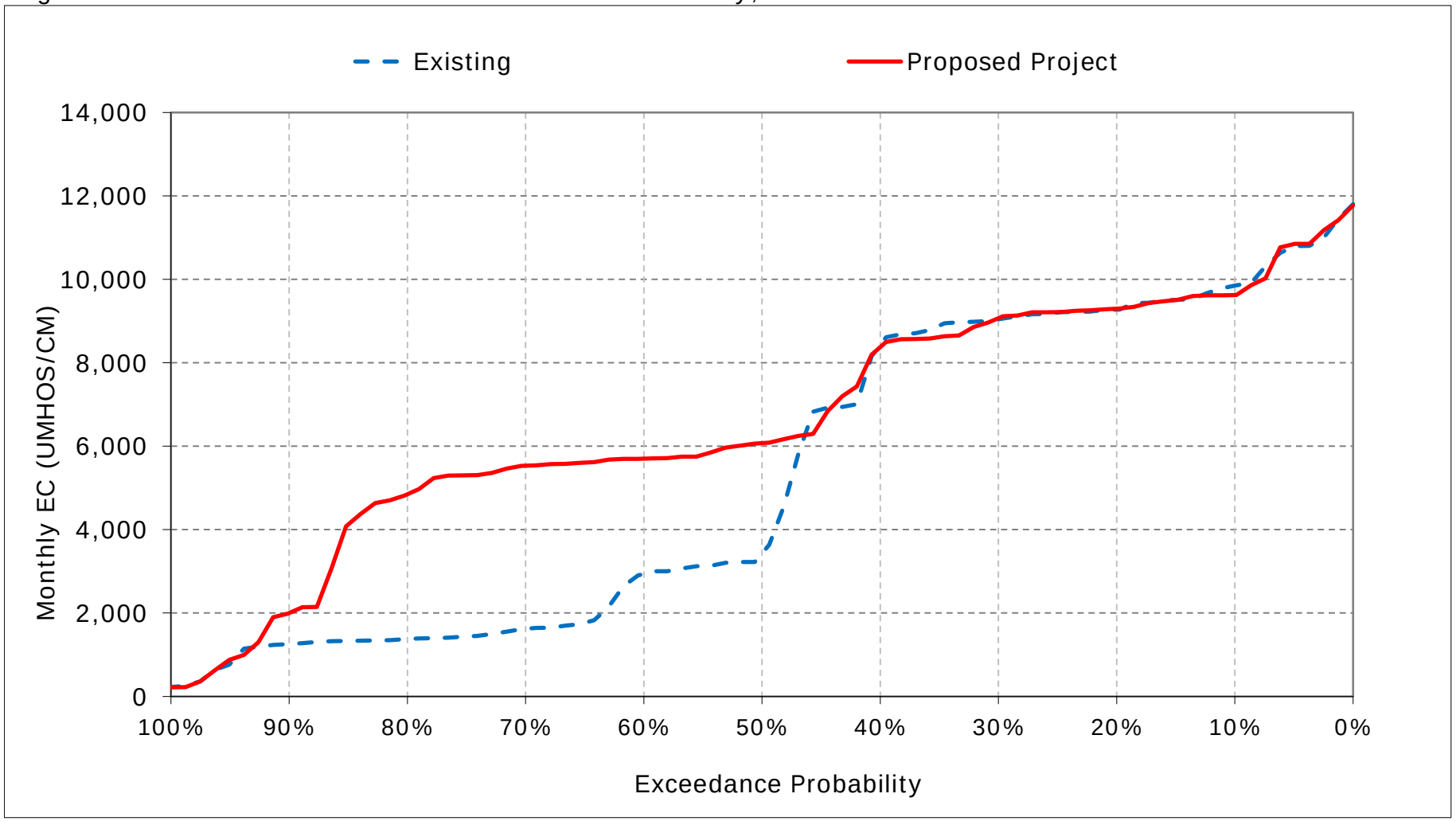


Figure 6-18. Sacramento River at Collinsville Salinity, December EC

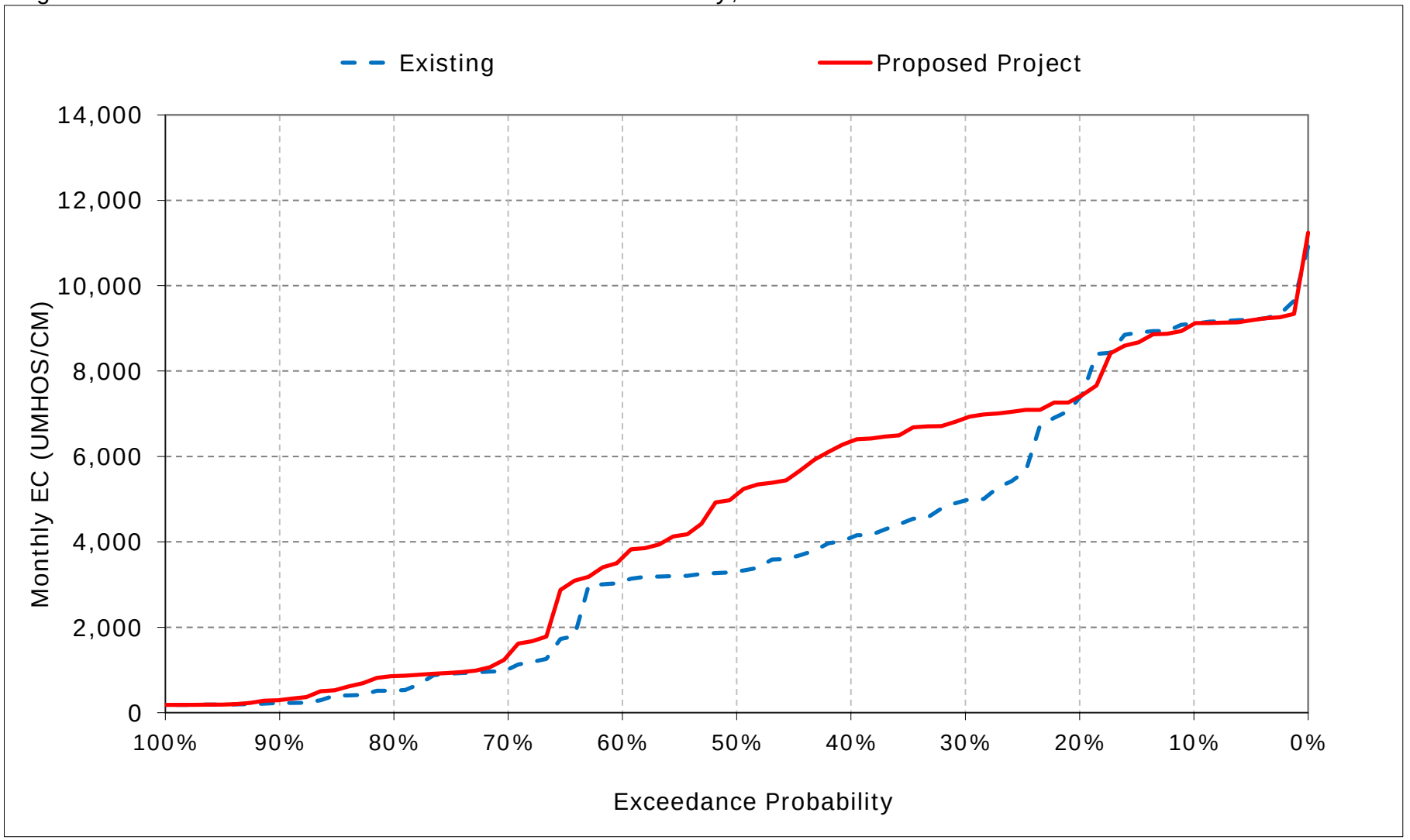


Table 7-1. Sacramento River at Mallard Slough Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	14,262	13,585	12,936	8,639	4,597	4,012	4,293	5,596	7,222	9,482	11,982	13,224
20%	13,605	13,227	11,331	7,673	2,924	2,247	2,342	4,309	6,033	8,280	10,695	12,609
30%	13,388	12,855	8,414	5,940	1,630	956	1,284	3,384	5,771	7,879	10,412	12,378
40%	13,120	12,345	7,099	3,495	809	700	1,005	2,083	4,919	6,131	8,722	11,515
50%	11,995	6,547	6,098	2,570	524	423	620	1,253	4,066	5,622	8,129	10,390
60%	6,582	5,724	5,568	1,463	286	274	361	814	3,217	4,474	7,926	5,456
70%	3,923	3,483	2,369	359	220	207	271	503	2,397	4,191	7,475	3,107
80%	3,688	3,152	1,073	220	202	199	207	270	1,164	3,700	7,186	2,793
90%	3,532	2,842	366	195	193	193	194	194	276	2,619	6,877	2,535
Long Term												
Full Simulation Period[a]	9,174	8,173	6,269	3,607	1,579	1,187	1,403	2,289	4,126	5,905	8,730	8,173
Water Year Types[b]												
Wet (32%)	7,268	5,420	2,138	668	239	254	318	527	1,492	3,090	6,675	2,582
Above Normal (15%)	9,562	8,069	6,277	2,184	595	270	393	736	2,907	4,100	7,318	5,343
Below Normal (17%)	9,602	8,995	7,981	3,998	1,044	902	977	1,745	4,029	5,789	8,430	10,918
Dry (22%)	9,695	9,431	7,836	5,709	2,550	1,656	1,989	3,398	5,703	8,040	10,550	12,495
Critical (15%)	11,632	11,396	10,864	7,790	4,638	3,754	4,381	6,633	8,800	10,742	12,212	13,430

Proposed Project

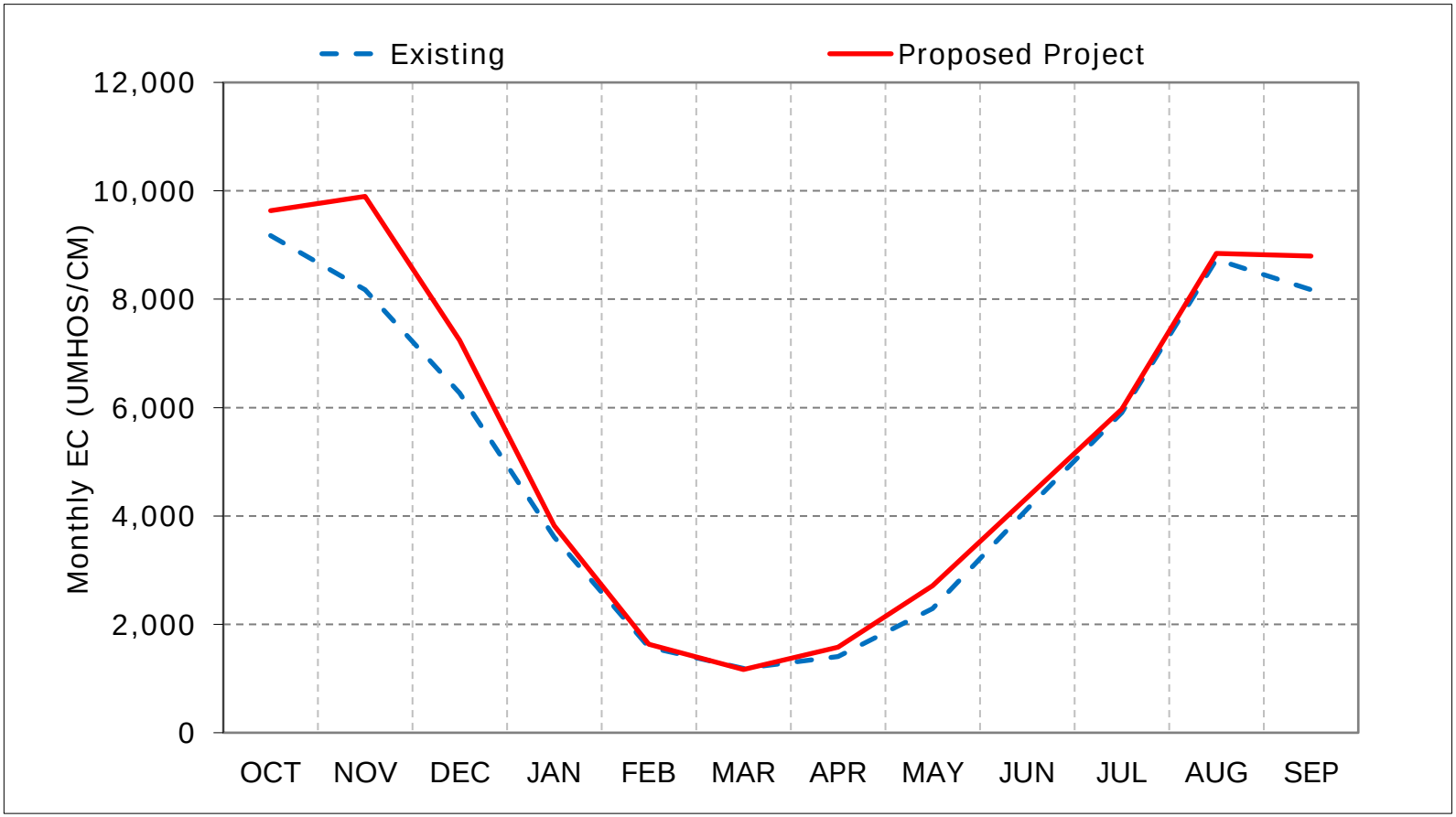
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	14,167	13,475	12,852	9,668	4,399	4,044	4,553	5,852	7,281	9,478	11,896	13,216
20%	13,526	13,199	11,287	8,238	2,774	2,127	2,831	5,042	6,493	8,387	10,732	12,663
30%	13,333	12,839	10,716	6,425	1,558	829	1,773	4,310	5,961	7,815	10,452	12,433
40%	12,771	12,181	10,045	3,735	881	647	1,280	2,708	5,425	6,457	9,678	11,923
50%	11,774	9,464	8,812	2,603	509	374	802	1,842	4,266	5,757	8,735	10,520
60%	6,200	9,080	6,833	1,379	248	246	424	1,373	3,708	4,427	7,864	5,219
70%	5,974	8,875	2,870	366	218	207	303	761	2,691	4,152	7,433	5,051
80%	5,690	8,159	1,730	218	203	197	206	325	1,226	3,734	7,136	4,805
90%	5,367	3,977	454	197	193	192	190	192	277	2,624	6,832	4,429
Long Term												
Full Simulation Period[a]	9,634	9,897	7,242	3,821	1,633	1,166	1,576	2,711	4,339	5,969	8,845	8,794
Water Year Types[b]												
Wet (32%)	7,895	7,635	2,722	662	233	245	391	771	1,700	3,100	6,568	4,511
Above Normal (15%)	10,105	9,984	7,765	2,299	469	254	506	1,178	3,072	4,049	7,353	4,932
Below Normal (17%)	10,089	10,632	9,169	4,033	992	834	1,223	2,377	4,216	6,083	9,202	11,231
Dry (22%)	10,196	10,915	9,025	6,243	2,728	1,587	2,267	4,007	5,997	8,113	10,610	12,543
Critical (15%)	11,558	12,330	11,589	8,312	4,938	3,830	4,591	6,897	8,978	10,758	12,208	13,469

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-95	-109	-84	1,029	-198	31	260	256	59	-4	-86	-8
20%	-79	-28	-44	565	-149	-120	489	733	460	108	37	54
30%	-55	-17	2,302	485	-72	-127	489	927	190	-64	40	55
40%	-349	-163	2,946	240	72	-53	275	625	506	326	955	408
50%	-221	2,917	2,714	33	-15	-50	181	590	199	135	606	130
60%	-381	3,356	1,265	-84	-39	-27	63	558	491	-47	-63	-238
70%	2,051	5,392	500	8	-2	0	33	258	294	-39	-42	1,944
80%	2,002	5,007	657	-2	1	-1	-1	54	62	35	-50	2,012
90%	1,835	1,135	89	2	0	0	-4	-2	1	5	-45	1,894
Long Term												
Full Simulation Period[a]	461	1,724	973	214	54	-21	174	422	212	64	115	621
Water Year Types[b]												
Wet (32%)	627	2,215	584	-7	-6	-9	74	244	208	11	-108	1,929
Above Normal (15%)	543	1,914	1,488	115	-125	-16	113	442	165	-52	35	-411
Below Normal (17%)	487	1,637	1,188	35	-52	-68	246	632	187	294	772	313
Dry (22%)	501	1,483	1,188	533	178	-69	278	608	294	74	61	49
Critical (15%)	-75	934	725	522	300	76	210	264	178	15	-4	38

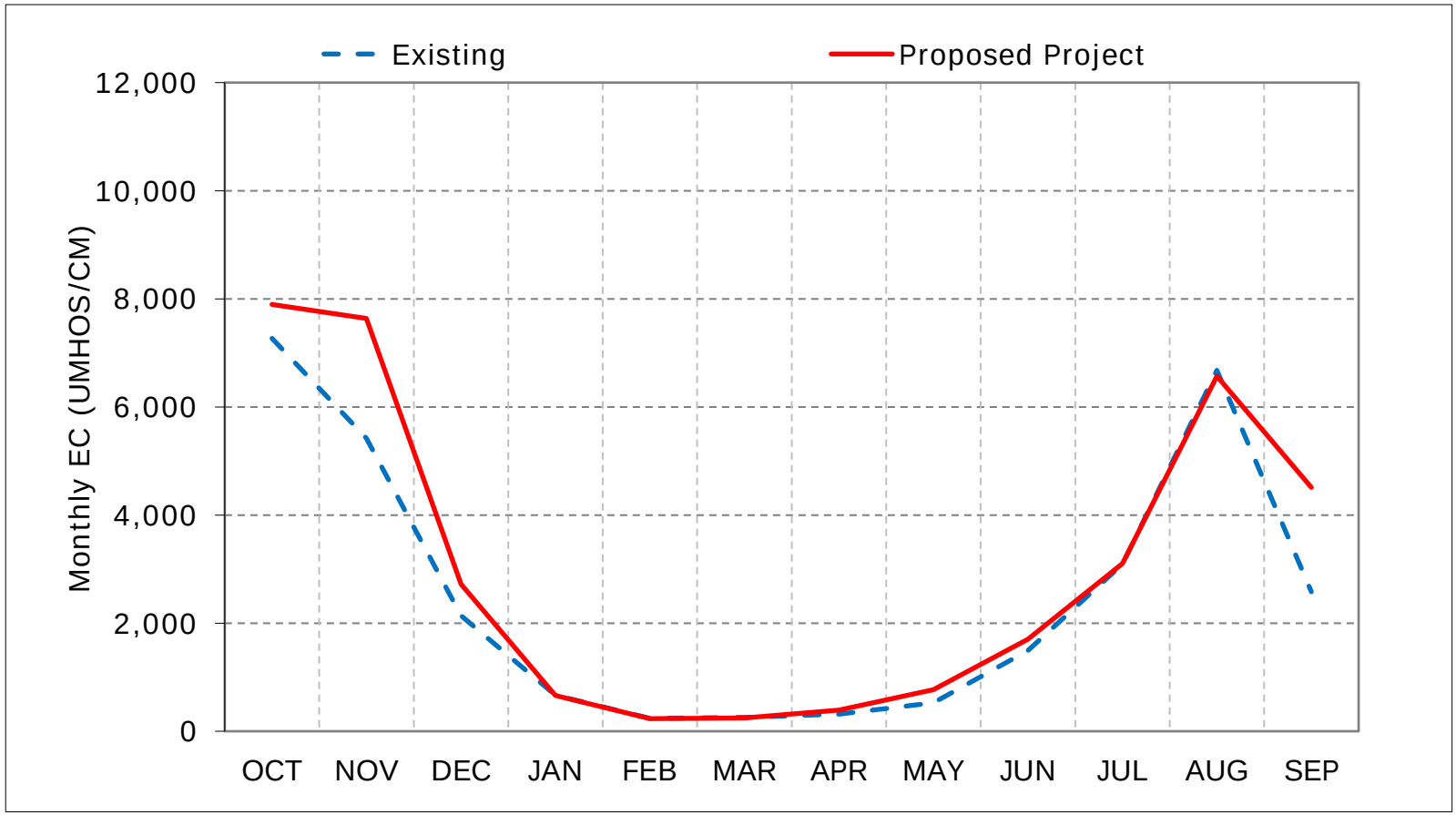
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 7-1. Sacramento River at Mallard Slough Salinity, Long-Term Average EC



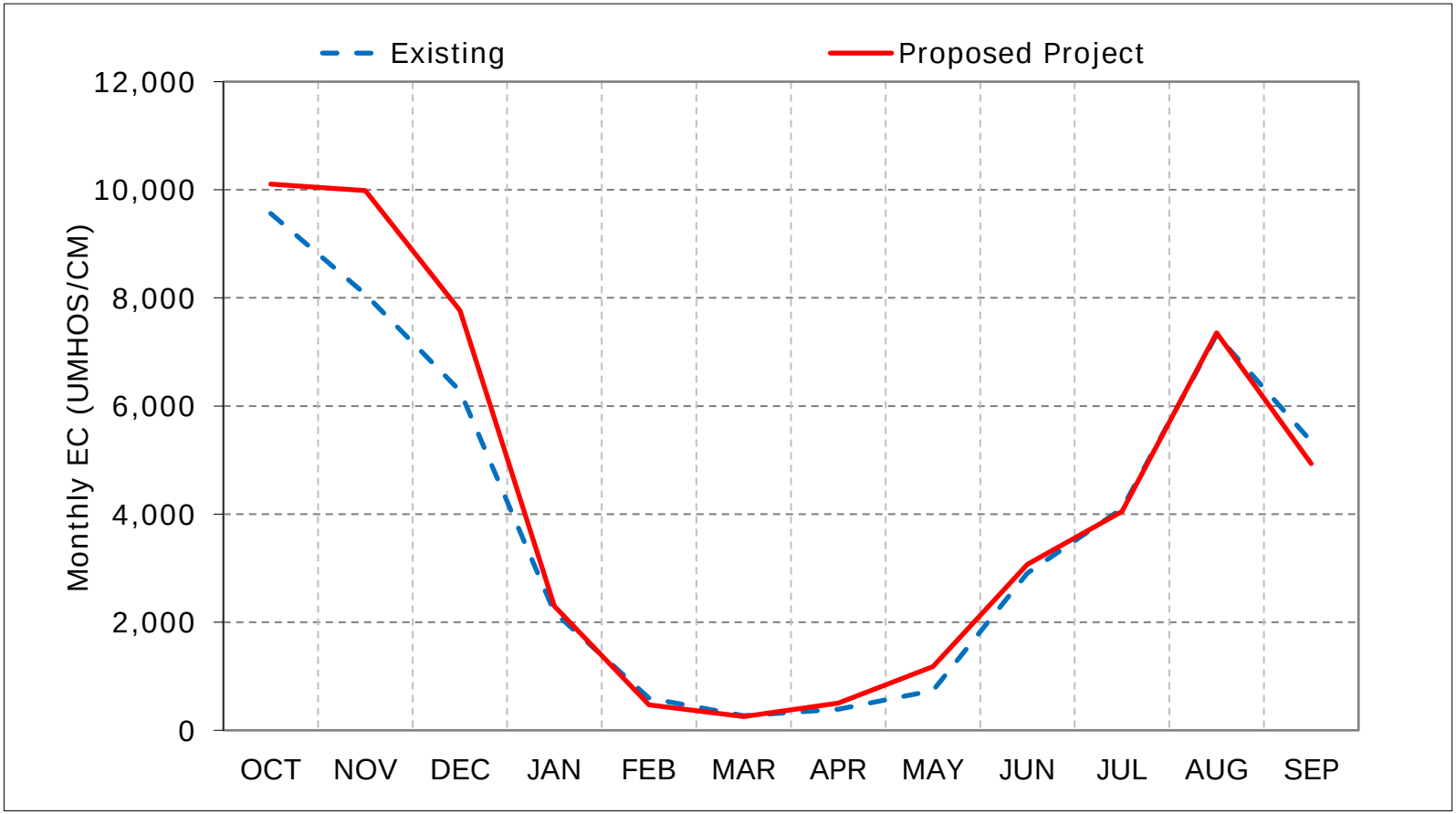
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-2. Sacramento River at Mallard Slough Salinity, Wet Year Average EC



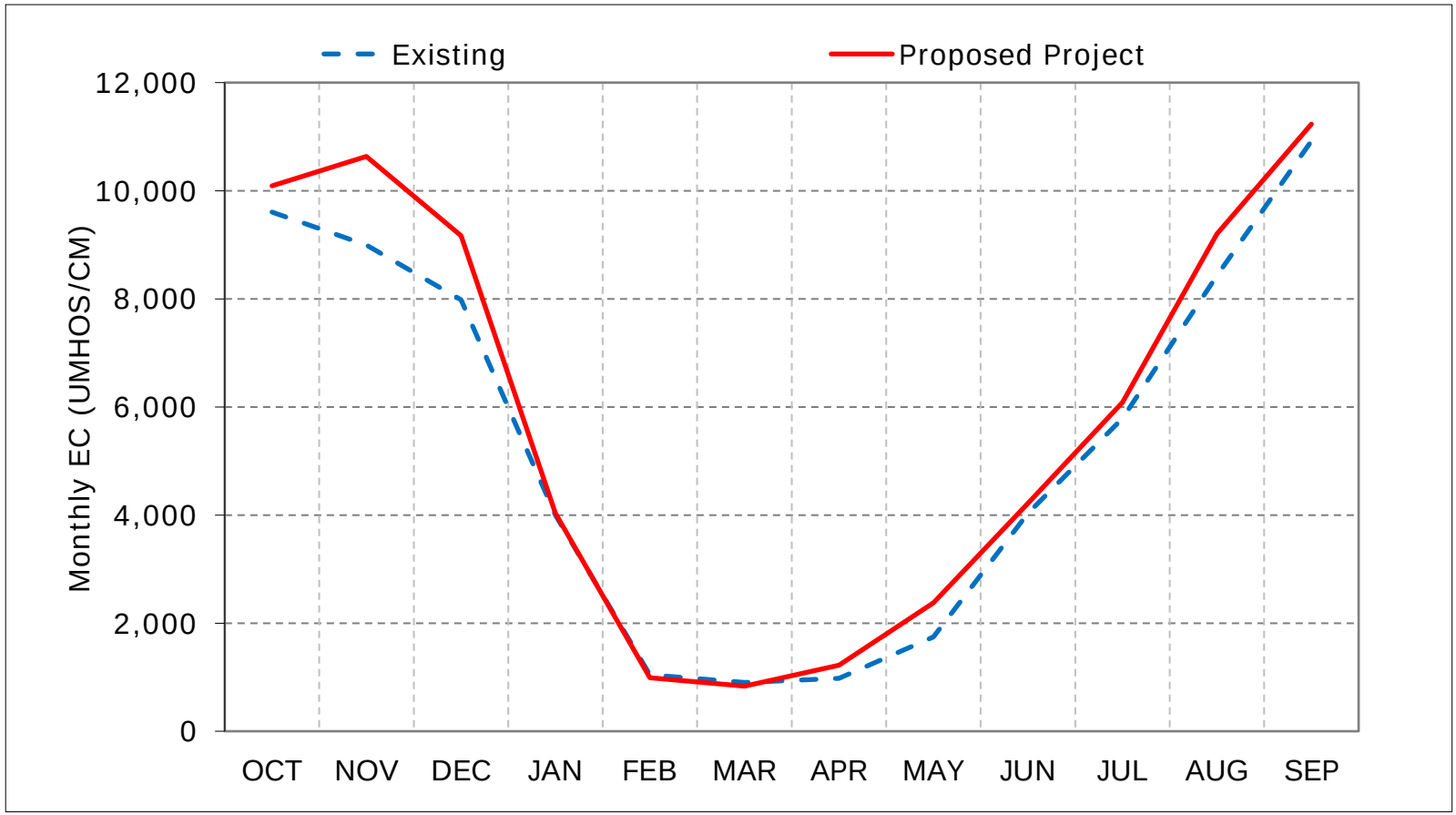
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-3. Sacramento River at Mallard Slough Salinity, Above Normal Year Avera



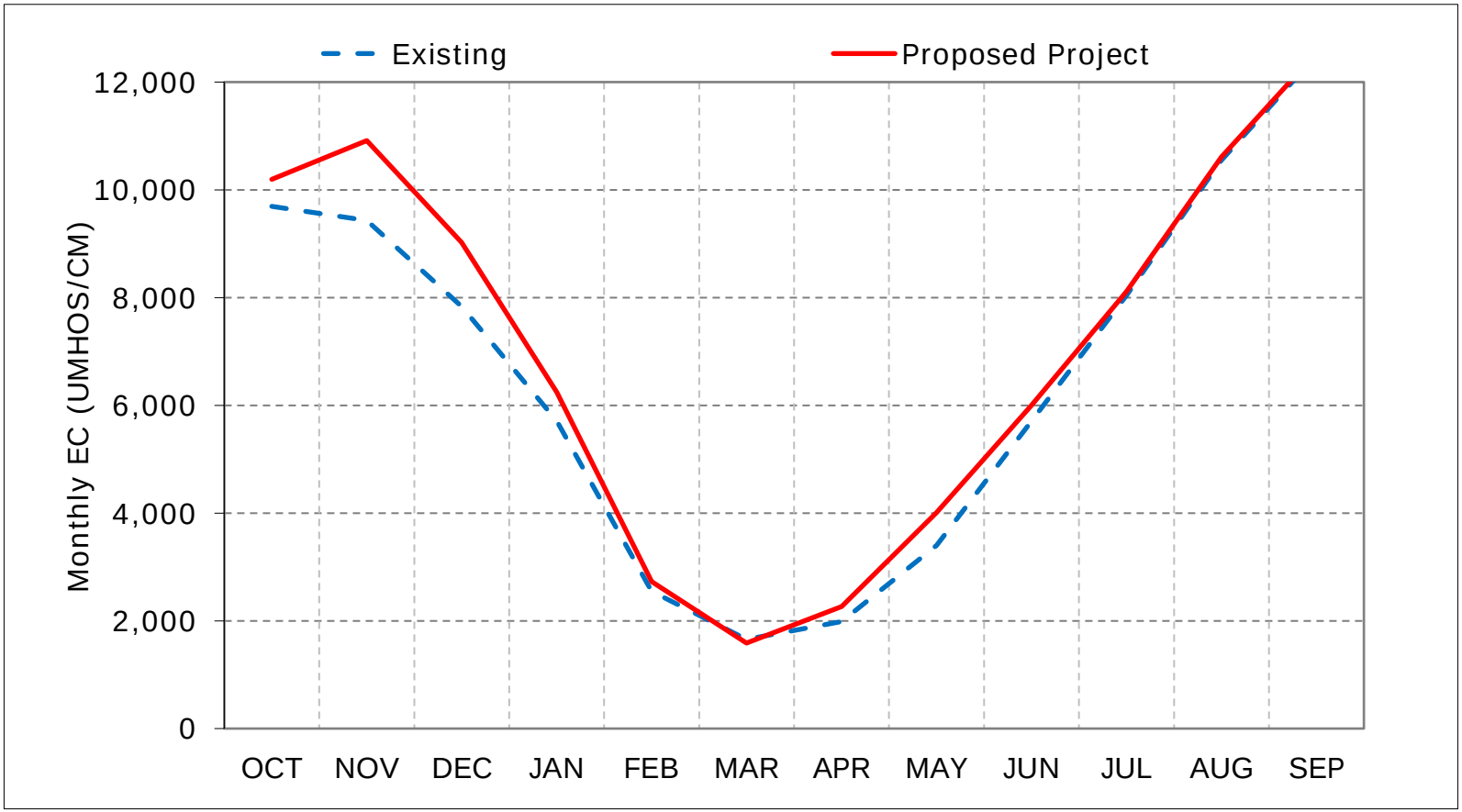
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-4. Sacramento River at Mallard Slough Salinity, Below Normal Year Avera



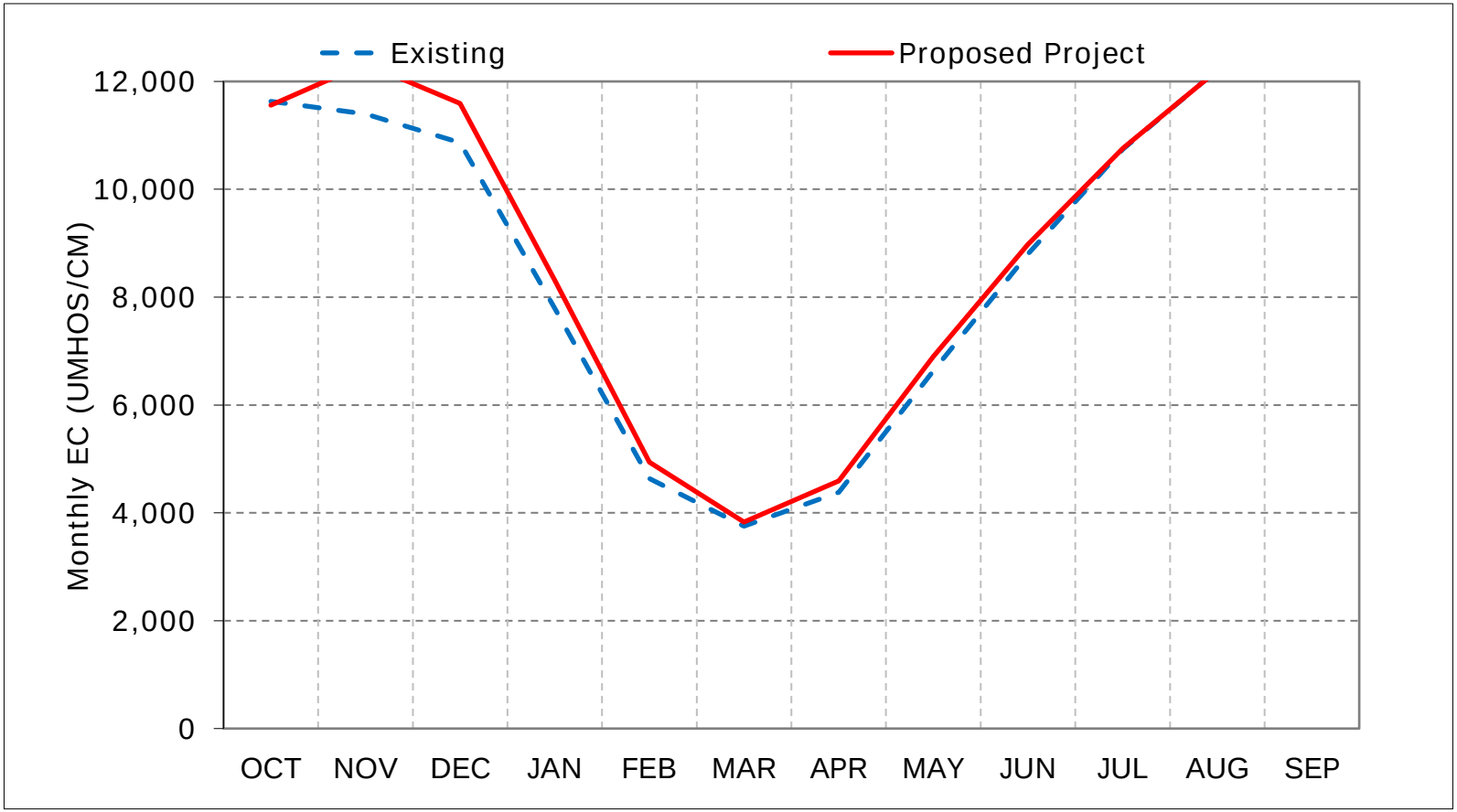
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-5. Sacramento River at Mallard Slough Salinity, Dry Year Average EC



*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.

Figure 7-6. Sacramento River at Mallard Slough Salinity, Critical Year Average EC



*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.

Figure 7-7. Sacramento River at Mallard Slough Salinity, January EC

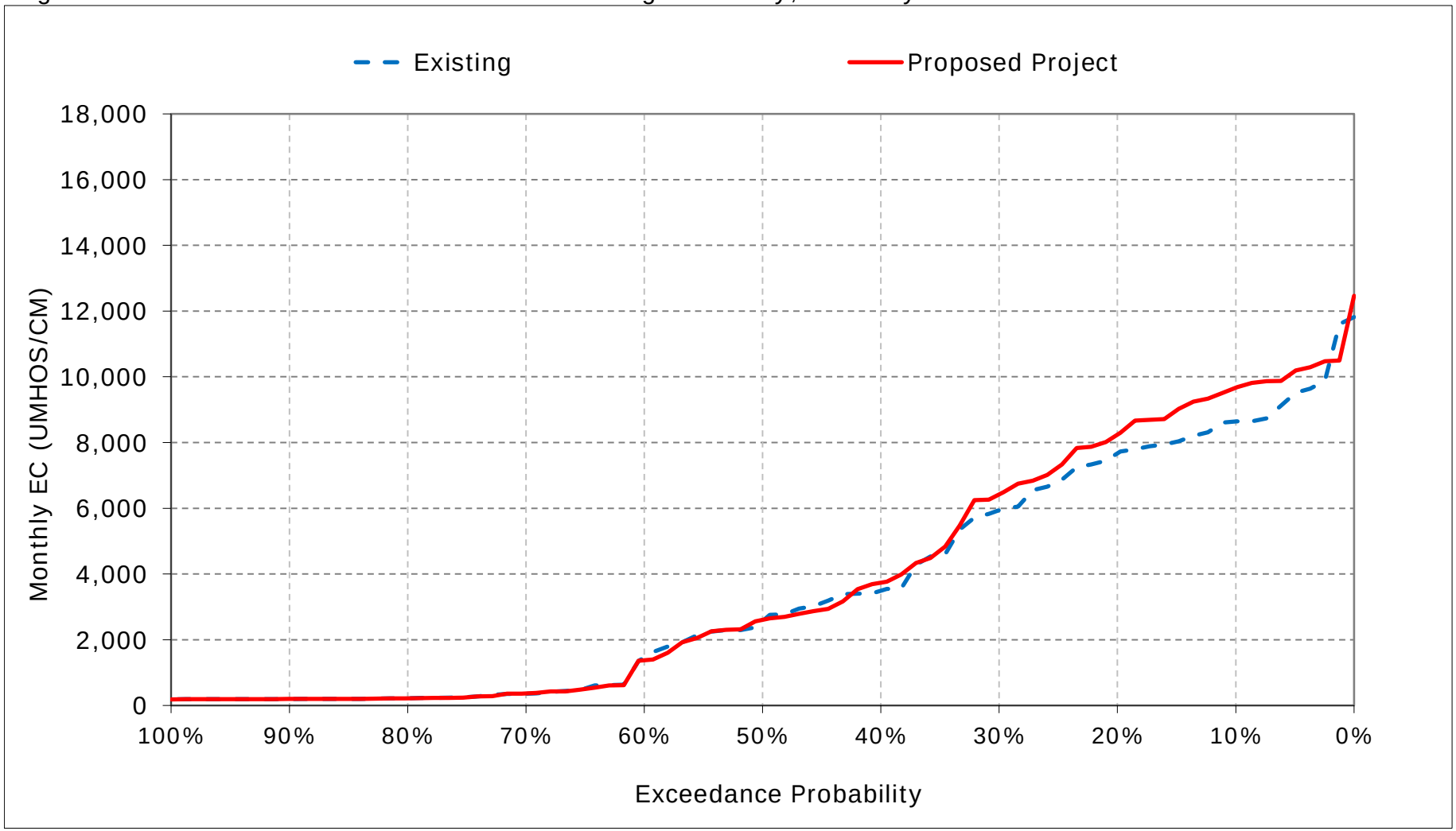


Figure 7-8. Sacramento River at Mallard Slough Salinity, February EC

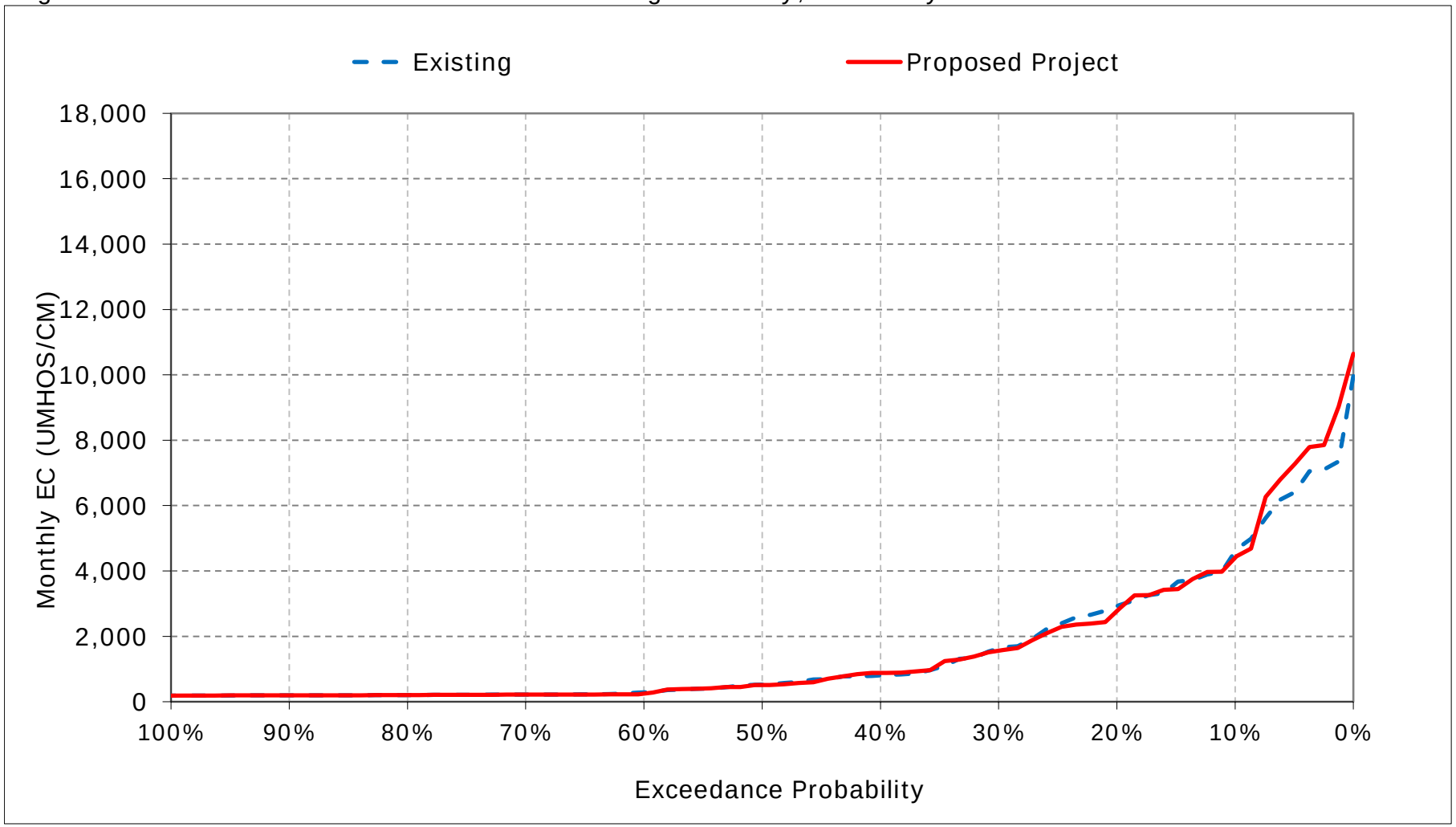


Figure 7-9. Sacramento River at Mallard Slough Salinity, March EC

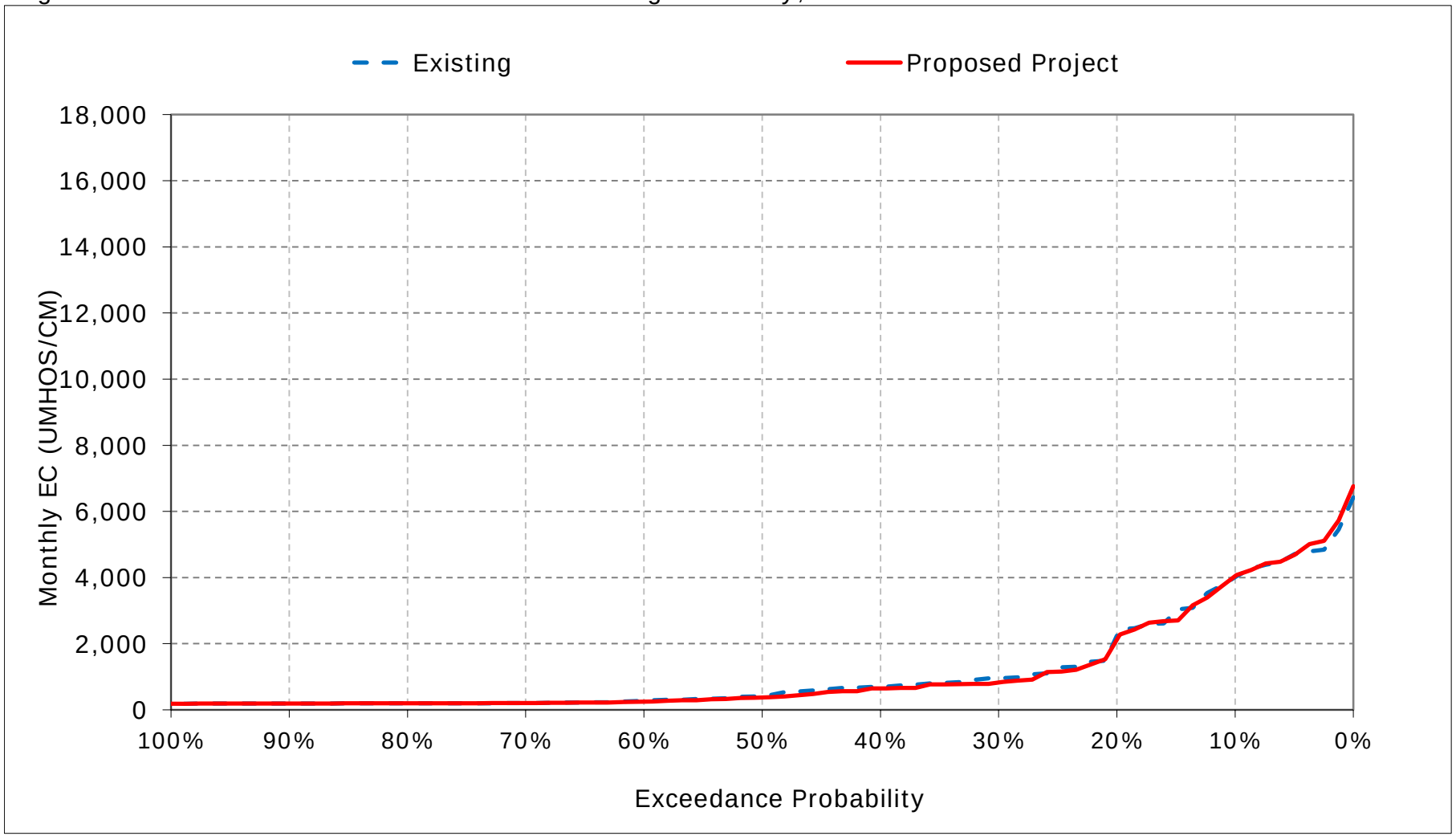


Figure 7-10. Sacramento River at Mallard Slough Salinity, April EC

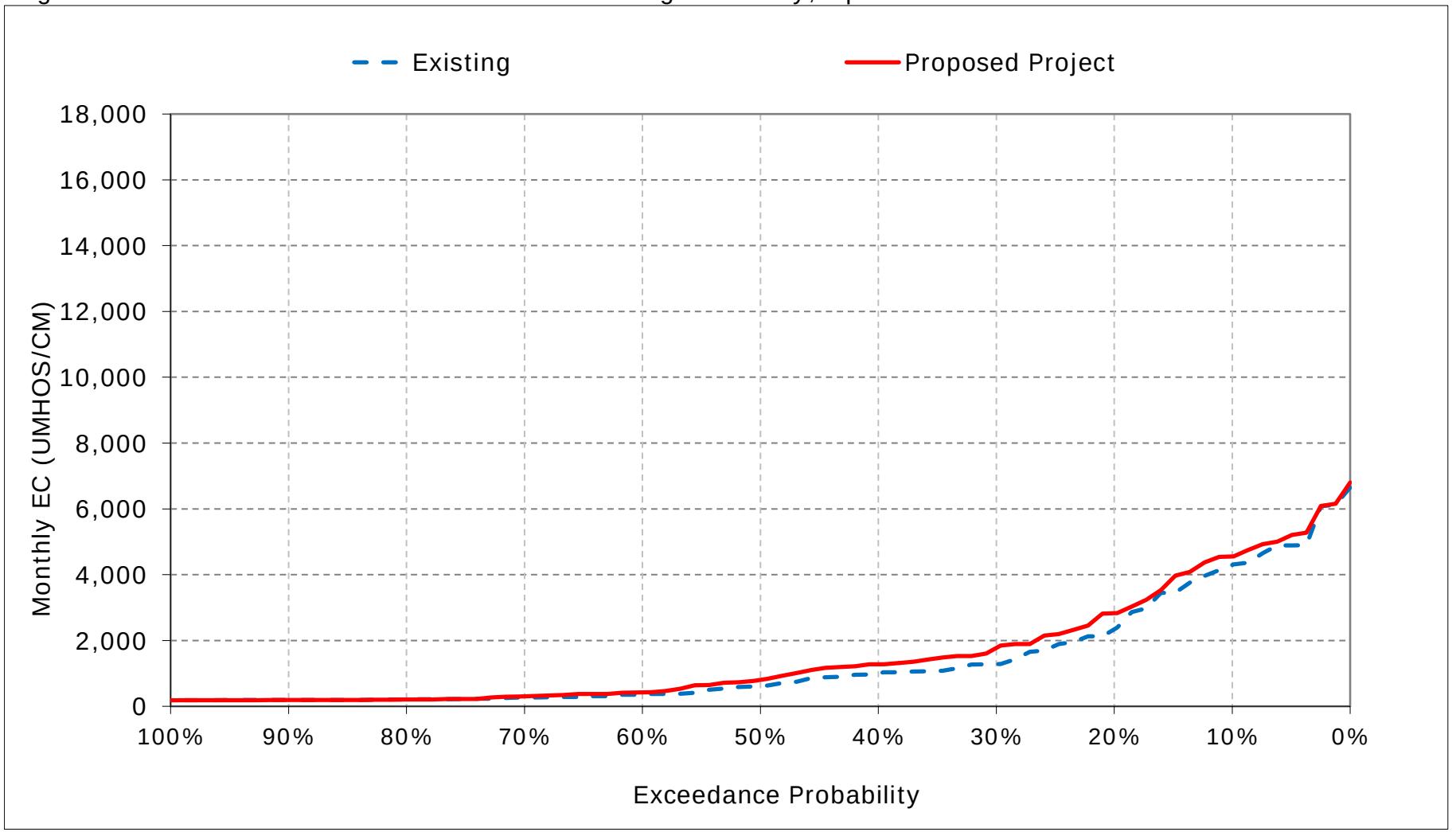


Figure 7-11. Sacramento River at Mallard Slough Salinity, May EC

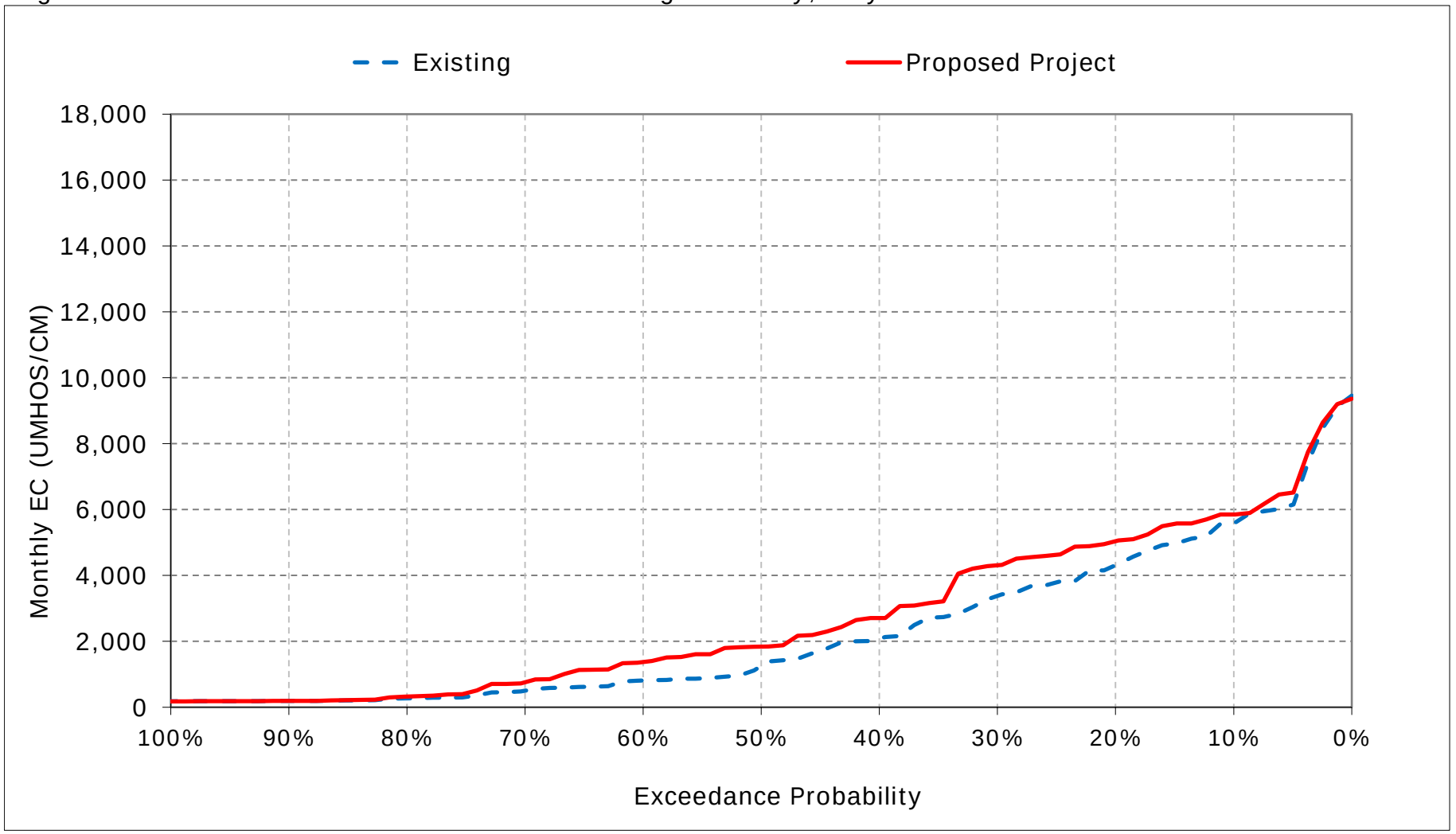


Figure 7-12. Sacramento River at Mallard Slough Salinity, June EC

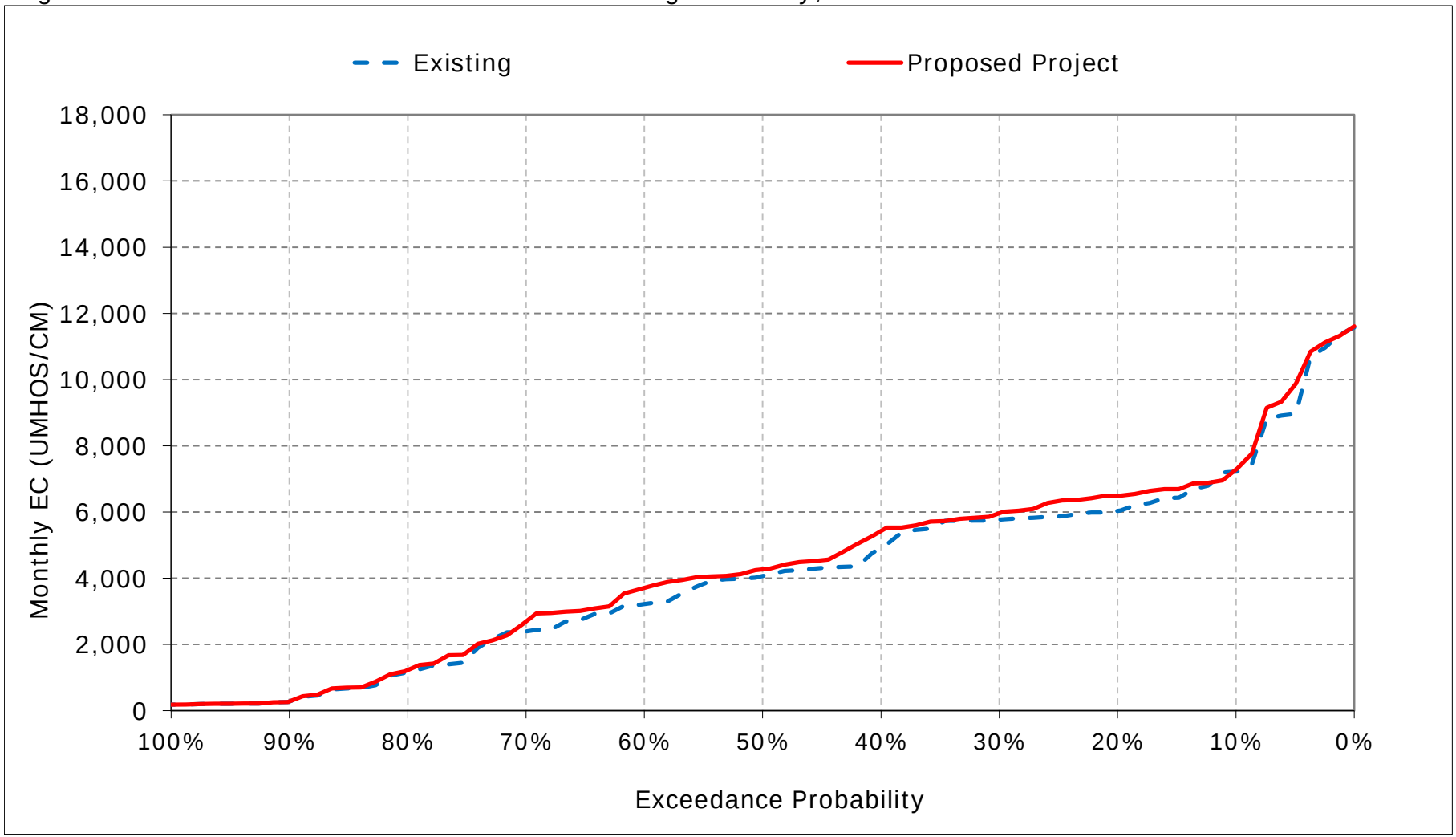


Figure 7-13. Sacramento River at Mallard Slough Salinity, July EC

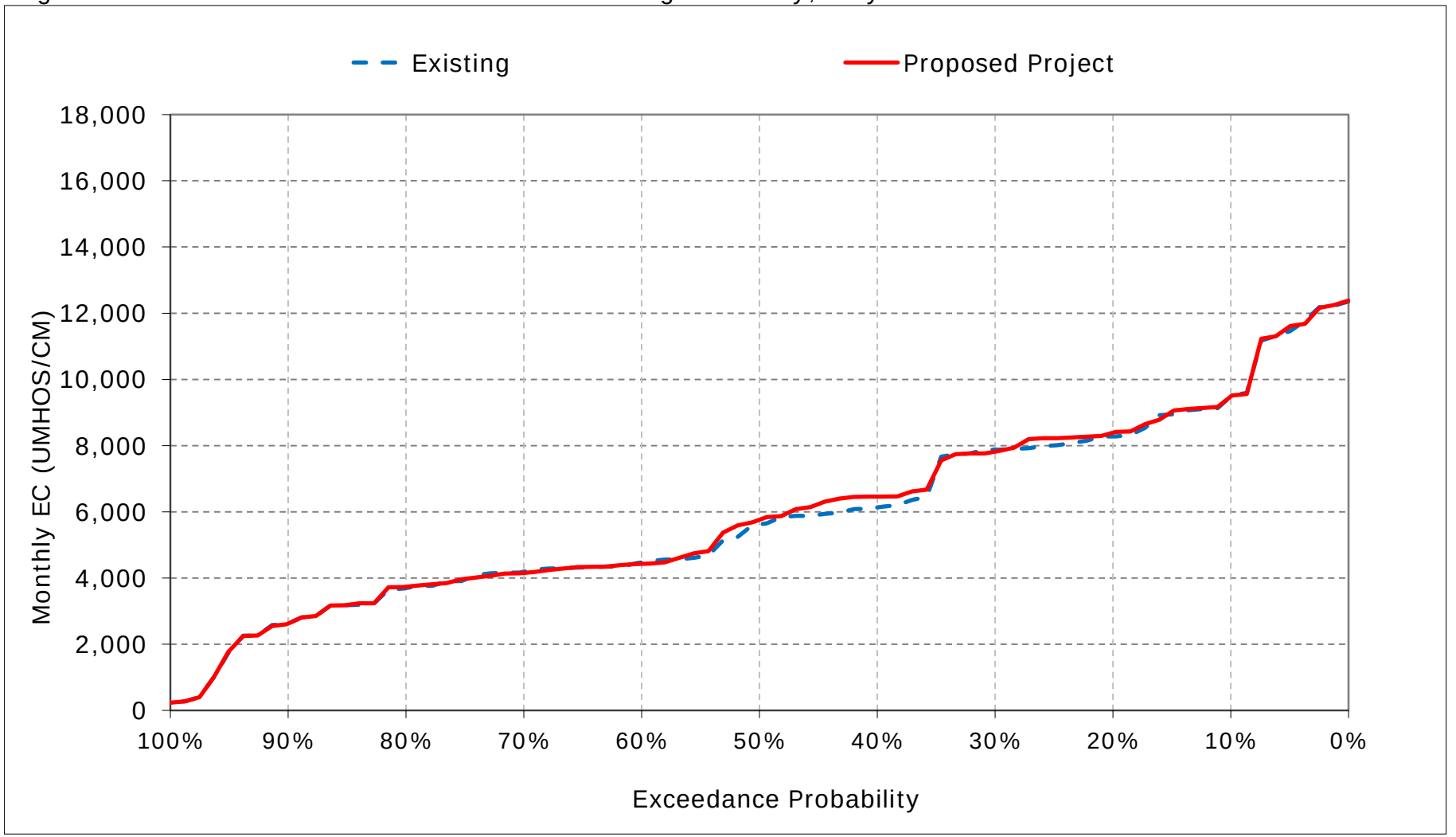


Figure 7-14. Sacramento River at Mallard Slough Salinity, August EC

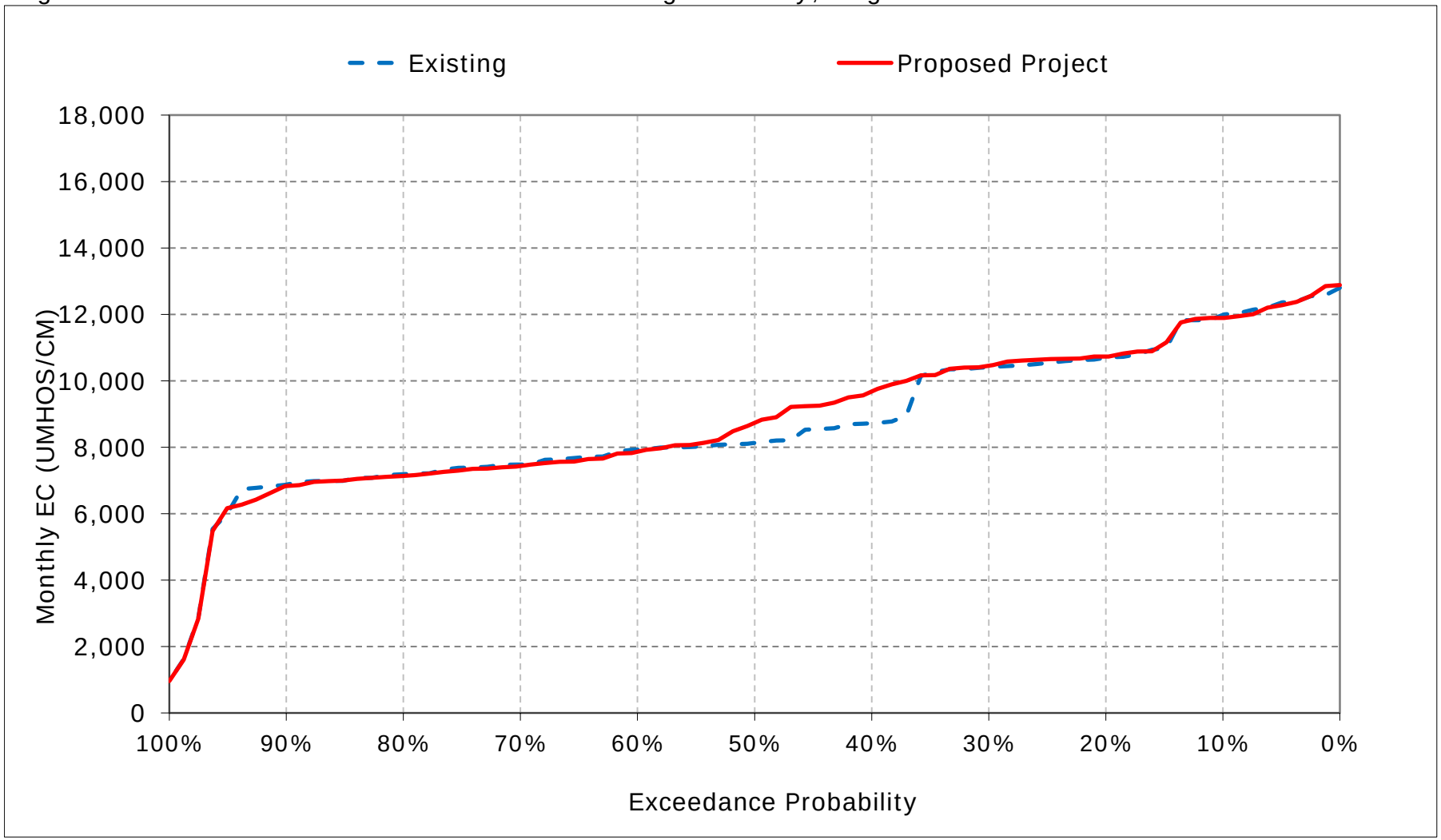


Figure 7-15. Sacramento River at Mallard Slough Salinity, September EC

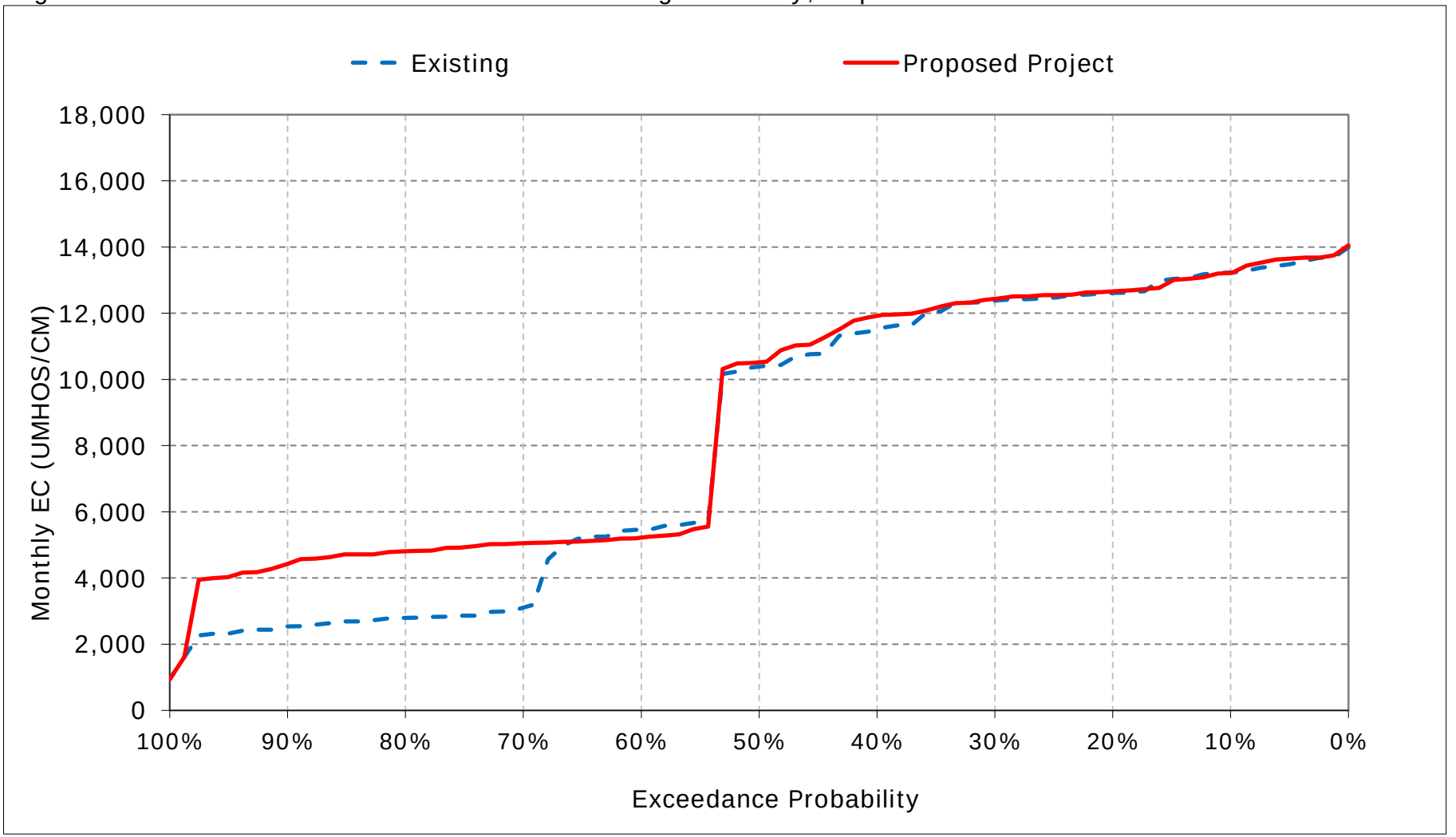


Figure 7-16. Sacramento River at Mallard Slough Salinity, October EC

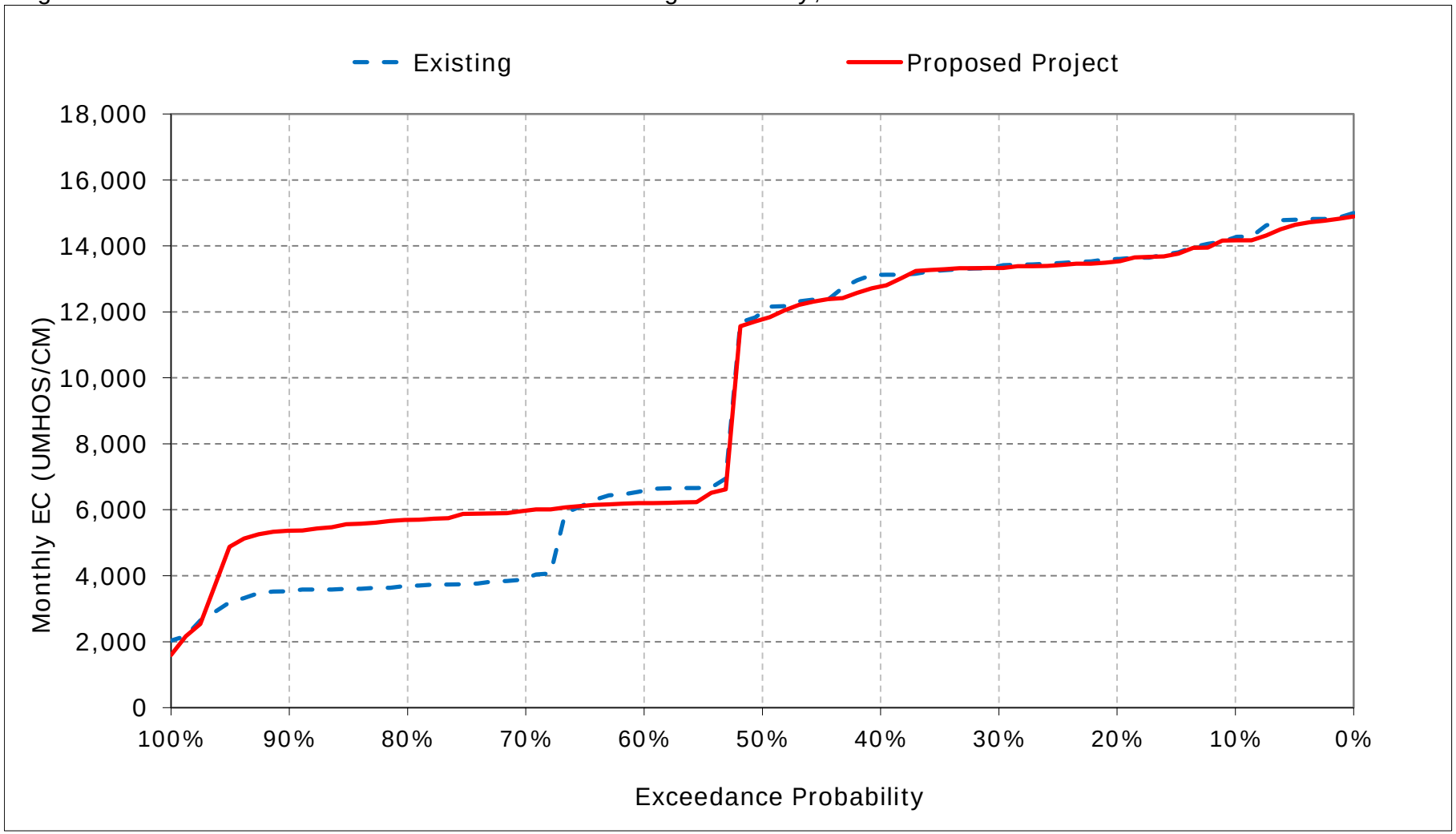


Figure 7-17. Sacramento River at Mallard Slough Salinity, November EC

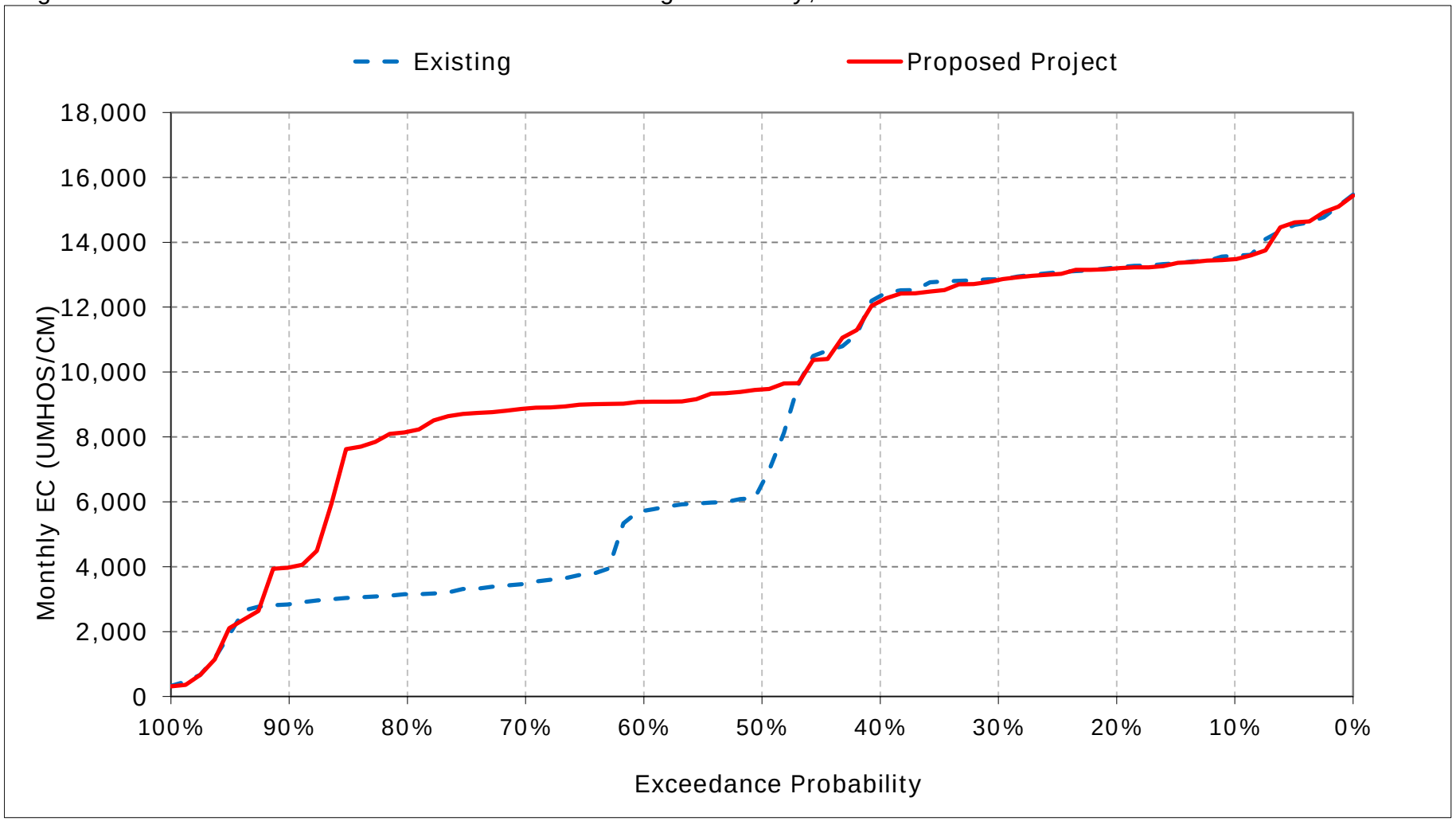


Figure 7-18. Sacramento River at Mallard Slough Salinity, December EC

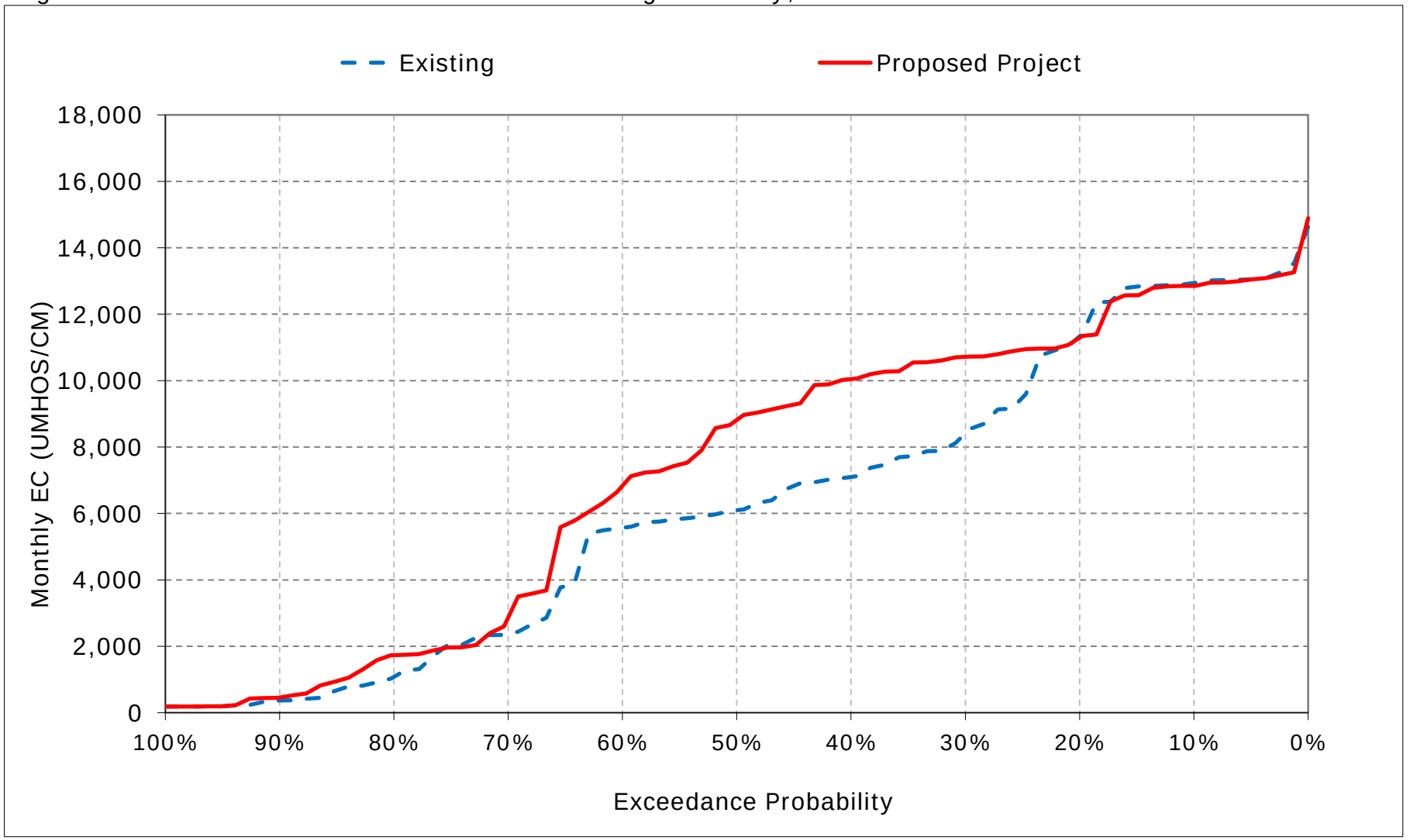


Table 8-1. Chipps Island North Channel Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	15,139	14,489	13,877	9,532	5,409	4,772	5,053	6,361	8,135	10,388	12,932	14,201
20%	14,525	14,158	12,320	8,644	3,435	2,748	2,823	5,030	6,871	9,219	11,638	13,565
30%	14,305	13,845	9,373	6,782	1,972	1,203	1,605	3,990	6,566	8,803	11,372	13,321
40%	14,060	13,301	8,053	4,143	1,005	902	1,261	2,549	5,667	6,999	9,694	12,485
50%	12,935	7,466	6,810	3,056	635	523	799	1,562	4,672	6,498	9,035	11,383
60%	7,398	6,550	6,264	1,784	321	316	446	1,033	3,816	5,231	8,836	6,341
70%	4,524	4,091	2,848	434	222	214	304	625	2,841	4,928	8,368	3,730
80%	4,248	3,742	1,294	227	203	200	215	317	1,451	4,385	8,047	3,386
90%	4,118	3,425	450	197	194	192	194	198	321	3,086	7,737	3,074
Long Term												
Full Simulation Period[a]	9,960	8,946	6,919	4,087	1,838	1,408	1,666	2,659	4,697	6,669	9,627	8,996
Water Year Types[b]												
Wet (32%)	7,986	6,081	2,461	761	253	280	364	625	1,765	3,635	7,485	3,140
Above Normal (15%)	10,362	8,828	6,983	2,528	692	305	468	909	3,388	4,812	8,193	6,219
Below Normal (17%)	10,414	9,840	8,741	4,591	1,252	1,113	1,204	2,106	4,665	6,641	9,377	11,904
Dry (22%)	10,498	10,257	8,668	6,472	3,009	2,003	2,412	3,999	6,494	8,973	11,500	13,449
Critical (15%)	12,501	12,262	11,767	8,686	5,345	4,410	5,103	7,452	9,701	11,681	13,181	14,387

Proposed Project

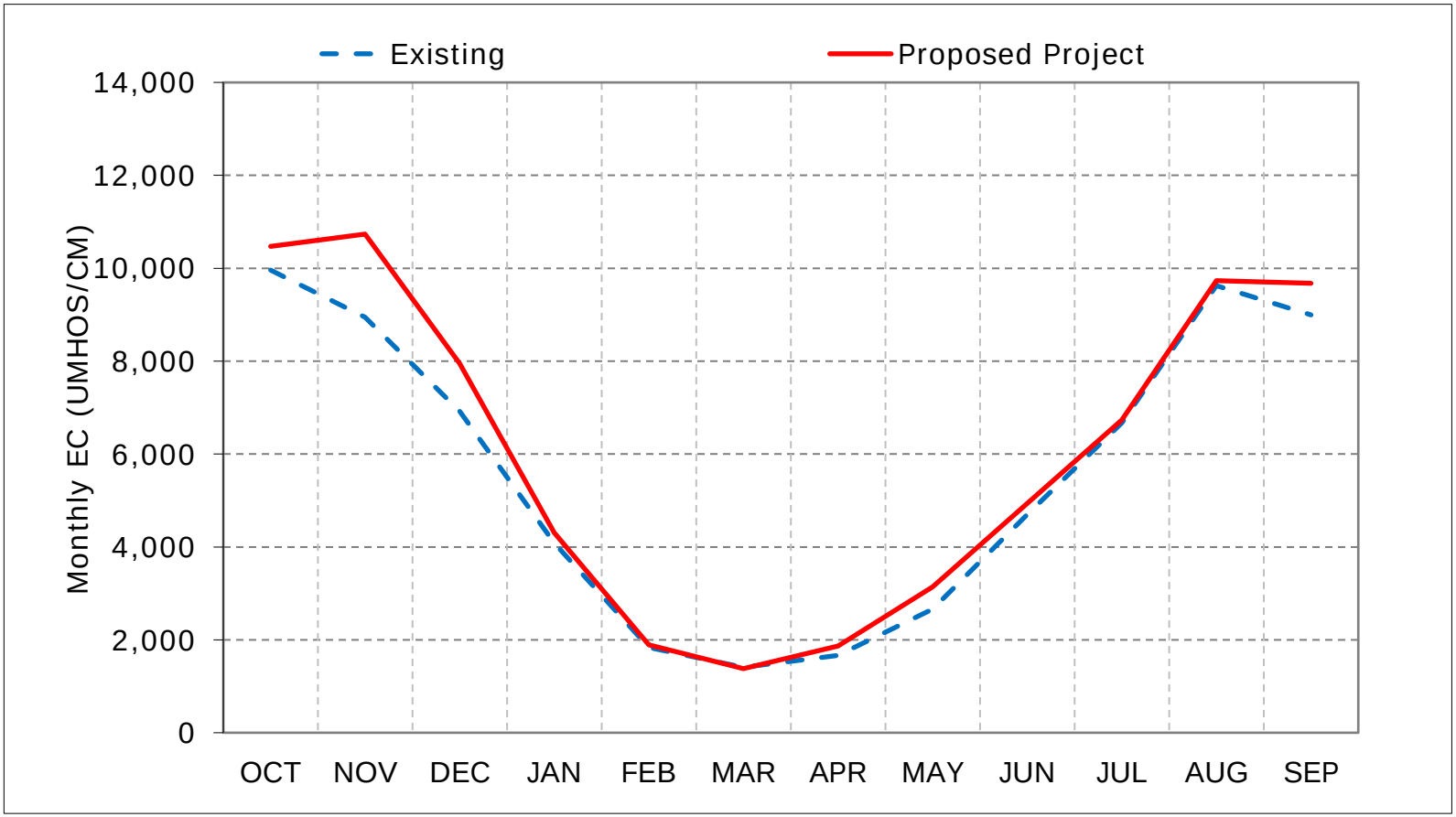
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	15,070	14,400	13,806	10,696	5,193	4,805	5,348	6,648	8,162	10,405	12,917	14,179
20%	14,457	14,127	12,193	9,232	3,267	2,606	3,415	5,836	7,368	9,305	11,690	13,612
30%	14,274	13,789	11,685	7,293	1,920	1,052	2,167	4,977	6,750	8,756	11,404	13,393
40%	13,717	13,105	10,971	4,412	1,101	812	1,597	3,259	6,222	7,297	10,559	12,833
50%	12,744	10,308	9,824	3,117	595	464	1,012	2,258	4,933	6,563	9,587	11,497
60%	6,979	9,948	7,769	1,710	270	277	533	1,711	4,384	5,183	8,769	6,083
70%	6,758	9,727	3,471	435	220	212	361	961	3,171	4,900	8,314	5,901
80%	6,446	9,036	2,023	222	205	200	216	404	1,531	4,429	8,002	5,648
90%	6,121	4,658	537	197	194	193	190	199	327	3,091	7,695	5,237
Long Term												
Full Simulation Period[a]	10,473	10,735	7,950	4,308	1,894	1,380	1,867	3,142	4,939	6,731	9,730	9,678
Water Year Types[b]												
Wet (32%)	8,674	8,385	3,099	754	246	268	456	916	2,003	3,648	7,374	5,294
Above Normal (15%)	10,975	10,832	8,556	2,642	550	282	610	1,442	3,594	4,757	8,228	5,776
Below Normal (17%)	10,954	11,543	9,990	4,621	1,190	1,024	1,494	2,838	4,891	6,907	10,080	12,183
Dry (22%)	11,048	11,778	9,912	7,036	3,207	1,917	2,724	4,668	6,816	9,048	11,562	13,498
Critical (15%)	12,442	13,222	12,534	9,219	5,661	4,493	5,331	7,732	9,883	11,702	13,181	14,426

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-70	-89	-71	1,164	-216	34	295	288	28	17	-15	-22
20%	-68	-31	-127	588	-167	-142	592	806	497	85	52	47
30%	-31	-56	2,311	511	-52	-151	562	986	184	-47	32	73
40%	-344	-196	2,918	269	96	-90	336	710	556	298	864	348
50%	-191	2,843	3,014	61	-40	-59	212	697	261	66	552	114
60%	-419	3,399	1,505	-74	-52	-39	87	678	569	-48	-67	-259
70%	2,233	5,636	623	1	-2	-2	57	336	330	-28	-54	2,171
80%	2,198	5,293	729	-5	2	0	1	88	80	44	-45	2,262
90%	2,003	1,233	87	0	0	1	-3	1	7	5	-43	2,163
Long Term												
Full Simulation Period[a]	512	1,789	1,031	221	56	-29	201	483	242	61	104	682
Water Year Types[b]												
Wet (32%)	689	2,304	638	-7	-7	-12	92	291	238	13	-111	2,154
Above Normal (15%)	614	2,004	1,573	113	-143	-23	142	533	206	-55	36	-443
Below Normal (17%)	540	1,702	1,249	30	-62	-88	290	732	226	267	702	279
Dry (22%)	549	1,521	1,244	564	199	-85	311	669	322	75	62	49
Critical (15%)	-59	960	767	533	316	83	228	280	182	21	0	39

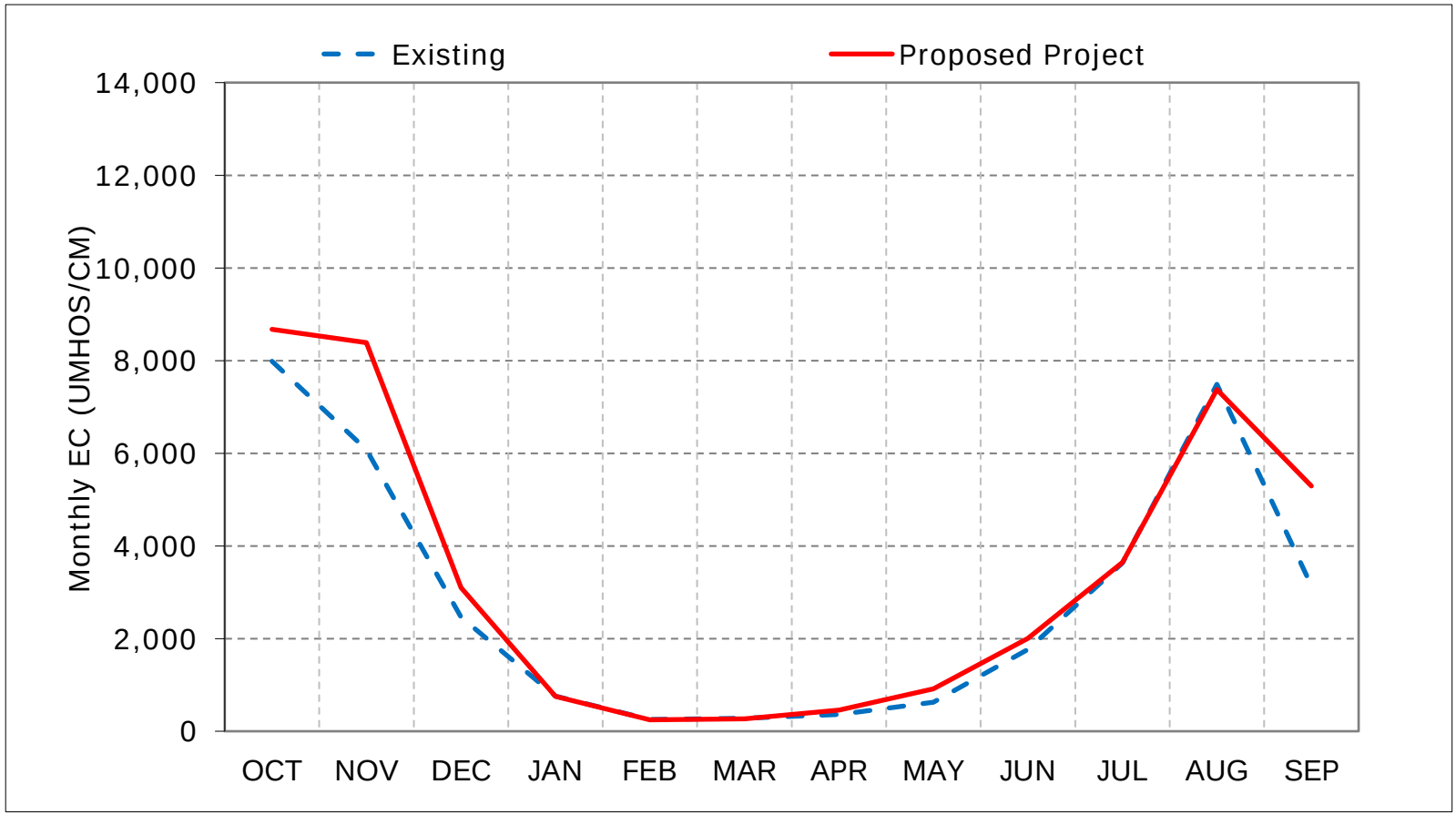
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 8-1. Chipps Island North Channel Salinity, Long-Term Average EC



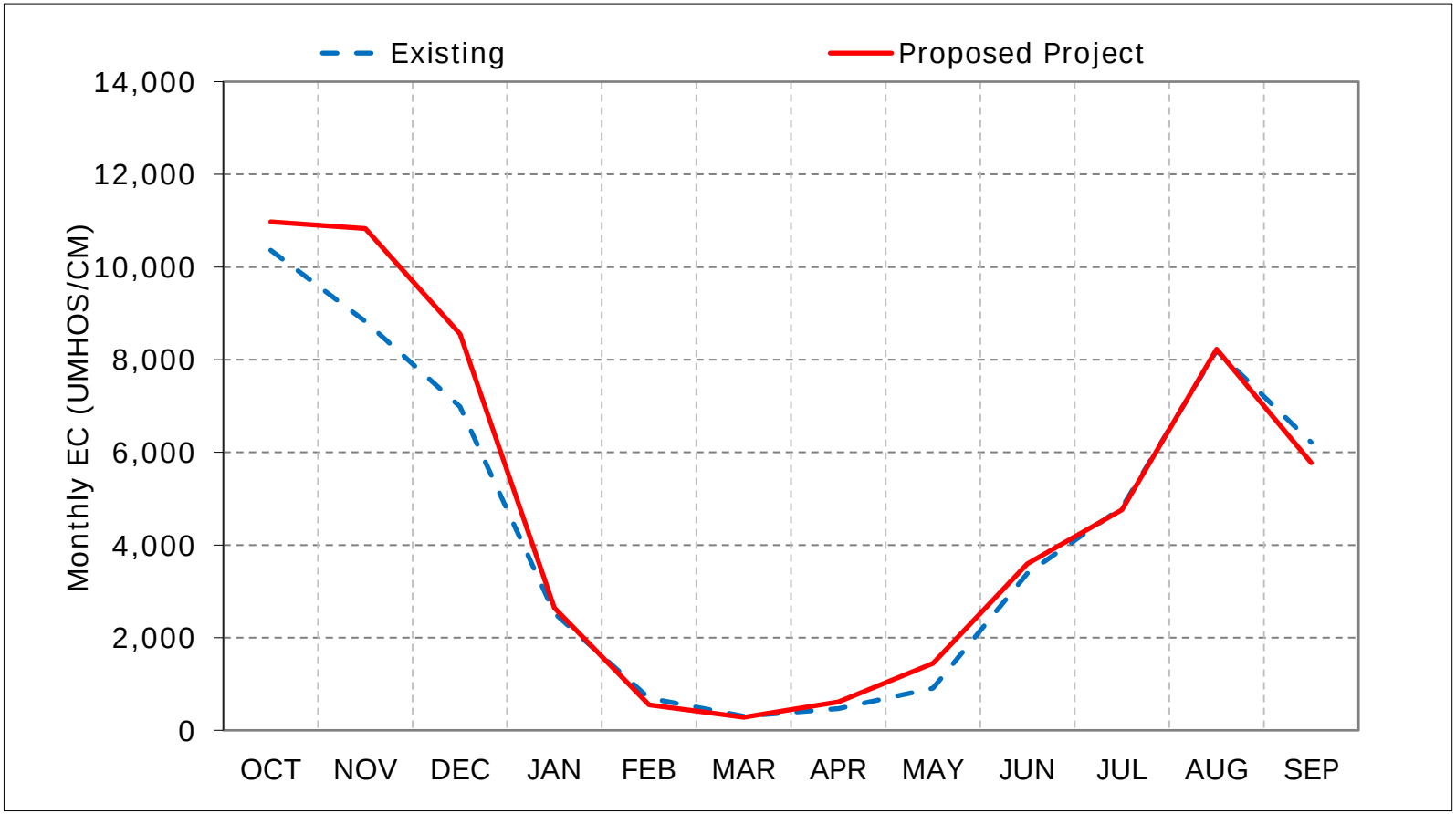
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-2. Chipps Island North Channel Salinity, Wet Year Average EC



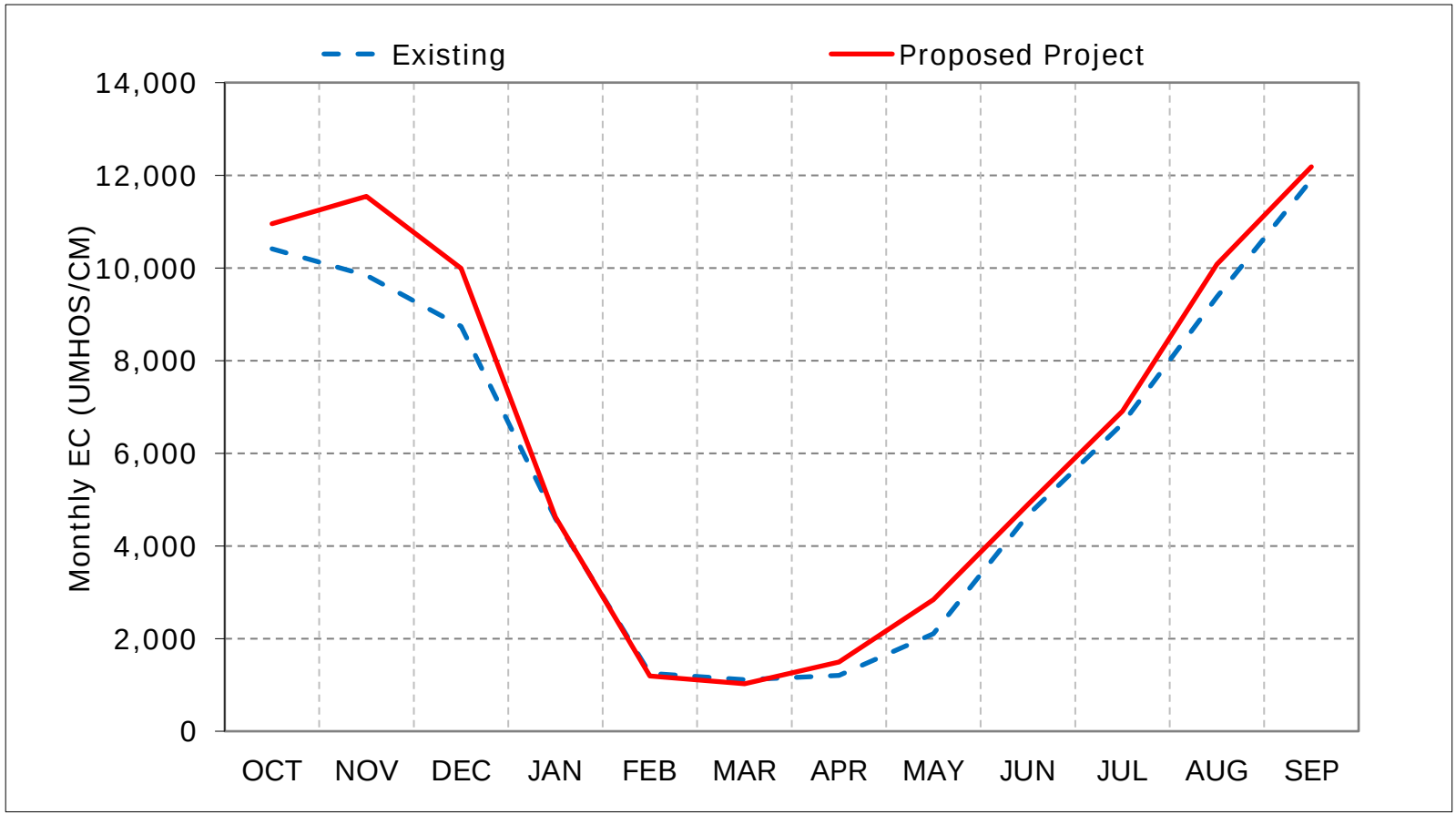
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-3. Chipps Island North Channel Salinity, Above Normal Year Average EC



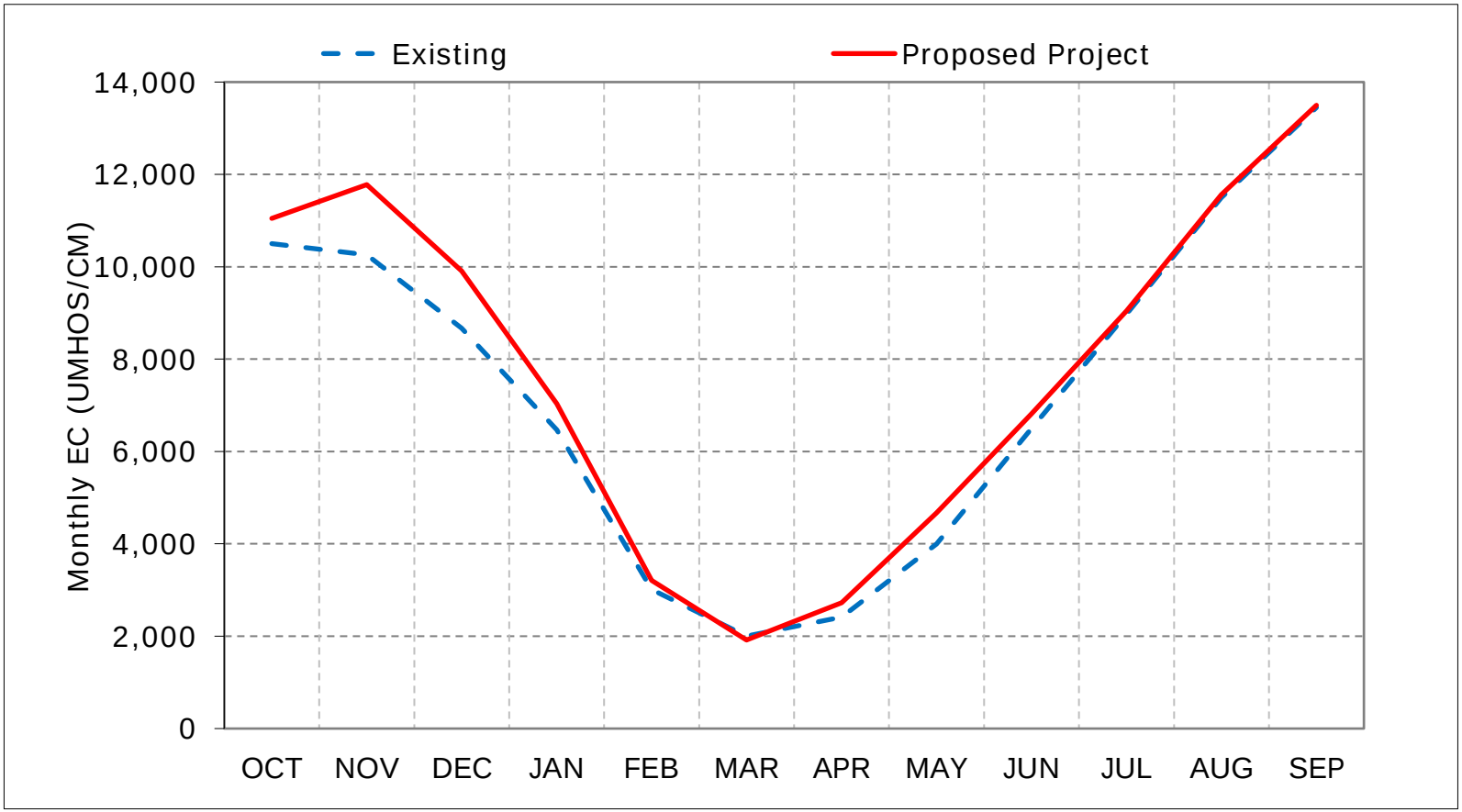
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-4. Chipps Island North Channel Salinity, Below Normal Year Average EC



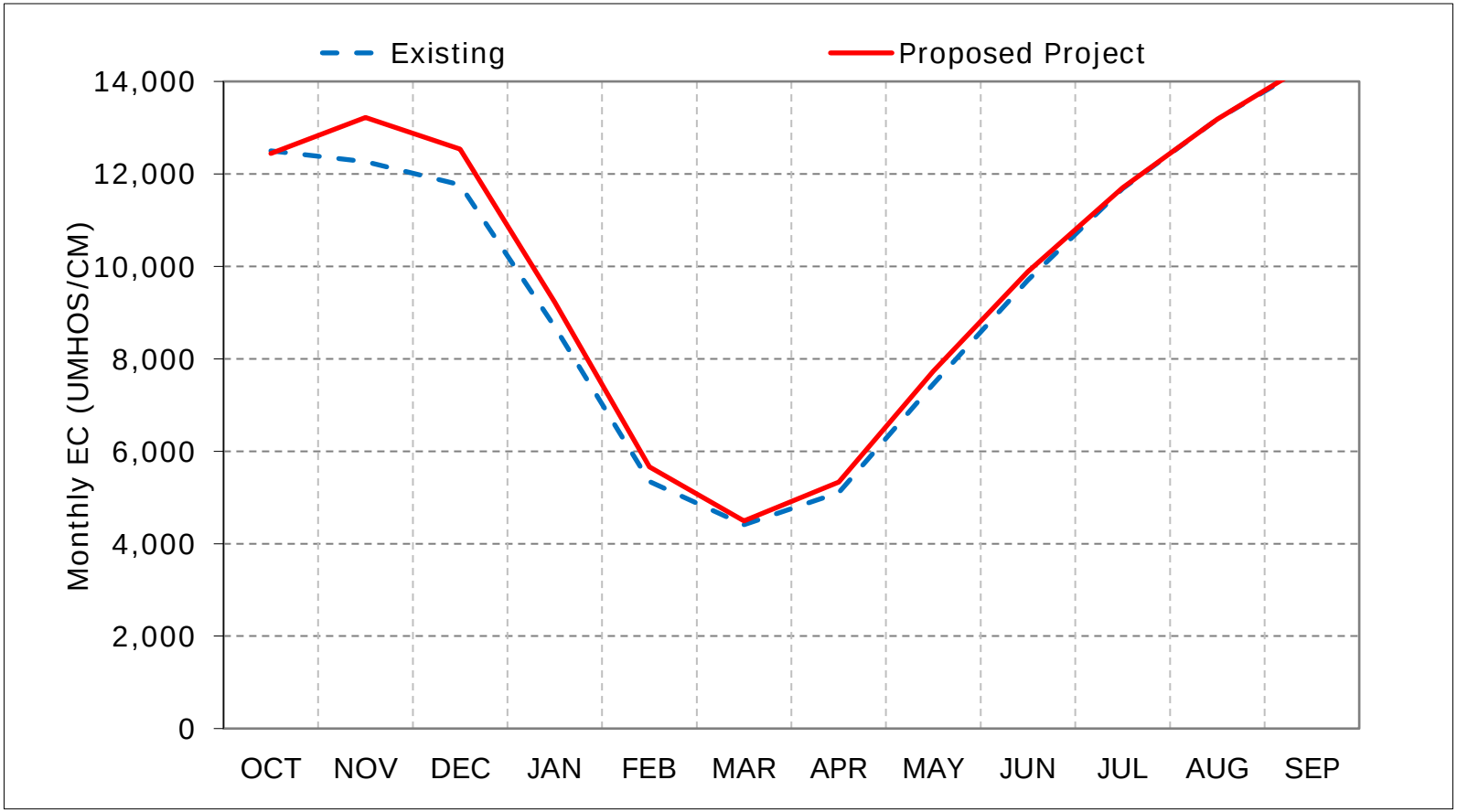
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-5. Chipps Island North Channel Salinity, Dry Year Average EC



*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.

Figure 8-6. Chipps Island North Channel Salinity, Critical Year Average EC



*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.

Figure 8-7. Chipps Island North Channel Salinity, January EC

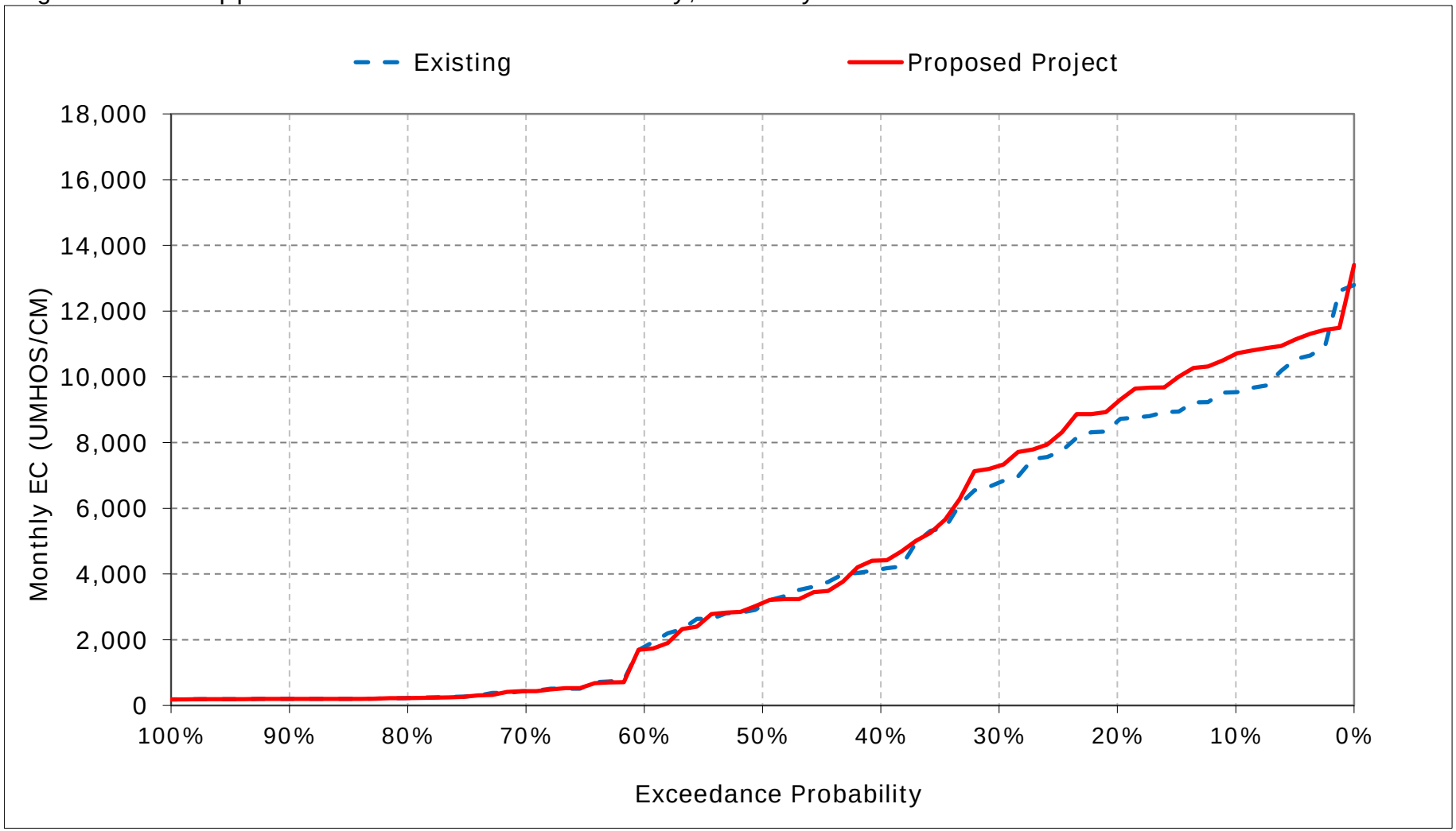


Figure 8-8. Chipps Island North Channel Salinity, February EC

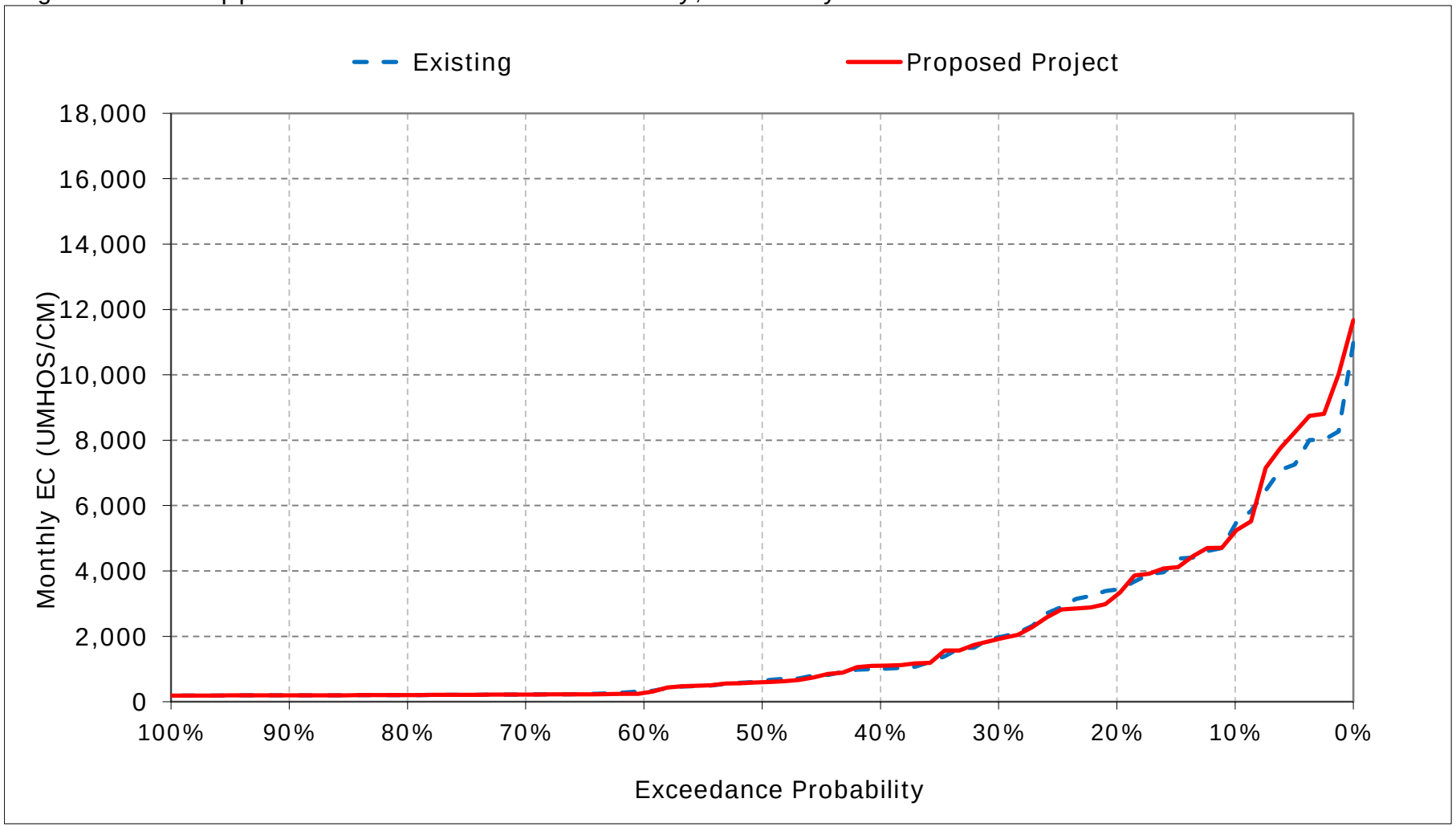


Figure 8-9. Chipps Island North Channel Salinity, March EC

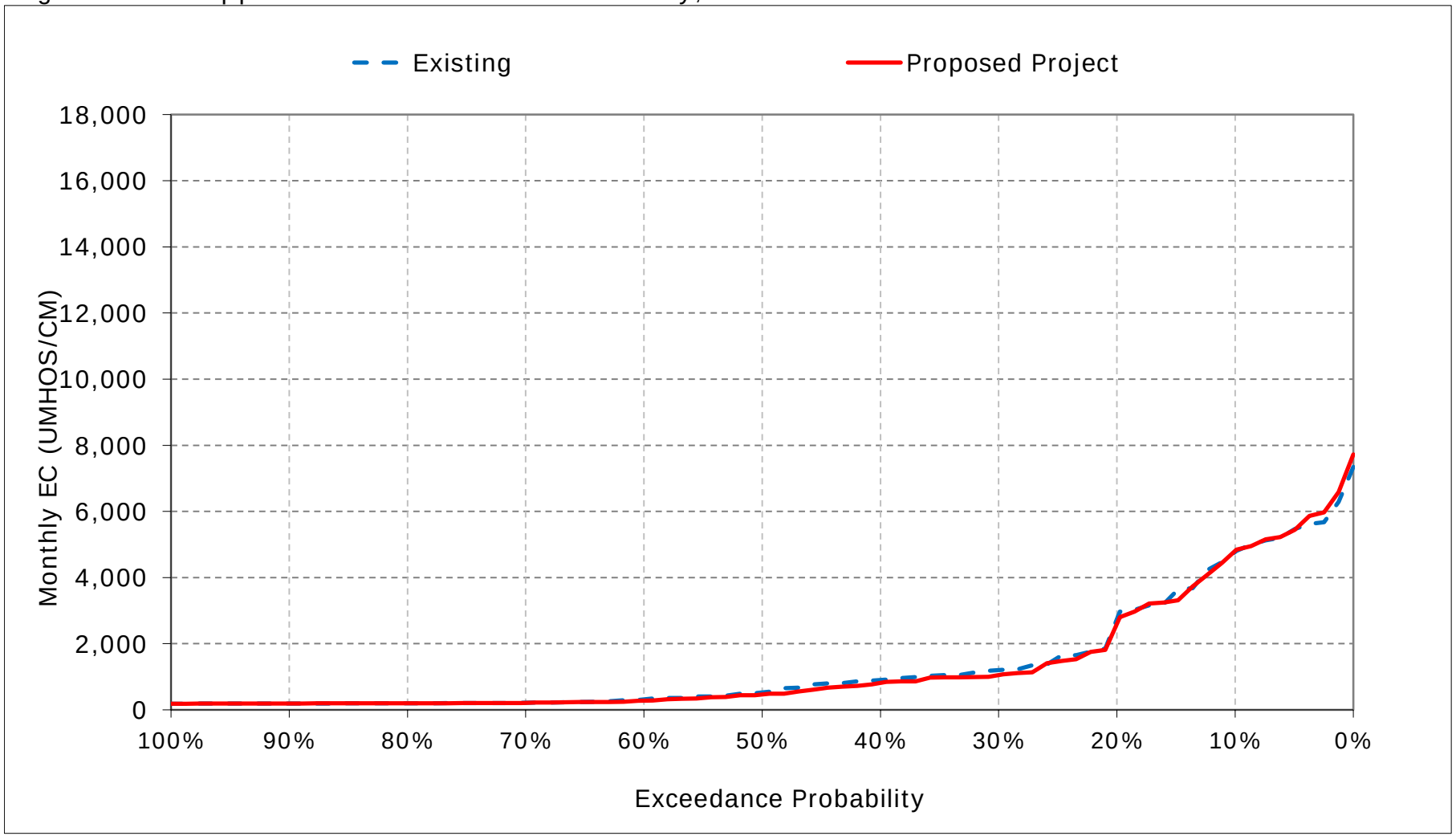


Figure 8-10. Chipps Island North Channel Salinity, April EC

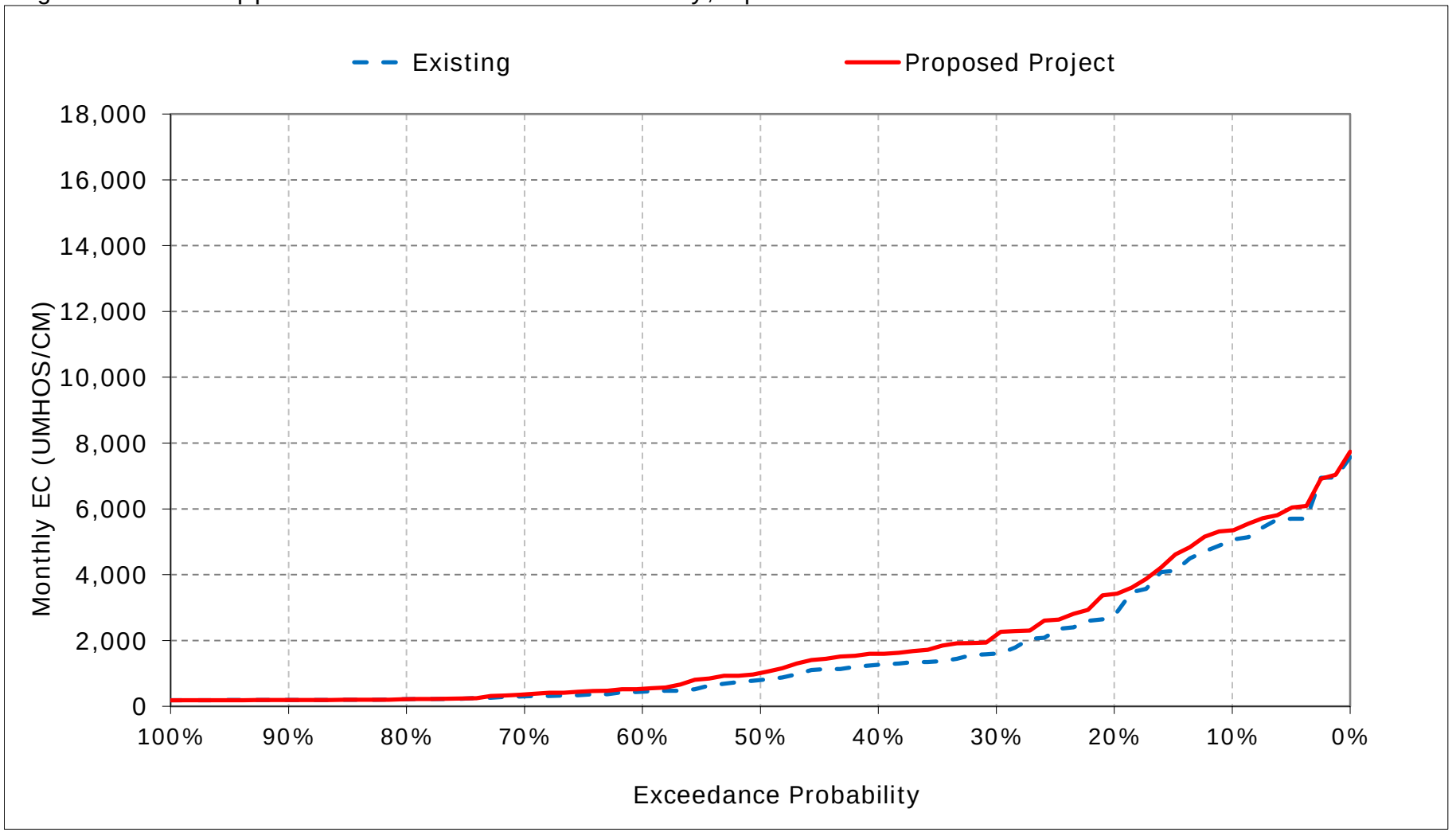


Figure 8-11. Chipps Island North Channel Salinity, May EC

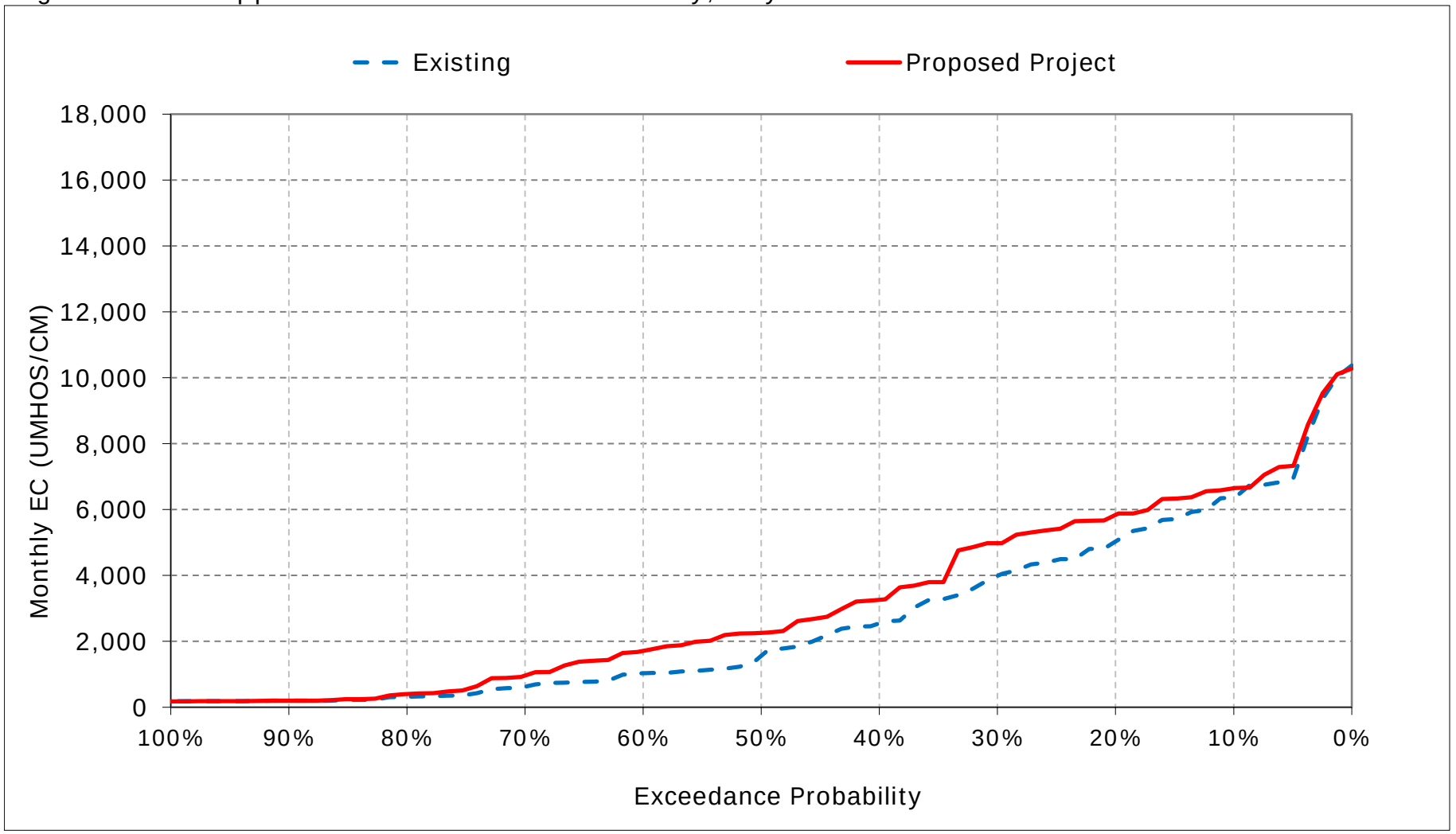


Figure 8-12. Chipps Island North Channel Salinity, June EC

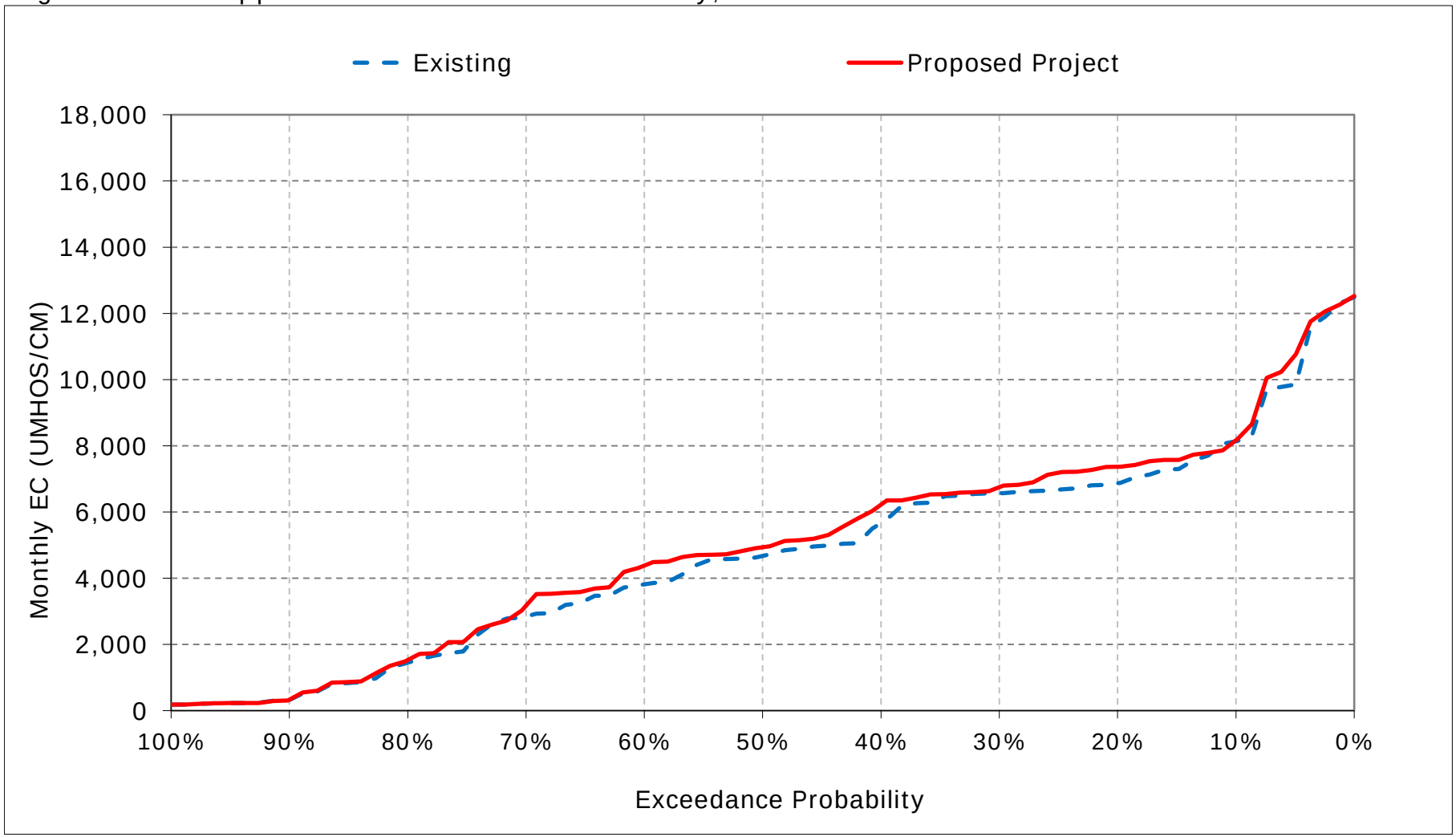


Figure 8-13. Chipps Island North Channel Salinity, July EC

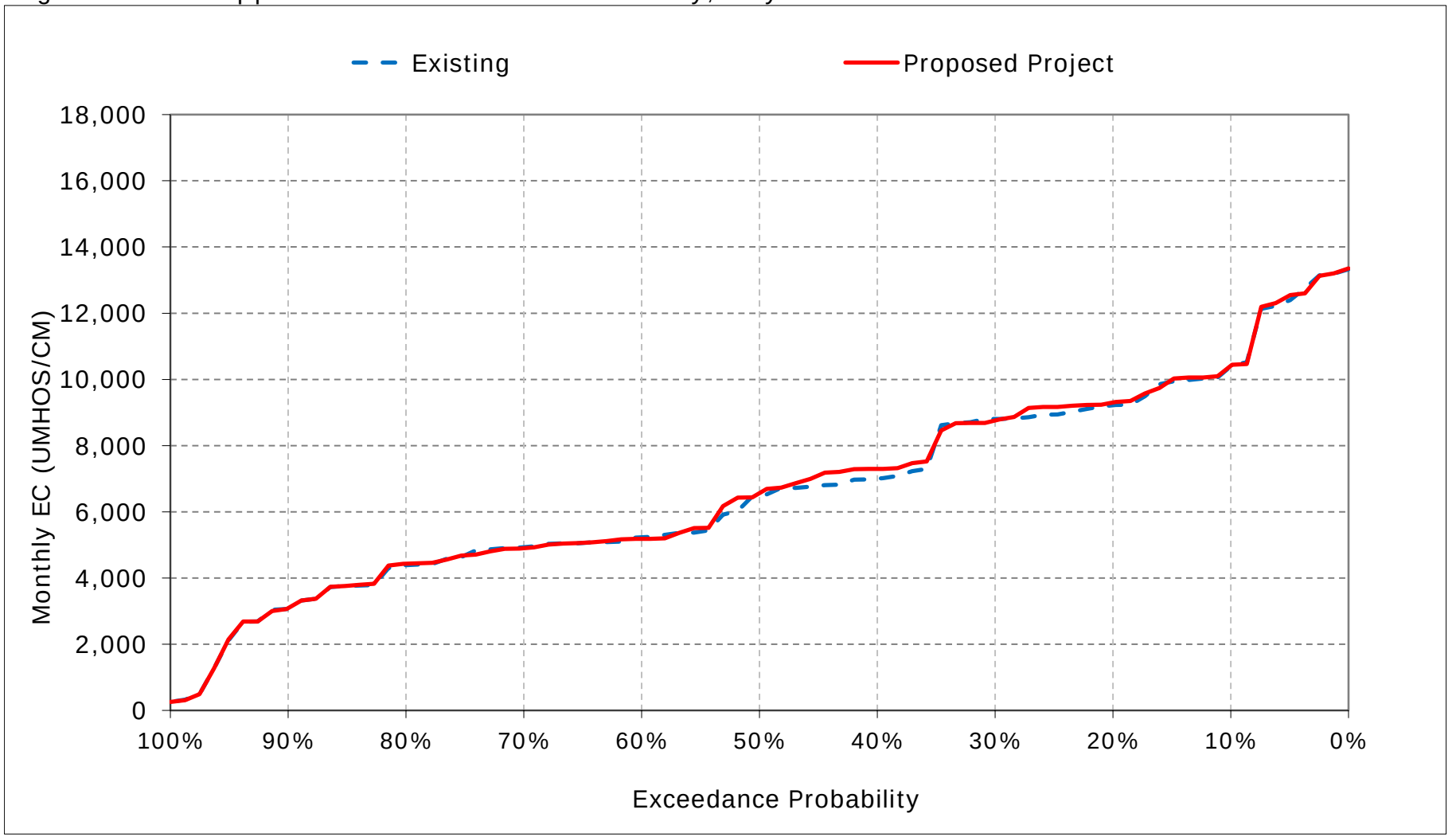


Figure 8-14. Chipps Island North Channel Salinity, August EC

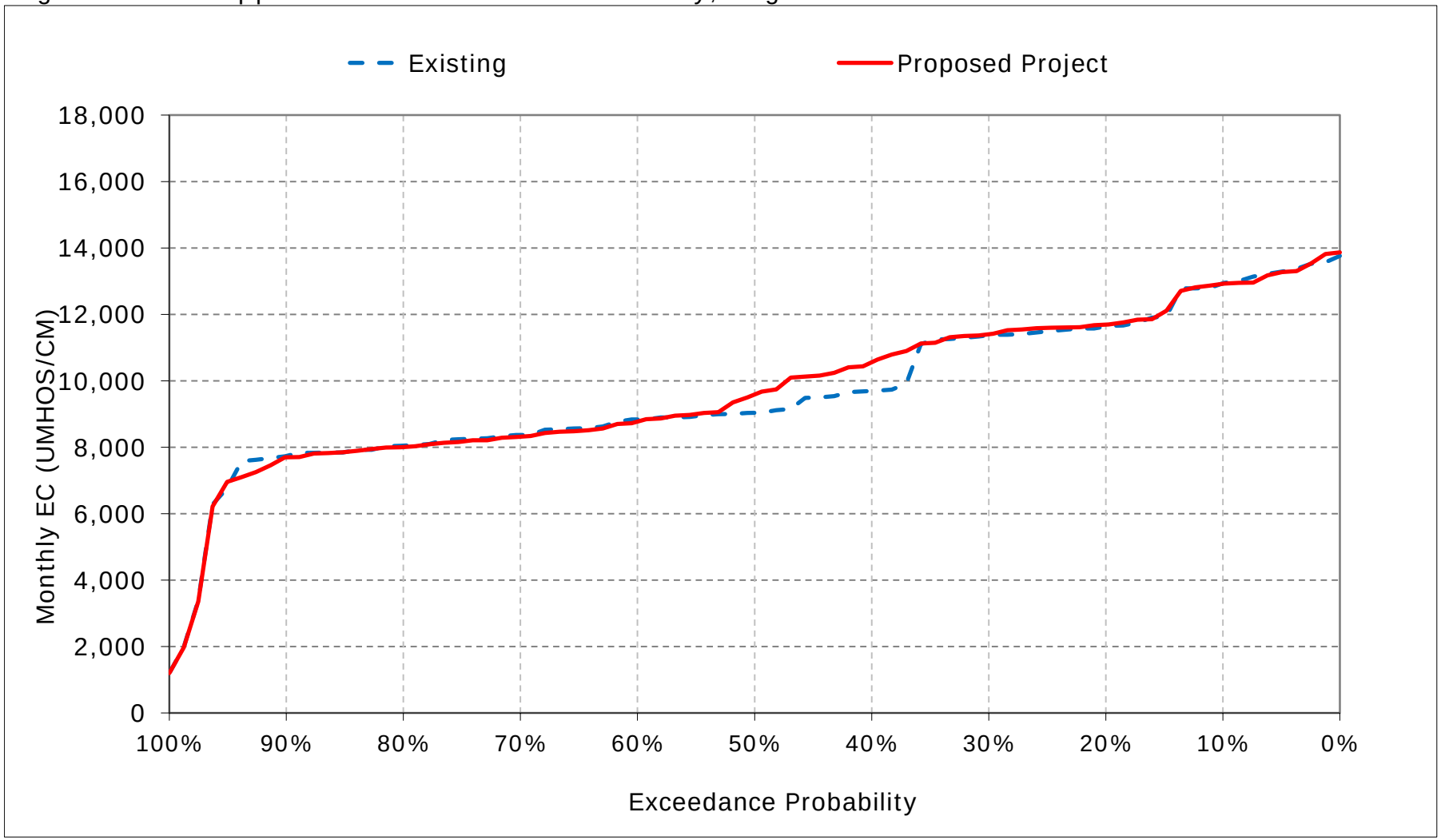


Figure 8-15. Chipps Island North Channel Salinity, September EC

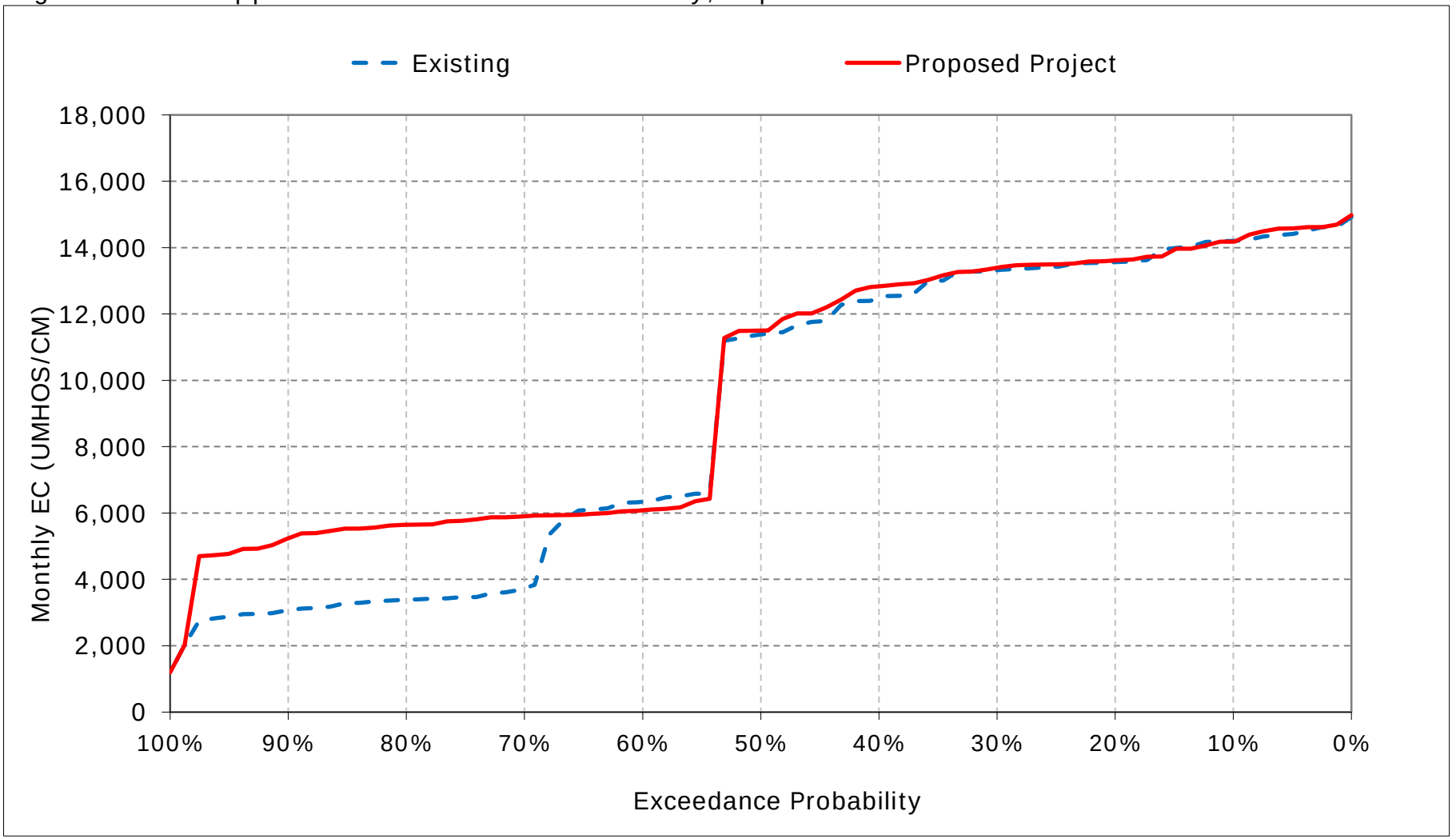


Figure 8-16. Chipps Island North Channel Salinity, October EC

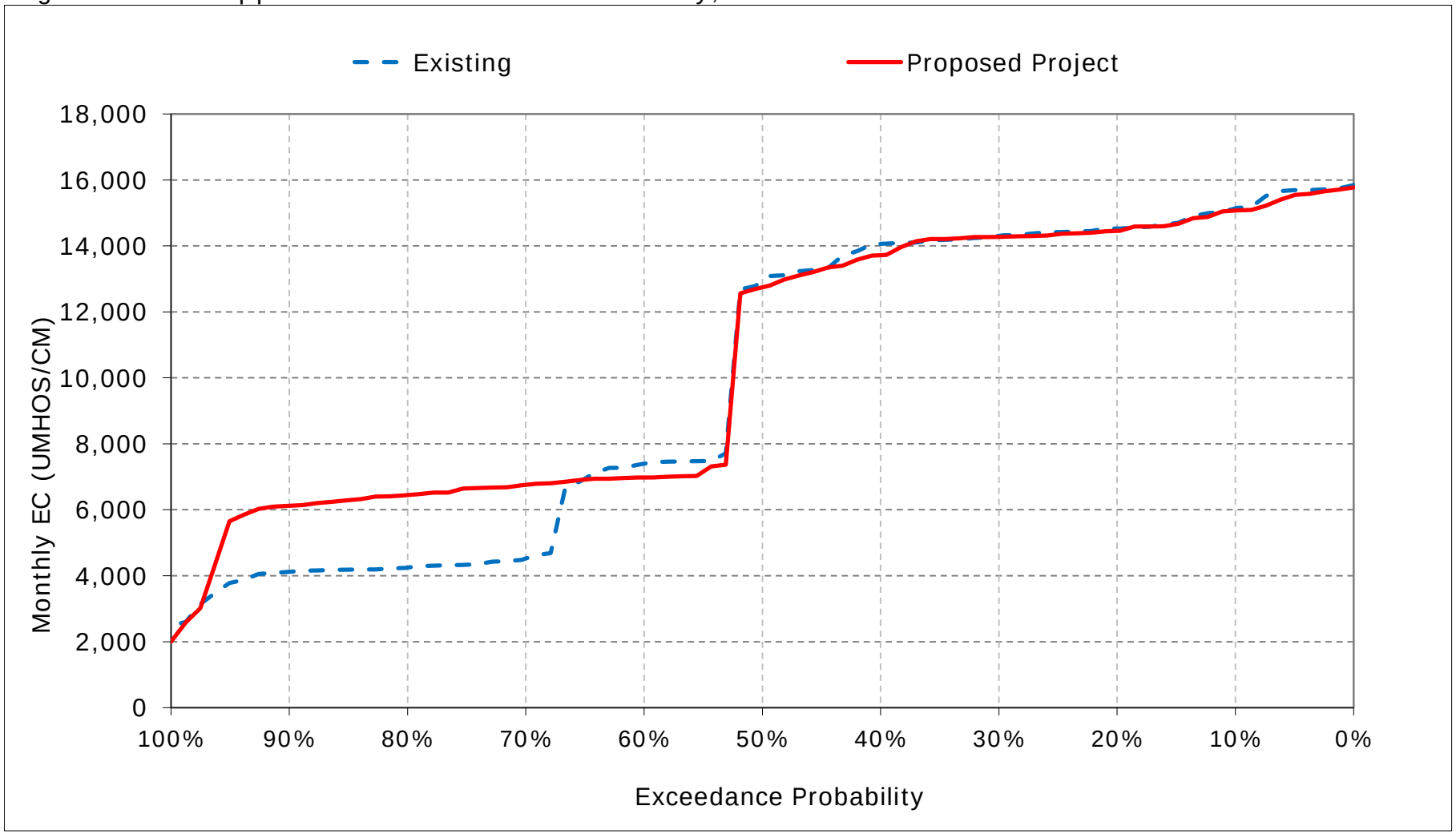


Figure 8-17. Chipps Island North Channel Salinity, November EC

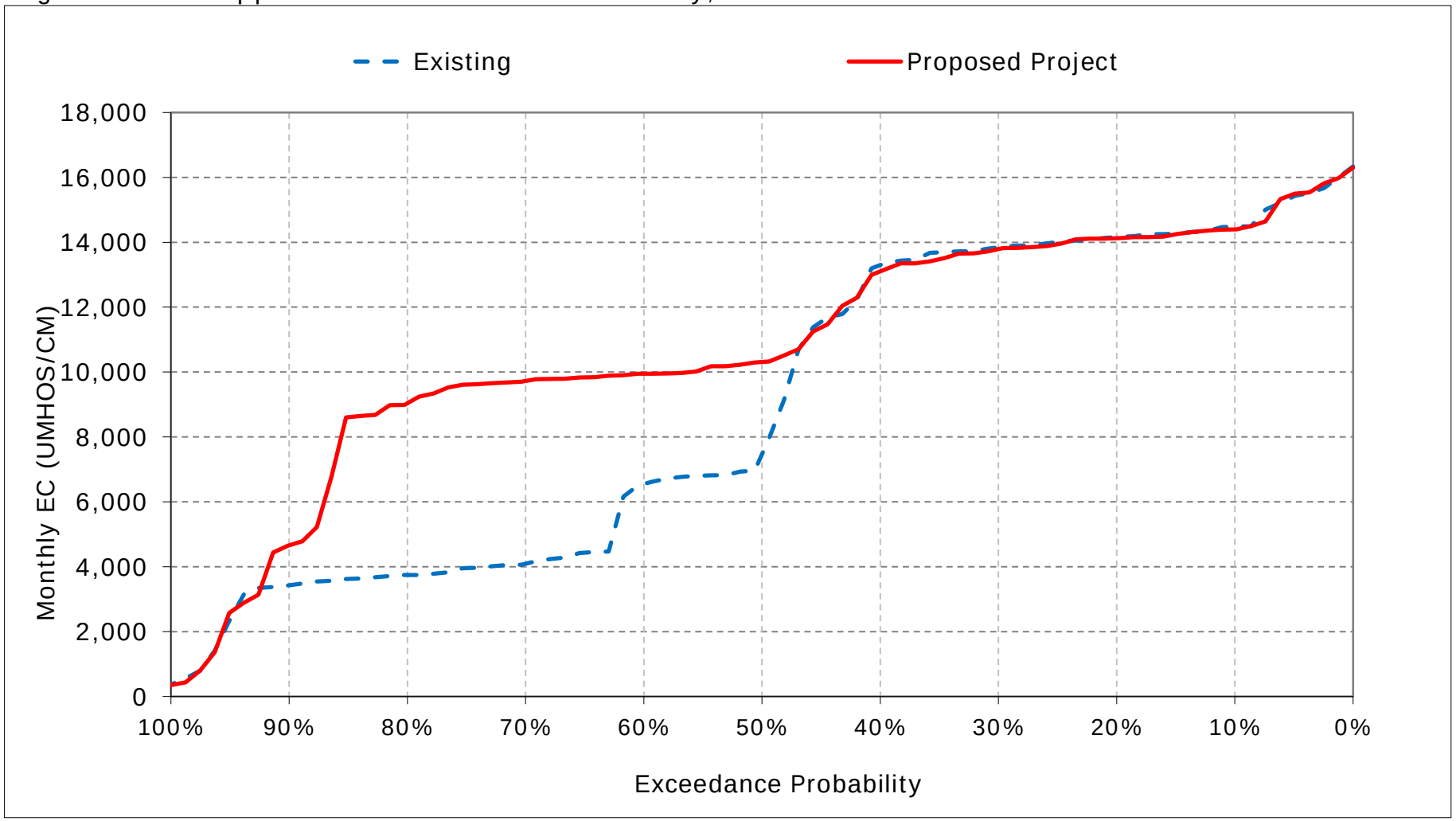


Figure 8-18. Chipps Island North Channel Salinity, December EC

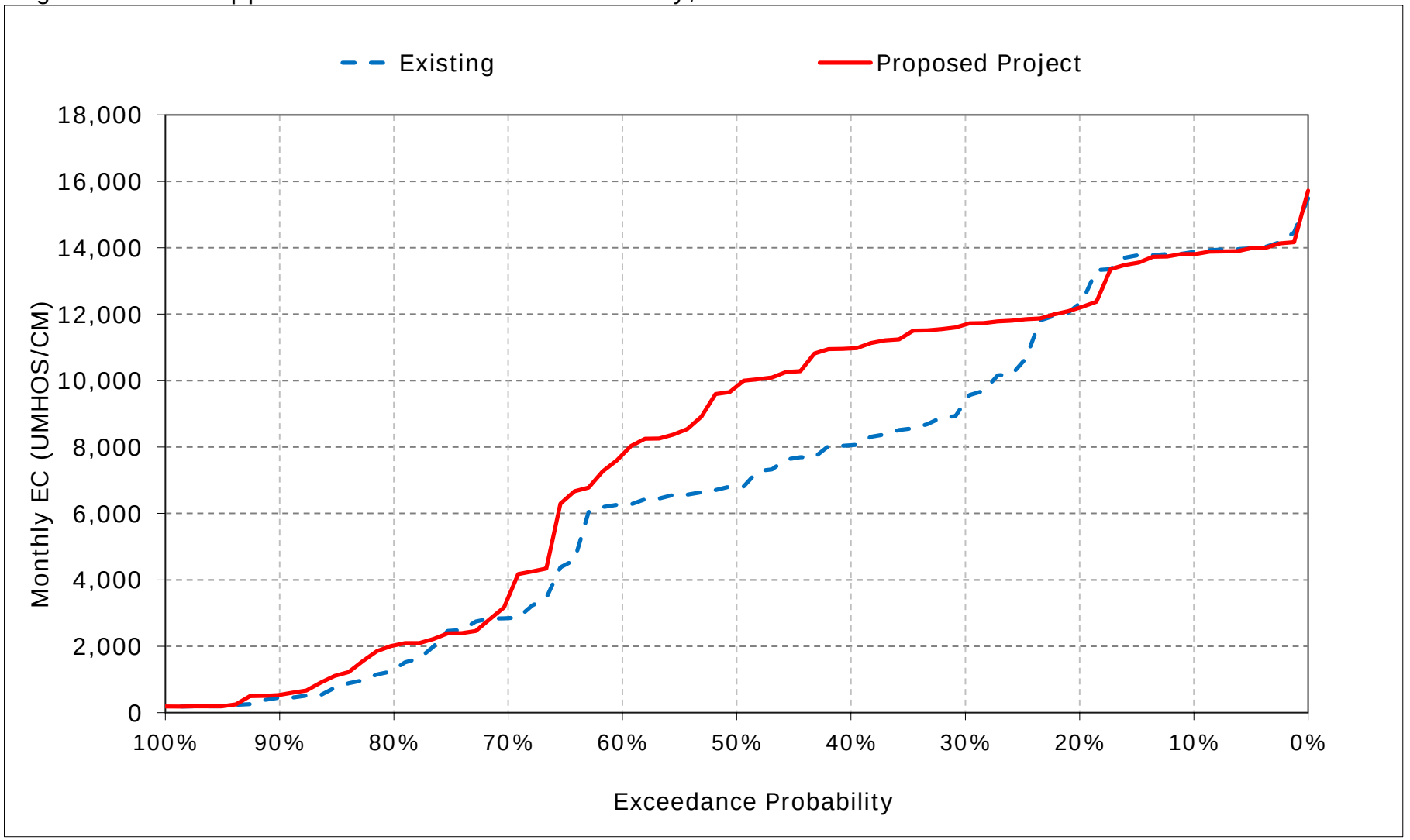


Table 9-1. Chipps Island South Channel Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	13,978	13,281	12,537	8,210	4,174	3,630	3,937	5,048	6,637	8,894	11,521	12,903
20%	13,320	12,805	10,920	7,295	2,547	2,037	1,966	3,919	5,526	7,692	10,241	12,247
30%	13,059	12,586	7,941	5,657	1,420	798	1,039	2,897	5,203	7,284	9,931	12,001
40%	12,865	11,999	6,732	3,264	795	605	808	1,734	4,277	5,564	8,261	11,115
50%	11,653	6,265	5,558	2,491	589	363	557	980	3,568	5,114	7,589	9,980
60%	6,184	5,367	5,069	1,335	295	244	307	646	2,720	4,060	7,427	5,219
70%	3,557	3,197	2,145	339	219	203	239	387	2,007	3,715	6,995	3,003
80%	3,334	2,863	1,040	216	201	196	205	238	897	3,268	6,690	2,663
90%	3,161	2,617	355	196	192	191	192	193	232	2,248	6,353	2,473
Long Term												
Full Simulation Period[a]	8,840	7,881	5,965	3,432	1,483	1,073	1,242	2,017	3,701	5,422	8,251	7,901
Water Year Types[b]												
Wet (32%)	6,948	5,172	2,013	631	240	236	282	448	1,259	2,703	6,196	2,473
Above Normal (15%)	9,230	7,827	5,961	2,122	564	251	336	595	2,502	3,646	6,818	5,100
Below Normal (17%)	9,261	8,675	7,599	3,803	972	781	836	1,470	3,527	5,266	7,910	10,521
Dry (22%)	9,348	9,098	7,430	5,383	2,376	1,474	1,734	2,962	5,139	7,459	10,075	12,122
Critical (15%)	11,294	11,051	10,428	7,453	4,354	3,446	3,964	6,062	8,235	10,217	11,797	13,075

Proposed Project

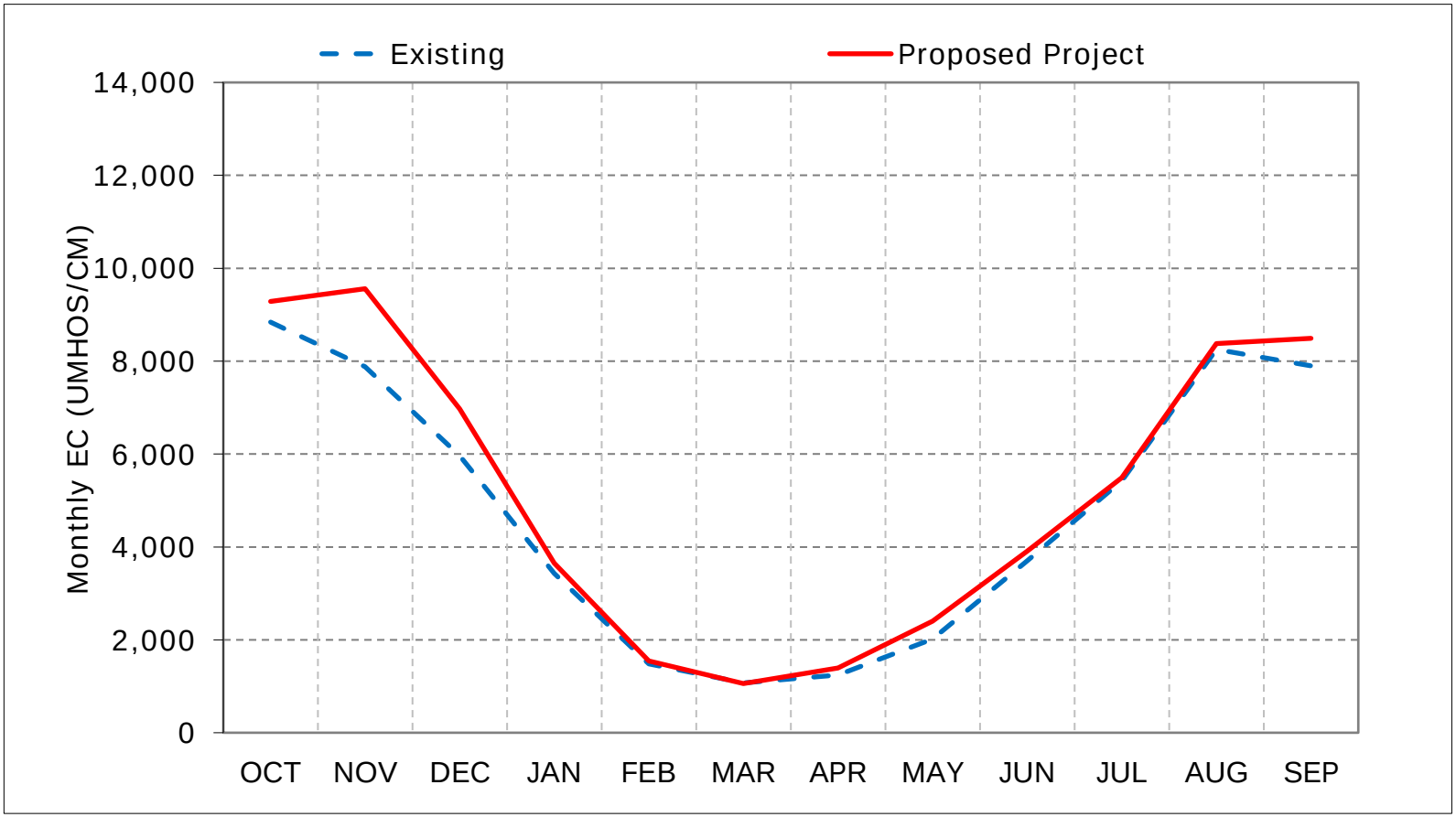
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	13,914	13,142	12,458	9,361	4,157	3,658	4,141	5,232	6,727	8,834	11,506	12,877
20%	13,210	12,827	10,831	7,924	2,416	1,914	2,454	4,565	5,956	7,829	10,256	12,305
30%	13,042	12,504	10,368	6,055	1,509	728	1,454	3,837	5,355	7,258	9,968	12,060
40%	12,425	11,822	9,593	3,535	777	536	1,028	2,261	4,818	5,950	9,289	11,514
50%	11,422	9,081	8,412	2,438	617	333	663	1,480	3,761	5,297	8,243	10,131
60%	5,783	8,604	6,501	1,225	270	232	362	1,127	3,223	3,969	7,369	4,987
70%	5,517	8,426	2,623	336	217	205	261	584	2,231	3,715	6,945	4,772
80%	5,277	7,794	1,673	219	201	195	201	268	946	3,336	6,636	4,597
90%	4,950	3,727	612	197	193	192	190	188	234	2,255	6,234	4,347
Long Term												
Full Simulation Period[a]	9,288	9,559	6,973	3,651	1,543	1,058	1,392	2,399	3,910	5,492	8,376	8,491
Water Year Types[b]												
Wet (32%)	7,561	7,329	2,653	629	233	230	340	657	1,455	2,715	6,086	4,278
Above Normal (15%)	9,757	9,678	7,477	2,255	450	236	425	970	2,660	3,588	6,851	4,703
Below Normal (17%)	9,734	10,274	8,815	3,857	927	726	1,045	2,036	3,716	5,596	8,752	10,872
Dry (22%)	9,833	10,551	8,644	5,912	2,557	1,421	1,977	3,537	5,434	7,532	10,137	12,171
Critical (15%)	11,220	11,949	11,177	7,964	4,674	3,517	4,162	6,320	8,417	10,232	11,786	13,112

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-64	-139	-79	1,151	-17	29	205	184	90	-60	-16	-26
20%	-111	22	-89	629	-131	-123	488	646	429	137	16	58
30%	-18	-83	2,427	398	90	-71	415	941	152	-27	36	59
40%	-440	-176	2,861	271	-17	-69	220	527	540	385	1,029	399
50%	-232	2,816	2,853	-53	28	-31	106	500	193	183	654	151
60%	-400	3,238	1,431	-110	-25	-12	55	481	503	-91	-58	-232
70%	1,960	5,229	479	-3	-2	2	22	197	224	0	-50	1,769
80%	1,942	4,931	633	3	0	-1	-4	30	49	68	-55	1,933
90%	1,789	1,110	258	0	1	1	-2	-5	2	6	-119	1,874
Long Term												
Full Simulation Period[a]	448	1,678	1,008	219	60	-15	150	382	209	70	126	590
Water Year Types[b]												
Wet (32%)	613	2,157	640	-2	-7	-6	58	209	196	12	-110	1,805
Above Normal (15%)	527	1,852	1,515	133	-114	-15	89	374	158	-58	33	-398
Below Normal (17%)	473	1,599	1,216	54	-44	-55	209	565	189	330	842	351
Dry (22%)	485	1,453	1,214	528	181	-53	243	575	295	74	62	50
Critical (15%)	-74	898	749	511	320	72	198	258	182	14	-11	37

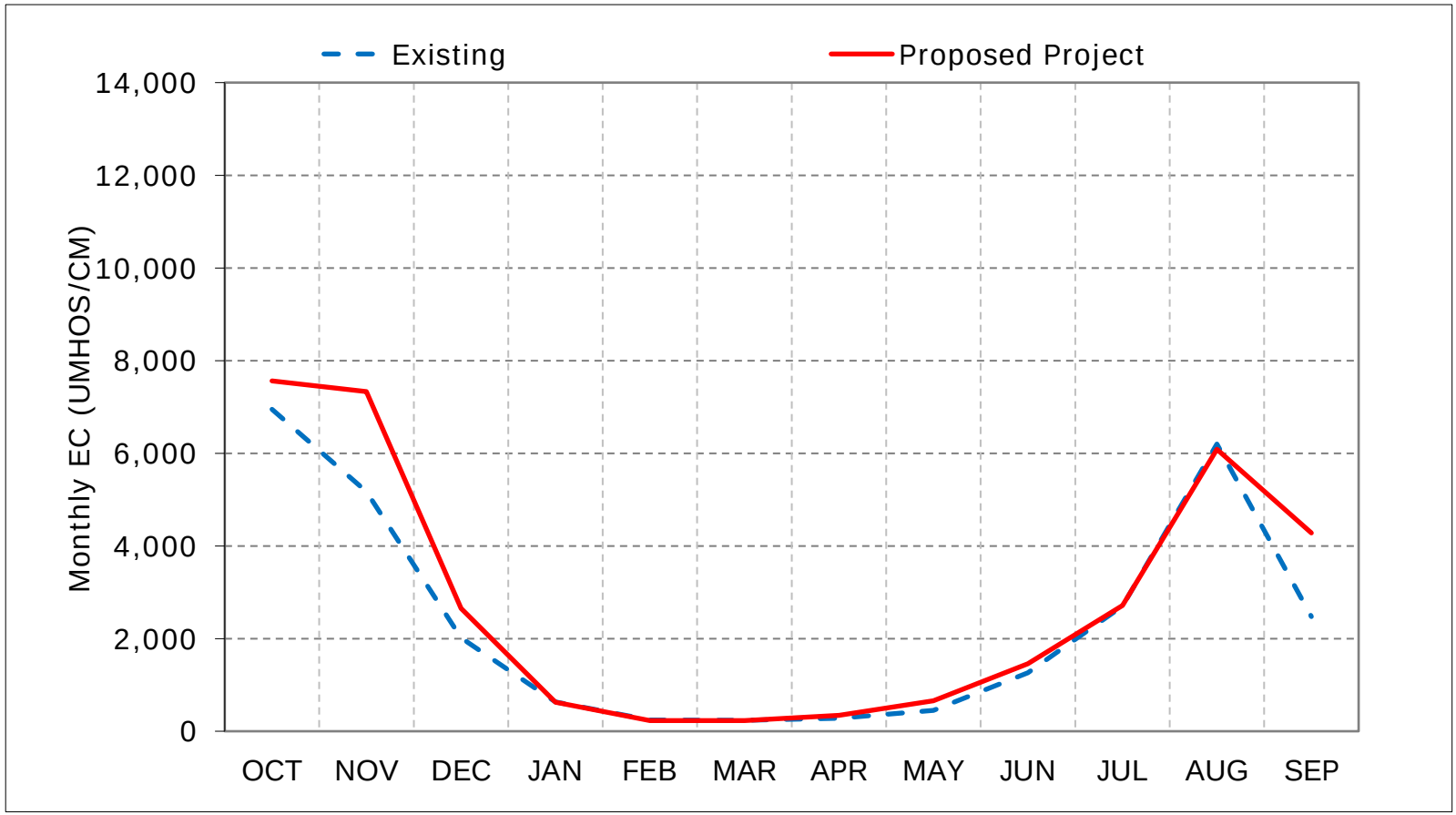
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 9-1. Chipps Island South Channel Salinity, Long-Term Average EC



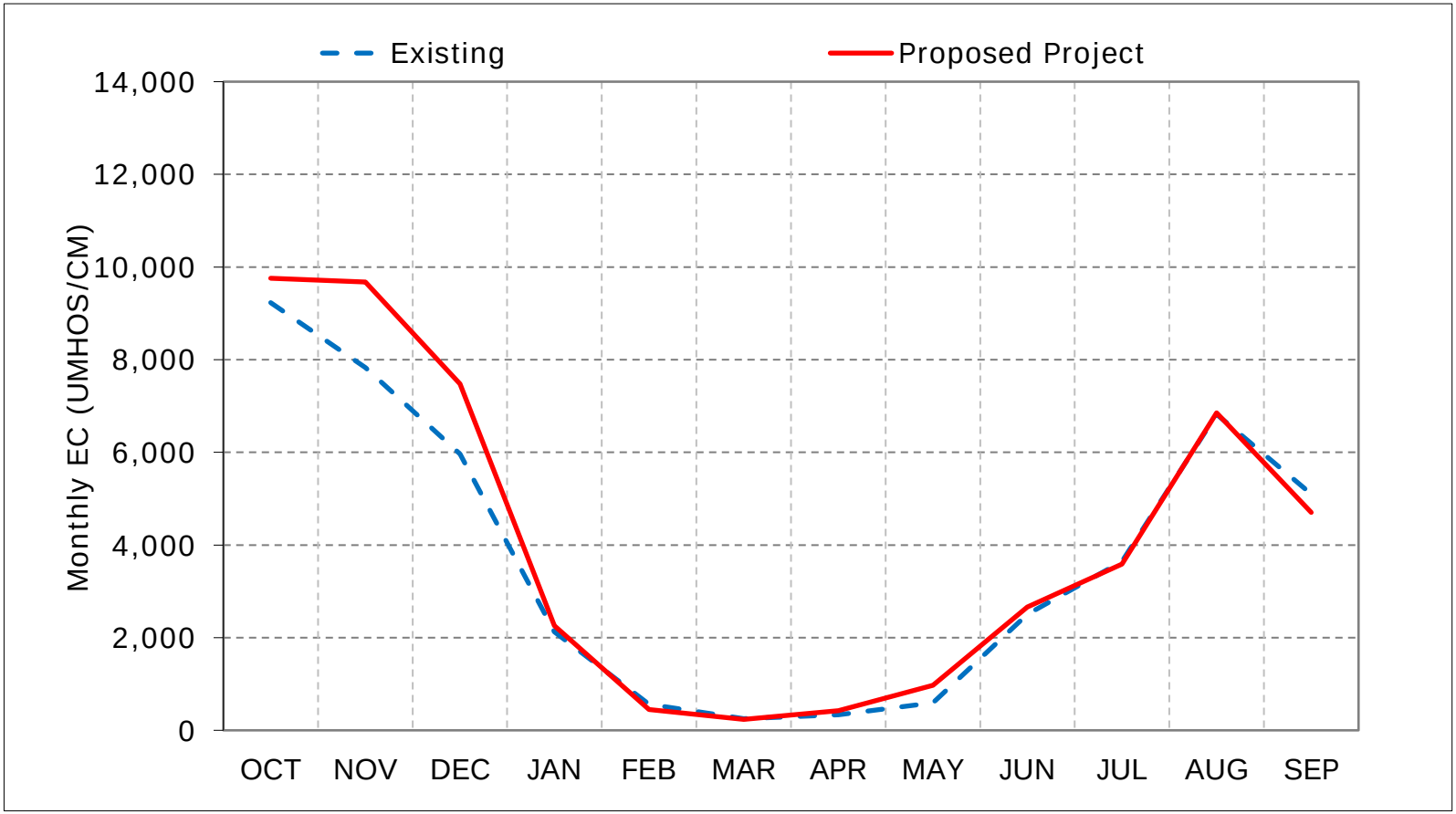
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-2. Chipps Island South Channel Salinity, Wet Year Average EC



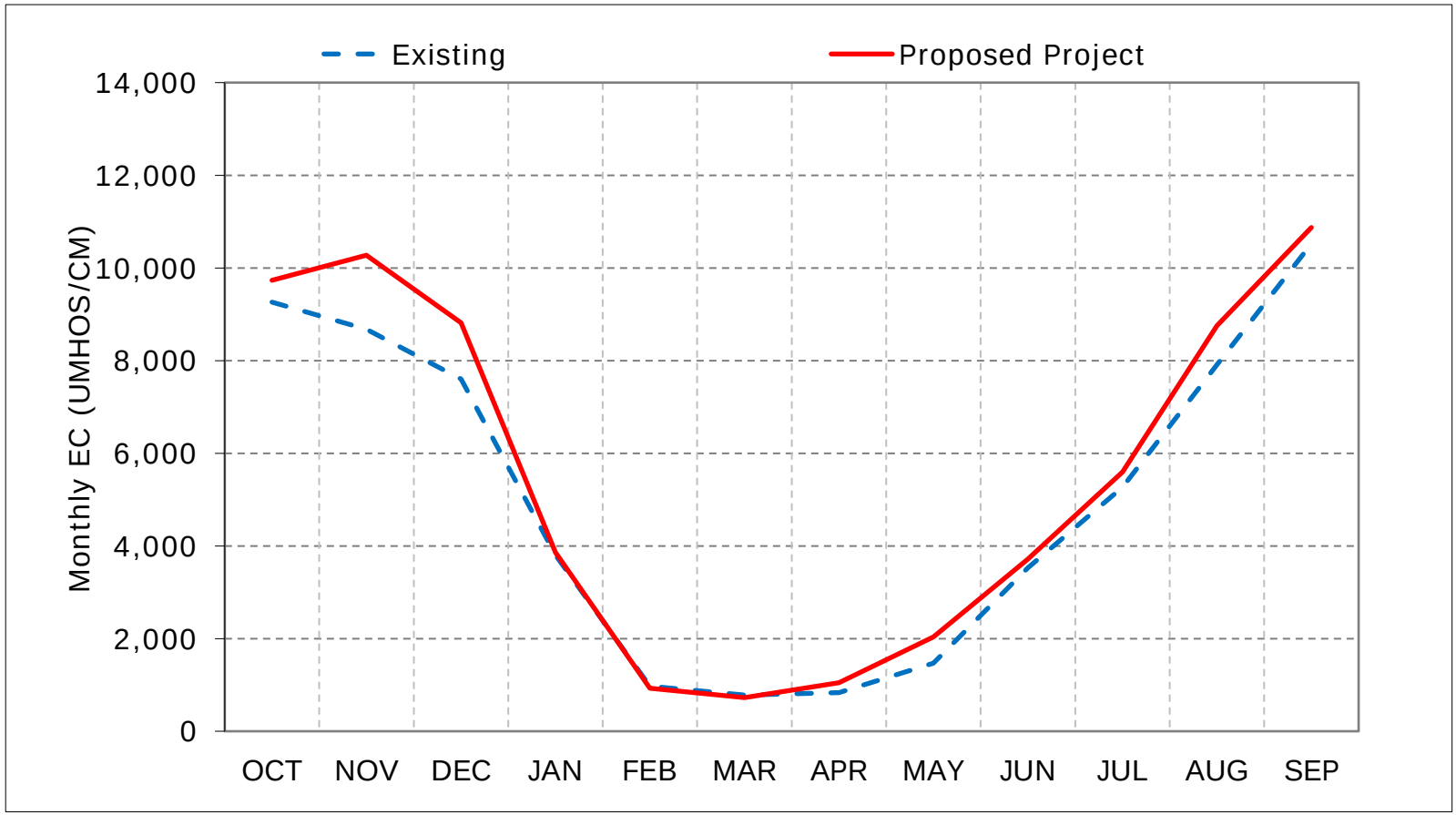
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-3. Chipps Island South Channel Salinity, Above Normal Year Average EC



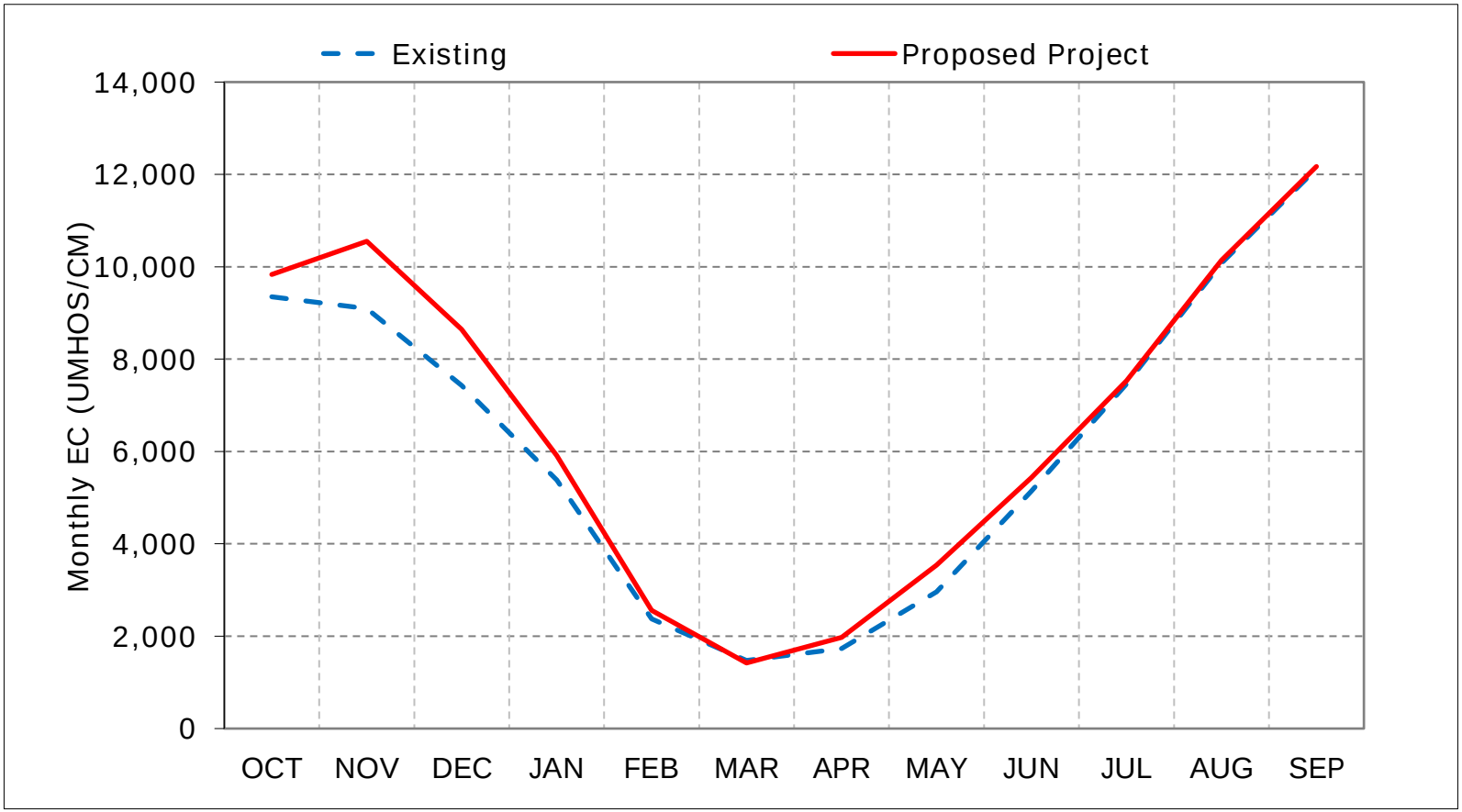
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-4. Chipps Island South Channel Salinity, Below Normal Year Average EC



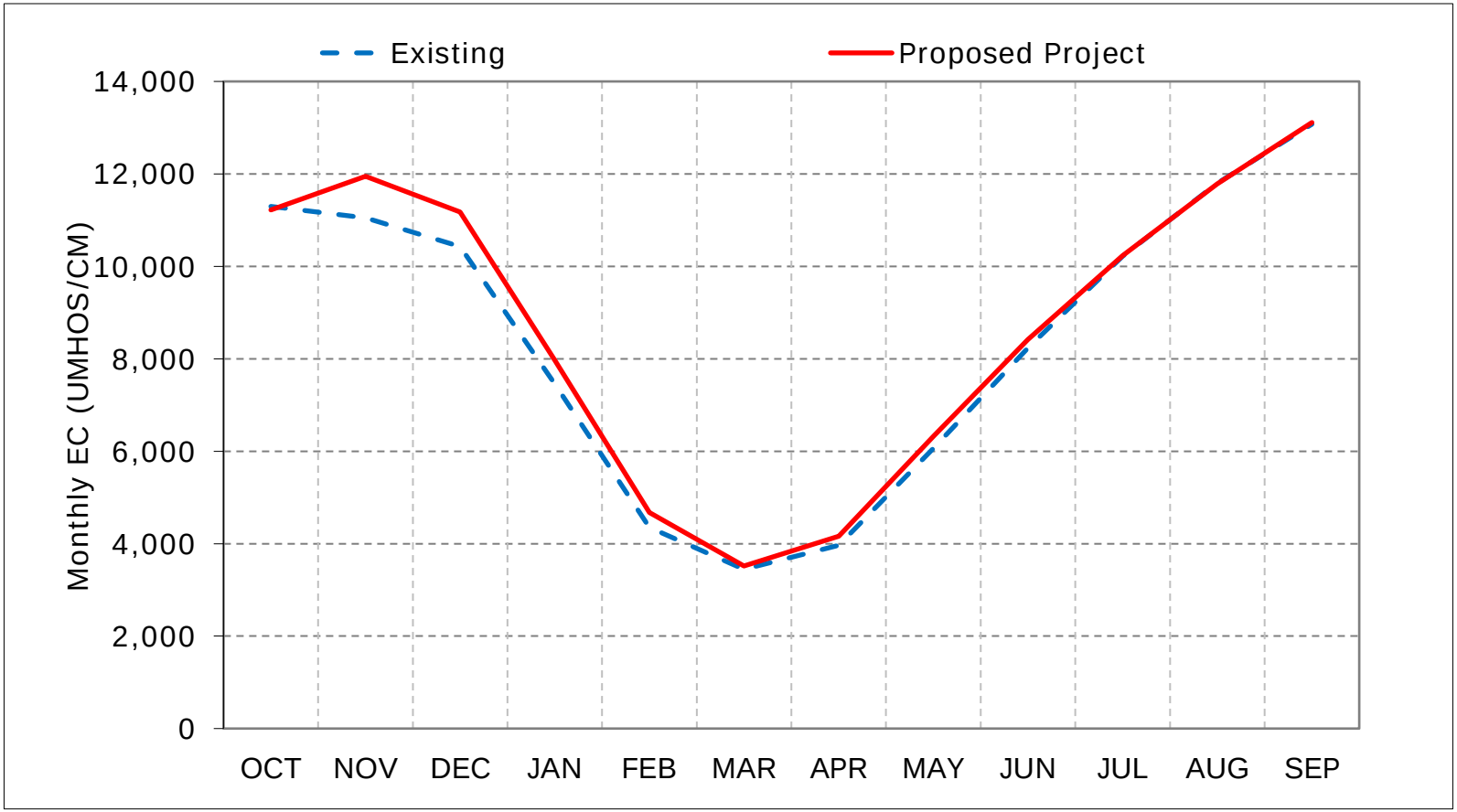
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-5. Chipps Island South Channel Salinity, Dry Year Average EC



*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.

Figure 9-6. Chipps Island South Channel Salinity, Critical Year Average EC



*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.

Figure 9-7. Chipps Island South Channel Salinity, January EC

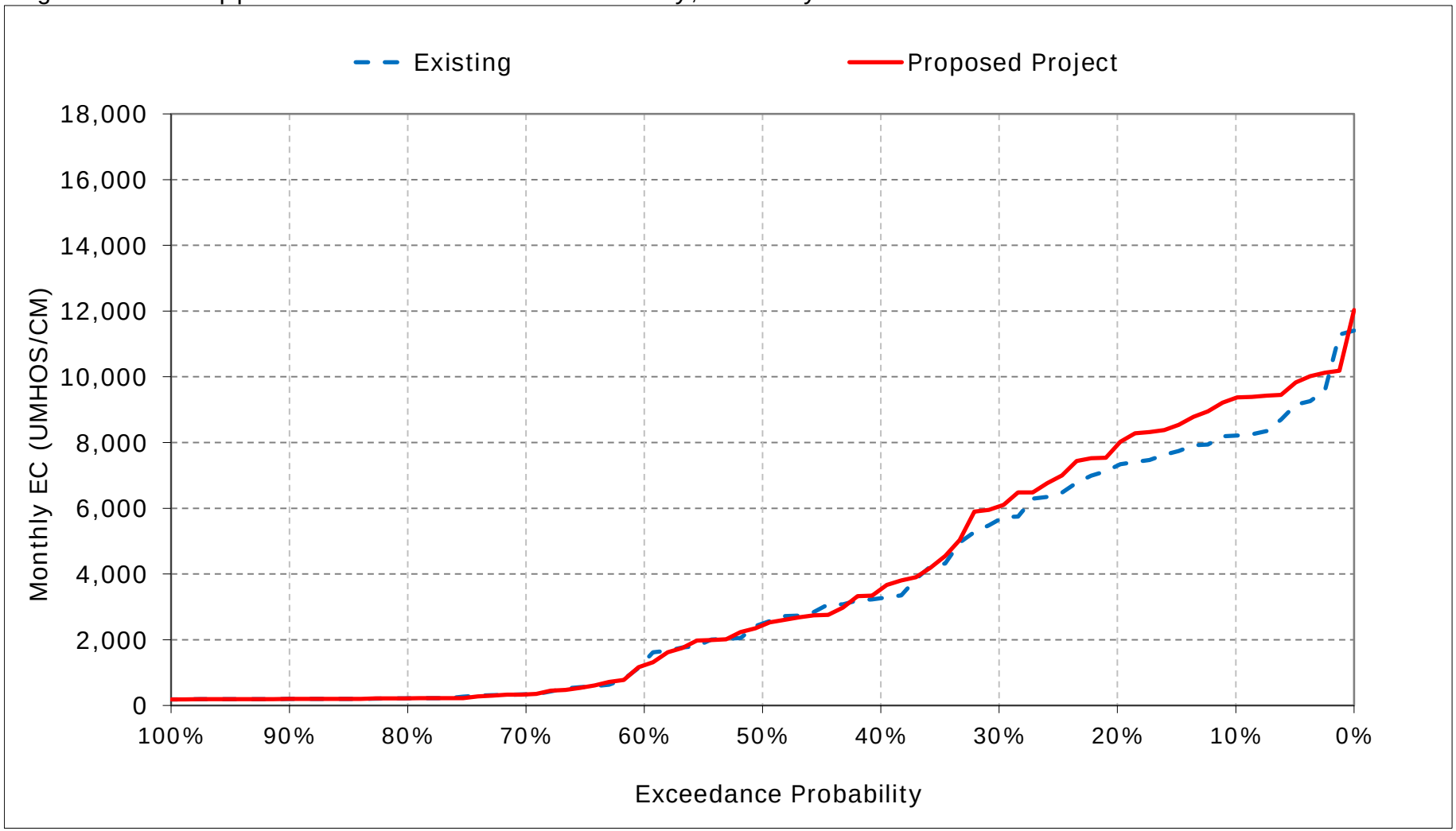


Figure 9-8. Chipps Island South Channel Salinity, February EC

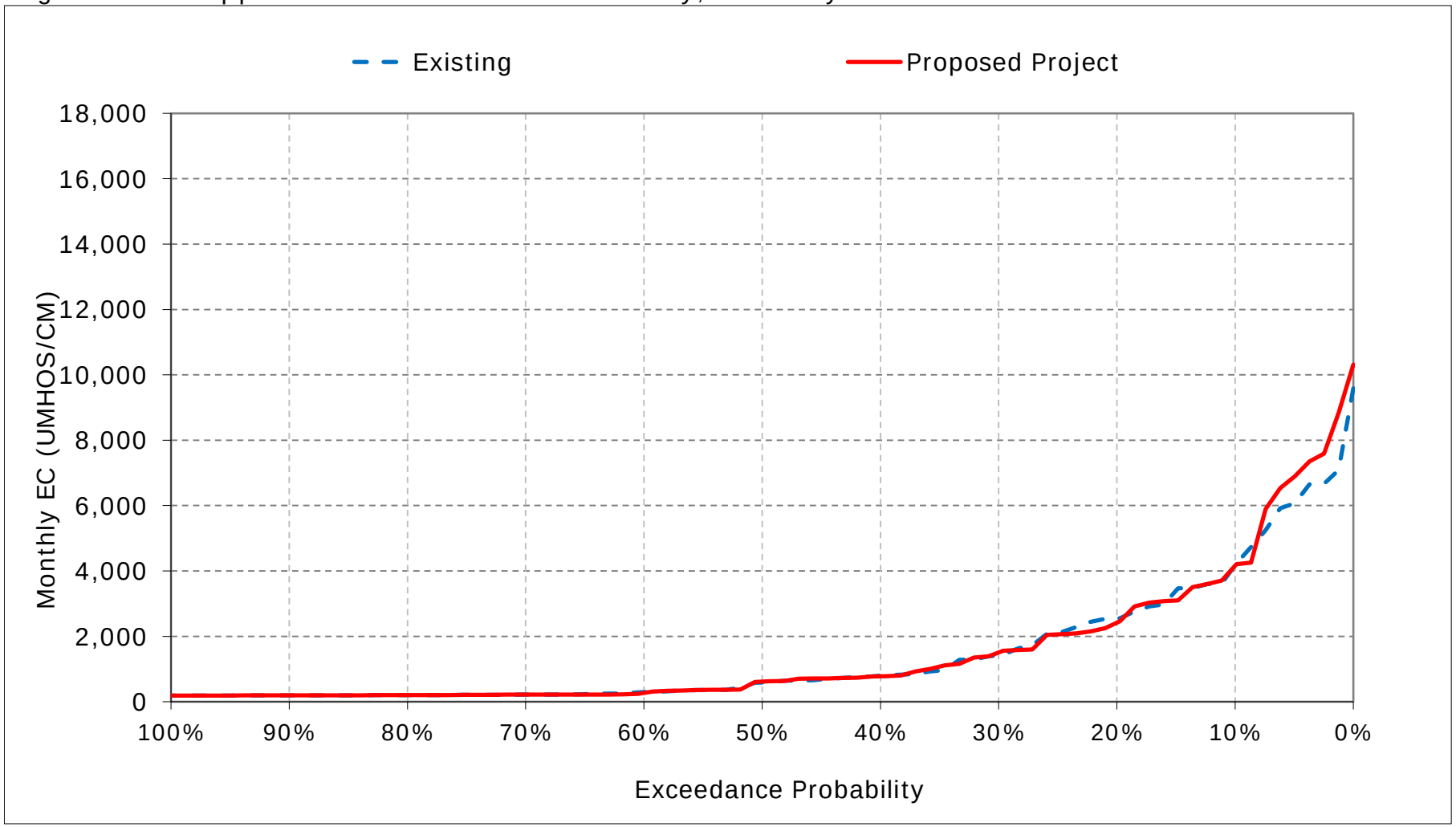


Figure 9-9. Chipps Island South Channel Salinity, March EC

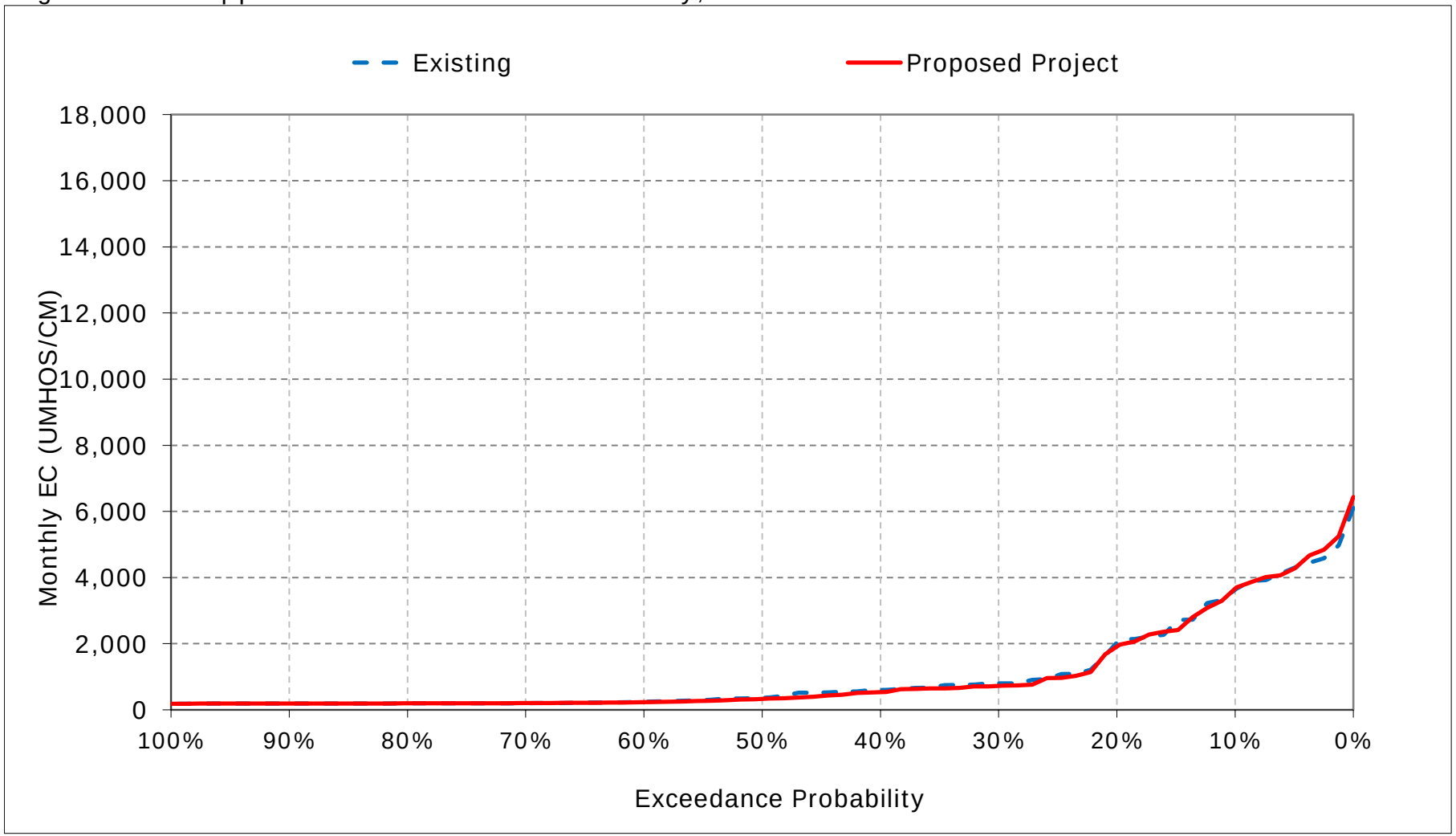


Figure 9-10. Chipps Island South Channel Salinity, April EC

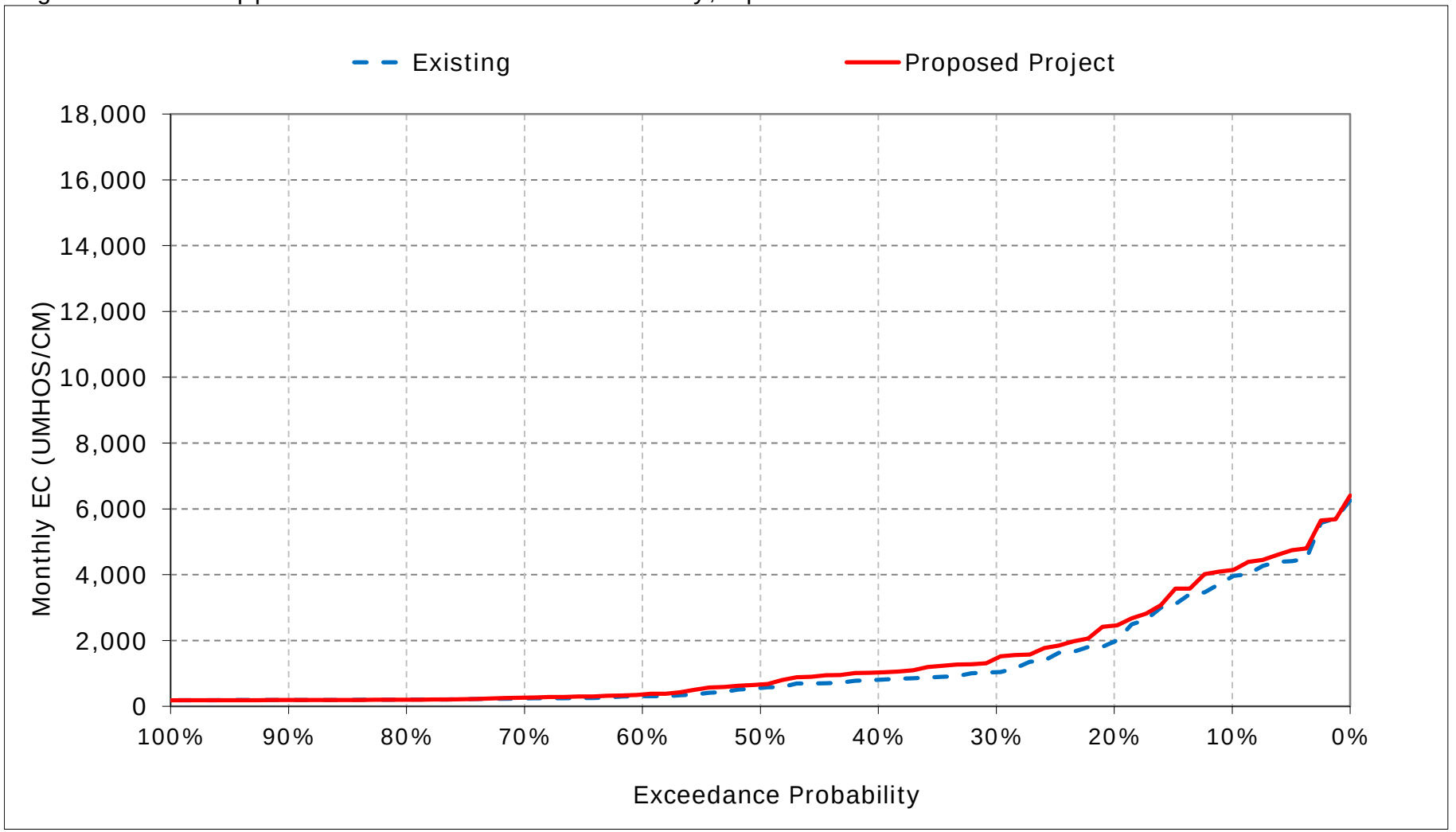


Figure 9-11. Chipps Island South Channel Salinity, May EC

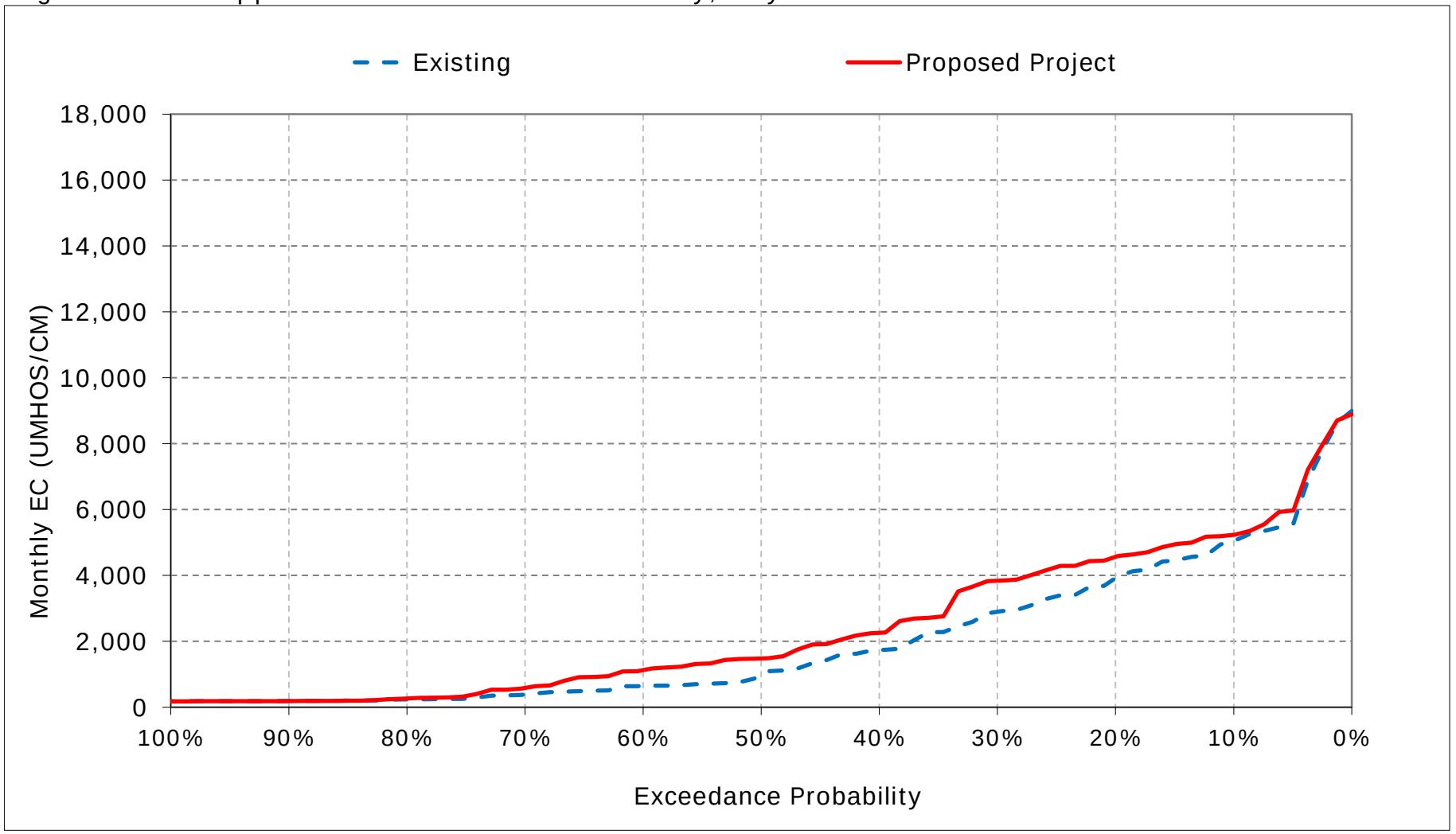


Figure 9-12. Chipps Island South Channel Salinity, June EC

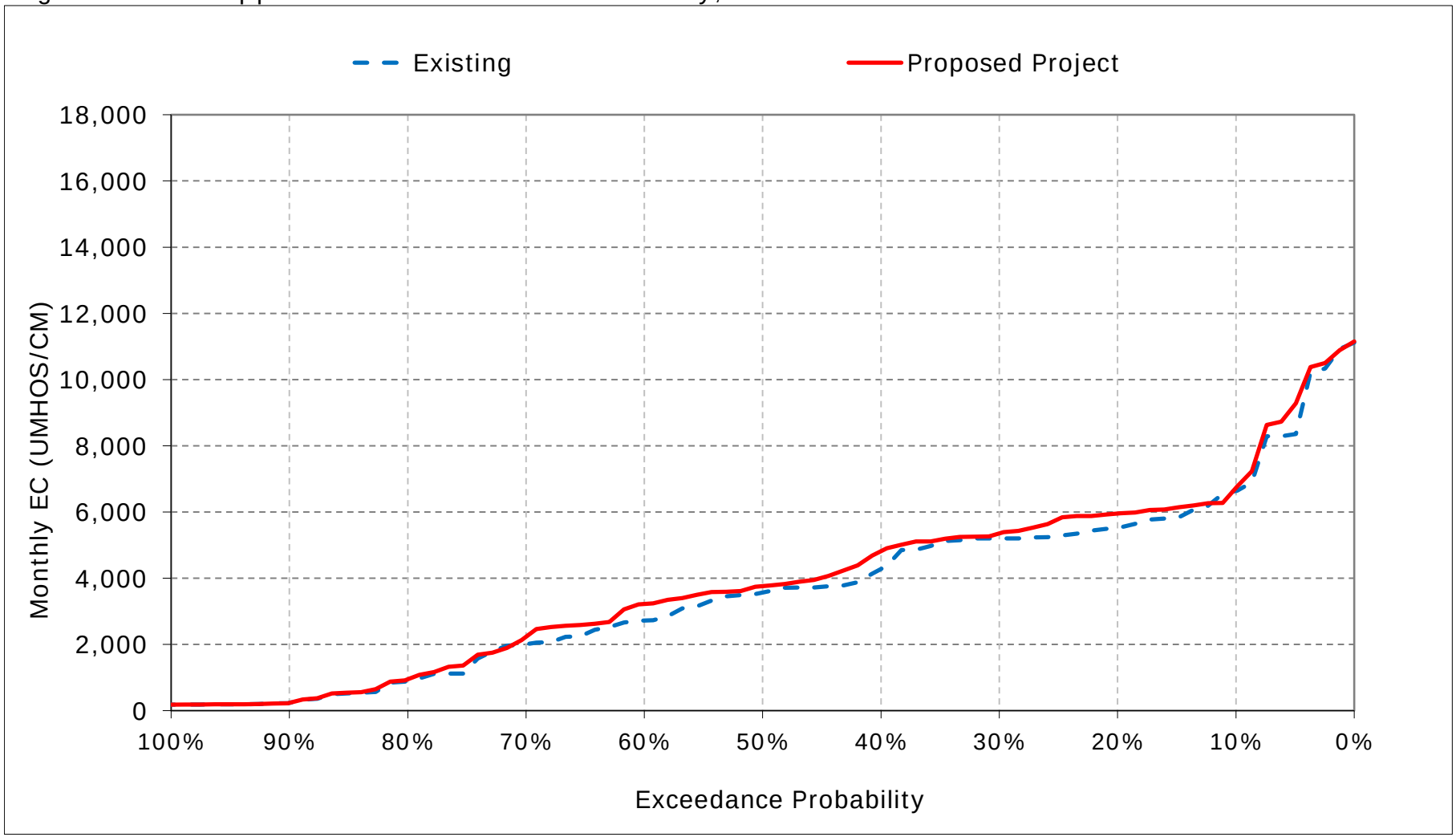


Figure 9-13. Chipps Island South Channel Salinity, July EC

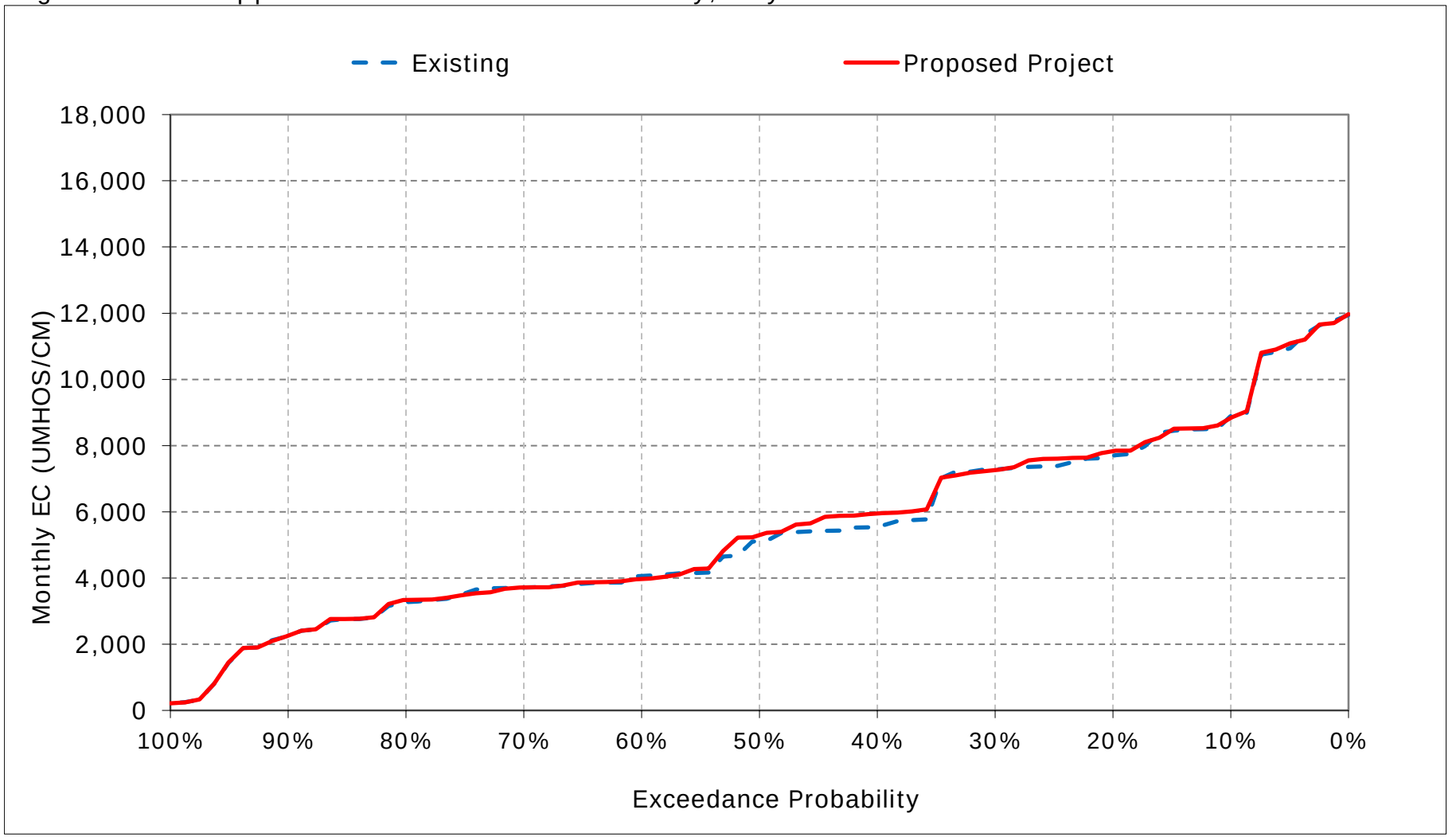


Figure 9-14. Chipps Island South Channel Salinity, August EC

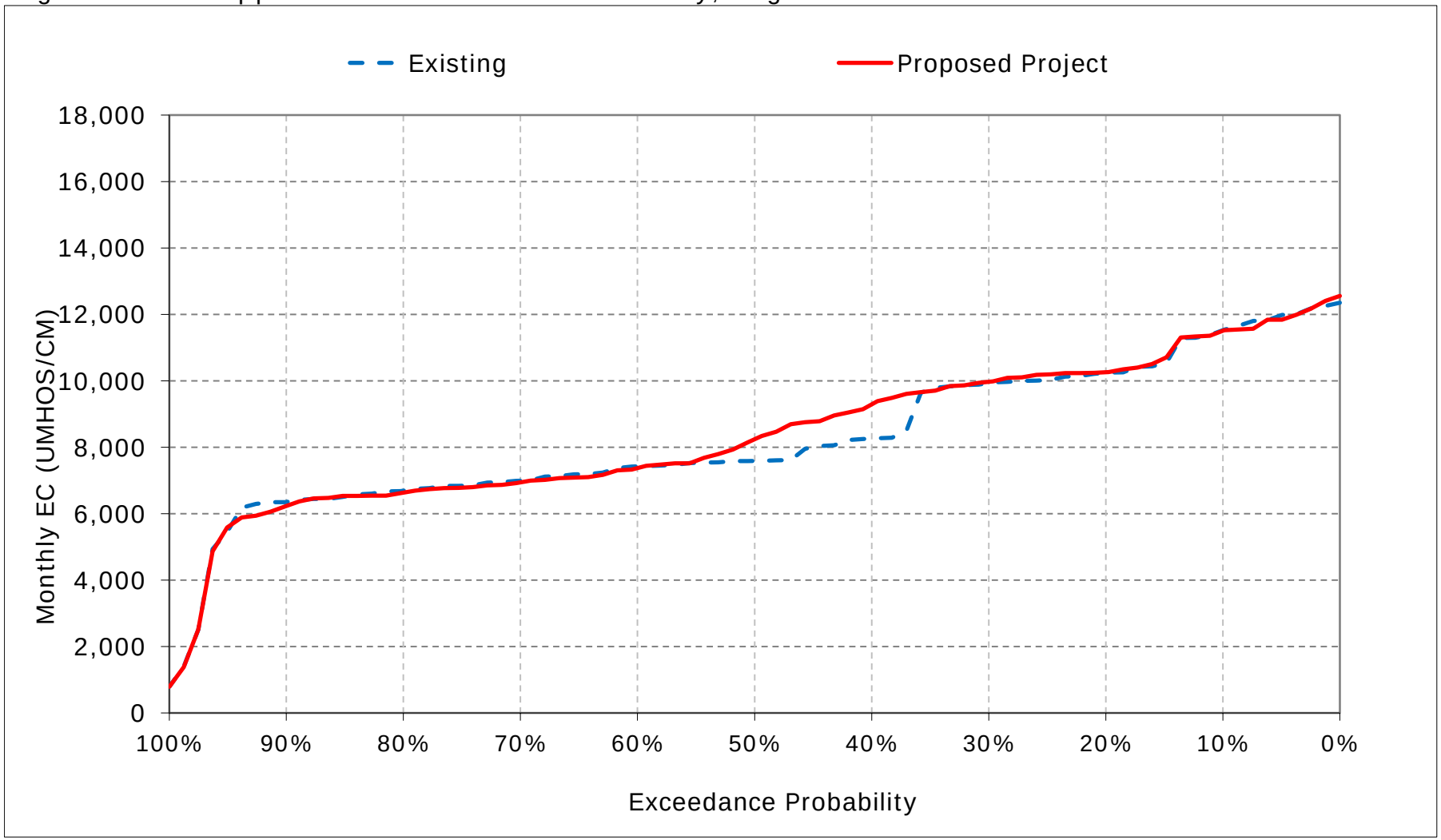


Figure 9-15. Chipps Island South Channel Salinity, September EC

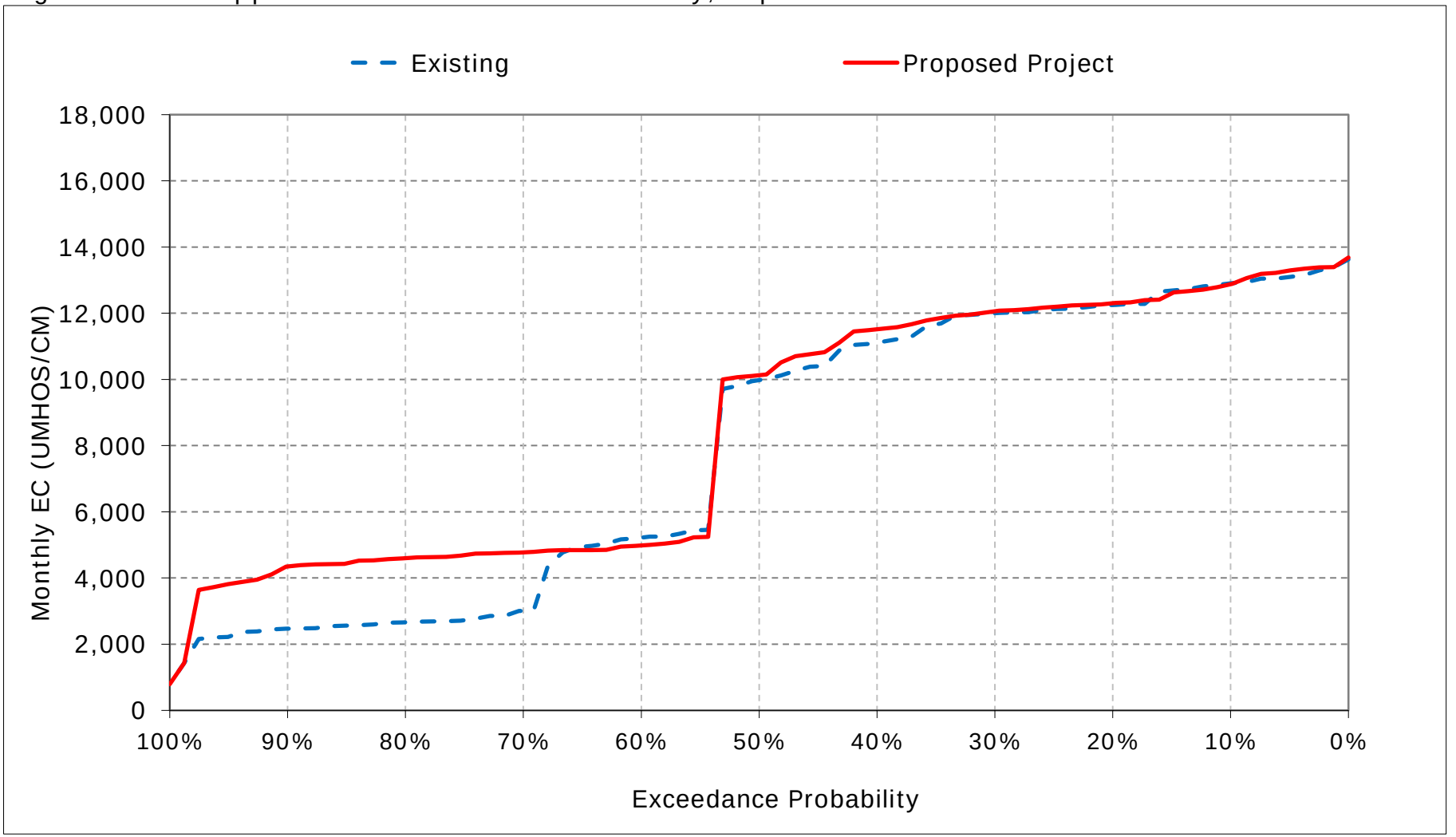


Figure 9-16. Chipps Island South Channel Salinity, October EC

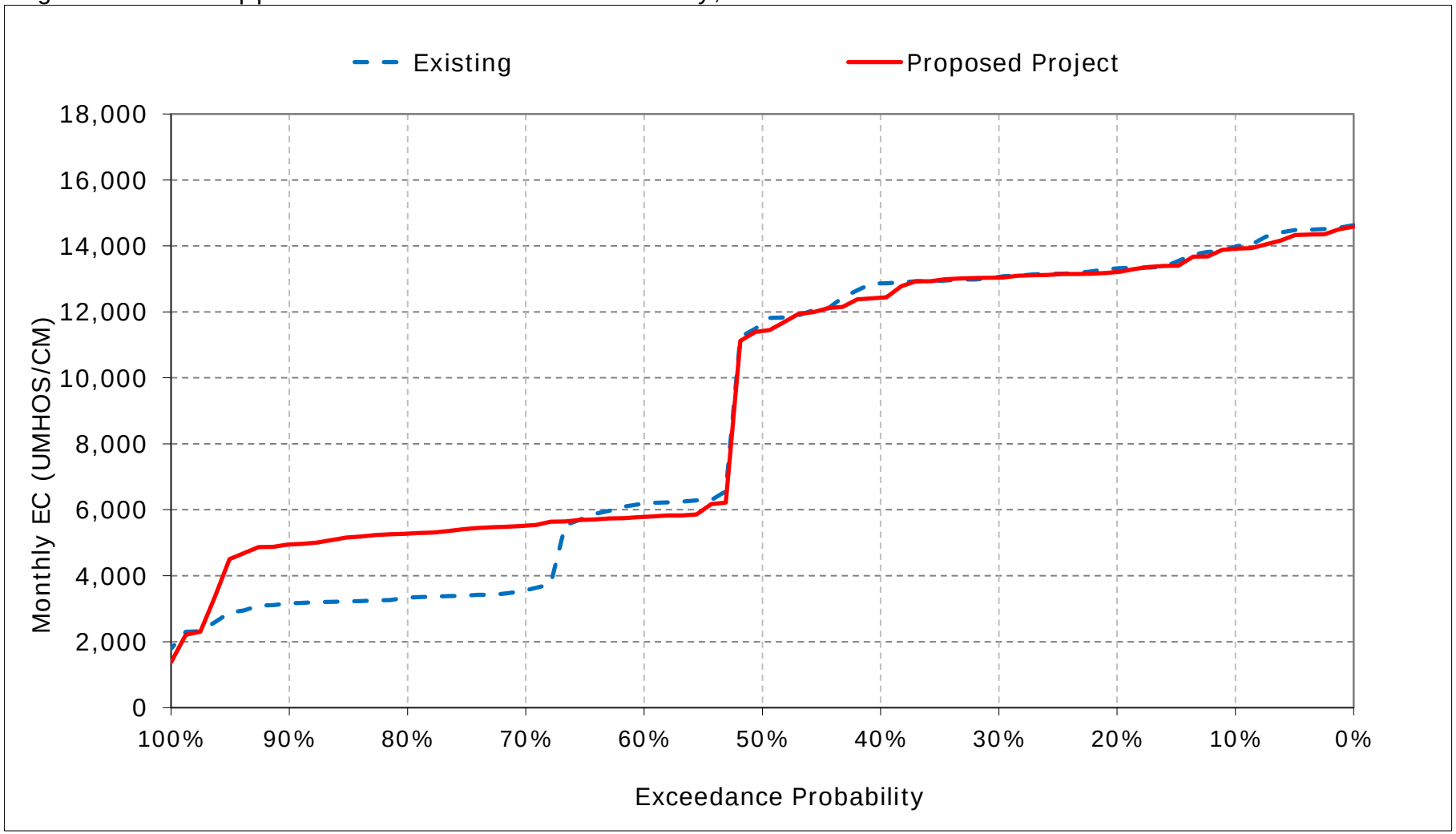


Figure 9-17. Chipps Island South Channel Salinity, November EC

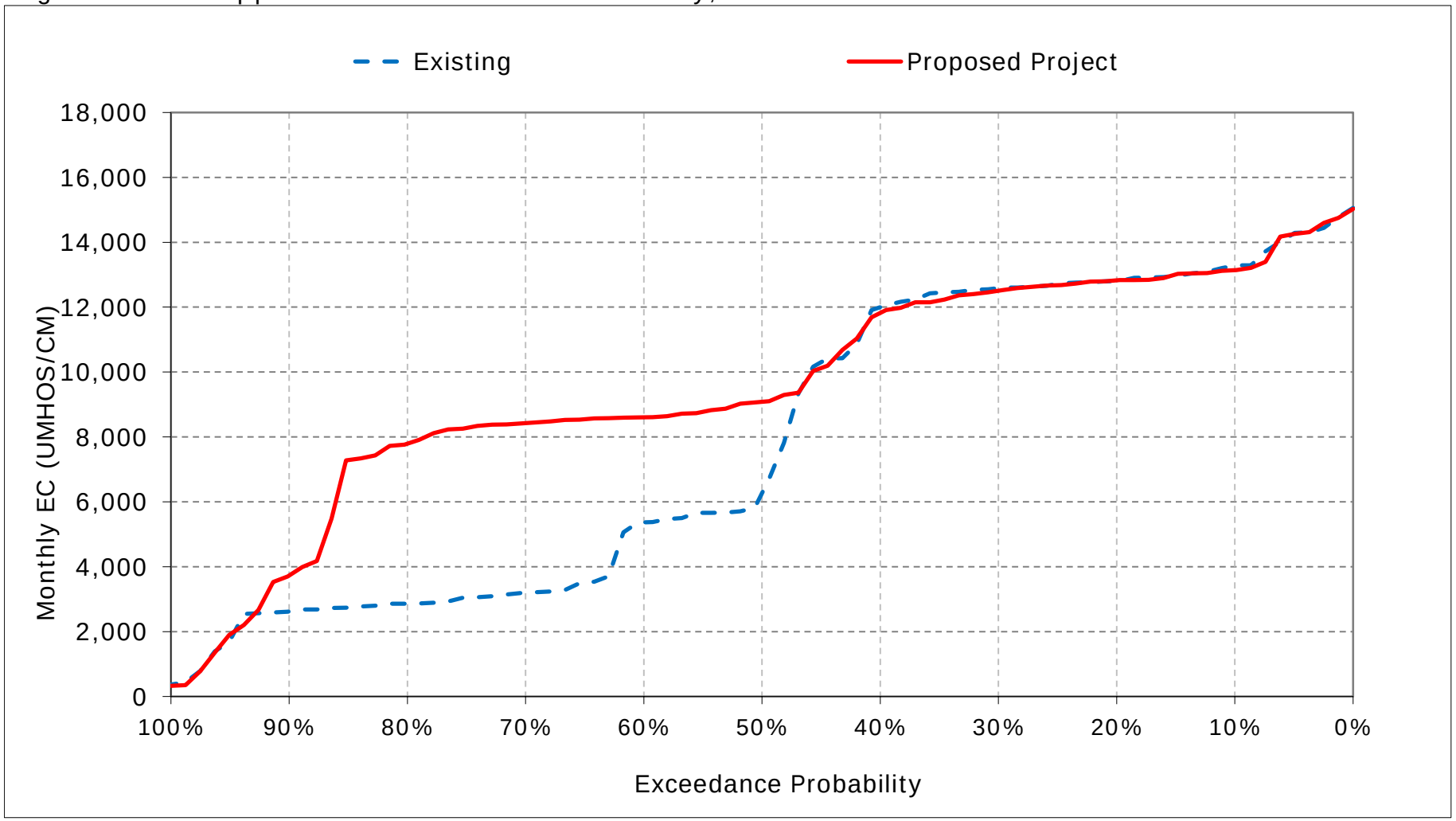


Figure 9-18. Chipps Island South Channel Salinity, December EC

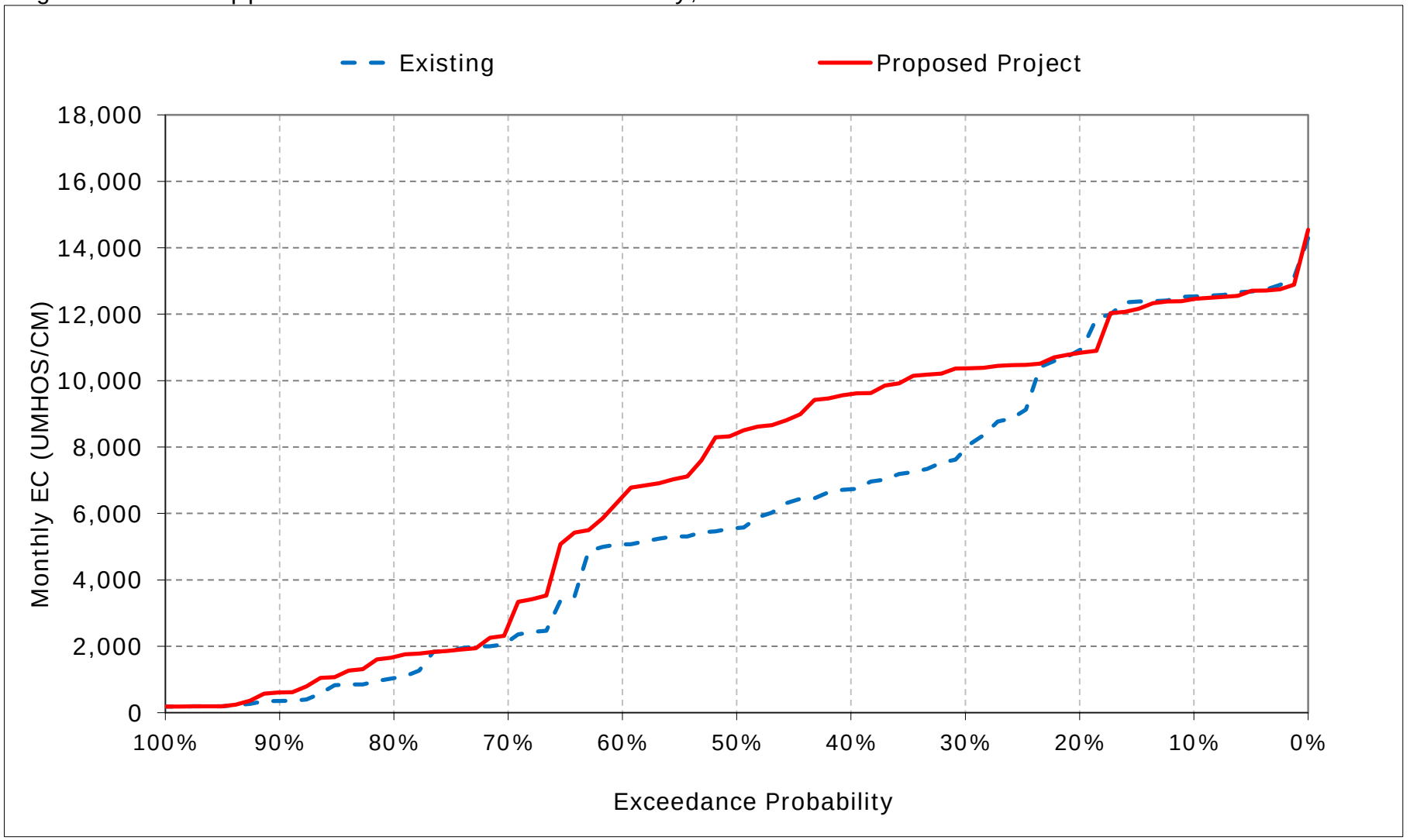


Table 10-1. Sacramento River at Port Chicago Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	18,857	18,301	17,944	14,027	10,103	9,246	9,508	11,032	12,944	14,993	17,328	18,408
20%	18,400	18,165	16,789	13,182	7,217	6,495	6,436	9,365	11,577	13,939	16,159	17,802
30%	18,221	17,817	14,104	11,188	4,890	3,578	4,510	8,038	11,116	13,675	15,975	17,592
40%	17,970	17,430	12,867	8,181	3,174	3,172	3,785	5,955	10,199	11,892	14,473	16,800
50%	17,153	12,186	11,009	6,774	1,756	1,883	2,627	4,393	8,819	11,353	13,884	16,050
60%	11,800	10,970	10,426	4,299	841	1,177	1,714	3,296	7,874	9,842	13,497	11,219
70%	8,403	8,017	6,384	1,127	341	539	1,041	2,304	6,353	9,483	13,064	7,842
80%	8,112	7,581	3,290	417	223	231	430	1,171	4,138	8,677	12,744	7,338
90%	7,934	7,173	1,022	227	205	201	219	337	1,237	6,634	12,410	6,785
Long Term												
Full Simulation Period[a]	13,892	12,807	10,348	6,775	3,582	3,140	3,701	5,288	8,305	11,058	14,210	13,231
Water Year Types[b]												
Wet (32%)	11,865	9,727	4,560	1,509	462	663	946	1,654	4,040	7,375	11,990	6,980
Above Normal (15%)	14,288	12,609	10,702	4,607	1,512	812	1,482	2,737	6,817	9,286	12,891	11,049
Below Normal (17%)	14,379	13,928	12,606	8,063	2,946	3,101	3,357	5,013	8,800	11,464	14,189	16,435
Dry (22%)	14,459	14,253	12,965	10,586	6,057	4,745	5,613	7,981	11,081	13,821	16,074	17,695
Critical (15%)	16,472	16,198	15,972	13,130	9,441	8,475	9,421	11,992	14,294	16,194	17,566	18,520

Proposed Project

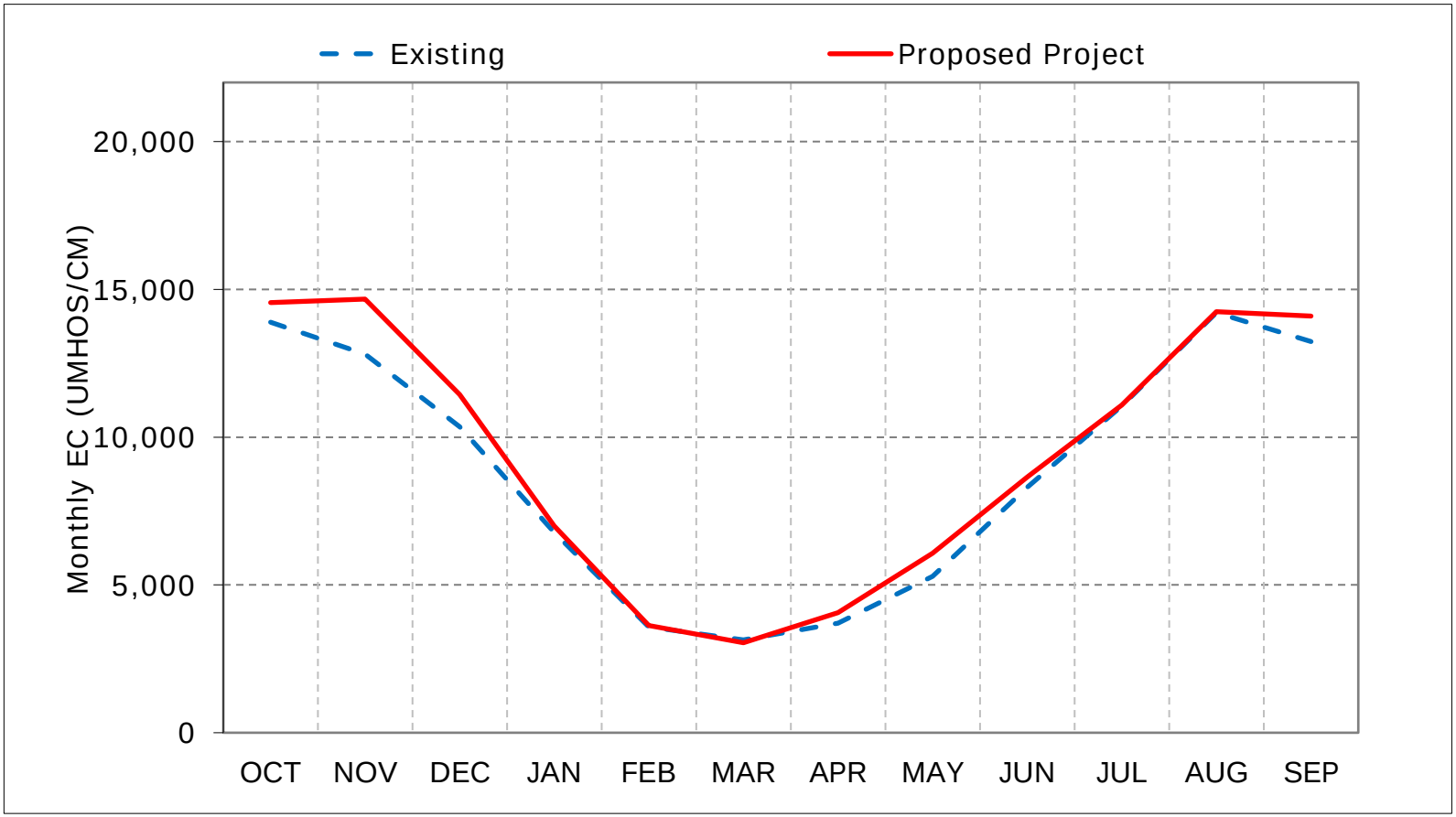
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	18,807	18,364	17,930	15,275	9,733	9,189	9,988	11,273	12,972	15,024	17,357	18,381
20%	18,405	18,122	16,529	14,037	6,813	6,374	7,403	10,357	12,141	14,132	16,249	17,837
30%	18,208	17,757	15,920	11,990	4,783	3,379	5,337	9,248	11,297	13,652	16,010	17,655
40%	17,806	17,203	15,464	8,671	3,283	2,839	4,433	7,278	10,866	11,916	14,852	17,013
50%	16,991	14,487	14,493	6,707	1,740	1,688	3,260	5,648	9,276	11,117	14,028	16,078
60%	11,336	14,200	12,571	4,163	641	981	1,943	4,608	8,564	9,821	13,451	10,855
70%	11,175	13,963	7,579	990	343	471	1,381	3,248	6,684	9,531	13,012	10,665
80%	10,827	13,519	4,094	400	222	232	507	1,556	4,307	8,733	12,790	10,439
90%	10,471	8,783	1,270	220	206	199	217	443	1,292	6,638	12,283	9,904
Long Term												
Full Simulation Period[a]	14,553	14,670	11,441	6,990	3,628	3,043	4,065	6,071	8,644	11,081	14,242	14,098
Water Year Types[b]												
Wet (32%)	12,723	12,151	5,319	1,484	444	619	1,180	2,252	4,405	7,395	11,882	9,851
Above Normal (15%)	15,103	14,760	12,346	4,689	1,303	721	1,847	3,793	7,182	9,230	12,924	10,538
Below Normal (17%)	15,073	15,716	13,907	8,052	2,808	2,859	3,903	6,213	9,156	11,489	14,463	16,535
Dry (22%)	15,145	15,761	14,213	11,207	6,330	4,546	6,074	8,844	11,463	13,893	16,132	17,739
Critical (15%)	16,472	17,181	16,768	13,658	9,751	8,581	9,705	12,299	14,468	16,227	17,577	18,556

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-50	63	-15	1,248	-369	-57	480	242	28	32	30	-27
20%	5	-43	-259	855	-403	-121	967	992	564	193	90	35
30%	-13	-59	1,816	802	-107	-198	827	1,210	182	-24	35	64
40%	-164	-227	2,597	490	108	-333	648	1,323	667	23	379	213
50%	-162	2,301	3,484	-67	-16	-196	634	1,255	457	-236	144	29
60%	-464	3,230	2,145	-136	-199	-196	229	1,312	691	-21	-47	-364
70%	2,772	5,946	1,195	-137	2	-68	340	944	331	48	-52	2,823
80%	2,715	5,937	804	-17	0	2	77	385	169	56	46	3,101
90%	2,536	1,610	248	-7	1	-2	-2	105	55	5	-127	3,119
Long Term												
Full Simulation Period[a]	660	1,863	1,094	215	46	-97	364	783	339	23	32	867
Water Year Types[b]												
Wet (32%)	858	2,424	758	-25	-17	-44	234	598	365	19	-107	2,870
Above Normal (15%)	815	2,151	1,644	82	-210	-91	365	1,056	365	-56	33	-511
Below Normal (17%)	694	1,788	1,301	-12	-138	-242	545	1,200	356	25	273	100
Dry (22%)	686	1,507	1,249	621	273	-199	461	863	381	72	58	44
Critical (15%)	0	983	795	527	311	106	284	307	174	32	11	36

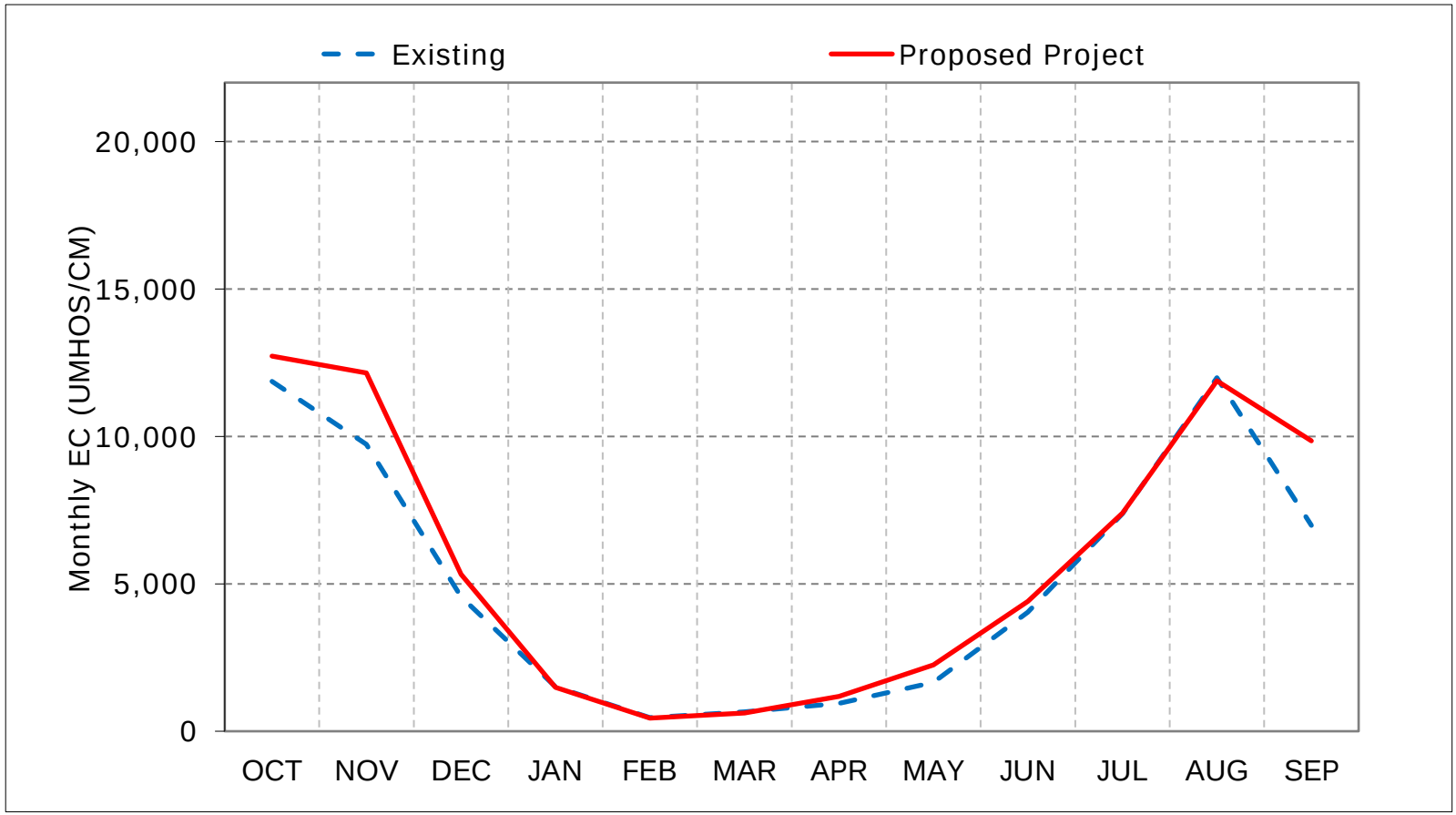
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 10-1. Sacramento River at Port Chicago Salinity, Long-Term Average EC



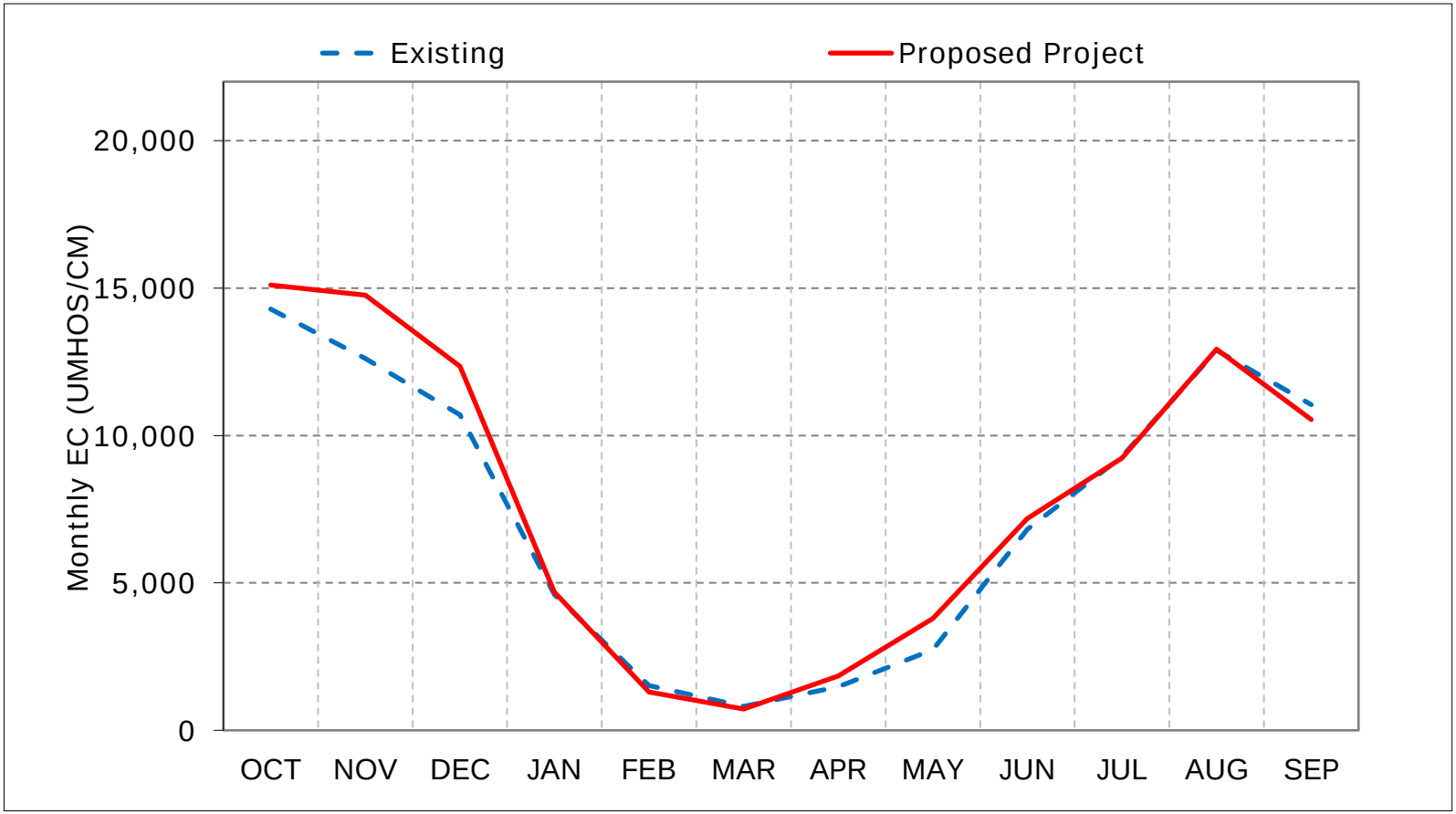
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 10-2. Sacramento River at Port Chicago Salinity, Wet Year Average EC



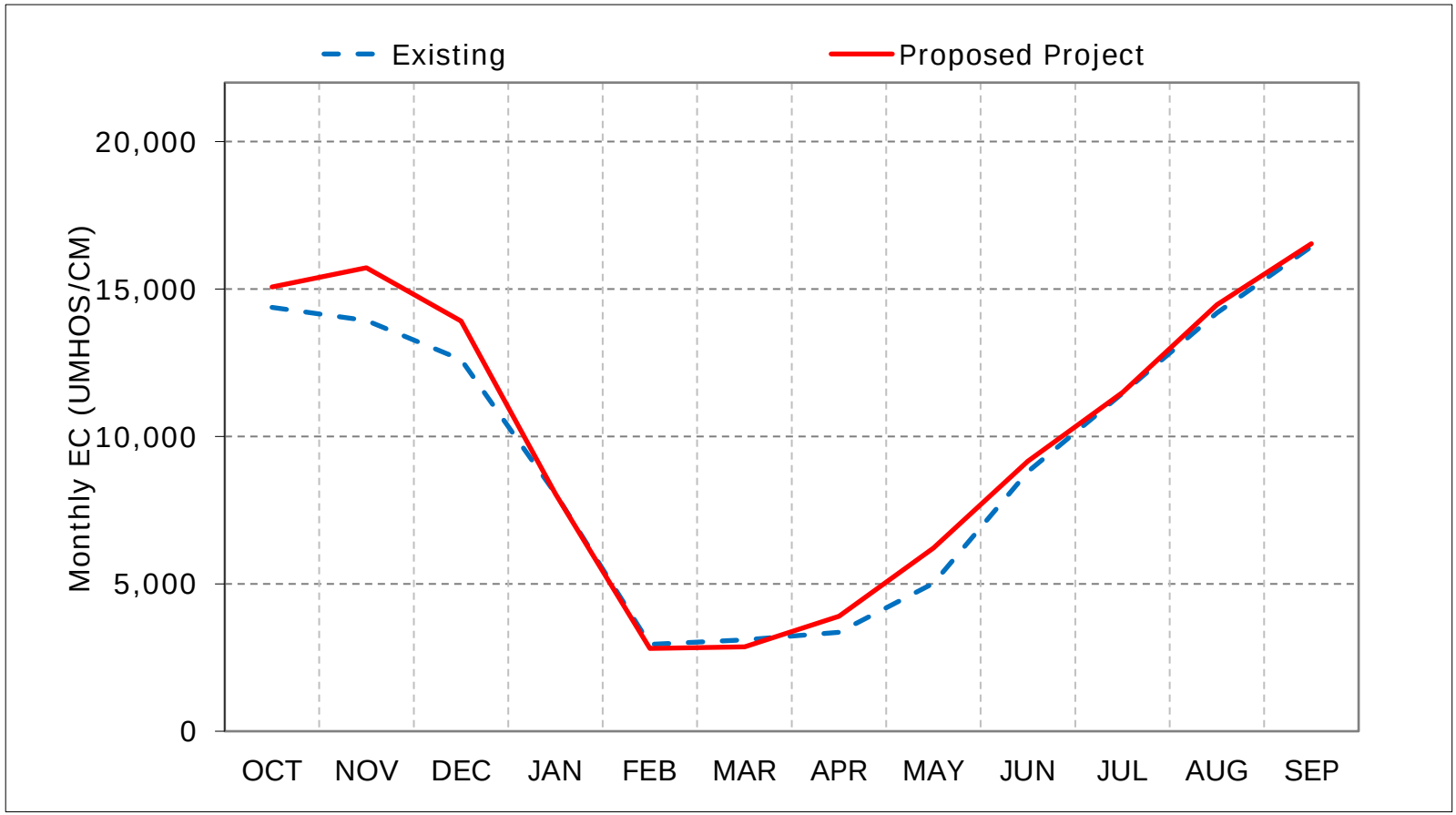
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 10-3. Sacramento River at Port Chicago Salinity, Above Normal Year Averag



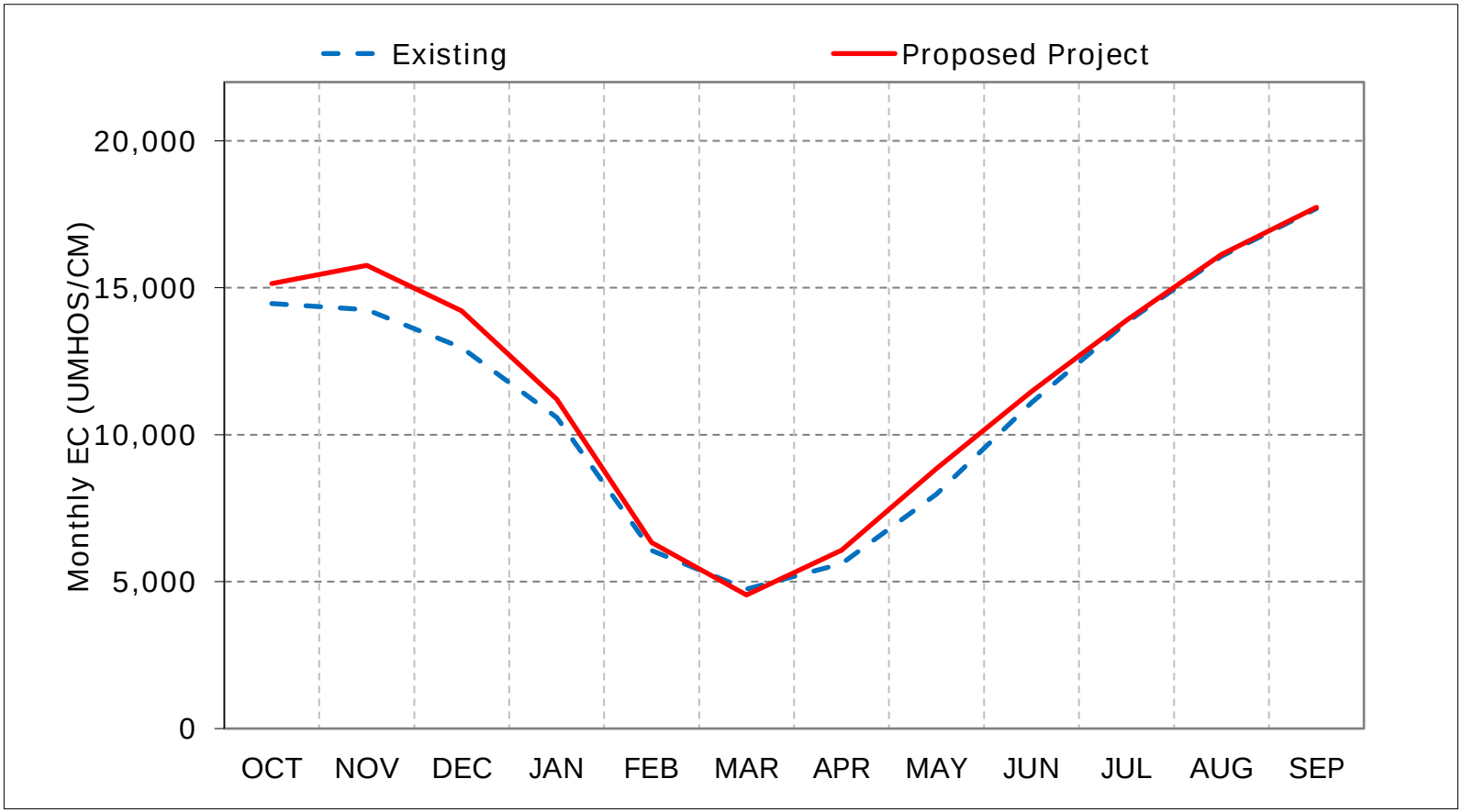
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 10-4. Sacramento River at Port Chicago Salinity, Below Normal Year Averag



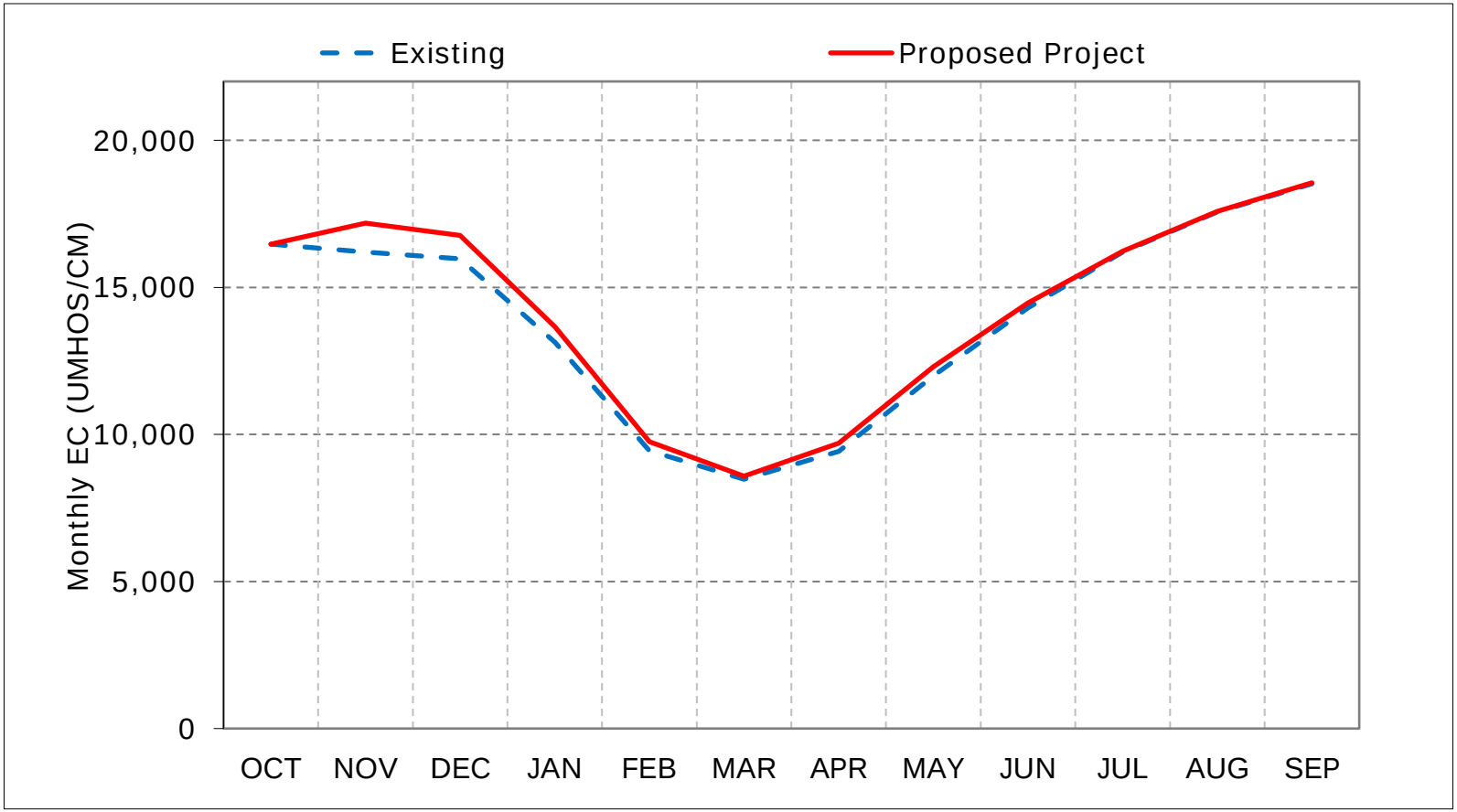
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 10-5. Sacramento River at Port Chicago Salinity, Dry Year Average EC



*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.

Figure 10-6. Sacramento River at Port Chicago Salinity, Critical Year Average EC



*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.

Figure 10-7. Sacramento River at Port Chicago Salinity, January EC

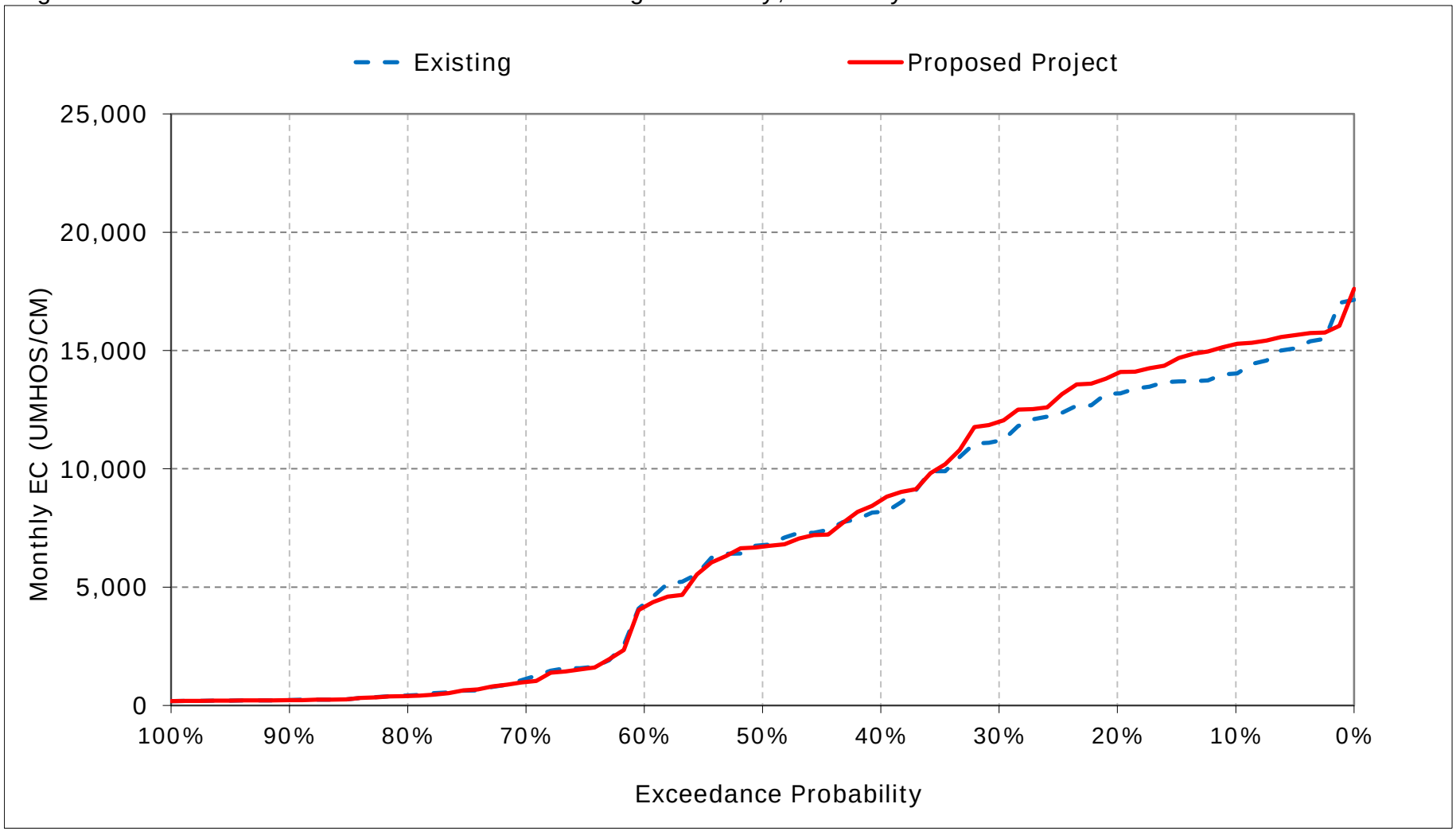


Figure 10-8. Sacramento River at Port Chicago Salinity, February EC

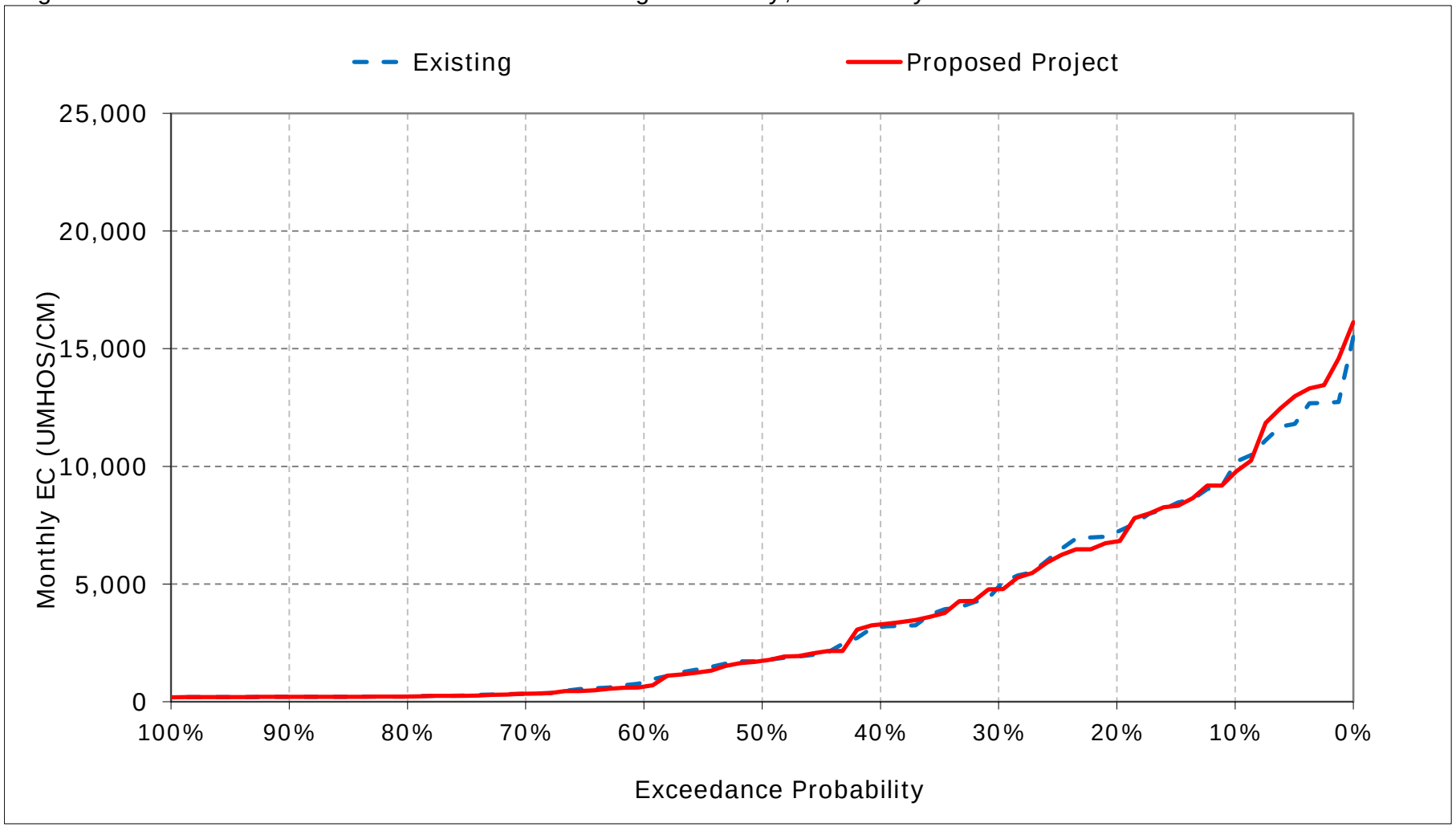


Figure 10-9. Sacramento River at Port Chicago Salinity, March EC

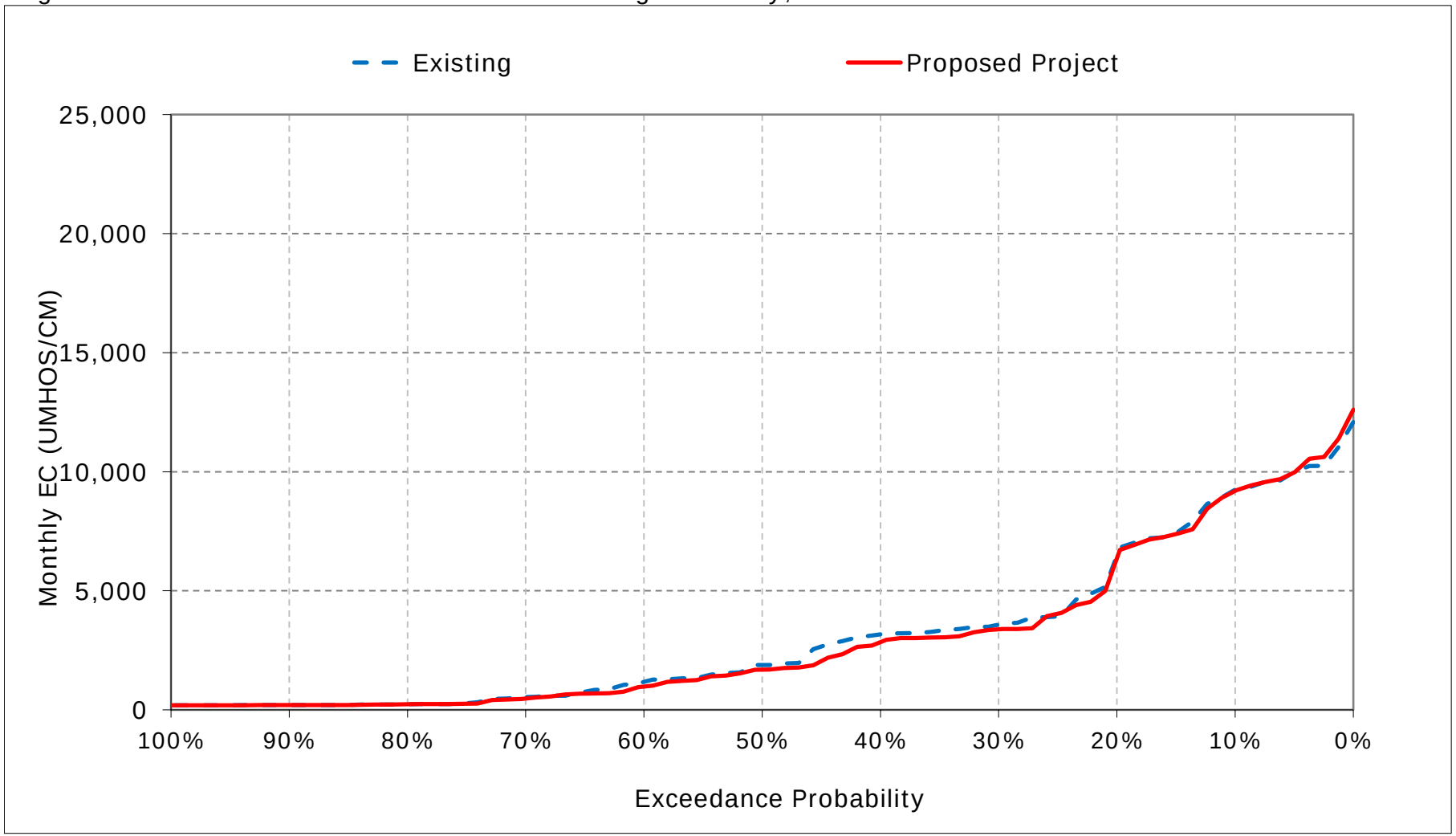


Figure 10-10. Sacramento River at Port Chicago Salinity, April EC

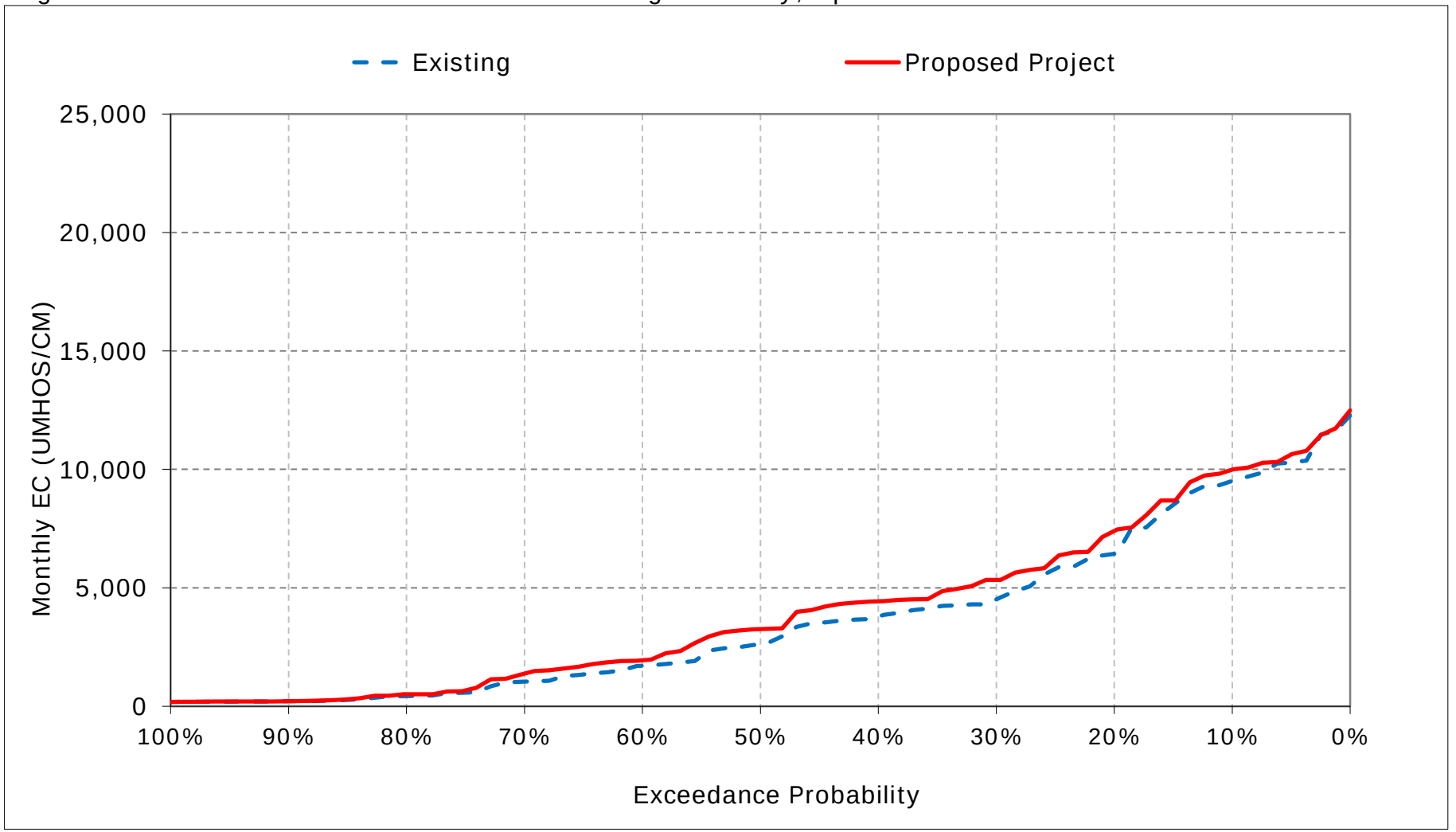


Figure 10-11. Sacramento River at Port Chicago Salinity, May EC

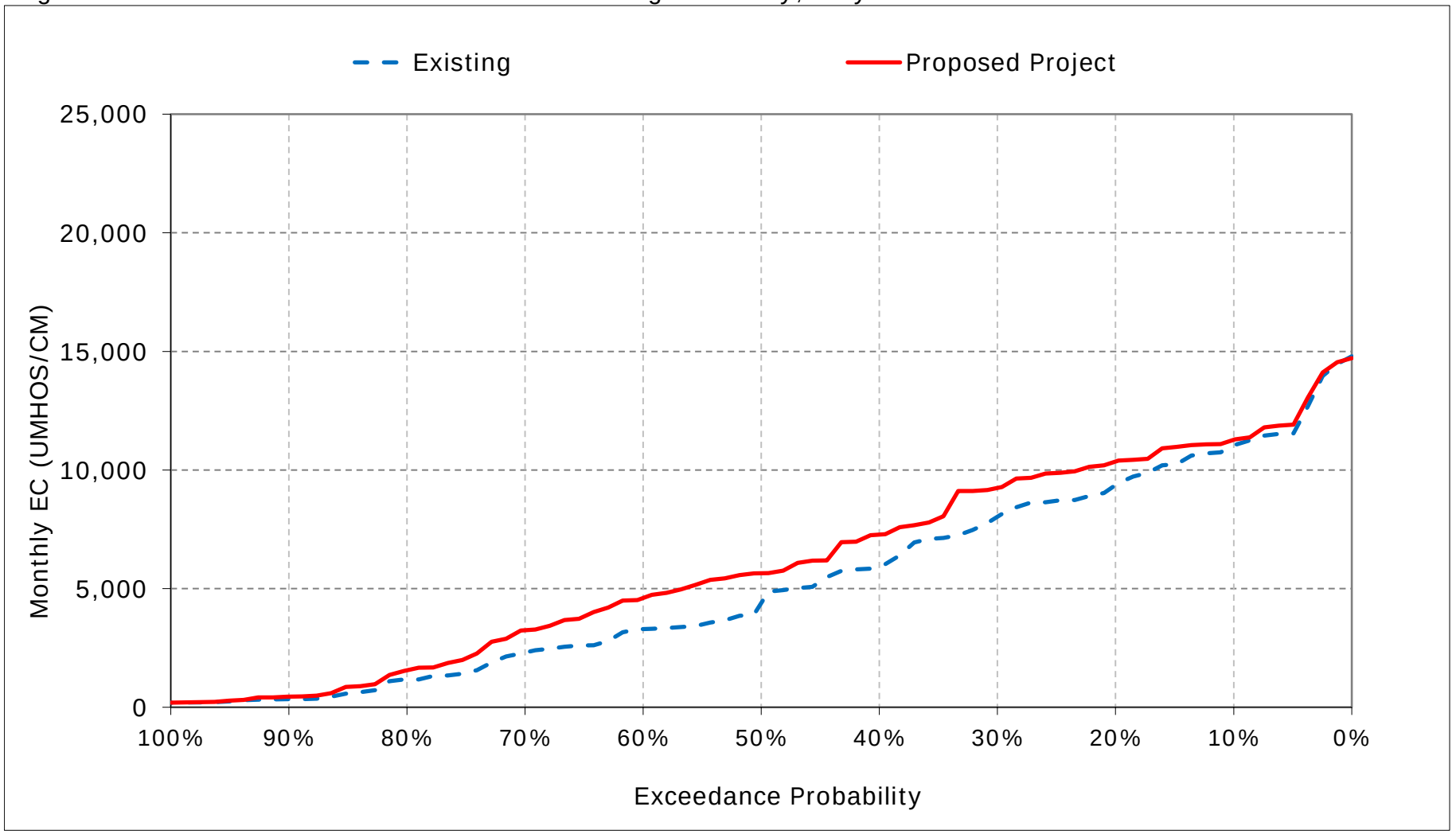


Figure 10-12. Sacramento River at Port Chicago Salinity, June EC

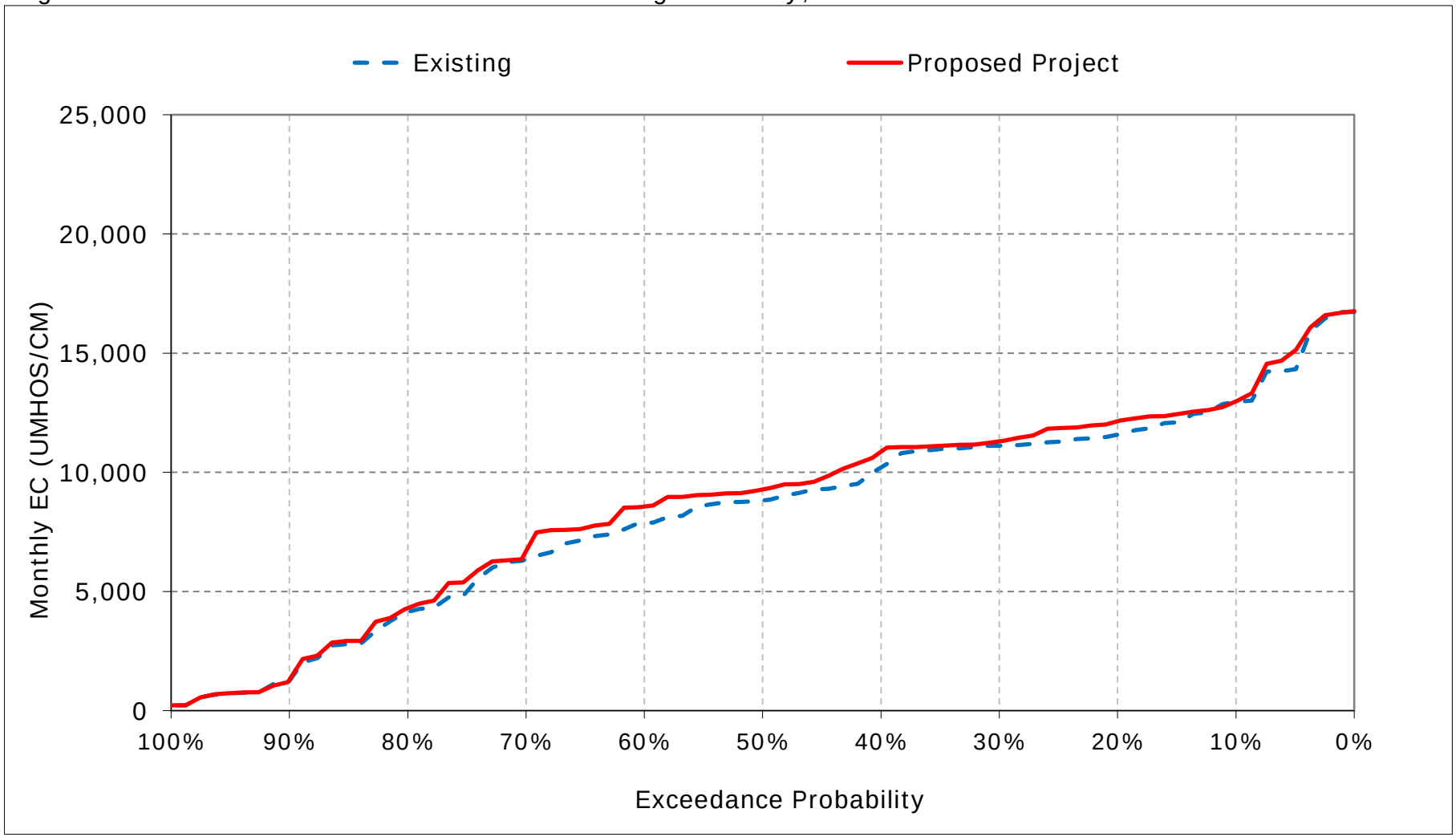


Figure 10-13. Sacramento River at Port Chicago Salinity, July EC

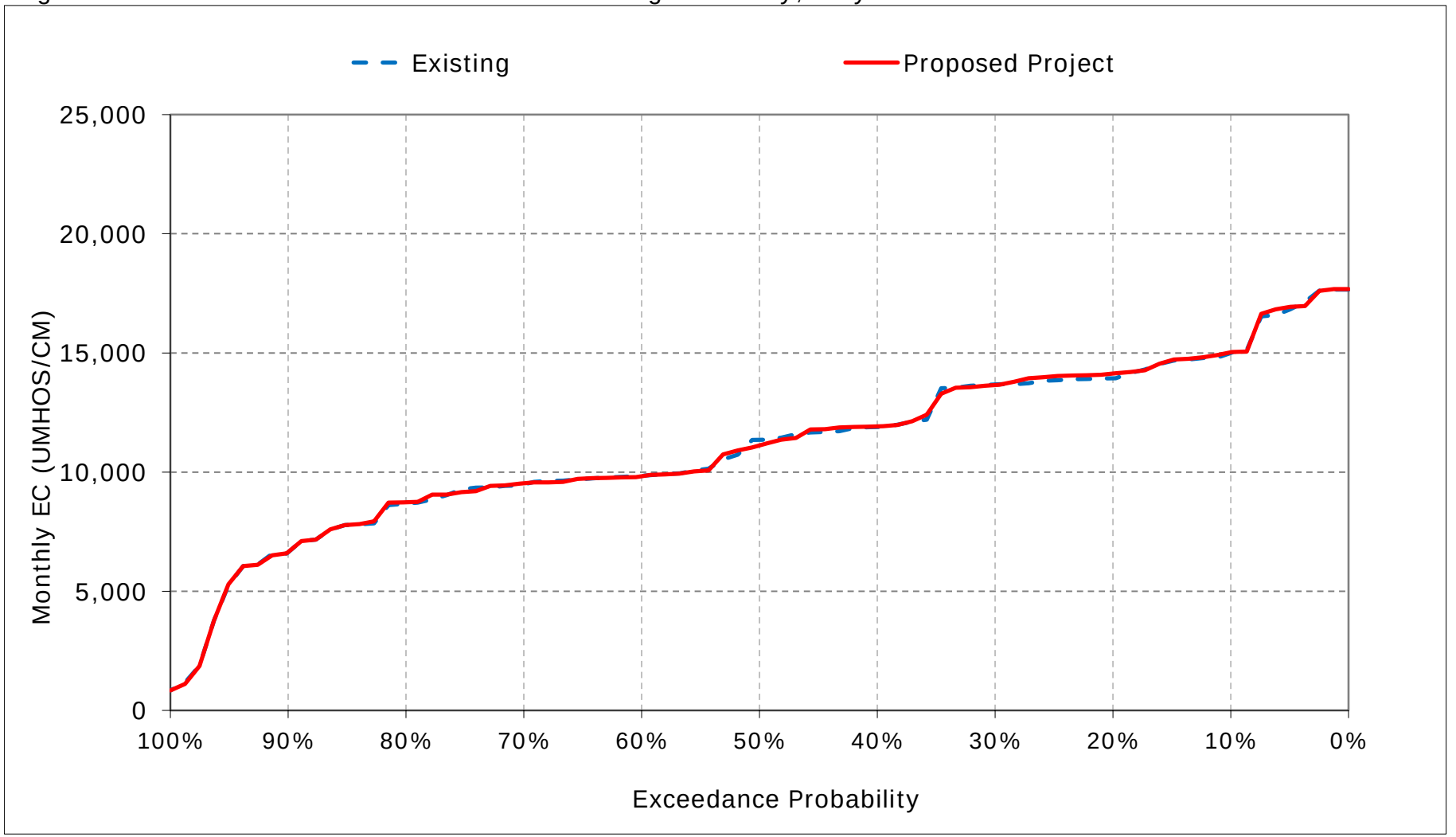


Figure 10-14. Sacramento River at Port Chicago Salinity, August EC

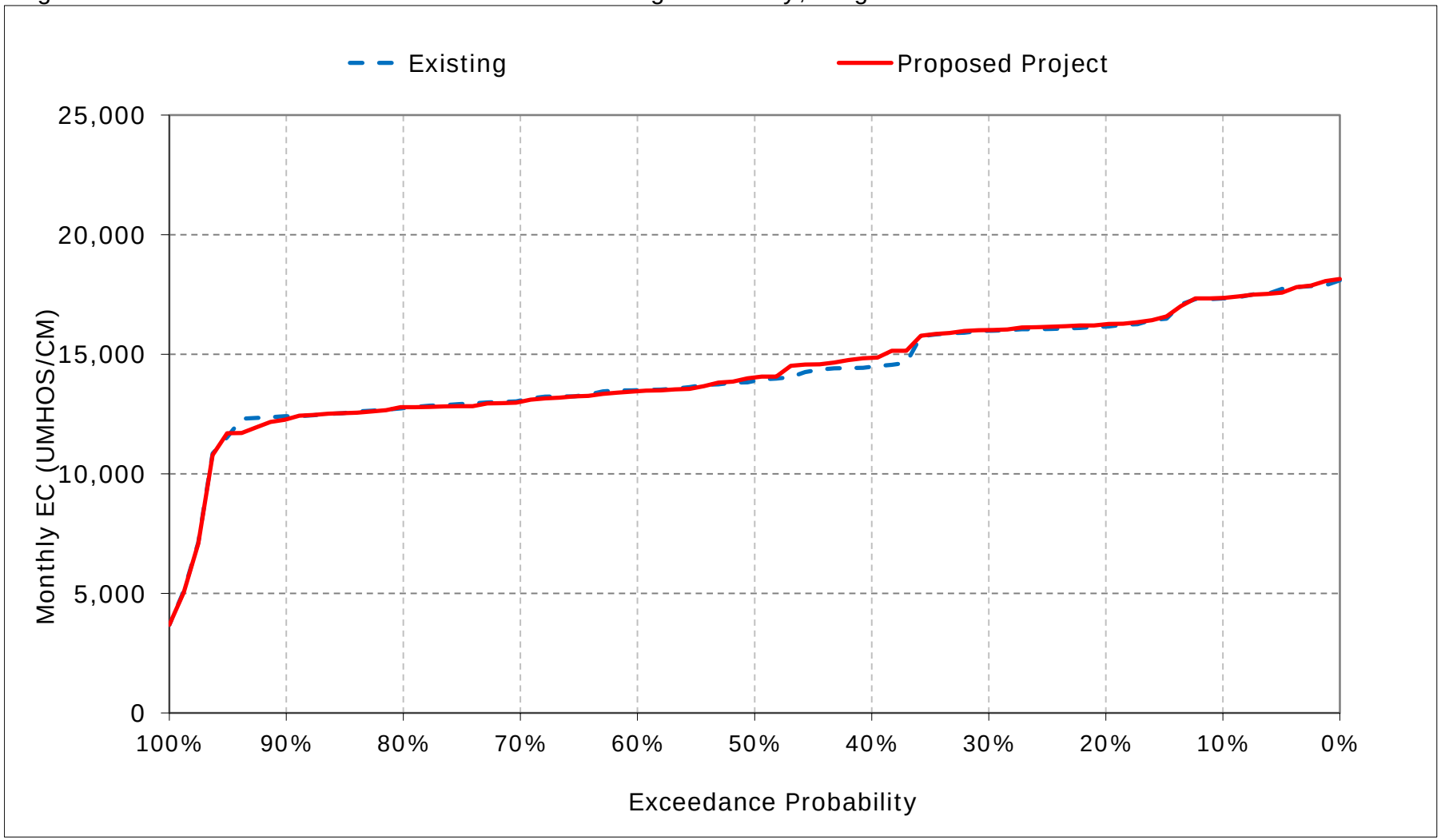


Figure 10-15. Sacramento River at Port Chicago Salinity, September EC

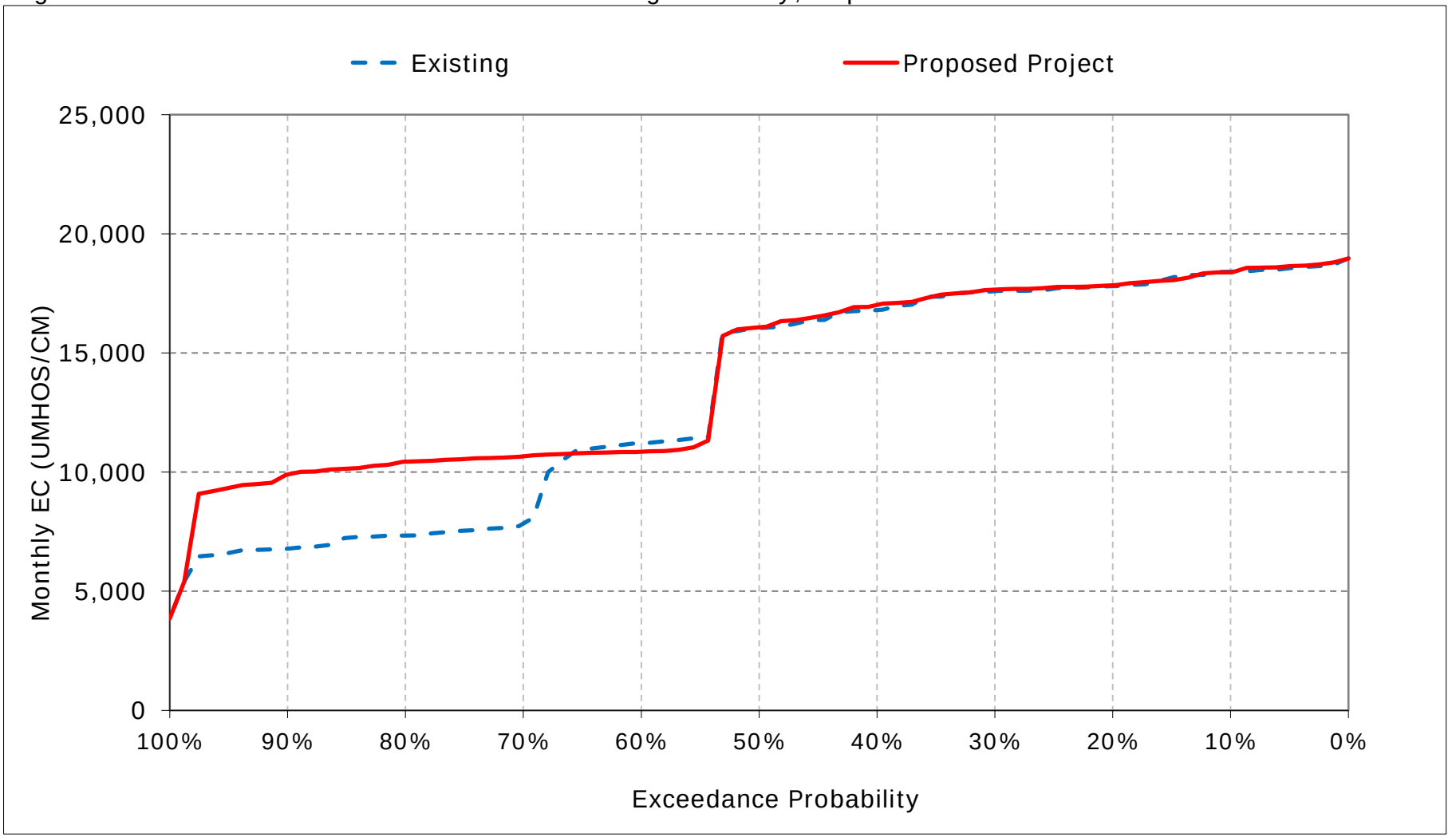


Figure 10-16. Sacramento River at Port Chicago Salinity, October EC

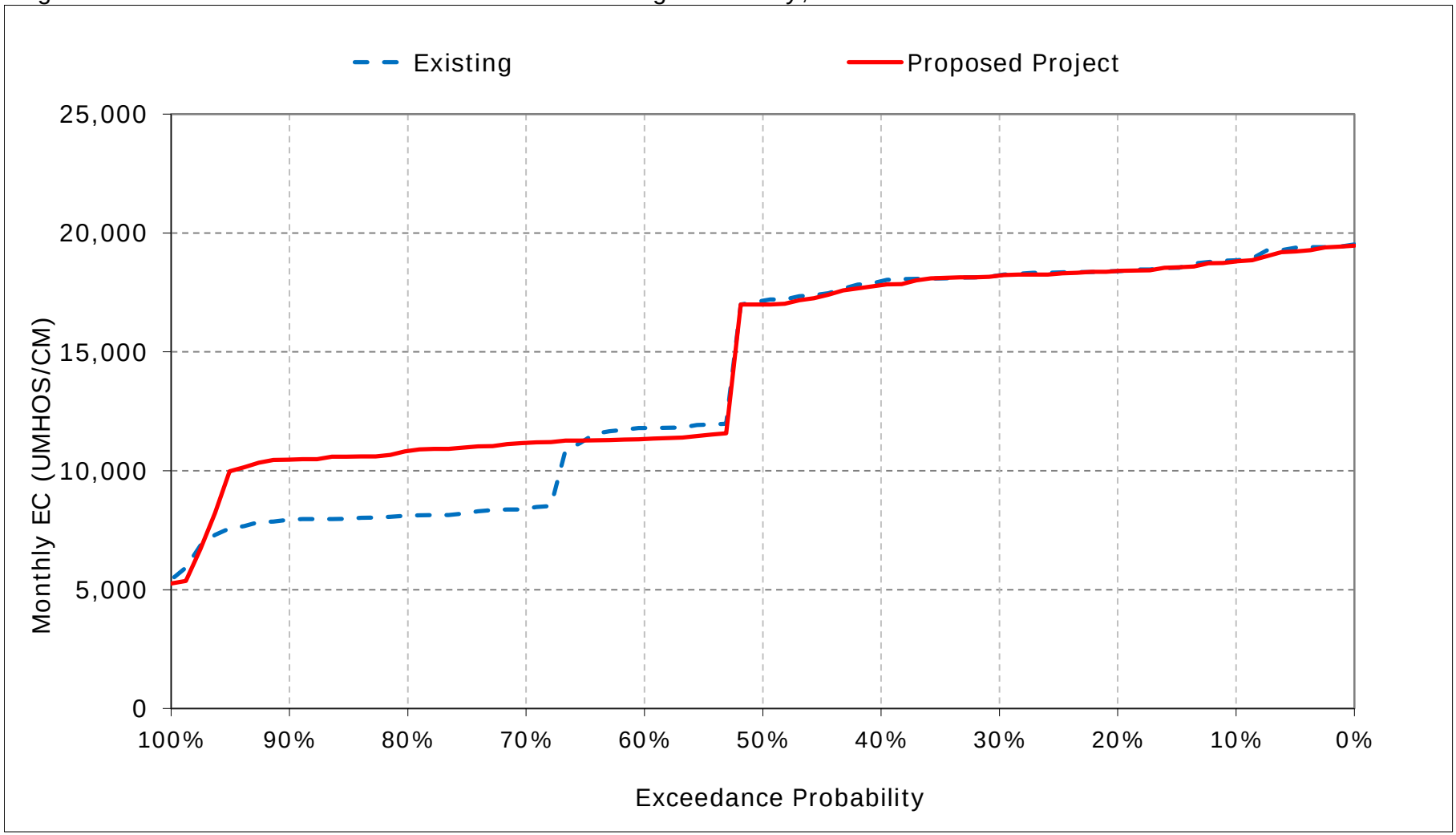


Figure 10-17. Sacramento River at Port Chicago Salinity, November EC

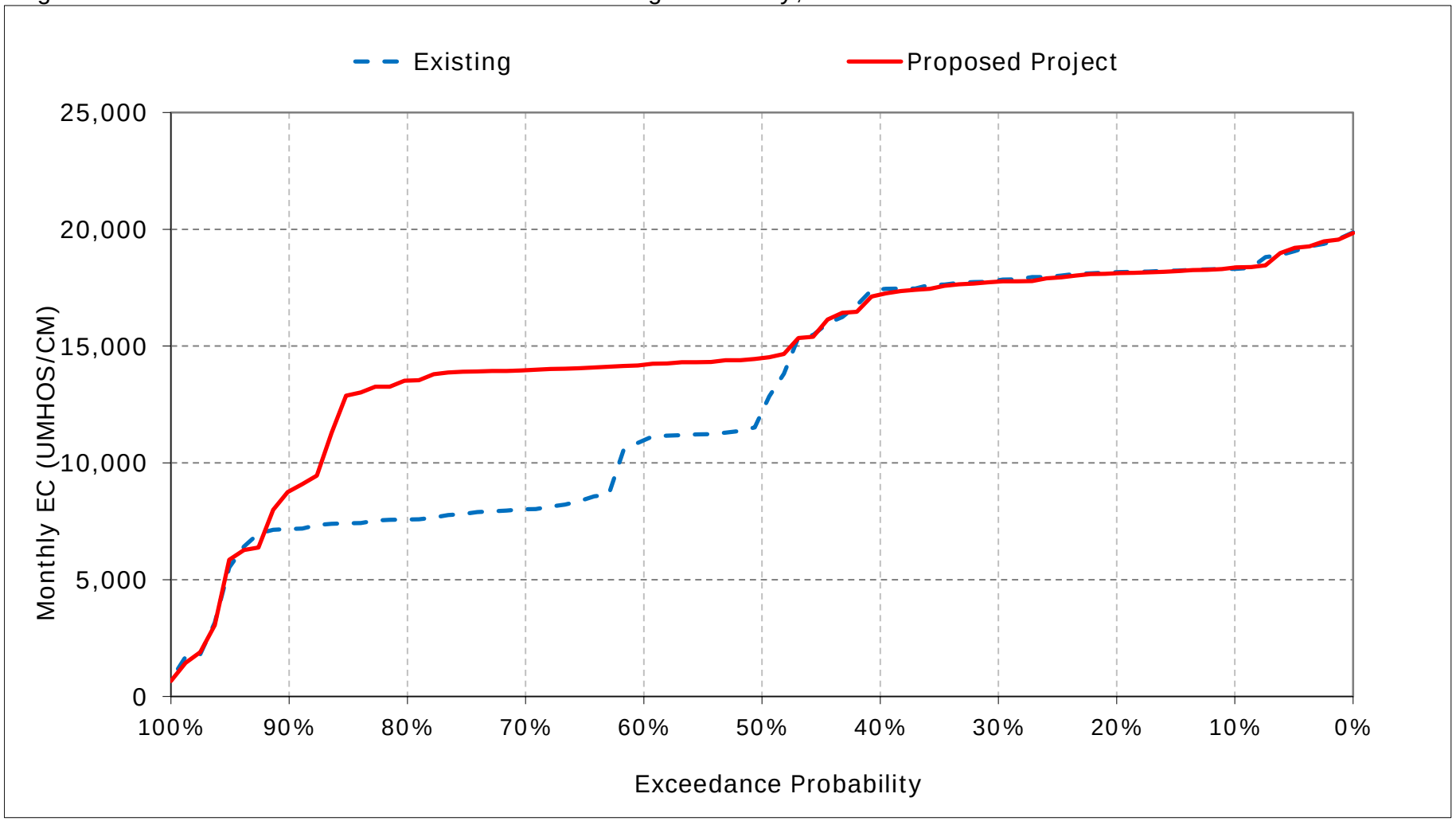


Figure 10-18. Sacramento River at Port Chicago Salinity, December EC

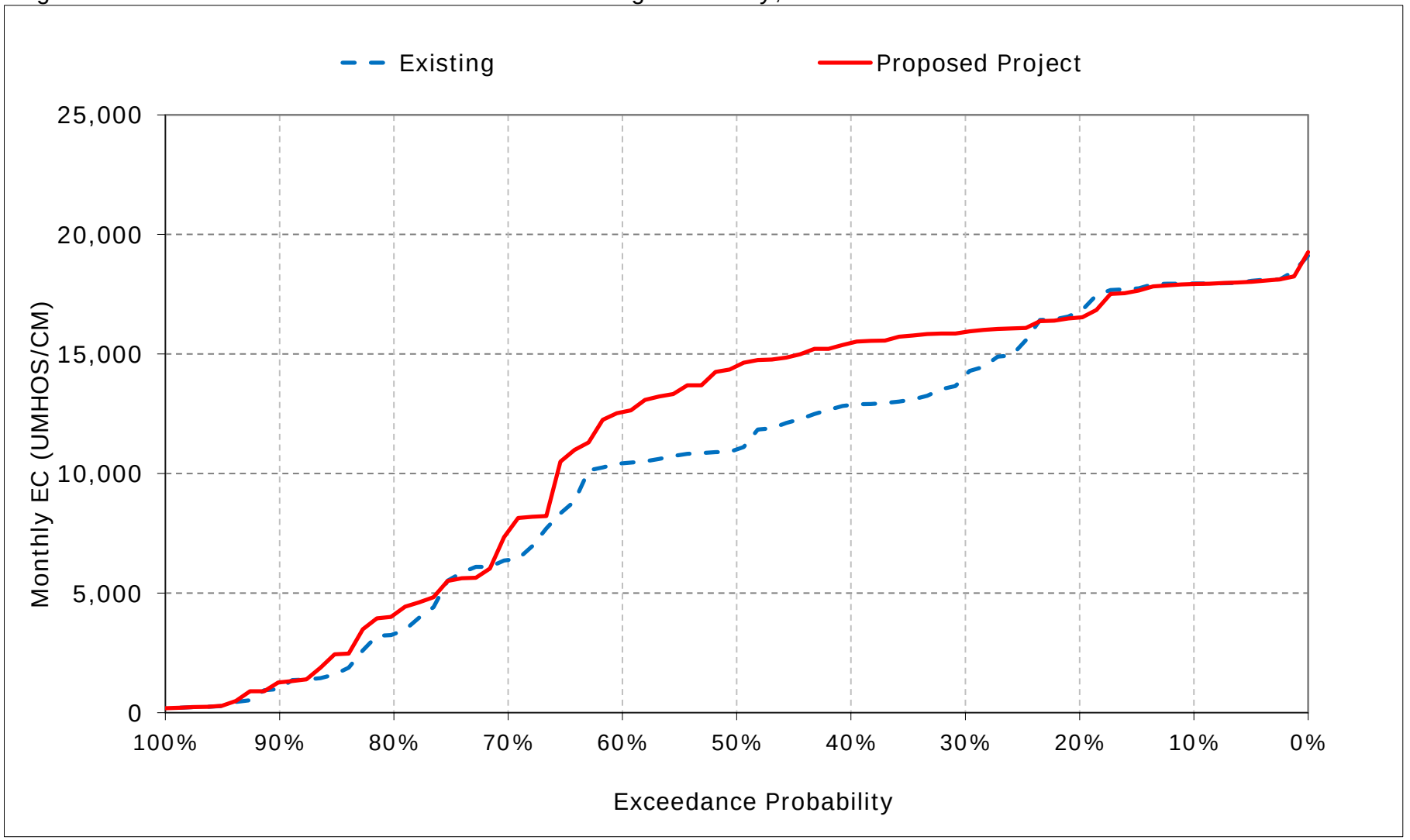


Table 11-1. San Joaquin River at Antioch Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	7,250	6,676	6,398	3,358	1,223	1,035	961	1,609	2,307	3,749	5,519	6,896
20%	6,792	6,518	5,164	2,829	758	498	505	1,020	1,833	3,160	4,834	6,480
30%	6,690	6,190	3,327	2,078	520	294	297	720	1,708	2,987	4,528	6,264
40%	6,284	5,969	2,785	1,274	370	260	262	422	1,303	2,013	3,709	5,800
50%	5,773	2,464	2,170	1,002	283	239	244	291	1,087	1,813	3,305	4,925
60%	2,050	1,730	1,872	491	255	229	227	252	689	1,232	3,199	2,032
70%	1,128	914	751	260	243	222	219	232	525	1,151	2,996	1,321
80%	952	798	486	235	225	216	213	216	270	955	2,779	1,199
90%	846	731	228	220	213	199	208	204	205	659	2,565	1,144
Long Term												
Full Simulation Period[a]	4,134	3,633	2,705	1,426	595	407	417	667	1,286	2,113	3,696	3,952
Water Year Types[b]												
Wet (32%)	3,066	2,178	843	354	240	220	220	236	408	827	2,568	1,081
Above Normal (15%)	4,383	3,637	2,584	908	319	223	224	251	755	1,128	2,849	2,005
Below Normal (17%)	4,353	3,978	3,531	1,536	399	296	293	422	1,065	1,884	3,469	5,337
Dry (22%)	4,420	4,312	3,284	2,079	808	464	454	785	1,686	3,078	4,668	6,380
Critical (15%)	5,515	5,357	5,024	3,155	1,547	1,040	1,123	2,128	3,379	4,706	5,797	6,863

Proposed Project

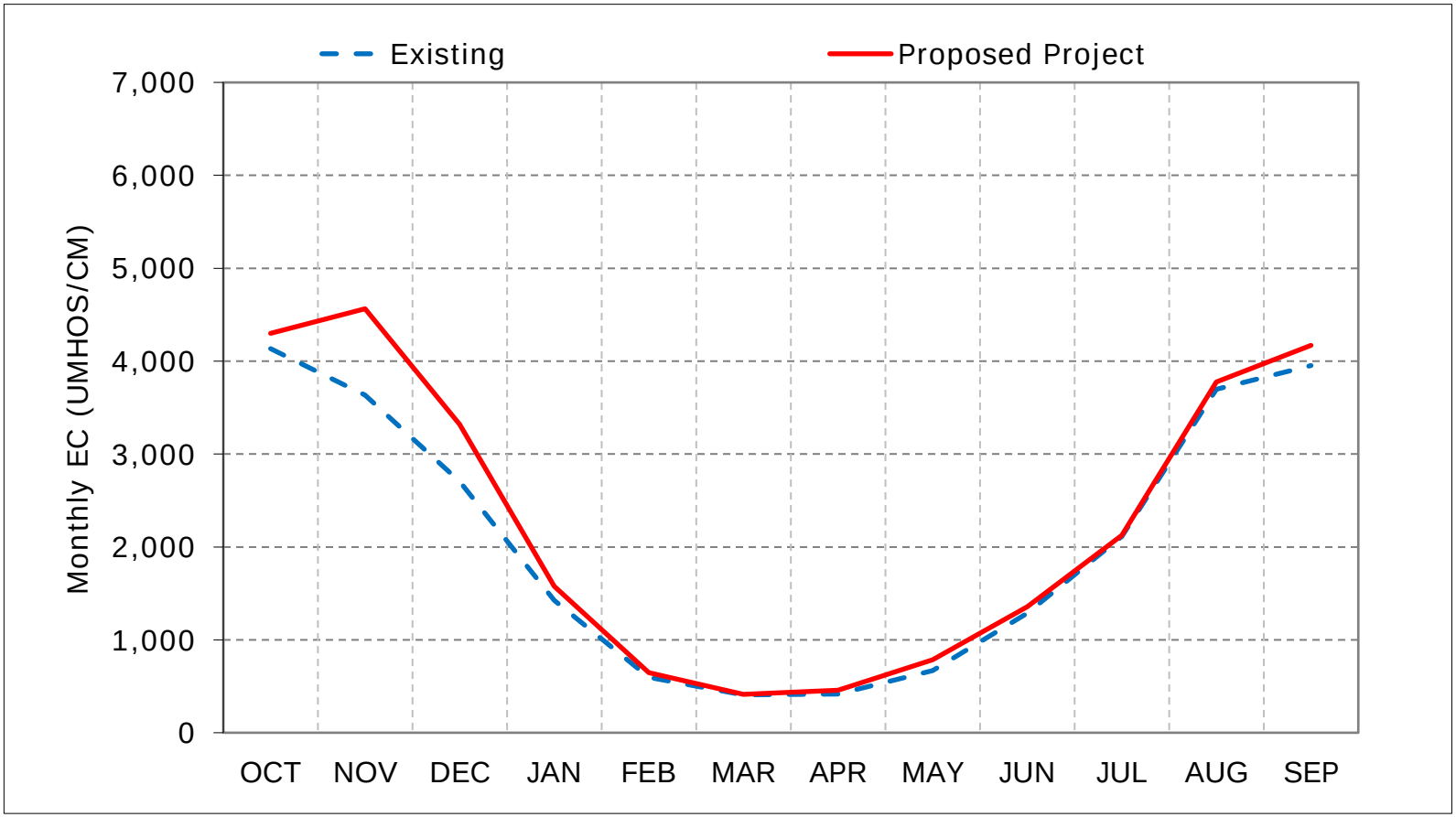
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	7,178	6,644	6,230	4,058	1,249	1,047	1,110	1,754	2,368	3,799	5,530	6,973
20%	6,813	6,497	5,224	3,210	817	501	621	1,359	1,994	3,261	4,845	6,491
30%	6,621	6,139	5,010	2,234	538	284	376	1,112	1,786	2,980	4,623	6,268
40%	6,284	5,751	4,557	1,467	375	256	297	555	1,471	2,099	4,135	6,009
50%	5,636	4,014	3,616	1,024	296	241	244	372	1,065	1,800	3,675	5,149
60%	1,956	3,811	2,553	510	262	228	222	305	803	1,231	3,158	1,933
70%	1,802	3,730	1,140	271	242	219	212	228	593	1,124	2,954	1,849
80%	1,753	3,309	758	242	225	215	206	196	266	969	2,731	1,798
90%	1,622	1,396	364	220	214	201	201	192	199	659	2,502	1,571
Long Term												
Full Simulation Period[a]	4,301	4,564	3,319	1,577	645	413	457	785	1,355	2,125	3,776	4,170
Water Year Types[b]												
Wet (32%)	3,331	3,353	1,244	366	239	221	221	271	457	826	2,491	1,591
Above Normal (15%)	4,551	4,615	3,476	1,061	307	225	228	298	760	1,095	2,867	1,835
Below Normal (17%)	4,546	4,860	4,270	1,631	397	290	337	568	1,100	1,949	3,962	5,712
Dry (22%)	4,602	5,148	4,045	2,388	910	461	535	1,022	1,816	3,092	4,713	6,418
Critical (15%)	5,413	5,912	5,461	3,437	1,754	1,088	1,222	2,280	3,498	4,725	5,845	6,925

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-72	-32	-168	700	27	12	148	146	61	50	10	77
20%	21	-20	60	381	60	2	116	338	161	101	11	11
30%	-69	-52	1,683	156	18	-10	80	392	78	-7	95	5
40%	0	-217	1,773	193	5	-3	35	133	167	86	426	209
50%	-136	1,550	1,446	23	13	3	0	81	-22	-12	370	224
60%	-94	2,080	681	19	7	-1	-6	53	114	-2	-40	-99
70%	674	2,816	389	11	-1	-3	-7	-4	68	-28	-41	528
80%	801	2,510	272	7	1	0	-8	-20	-4	14	-48	599
90%	777	665	136	0	1	2	-7	-12	-5	0	-63	426
Long Term												
Full Simulation Period[a]	167	931	615	151	50	6	41	117	68	12	79	218
Water Year Types[b]												
Wet (32%)	265	1,175	401	12	-1	1	1	35	49	0	-77	510
Above Normal (15%)	168	978	892	153	-12	2	4	47	5	-33	18	-170
Below Normal (17%)	193	882	738	95	-2	-6	44	146	35	65	494	375
Dry (22%)	182	836	761	309	102	-3	80	238	130	14	45	38
Critical (15%)	-102	555	437	282	207	48	99	152	119	19	48	62

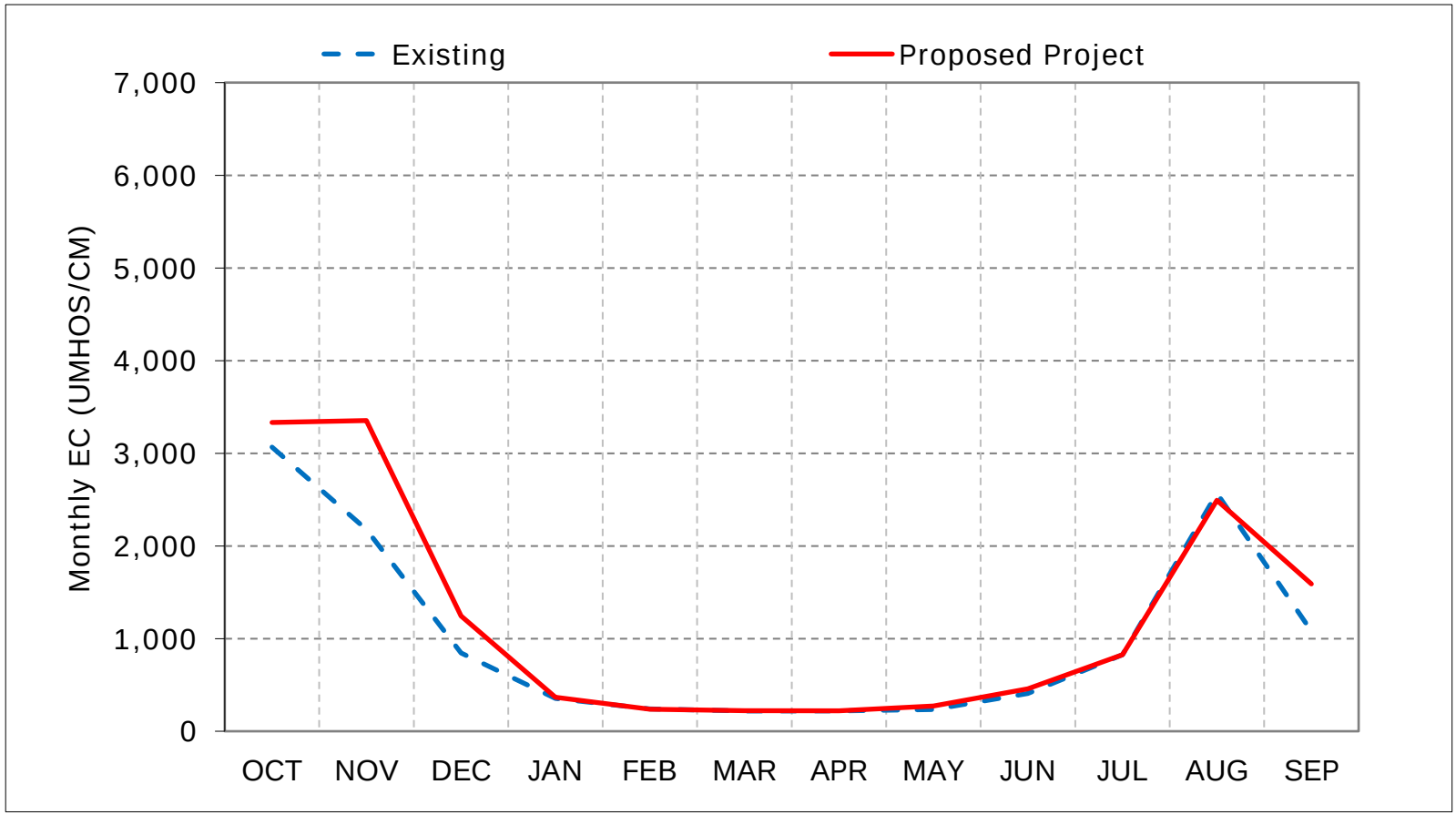
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 11-1. San Joaquin River at Antioch Salinity, Long-Term Average EC



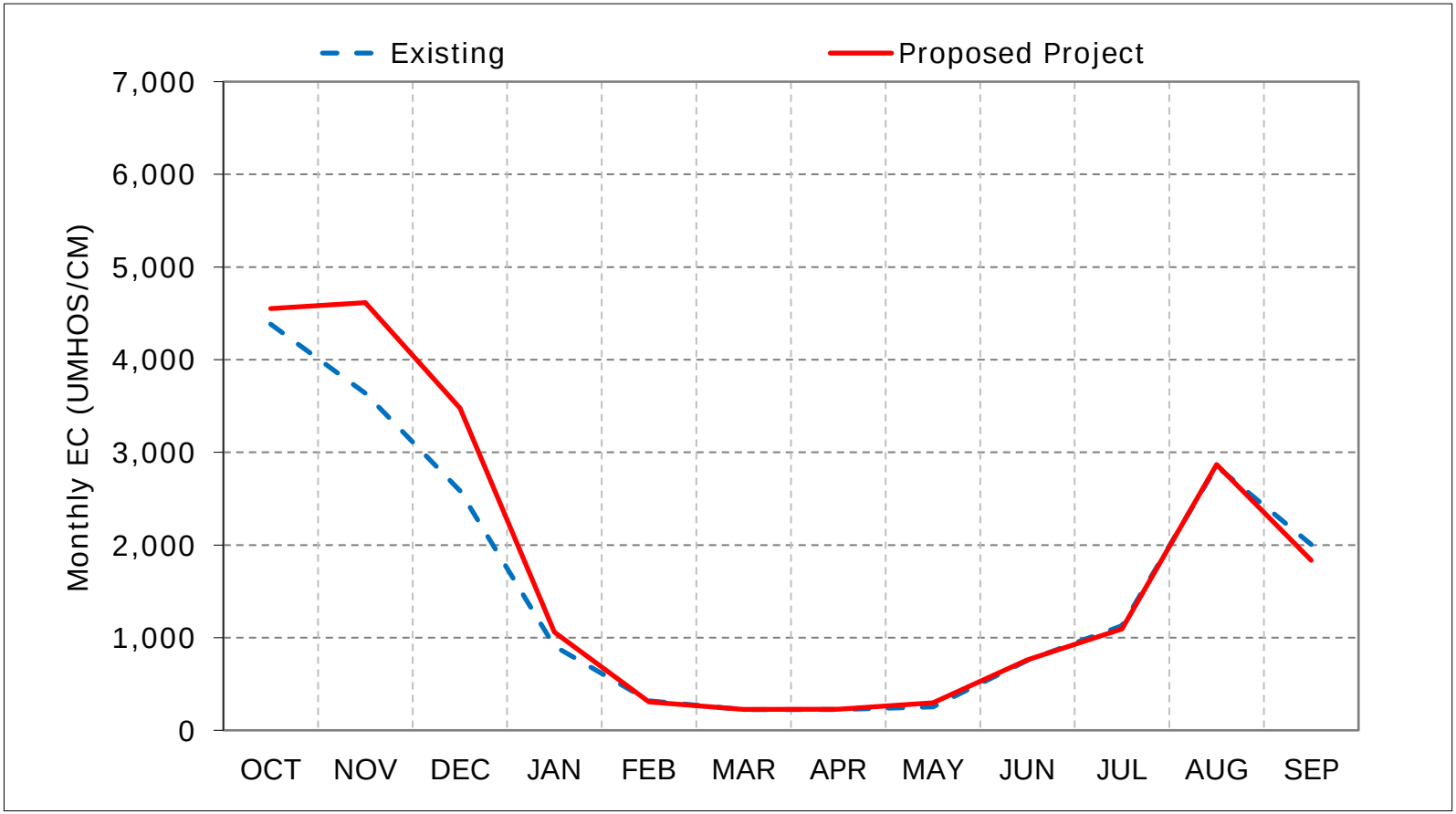
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 11-2. San Joaquin River at Antioch Salinity, Wet Year Average EC



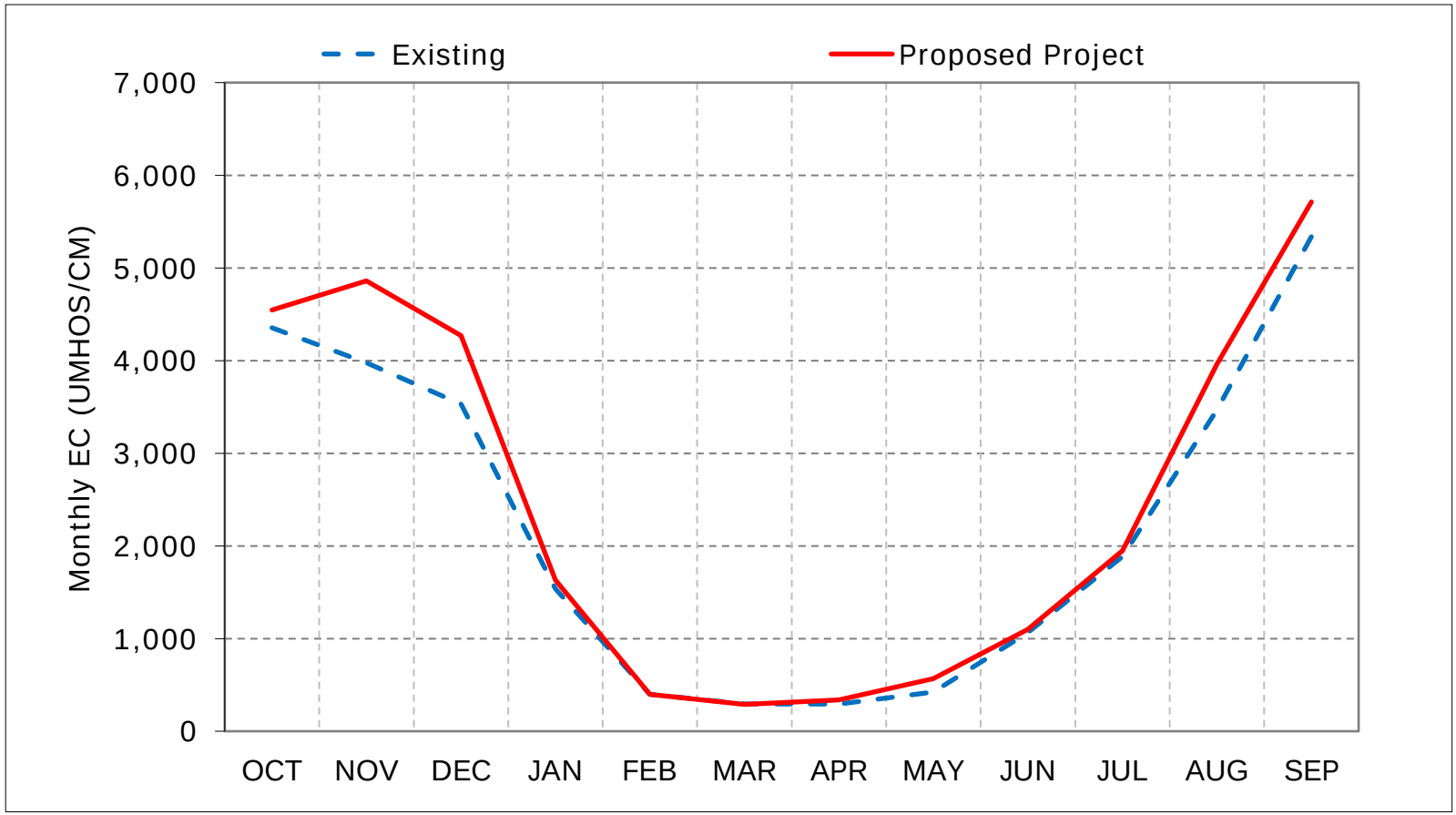
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 11-3. San Joaquin River at Antioch Salinity, Above Normal Year Average EC



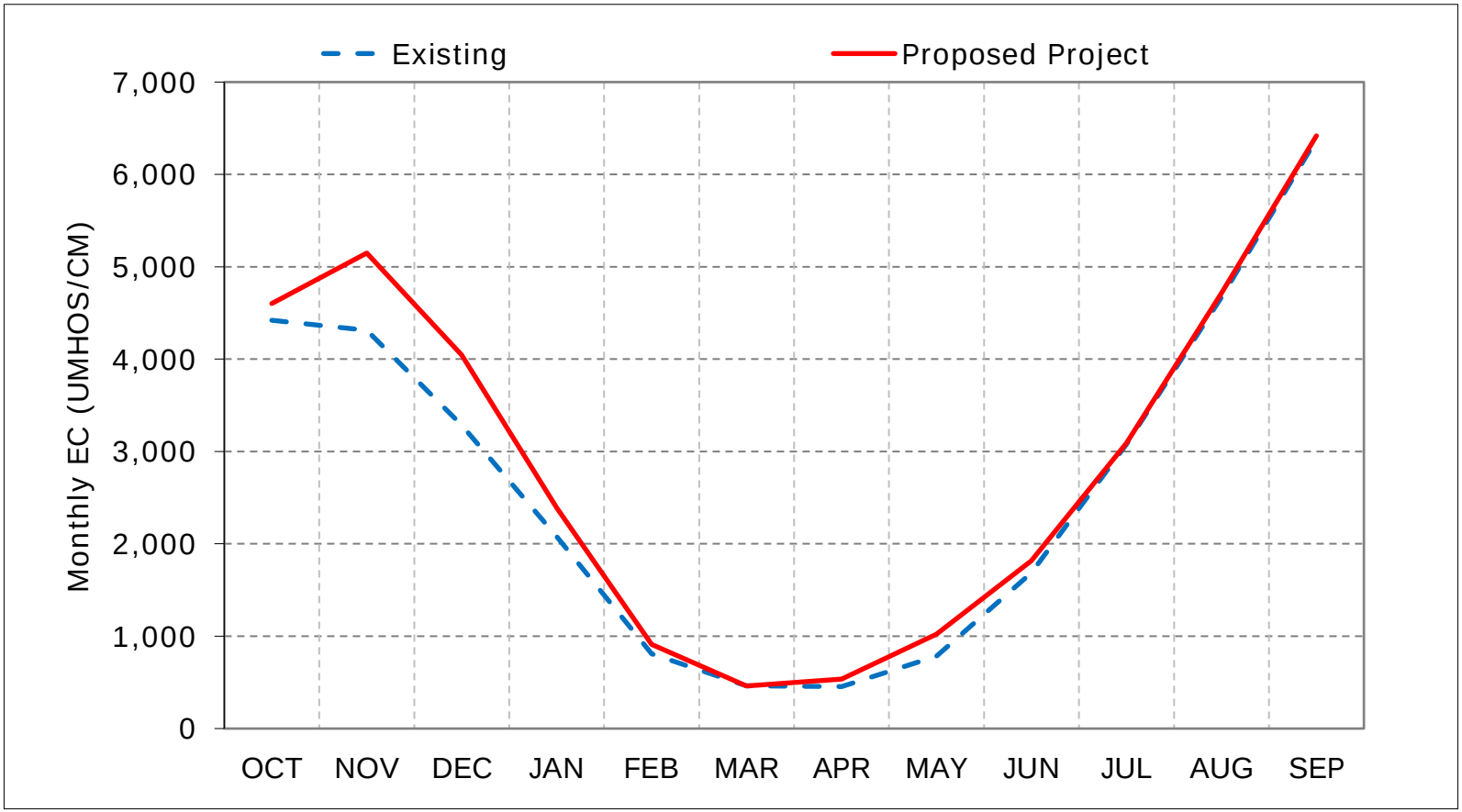
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 11-4. San Joaquin River at Antioch Salinity, Below Normal Year Average EC



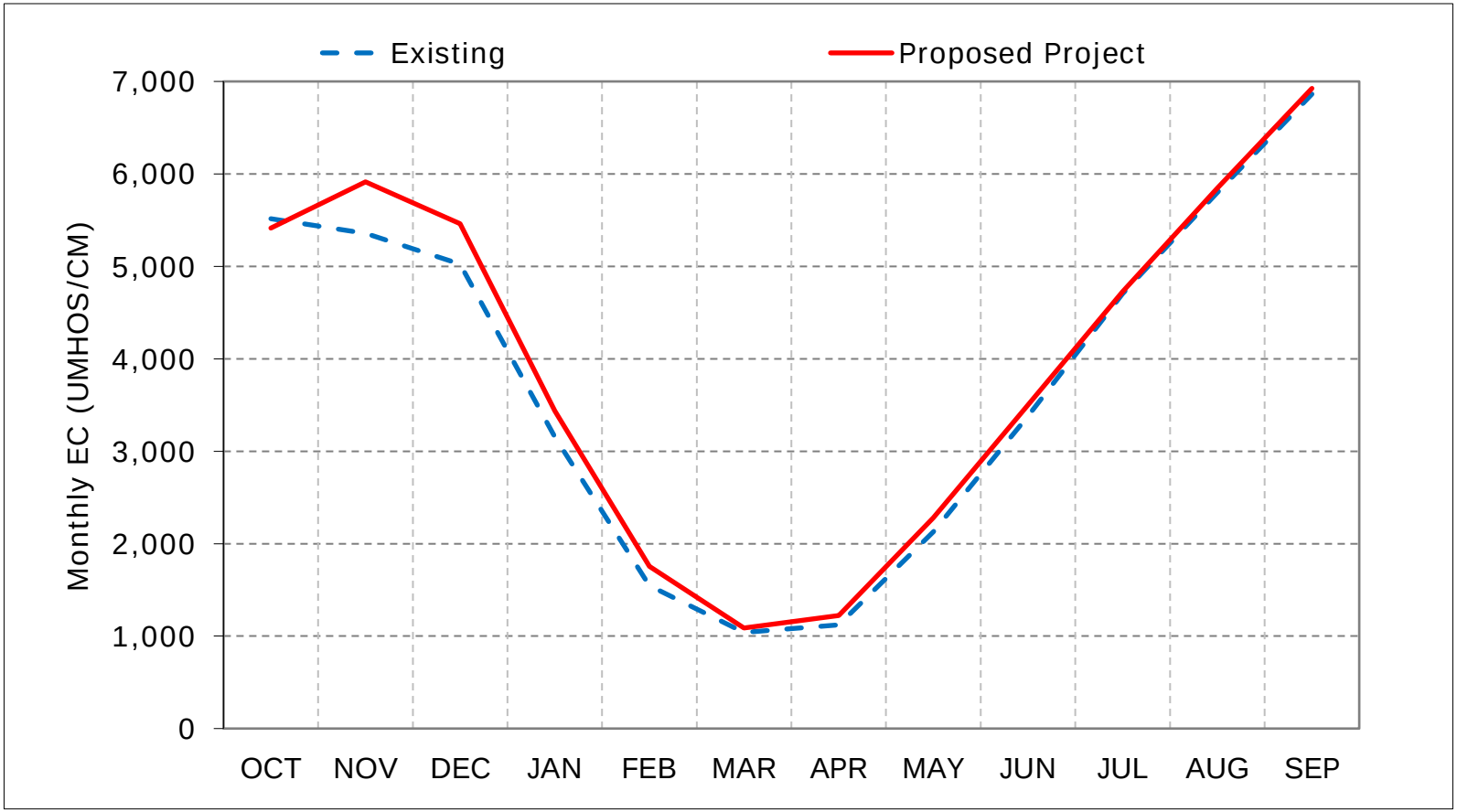
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 11-5. San Joaquin River at Antioch Salinity, Dry Year Average EC



*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.

Figure 11-6. San Joaquin River at Antioch Salinity, Critical Year Average EC



*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.

Figure 11-7. San Joaquin River at Antioch Salinity, January EC

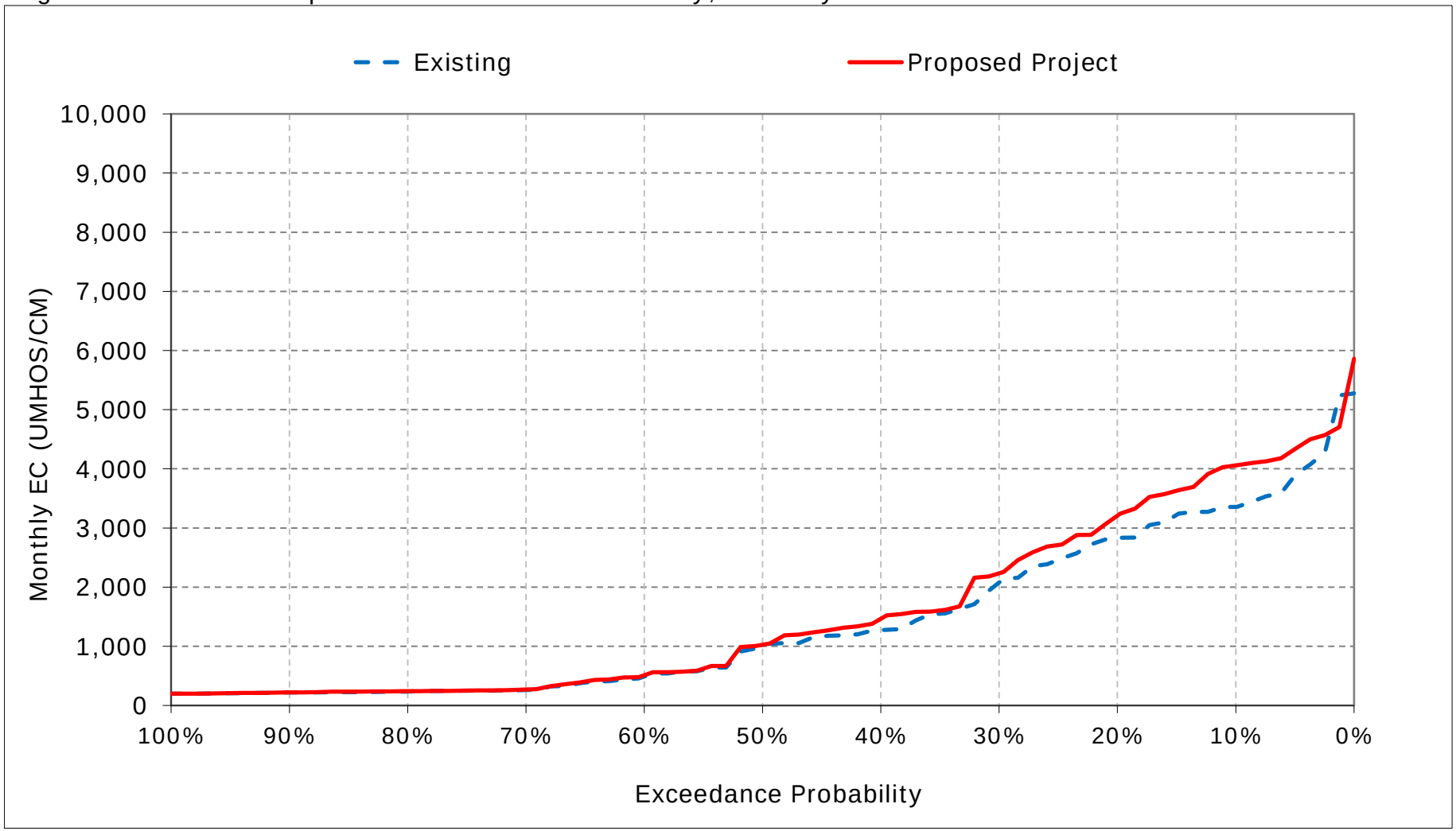


Figure 11-8. San Joaquin River at Antioch Salinity, February EC

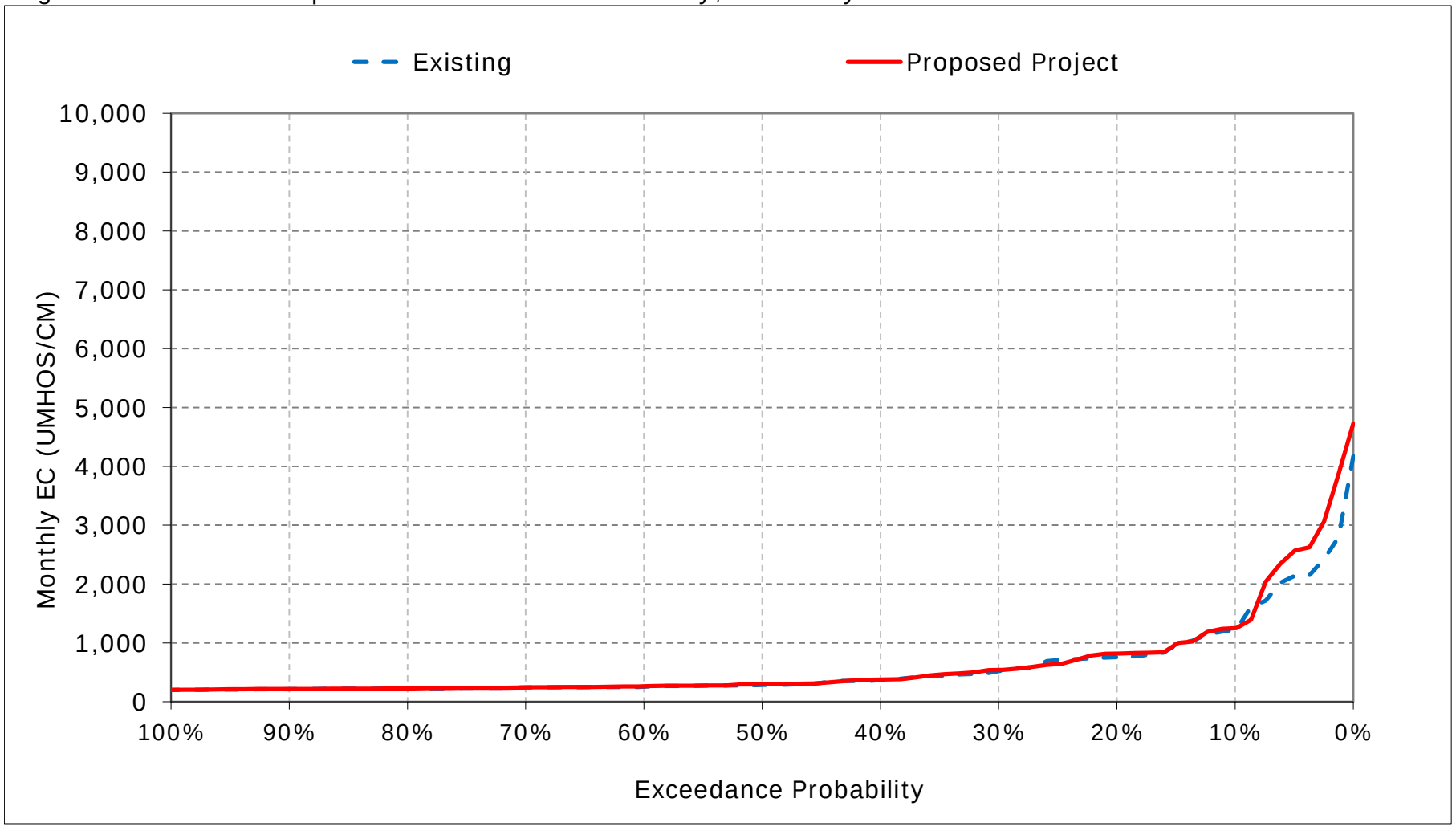


Figure 11-9. San Joaquin River at Antioch Salinity, March EC

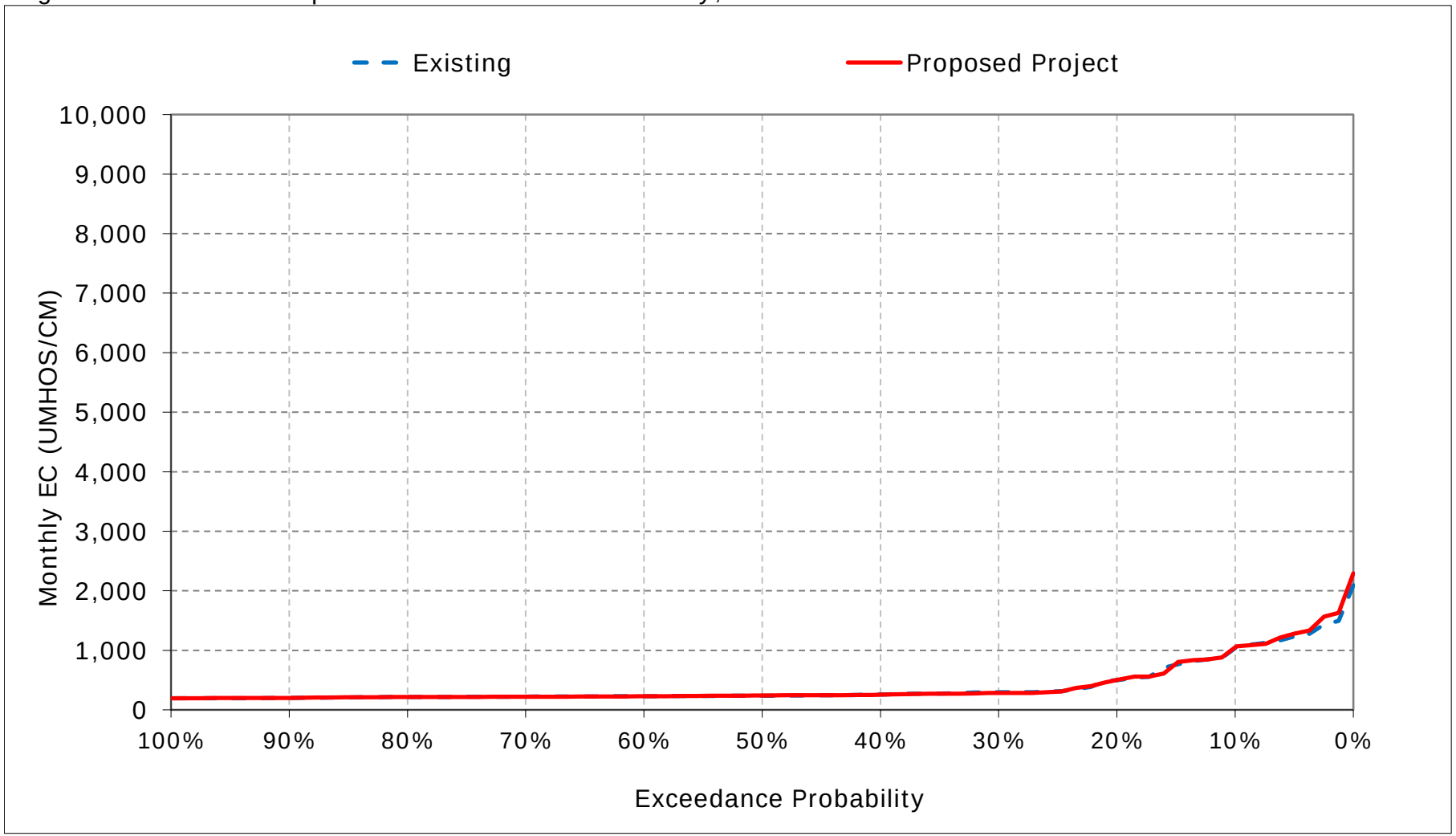


Figure 11-10. San Joaquin River at Antioch Salinity, April EC

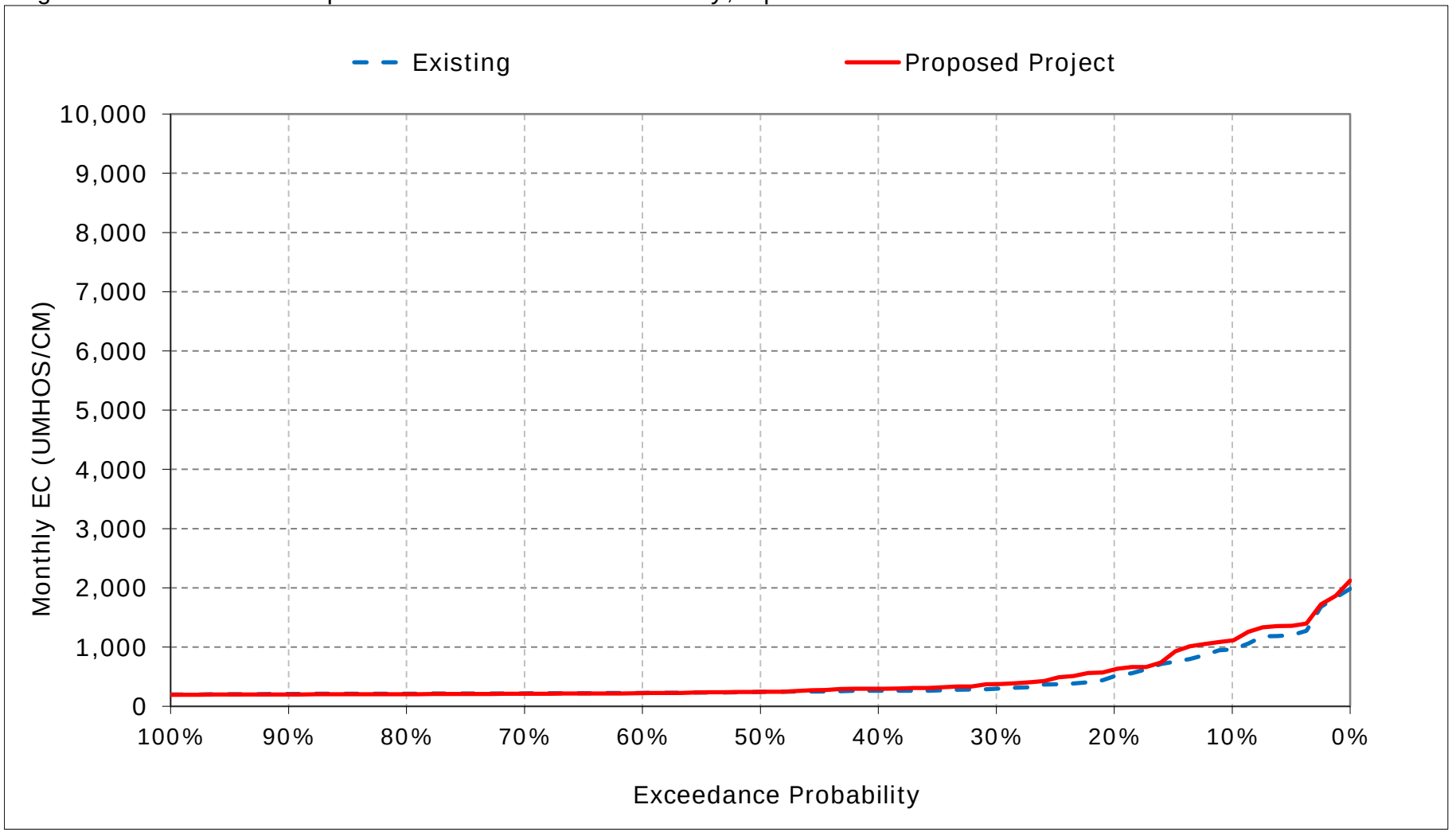


Figure 11-11. San Joaquin River at Antioch Salinity, May EC

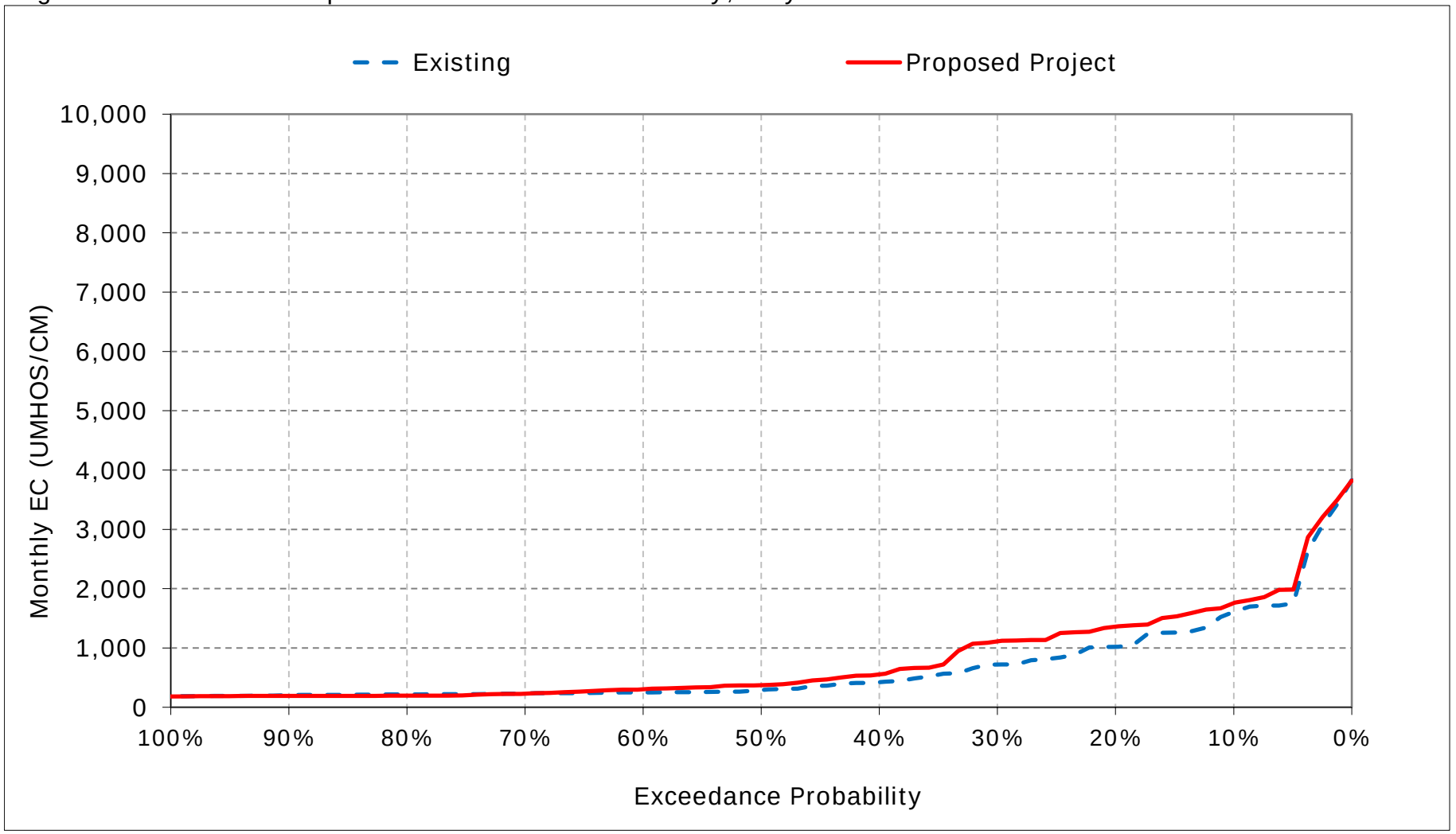


Figure 11-12. San Joaquin River at Antioch Salinity, June EC

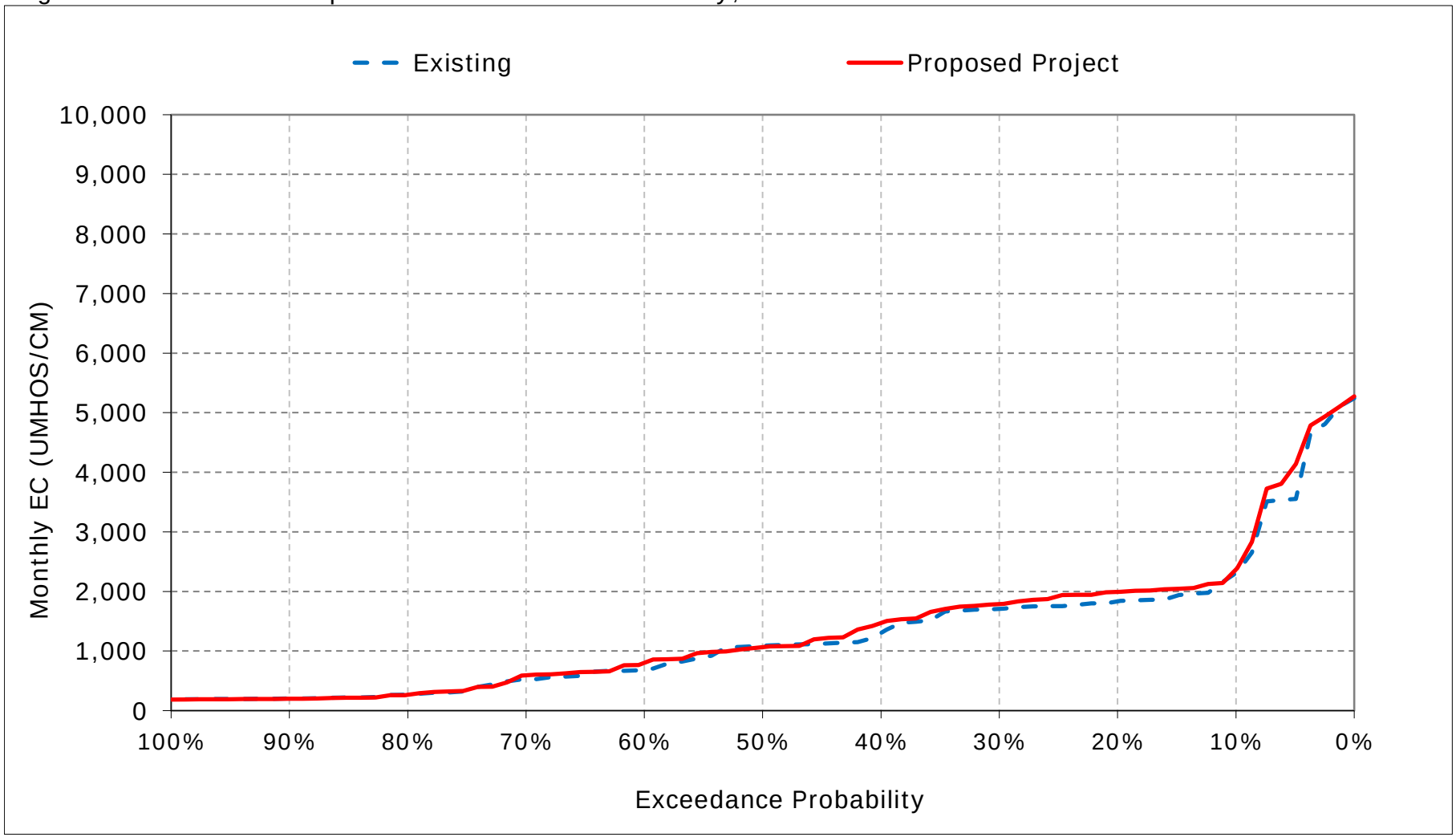


Figure 11-13. San Joaquin River at Antioch Salinity, July EC

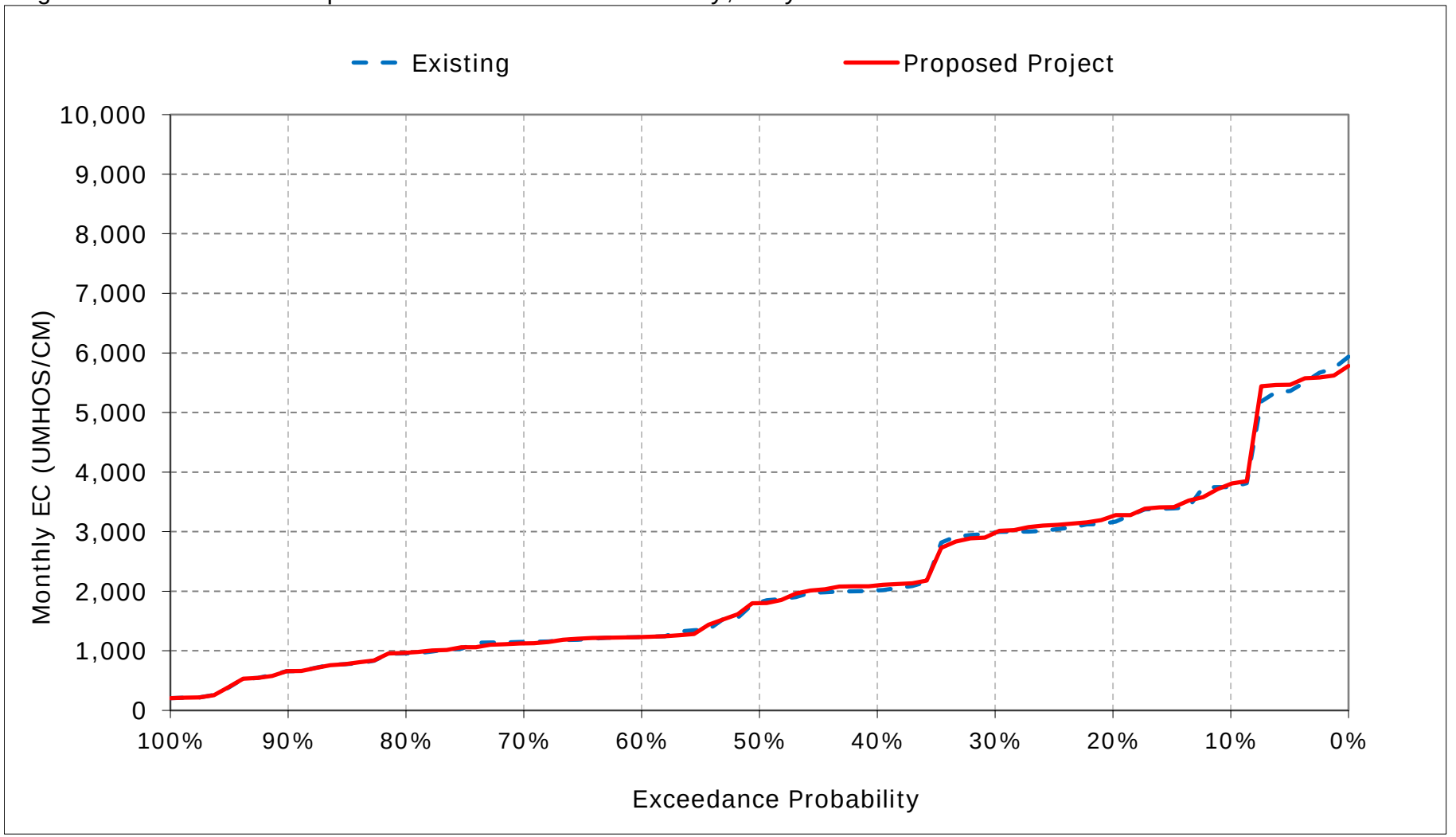


Figure 11-14. San Joaquin River at Antioch Salinity, August EC

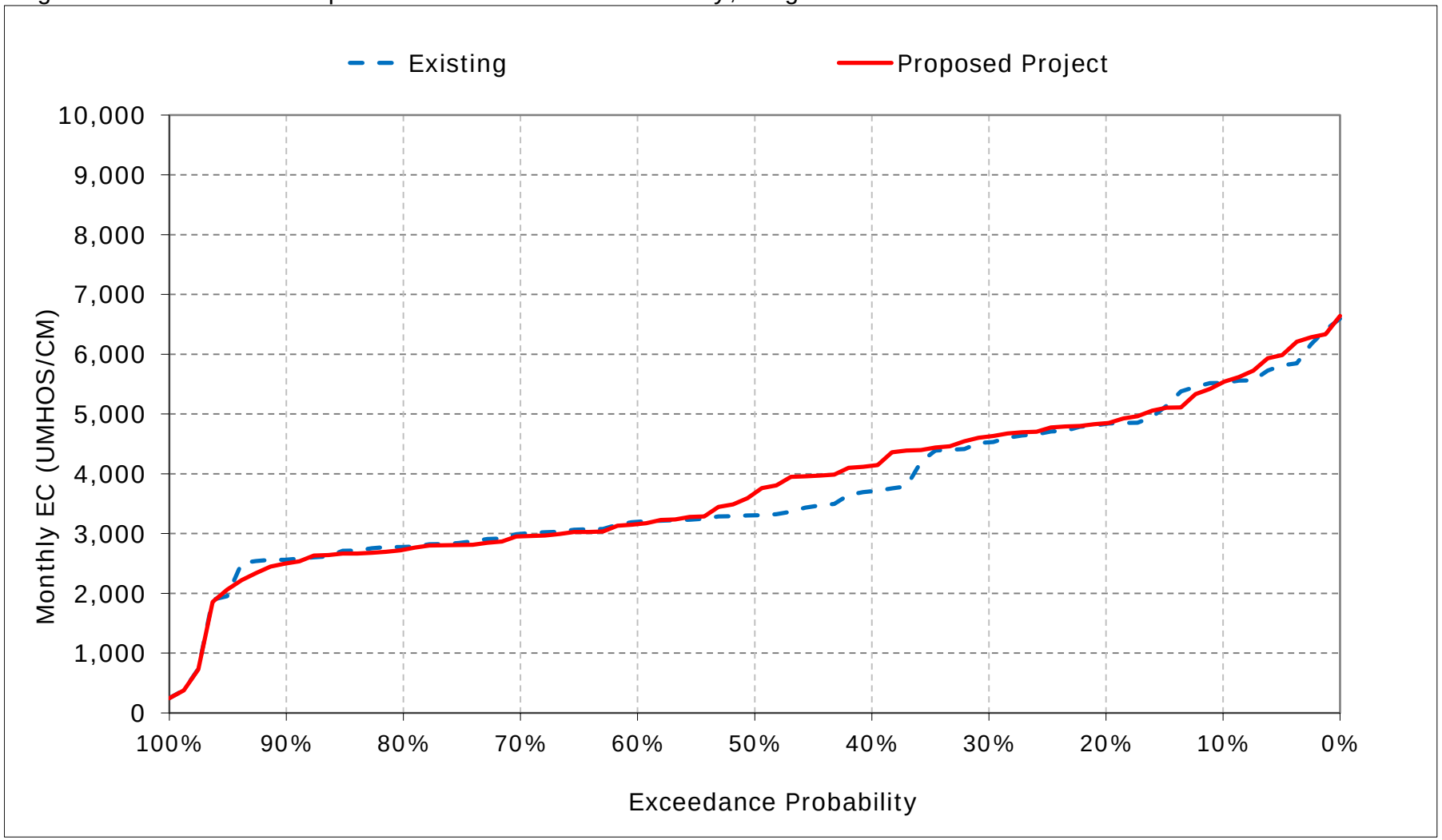


Figure 11-15. San Joaquin River at Antioch Salinity, September EC

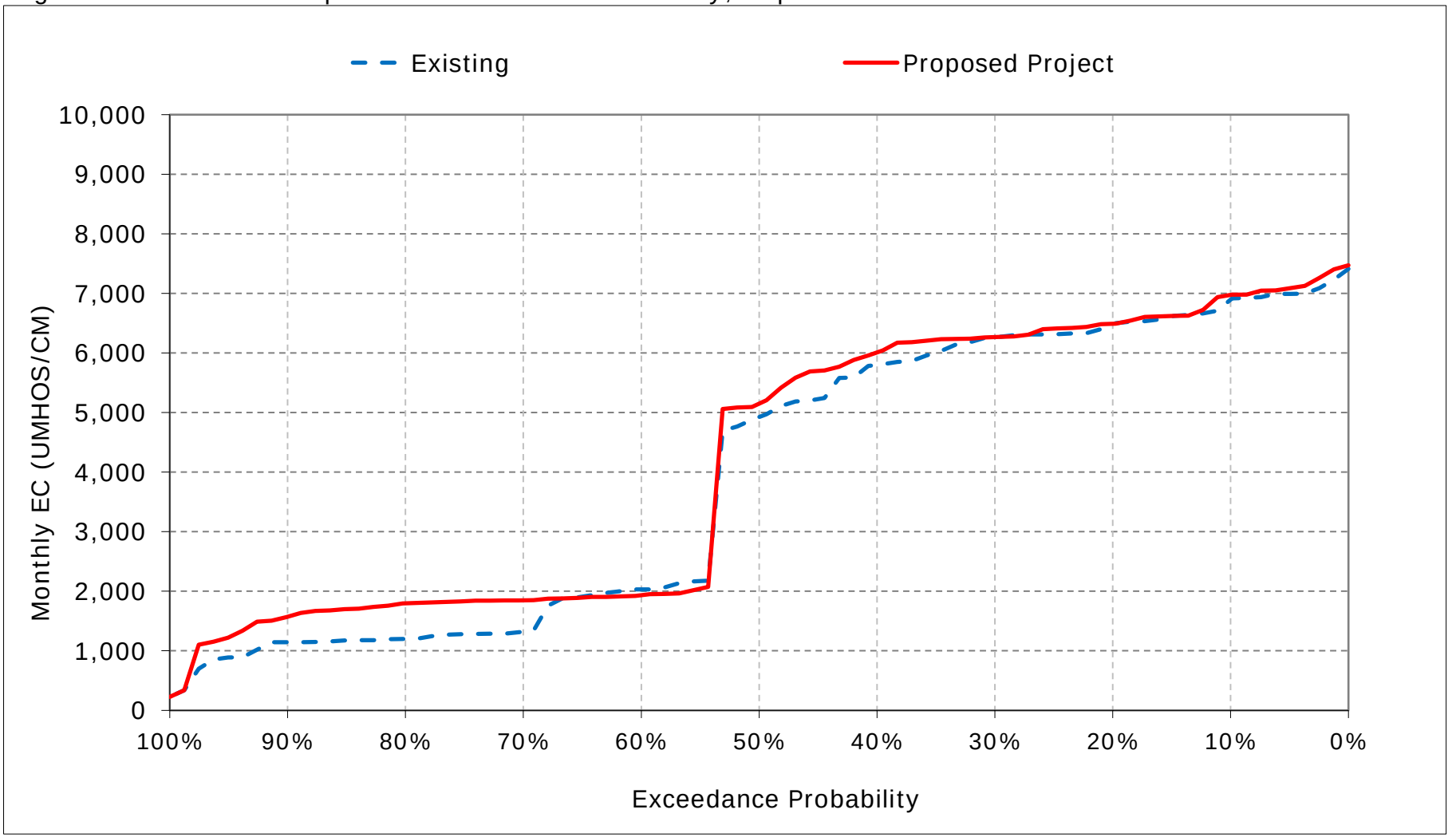


Figure 11-16. San Joaquin River at Antioch Salinity, October EC

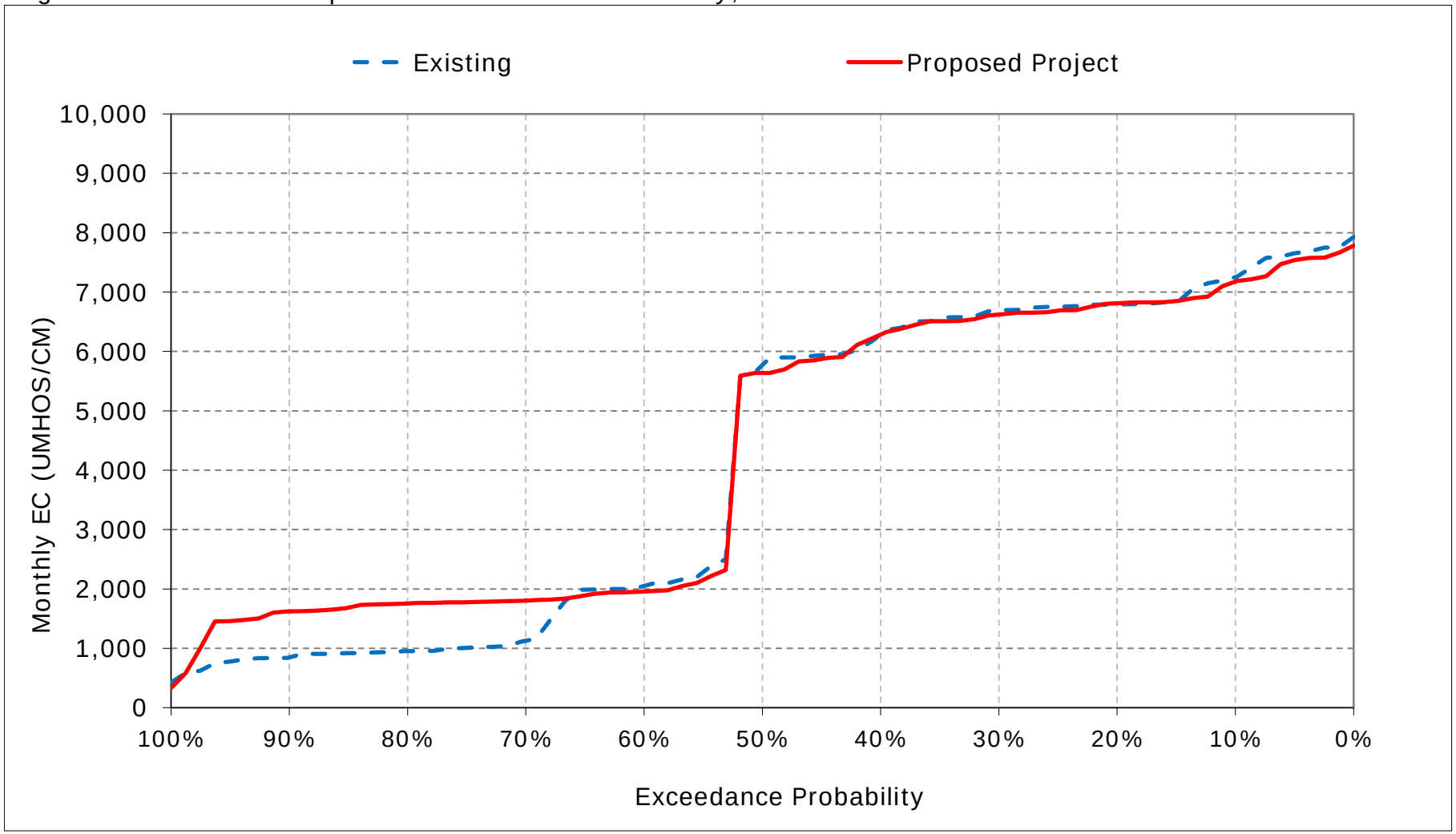


Figure 11-17. San Joaquin River at Antioch Salinity, November EC

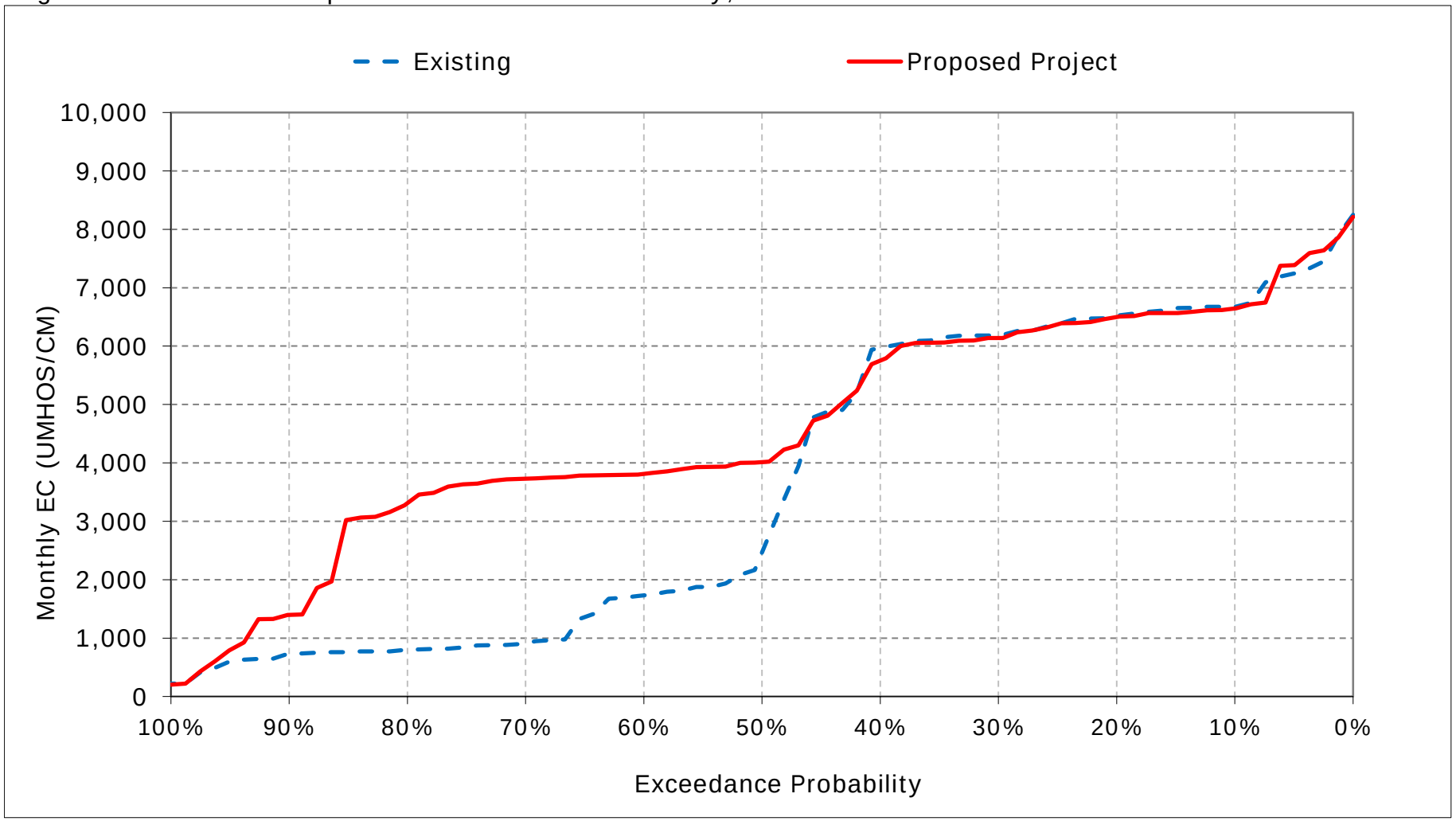


Figure 11-18. San Joaquin River at Antioch Salinity, December EC

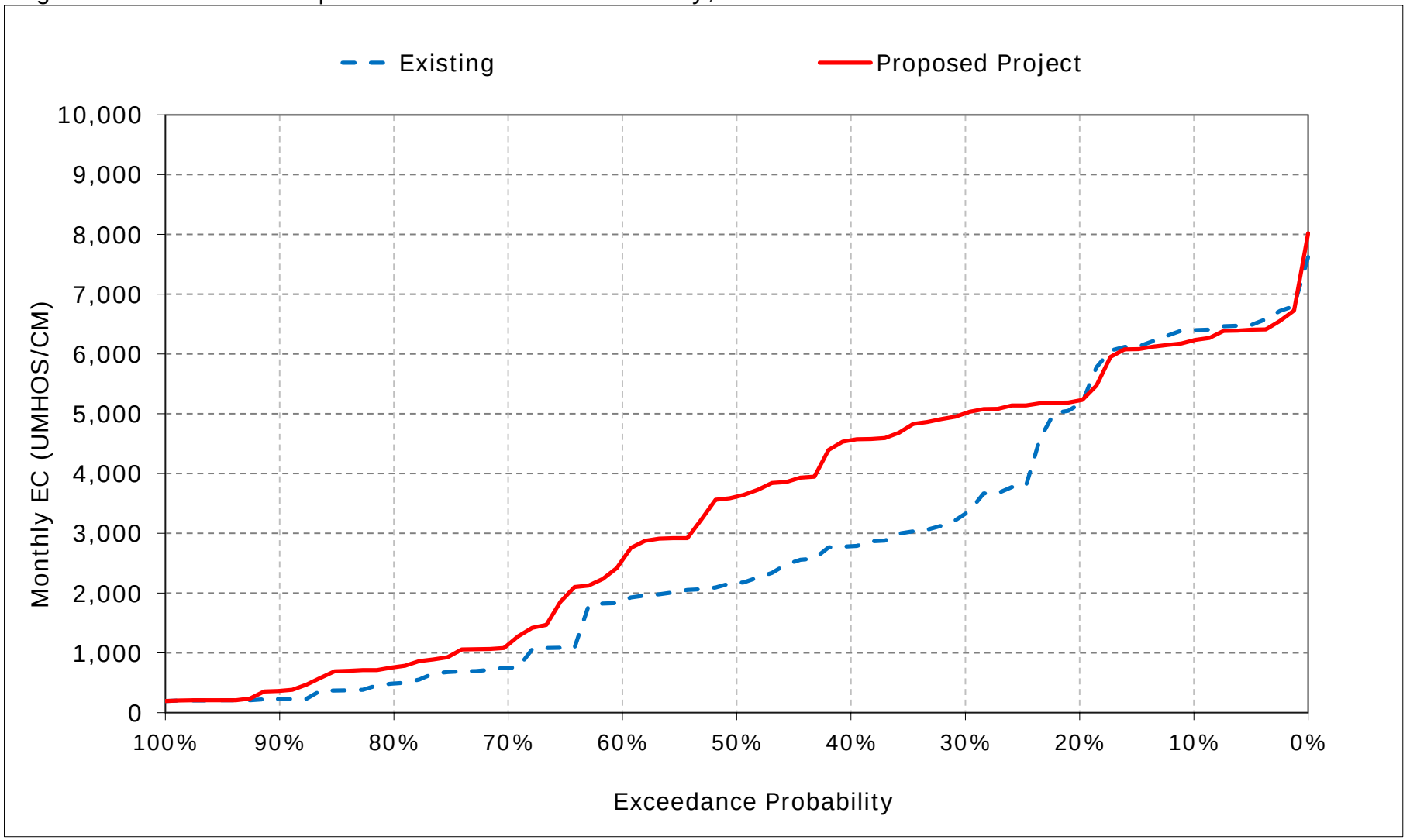


Table 12-1. San Joaquin River at Jersey Point Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,437	2,408	2,326	1,362	568	339	307	395	562	1,431	1,744	2,423
20%	2,258	2,253	2,053	1,126	397	274	249	303	470	1,136	1,546	2,323
30%	2,157	2,128	1,532	889	309	244	236	266	446	888	1,473	2,249
40%	2,064	1,889	1,271	674	290	236	230	247	365	808	1,374	2,127
50%	1,775	1,285	831	515	270	228	224	240	311	595	1,300	1,910
60%	562	637	743	352	252	222	221	233	256	491	1,208	1,028
70%	369	399	507	264	237	214	219	227	231	442	1,148	967
80%	312	322	308	234	219	209	214	222	209	337	1,065	909
90%	287	267	215	218	213	200	209	207	203	246	1,000	876
Long Term												
Full Simulation Period[a]	1,354	1,310	1,133	668	342	255	243	283	401	754	1,304	1,613
Water Year Types[b]												
Wet (32%)	1,021	898	480	277	234	219	218	215	223	335	990	819
Above Normal (15%)	1,495	1,286	1,114	516	267	222	224	229	276	429	1,124	942
Below Normal (17%)	1,417	1,465	1,437	744	289	233	232	247	328	746	1,402	2,286
Dry (22%)	1,430	1,529	1,355	865	391	256	239	277	449	1,141	1,475	2,261
Critical (15%)	1,747	1,716	1,876	1,282	637	387	332	534	923	1,413	1,795	2,248

Proposed Project

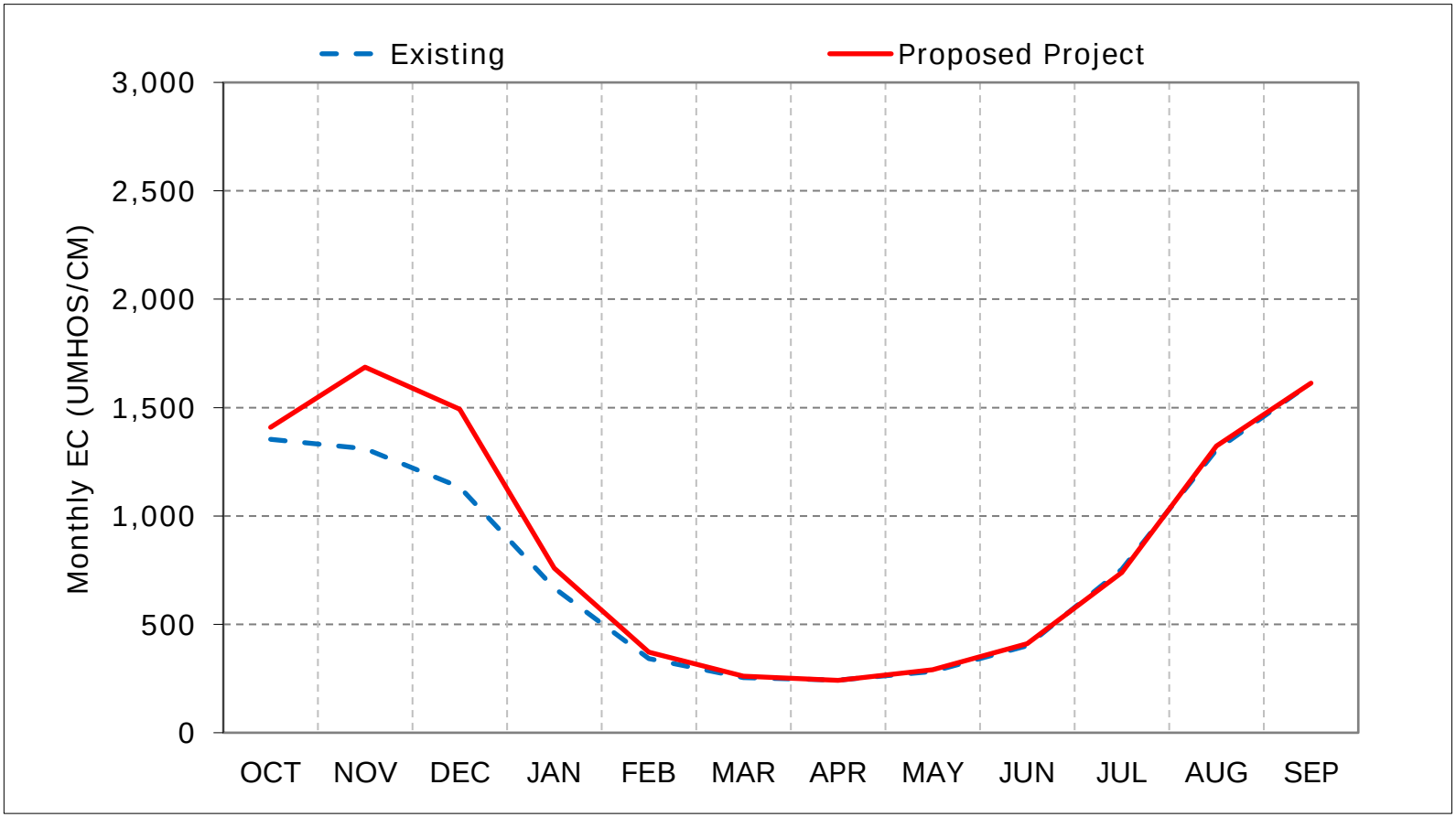
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,418	2,437	2,461	1,628	622	337	328	451	588	1,452	1,808	2,544
20%	2,262	2,267	2,327	1,287	413	275	249	367	521	1,019	1,640	2,480
30%	2,187	2,074	2,186	1,067	326	246	228	309	453	820	1,520	2,338
40%	2,021	1,877	1,951	879	294	239	220	235	381	754	1,420	2,160
50%	1,775	1,744	1,630	536	273	232	215	217	299	558	1,305	1,953
60%	619	1,507	1,358	381	258	225	211	207	247	465	1,181	935
70%	561	1,441	688	268	236	217	207	201	223	422	1,134	867
80%	488	1,223	525	240	220	209	205	195	200	340	1,047	792
90%	412	704	274	225	214	204	201	192	196	245	933	662
Long Term												
Full Simulation Period[a]	1,409	1,687	1,493	760	372	261	242	290	411	739	1,322	1,613
Water Year Types[b]												
Wet (32%)	1,109	1,363	724	295	235	221	208	202	223	330	946	708
Above Normal (15%)	1,570	1,723	1,647	644	276	226	211	205	260	418	1,127	865
Below Normal (17%)	1,488	1,822	1,844	829	293	233	224	246	324	691	1,511	2,479
Dry (22%)	1,474	1,822	1,806	1,038	445	262	243	313	482	1,102	1,487	2,281
Critical (15%)	1,712	1,989	2,123	1,383	745	417	364	584	968	1,453	1,863	2,311

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-19	29	135	266	54	-2	21	56	26	21	64	122
20%	4	15	275	161	16	1	-1	64	51	-117	93	157
30%	29	-54	654	178	17	2	-8	44	7	-68	47	90
40%	-43	-12	679	206	5	3	-10	-11	15	-54	46	33
50%	0	460	798	21	3	3	-9	-23	-12	-38	5	44
60%	57	871	614	30	6	4	-10	-25	-9	-25	-27	-93
70%	192	1,042	180	5	0	3	-12	-26	-8	-21	-15	-100
80%	175	901	217	6	0	0	-10	-26	-9	3	-18	-117
90%	125	437	59	6	1	3	-8	-15	-7	-1	-67	-214
Long Term												
Full Simulation Period[a]	56	377	360	92	30	7	-1	7	10	-15	17	0
Water Year Types[b]												
Wet (32%)	88	465	244	18	1	2	-10	-13	-1	-4	-45	-111
Above Normal (15%)	75	437	533	128	9	4	-13	-24	-16	-10	3	-77
Below Normal (17%)	71	357	406	86	4	0	-8	-1	-4	-55	110	193
Dry (22%)	44	293	451	173	54	6	4	36	33	-39	12	20
Critical (15%)	-35	273	247	100	108	29	31	50	44	40	68	63

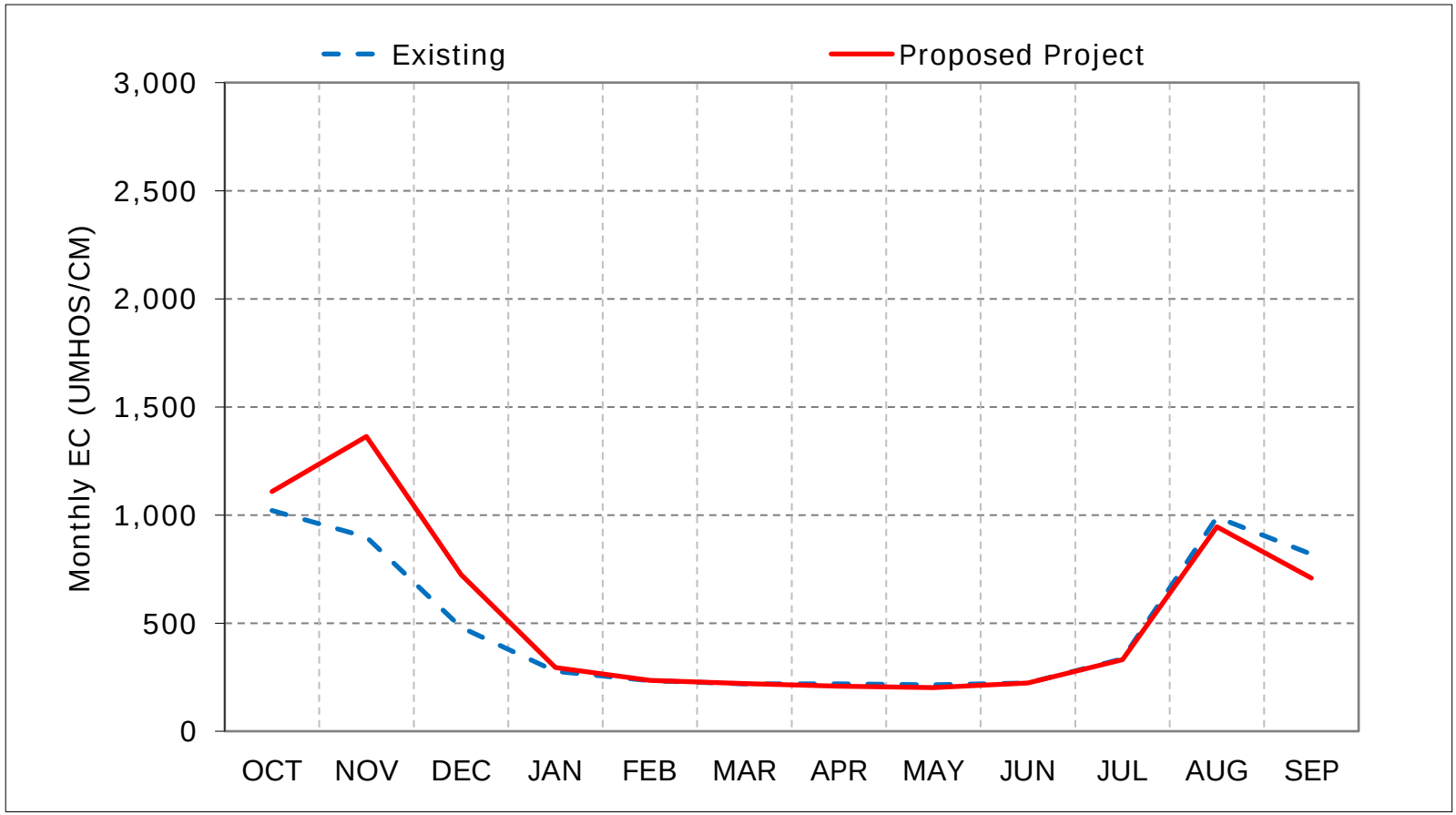
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 12-1. San Joaquin River at Jersey Point Salinity, Long-Term Average EC



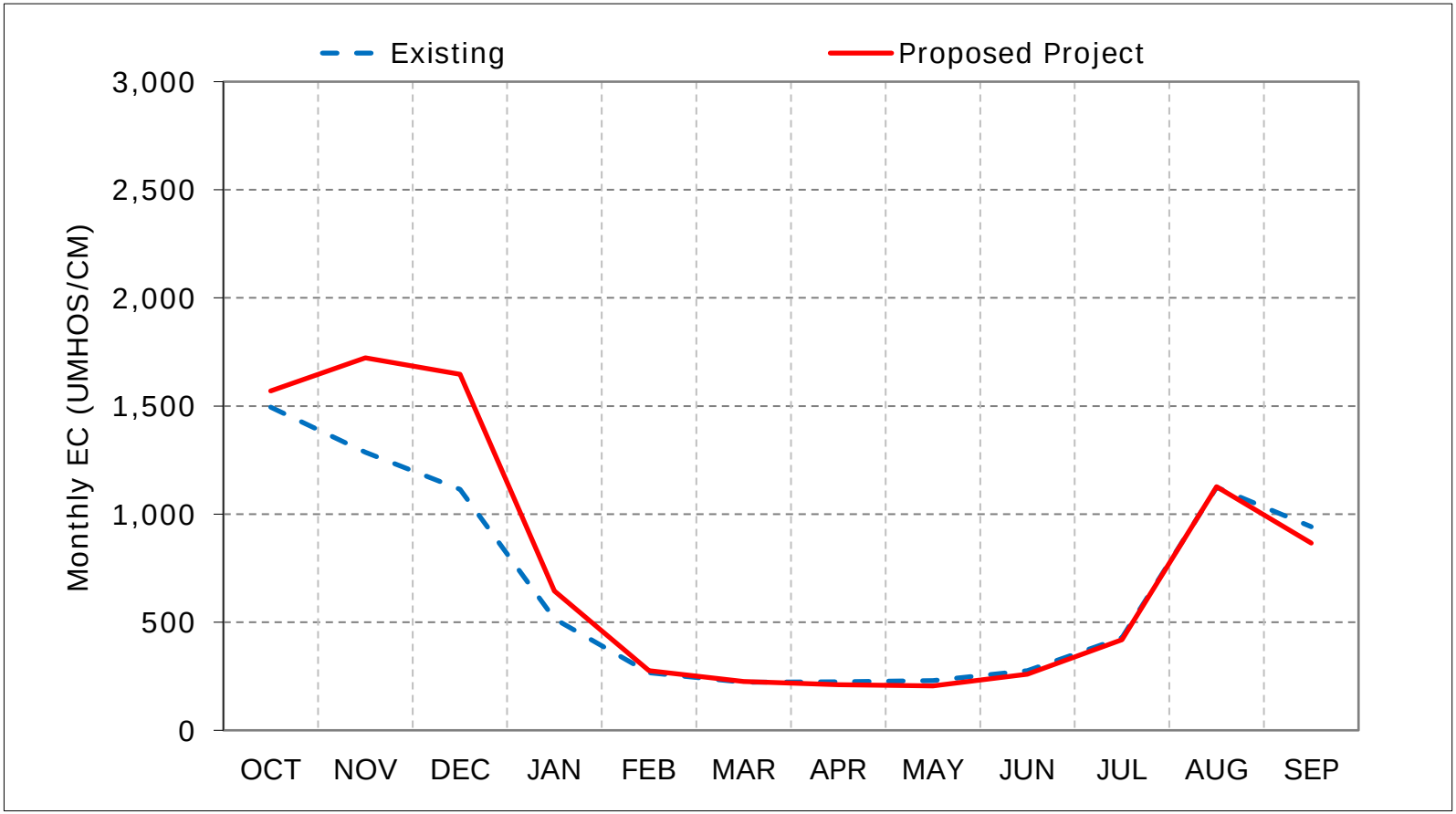
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 12-2. San Joaquin River at Jersey Point Salinity, Wet Year Average EC



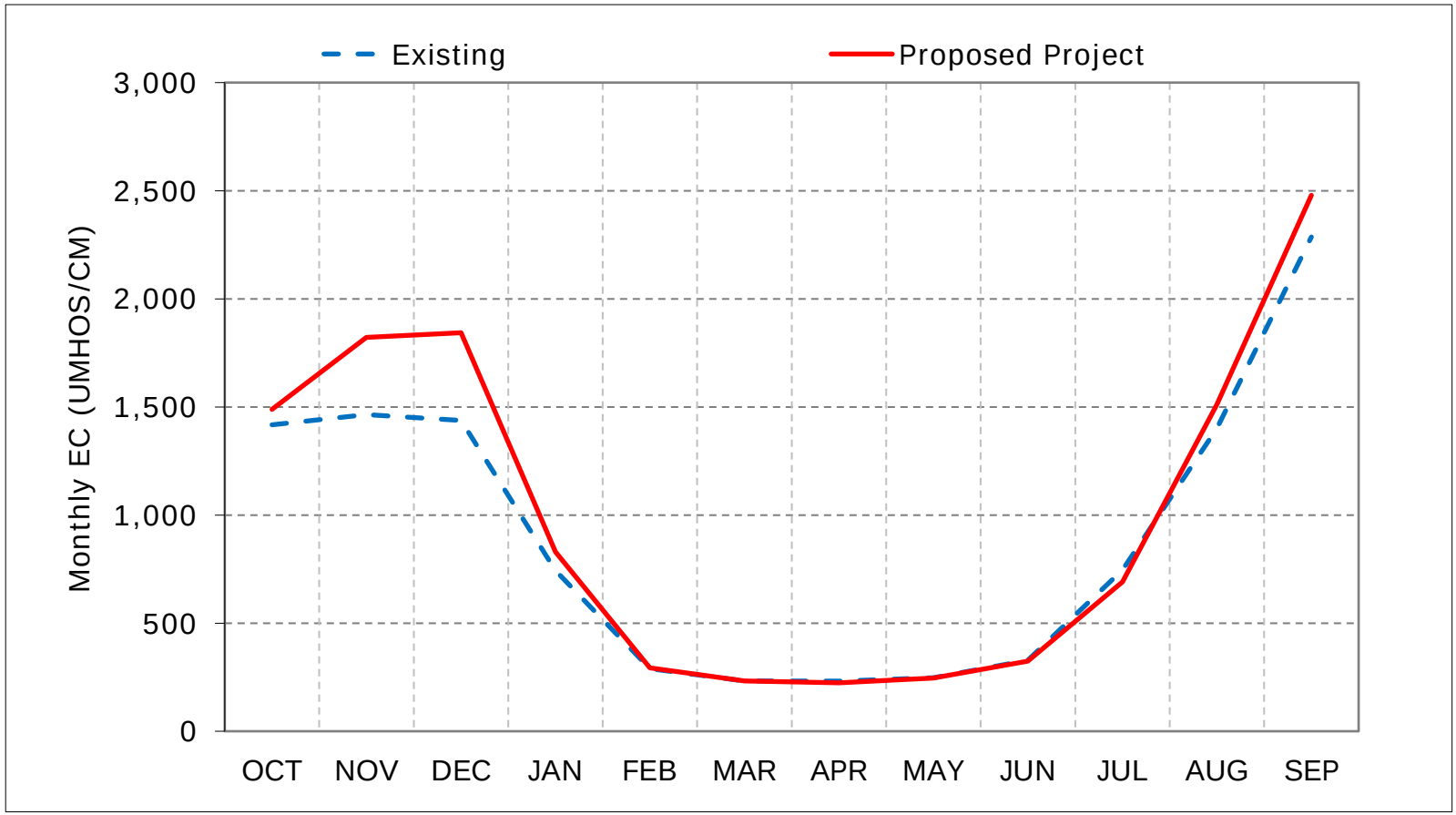
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 12-3. San Joaquin River at Jersey Point Salinity, Above Normal Year Averag



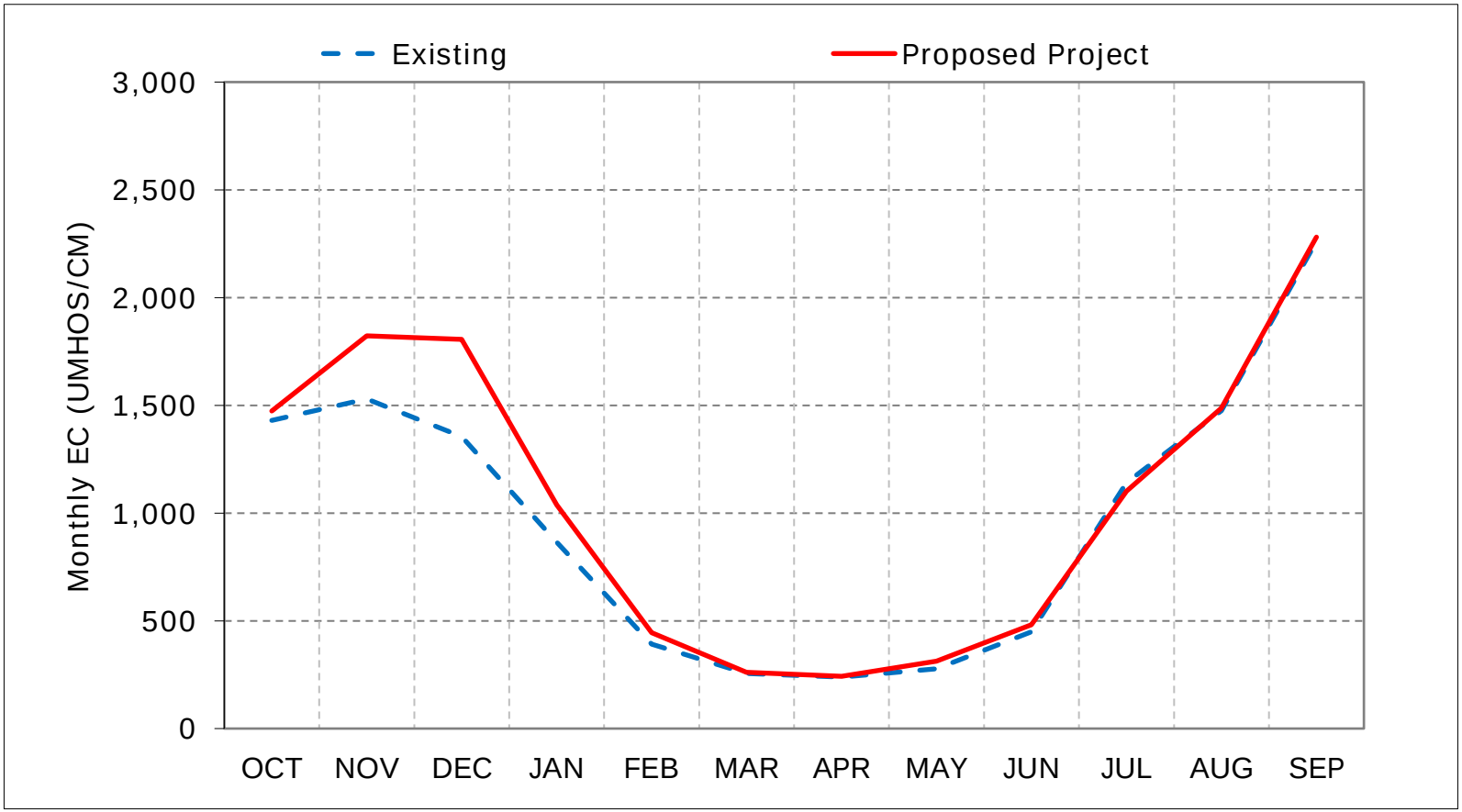
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 12-4. San Joaquin River at Jersey Point Salinity, Below Normal Year Averag



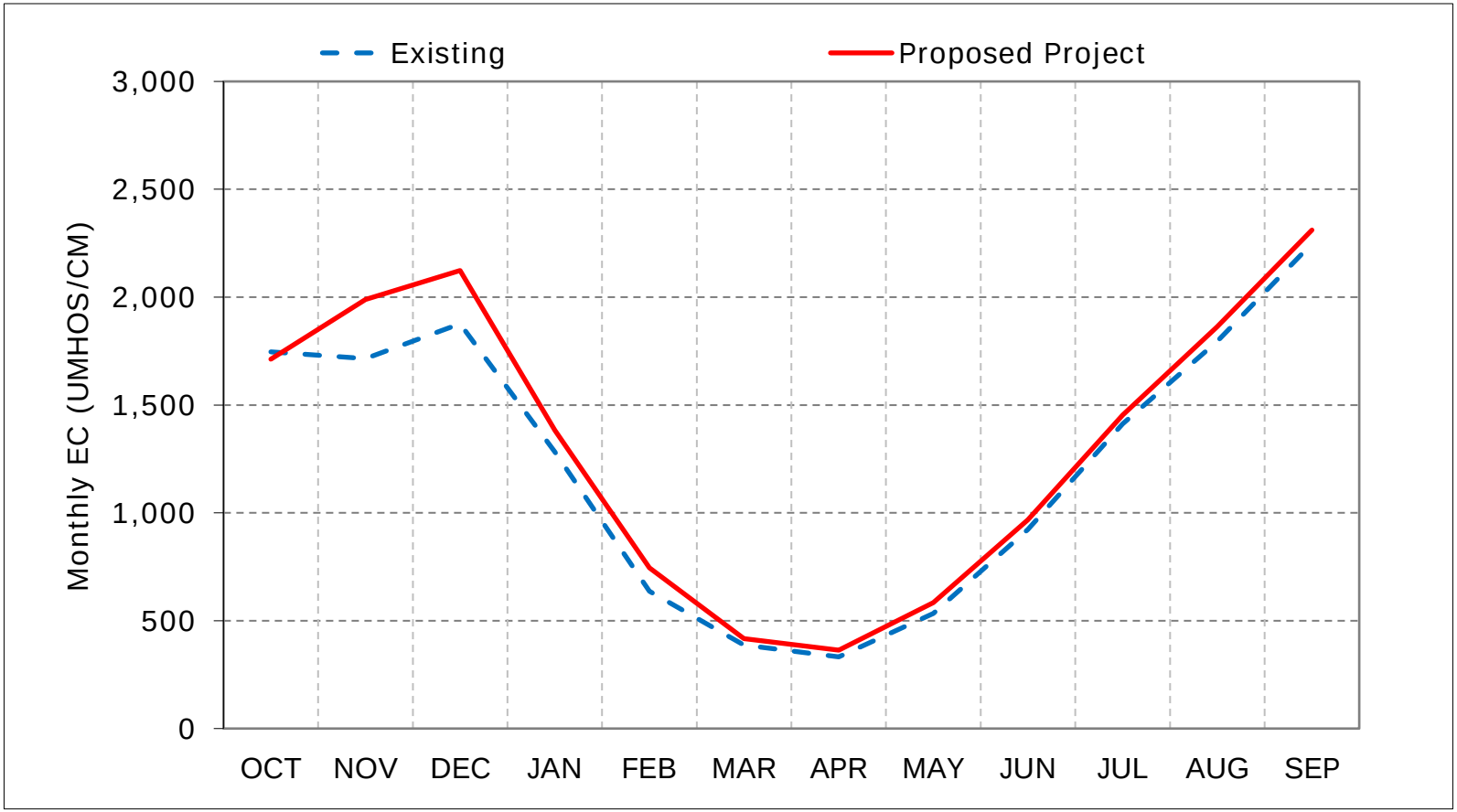
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 12-5. San Joaquin River at Jersey Point Salinity, Dry Year Average EC



*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.

Figure 12-6. San Joaquin River at Jersey Point Salinity, Critical Year Average EC



*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.

Figure 12-7. San Joaquin River at Jersey Point Salinity, January EC

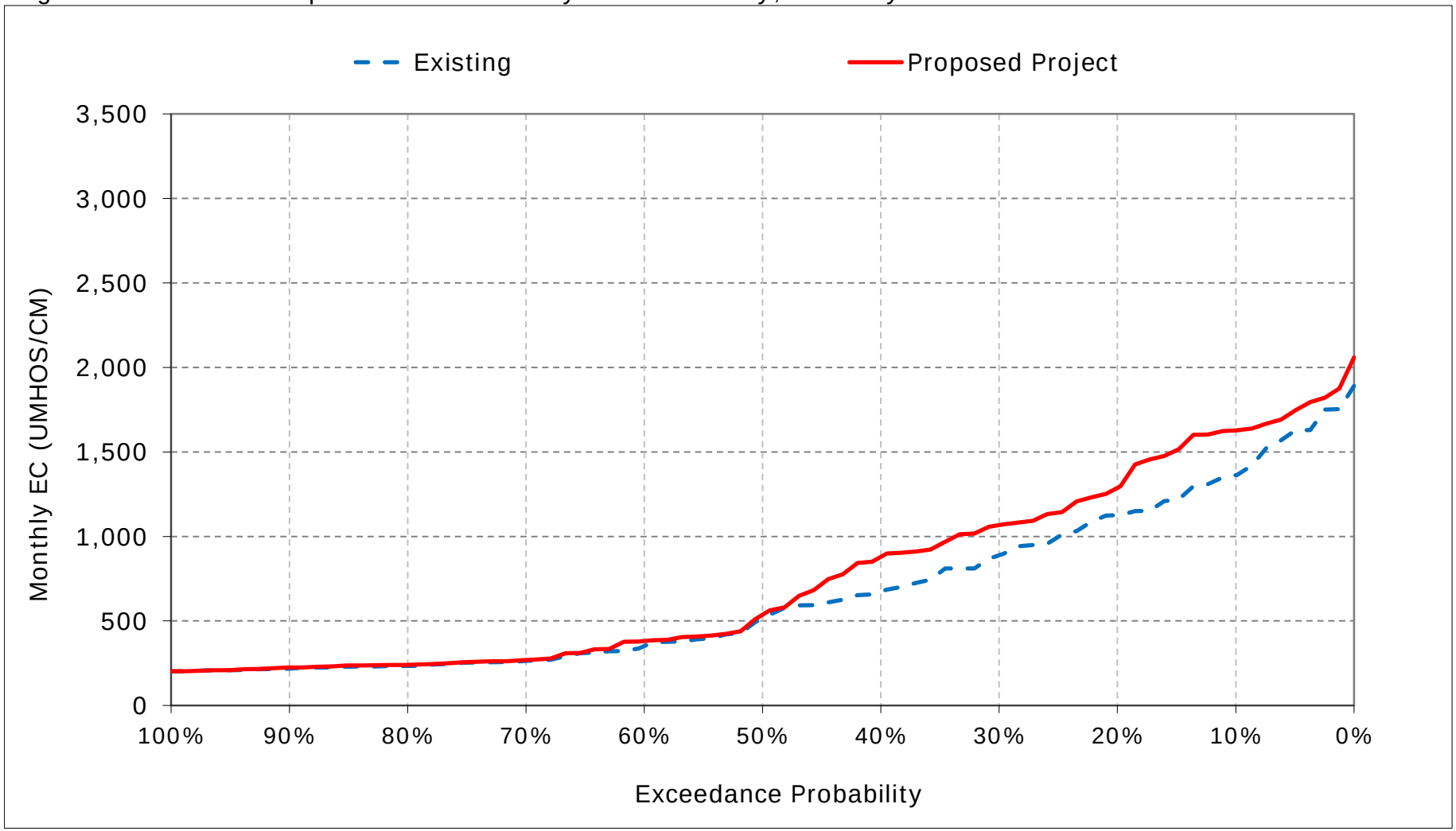


Figure 12-8. San Joaquin River at Jersey Point Salinity, February EC

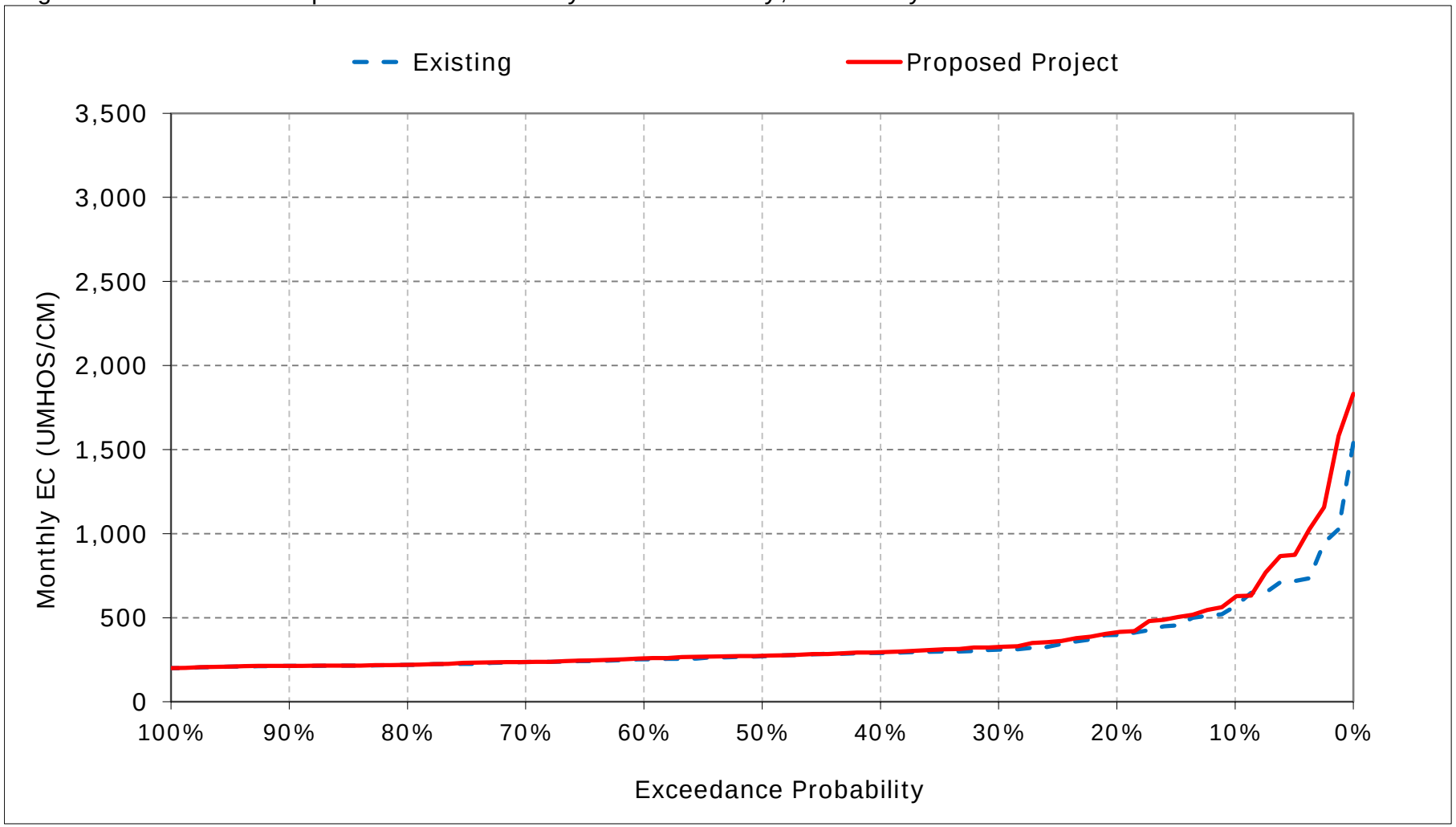


Figure 12-9. San Joaquin River at Jersey Point Salinity, March EC

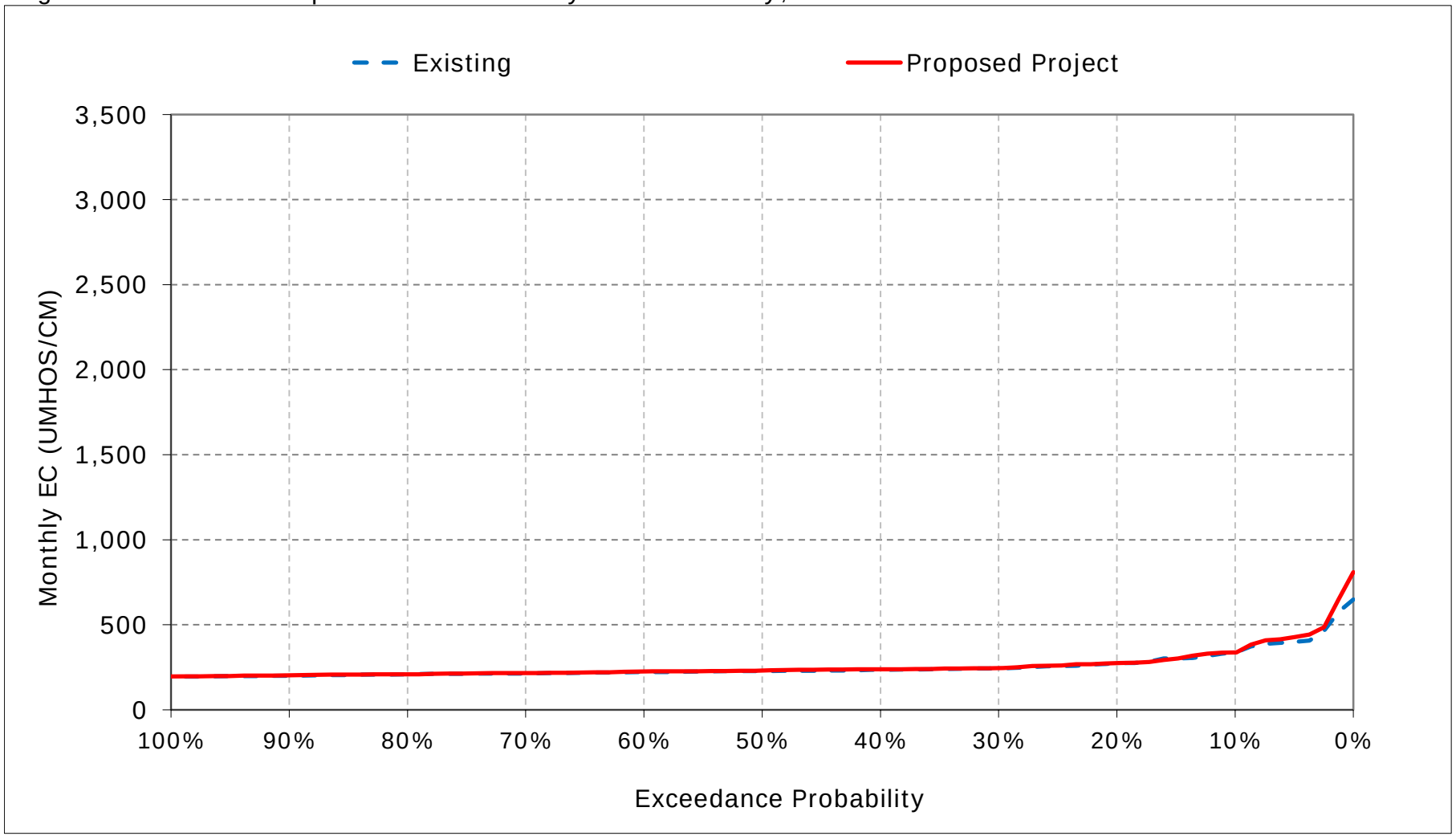


Figure 12-10. San Joaquin River at Jersey Point Salinity, April EC

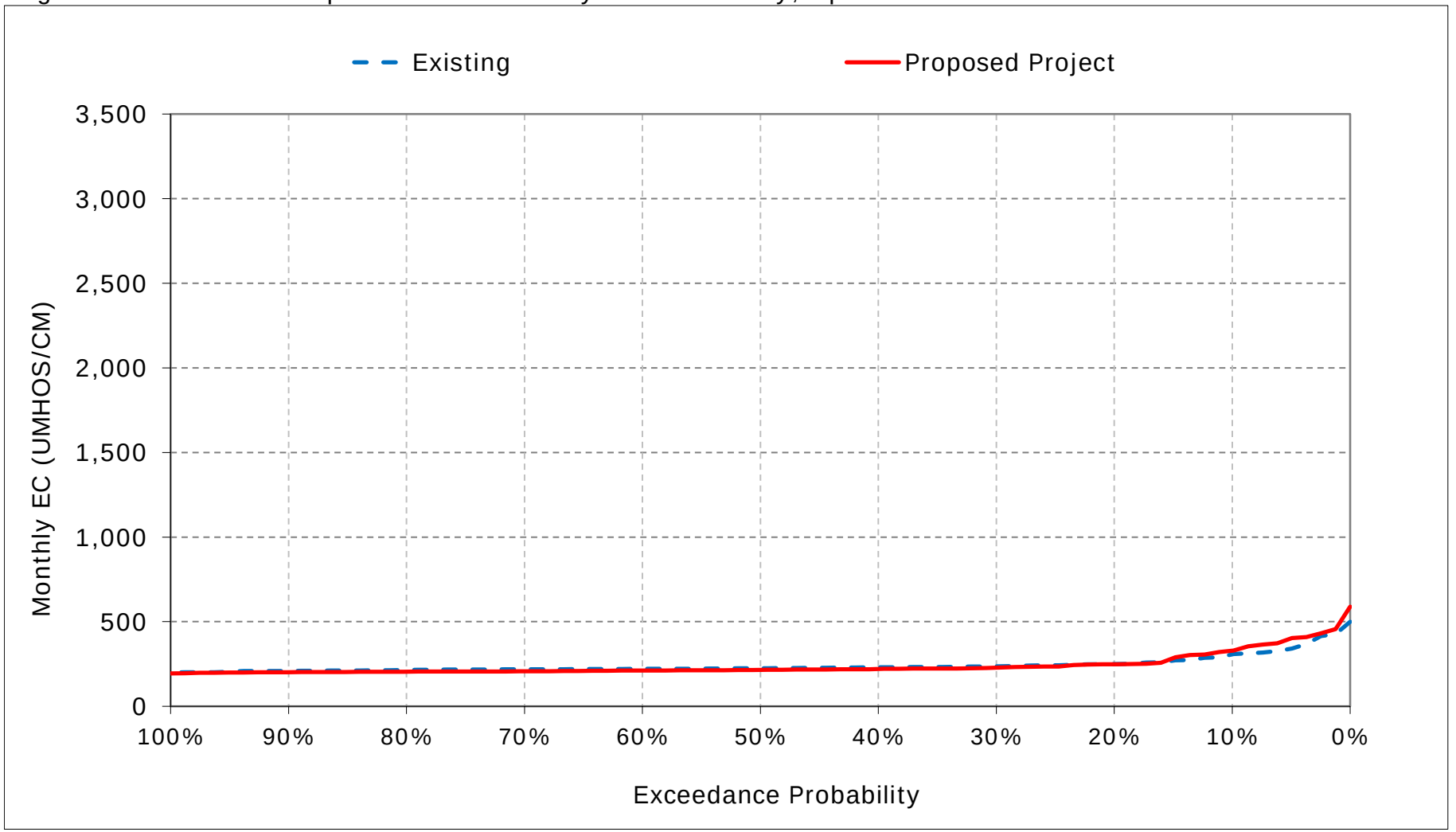


Figure 12-11. San Joaquin River at Jersey Point Salinity, May EC

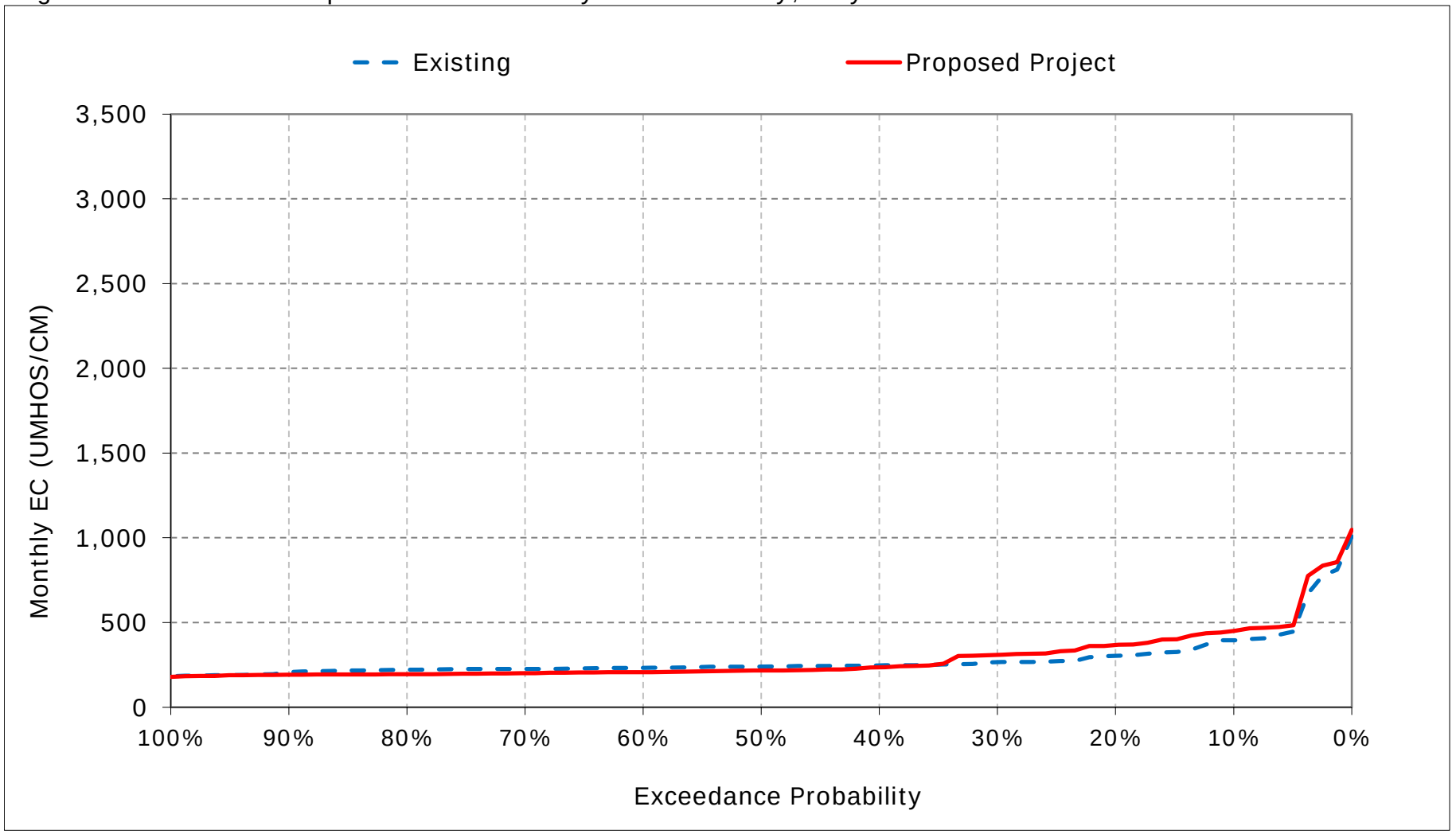


Figure 12-12. San Joaquin River at Jersey Point Salinity, June EC

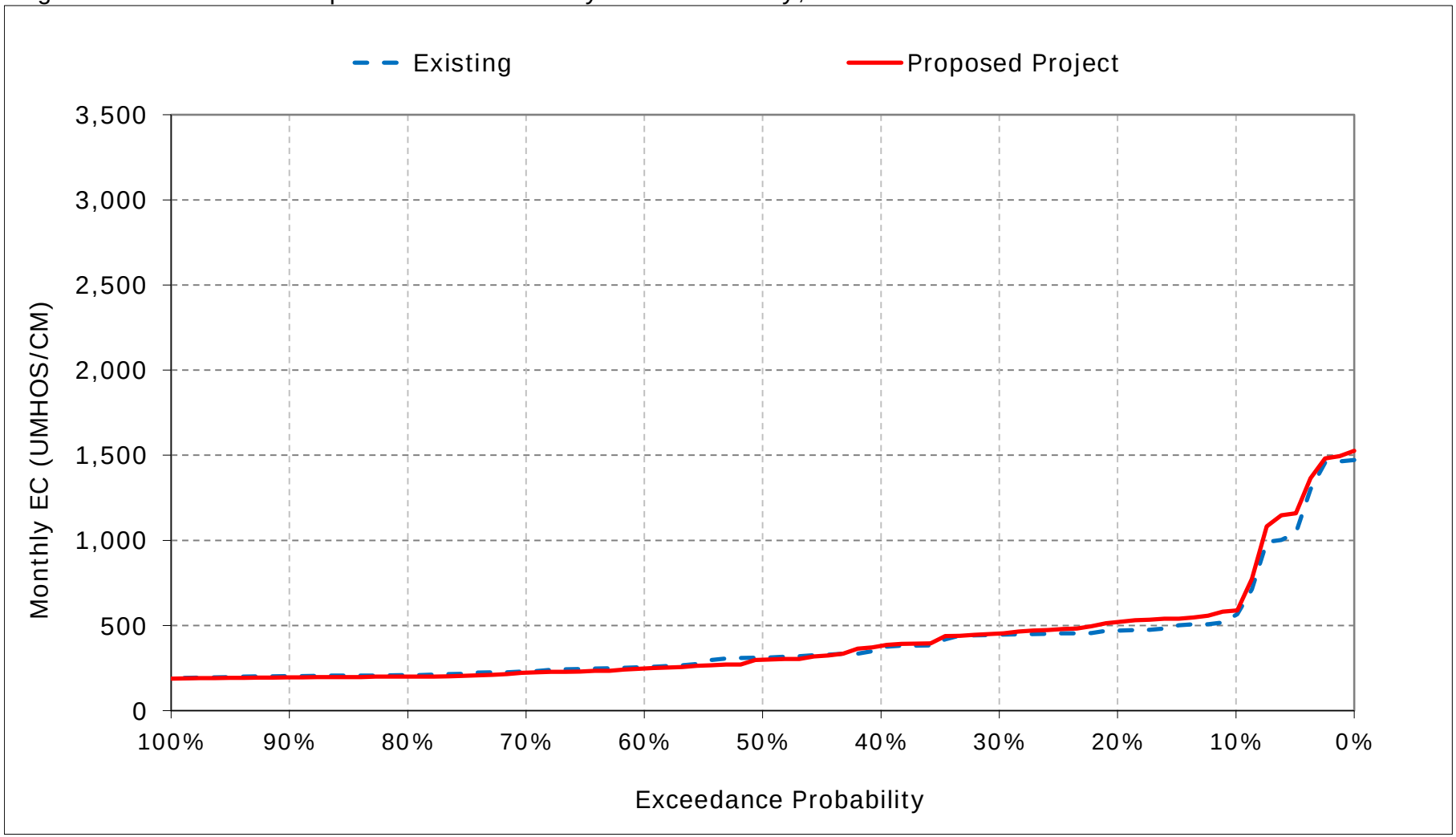


Figure 12-13. San Joaquin River at Jersey Point Salinity, July EC

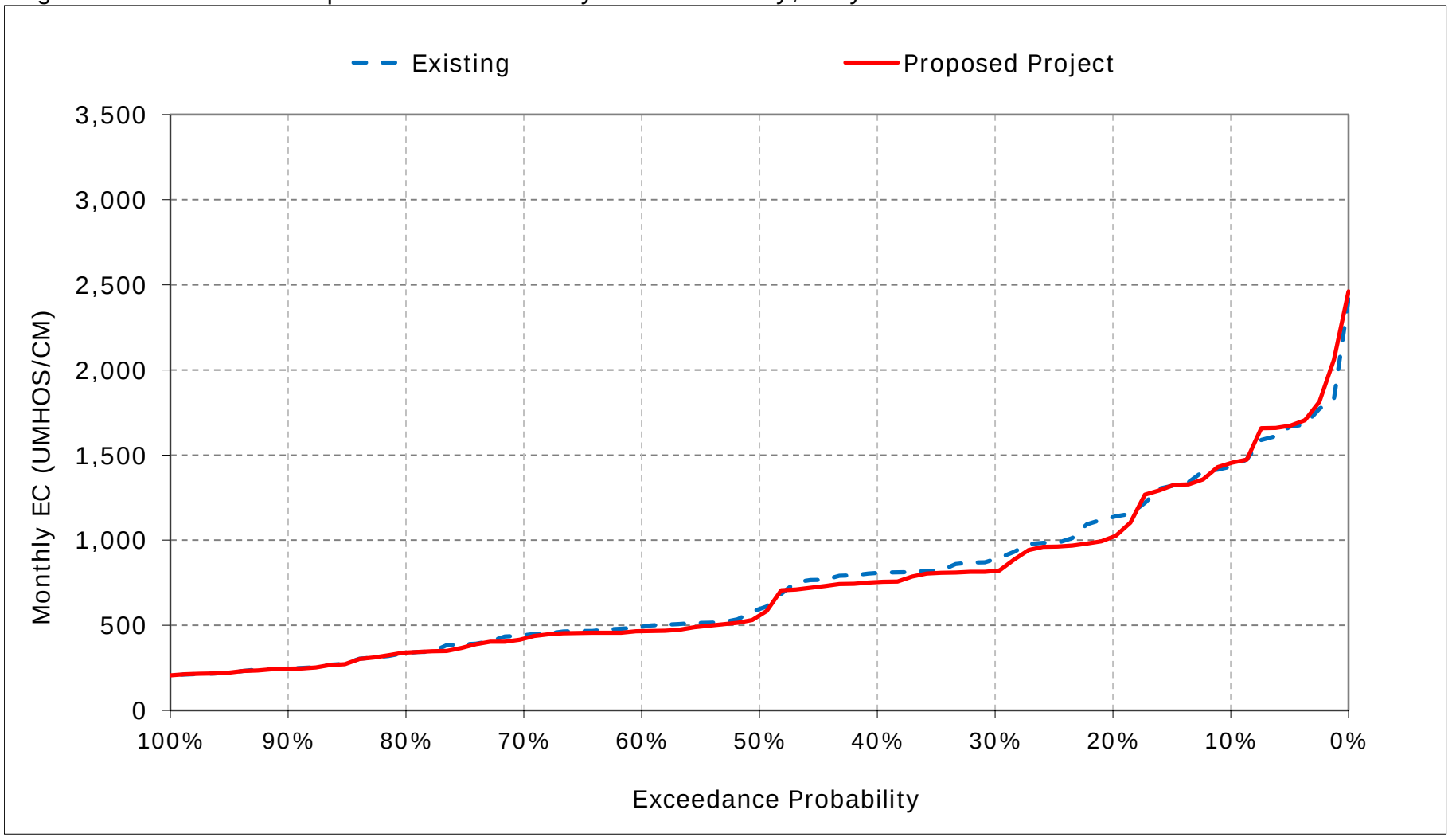


Figure 12-14. San Joaquin River at Jersey Point Salinity, August EC

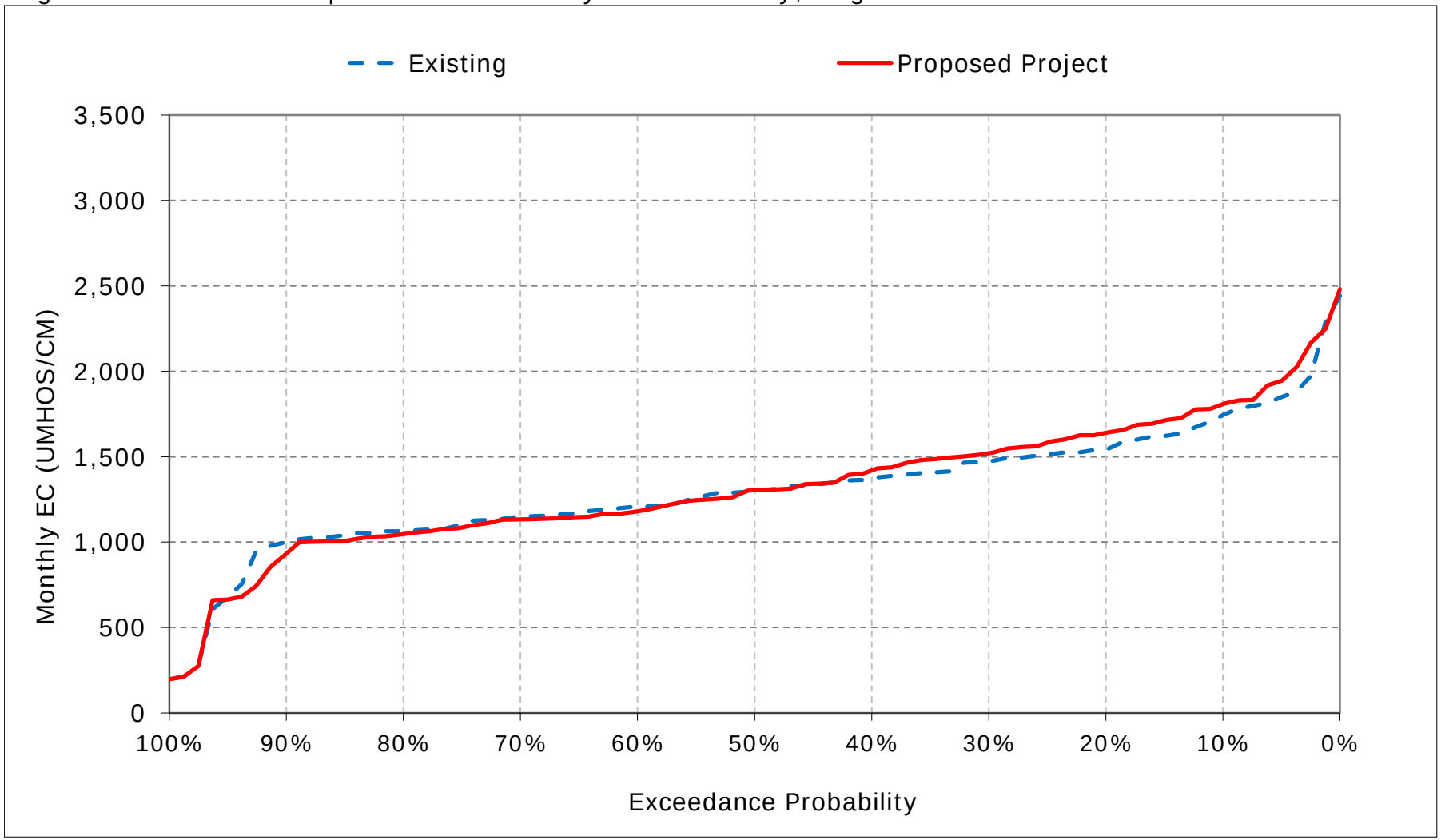


Figure 12-15. San Joaquin River at Jersey Point Salinity, September EC

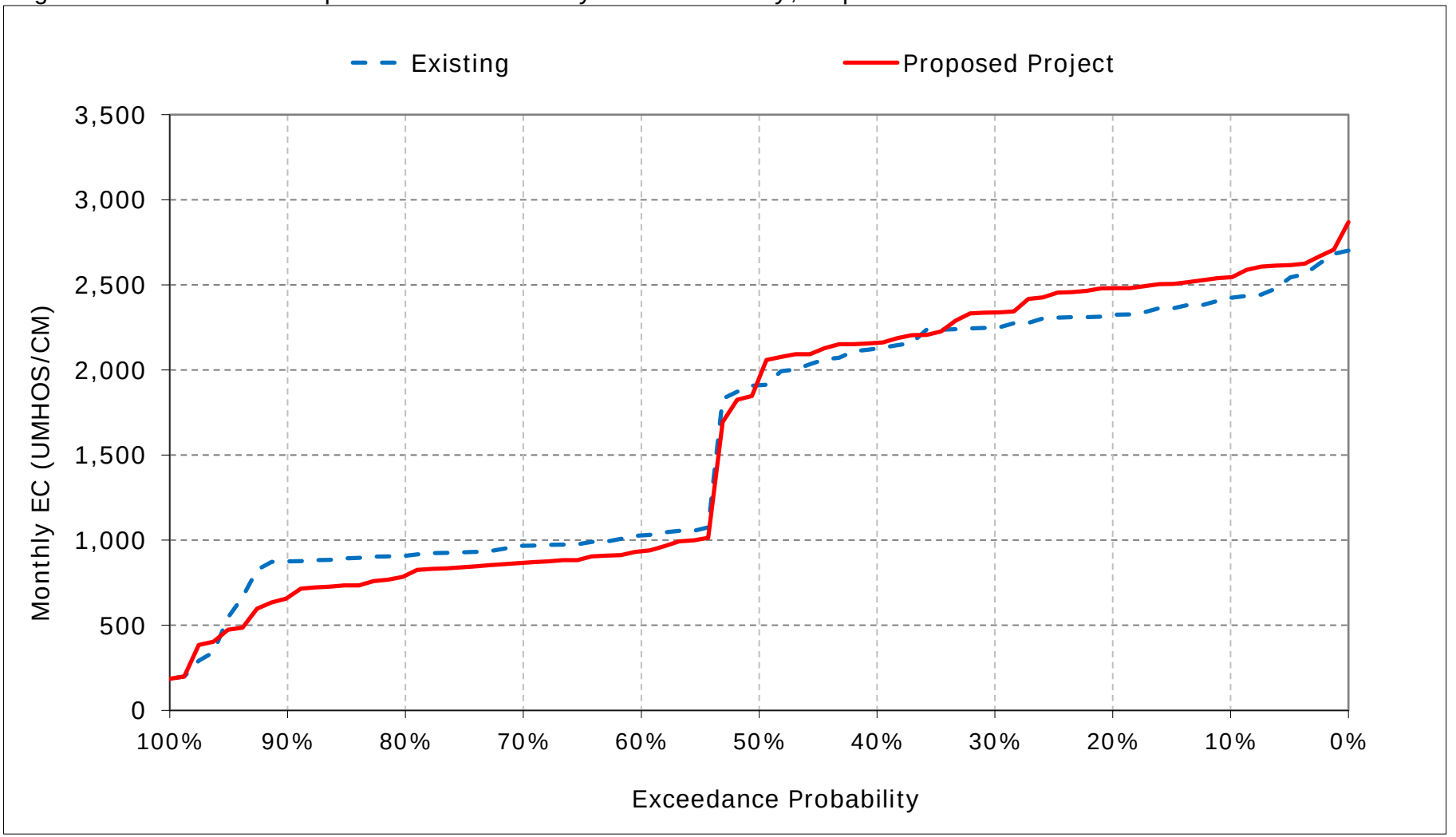


Figure 12-16. San Joaquin River at Jersey Point Salinity, October EC

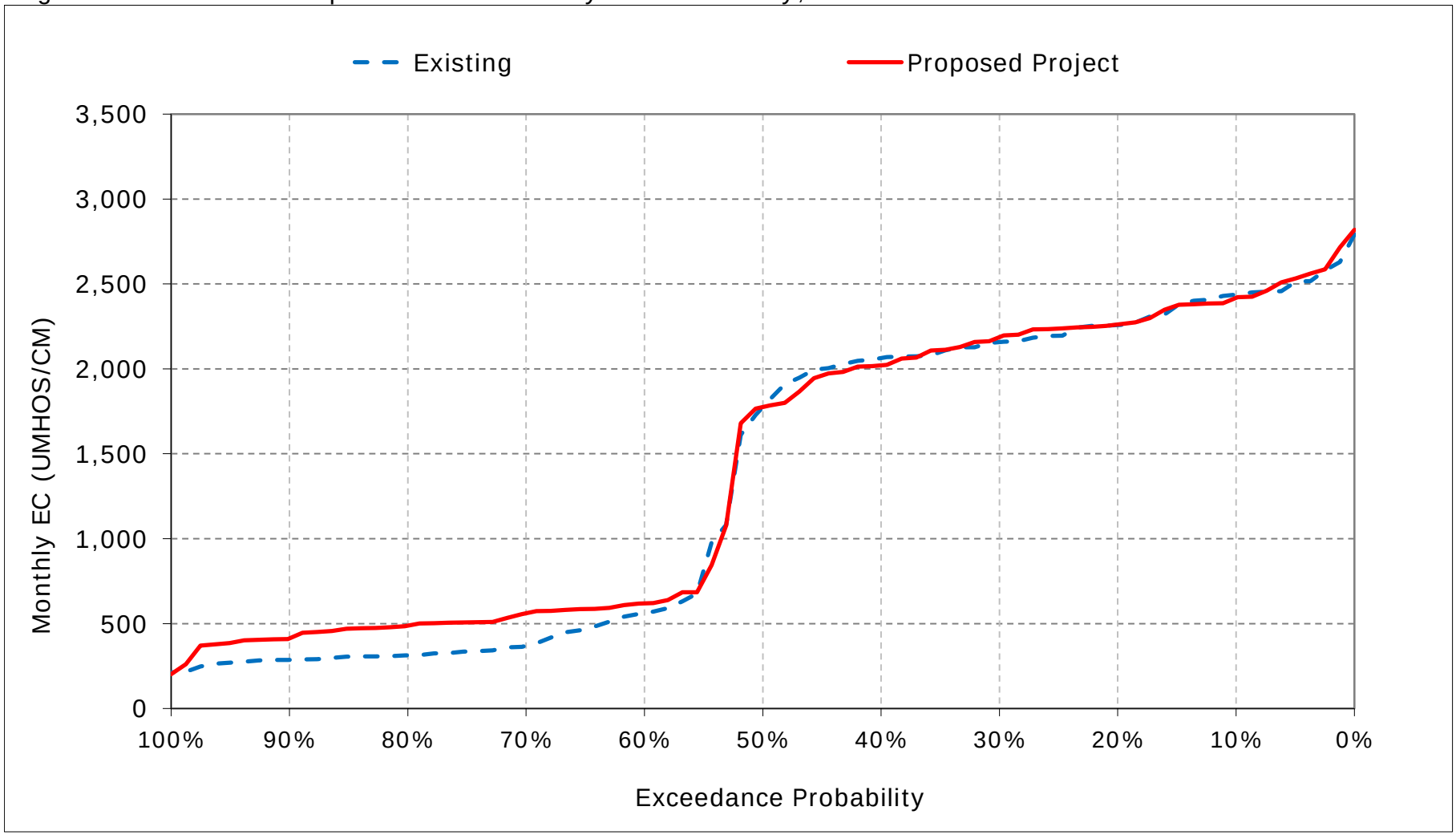


Figure 12-17. San Joaquin River at Jersey Point Salinity, November EC

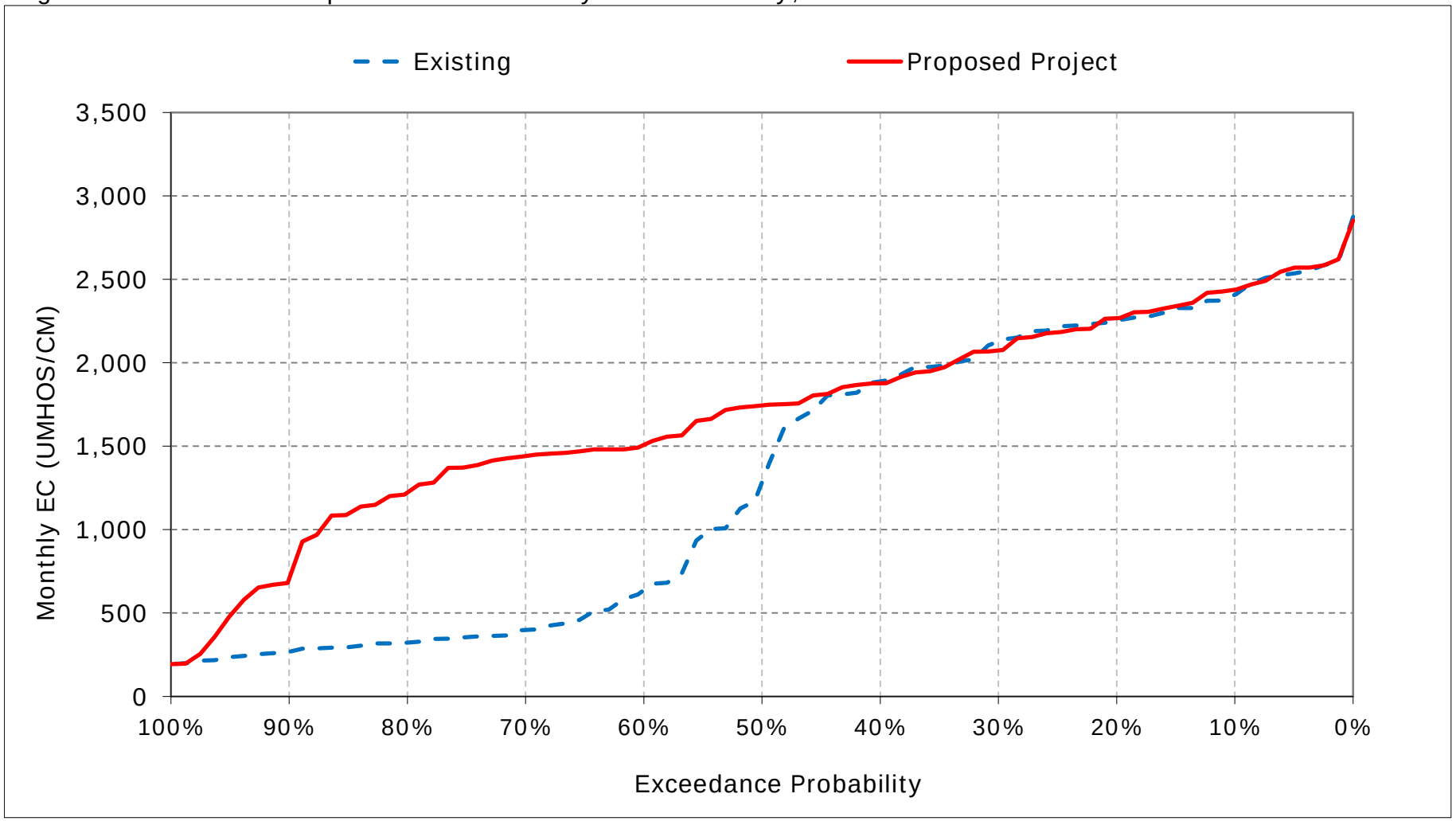


Figure 12-18. San Joaquin River at Jersey Point Salinity, December EC

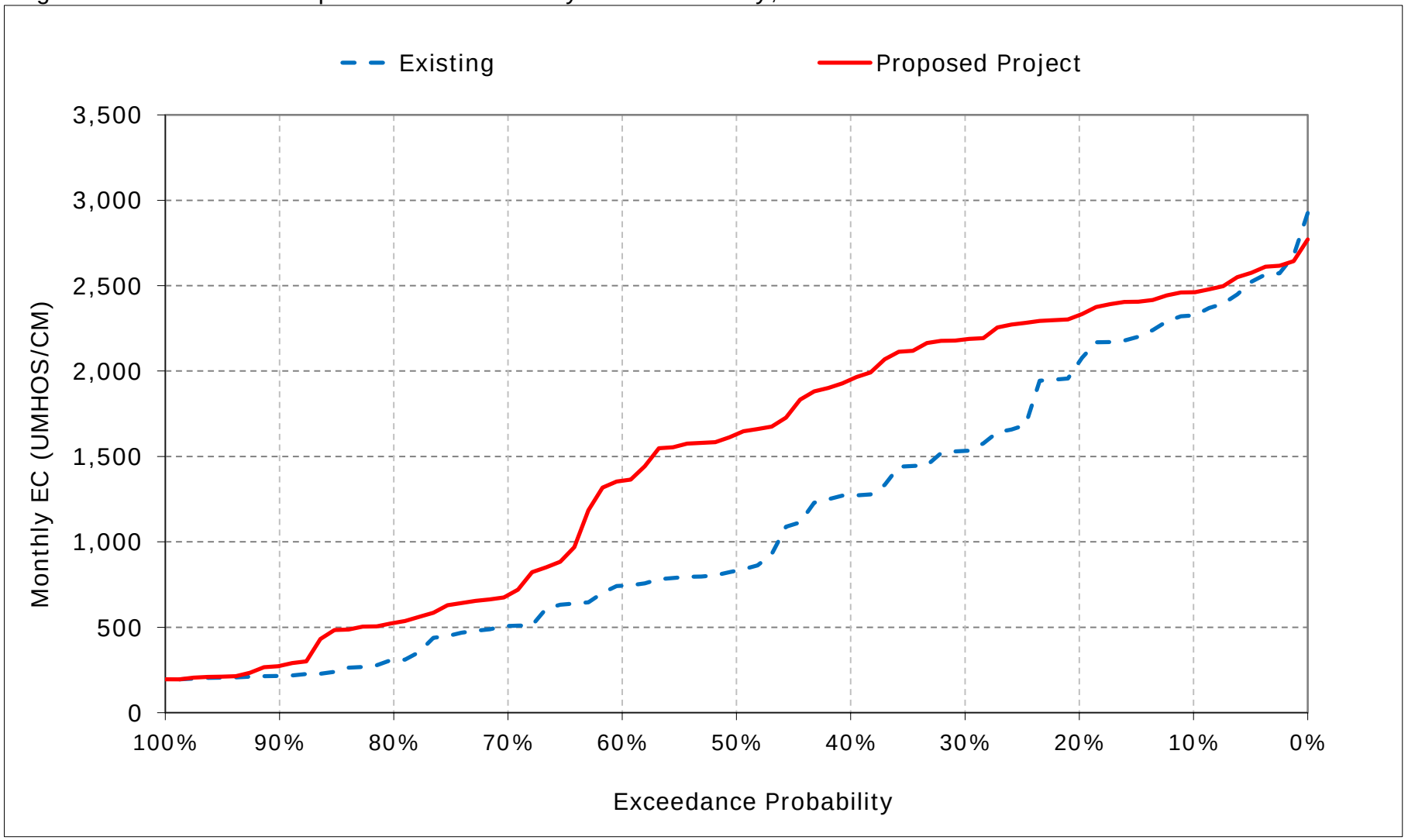


Table 13-1. San Joaquin River at San Andreas, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	652	638	694	569	318	233	241	246	236	360	470	586
20%	584	586	652	496	274	227	232	241	219	301	424	567
30%	564	560	581	414	245	217	226	237	215	267	391	539
40%	544	523	470	362	232	211	222	232	210	255	359	516
50%	500	422	322	308	227	206	217	224	206	220	341	470
60%	219	258	290	258	219	202	212	217	202	210	322	411
70%	213	215	263	230	208	197	208	214	194	204	292	372
80%	207	204	223	212	199	194	205	203	192	197	284	304
90%	203	198	195	202	195	191	192	185	188	193	272	272
Long Term												
Full Simulation Period[a]	410	409	419	353	244	212	218	225	217	259	351	448
Water Year Types[b]												
Wet (32%)	340	325	268	226	205	198	202	201	193	198	276	349
Above Normal (15%)	448	408	416	307	225	203	213	217	202	206	295	282
Below Normal (17%)	412	428	482	384	235	212	223	228	205	244	355	532
Dry (22%)	424	453	472	411	261	214	228	235	216	306	412	527
Critical (15%)	498	499	593	551	331	250	235	265	303	389	478	609

Proposed Project

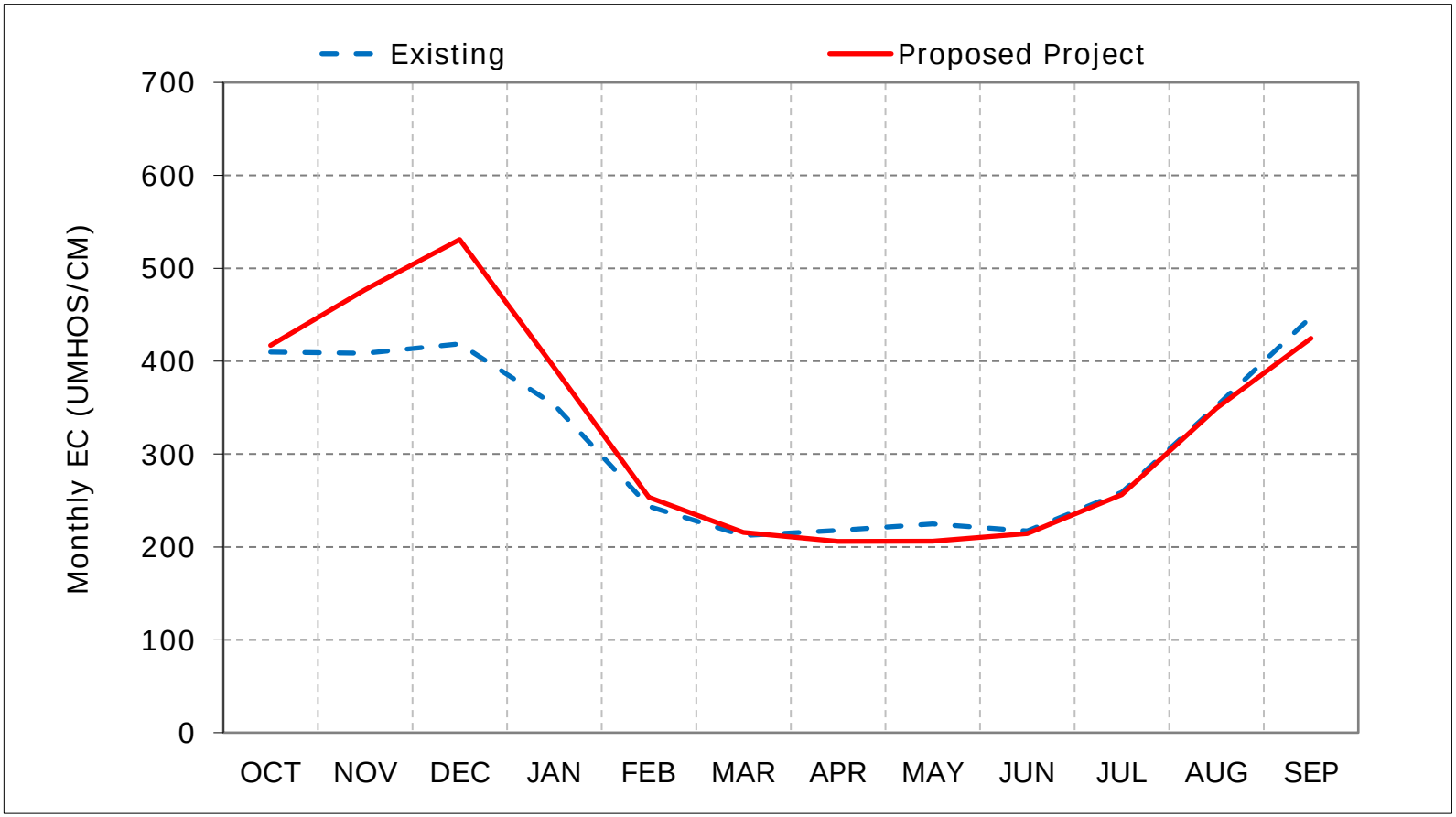
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	638	664	756	681	338	235	224	231	239	364	465	620
20%	608	613	710	566	278	228	219	220	218	289	418	585
30%	575	572	695	502	250	219	212	211	213	264	386	566
40%	548	532	637	433	233	214	205	204	204	241	366	523
50%	527	491	608	309	229	208	203	200	195	217	336	476
60%	240	410	545	259	221	203	199	193	192	208	313	284
70%	218	375	337	232	208	199	196	190	189	202	289	268
80%	210	338	283	213	201	196	193	185	188	198	281	260
90%	201	278	209	202	195	193	188	179	185	193	256	246
Long Term												
Full Simulation Period[a]	417	477	531	393	253	216	206	206	214	256	349	425
Water Year Types[b]												
Wet (32%)	348	408	344	235	205	199	193	186	189	198	268	248
Above Normal (15%)	455	502	587	365	230	206	199	192	193	204	295	271
Below Normal (17%)	420	489	599	421	235	213	206	201	197	232	358	572
Dry (22%)	429	504	611	487	278	218	211	212	214	300	406	534
Critical (15%)	505	548	679	589	367	261	234	261	310	397	483	625

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-14	26	62	112	21	2	-18	-16	3	4	-4	34
20%	23	27	58	70	4	1	-14	-21	0	-11	-6	18
30%	11	12	114	88	5	2	-15	-27	-2	-3	-5	27
40%	4	9	167	72	2	3	-16	-28	-6	-14	7	7
50%	27	69	286	1	2	2	-14	-23	-11	-3	-5	6
60%	20	152	254	1	2	1	-13	-24	-10	-2	-9	-126
70%	5	161	74	2	0	3	-12	-25	-4	-2	-3	-104
80%	3	134	60	0	2	2	-11	-19	-5	0	-4	-44
90%	-2	80	14	0	0	2	-4	-5	-4	0	-16	-26
Long Term												
Full Simulation Period[a]	7	68	112	40	10	4	-12	-19	-3	-3	-2	-23
Water Year Types[b]												
Wet (32%)	8	82	76	9	0	1	-9	-15	-3	0	-7	-101
Above Normal (15%)	7	94	172	58	4	3	-15	-24	-9	-1	1	-11
Below Normal (17%)	8	60	116	37	0	1	-17	-28	-7	-13	3	40
Dry (22%)	5	50	140	76	17	4	-17	-23	-2	-6	-6	7
Critical (15%)	6	50	86	38	36	11	-1	-4	7	7	6	15

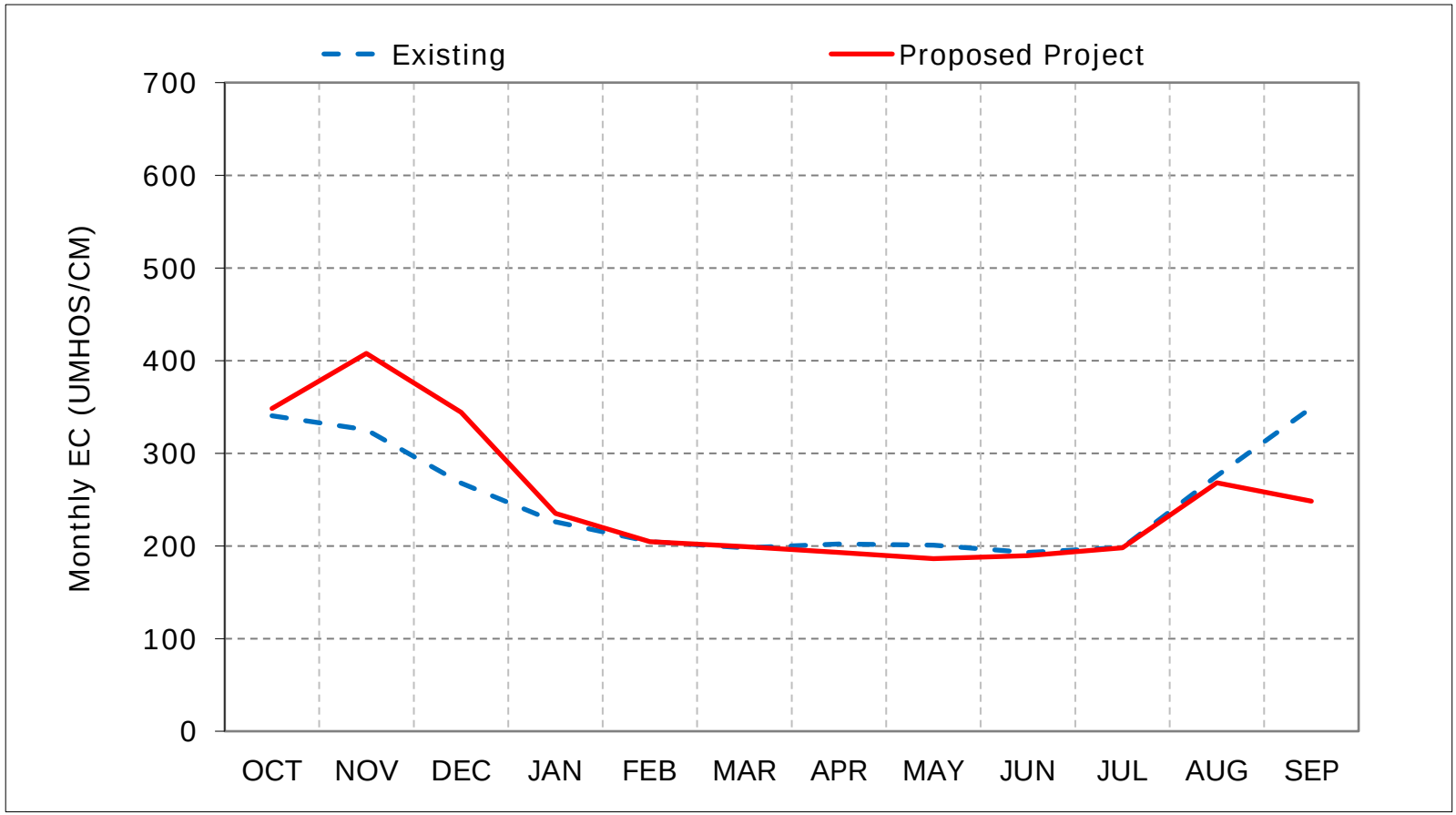
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 13-1. San Joaquin River at San Andreas, Long-Term Average EC



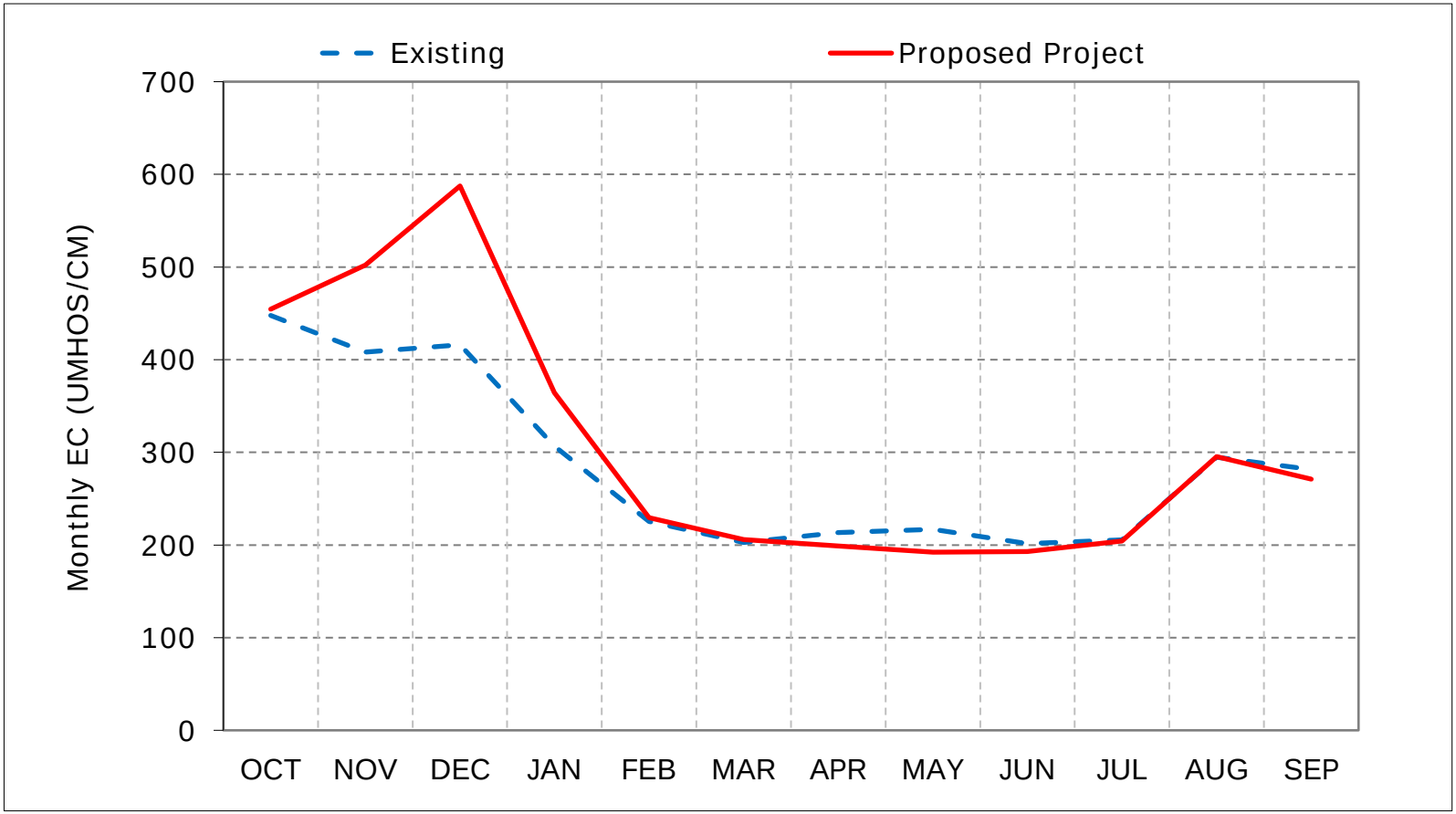
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 13-2. San Joaquin River at San Andreas, Wet Year Average EC



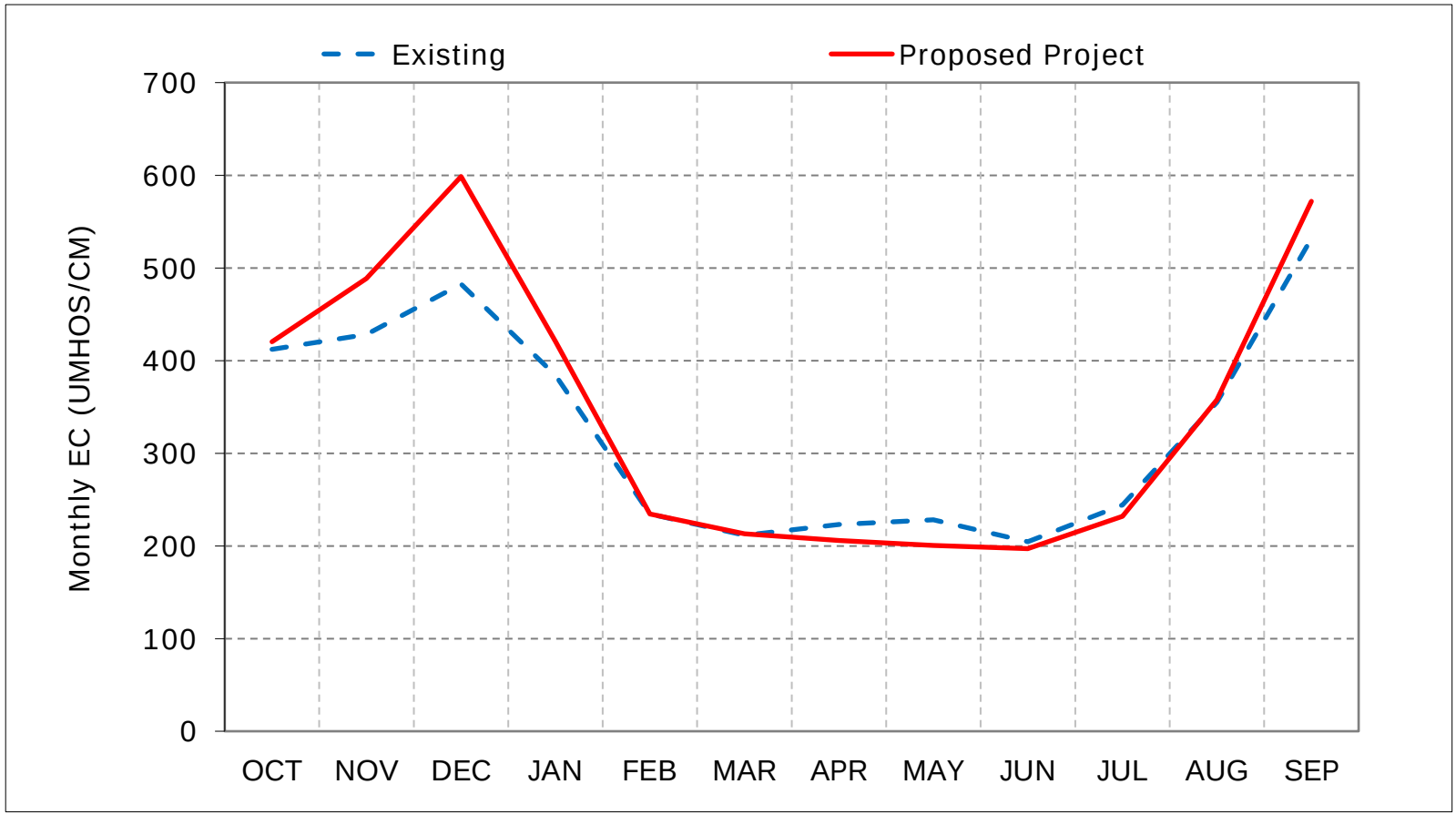
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 13-3. San Joaquin River at San Andreas, Above Normal Year Average EC



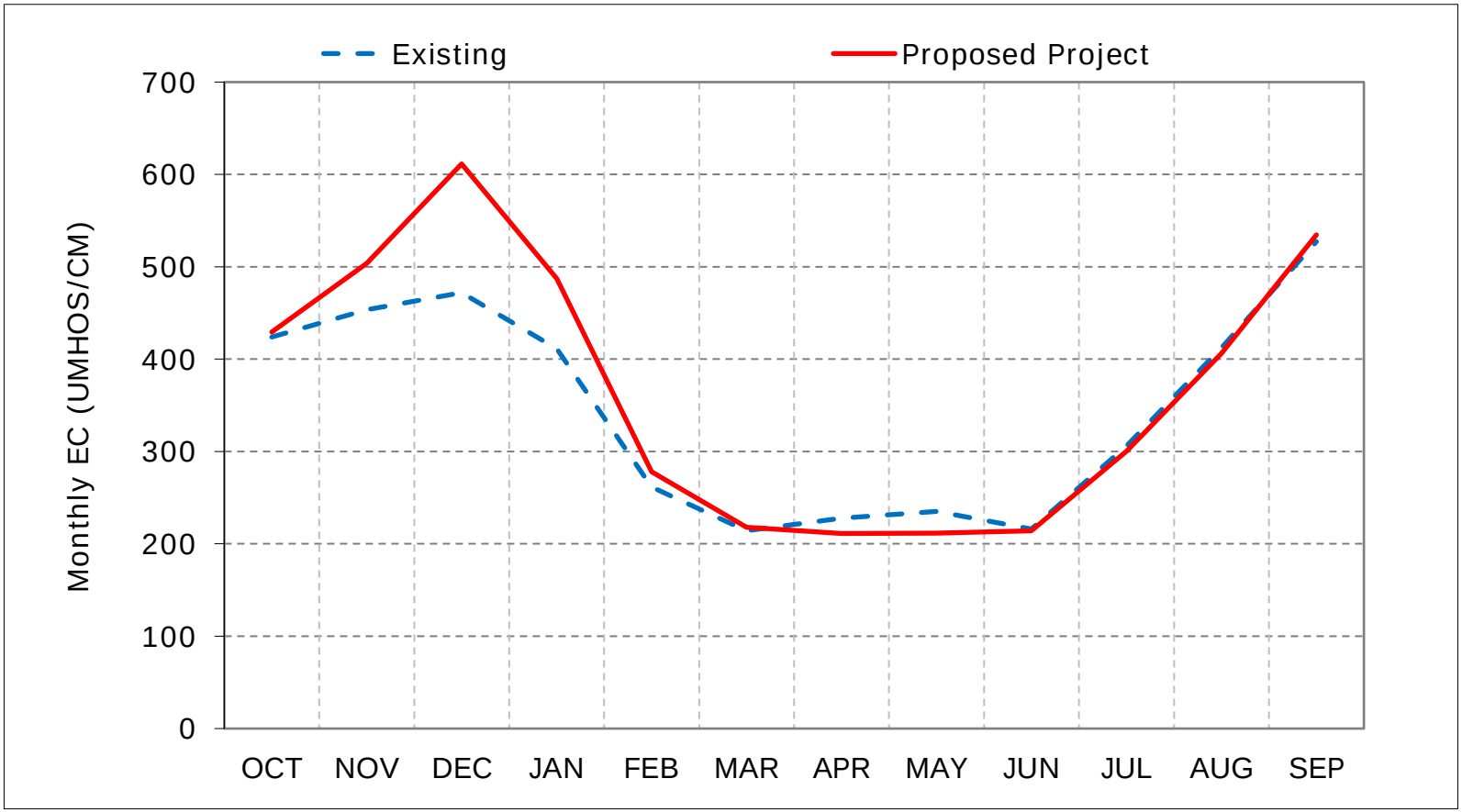
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 13-4. San Joaquin River at San Andreas, Below Normal Year Average EC



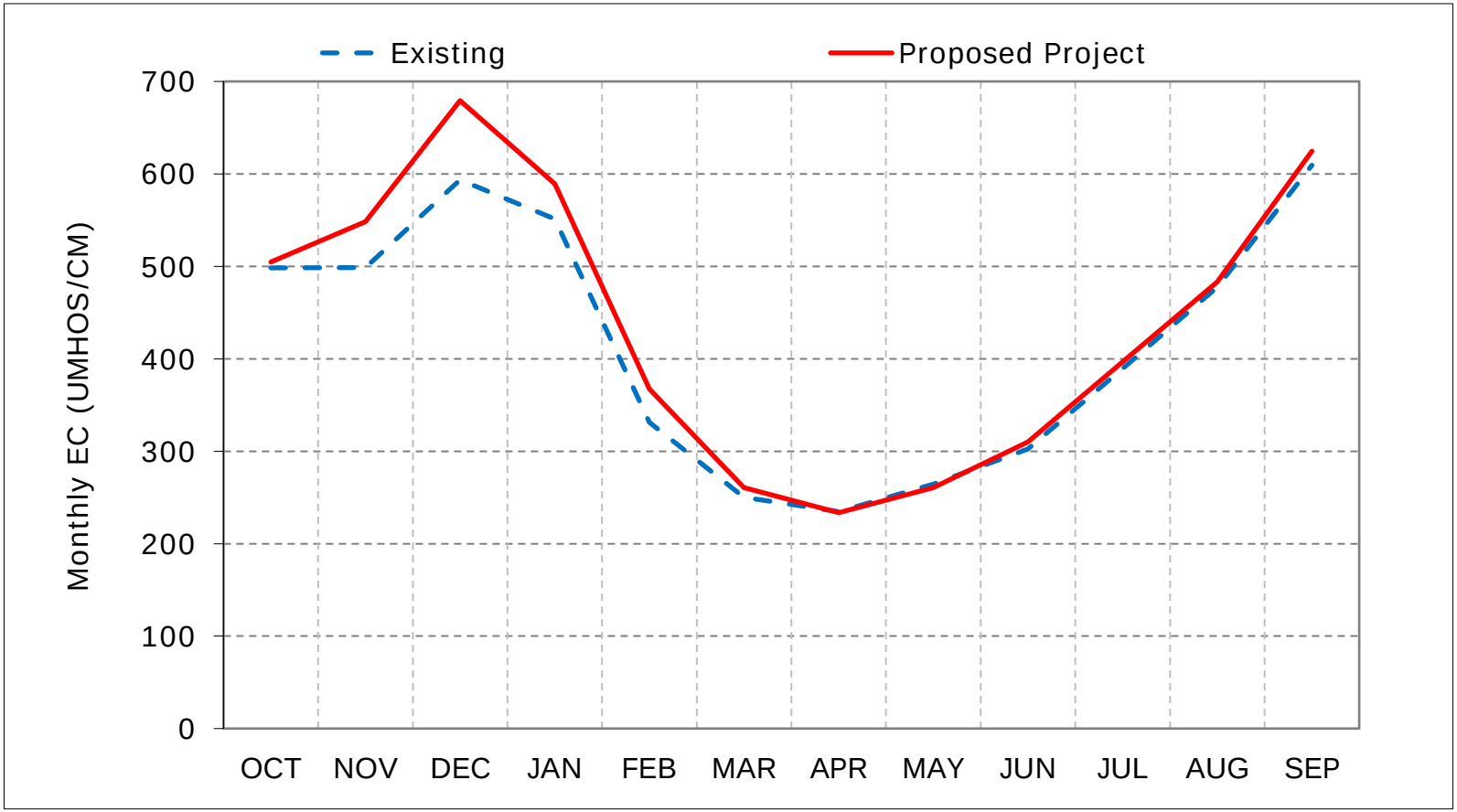
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 13-5. San Joaquin River at San Andreas, Dry Year Average EC



*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.

Figure 13-6. San Joaquin River at San Andreas, Critical Year Average EC



*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.

Figure 13-7. San Joaquin River at San Andreas, January EC

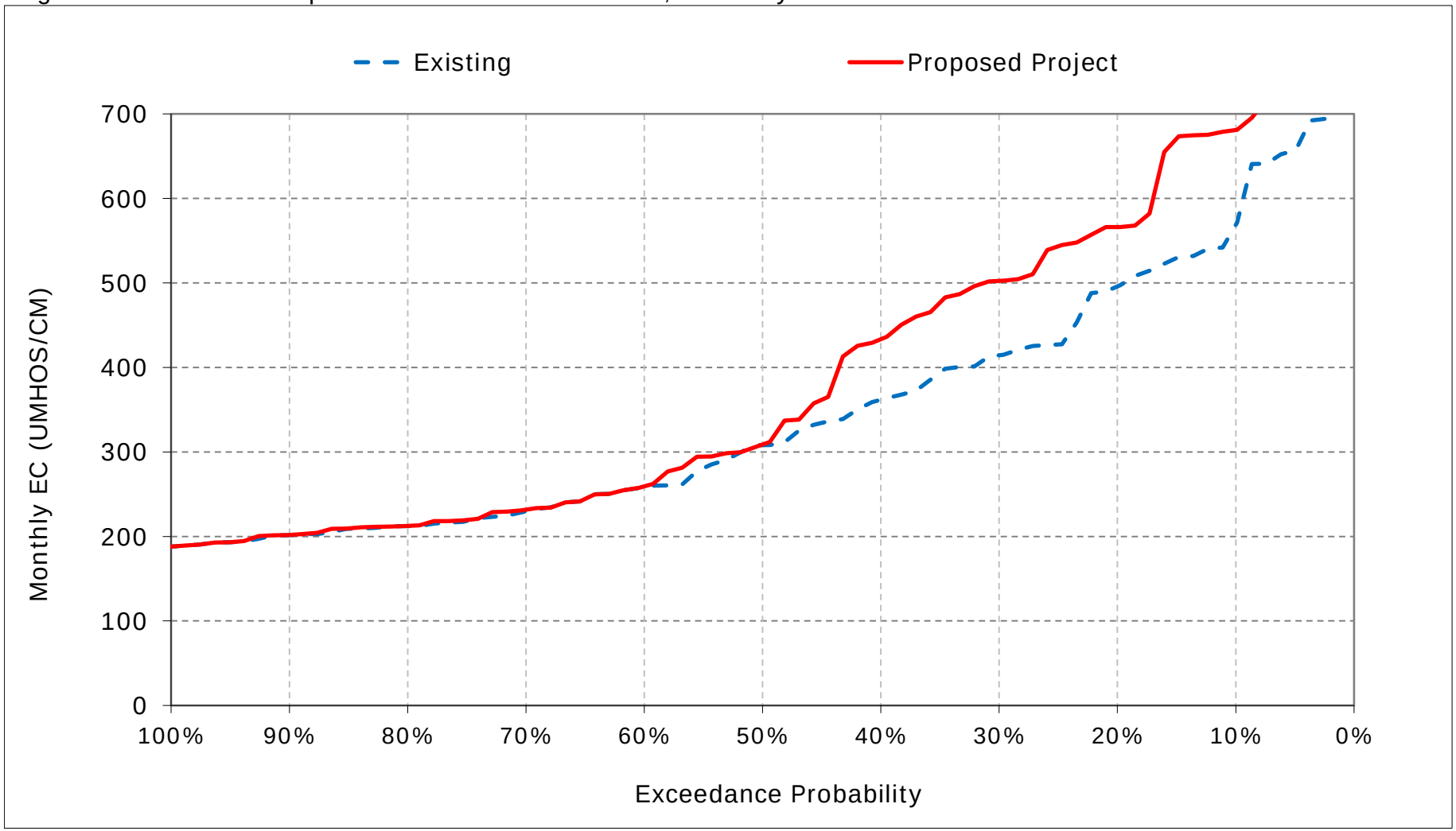


Figure 13-8. San Joaquin River at San Andreas, February EC

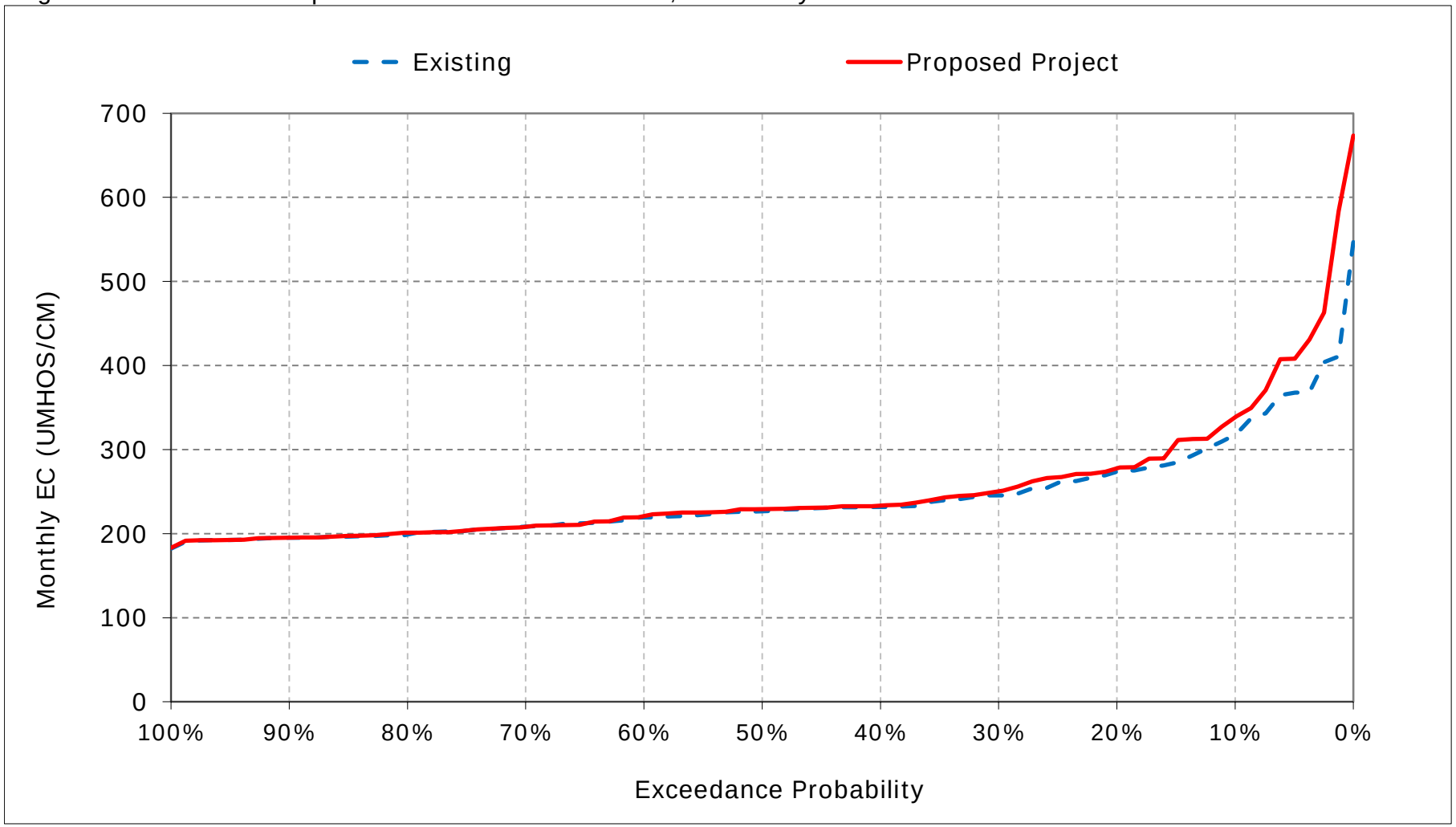


Figure 13-9. San Joaquin River at San Andreas, March EC

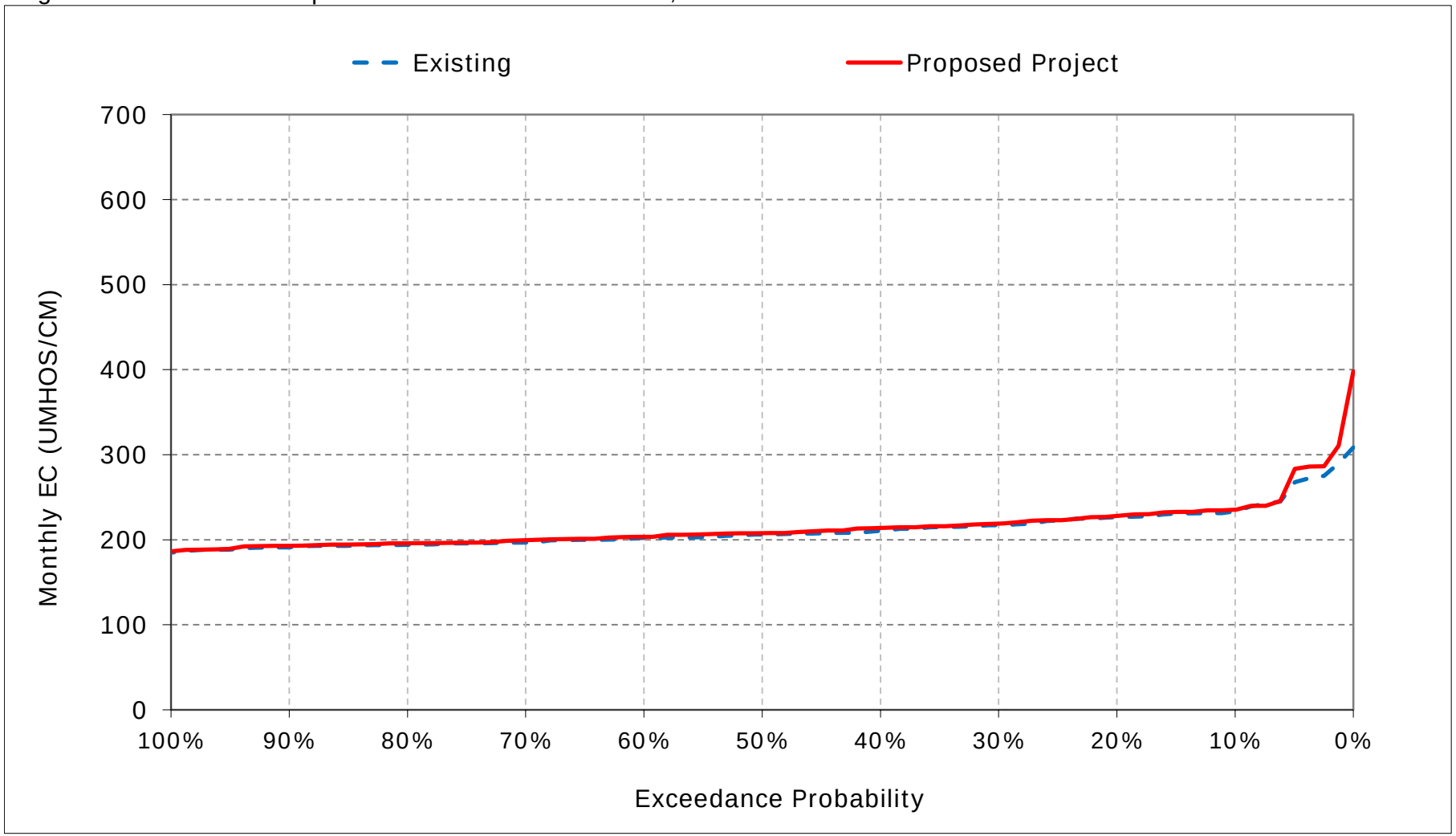


Figure 13-10. San Joaquin River at San Andreas, April EC

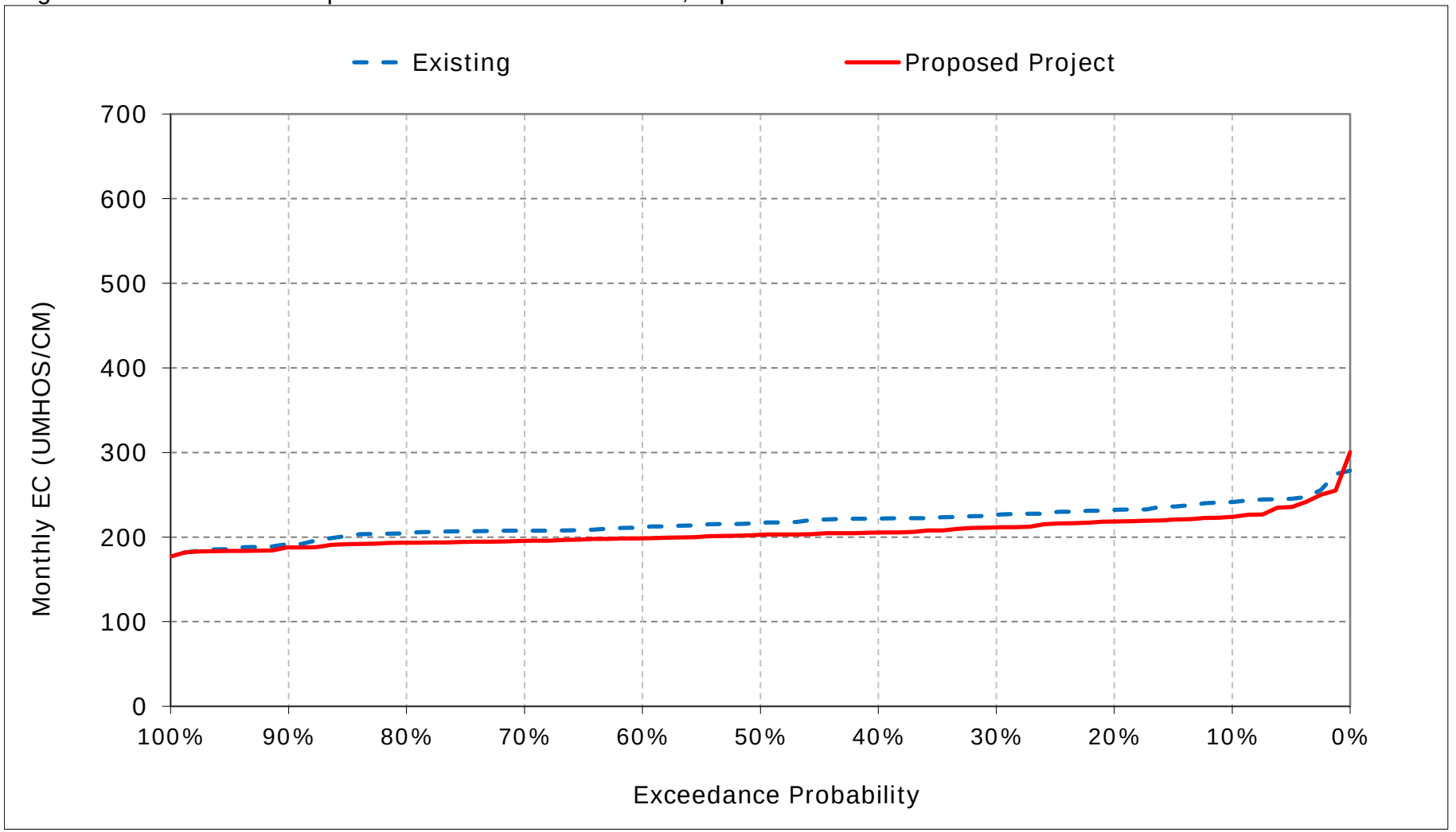


Figure 13-11. San Joaquin River at San Andreas, May EC

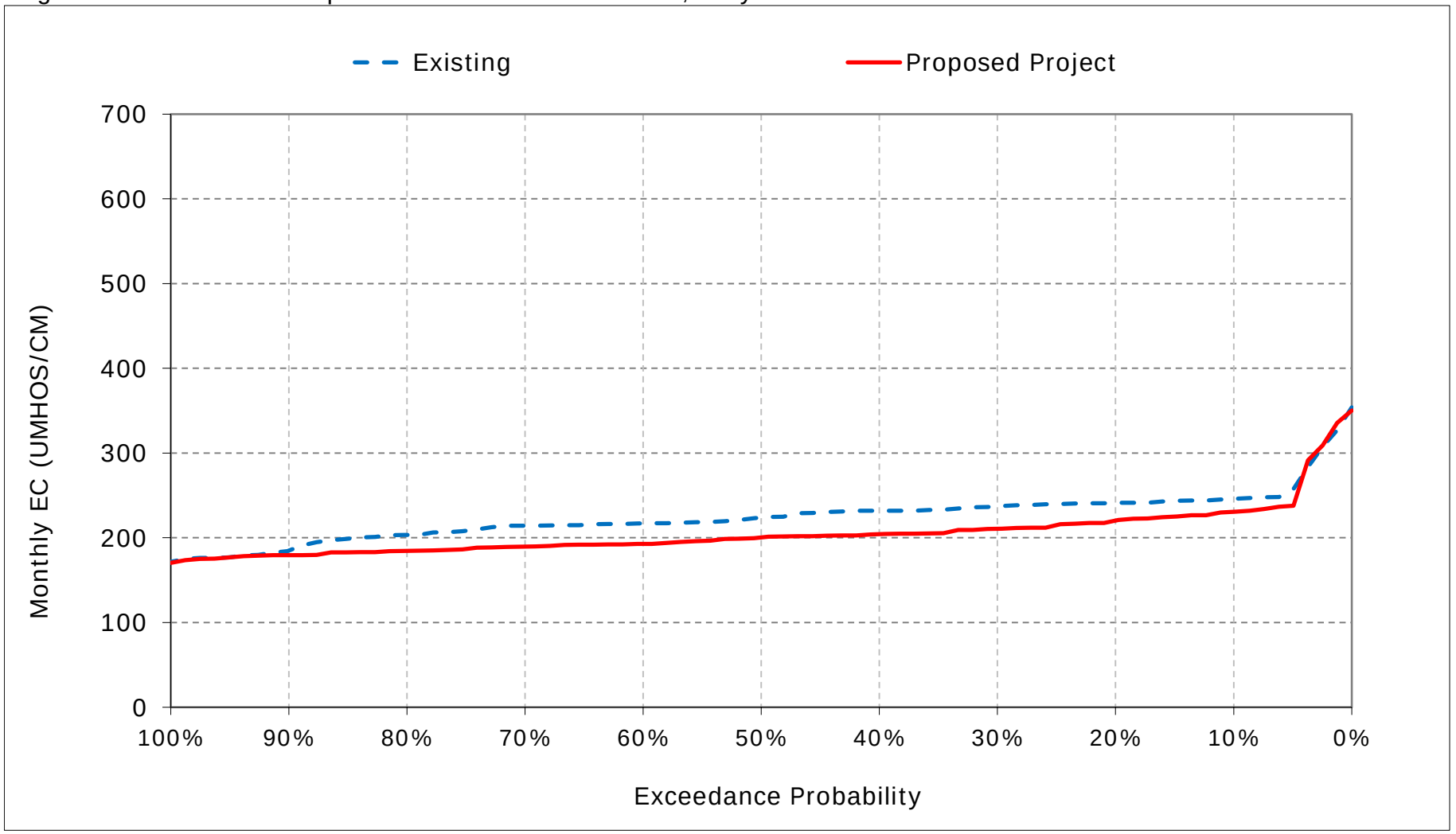


Figure 13-12. San Joaquin River at San Andreas, June EC

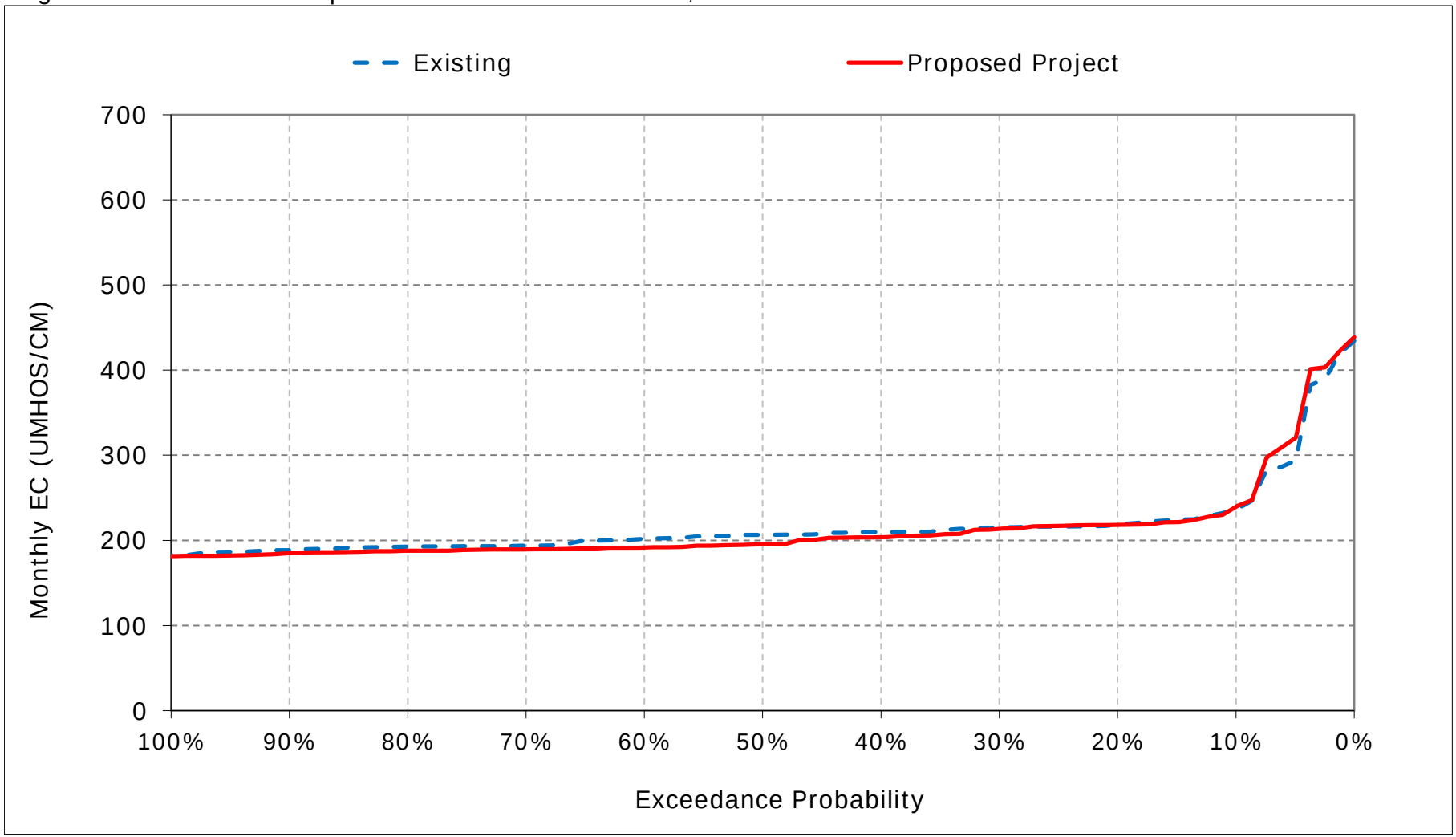


Figure 13-13. San Joaquin River at San Andreas, July EC

Figure 13-14. San Joaquin River at San Andreas, August EC

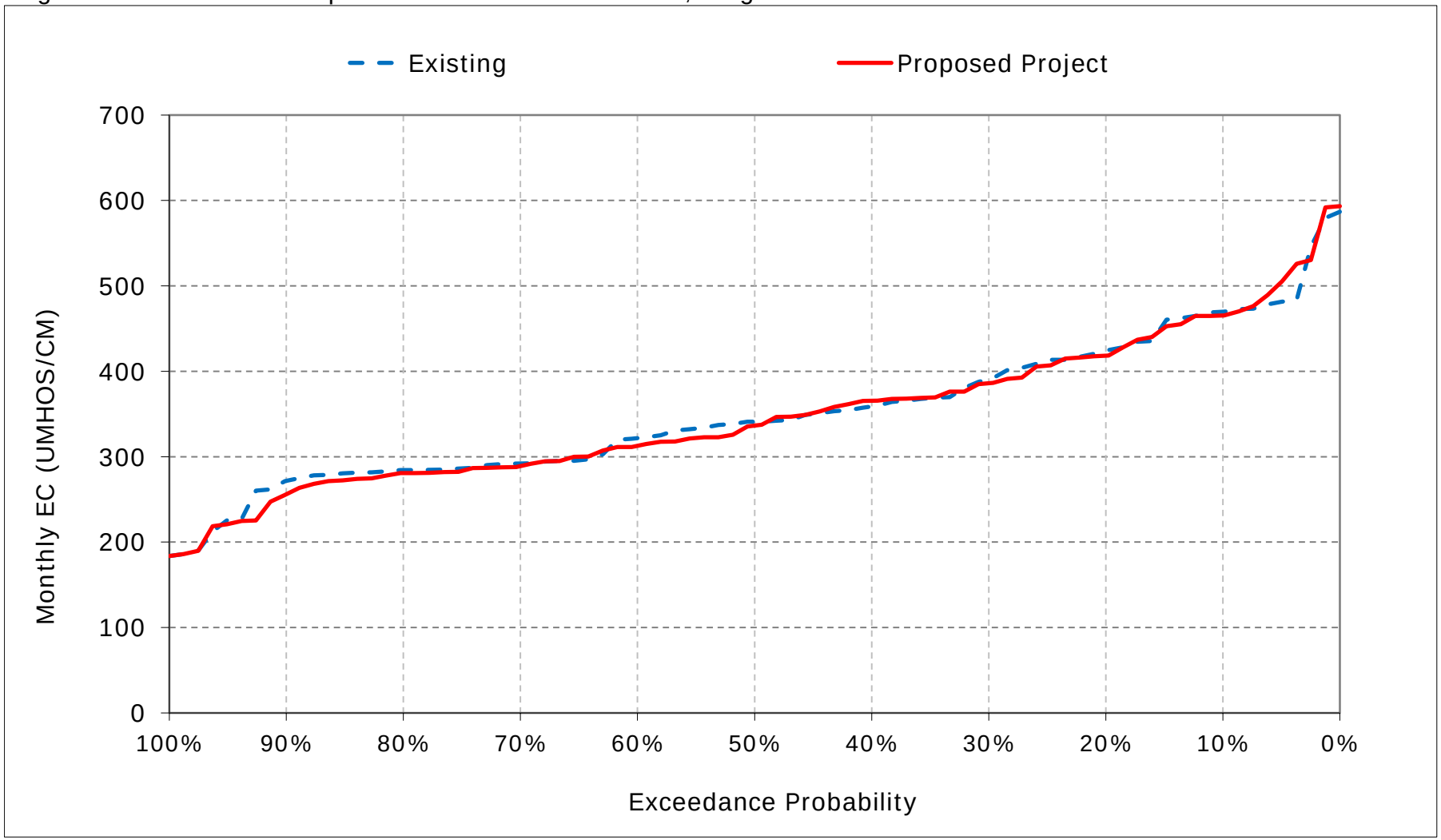


Figure 13-15. San Joaquin River at San Andreas, September EC

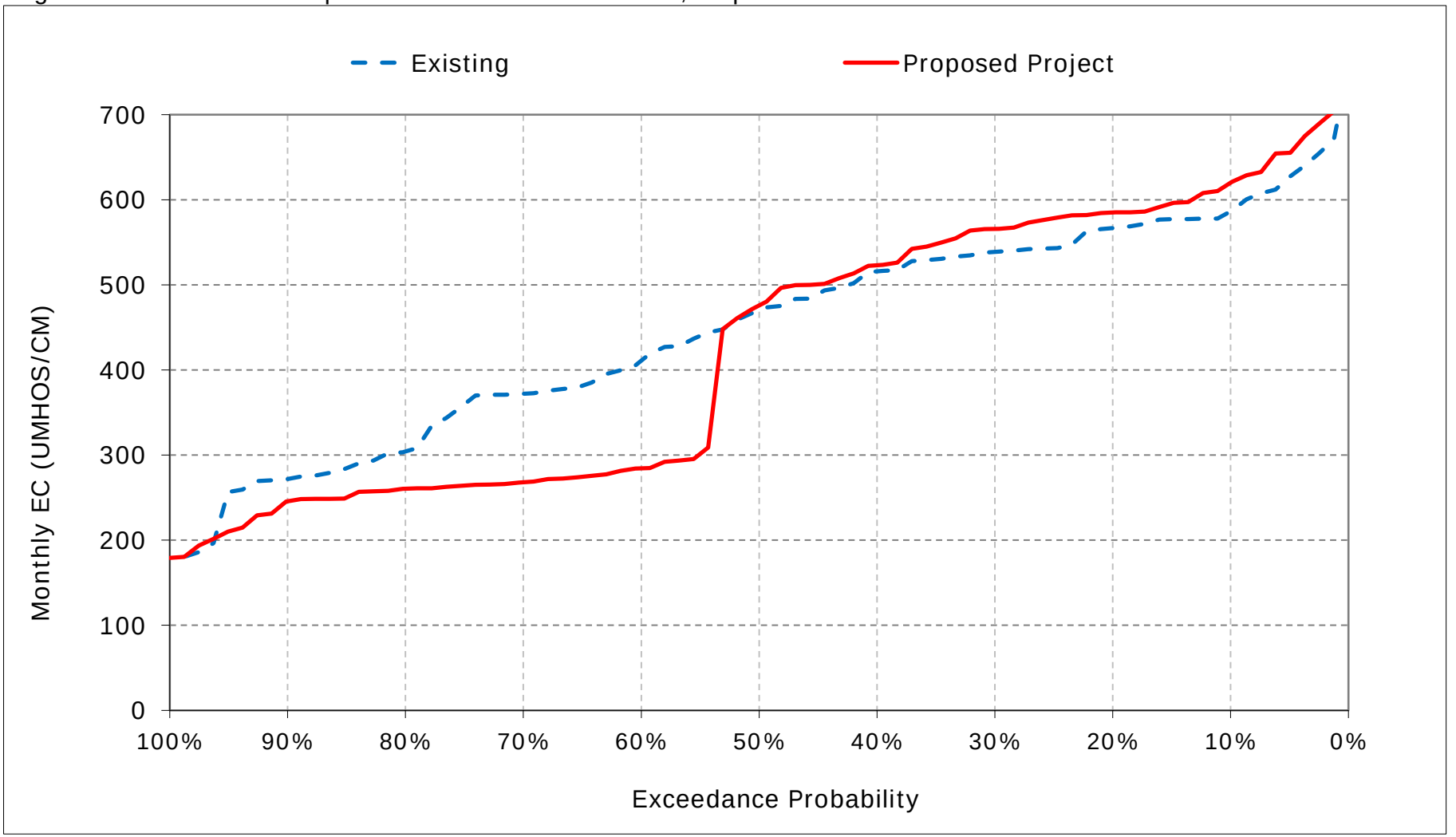


Figure 13-16. San Joaquin River at San Andreas, October EC

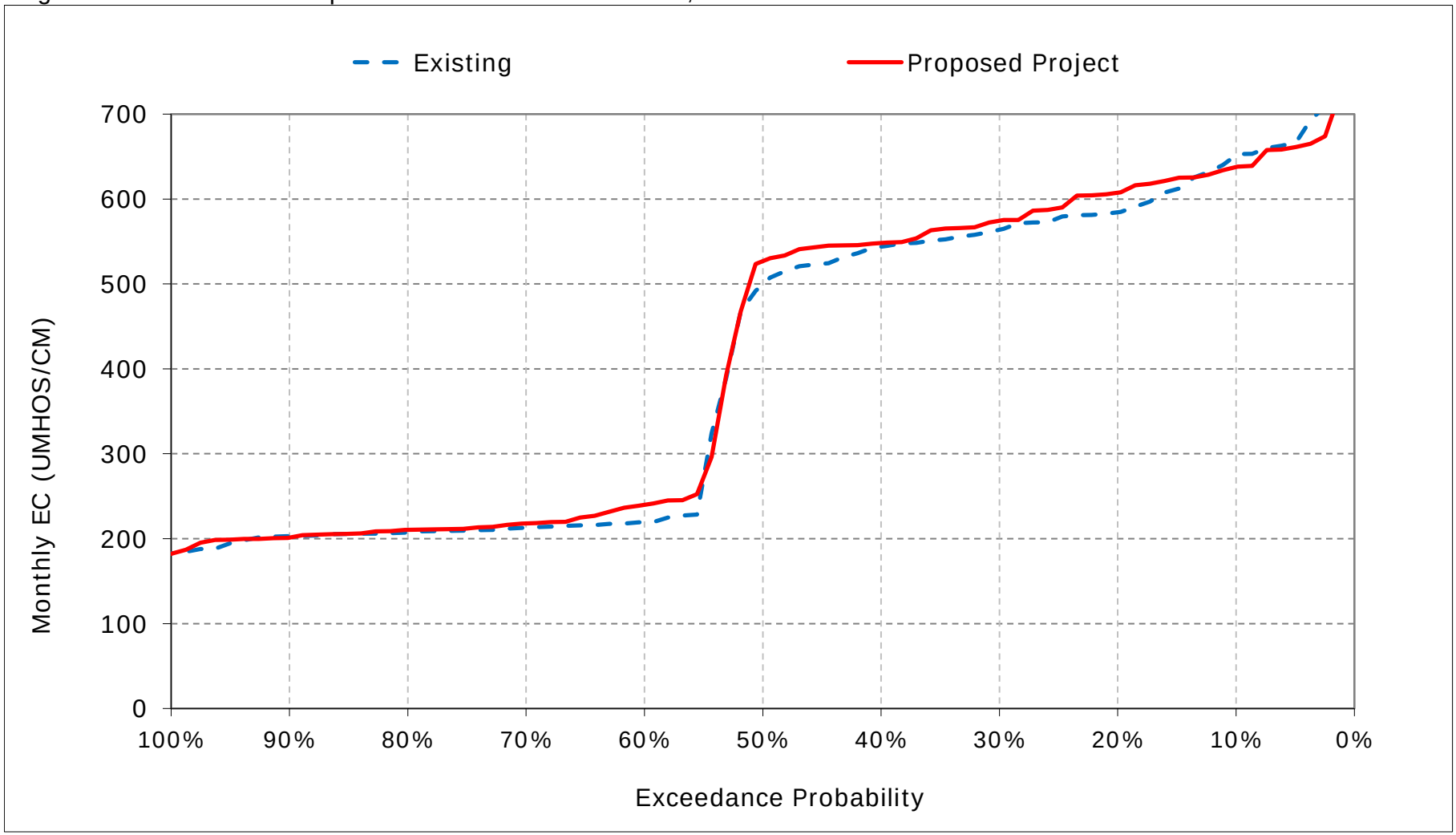


Figure 13-17. San Joaquin River at San Andreas, November EC

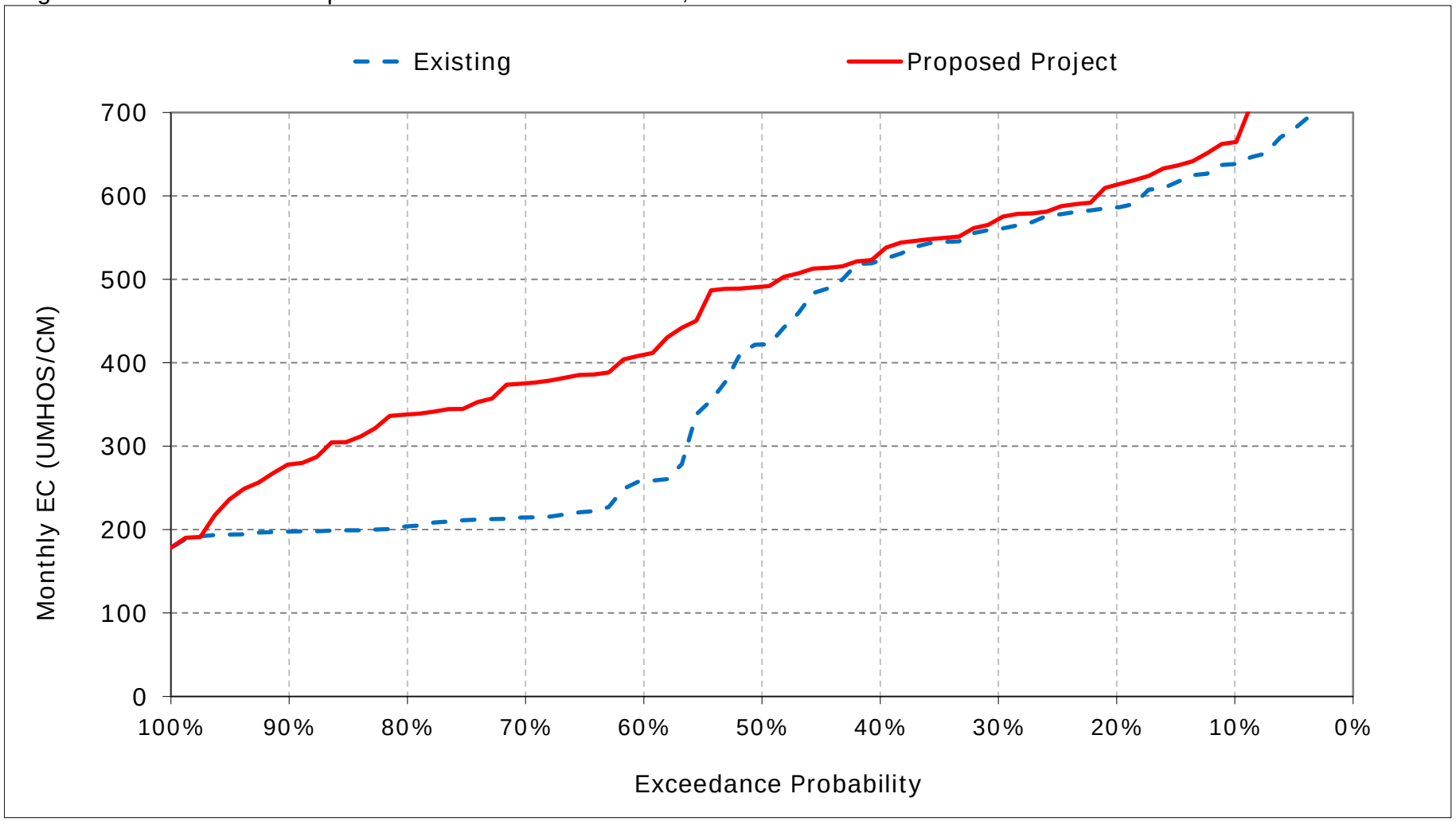


Figure 13-18. San Joaquin River at San Andreas, December EC

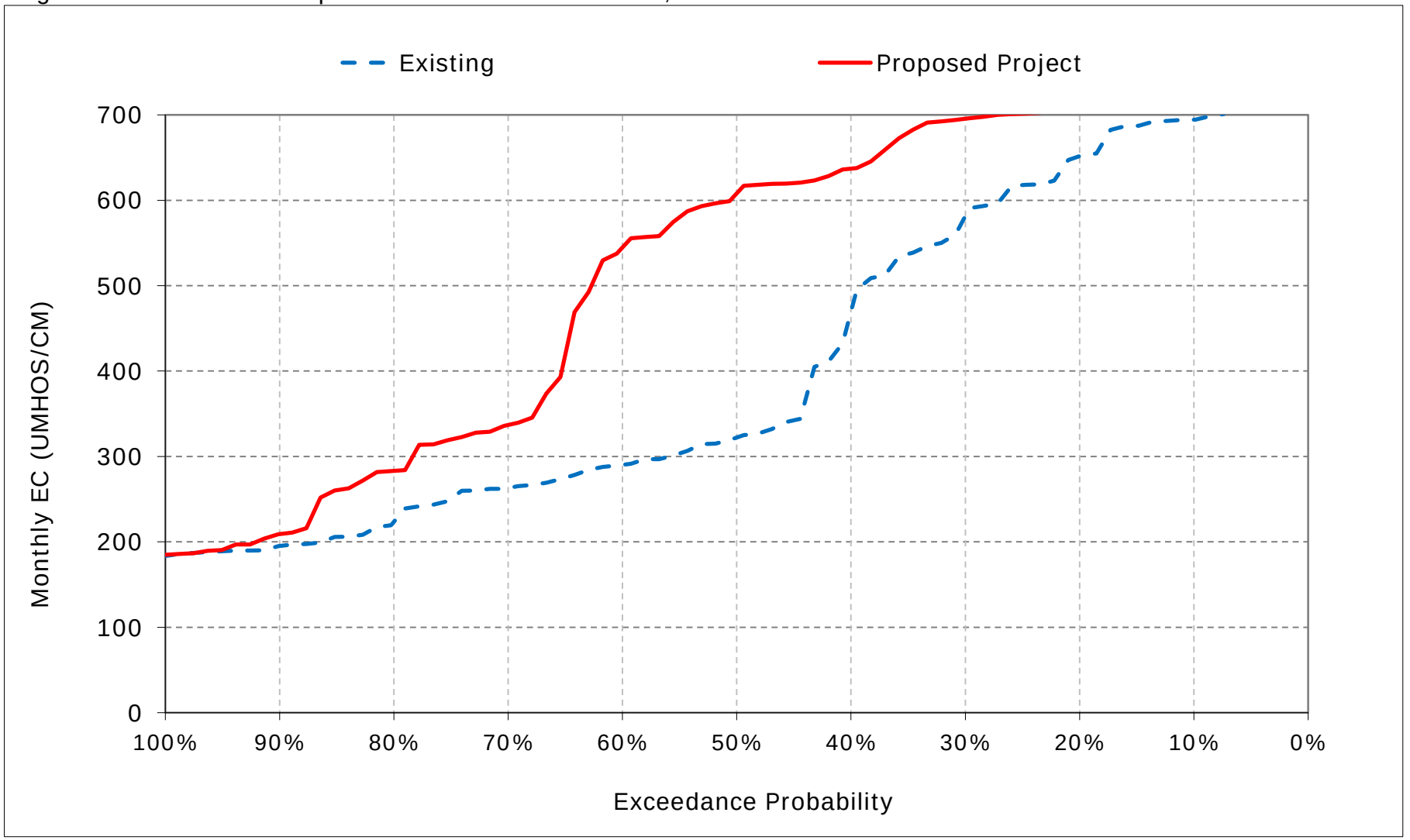


Table 14-1. San Joaquin River at Prisoners Point, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	599	595	688	651	443	341	366	352	292	375	473	569
20%	565	550	649	545	396	323	353	336	274	301	407	549
30%	550	524	588	507	382	308	341	328	264	278	379	519
40%	534	484	505	423	355	298	329	322	253	262	359	495
50%	495	450	374	402	335	282	317	316	247	253	338	463
60%	261	275	308	376	315	276	313	307	243	231	314	433
70%	247	242	284	346	287	269	294	300	241	224	287	410
80%	236	231	253	318	278	254	275	283	235	219	280	358
90%	227	224	237	286	265	240	257	226	228	208	271	322
Long Term												
Full Simulation Period[a]	410	402	438	438	340	290	313	306	259	271	347	453
Water Year Types[b]												
Wet (23%)	394	388	401	362	337	298	261	248	266	237	264	339
Above Normal (24%)	421	418	429	417	348	302	321	314	245	223	318	452
Below Normal (10%)	374	333	344	389	325	293	340	316	233	237	323	438
Dry (16%)	386	365	413	446	310	278	350	338	246	290	396	523
Critical (27%)	441	445	526	536	360	278	320	325	282	347	426	515

Proposed Project

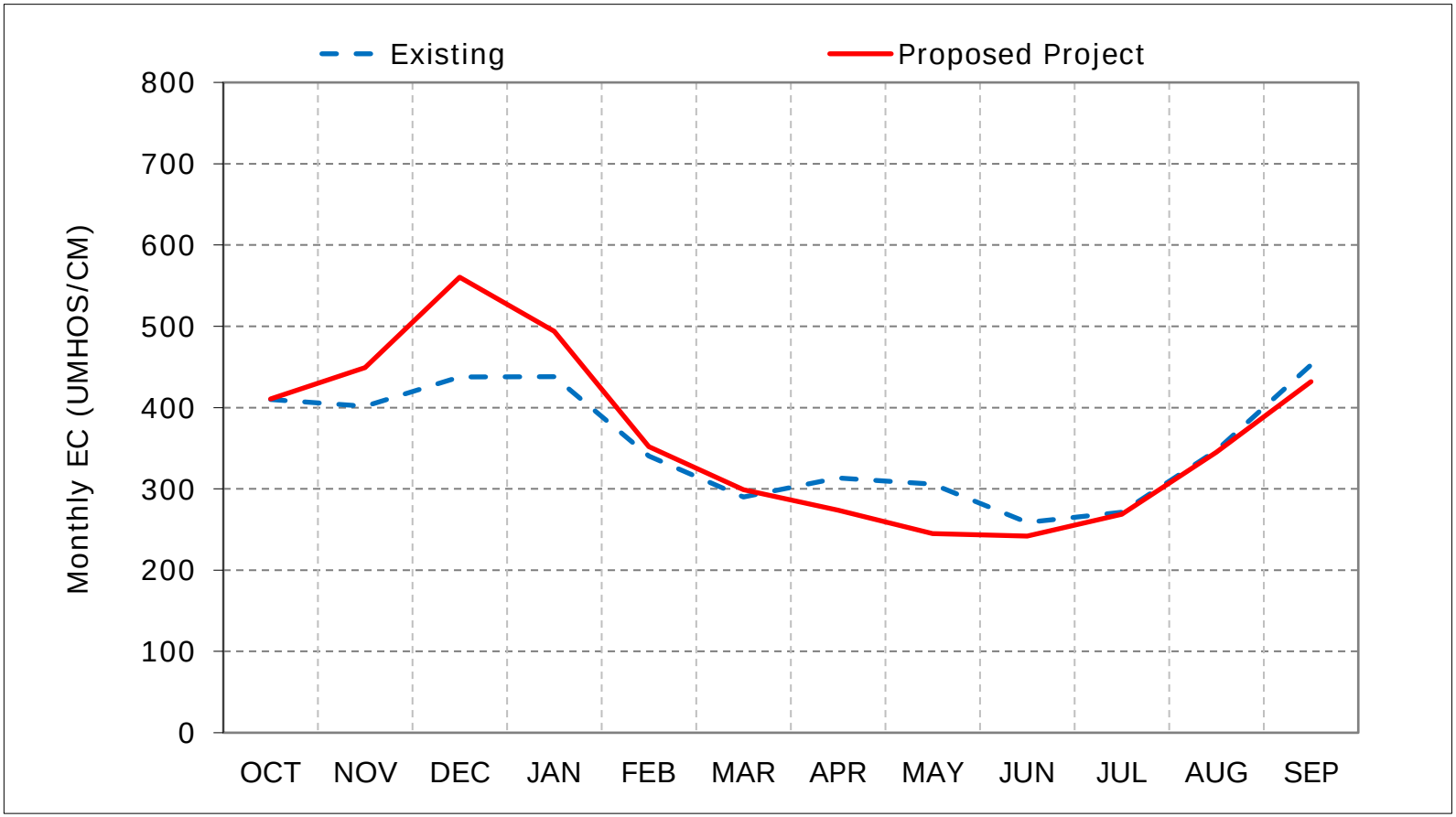
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	603	618	748	748	444	355	319	266	288	375	474	614
20%	584	569	706	681	417	336	304	260	266	290	398	575
30%	562	539	677	621	393	315	287	256	250	266	375	546
40%	546	508	649	531	367	302	282	249	236	257	353	491
50%	509	465	626	433	344	290	275	247	229	243	339	435
60%	235	401	577	384	315	283	266	242	223	229	307	340
70%	224	351	432	349	295	270	255	235	218	221	285	319
80%	217	310	388	325	280	261	245	230	211	216	275	309
90%	214	268	296	296	264	243	234	213	203	207	255	288
Long Term												
Full Simulation Period[a]	411	449	560	494	352	299	274	245	242	269	345	432
Water Year Types[b]												
Wet (23%)	396	429	480	372	334	298	248	227	261	238	256	272
Above Normal (24%)	426	459	518	450	346	307	287	246	217	217	313	411
Below Normal (10%)	362	438	550	525	347	314	299	241	209	227	313	408
Dry (16%)	377	419	597	543	323	293	284	248	222	281	395	546
Critical (27%)	446	480	650	598	391	290	270	260	272	351	433	530

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	5	23	59	97	1	14	-47	-85	-4	0	0	45
20%	19	19	57	136	20	13	-49	-76	-9	-11	-8	25
30%	13	14	89	113	11	7	-54	-72	-14	-12	-5	28
40%	12	24	145	108	12	4	-47	-73	-18	-5	-6	-4
50%	15	15	252	31	9	8	-42	-69	-19	-10	2	-28
60%	-27	126	269	8	0	7	-47	-64	-20	-2	-7	-93
70%	-23	110	148	3	8	1	-39	-65	-23	-3	-1	-91
80%	-19	78	135	7	3	8	-30	-53	-23	-2	-5	-49
90%	-13	44	59	10	-1	3	-23	-13	-24	-1	-16	-35
Long Term												
Full Simulation Period[a]	1	48	123	56	11	9	-40	-61	-17	-3	-2	-21
Water Year Types[b]												
Wet (23%)	2	40	79	10	-3	0	-13	-21	-6	1	-8	-67
Above Normal (24%)	5	41	90	34	-2	5	-34	-68	-27	-5	-4	-41
Below Normal (10%)	-12	105	206	136	22	22	-41	-76	-24	-11	-10	-29
Dry (16%)	-9	54	184	97	13	16	-66	-90	-24	-9	-1	23
Critical (27%)	5	36	124	62	31	12	-51	-65	-10	4	6	15

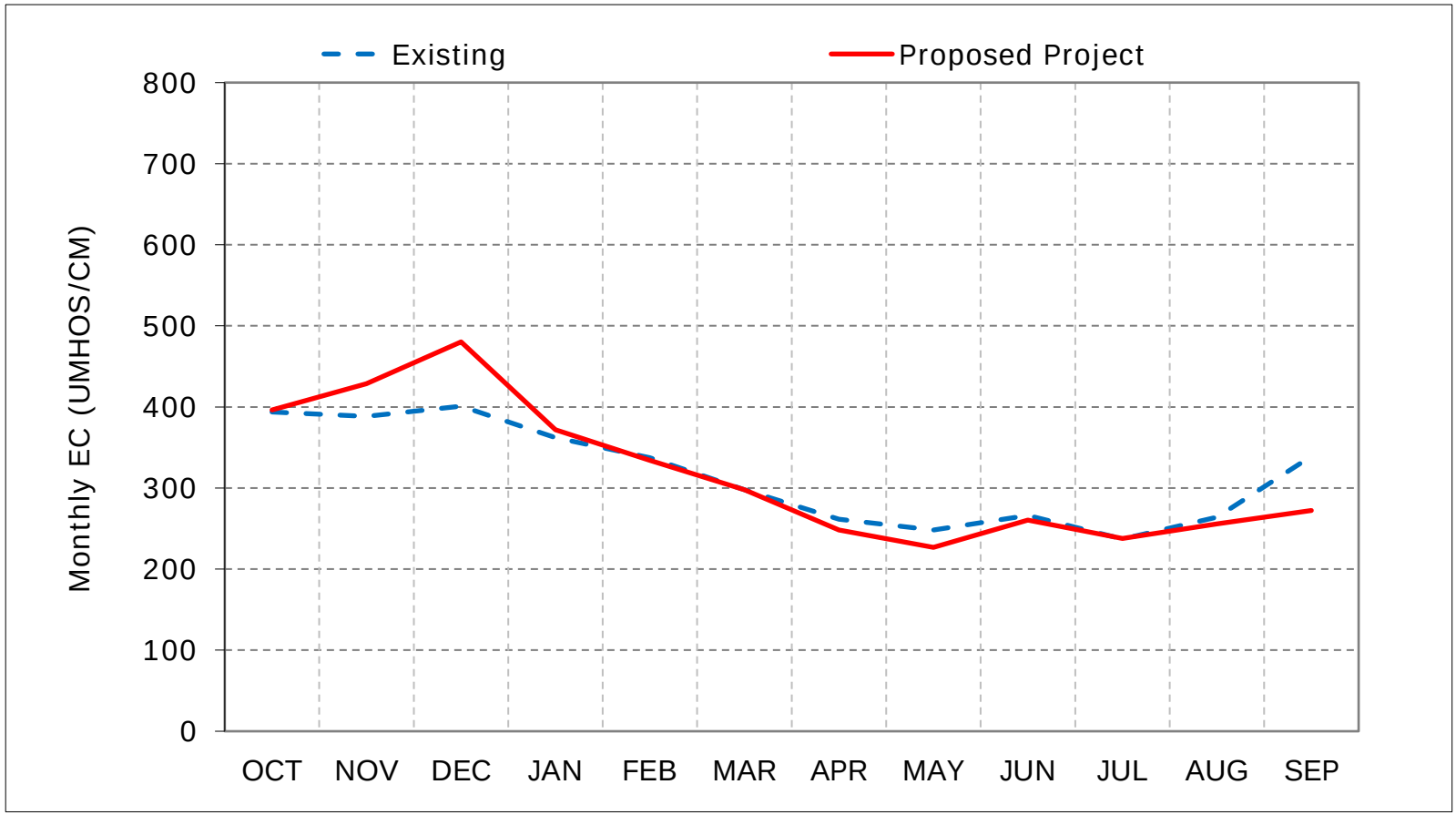
a Based on the 82-year simulation period.
b As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 14-1. San Joaquin River at Prisoners Point, Long-Term Average EC



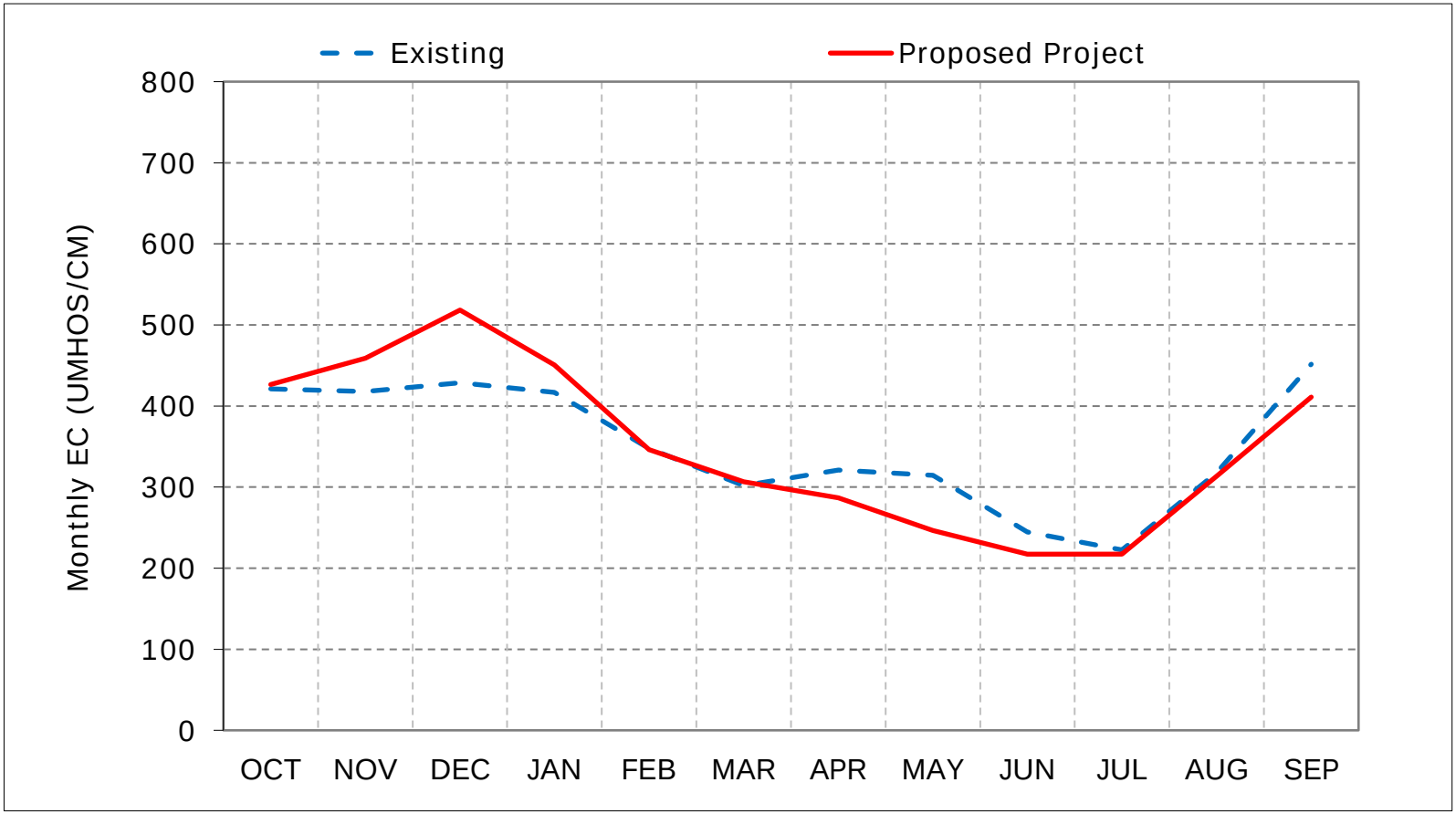
*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 14-2. San Joaquin River at Prisoners Point, Wet Year Average EC



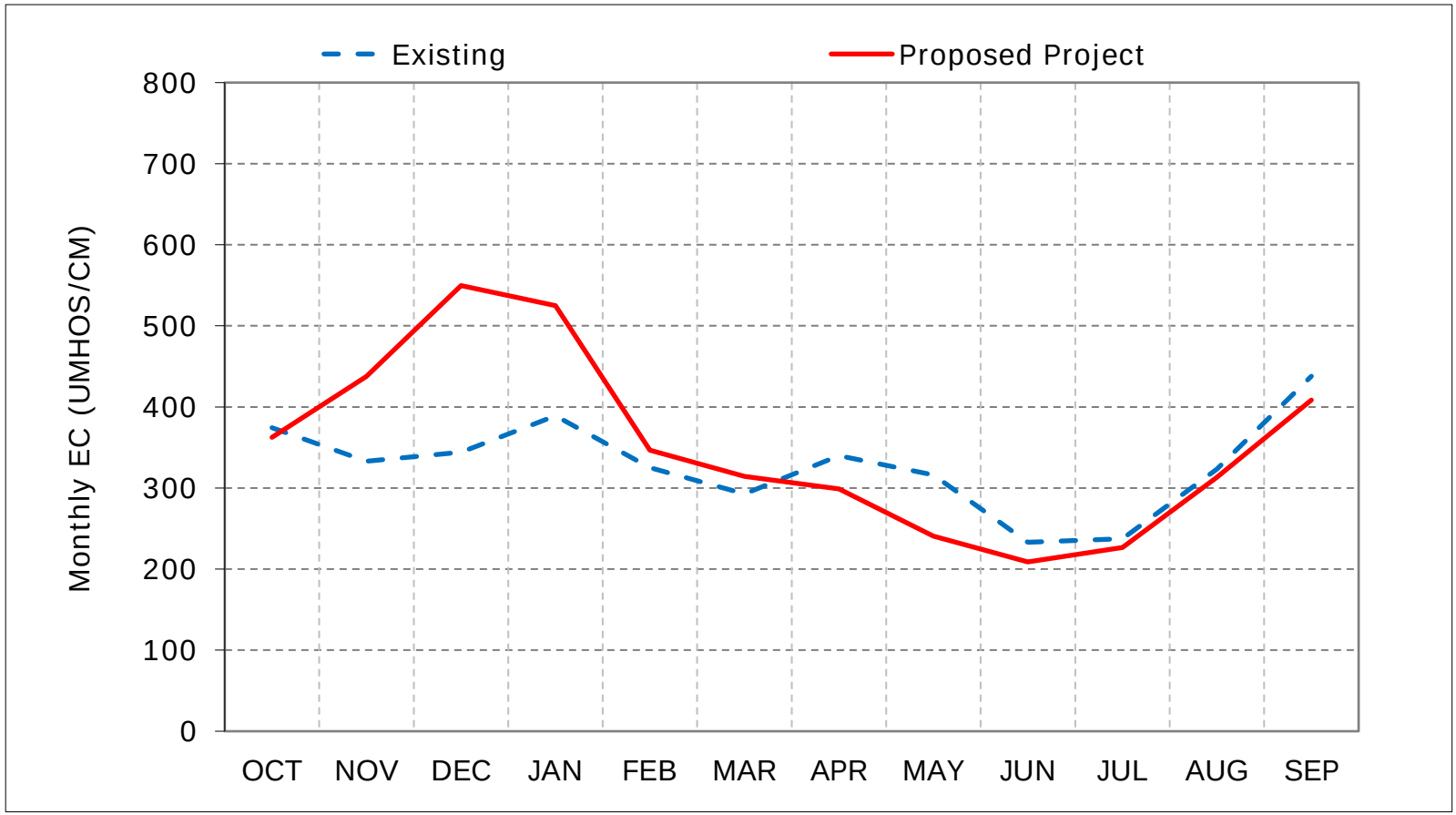
*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 14-3. San Joaquin River at Prisoners Point, Above Normal Year Average EC



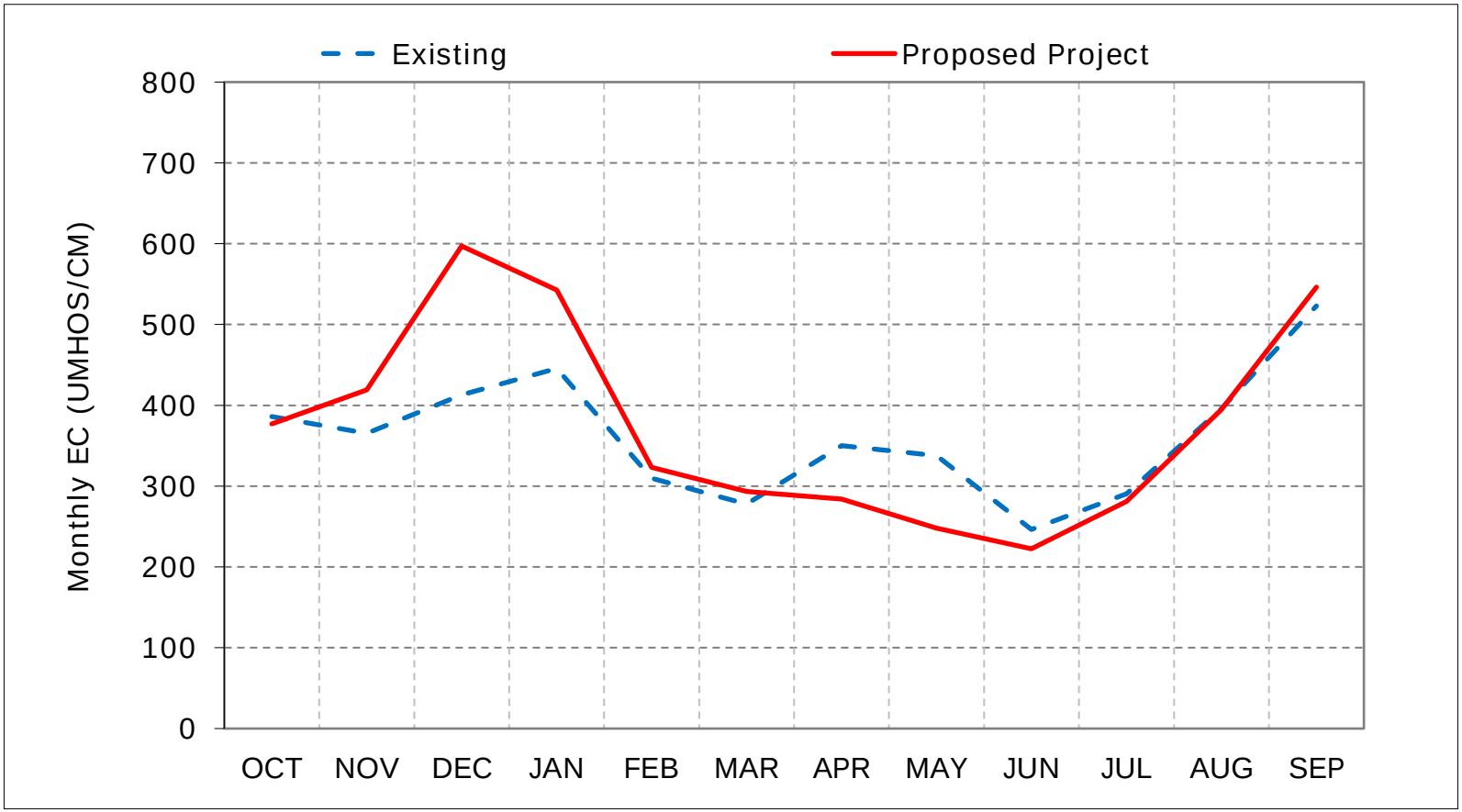
*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 14-4. San Joaquin River at Prisoners Point, Below Normal Year Average EC



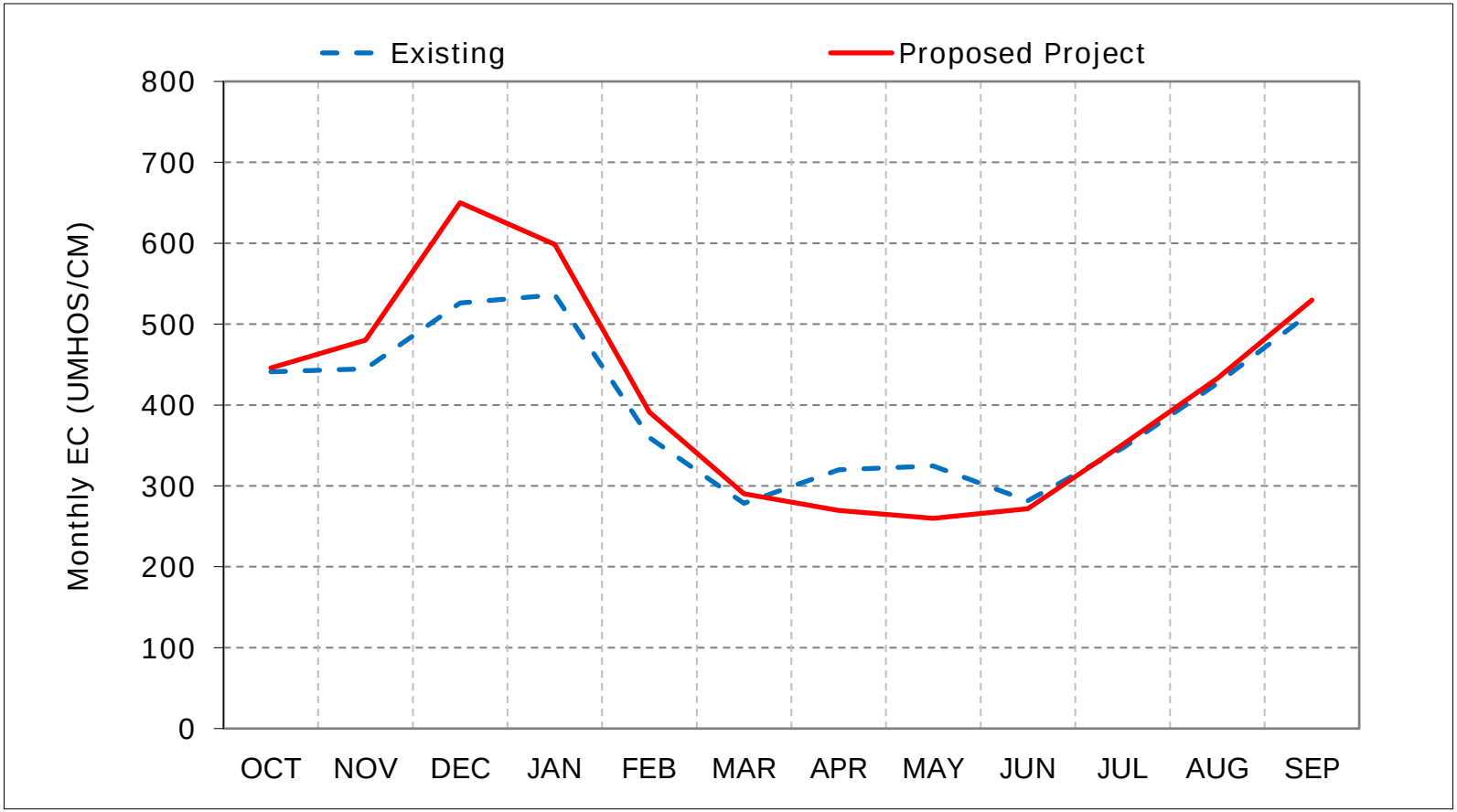
*As defined by the San Joaquin Valley 60-20-20 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 14-5. San Joaquin River at Prisoners Point, Dry Year Average EC



*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.

Figure 14-6. San Joaquin River at Prisoners Point, Critical Year Average EC



*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.

Figure 14-7. San Joaquin River at Prisoners Point, January EC

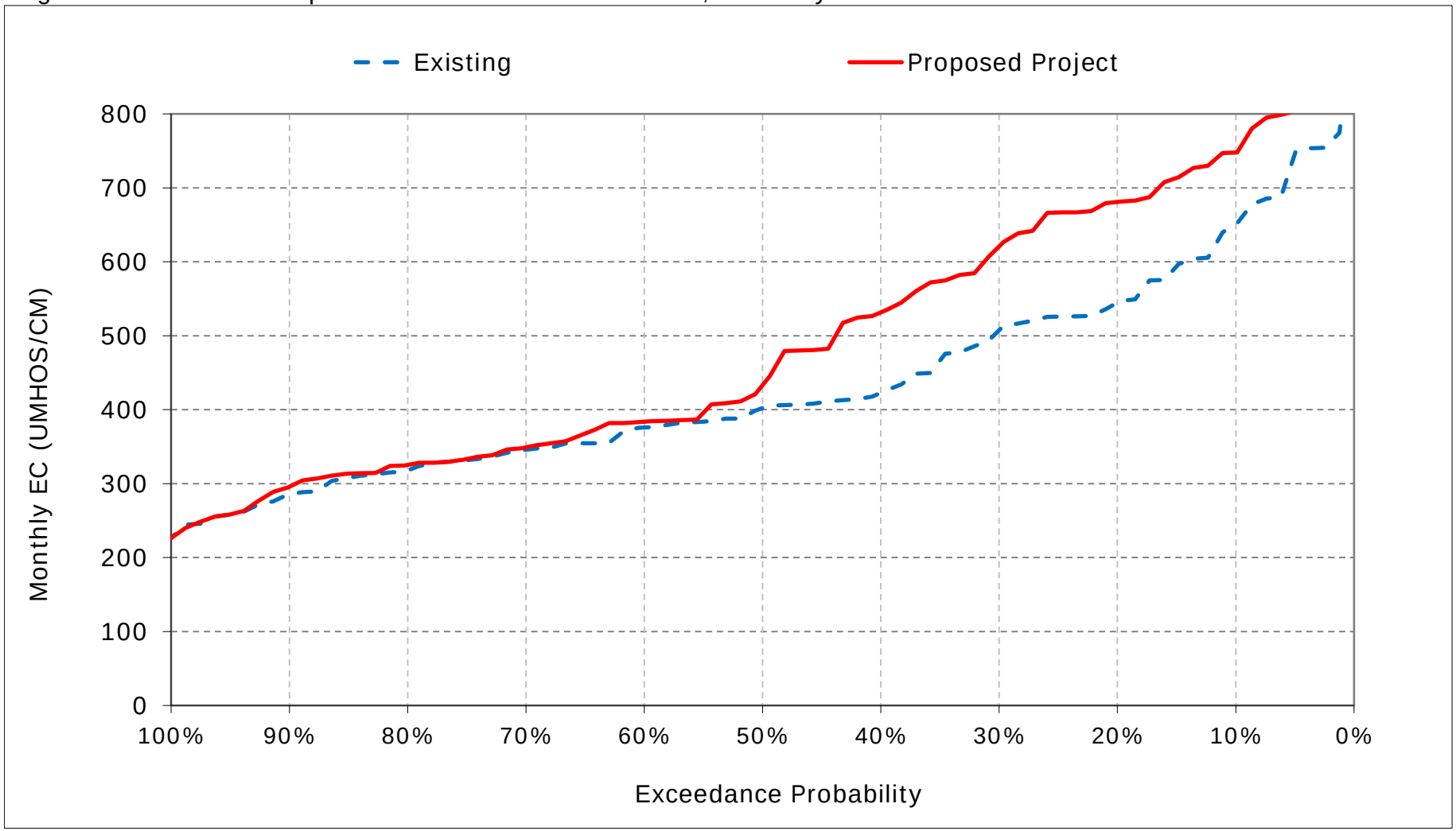


Figure 14-8. San Joaquin River at Prisoners Point, February EC

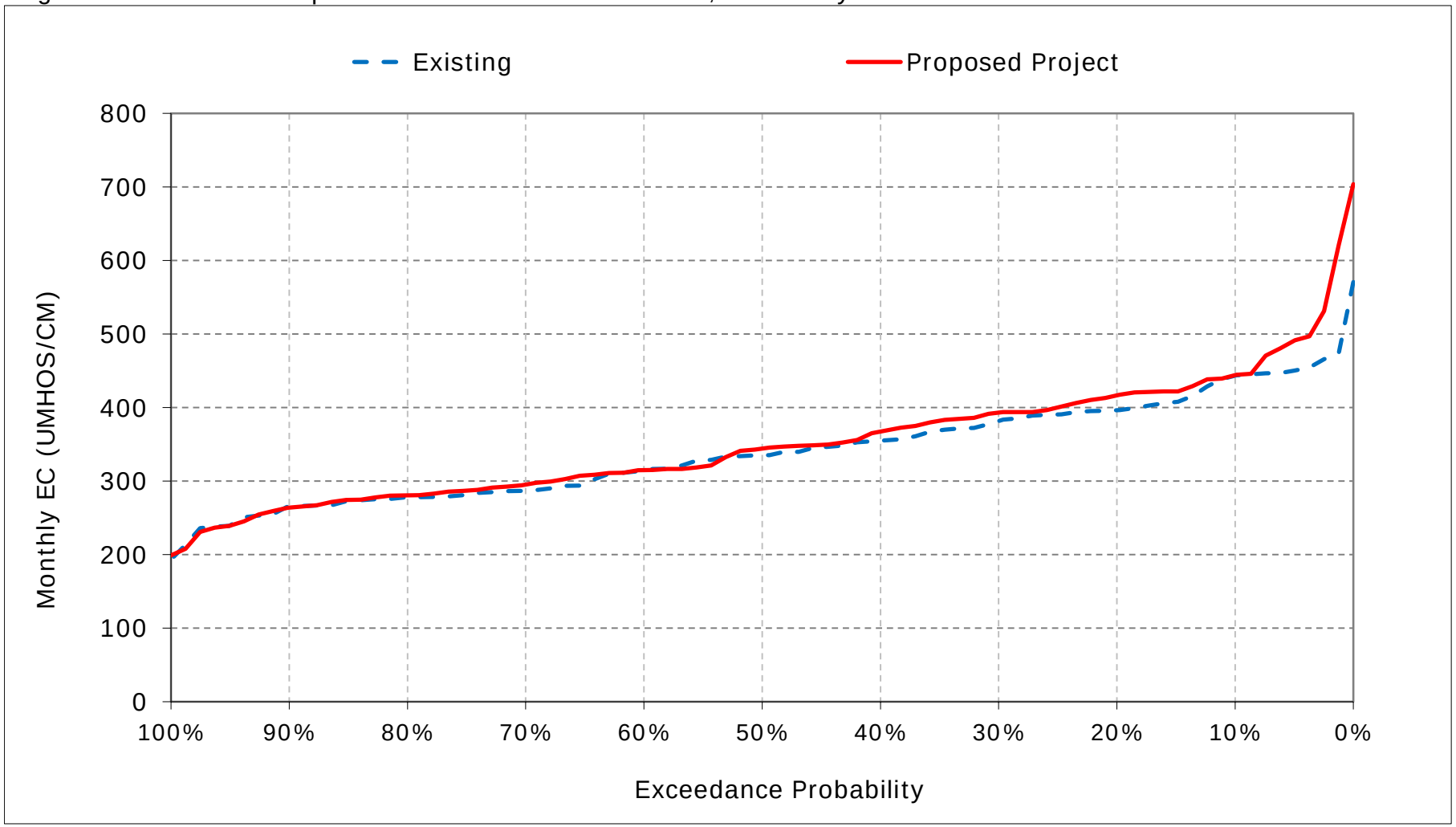


Figure 14-9. San Joaquin River at Prisoners Point, March EC

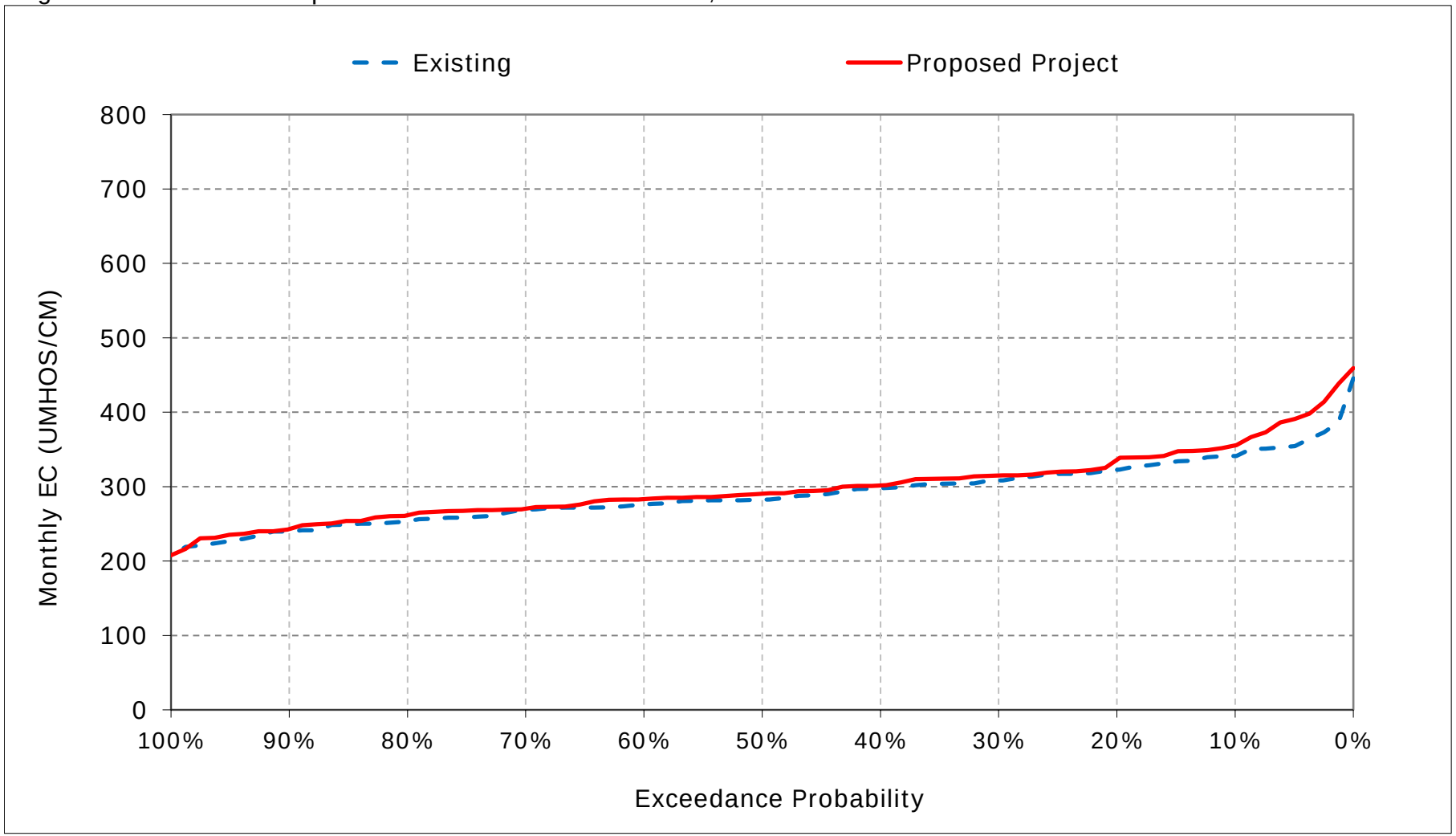


Figure 14-10. San Joaquin River at Prisoners Point, April EC

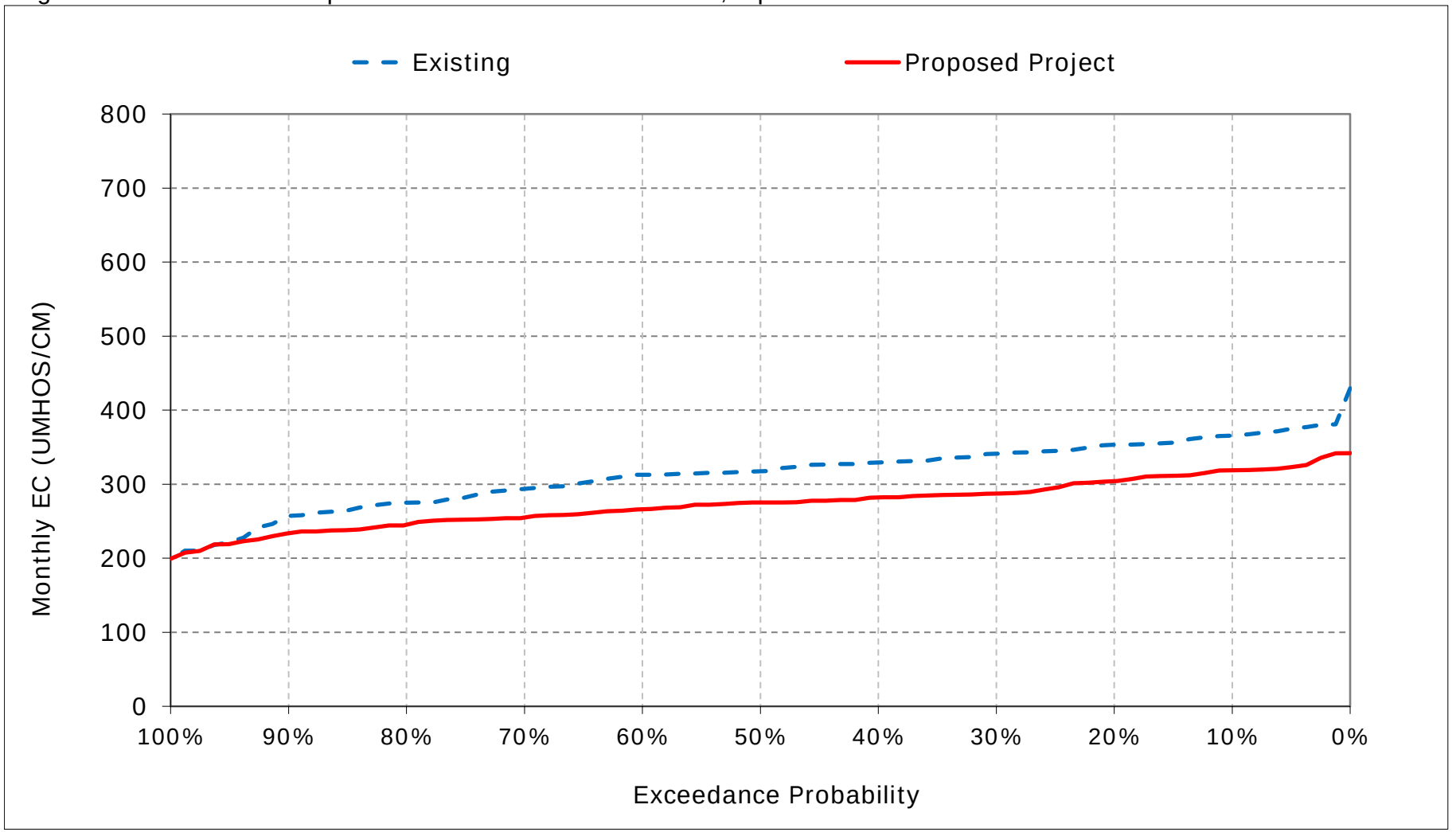


Figure 14-11. San Joaquin River at Prisoners Point, May EC

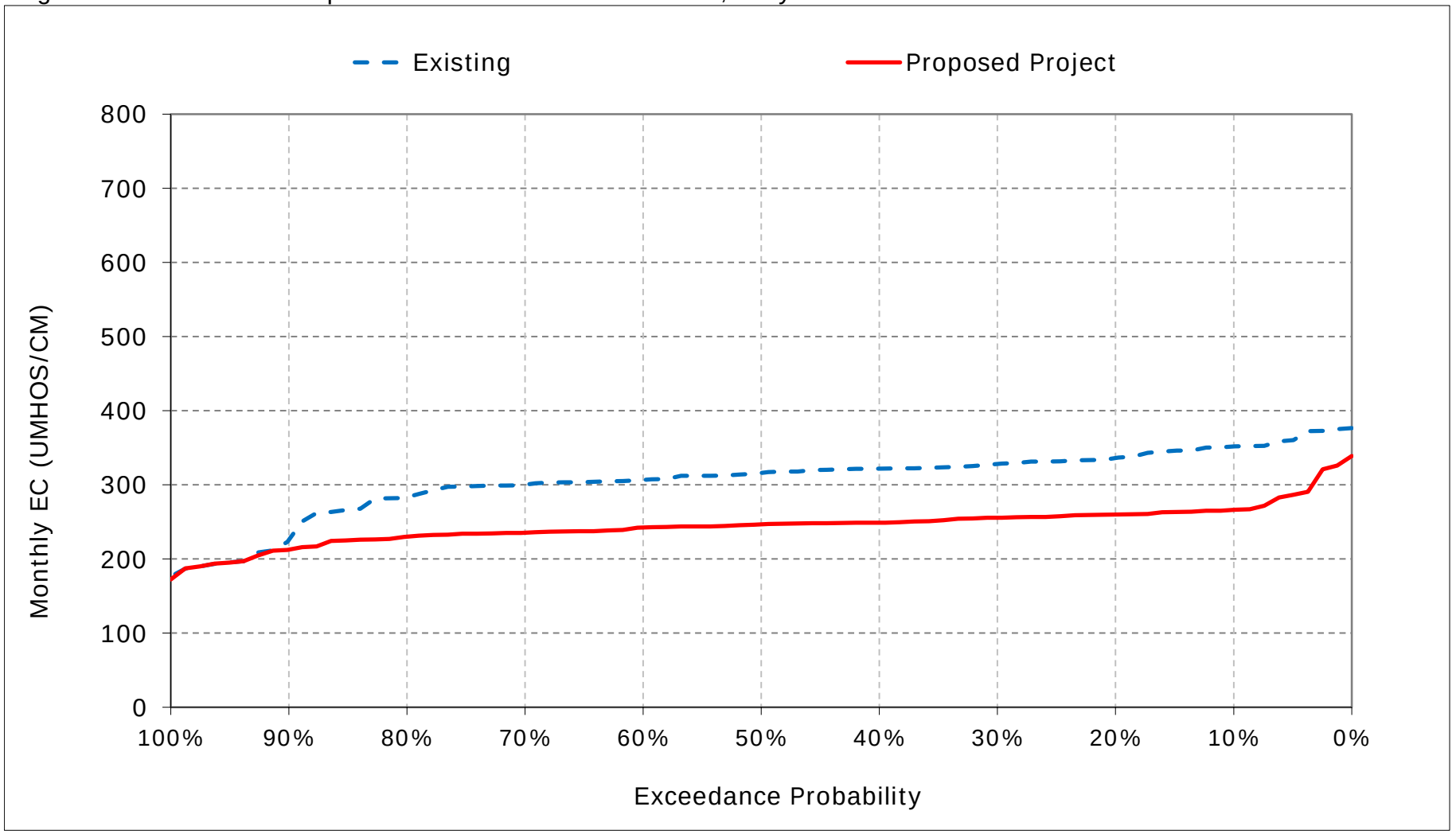


Figure 14-12. San Joaquin River at Prisoners Point, June EC

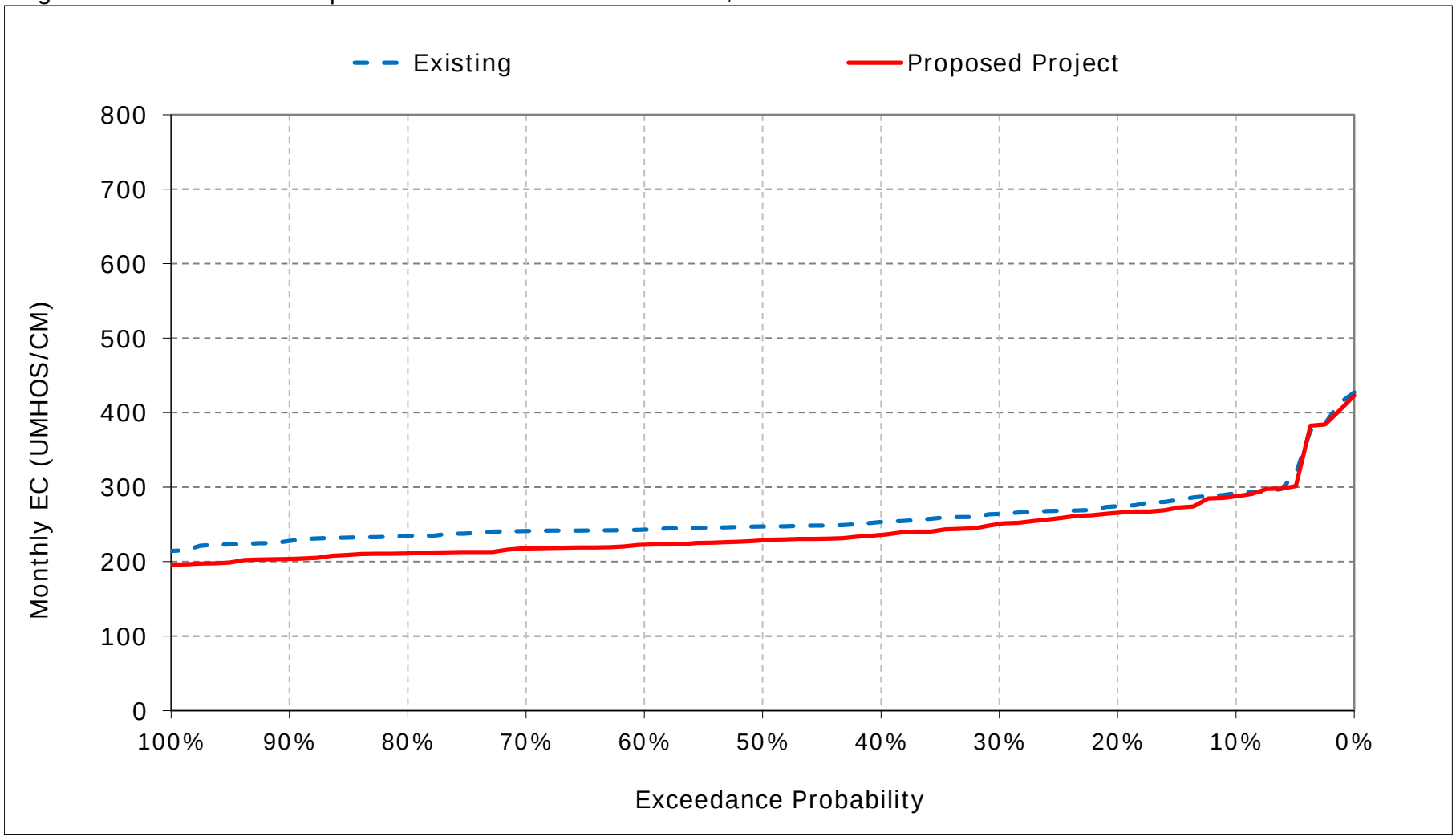


Figure 14-13. San Joaquin River at Prisoners Point, July EC

Figure 14-14. San Joaquin River at Prisoners Point, August EC

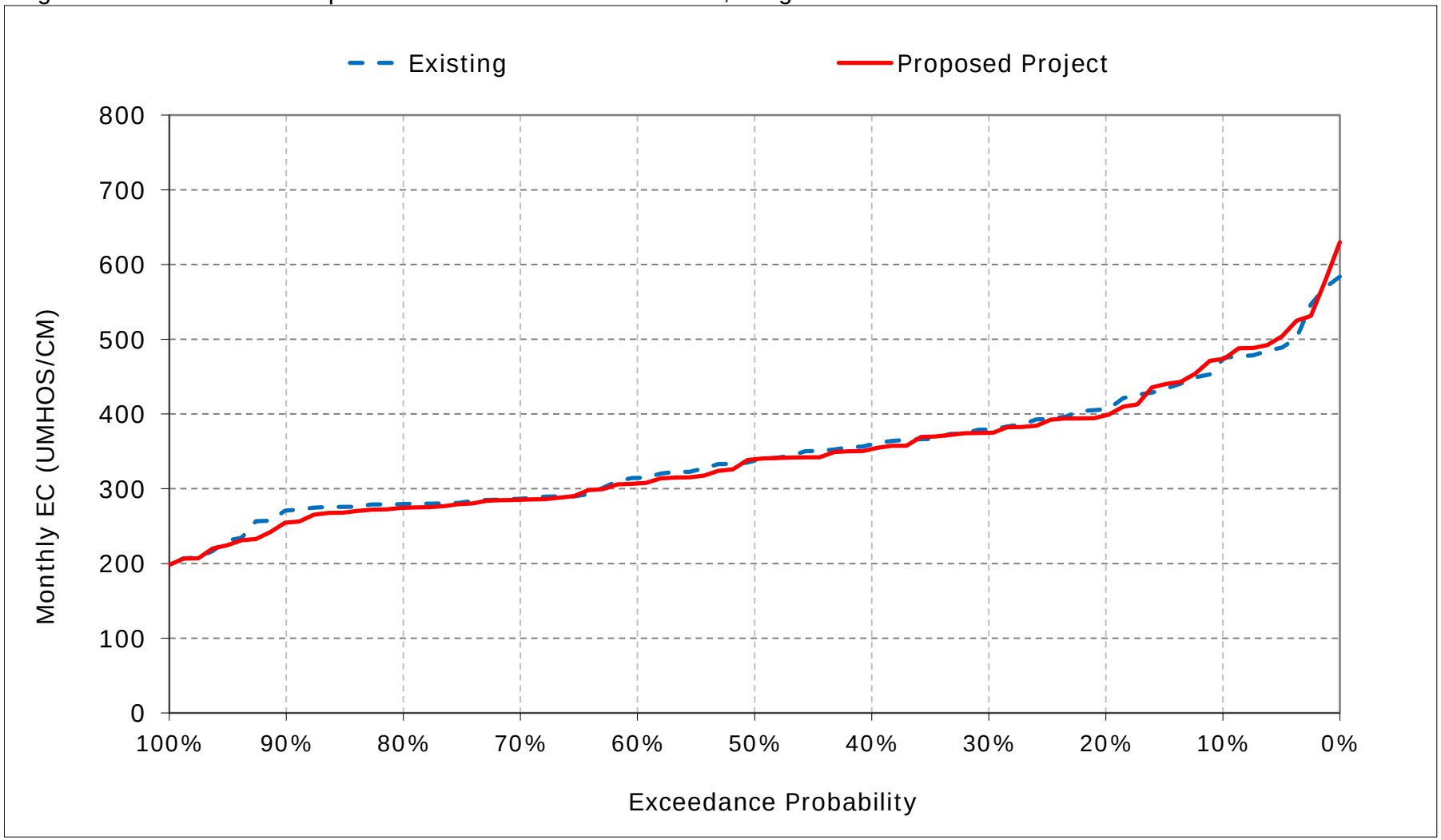


Figure 14-15. San Joaquin River at Prisoners Point, September EC

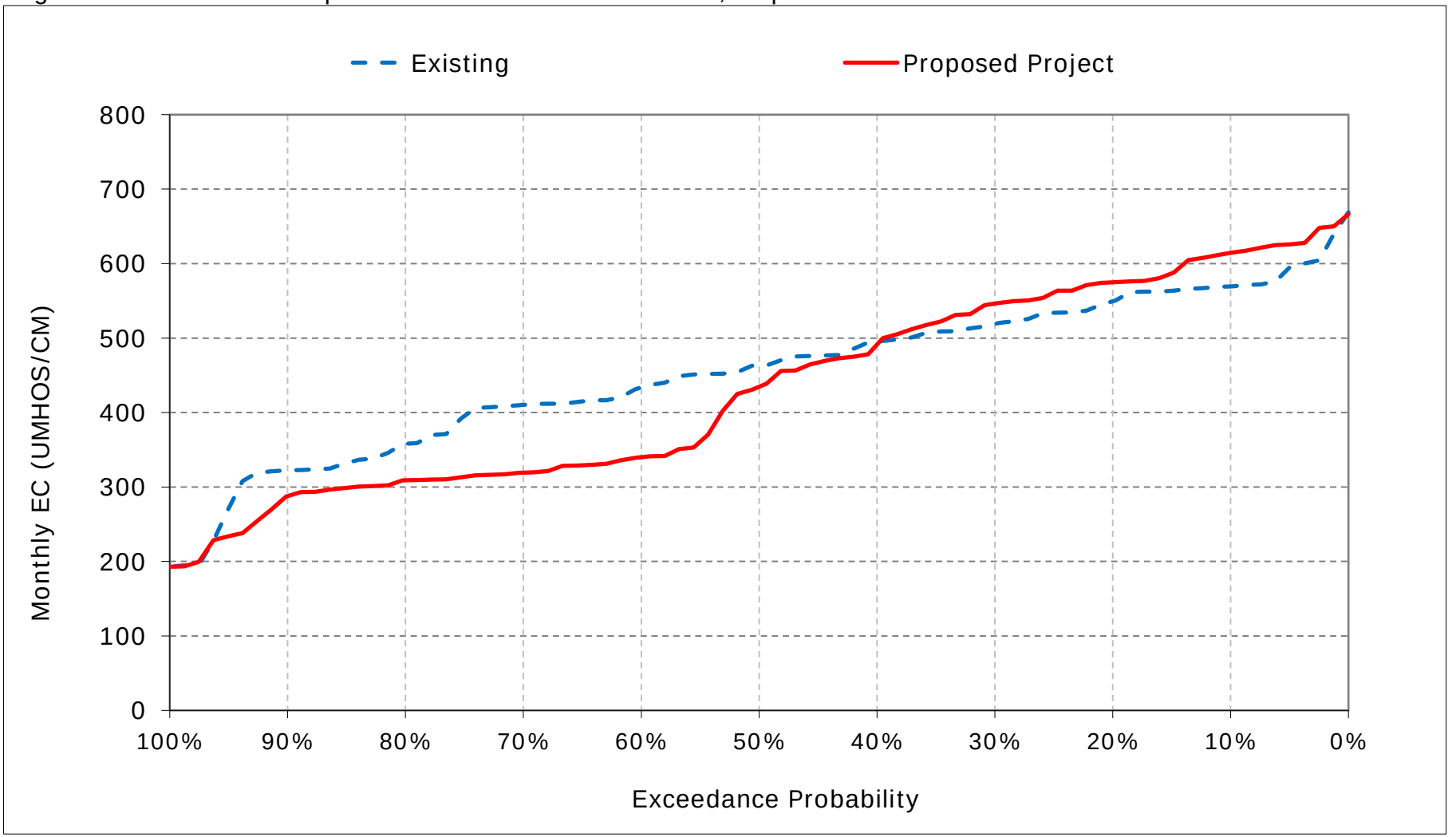


Figure 14-16. San Joaquin River at Prisoners Point, October EC

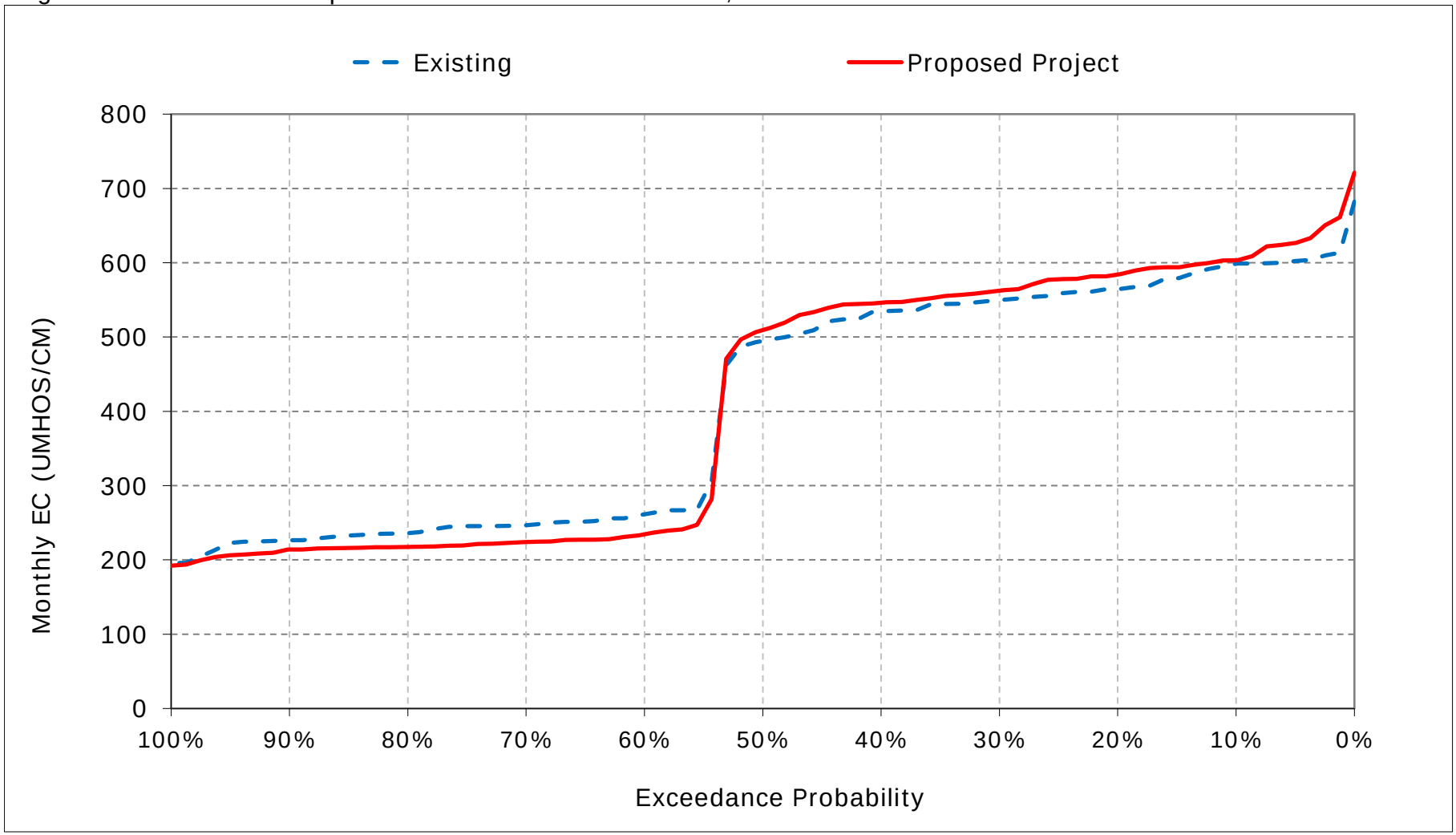


Figure 14-17. San Joaquin River at Prisoners Point, November EC

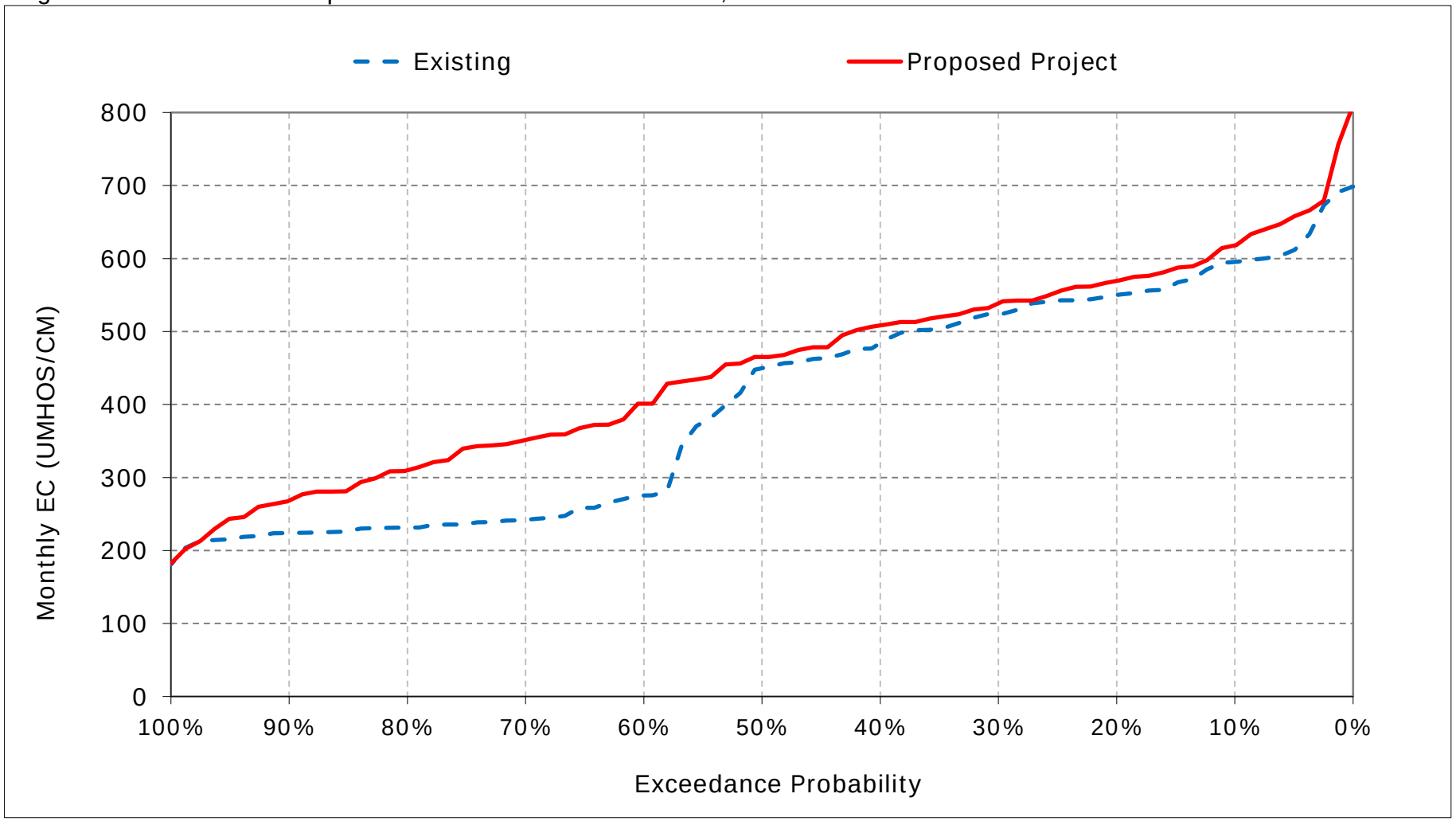


Figure 14-18. San Joaquin River at Prisoners Point, December EC

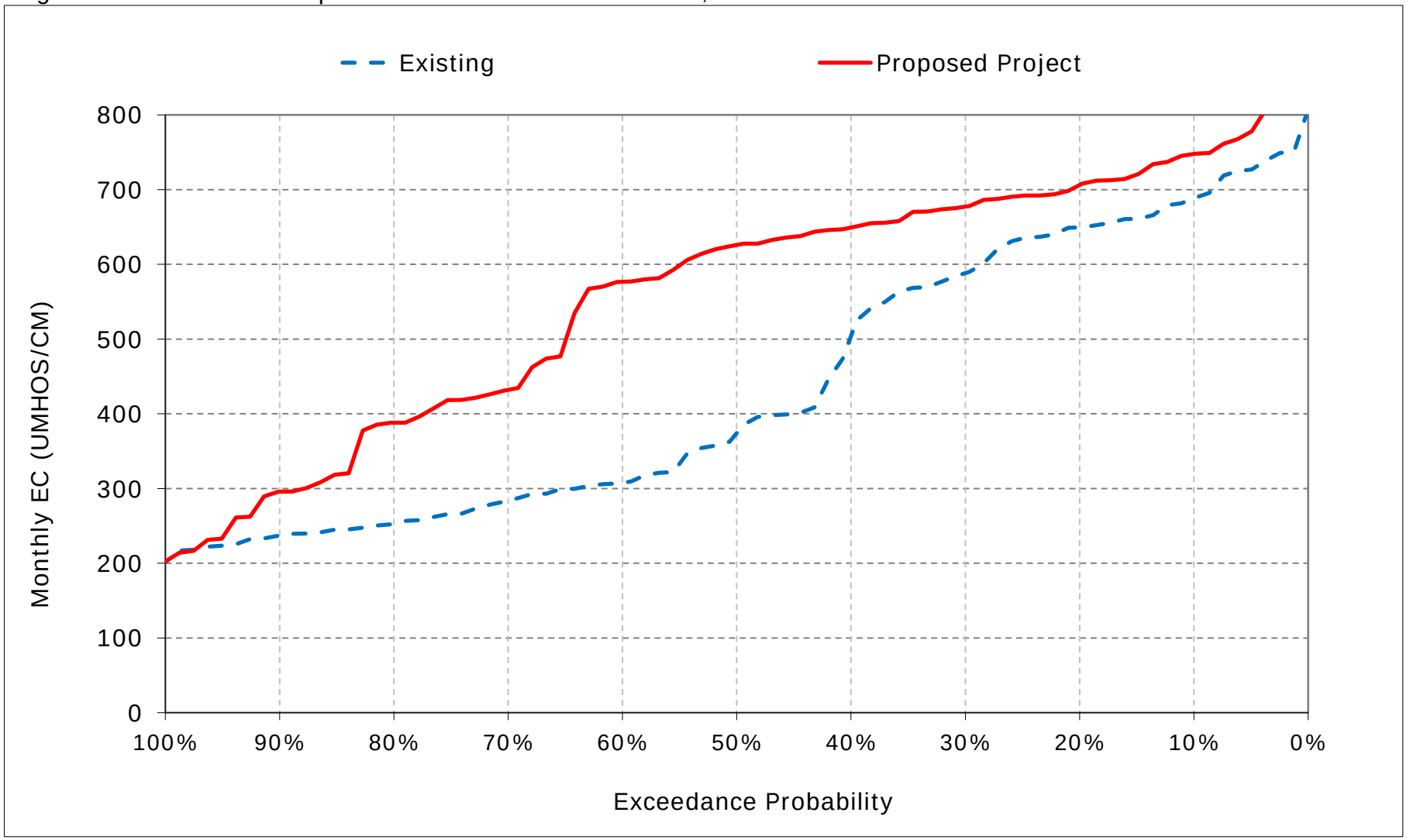


Table 15-1. Old River at Rock Slough Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	871	839	912	833	508	361	357	375	301	483	645	799
20%	831	768	869	699	418	316	339	352	273	374	544	774
30%	806	729	787	610	394	295	324	325	263	338	495	722
40%	776	673	627	524	360	287	309	314	259	303	471	664
50%	714	588	444	459	341	273	301	308	256	272	432	622
60%	275	310	342	419	306	264	288	298	252	254	397	571
70%	263	251	299	342	289	254	283	293	248	245	357	535
80%	259	236	272	312	275	243	270	282	240	230	344	476
90%	249	223	243	275	262	233	247	247	233	220	324	436
Long Term												
Full Simulation Period[a]	555	522	544	517	360	285	302	308	270	319	449	614
Water Year Types[b]												
Wet (32%)	459	415	371	343	331	285	289	280	243	235	335	492
Above Normal (15%)	618	541	542	485	345	286	321	328	252	244	361	454
Below Normal (17%)	573	549	617	591	338	270	317	335	252	305	470	762
Dry (22%)	560	571	617	566	361	268	296	309	264	389	545	686
Critical (15%)	668	632	729	769	459	330	301	315	373	487	613	755

Proposed Project

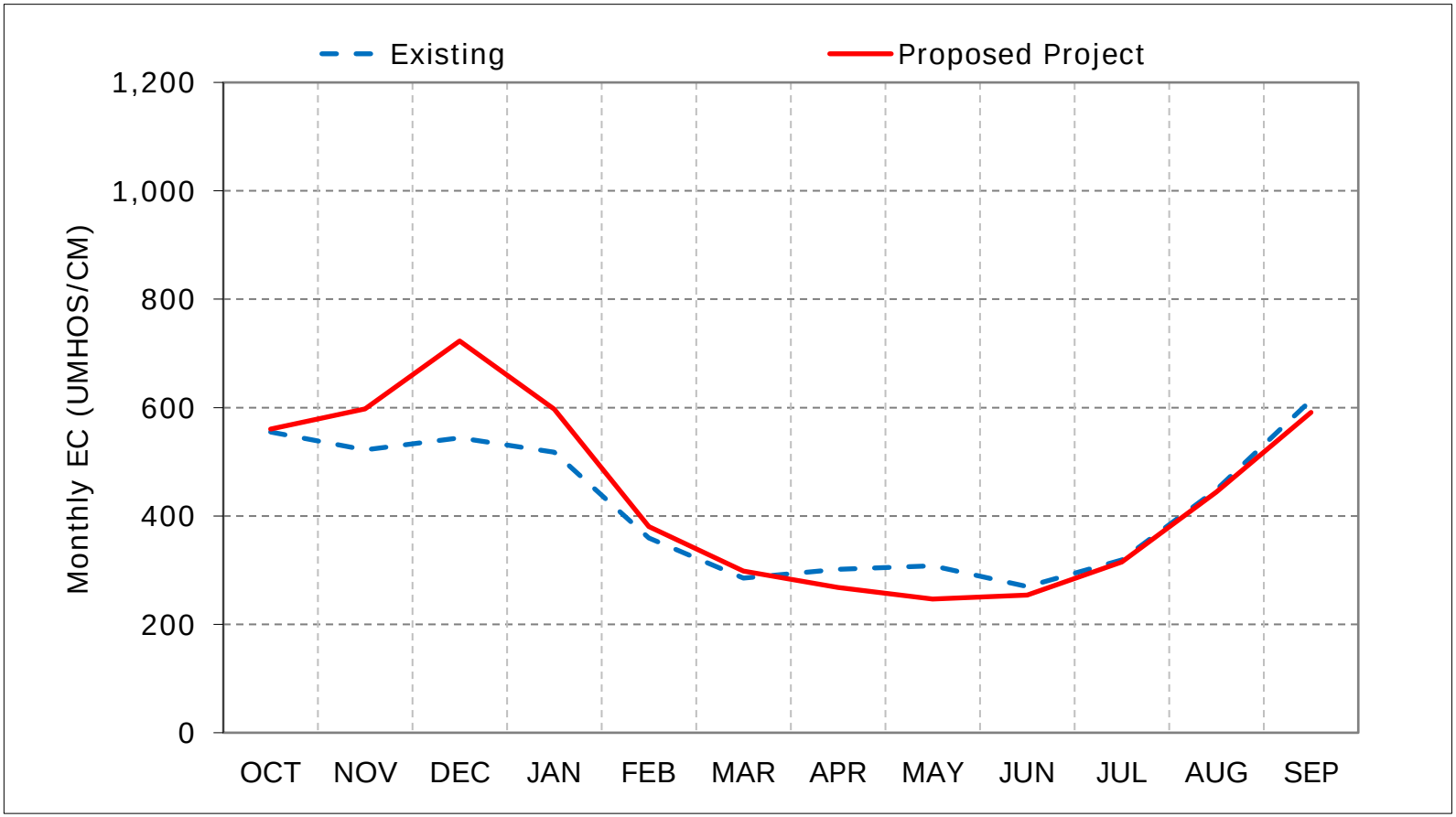
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	888	843	976	1,020	531	385	298	277	285	489	644	863
20%	857	797	924	884	489	338	281	262	264	345	527	804
30%	823	731	891	810	408	303	276	254	251	320	498	761
40%	787	703	857	694	378	295	273	243	241	297	463	676
50%	731	628	823	523	350	285	265	238	236	268	433	587
60%	266	528	763	449	320	270	257	234	230	249	389	468
70%	251	447	556	350	300	263	252	230	223	239	352	433
80%	242	394	494	325	283	251	243	227	218	228	336	411
90%	230	321	304	284	265	244	237	222	213	220	299	380
Long Term												
Full Simulation Period[a]	560	598	723	597	380	298	268	247	254	315	444	591
Water Year Types[b]												
Wet (32%)	463	510	521	372	332	295	257	230	228	235	324	378
Above Normal (15%)	628	649	792	617	371	302	264	231	225	240	362	439
Below Normal (17%)	575	619	793	679	344	280	270	242	228	283	467	822
Dry (22%)	562	622	810	694	395	284	266	252	252	380	532	695
Critical (15%)	683	673	879	822	513	347	297	298	375	503	628	779

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	18	4	64	188	24	24	-59	-98	-16	6	-1	63
20%	26	28	54	185	71	22	-58	-90	-9	-29	-17	30
30%	17	2	105	201	14	9	-48	-71	-12	-19	3	39
40%	11	30	230	171	18	8	-37	-71	-19	-6	-8	13
50%	17	40	379	64	10	13	-35	-70	-20	-3	1	-35
60%	-9	218	421	29	13	6	-31	-65	-23	-5	-9	-103
70%	-12	196	258	8	12	9	-30	-63	-25	-6	-4	-102
80%	-17	157	222	13	8	8	-26	-55	-21	-2	-8	-65
90%	-19	98	60	8	2	11	-9	-25	-20	0	-25	-56
Long Term												
Full Simulation Period[a]	6	75	179	79	21	13	-33	-61	-16	-4	-4	-23
Water Year Types[b]												
Wet (32%)	4	95	150	29	1	11	-31	-50	-15	0	-11	-114
Above Normal (15%)	9	108	250	131	26	15	-57	-97	-27	-4	1	-15
Below Normal (17%)	2	71	176	88	6	10	-47	-93	-25	-21	-3	60
Dry (22%)	1	52	193	128	34	16	-30	-57	-12	-10	-13	8
Critical (15%)	14	41	150	53	55	17	-4	-17	2	15	16	24

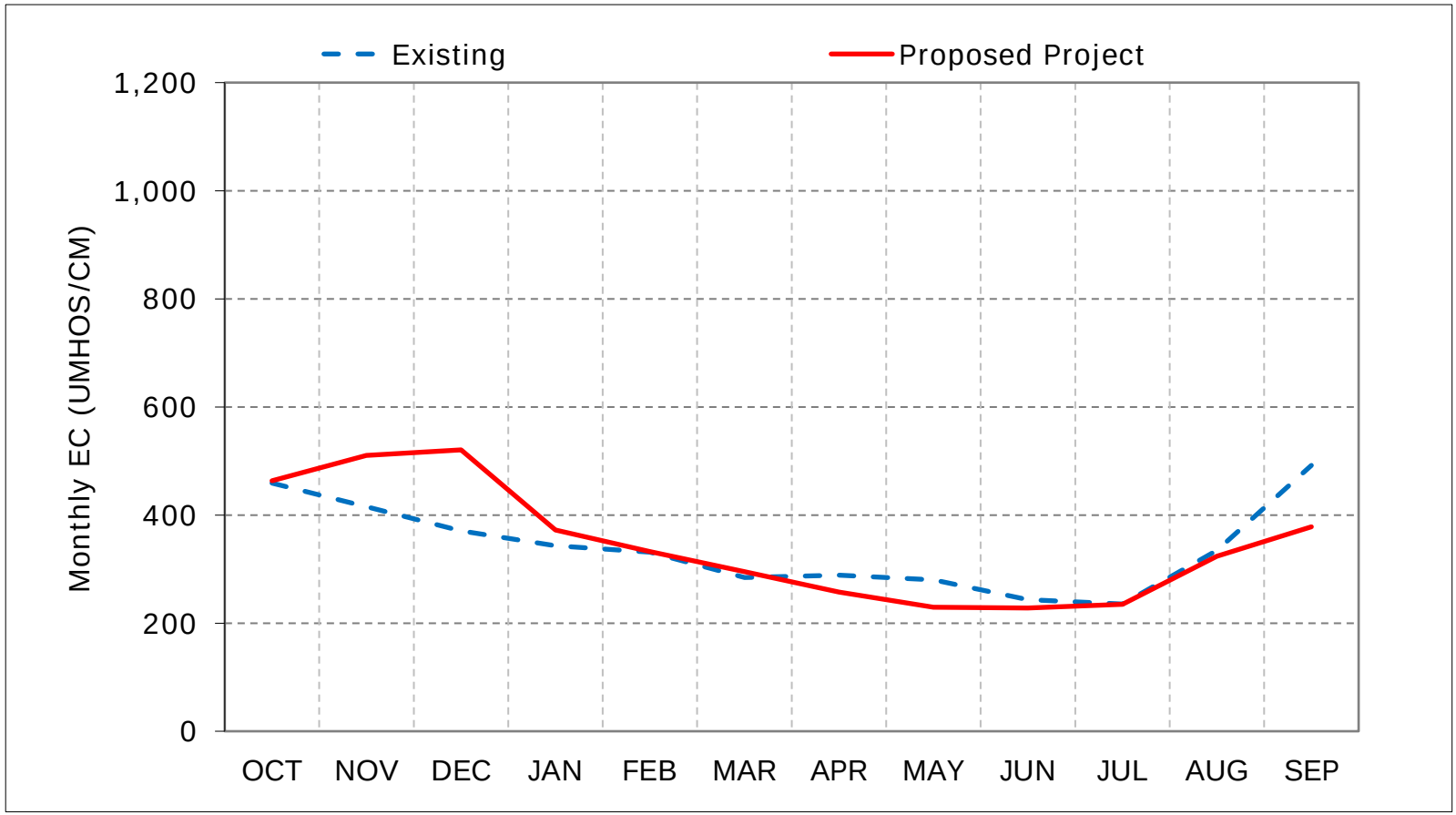
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 15-1. Old River at Rock Slough Salinity, Long-Term Average EC



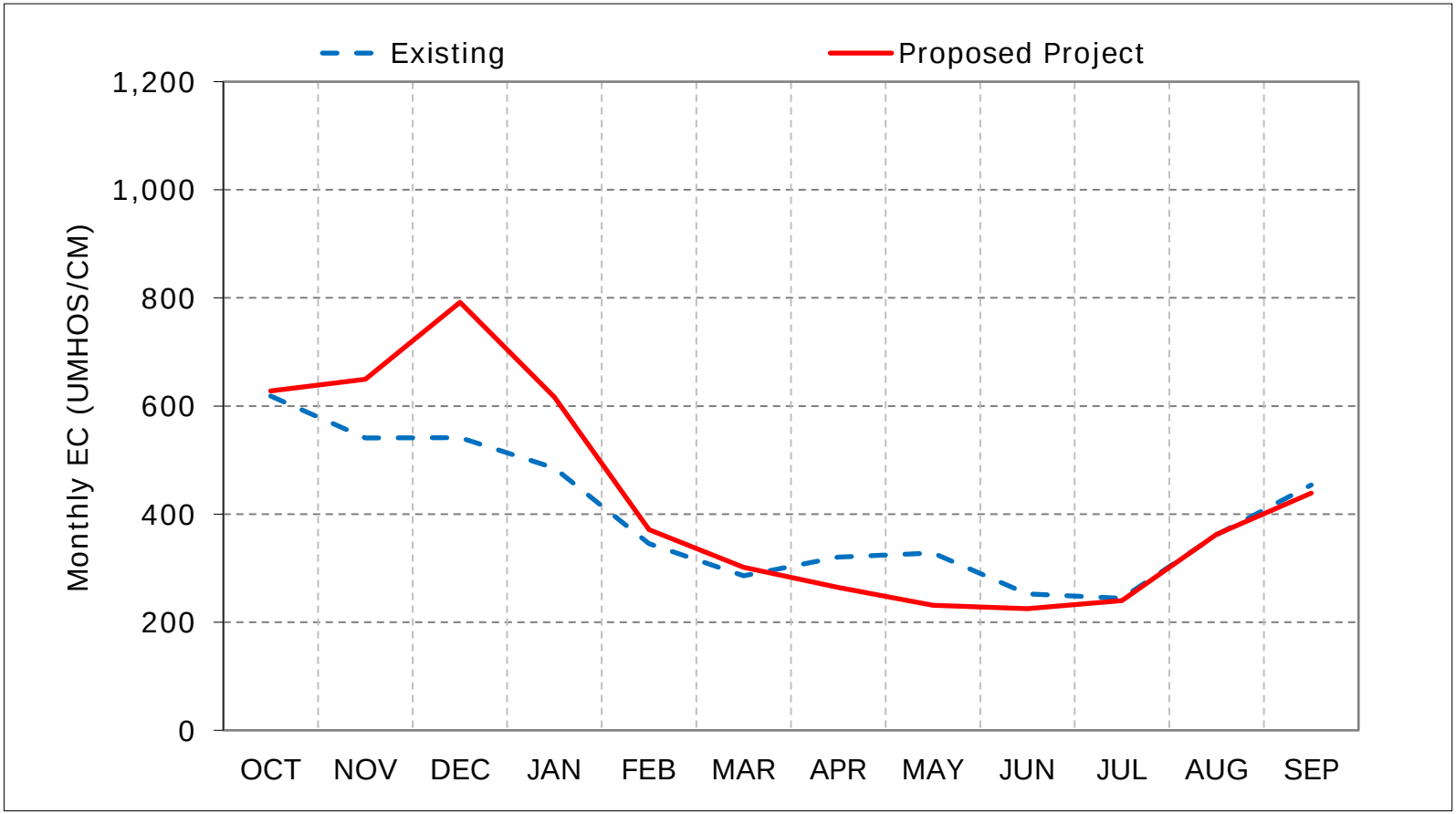
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 15-2. Old River at Rock Slough Salinity, Wet Year Average EC



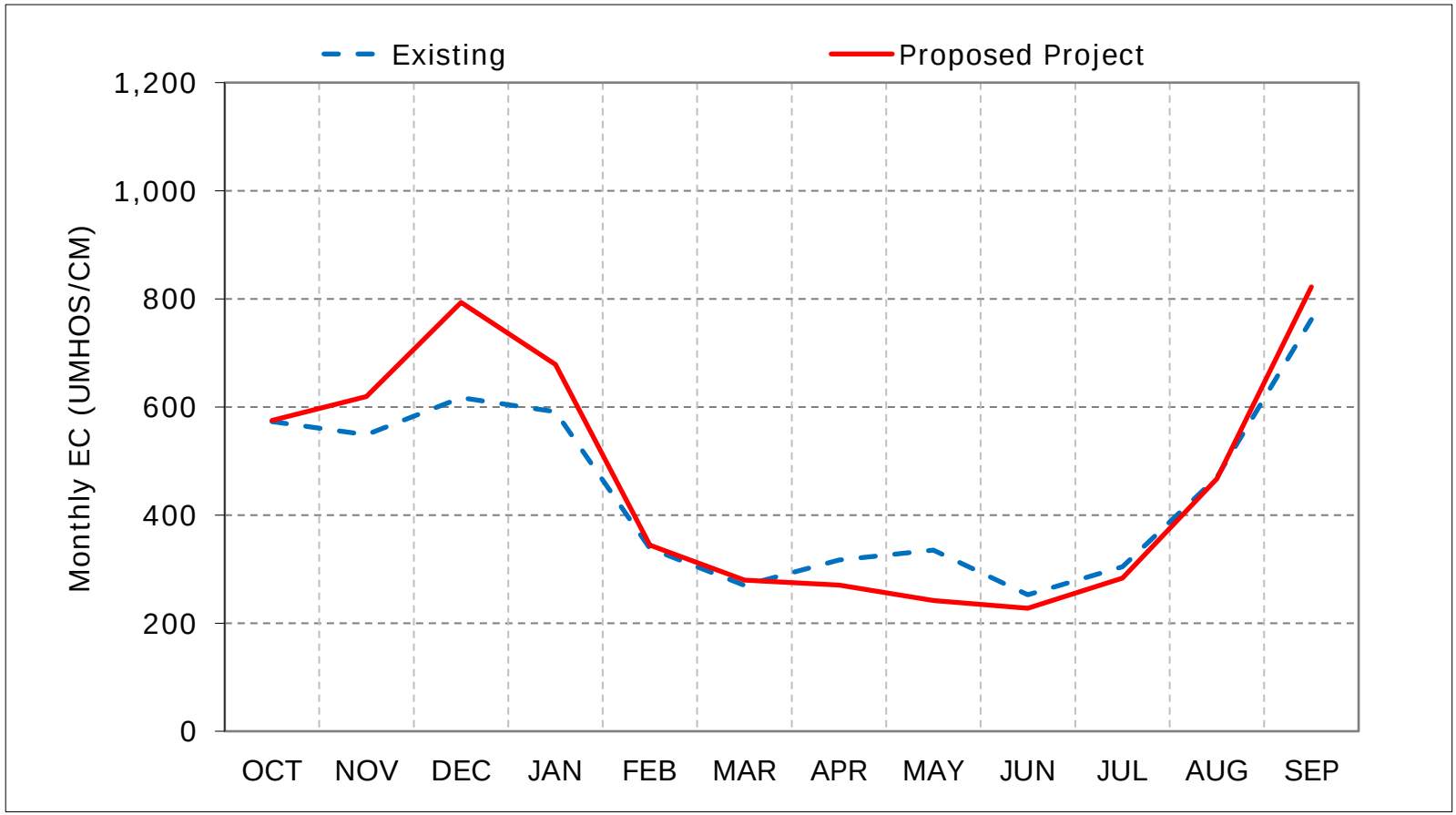
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 15-3. Old River at Rock Slough Salinity, Above Normal Year Average EC



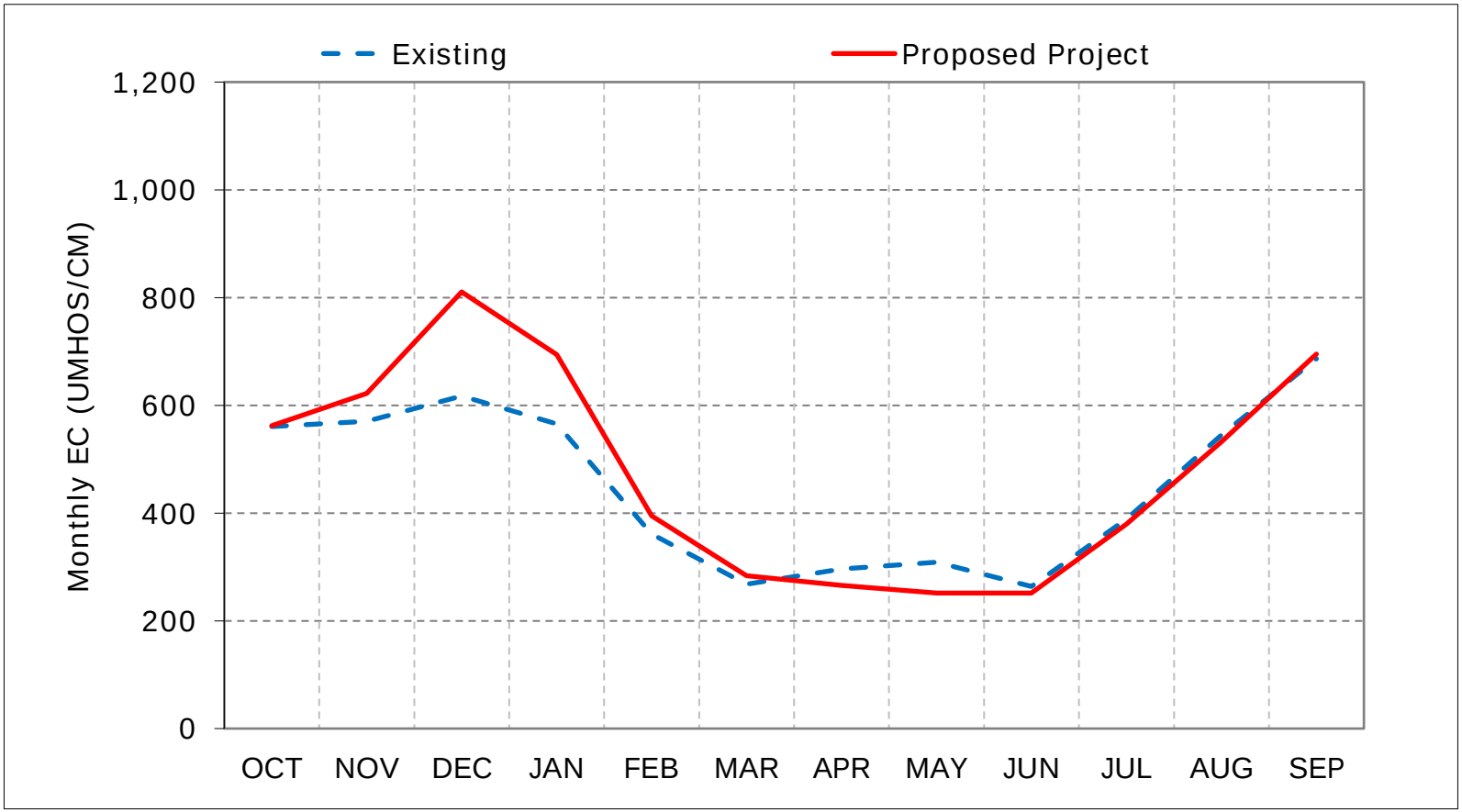
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 15-4. Old River at Rock Slough Salinity, Below Normal Year Average EC



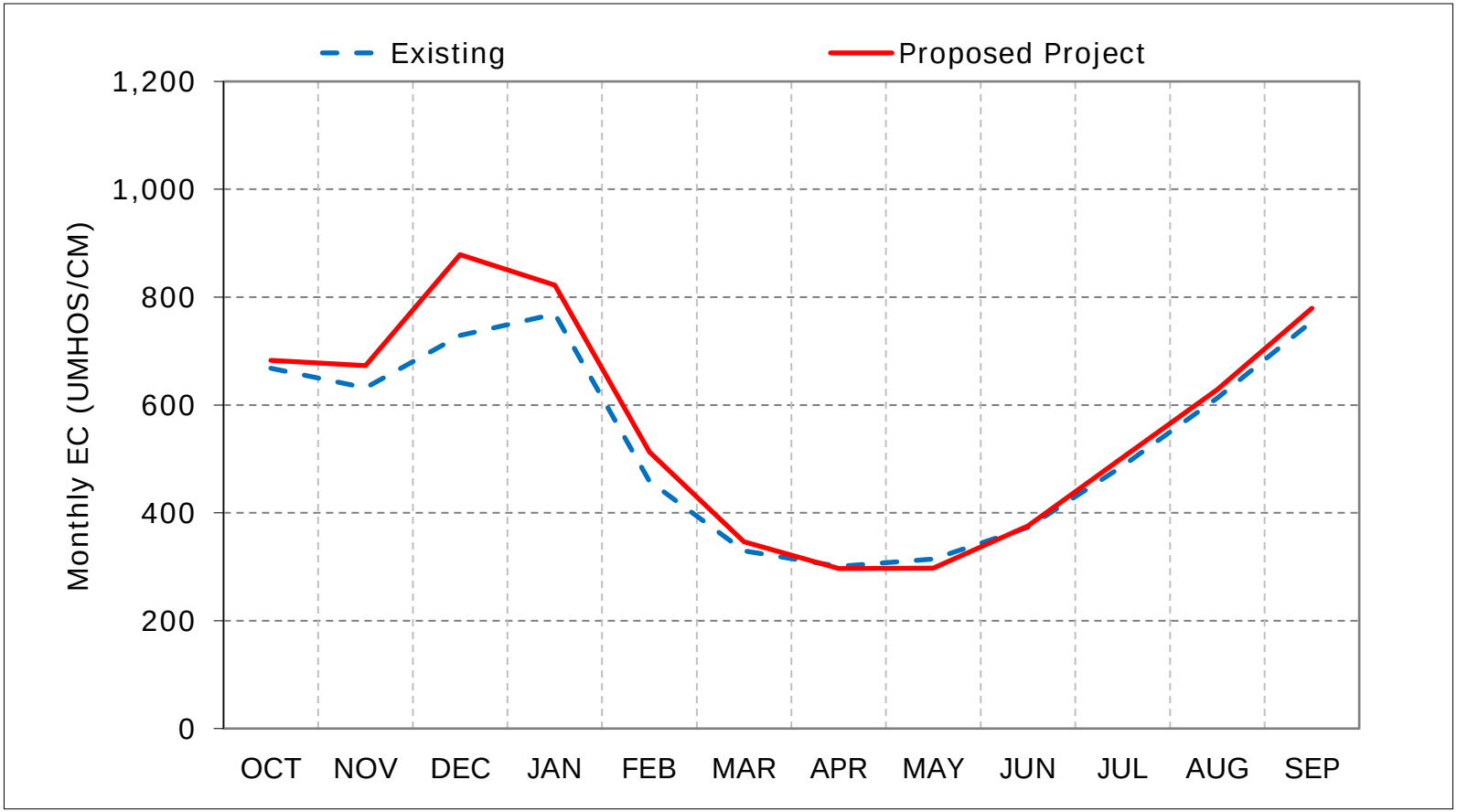
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 15-5. Old River at Rock Slough Salinity, Dry Year Average EC



*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.

Figure 15-6. Old River at Rock Slough Salinity, Critical Year Average EC



*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.

Figure 15-7. Old River at Rock Slough Salinity, January EC

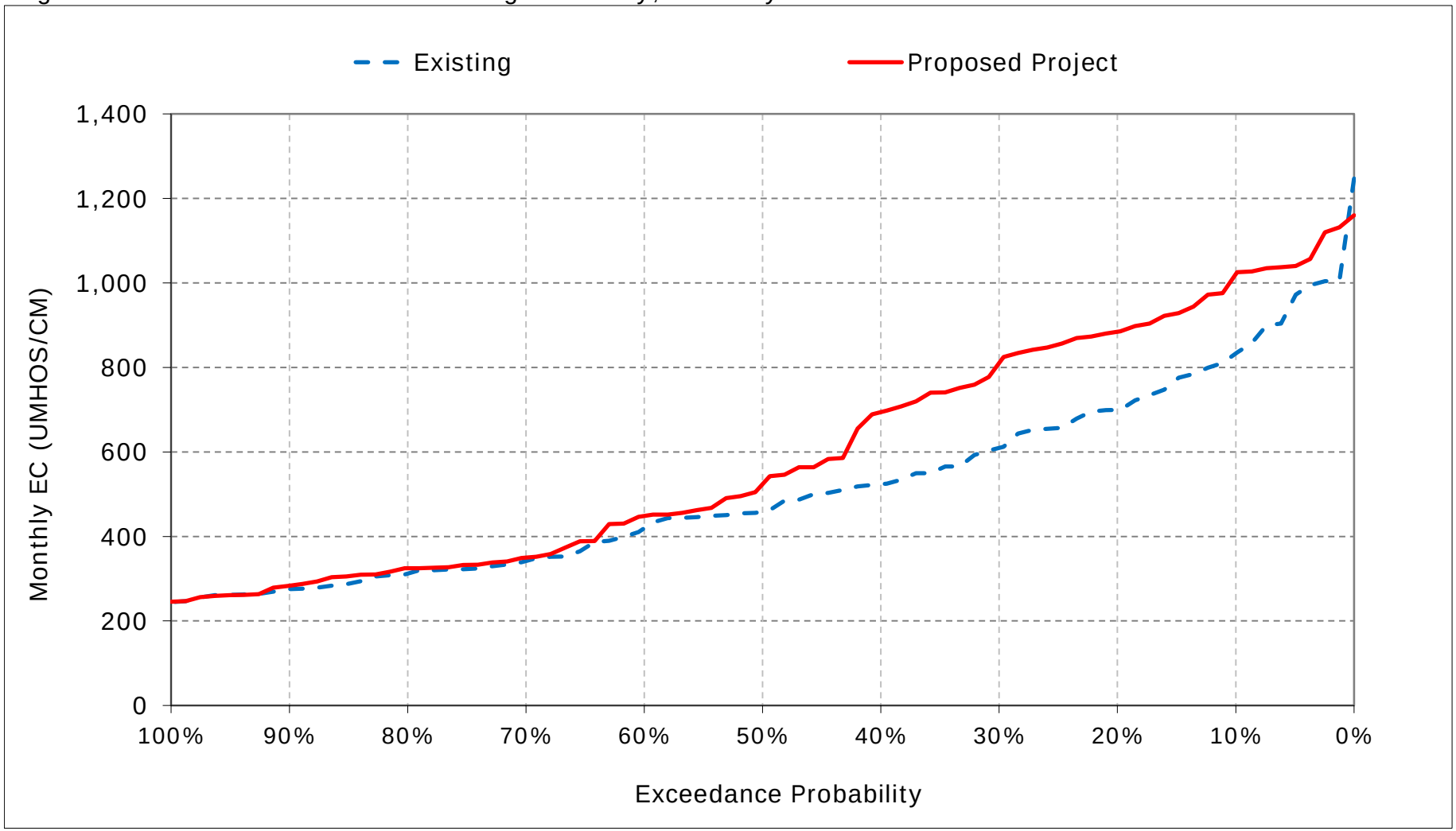


Figure 15-8. Old River at Rock Slough Salinity, February EC

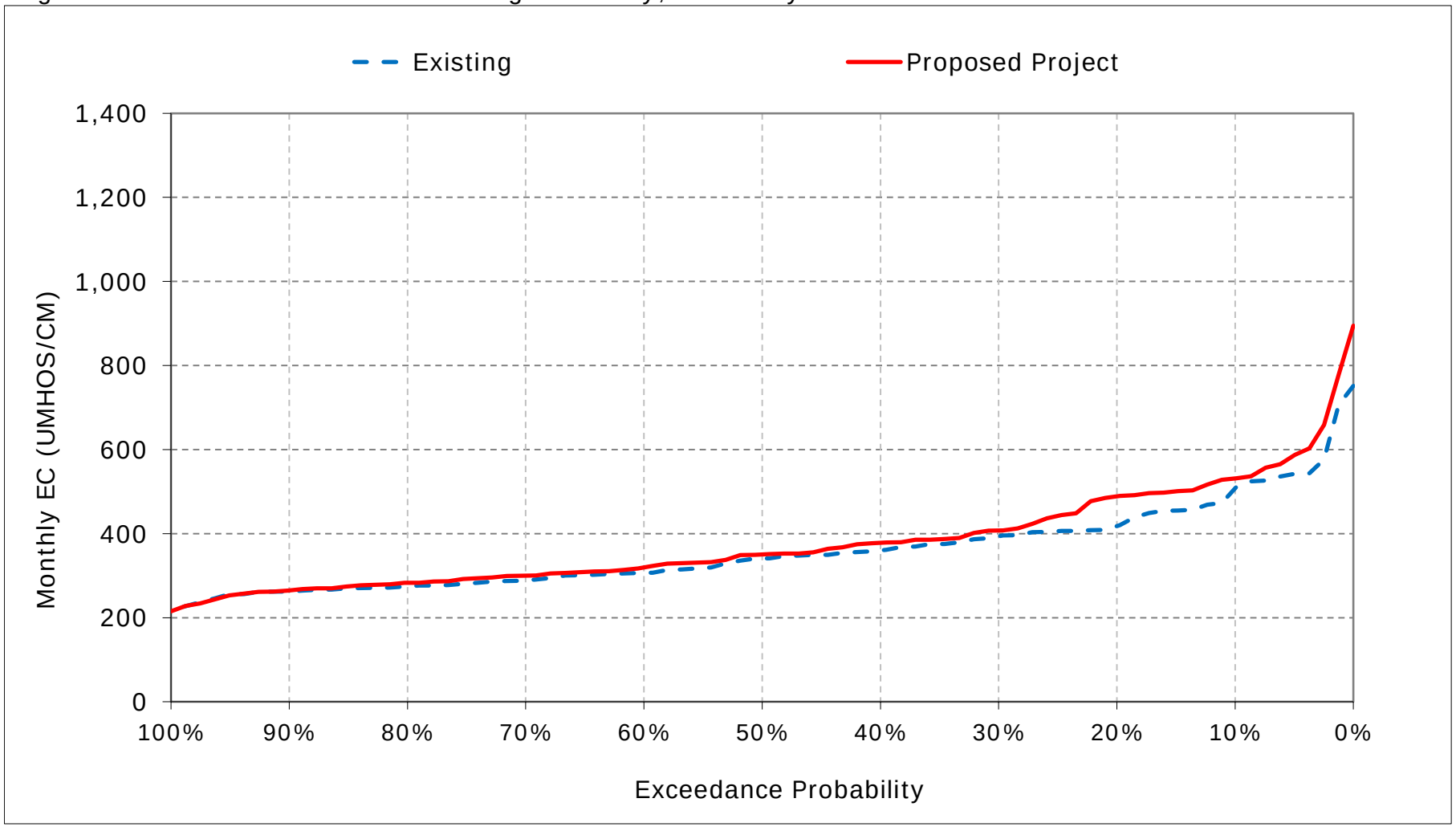


Figure 15-9. Old River at Rock Slough Salinity, March EC

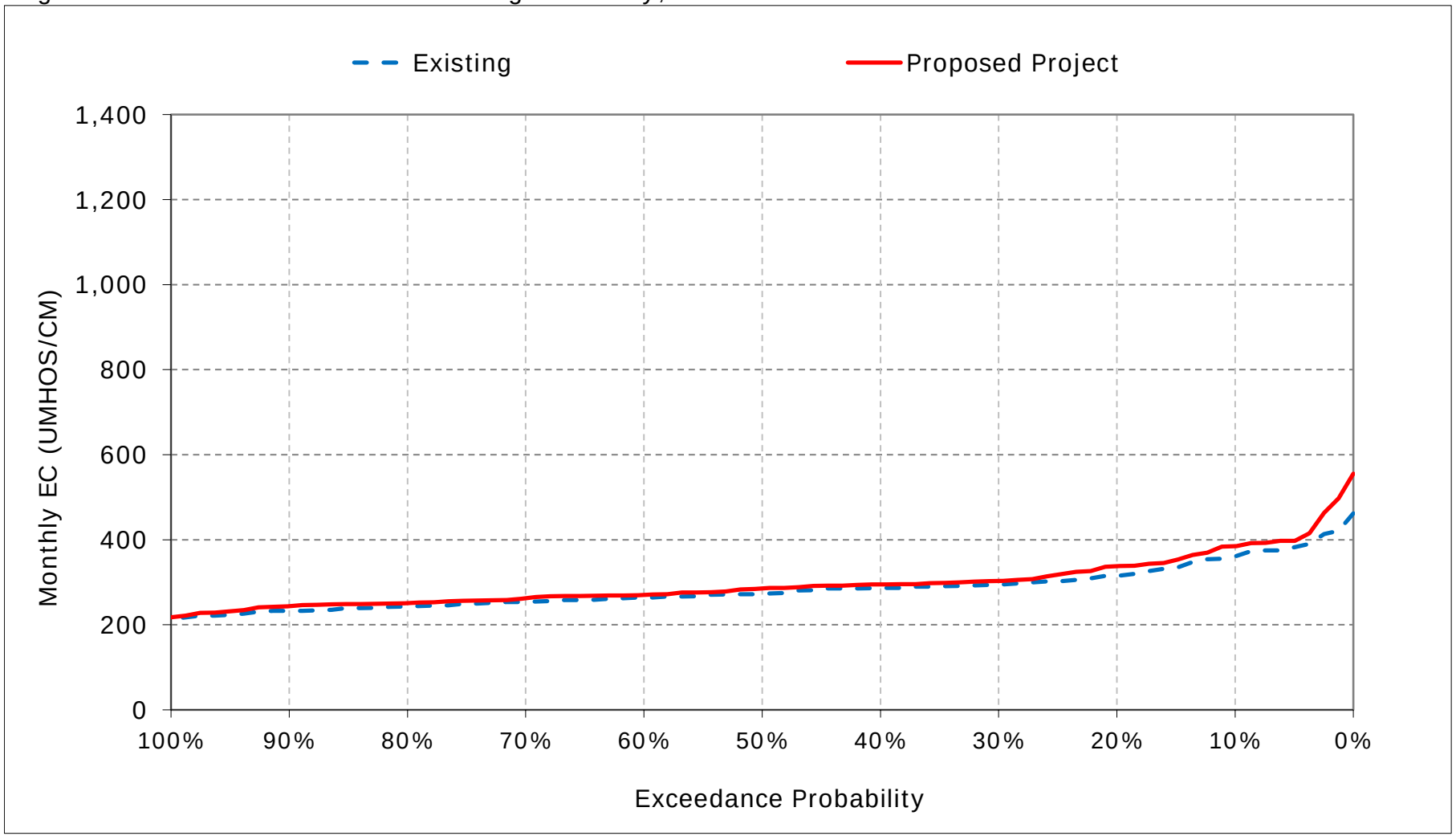


Figure 15-10. Old River at Rock Slough Salinity, April EC

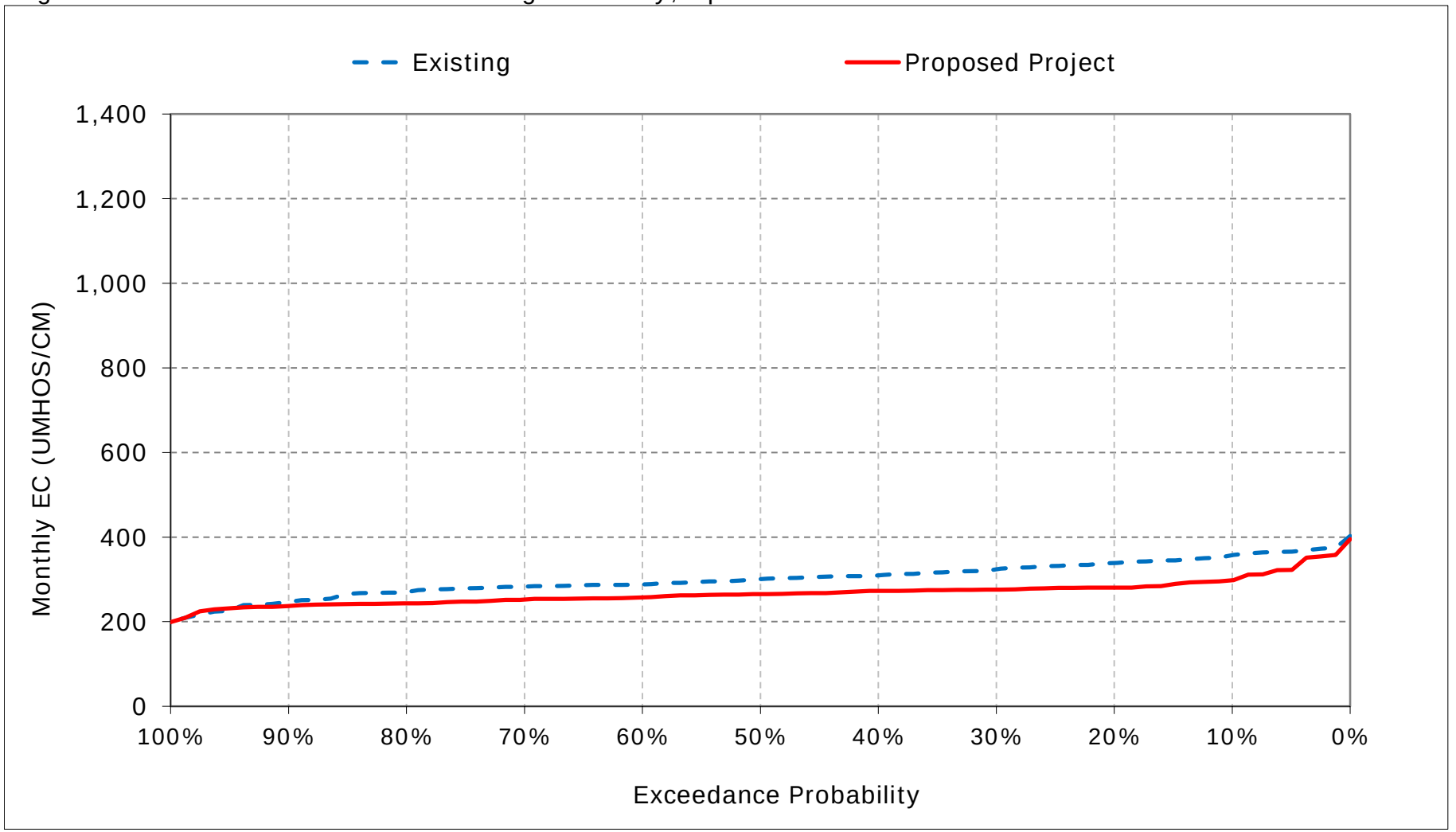


Figure 15-11. Old River at Rock Slough Salinity, May EC

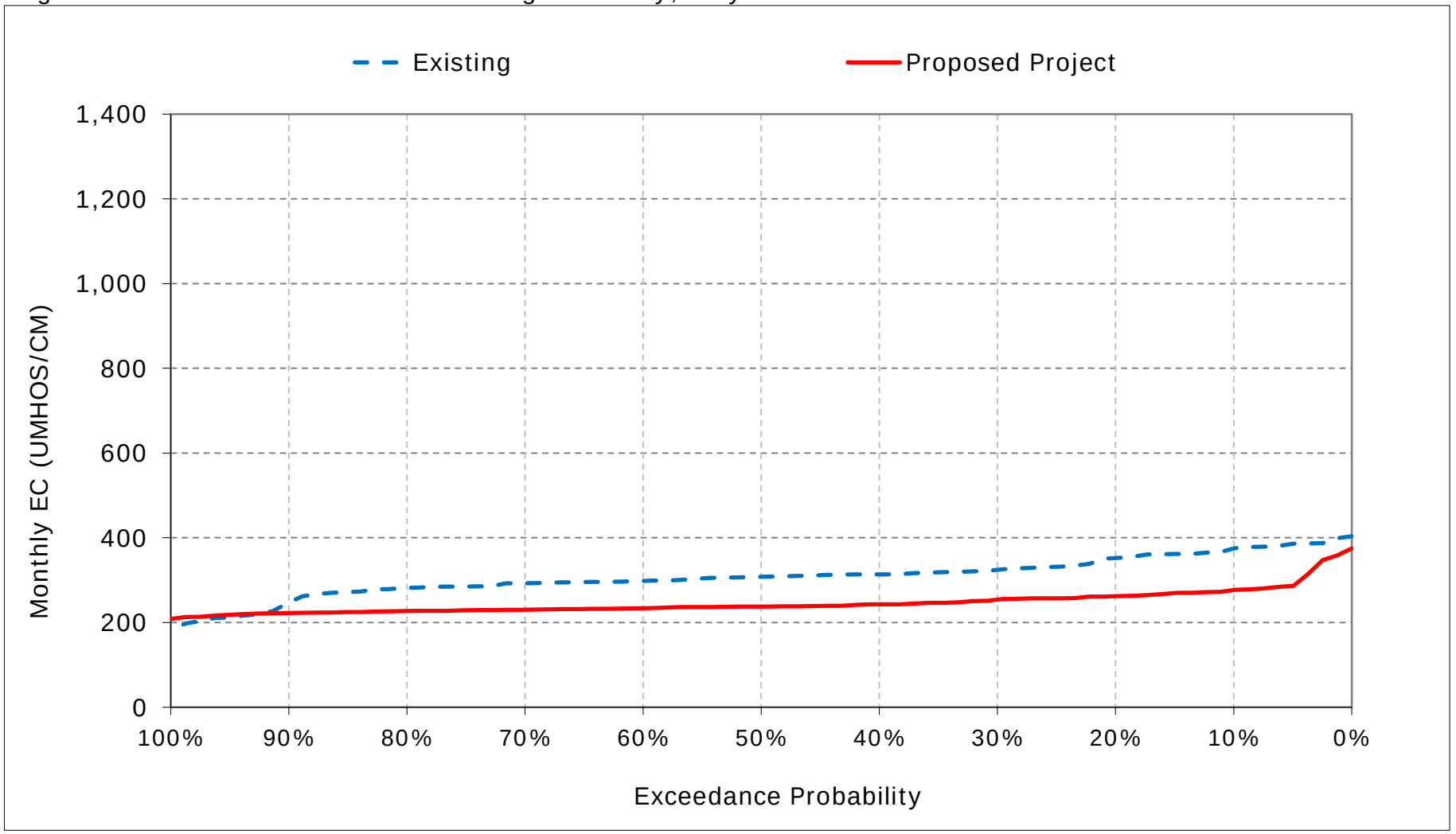


Figure 15-12. Old River at Rock Slough Salinity, June EC

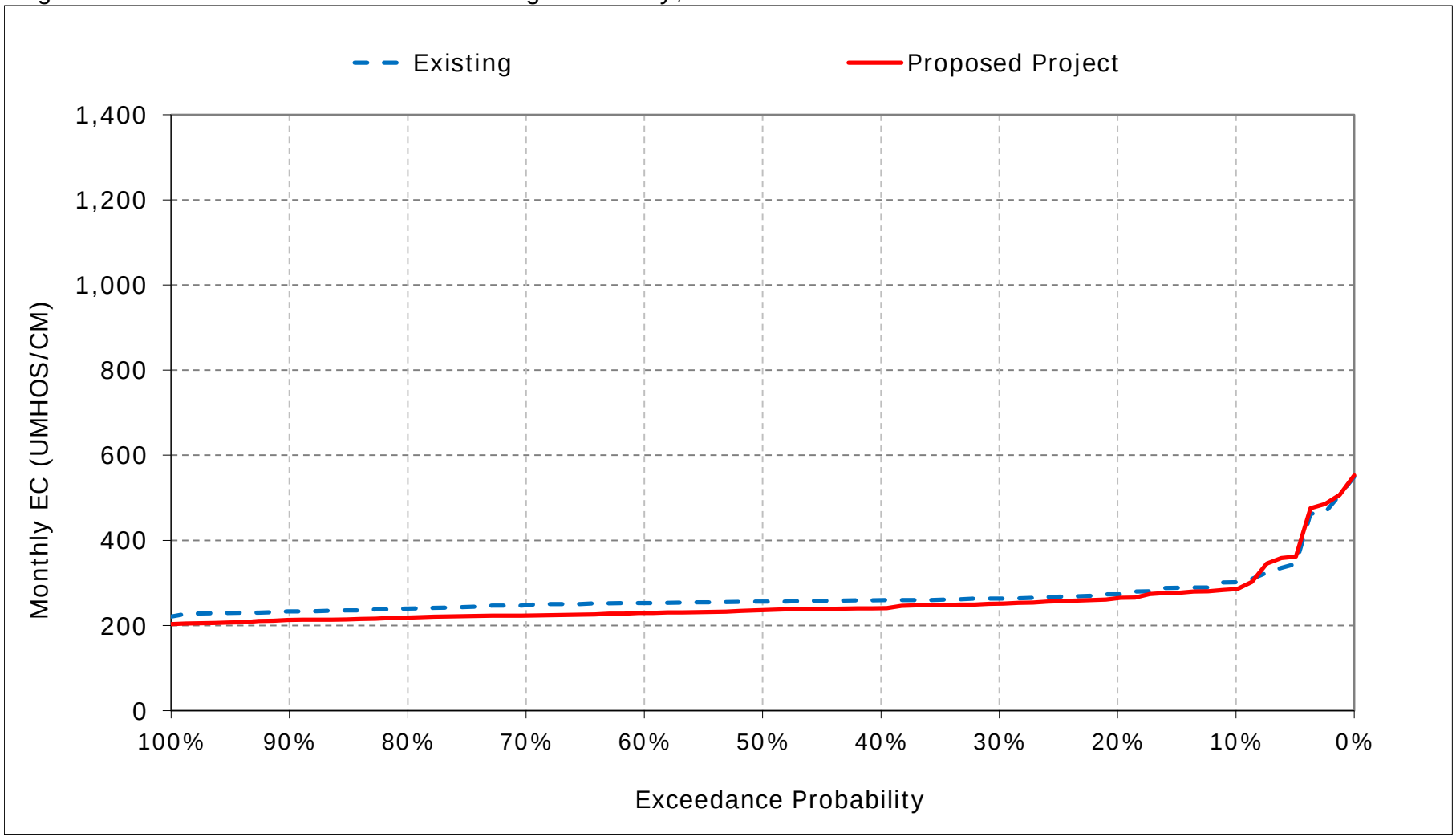


Figure 15-13. Old River at Rock Slough Salinity, July EC

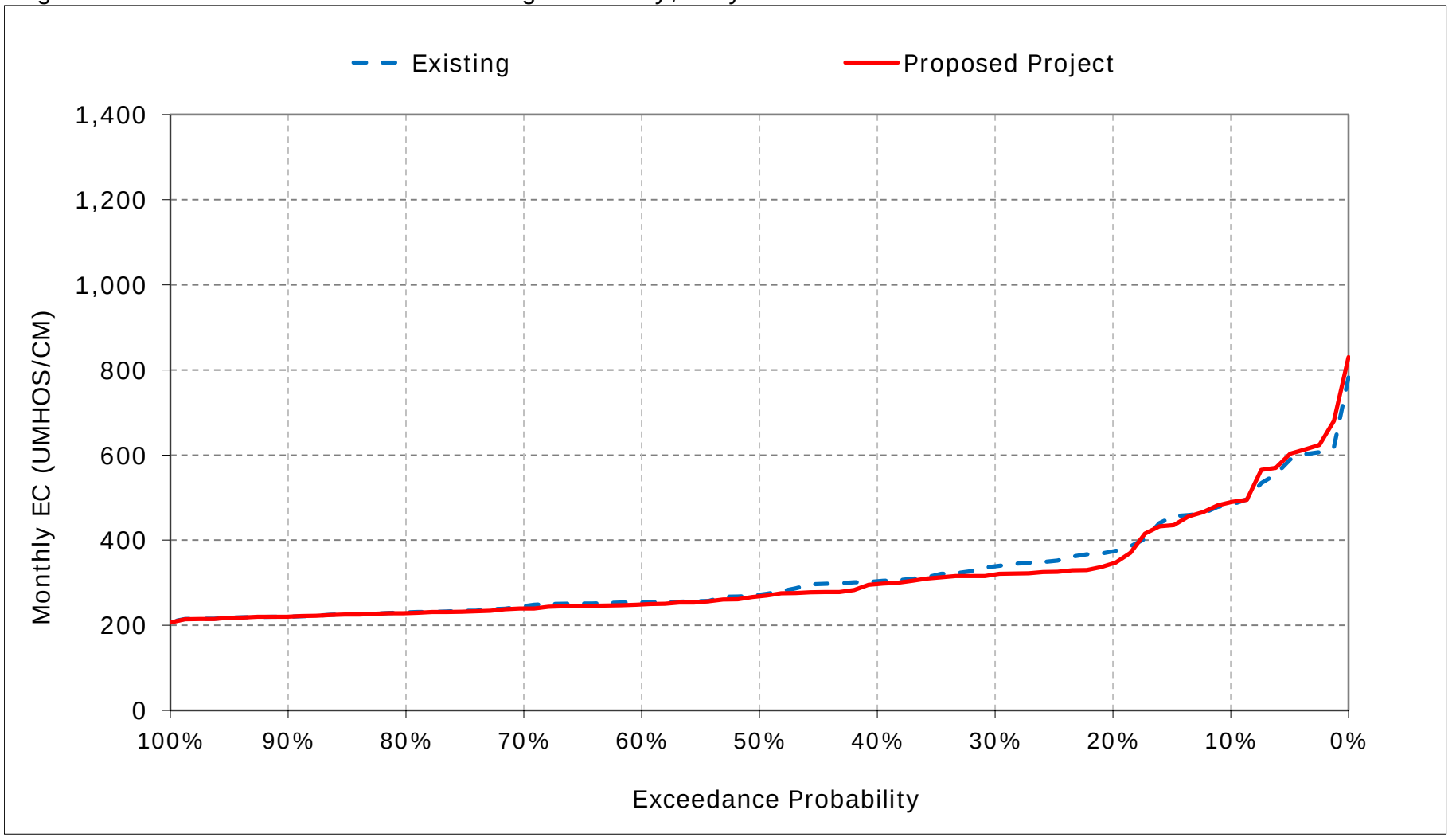


Figure 15-14. Old River at Rock Slough Salinity, August EC

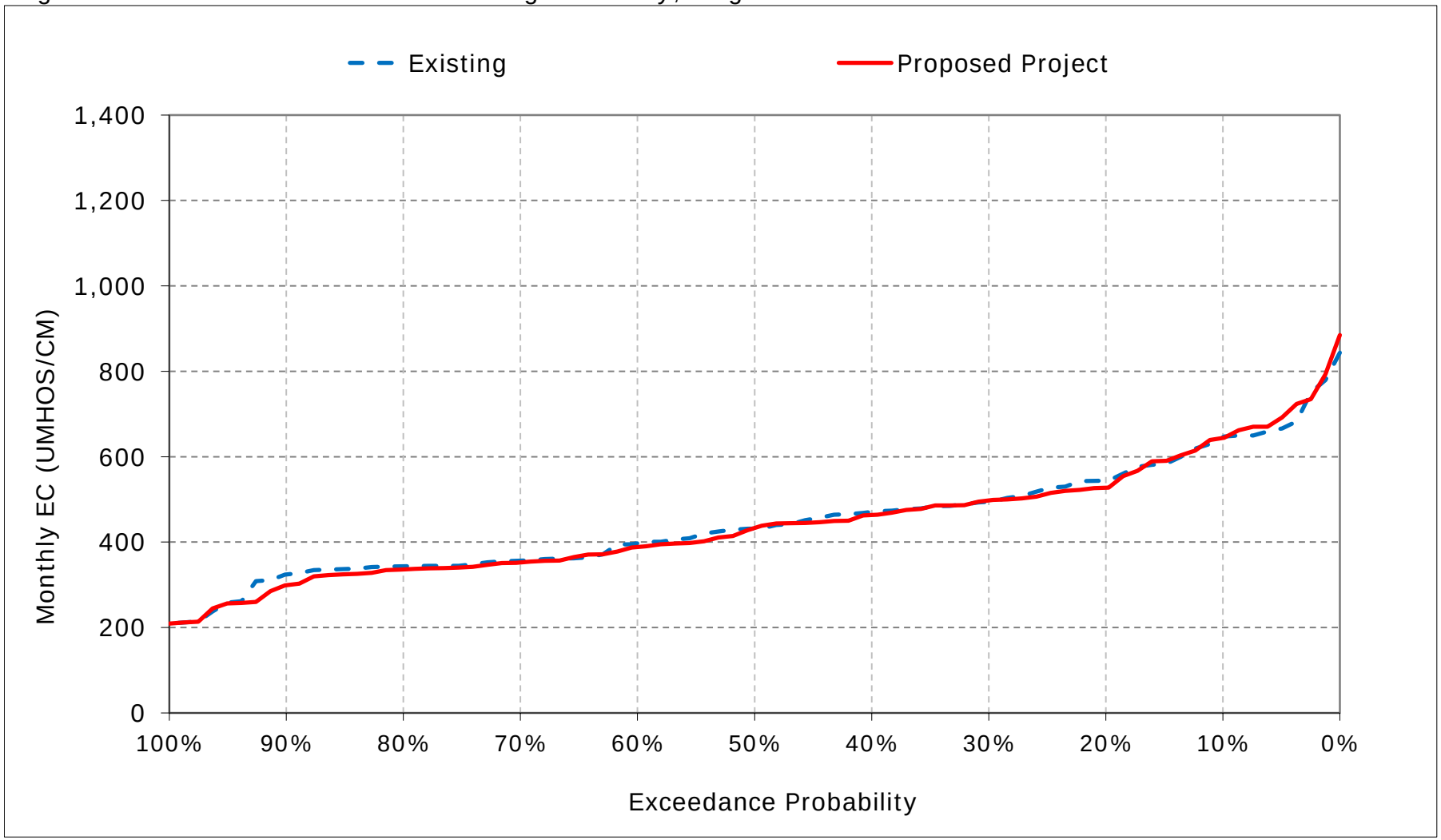


Figure 15-15. Old River at Rock Slough Salinity, September EC

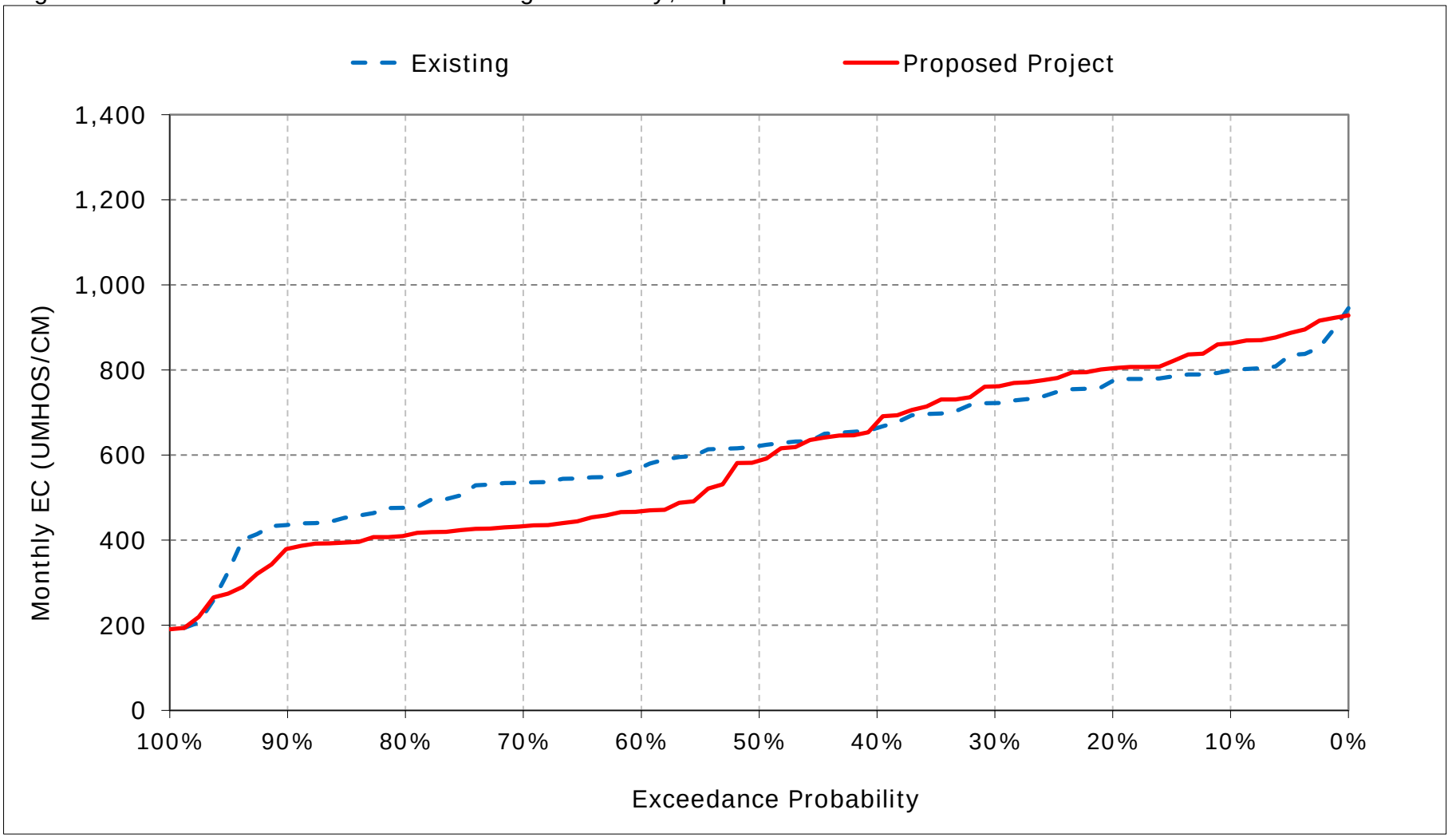


Figure 15-16. Old River at Rock Slough Salinity, October EC

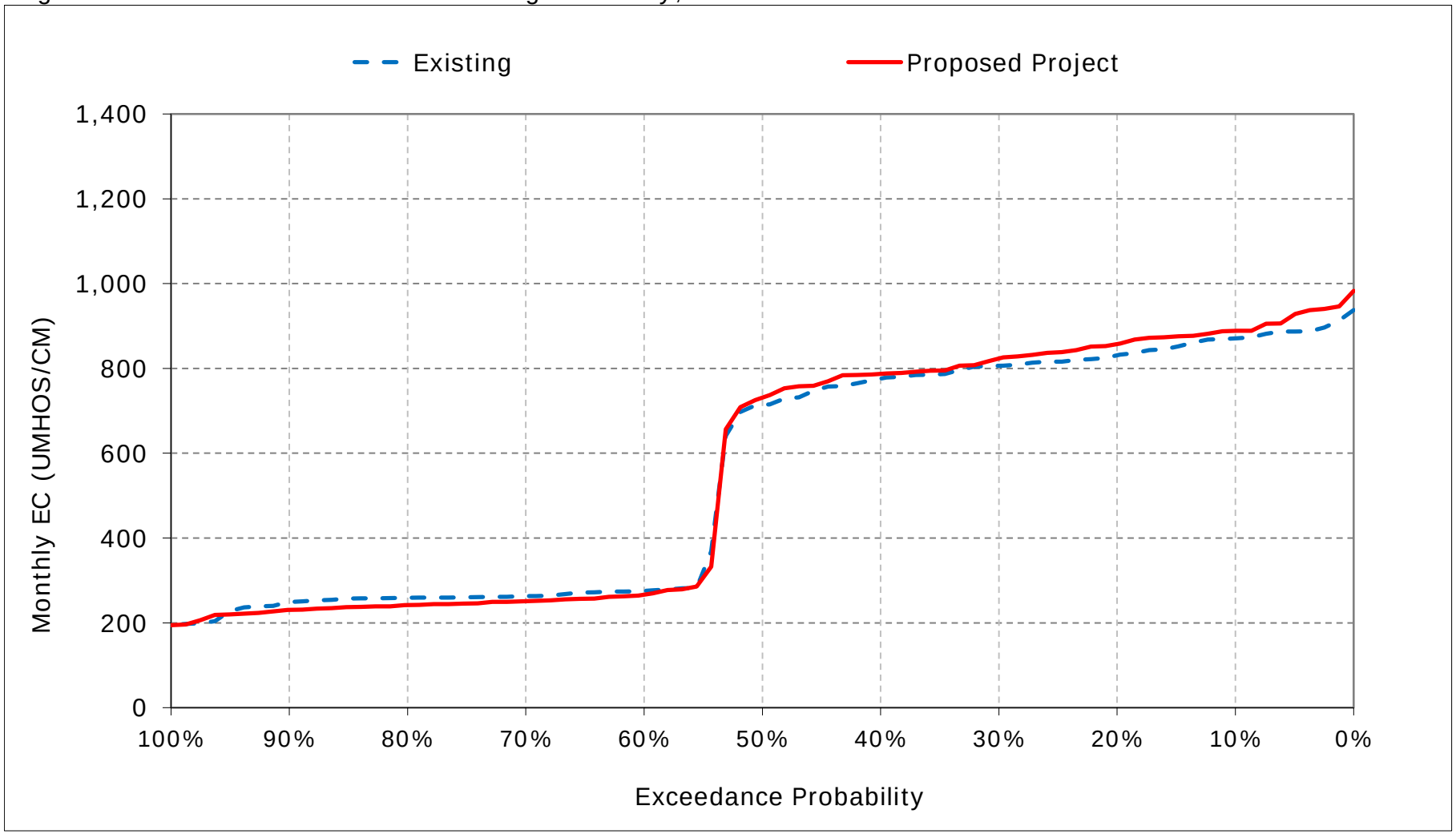


Figure 15-17. Old River at Rock Slough Salinity, November EC

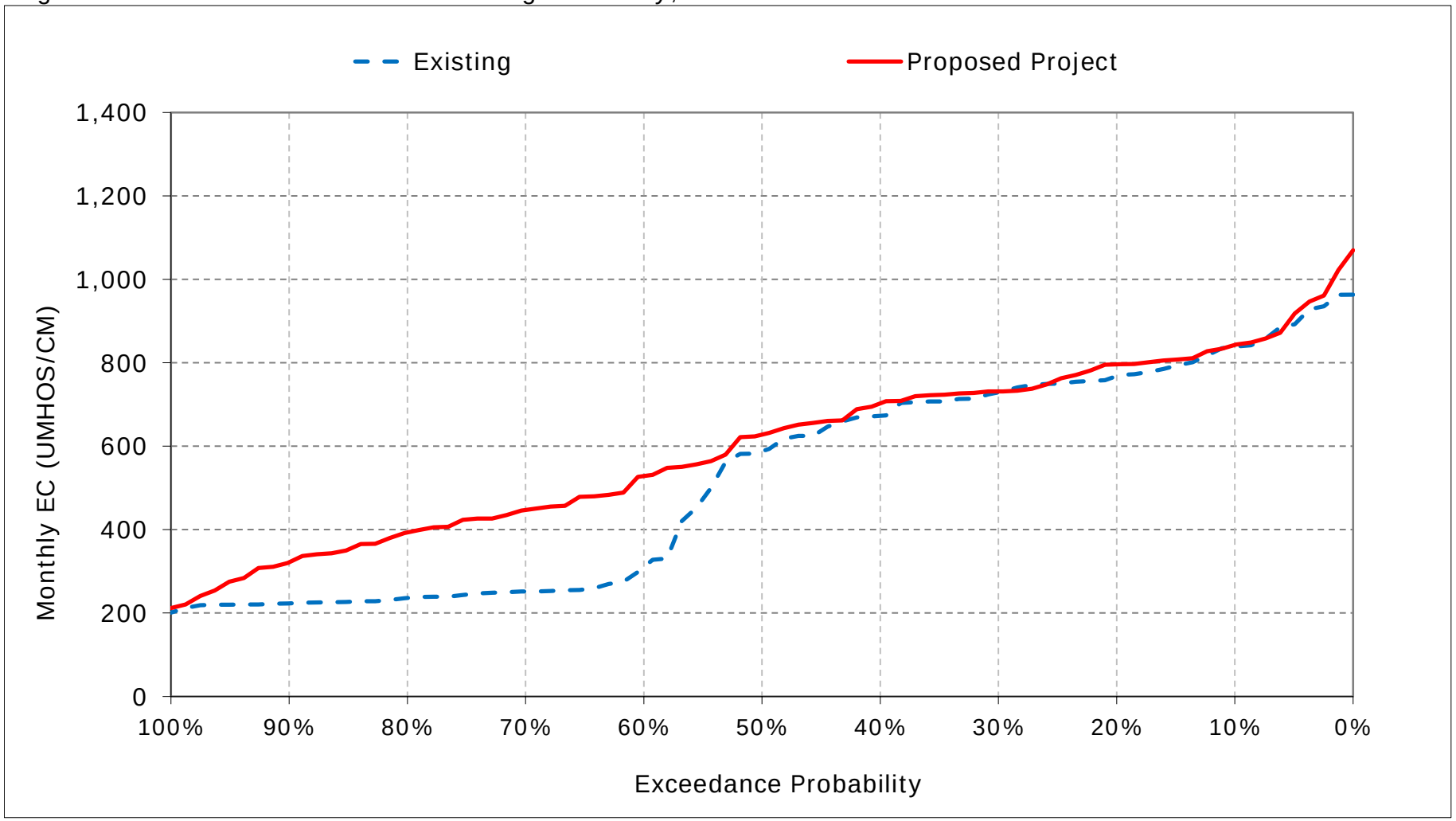


Figure 15-18. Old River at Rock Slough Salinity, December EC

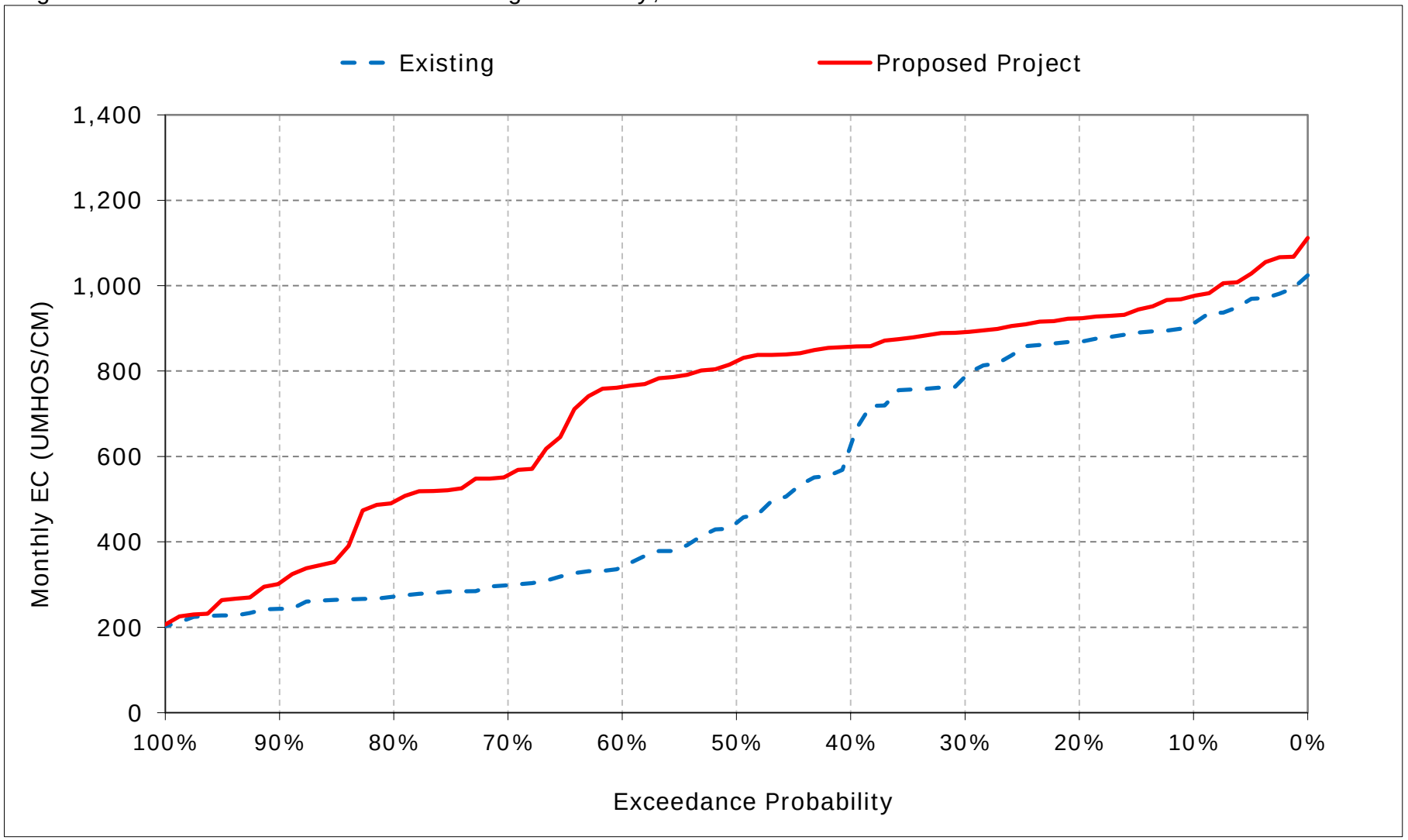


Table 16-1. Banks Pumping Plant South Delta Exports Salinity, Monthly EC

Existing

	Monthly EC (UMHOS/CM)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	667	668	727	769	621	518	467	469	430	401	532	593
20%	641	604	685	726	567	454	433	442	384	367	435	566
30%	625	592	660	604	520	432	407	427	370	322	393	545
40%	599	570	603	561	503	409	390	414	364	315	380	530
50%	572	549	441	516	461	392	377	397	354	310	351	496
60%	357	336	371	491	443	380	360	385	347	300	328	472
70%	336	311	329	455	418	361	346	360	341	282	311	456
80%	314	301	305	418	398	336	310	334	325	274	304	427
90%	296	294	294	384	346	311	267	230	294	266	293	401
Long Term												
Full Simulation Period[a]	486	469	499	555	477	401	372	381	358	323	376	490
Water Year Types[b]												
Wet (32%)	433	403	409	434	393	337	299	300	312	282	303	437
Above Normal (15%)	528	500	500	554	494	396	362	374	348	285	310	412
Below Normal (17%)	500	478	533	618	483	404	384	398	354	298	382	565
Dry (22%)	484	489	540	582	510	434	420	433	377	341	445	518
Critical (15%)	546	545	589	706	586	487	458	462	447	451	488	555

Proposed Project

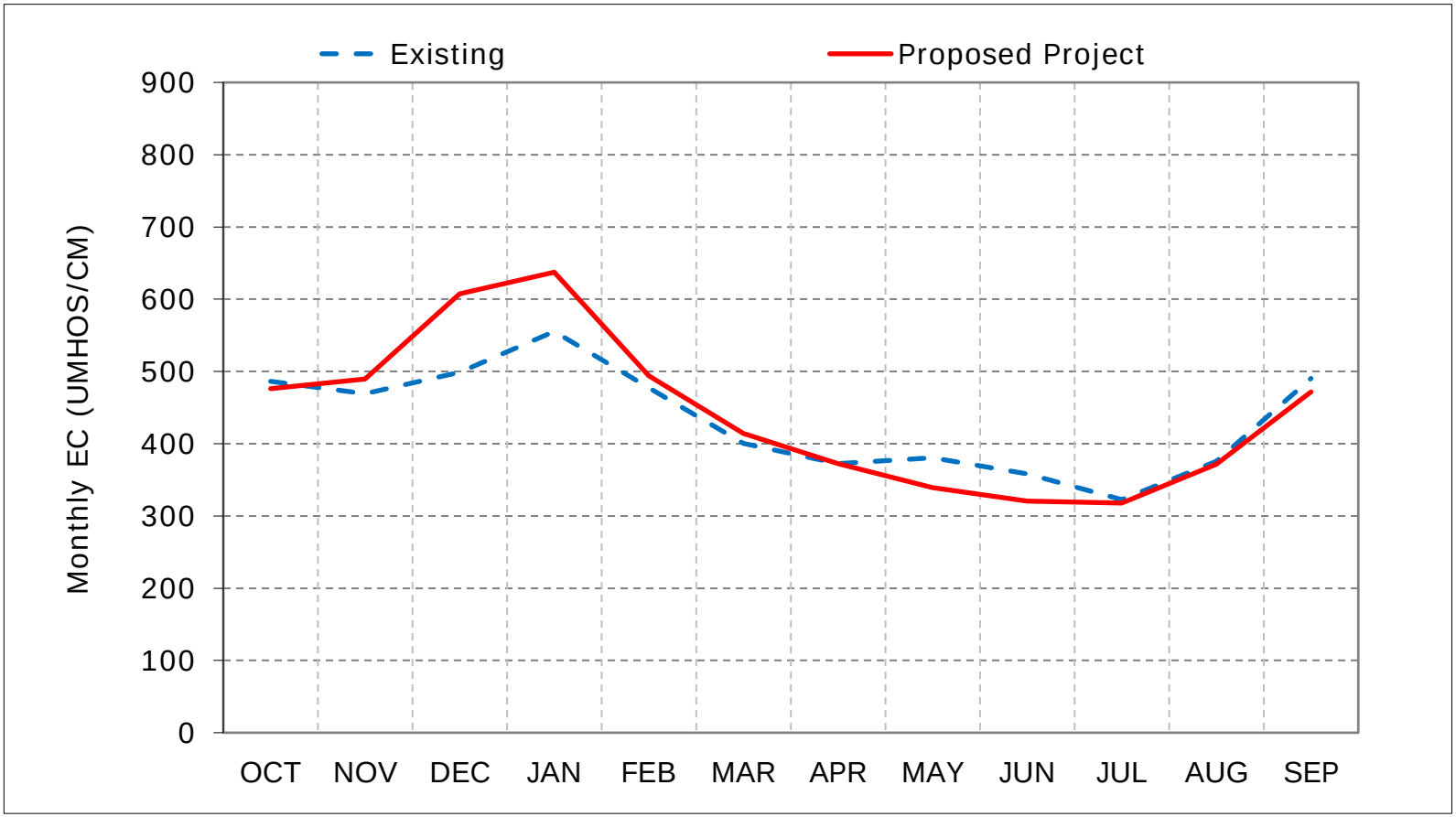
	Monthly EC (UMHOS/CM)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	699	653	750	912	684	524	452	423	378	399	533	608
20%	660	630	708	850	615	484	434	391	338	357	416	585
30%	636	591	694	764	558	461	410	376	324	320	389	549
40%	598	580	666	721	518	430	396	347	313	312	373	497
50%	588	558	644	600	502	404	384	332	308	301	348	456
60%	295	395	626	531	444	391	350	320	305	295	328	424
70%	287	363	579	494	419	368	333	311	294	280	310	399
80%	280	331	499	432	388	337	311	302	287	265	303	386
90%	274	310	347	399	337	321	283	257	281	260	284	361
Long Term												
Full Simulation Period[a]	476	490	607	637	494	414	372	339	321	318	371	472
Water Year Types[b]												
Wet (32%)	418	428	507	469	390	342	297	272	288	280	298	361
Above Normal (15%)	520	543	657	698	520	415	356	315	300	277	310	405
Below Normal (17%)	483	495	632	705	495	416	382	340	303	288	375	596
Dry (22%)	473	499	648	701	543	456	427	383	328	336	434	519
Critical (15%)	554	549	685	766	619	503	457	443	421	448	494	565

Proposed Project minus Existing

	Monthly EC (UMHOS/CM)											
Statistic	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	32	-15	23	143	63	6	-16	-47	-52	-3	1	15
20%	19	26	23	124	48	30	1	-51	-46	-10	-19	19
30%	11	-1	34	160	38	29	3	-52	-46	-3	-4	5
40%	-2	10	64	160	15	21	5	-67	-51	-3	-7	-32
50%	16	8	202	84	41	12	7	-64	-47	-8	-2	-40
60%	-62	59	255	39	1	11	-10	-65	-43	-5	1	-47
70%	-49	52	250	39	0	6	-13	-49	-47	-2	-1	-56
80%	-34	30	194	14	-11	0	2	-32	-38	-9	0	-41
90%	-22	16	53	15	-9	11	16	26	-13	-6	-9	-40
Long Term												
Full Simulation Period[a]	-10	20	109	82	17	13	0	-41	-38	-5	-4	-18
Water Year Types[b]												
Wet (32%)	-15	25	98	35	-3	4	-1	-28	-23	-1	-5	-76
Above Normal (15%)	-9	43	156	145	26	19	-6	-59	-47	-8	1	-8
Below Normal (17%)	-16	17	100	87	12	12	-2	-59	-51	-11	-7	31
Dry (22%)	-11	11	109	119	33	22	8	-50	-49	-4	-11	1
Critical (15%)	9	4	96	60	33	16	-1	-19	-26	-3	5	10

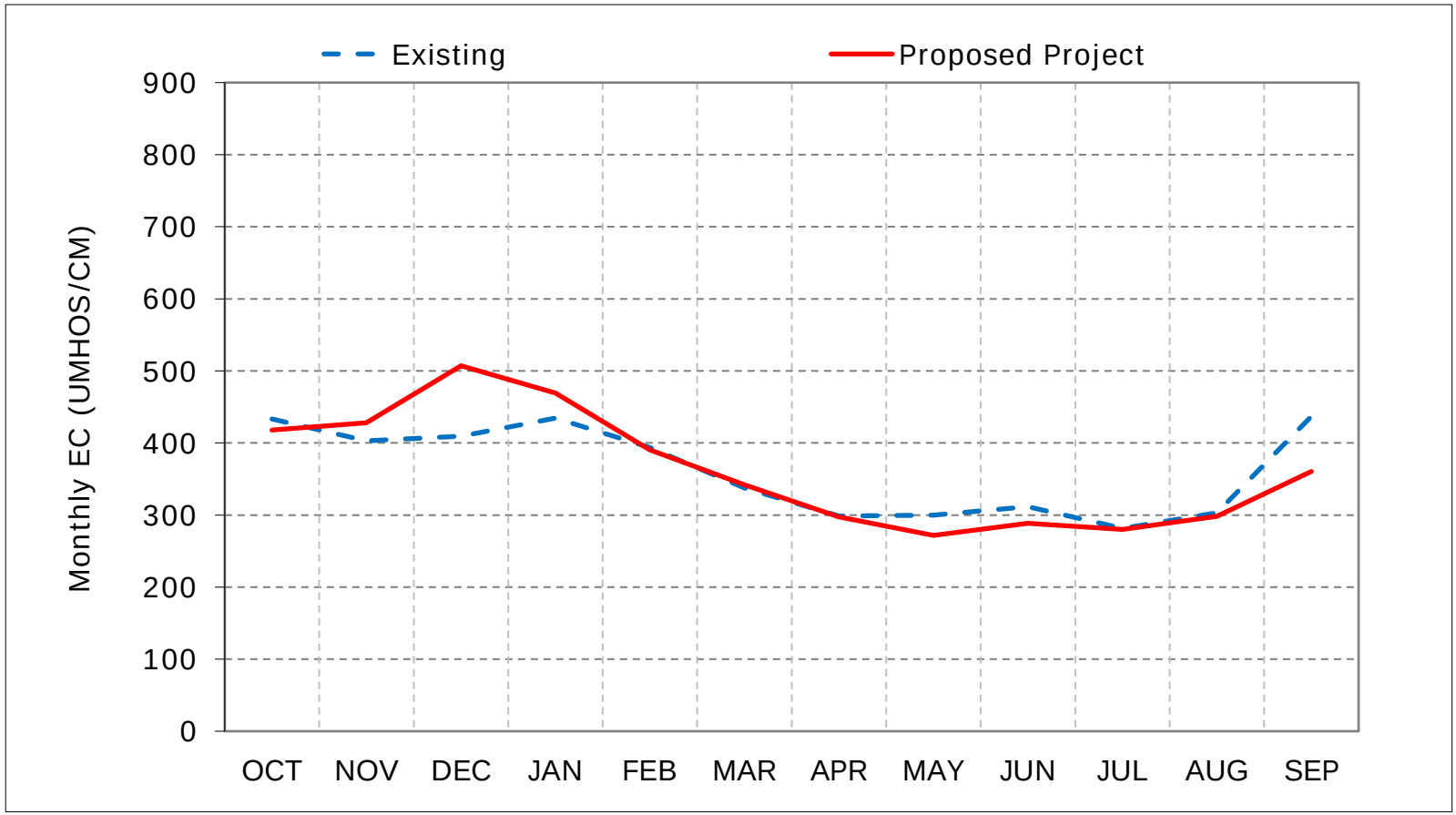
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 16-1. Banks Pumping Plant South Delta Exports Salinity, Long-Term Averag



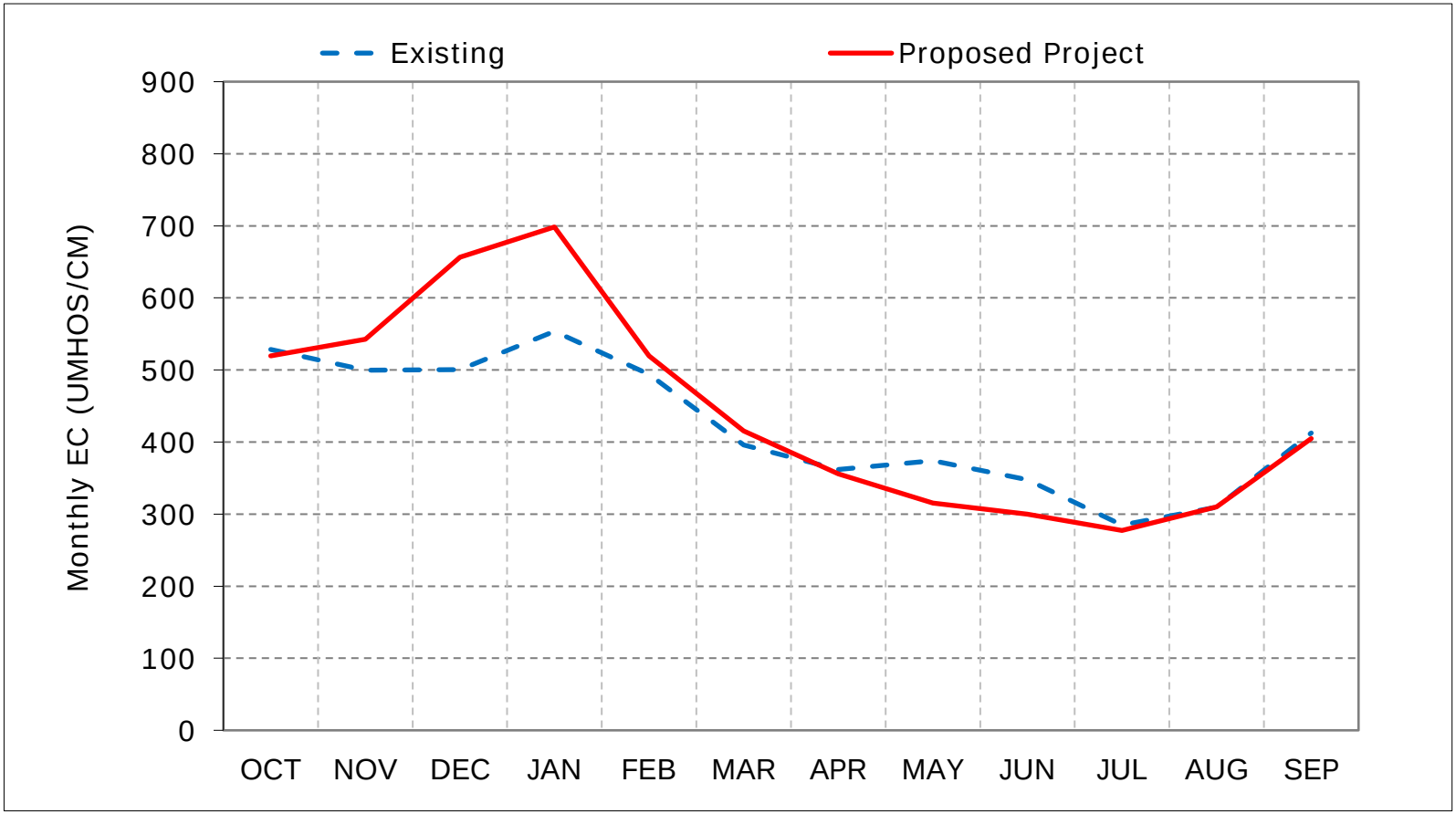
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 16-2. Banks Pumping Plant South Delta Exports Salinity, Wet Year Average



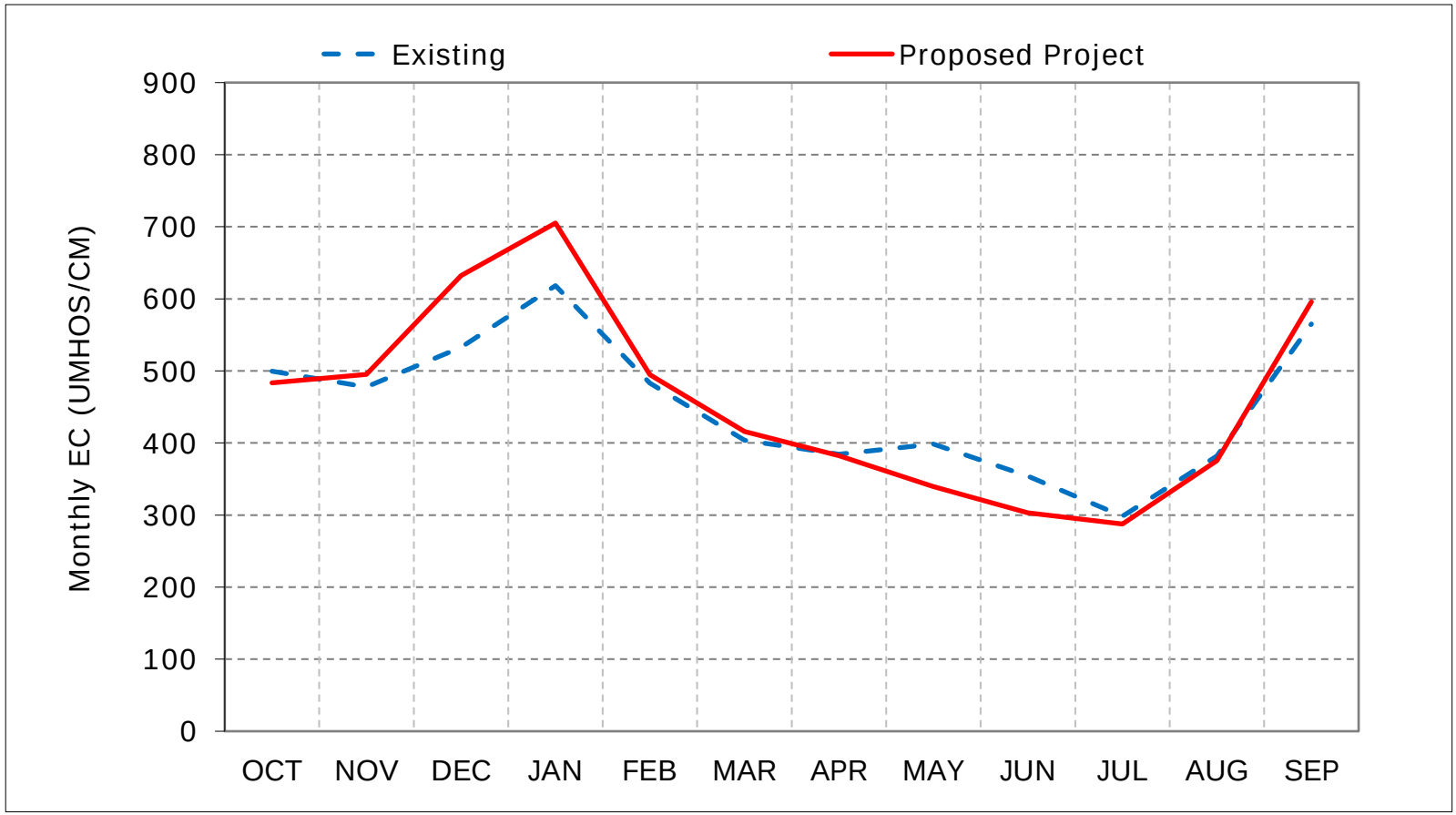
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 16-3. Banks Pumping Plant South Delta Exports Salinity, Above Normal Yea



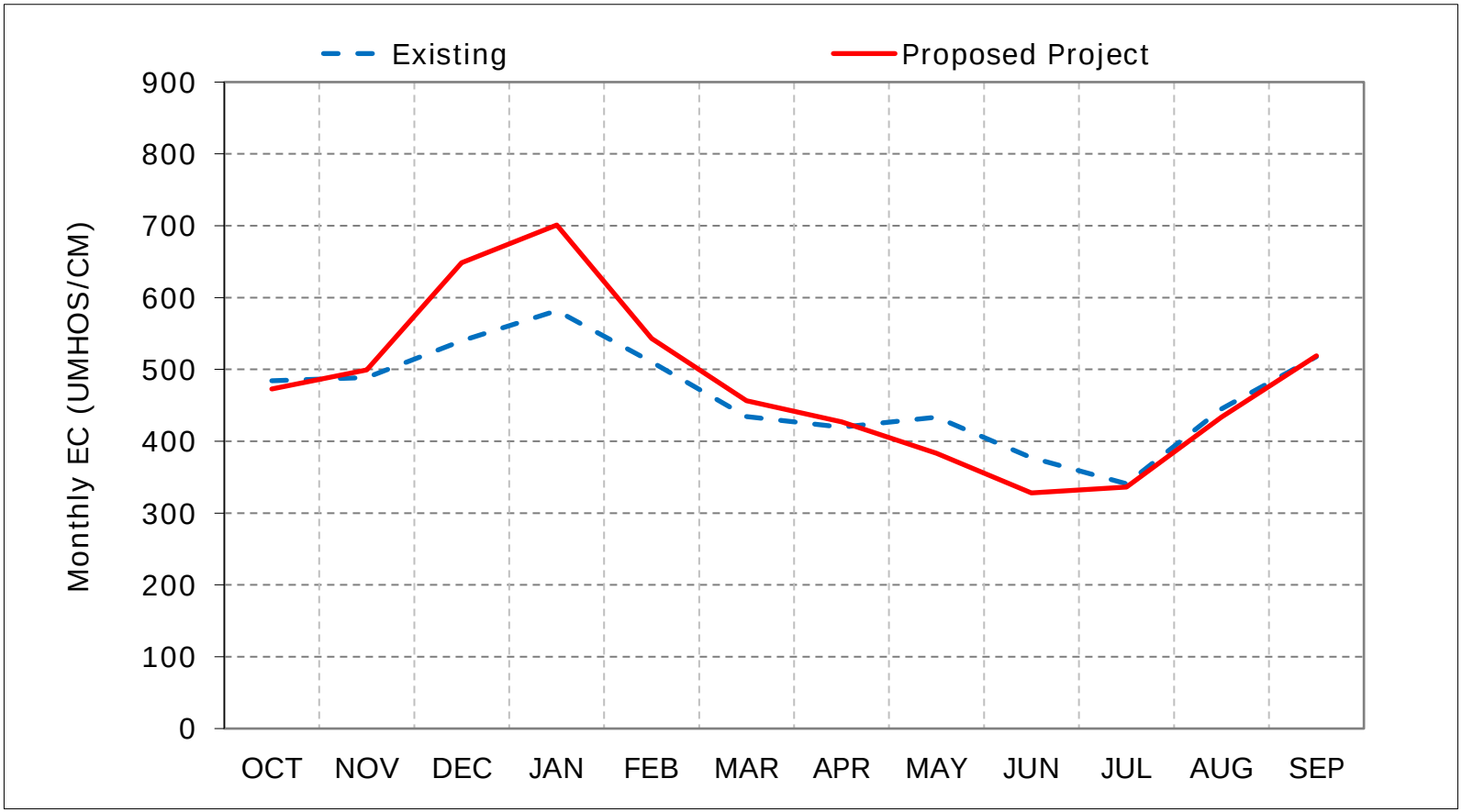
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 16-4. Banks Pumping Plant South Delta Exports Salinity, Below Normal Yea



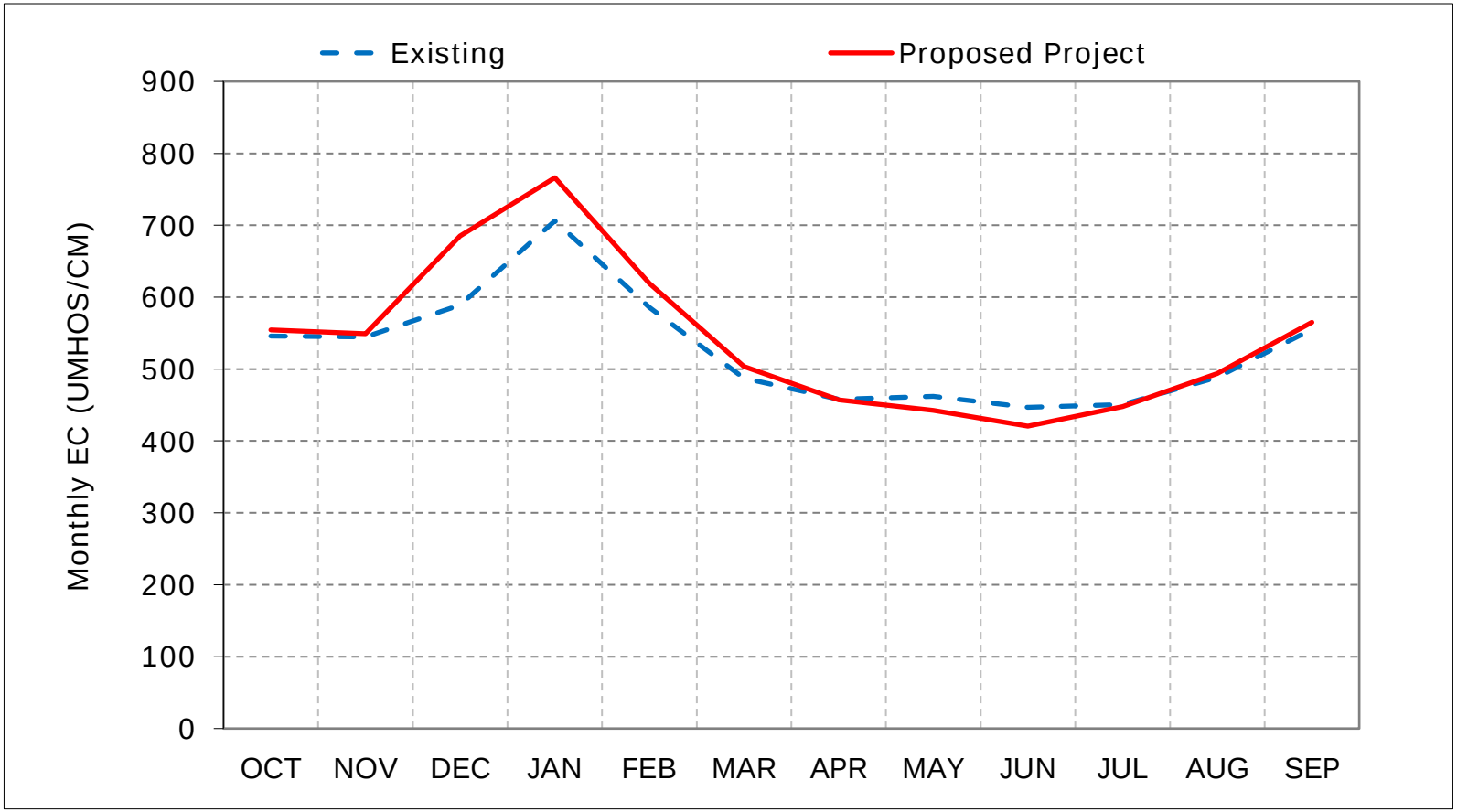
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 16-5. Banks Pumping Plant South Delta Exports Salinity, Dry Year Average



*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.

Figure 16-6. Banks Pumping Plant South Delta Exports Salinity, Critical Year Avera



*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.

Figure 16-7. Banks Pumping Plant South Delta Exports Salinity, January EC

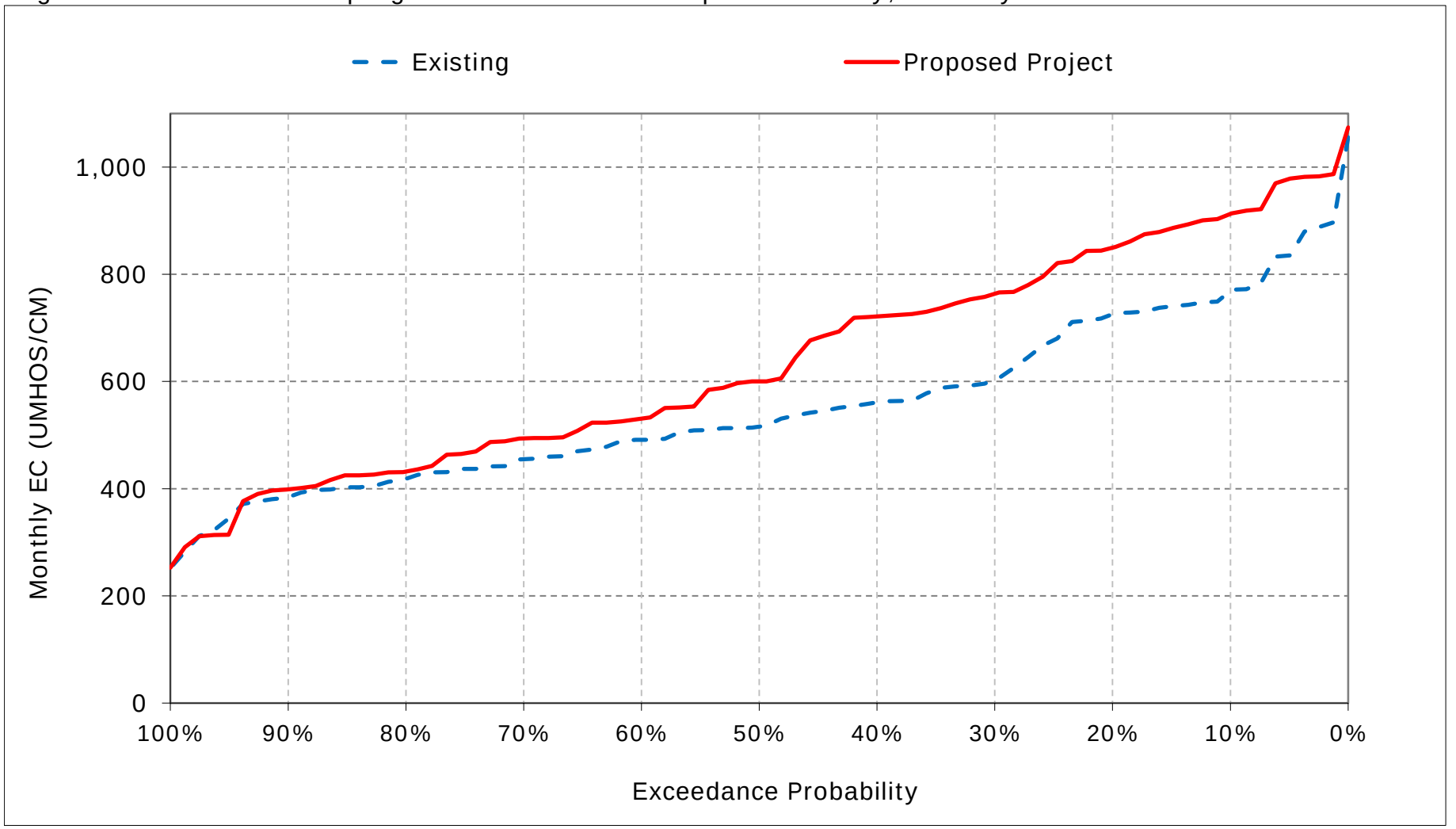


Figure 16-8. Banks Pumping Plant South Delta Exports Salinity, February EC

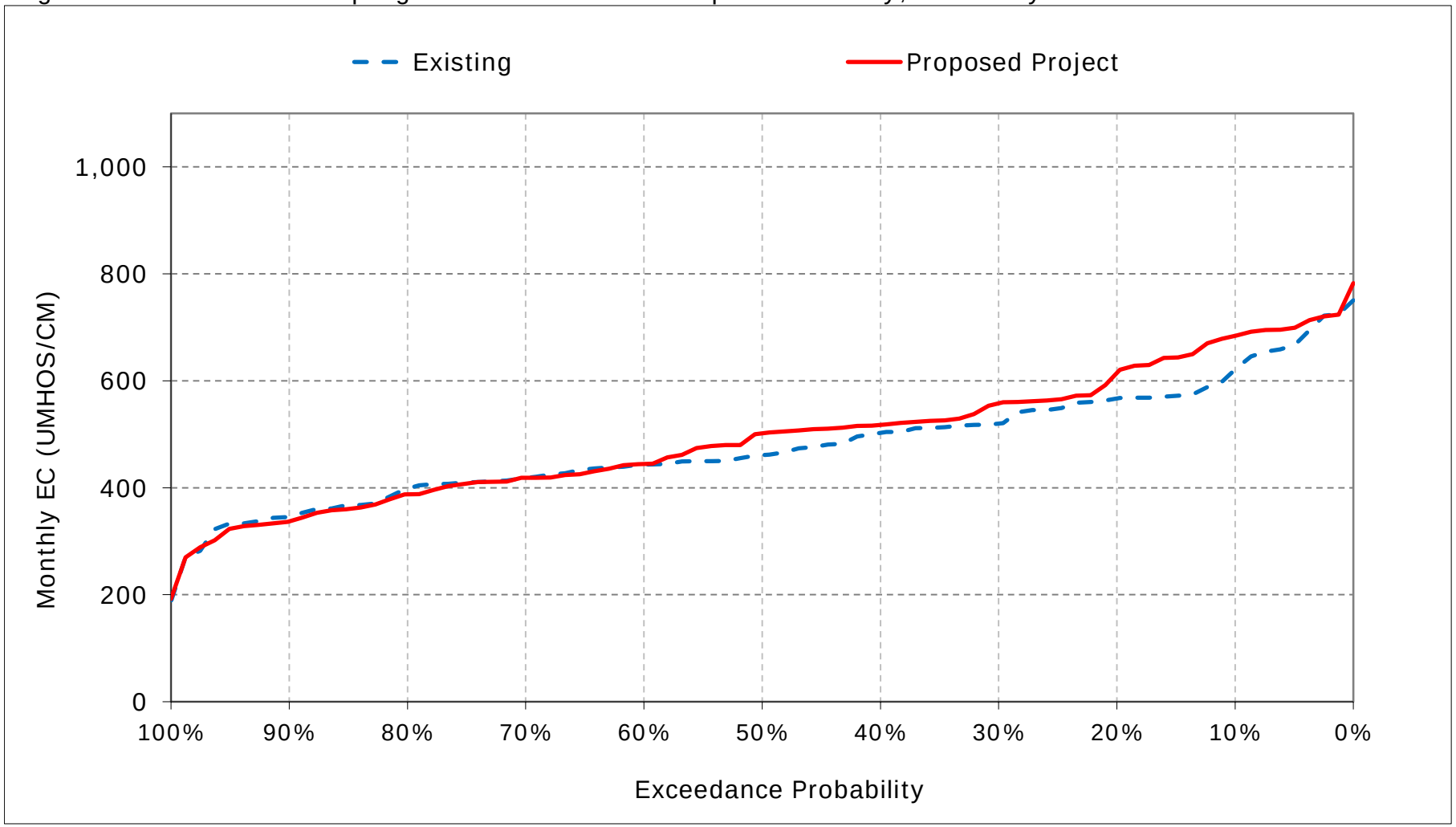


Figure 16-9. Banks Pumping Plant South Delta Exports Salinity, March EC

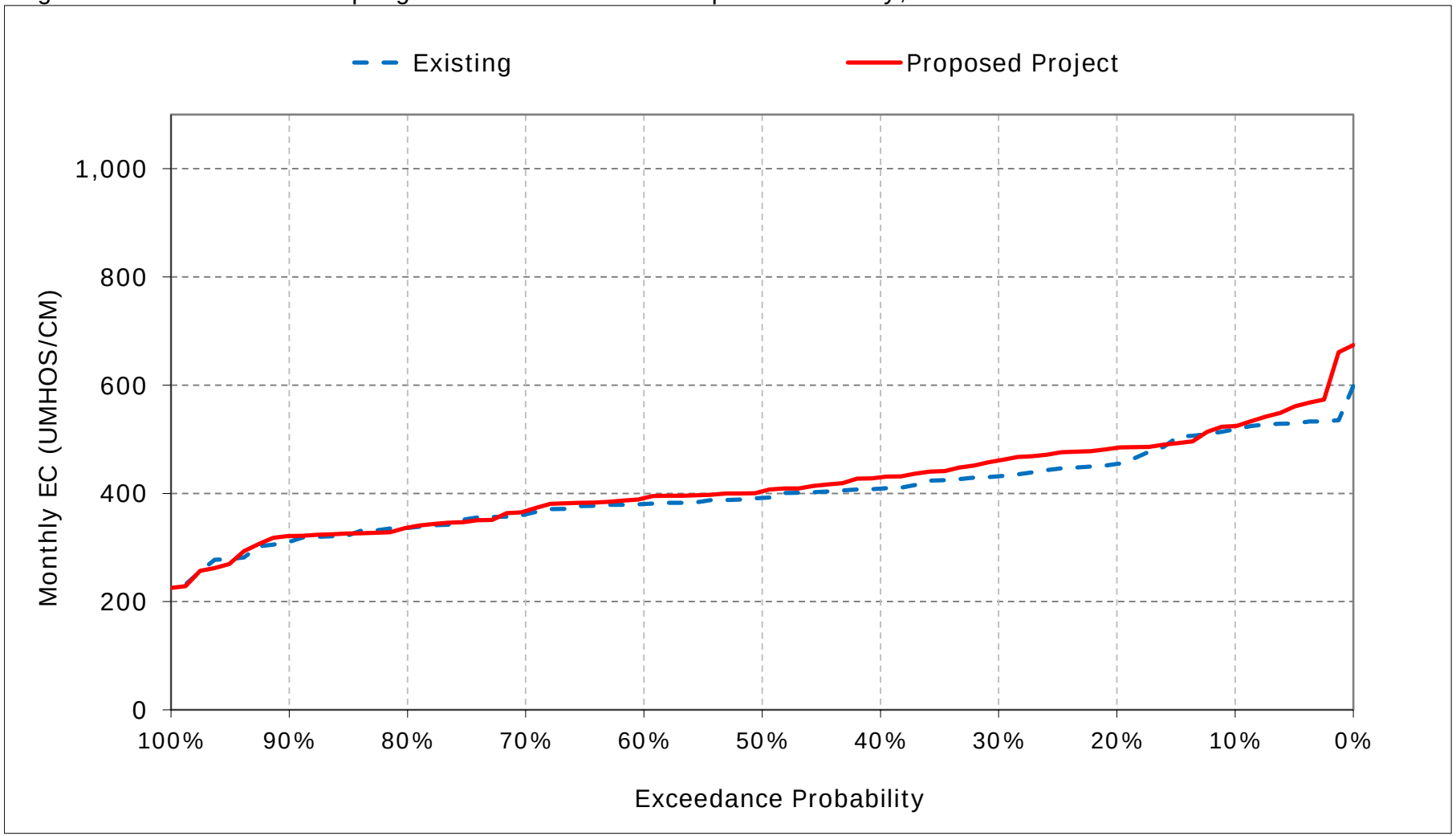


Figure 16-10. Banks Pumping Plant South Delta Exports Salinity, April EC

Figure 16-11. Banks Pumping Plant South Delta Exports Salinity, May EC

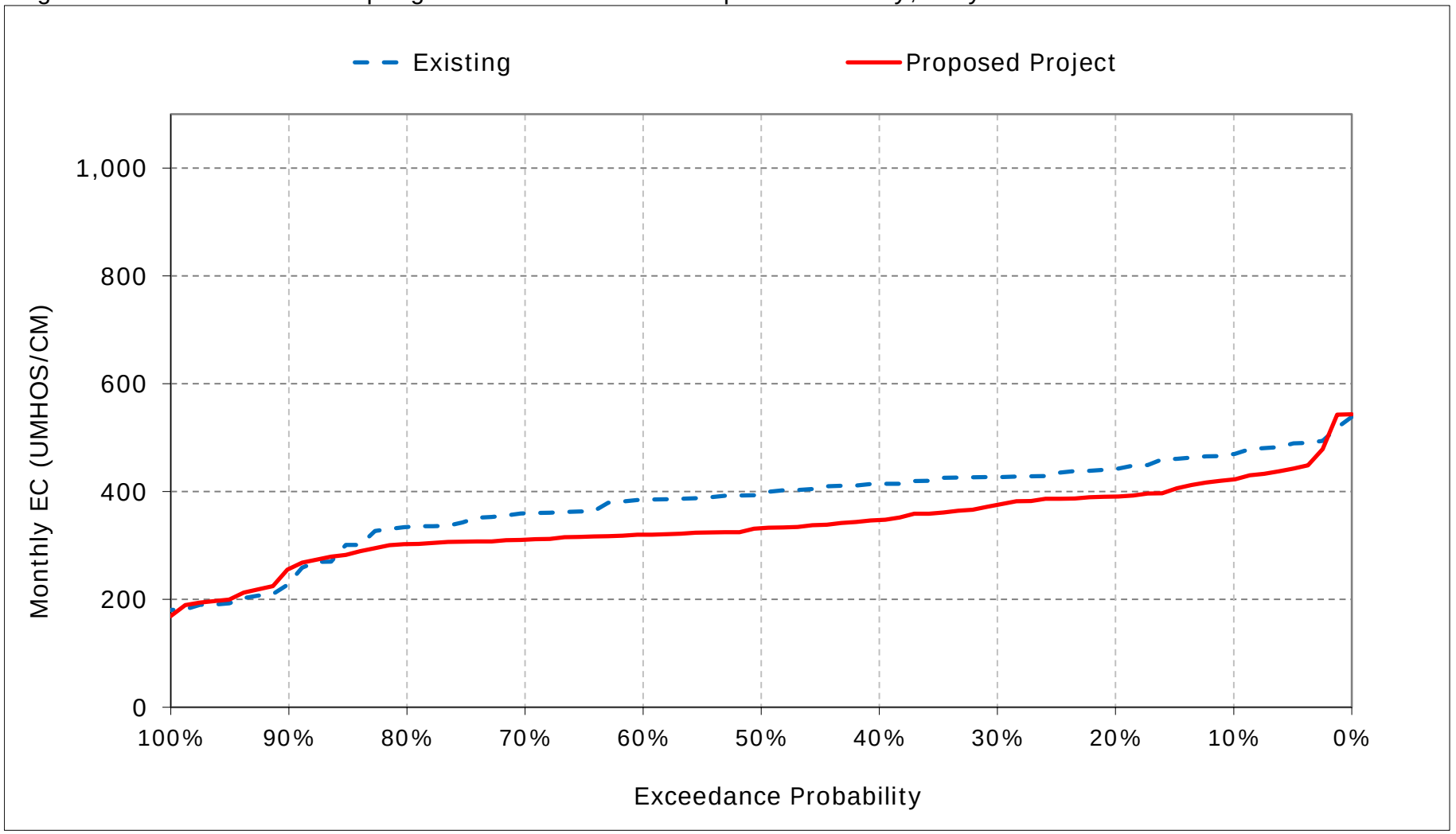


Figure 16-12. Banks Pumping Plant South Delta Exports Salinity, June EC

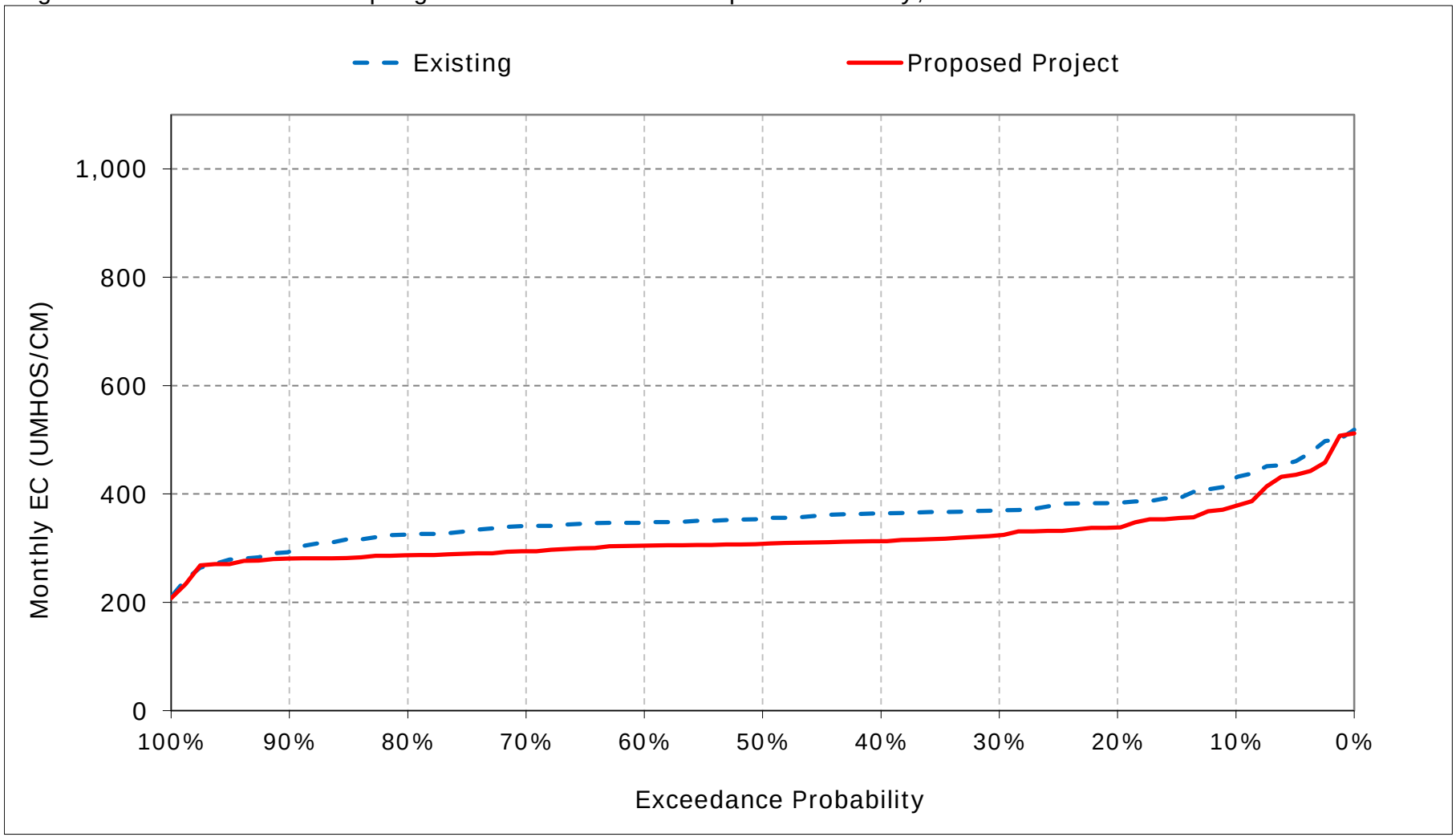


Figure 16-13. Banks Pumping Plant South Delta Exports Salinity, July EC

Figure 16-14. Banks Pumping Plant South Delta Exports Salinity, August EC

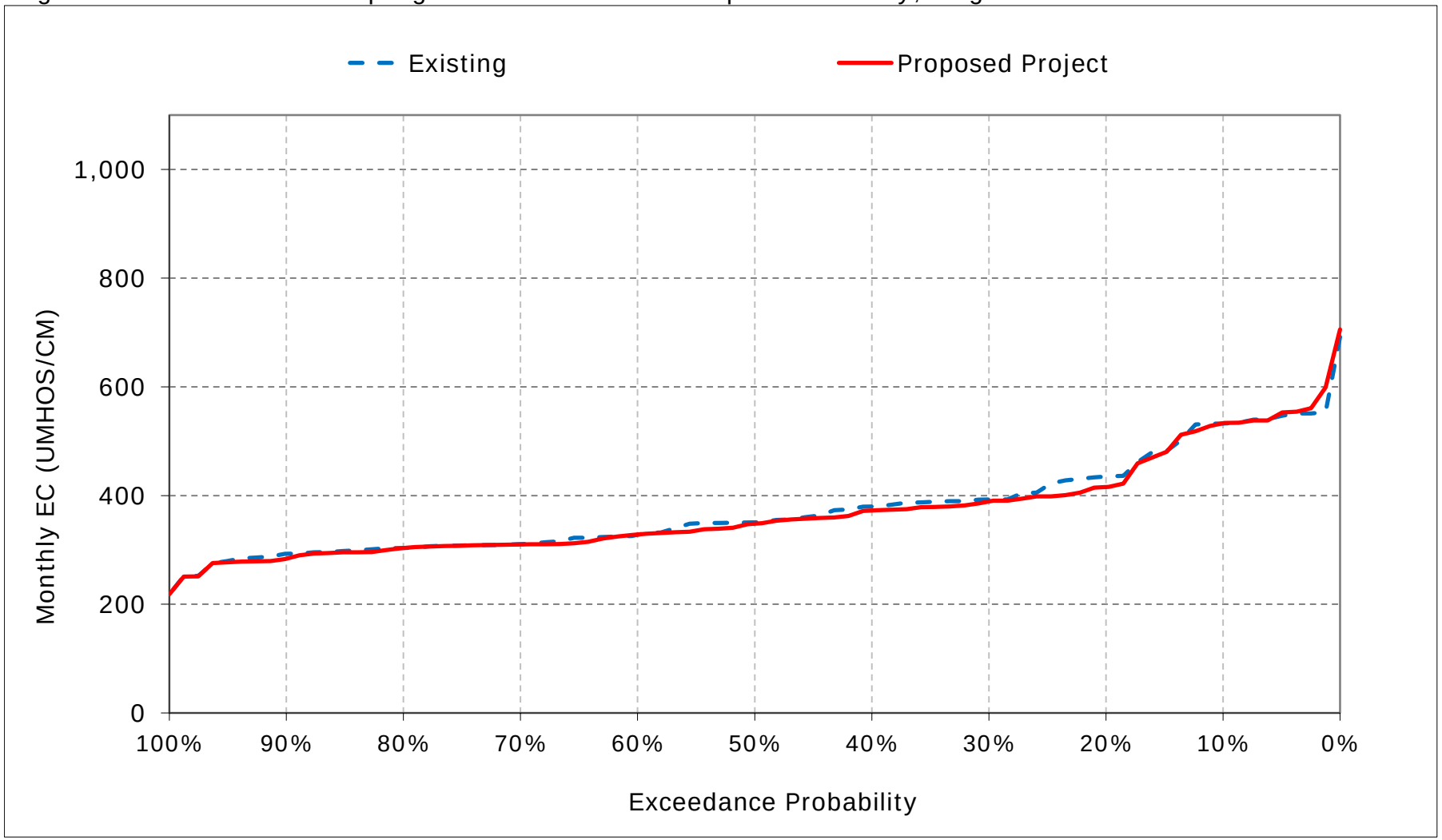


Figure 16-15. Banks Pumping Plant South Delta Exports Salinity, September EC

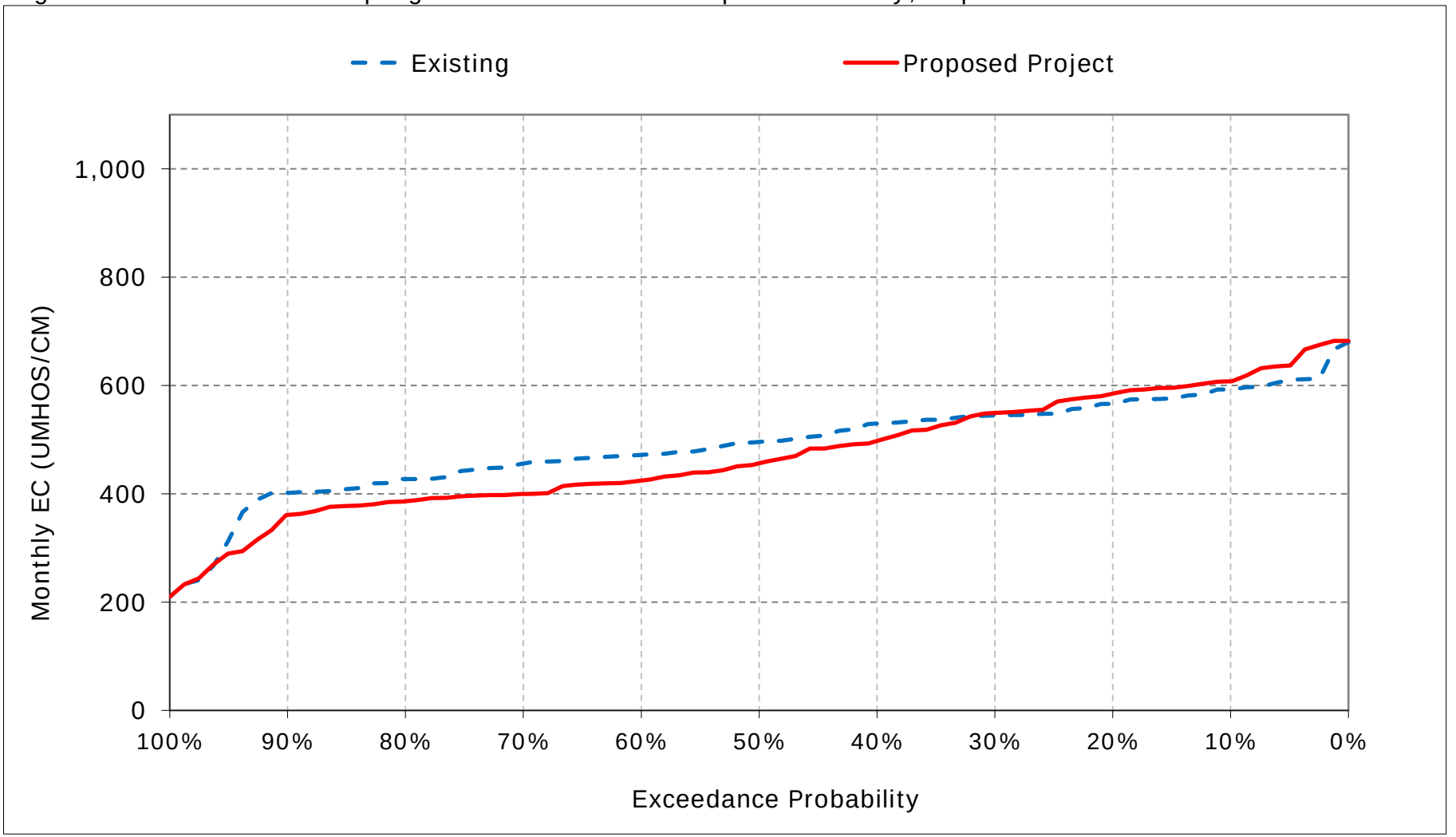


Figure 16-16. Banks Pumping Plant South Delta Exports Salinity, October EC

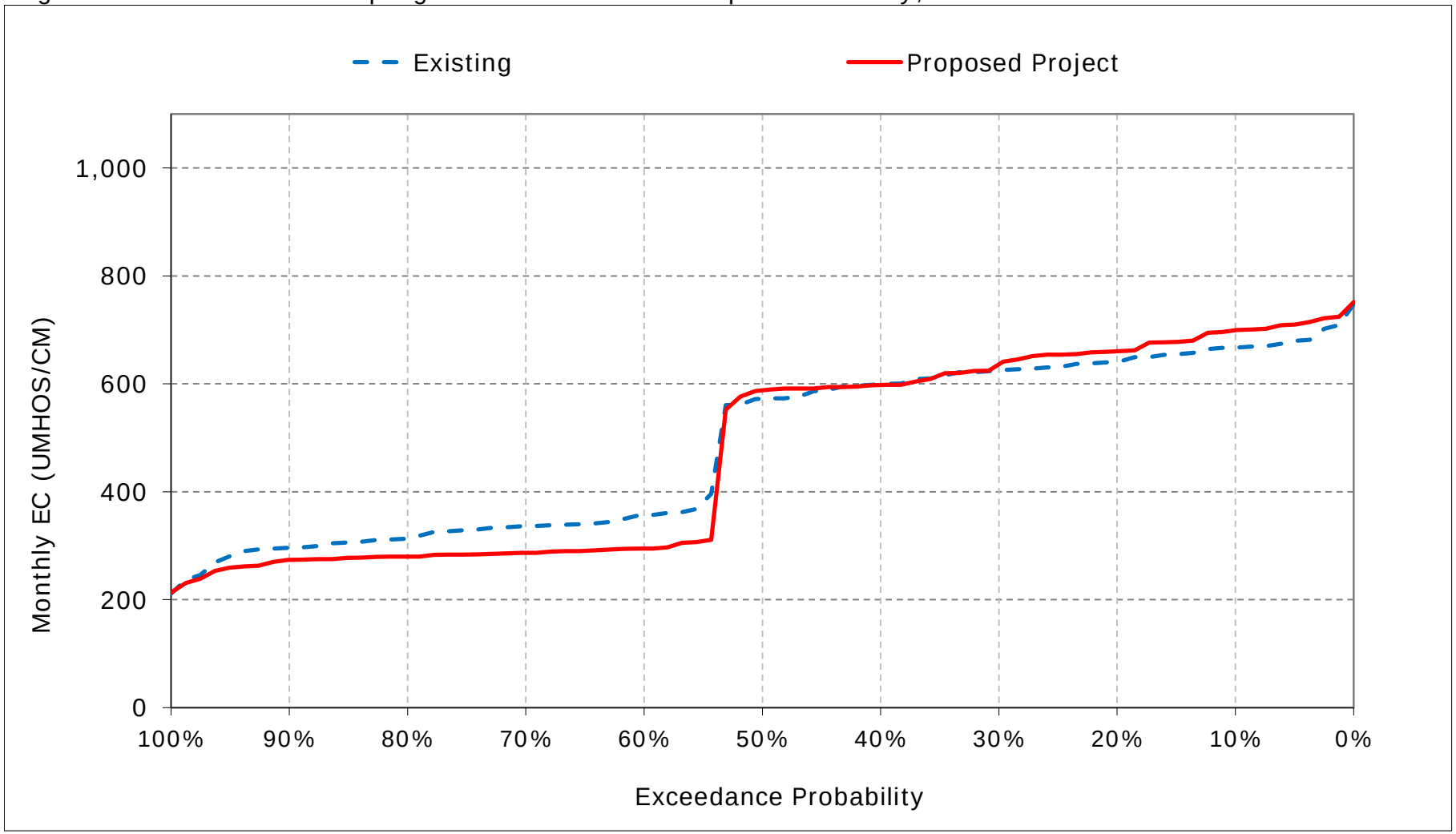


Figure 16-17. Banks Pumping Plant South Delta Exports Salinity, November EC

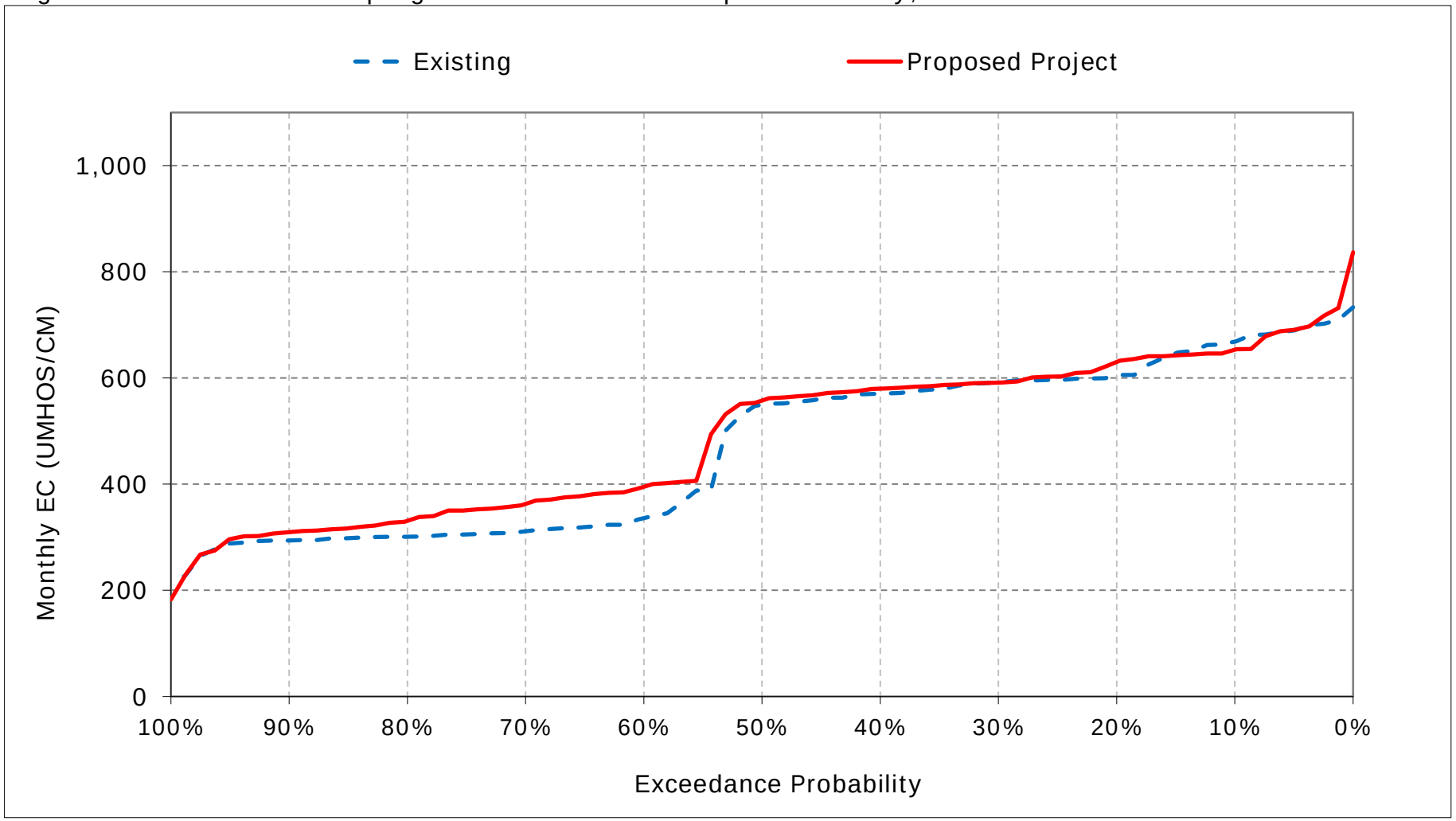


Figure 16-18. Banks Pumping Plant South Delta Exports Salinity, December EC

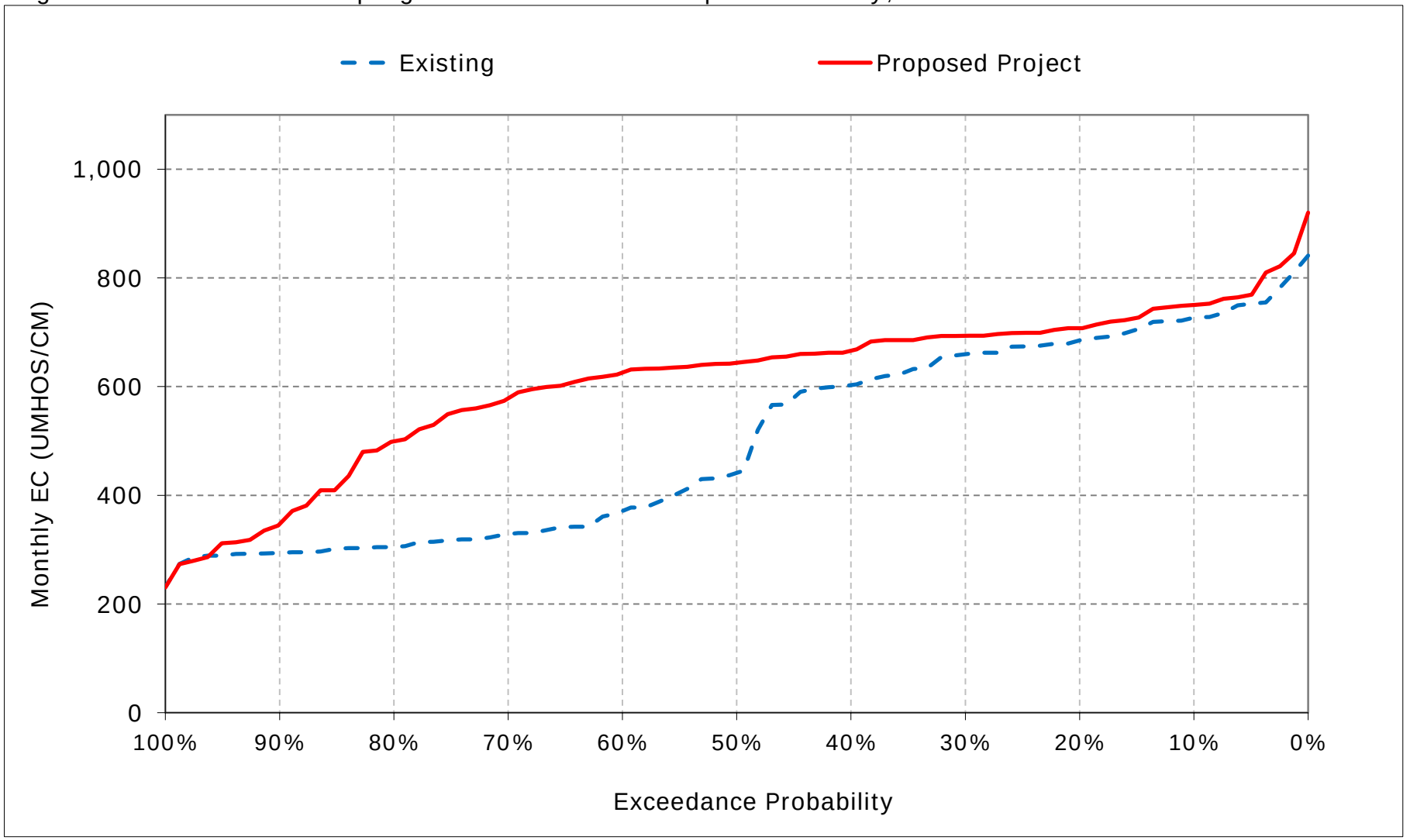


Table 17-1. Jones Pumping Plant South Delta Exports Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	652	661	764	777	681	619	511	463	409	413	537	597
20%	633	604	726	752	660	591	487	445	384	385	464	580
30%	618	593	699	674	617	552	459	431	377	377	425	556
40%	596	572	654	643	592	530	437	420	370	365	413	546
50%	566	548	543	613	569	490	403	392	366	345	392	516
60%	372	405	497	580	523	415	375	376	360	338	369	484
70%	358	359	453	547	470	362	341	363	354	323	347	456
80%	343	339	433	522	399	323	304	333	342	309	338	434
90%	330	329	426	427	331	299	251	226	329	291	329	403
Long Term												
Full Simulation Period[a]	492	489	577	614	534	472	393	380	368	355	404	501
Water Year Types[b]												
Wet (32%)	440	430	502	503	406	343	295	299	343	324	330	436
Above Normal (15%)	531	508	575	615	544	413	377	375	366	330	347	422
Below Normal (17%)	502	500	599	653	523	464	409	399	363	340	416	571
Dry (22%)	494	509	610	651	627	566	458	433	367	369	471	537
Critical (15%)	548	556	663	750	679	680	505	458	433	447	504	585

Proposed Project

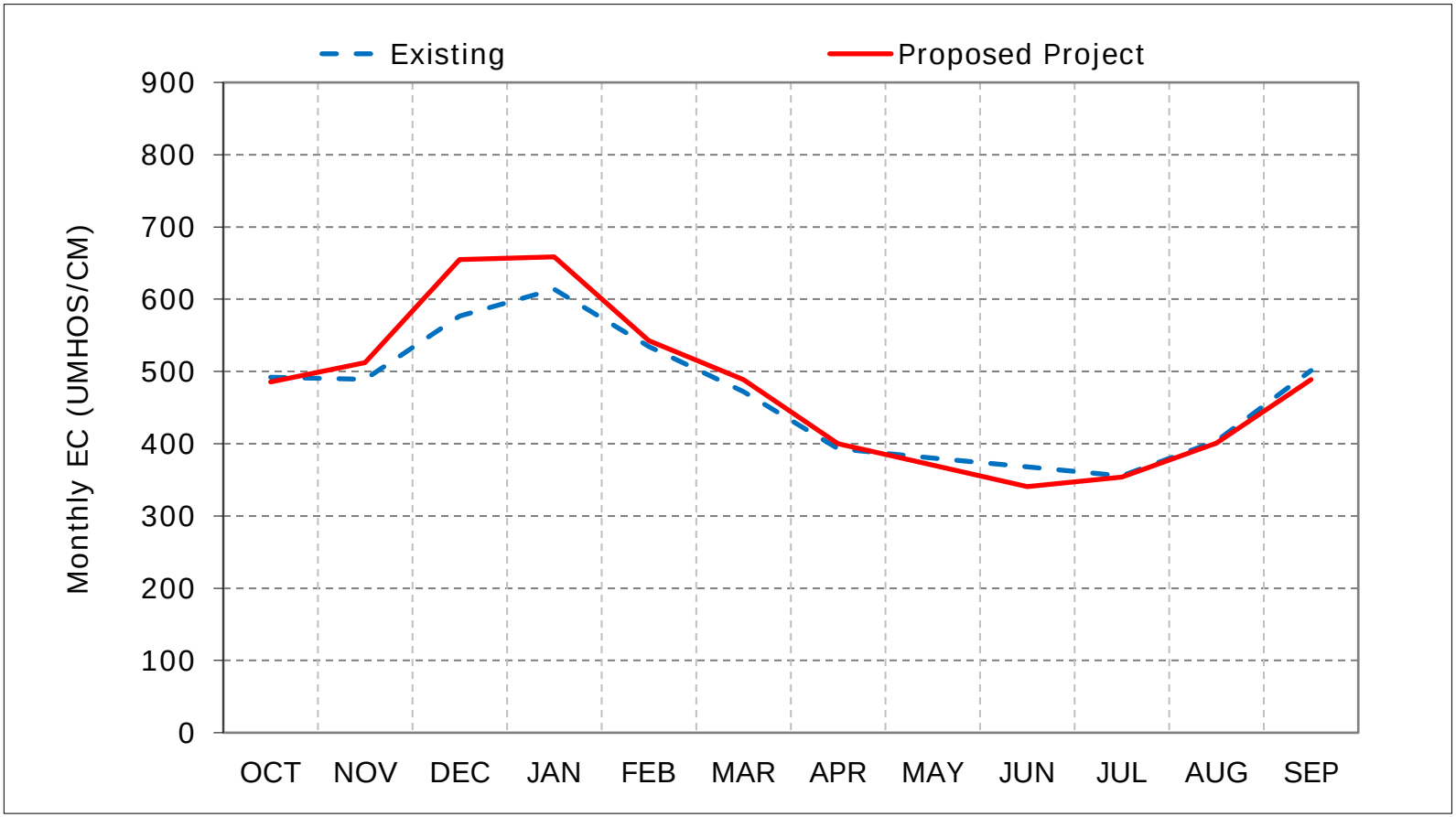
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	662	653	775	851	735	675	573	497	385	413	542	620
20%	626	621	742	823	680	616	516	462	366	392	446	589
30%	611	595	725	767	634	579	469	428	352	378	426	565
40%	589	583	712	734	605	540	415	377	339	358	408	539
50%	568	564	694	665	563	508	379	355	333	338	385	489
60%	355	443	677	610	518	443	352	342	328	328	366	440
70%	341	416	633	554	460	365	332	334	320	316	347	419
80%	335	392	547	522	400	327	306	312	311	305	338	402
90%	326	360	466	427	336	296	246	222	296	286	316	377
Long Term												
Full Simulation Period[a]	485	512	655	659	543	489	400	370	341	354	401	489
Water Year Types[b]												
Wet (32%)	435	460	565	519	401	350	284	280	328	323	325	375
Above Normal (15%)	522	553	693	695	551	417	349	335	332	324	347	423
Below Normal (17%)	488	517	674	700	524	489	392	362	327	336	412	596
Dry (22%)	491	523	692	723	641	598	479	437	331	365	462	540
Critical (15%)	548	563	734	780	713	698	591	509	407	452	514	597

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	10	-8	11	74	55	56	62	34	-24	1	5	23
20%	-7	17	16	71	20	25	29	17	-18	7	-18	9
30%	-6	3	25	92	17	27	10	-3	-24	1	1	10
40%	-6	10	58	92	13	11	-22	-43	-30	-7	-5	-7
50%	1	17	151	51	-6	18	-24	-37	-33	-7	-6	-27
60%	-18	38	180	31	-6	28	-23	-34	-32	-10	-4	-44
70%	-17	57	180	7	-10	2	-9	-29	-34	-7	0	-36
80%	-8	54	114	0	1	5	1	-21	-31	-4	0	-32
90%	-4	31	41	0	5	-3	-5	-4	-33	-5	-13	-26
Long Term												
Full Simulation Period[a]	-6	23	78	45	8	17	7	-10	-27	-2	-3	-13
Water Year Types[b]												
Wet (32%)	-5	30	62	16	-4	7	-11	-19	-15	0	-5	-61
Above Normal (15%)	-10	46	118	80	7	3	-28	-40	-34	-6	0	1
Below Normal (17%)	-14	16	74	48	2	24	-17	-37	-36	-4	-4	24
Dry (22%)	-4	14	82	71	14	33	21	4	-36	-4	-9	3
Critical (15%)	-1	7	71	30	34	18	86	51	-26	5	9	12

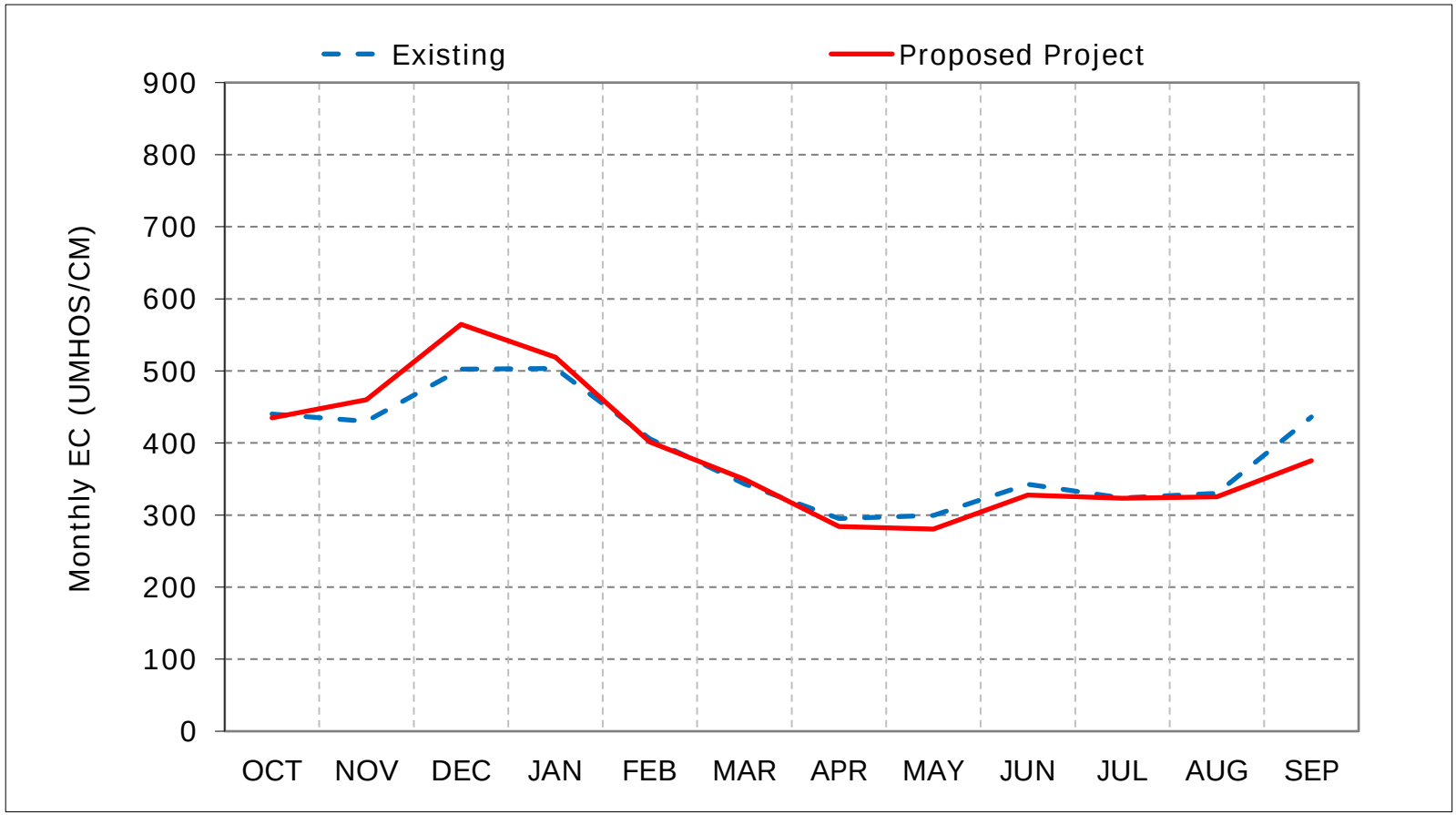
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 17-1. Jones Pumping Plant South Delta Exports Salinity, Long-Term Averag



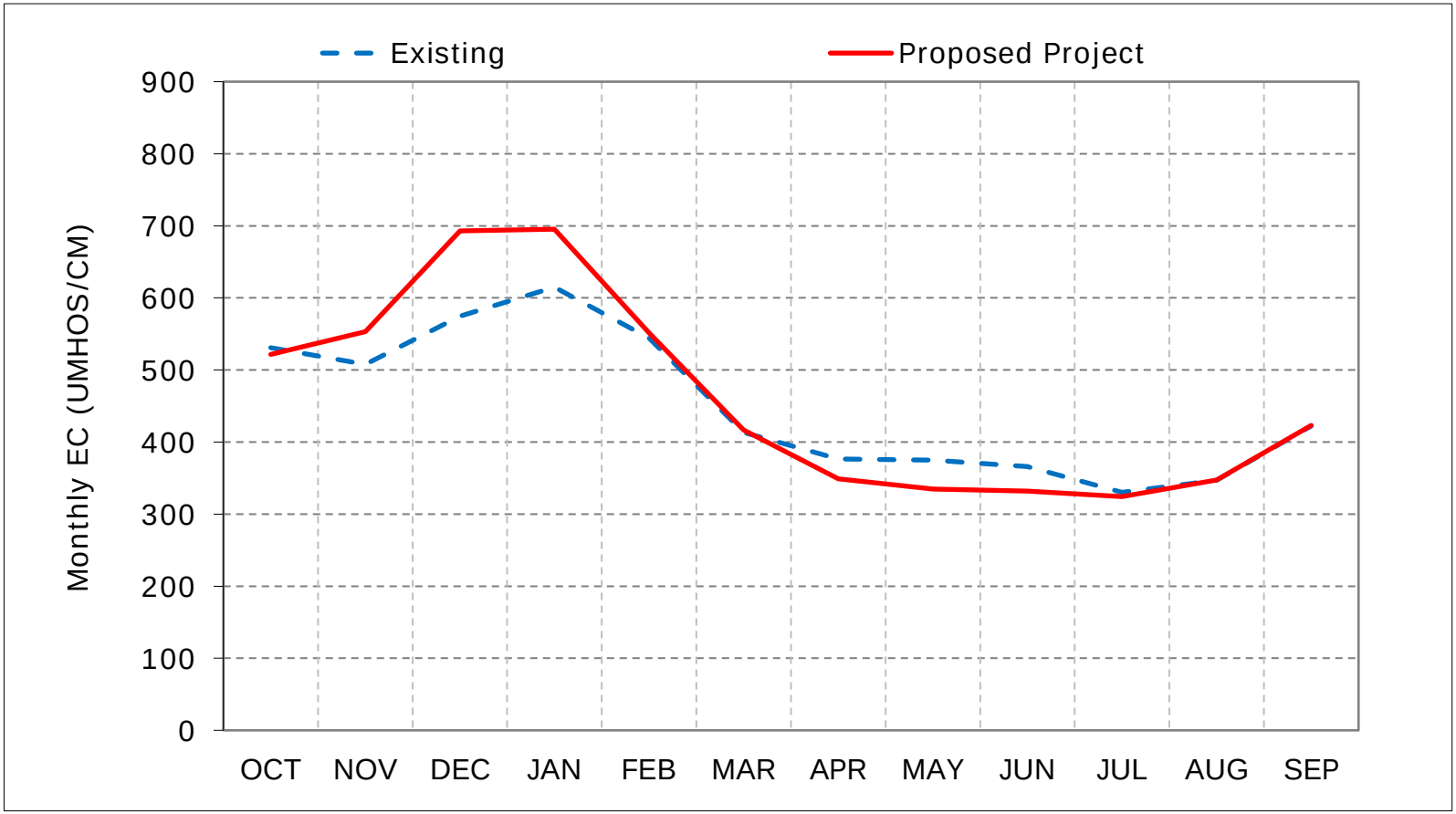
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 17-2. Jones Pumping Plant South Delta Exports Salinity, Wet Year Average



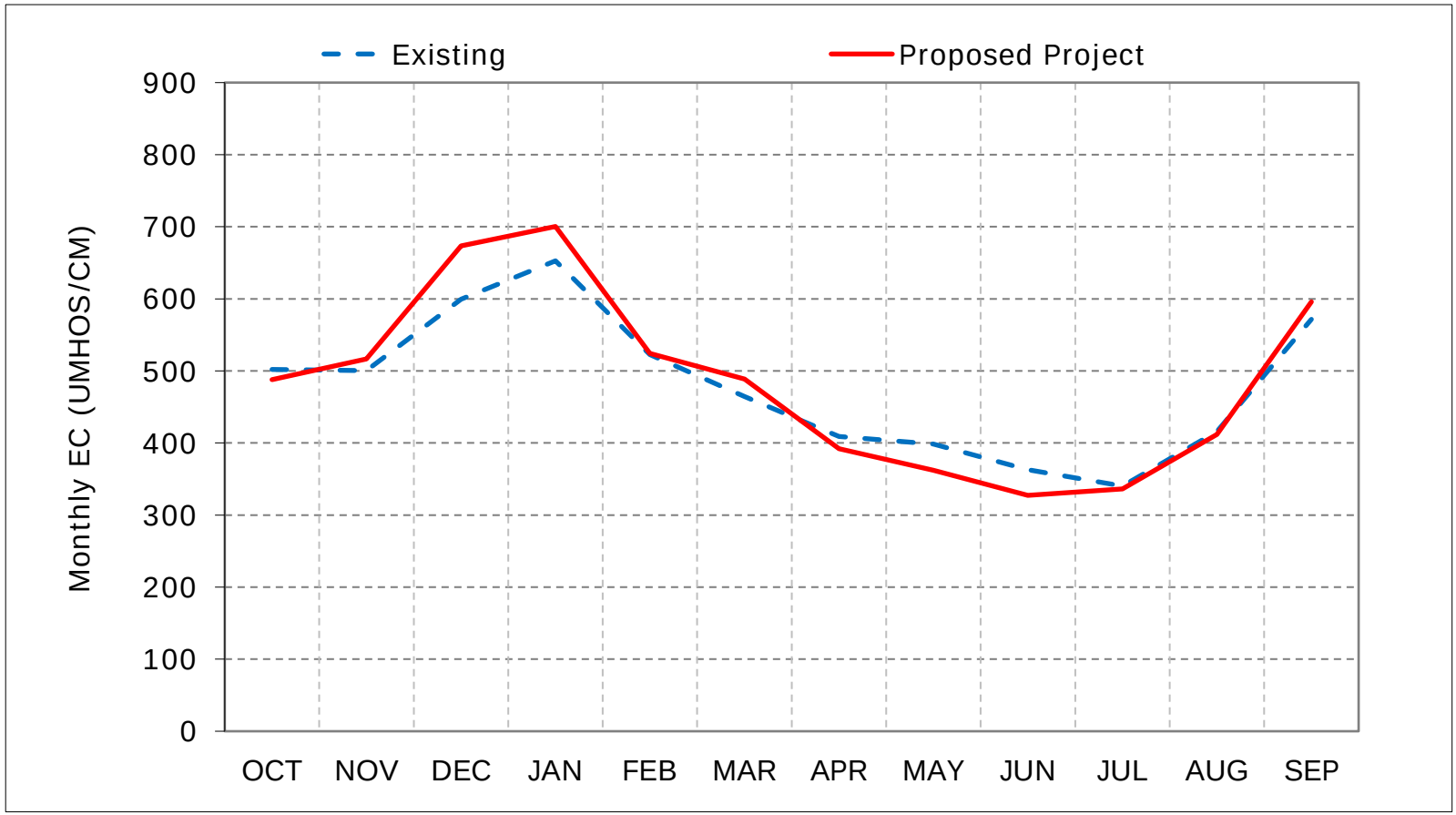
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 17-3. Jones Pumping Plant South Delta Exports Salinity, Above Normal Yea



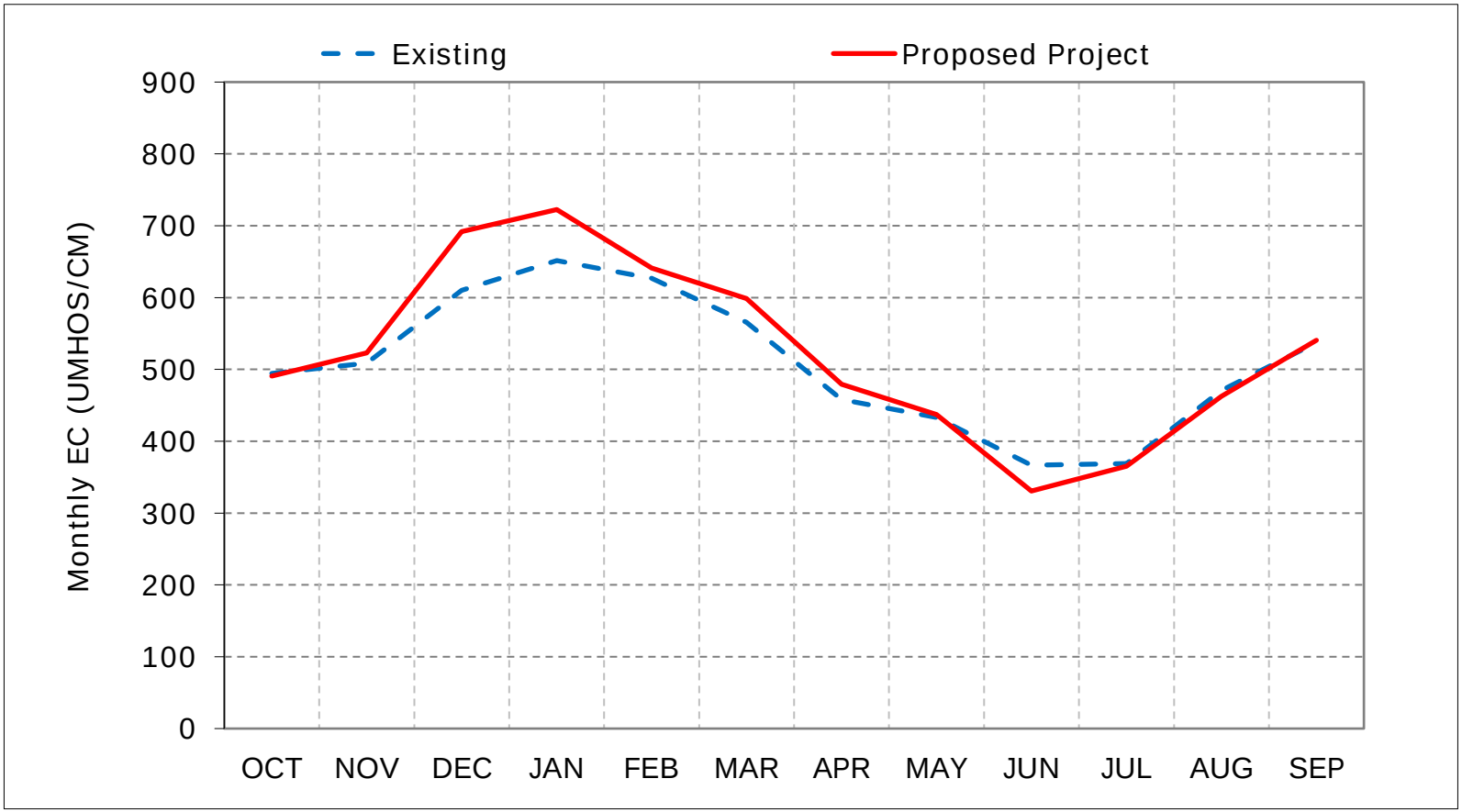
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 17-4. Jones Pumping Plant South Delta Exports Salinity, Below Normal Yea



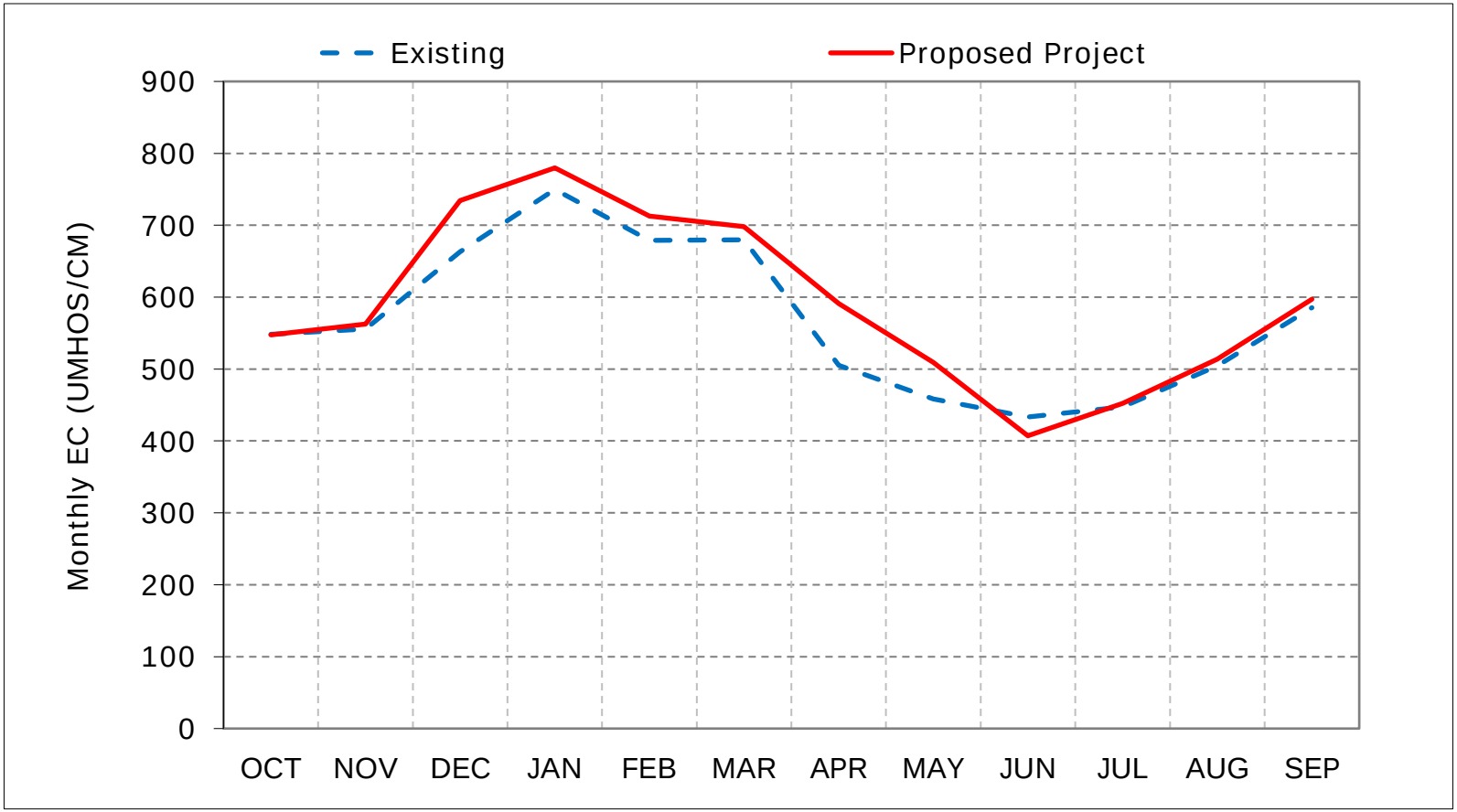
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 17-5. Jones Pumping Plant South Delta Exports Salinity, Dry Year Average



*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.

Figure 17-6. Jones Pumping Plant South Delta Exports Salinity, Critical Year Avera



*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.

Figure 17-7. Jones Pumping Plant South Delta Exports Salinity, January EC

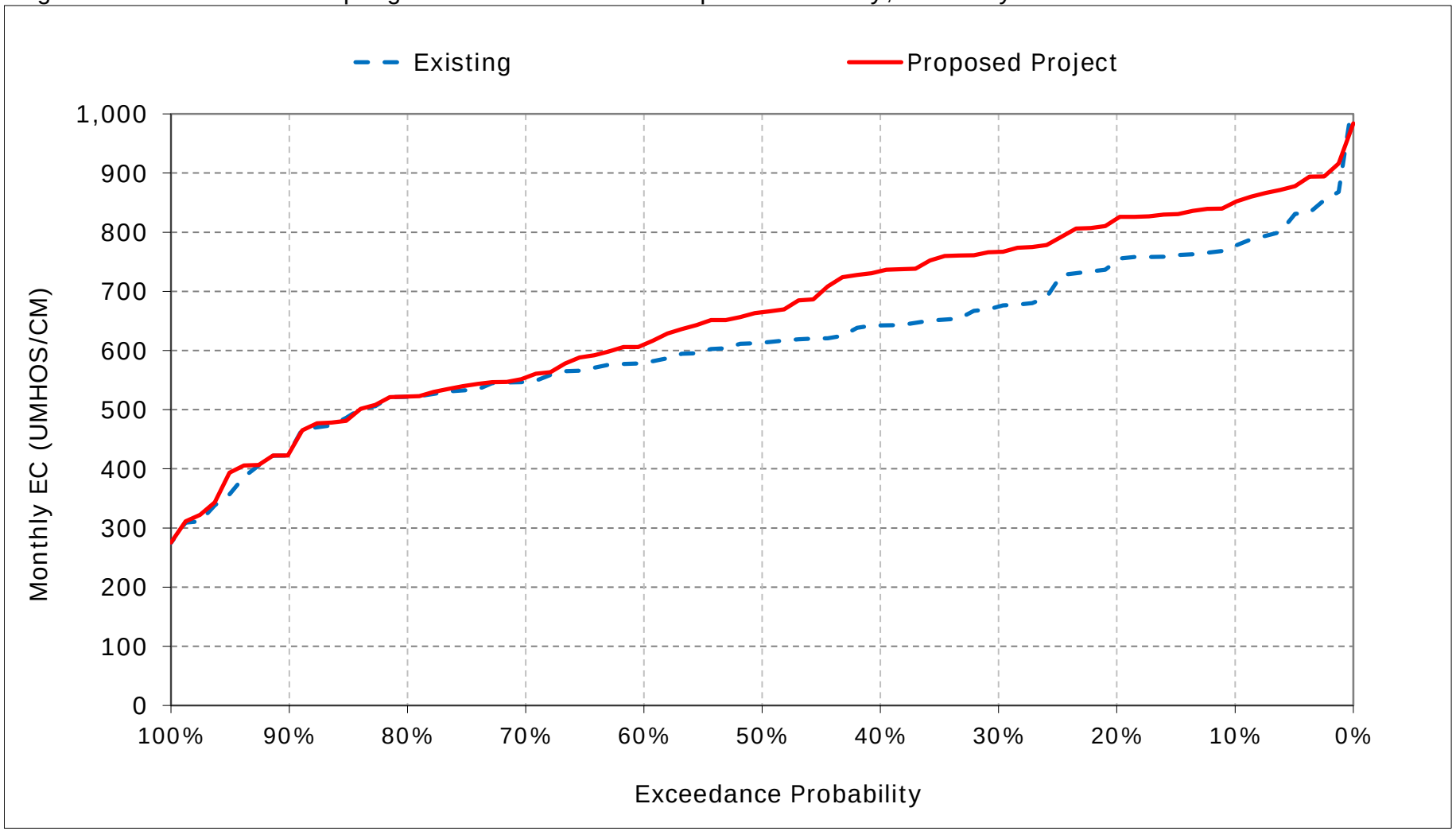


Figure 17-8. Jones Pumping Plant South Delta Exports Salinity, February EC

Figure 17-9. Jones Pumping Plant South Delta Exports Salinity, March EC

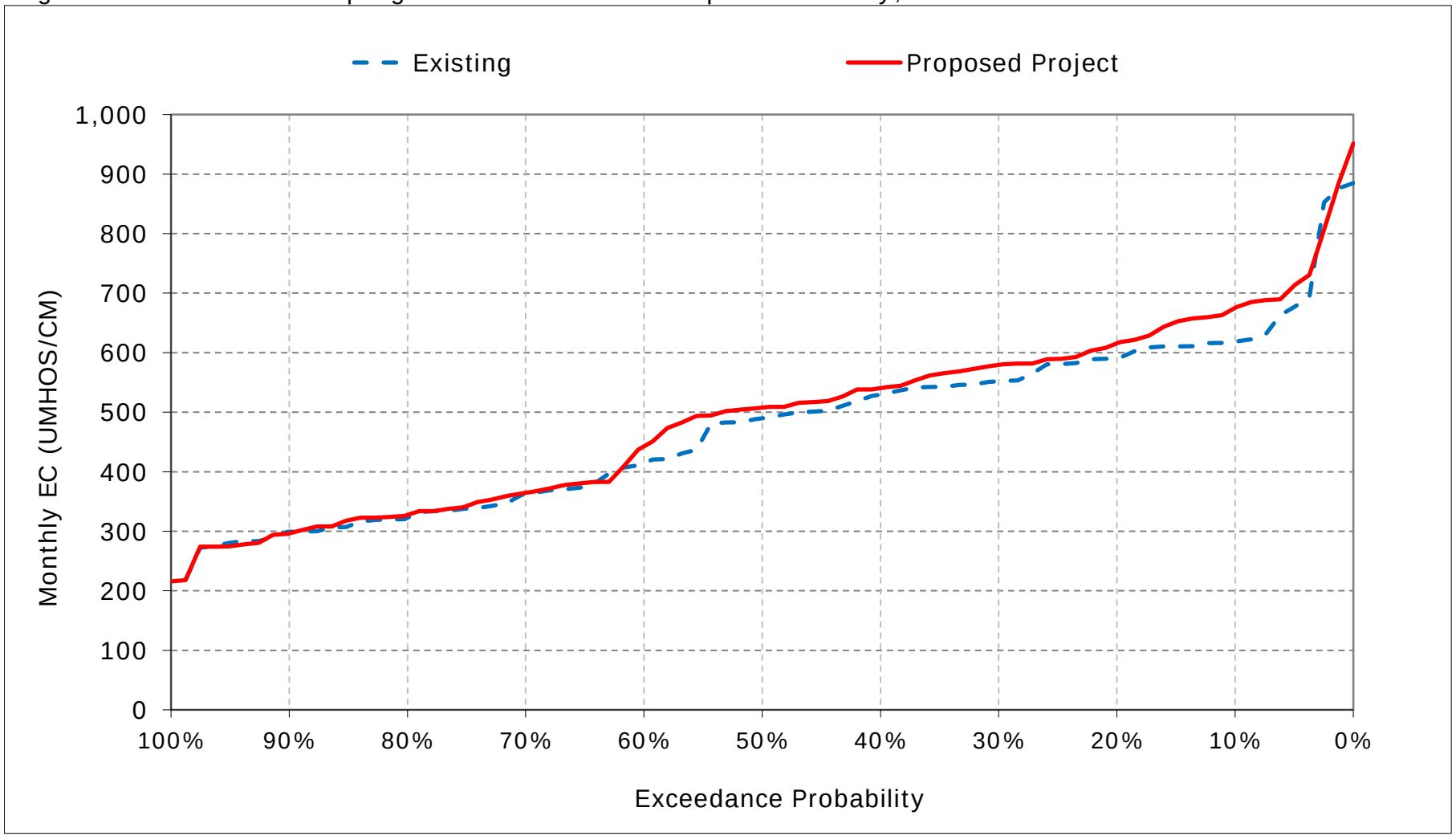


Figure 17-10. Jones Pumping Plant South Delta Exports Salinity, April EC

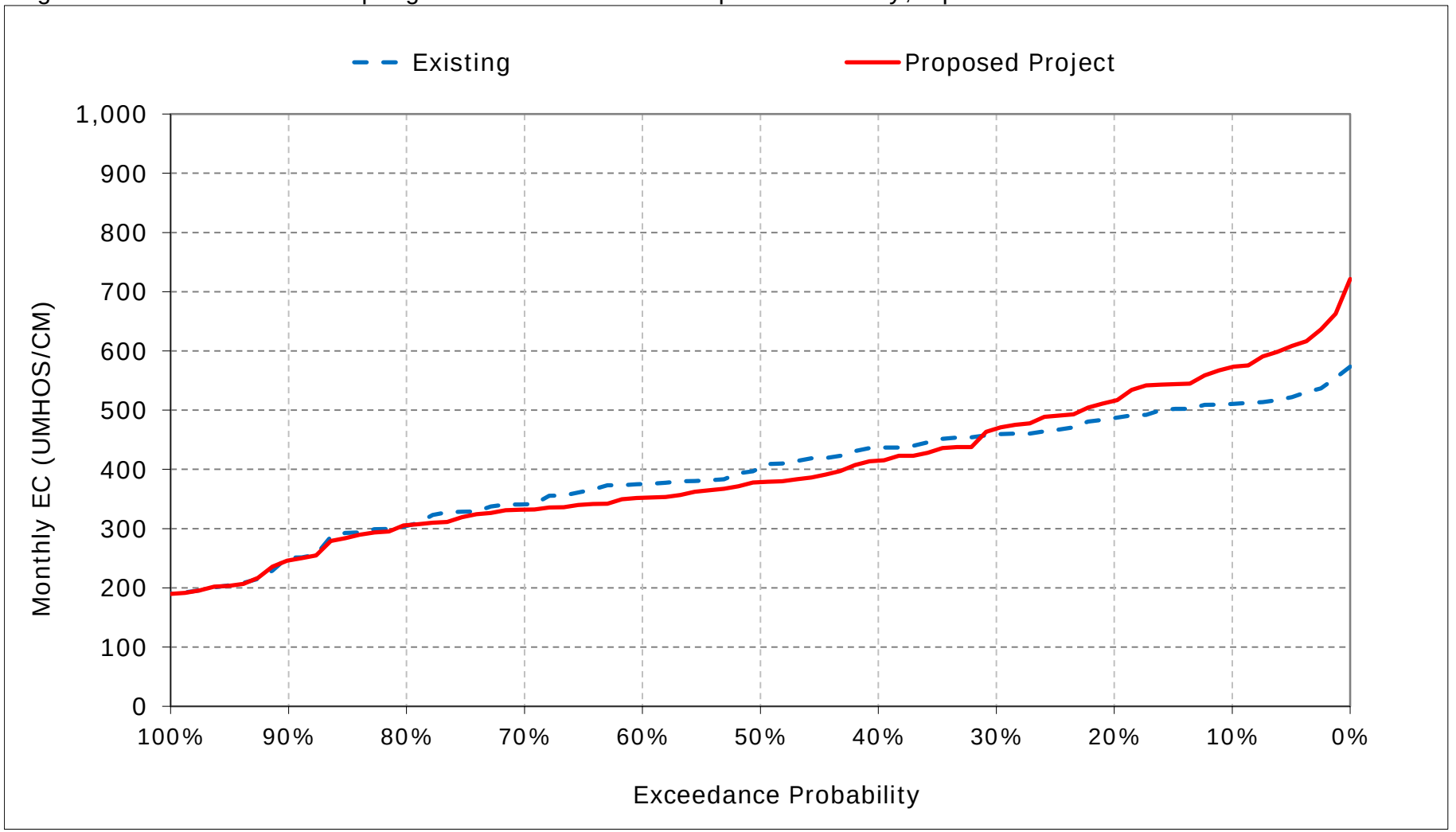


Figure 17-11. Jones Pumping Plant South Delta Exports Salinity, May EC

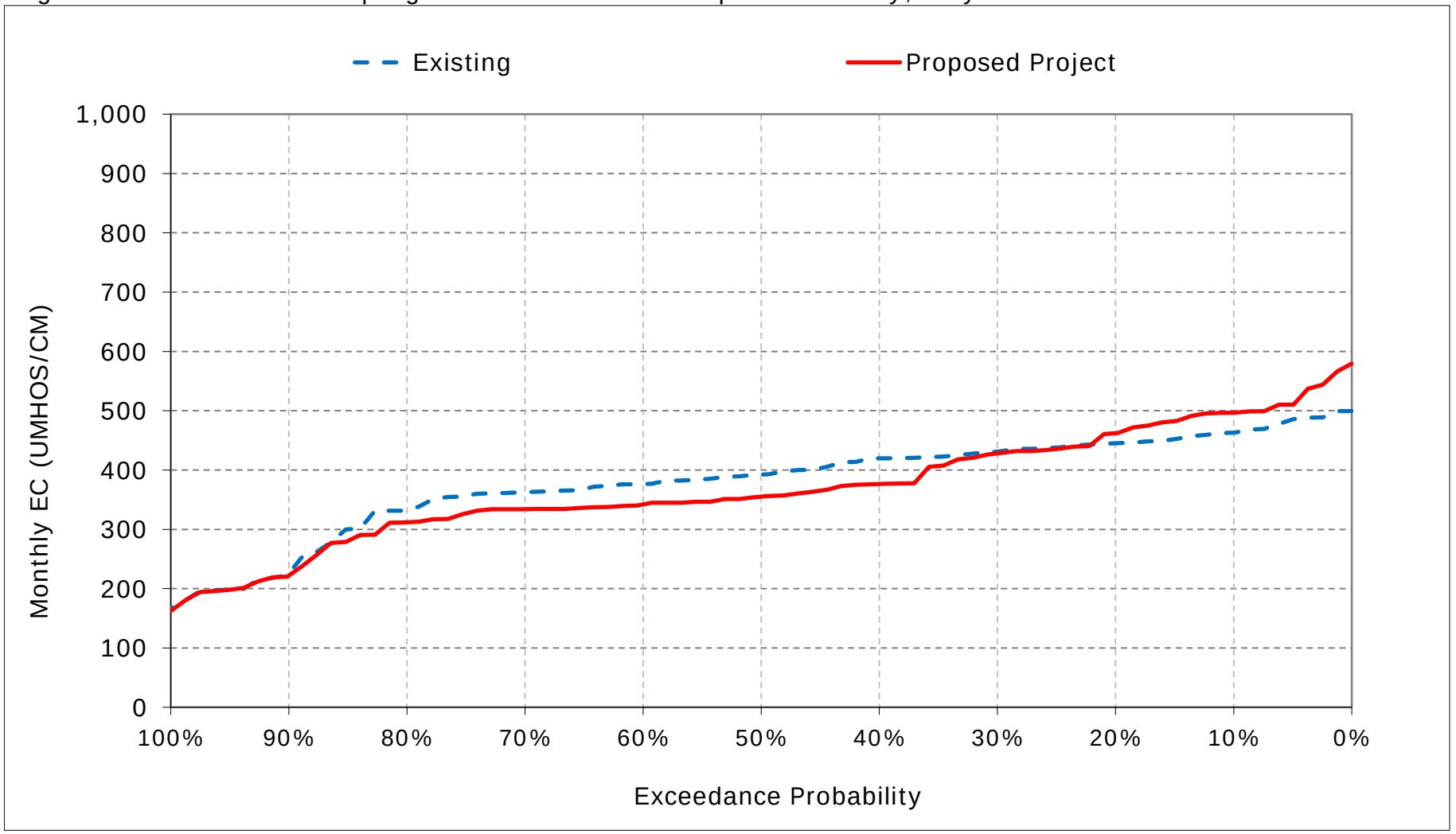


Figure 17-12. Jones Pumping Plant South Delta Exports Salinity, June EC

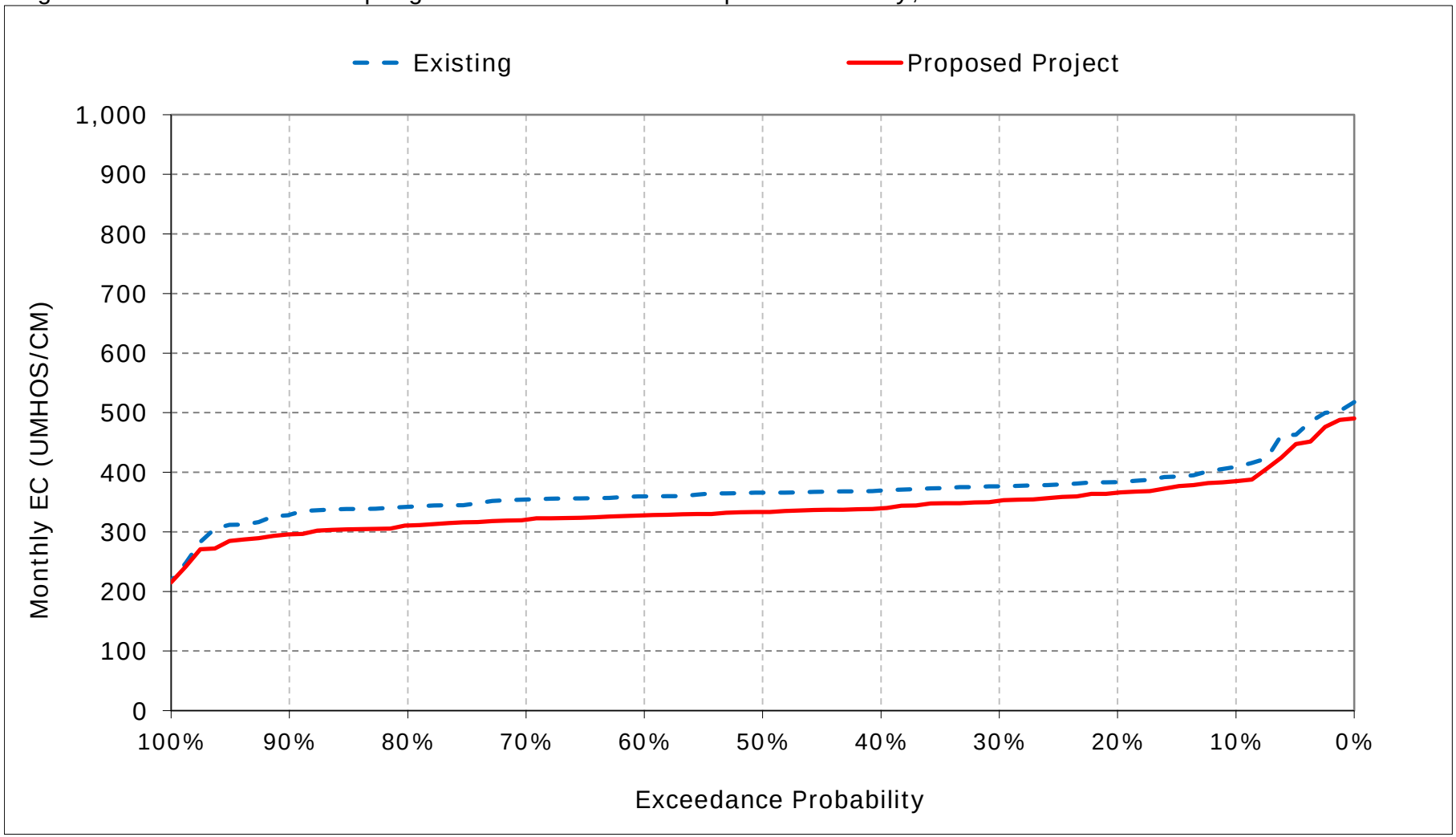


Figure 17-13. Jones Pumping Plant South Delta Exports Salinity, July EC

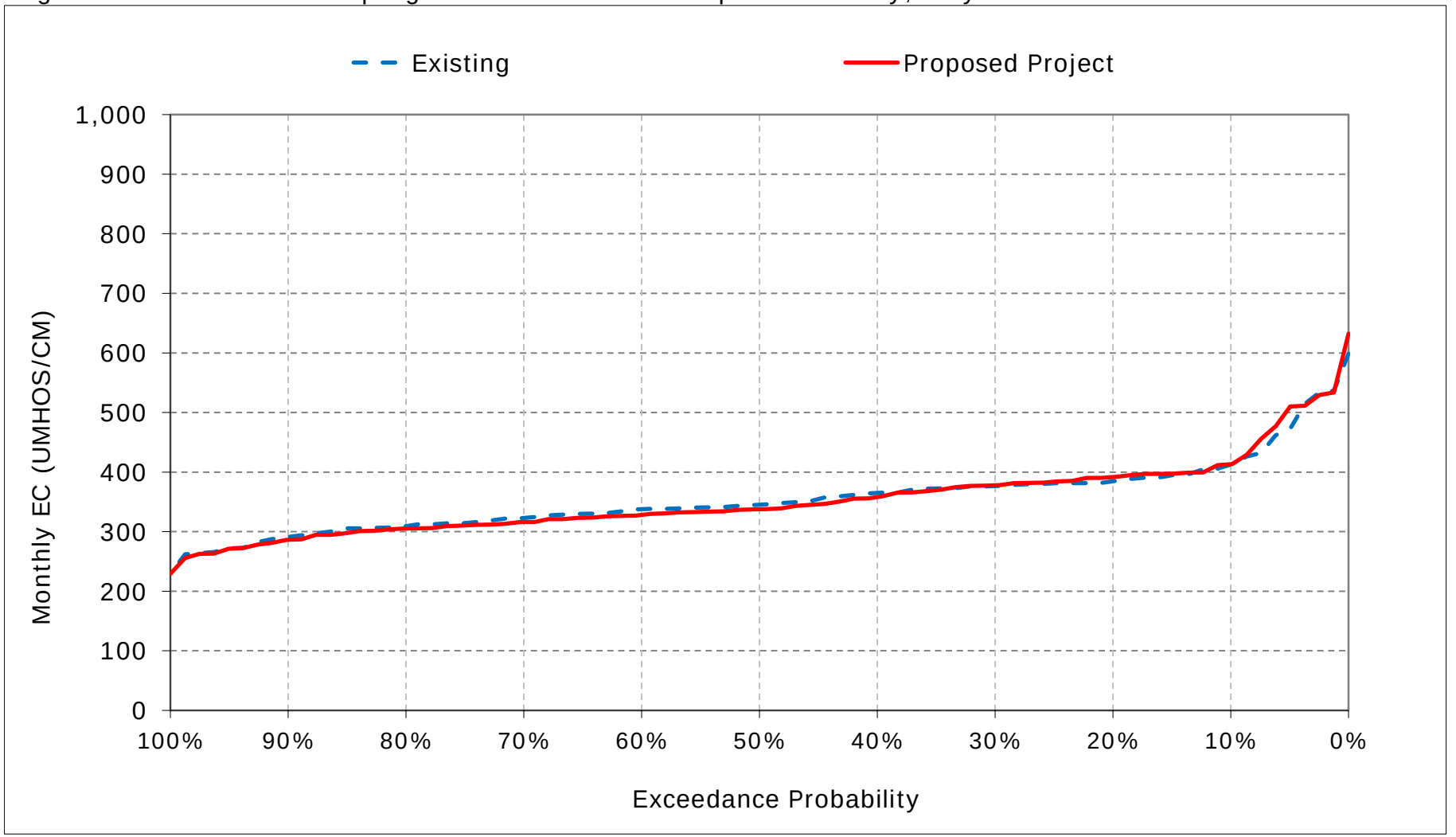


Figure 17-14. Jones Pumping Plant South Delta Exports Salinity, August EC

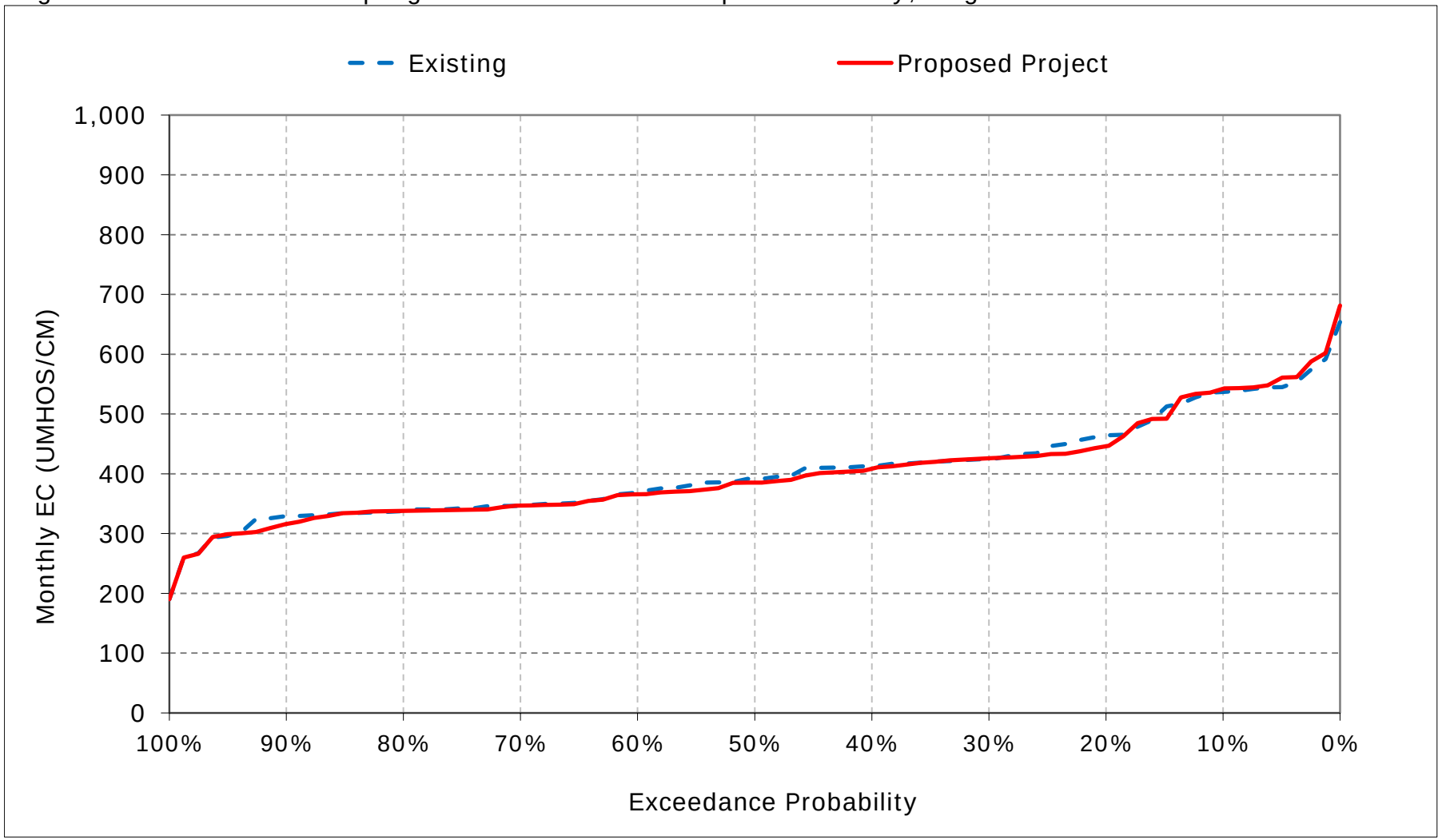


Figure 17-15. Jones Pumping Plant South Delta Exports Salinity, September EC

Figure 17-16. Jones Pumping Plant South Delta Exports Salinity, October EC

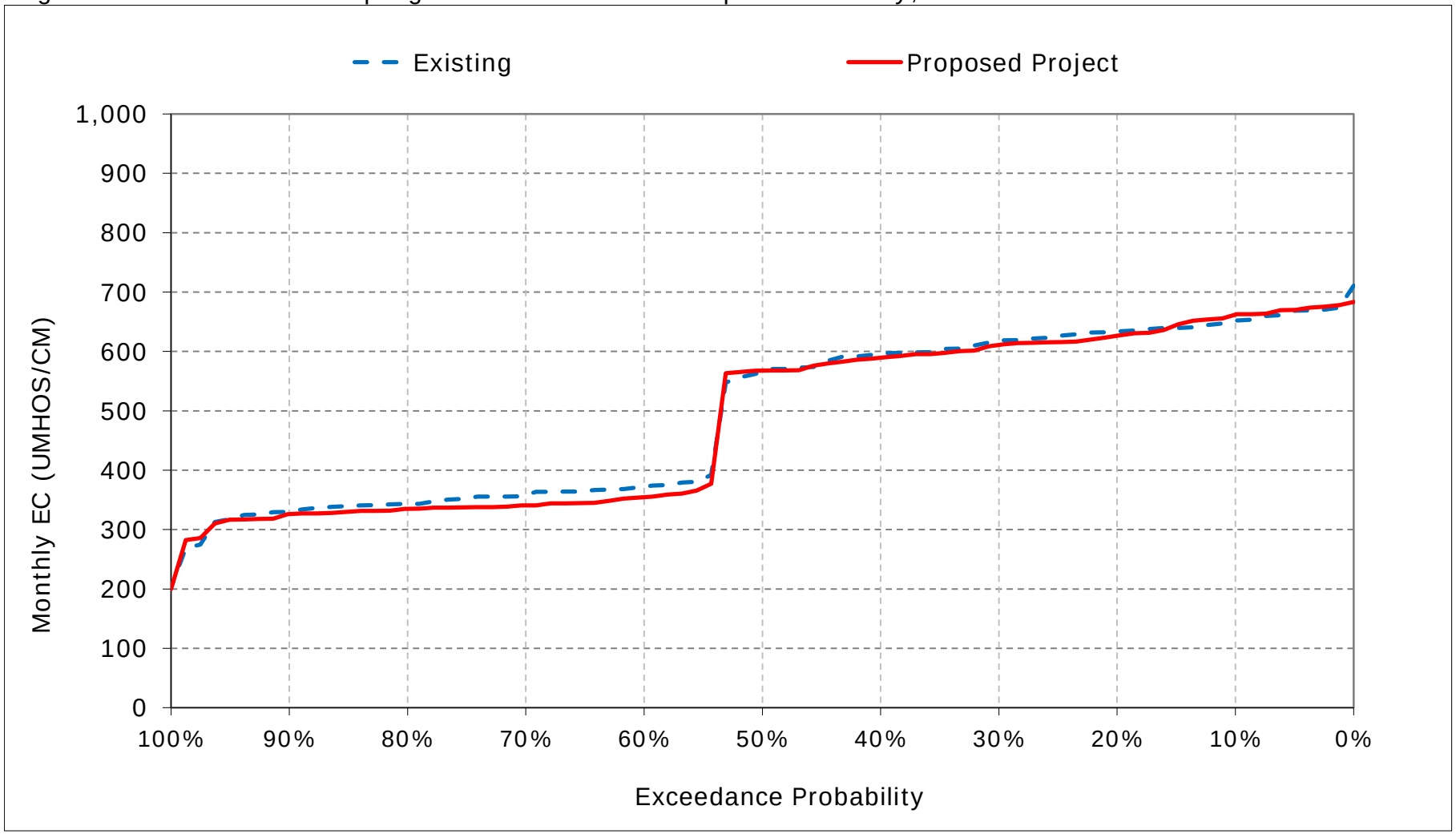


Figure 17-17. Jones Pumping Plant South Delta Exports Salinity, November EC

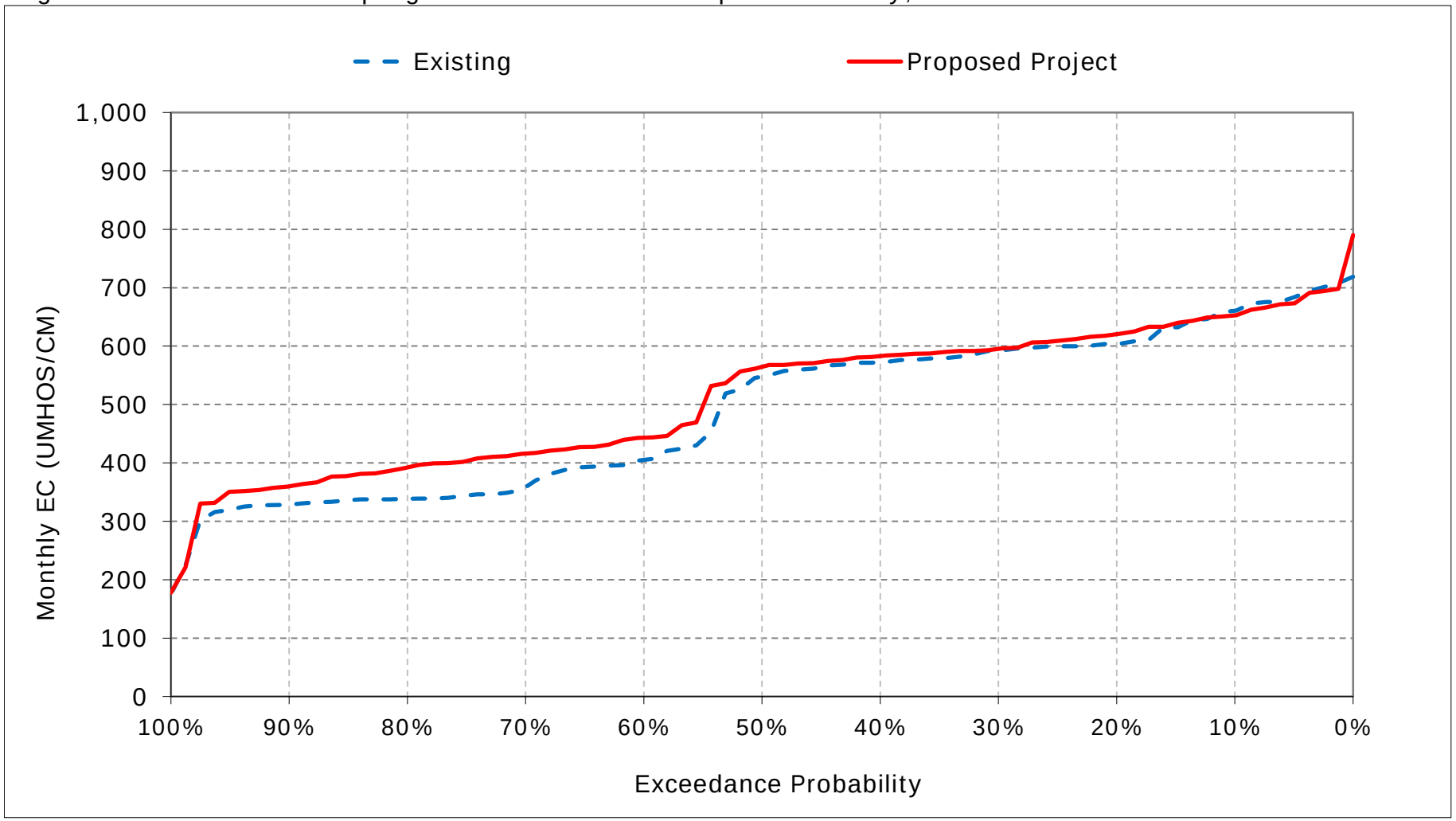


Figure 17-18. Jones Pumping Plant South Delta Exports Salinity, December EC

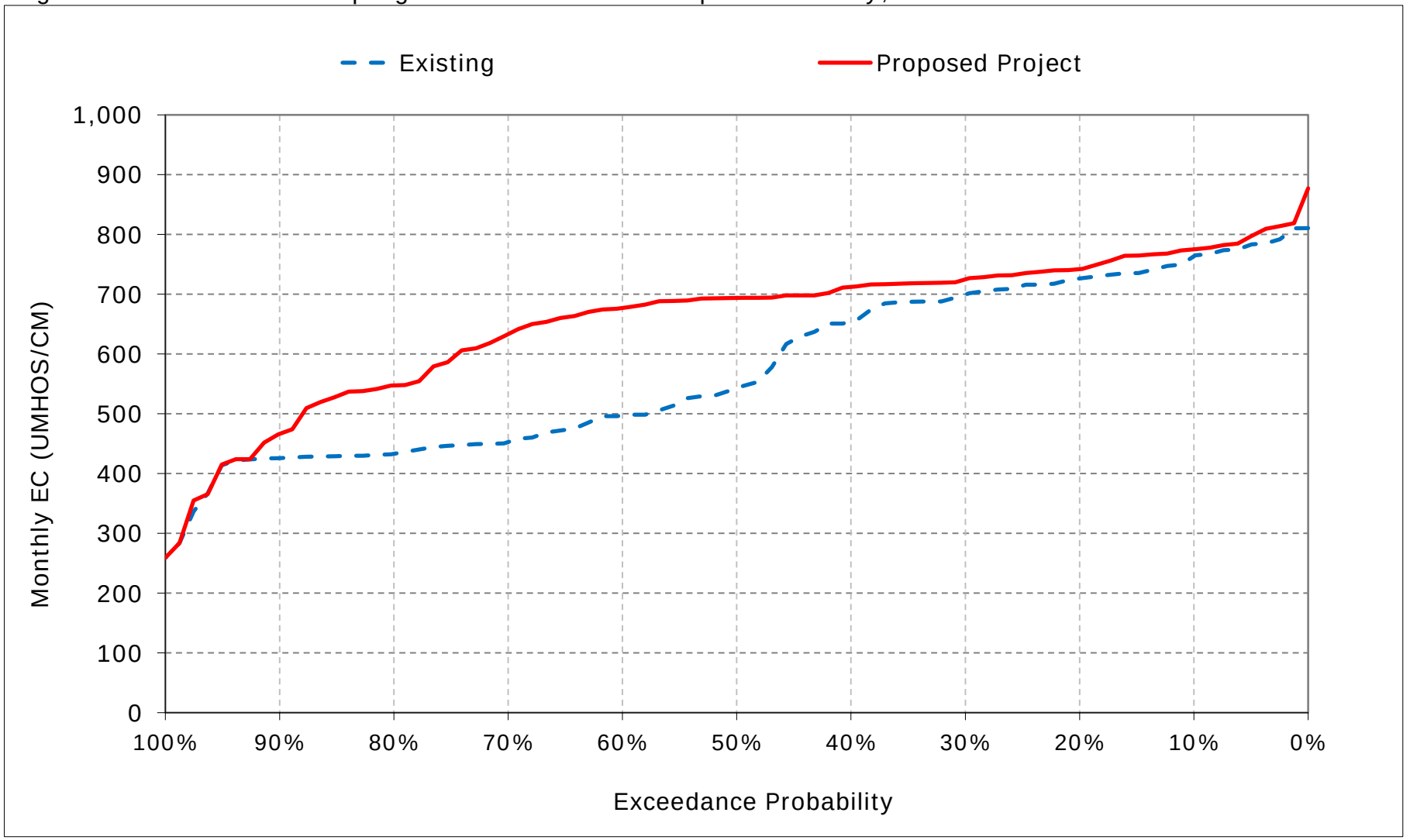


Table 18-1. Old River at Highway 4, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	753	741	807	782	558	435	417	418	360	425	570	689
20%	725	677	768	719	512	406	401	402	327	352	482	660
30%	710	650	722	612	487	370	380	391	315	332	442	624
40%	678	620	613	561	458	359	374	385	310	315	423	590
50%	634	580	424	518	421	347	363	377	307	290	387	559
60%	319	322	368	471	387	338	351	367	303	275	364	516
70%	303	286	313	429	366	324	336	354	297	268	330	496
80%	292	273	286	373	348	314	299	331	286	261	320	448
90%	278	266	280	351	327	288	246	220	273	252	309	418
Long Term												
Full Simulation Period[a]	516	492	519	552	435	356	350	357	315	321	408	547
Water Year Types[b]												
Wet (32%)	444	410	395	417	389	331	288	293	283	265	317	464
Above Normal (15%)	566	513	517	540	450	351	352	363	303	266	333	433
Below Normal (17%)	533	510	570	612	422	346	364	381	304	301	422	656
Dry (22%)	518	525	575	581	443	359	390	394	316	362	492	596
Critical (15%)	599	580	649	741	523	419	409	407	408	457	541	644

Proposed Project

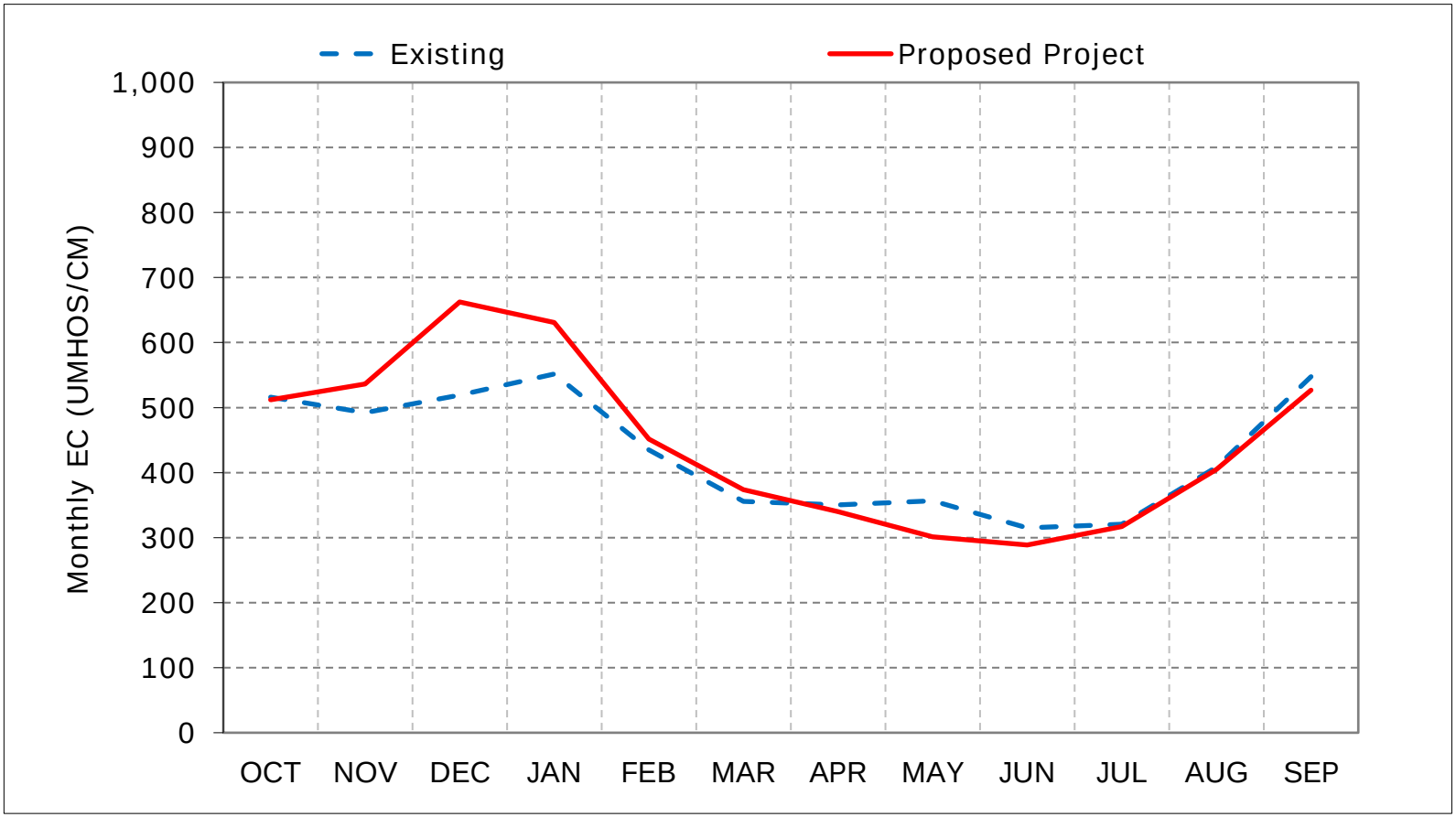
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	774	732	831	956	612	477	406	355	345	431	577	731
20%	748	687	812	874	546	414	383	334	303	342	468	684
30%	715	650	777	774	488	394	368	321	286	323	443	640
40%	680	632	761	704	457	376	348	306	281	305	417	584
50%	647	587	739	582	428	367	337	292	275	282	384	524
60%	282	454	676	508	412	348	330	283	271	273	356	443
70%	270	398	586	449	382	337	319	278	264	262	328	415
80%	262	358	511	405	353	323	306	271	259	258	316	397
90%	257	316	329	359	328	303	282	261	249	251	296	370
Long Term												
Full Simulation Period[a]	512	536	662	631	451	374	340	301	289	317	405	527
Water Year Types[b]												
Wet (32%)	437	467	518	451	388	344	292	261	265	264	310	369
Above Normal (15%)	564	585	720	675	467	376	330	281	267	261	334	421
Below Normal (17%)	524	550	708	698	429	366	353	299	267	286	417	701
Dry (22%)	512	552	725	701	473	384	368	325	287	356	481	601
Critical (15%)	607	598	771	792	567	429	395	377	389	467	554	661

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	21	-9	24	174	53	42	-11	-62	-15	6	7	42
20%	24	10	44	155	34	8	-17	-68	-24	-10	-14	24
30%	5	0	55	162	0	24	-12	-70	-29	-9	2	16
40%	2	12	148	143	-1	18	-26	-79	-30	-10	-5	-7
50%	13	8	314	64	8	20	-25	-85	-33	-9	-3	-35
60%	-37	132	308	37	25	10	-22	-83	-31	-3	-8	-73
70%	-33	113	273	20	16	13	-17	-76	-33	-7	-1	-81
80%	-29	85	225	32	5	9	7	-60	-27	-3	-4	-51
90%	-21	50	50	8	0	14	36	42	-24	-1	-13	-48
Long Term												
Full Simulation Period[a]	-4	44	143	79	16	18	-11	-55	-26	-3	-4	-20
Water Year Types[b]												
Wet (32%)	-7	57	123	33	-1	12	4	-31	-18	-1	-8	-95
Above Normal (15%)	-2	71	202	135	17	25	-22	-82	-36	-6	1	-12
Below Normal (17%)	-9	40	137	86	6	20	-11	-82	-36	-15	-5	45
Dry (22%)	-7	27	151	121	30	25	-22	-69	-29	-6	-11	5
Critical (15%)	8	18	123	51	44	10	-14	-29	-19	9	13	17

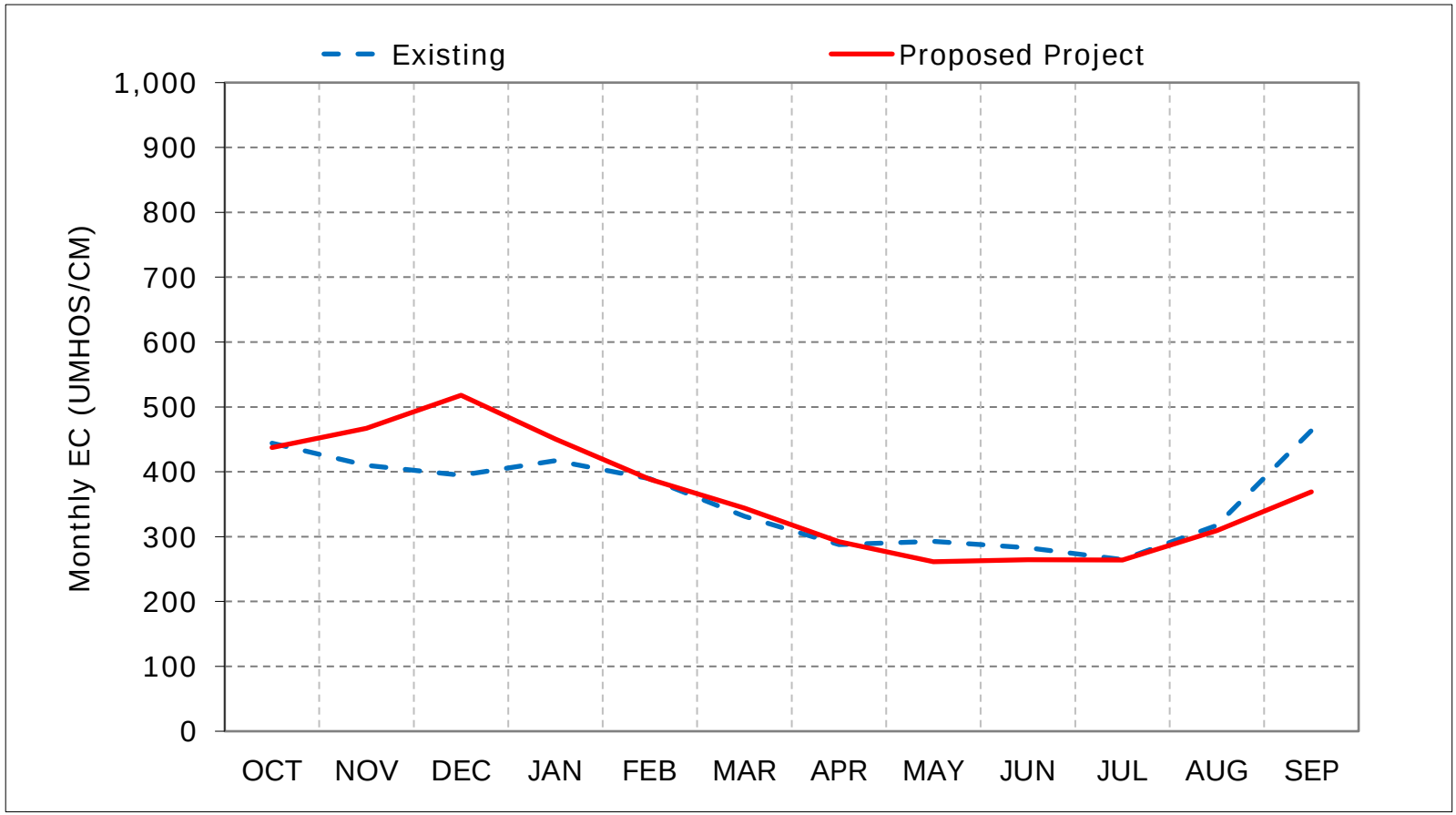
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 18-1. Old River at Highway 4, Long-Term Average EC



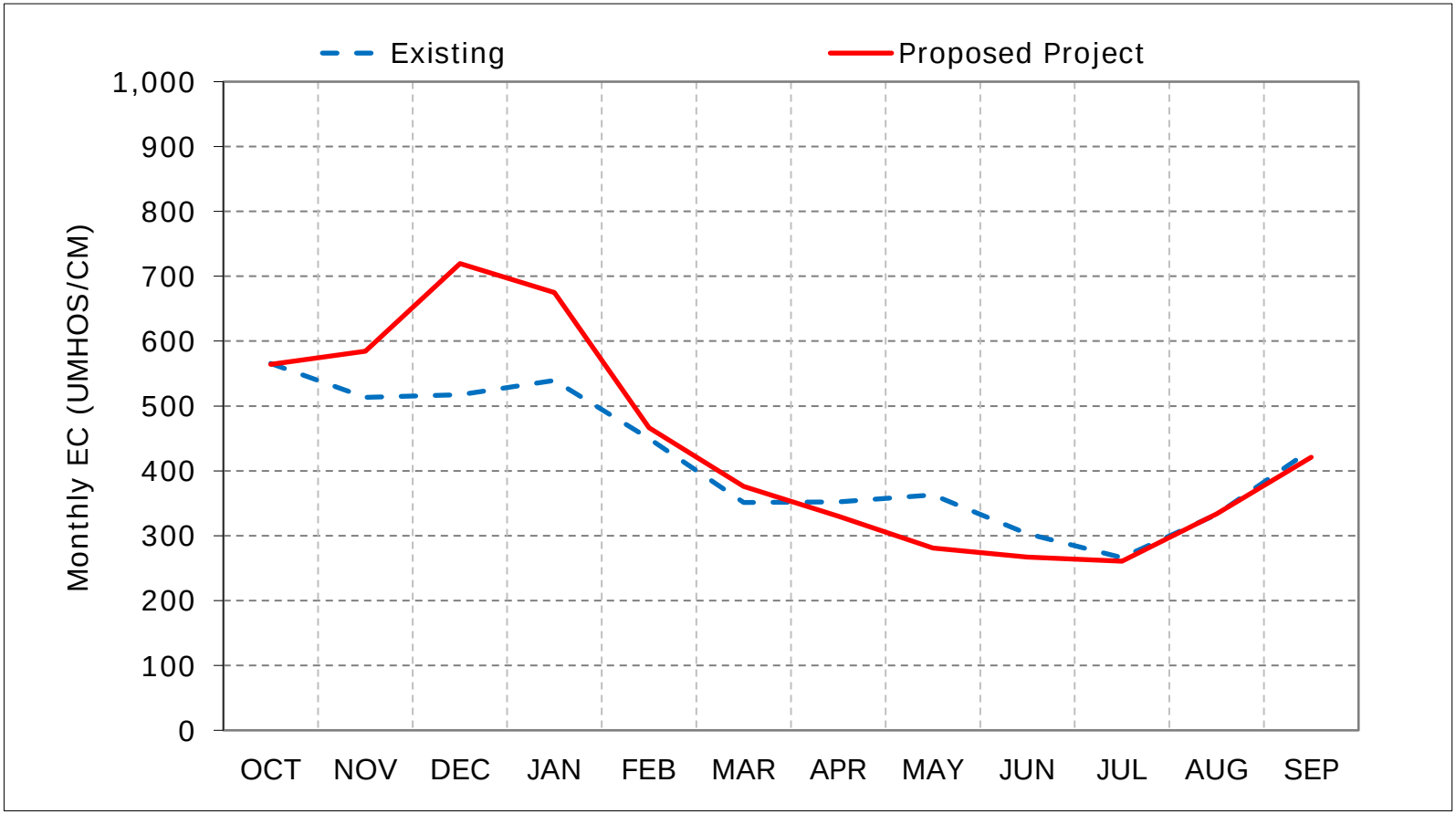
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 18-2. Old River at Highway 4, Wet Year Average EC



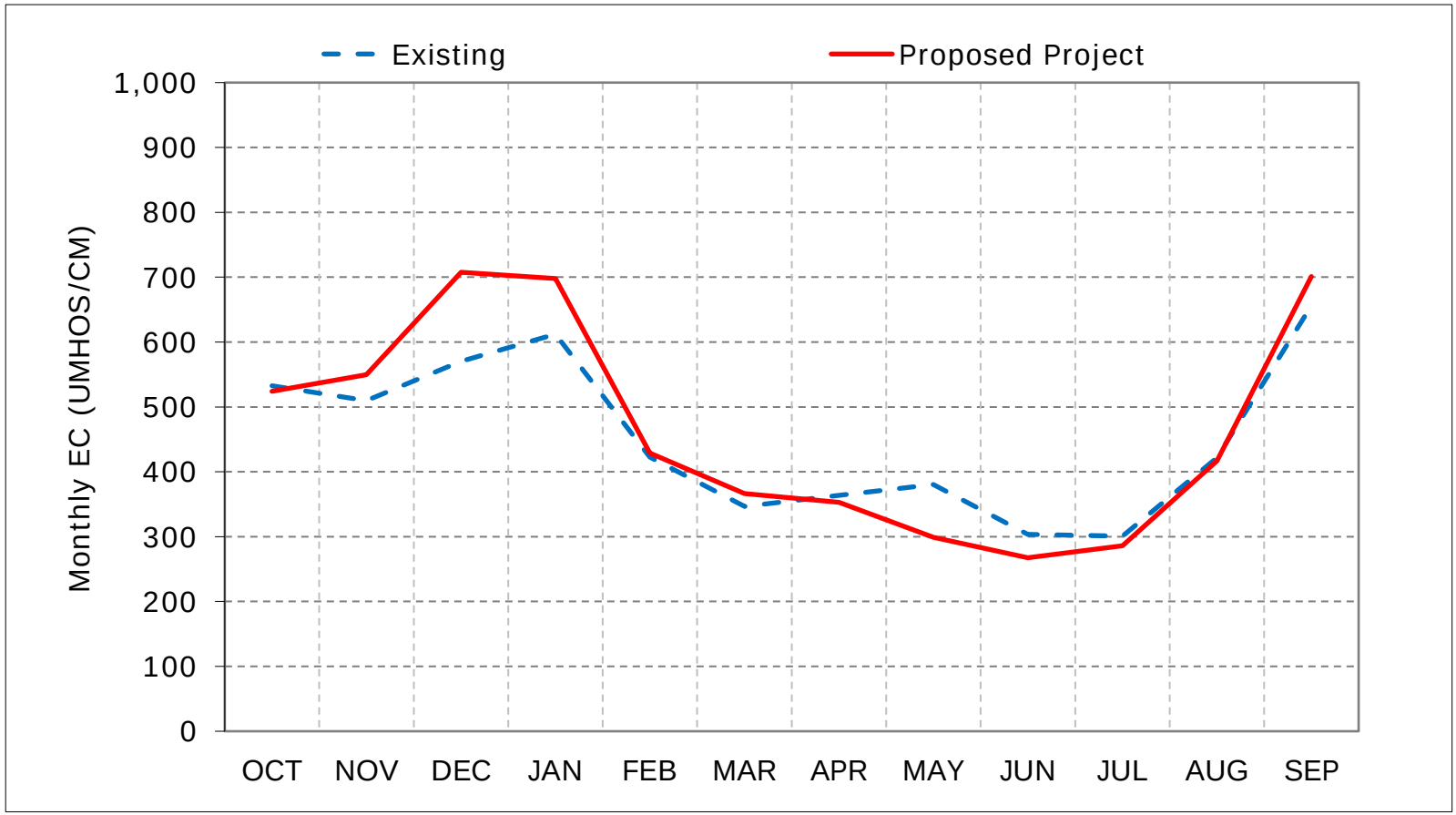
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 18-3. Old River at Highway 4, Above Normal Year Average EC



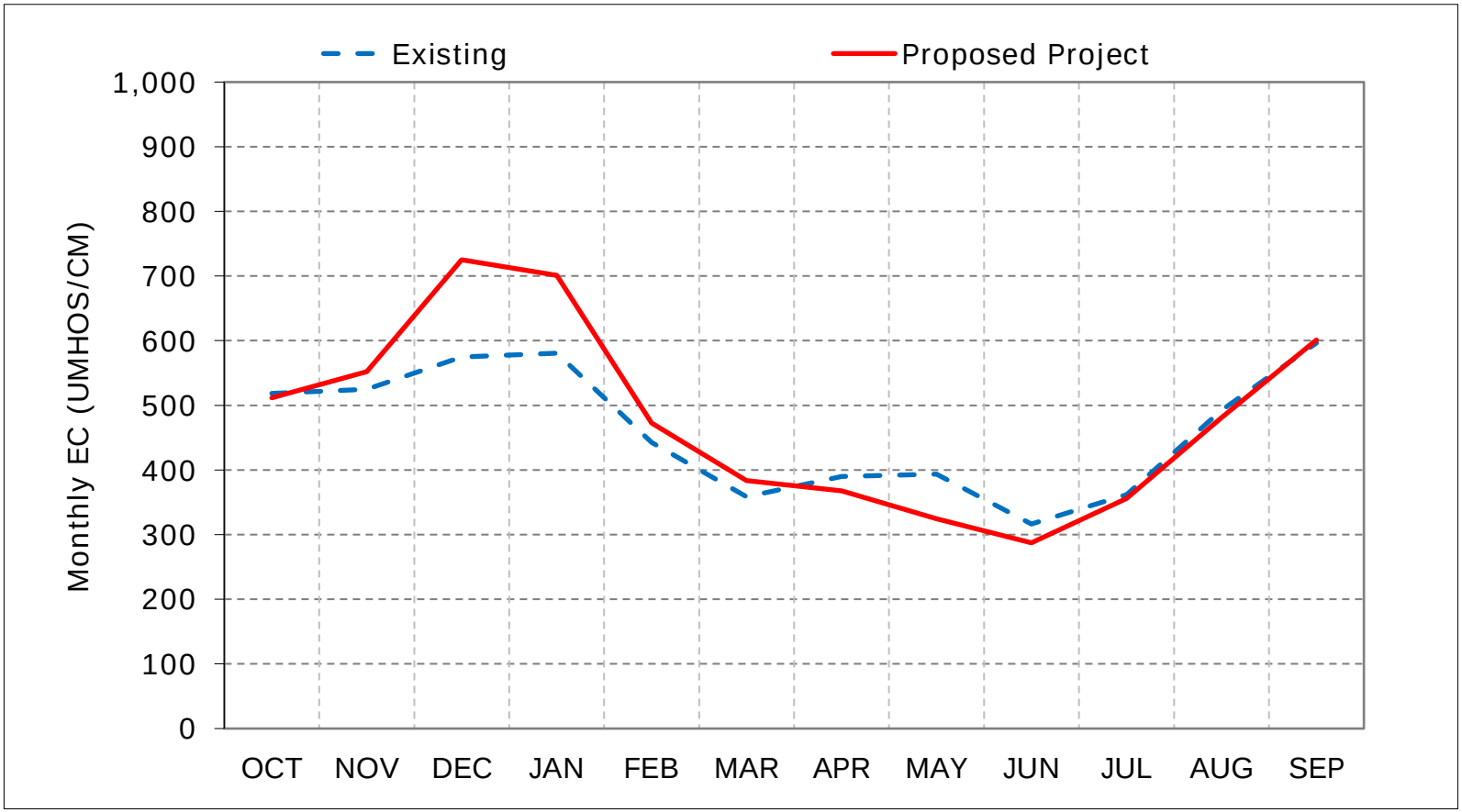
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 18-4. Old River at Highway 4, Below Normal Year Average EC



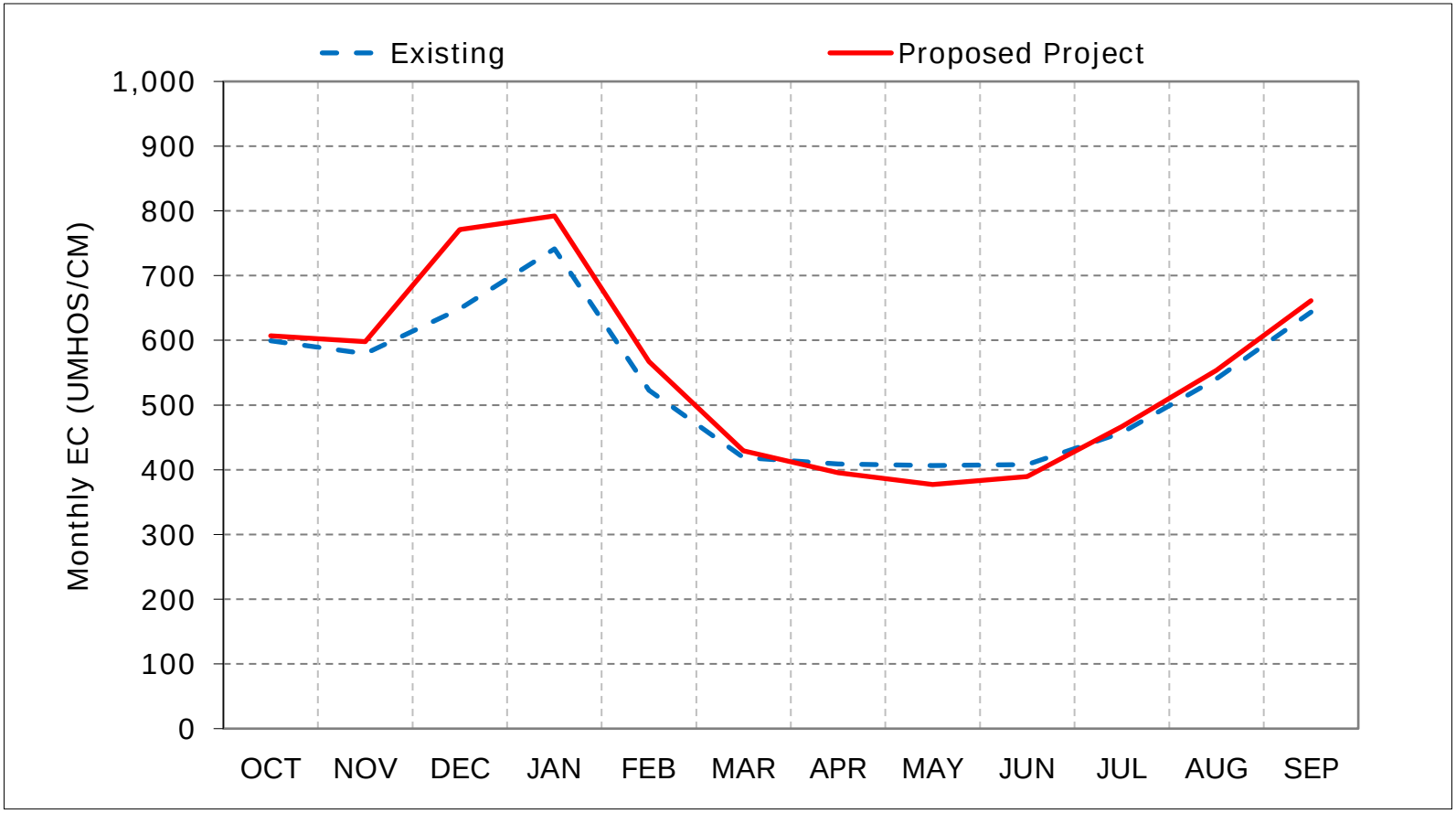
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 18-5. Old River at Highway 4, Dry Year Average EC



*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.

Figure 18-6. Old River at Highway 4, Critical Year Average EC



*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.

Figure 18-7. Old River at Highway 4, January EC

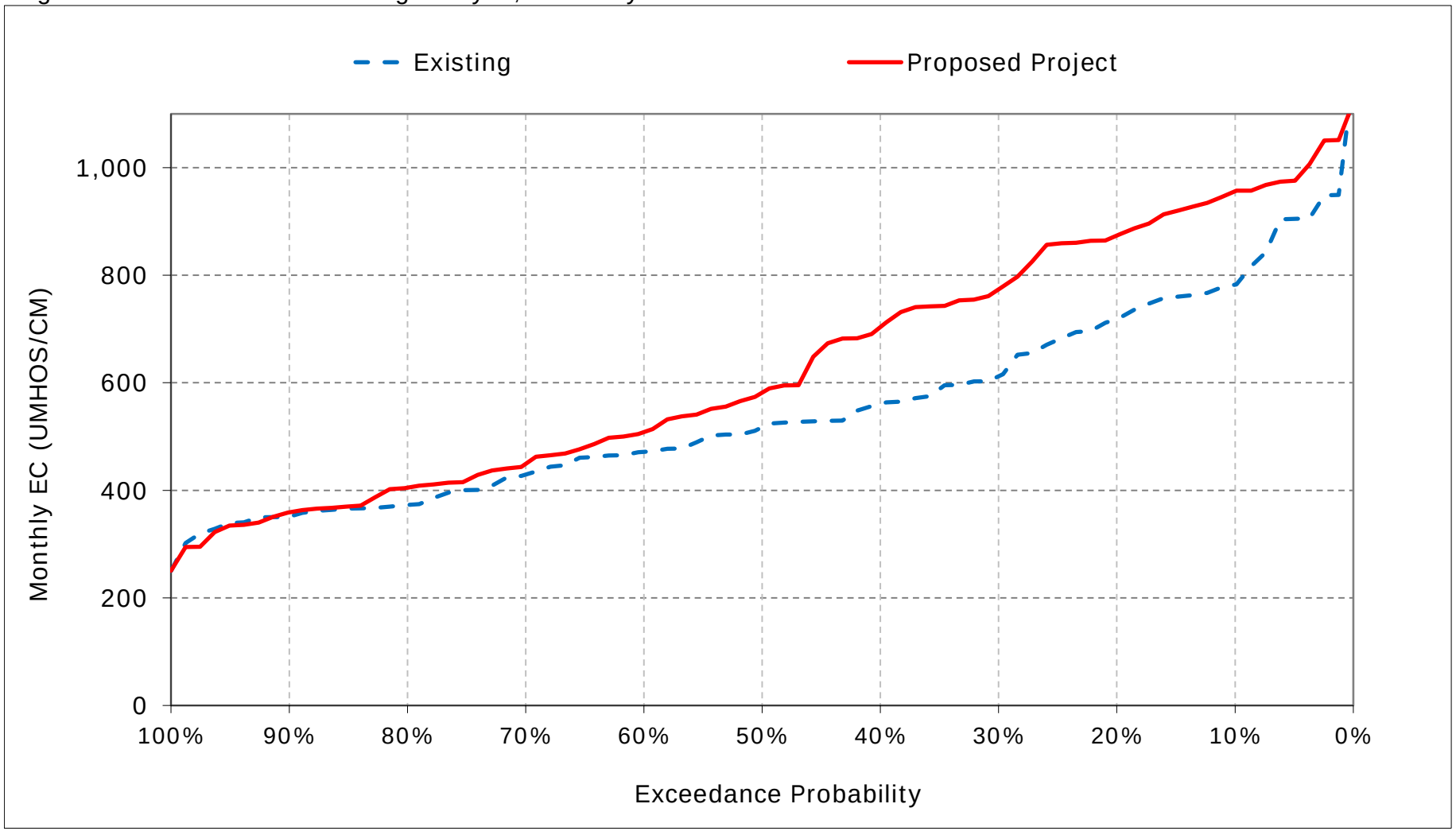


Figure 18-8. Old River at Highway 4, February EC

Figure 18-9. Old River at Highway 4, March EC

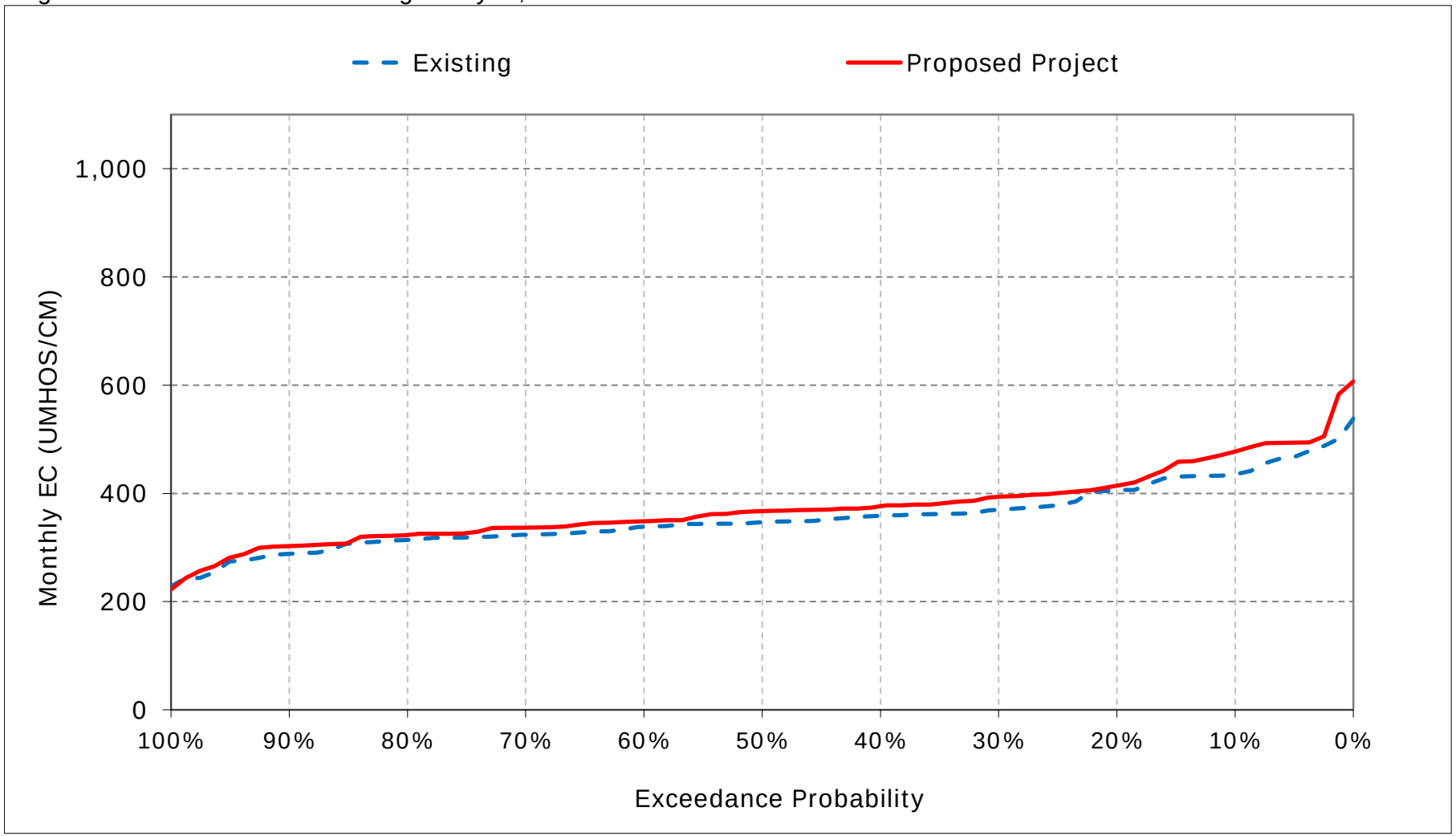


Figure 18-10. Old River at Highway 4, April EC

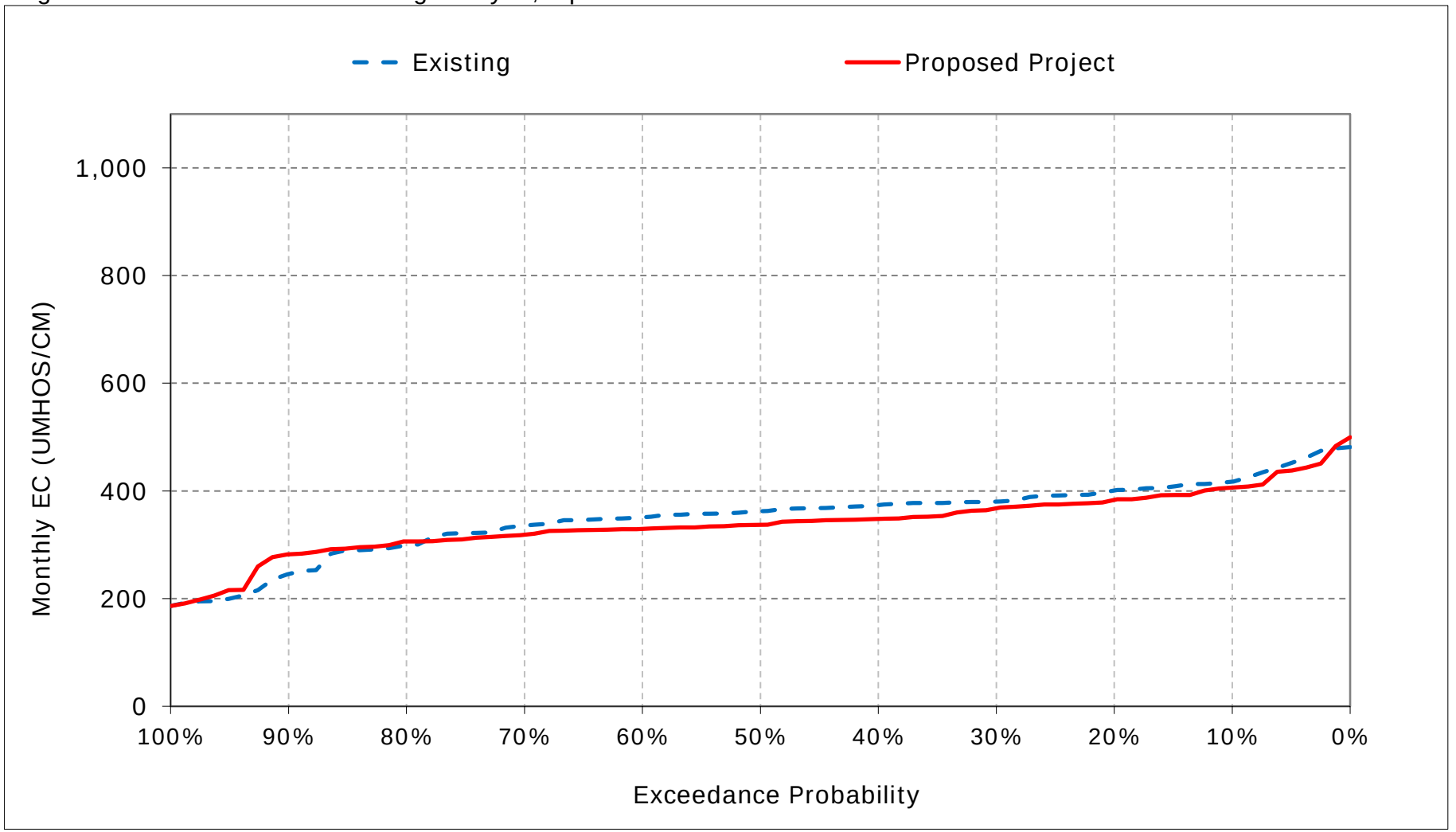


Figure 18-11. Old River at Highway 4, May EC

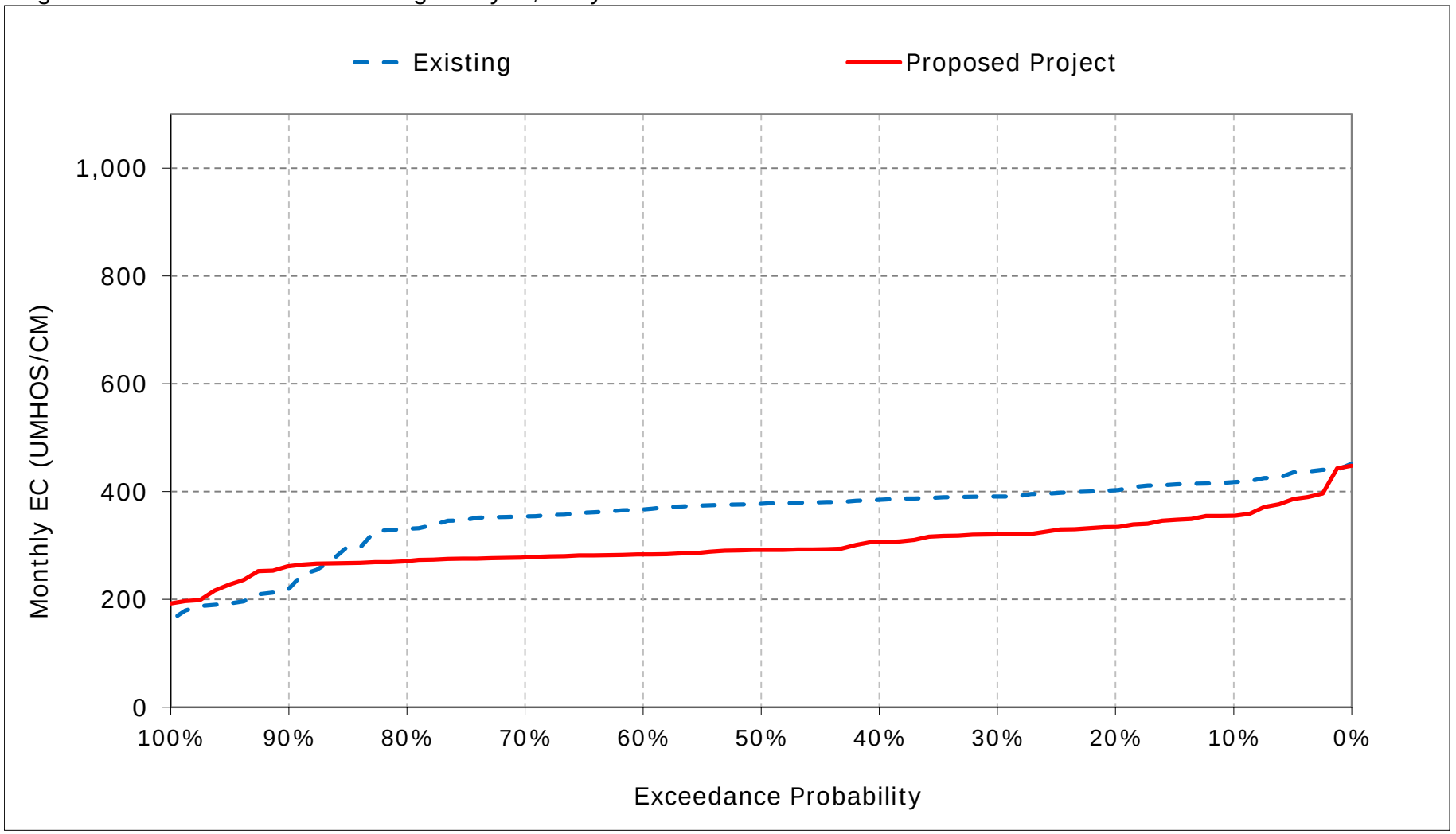


Figure 18-12. Old River at Highway 4, June EC

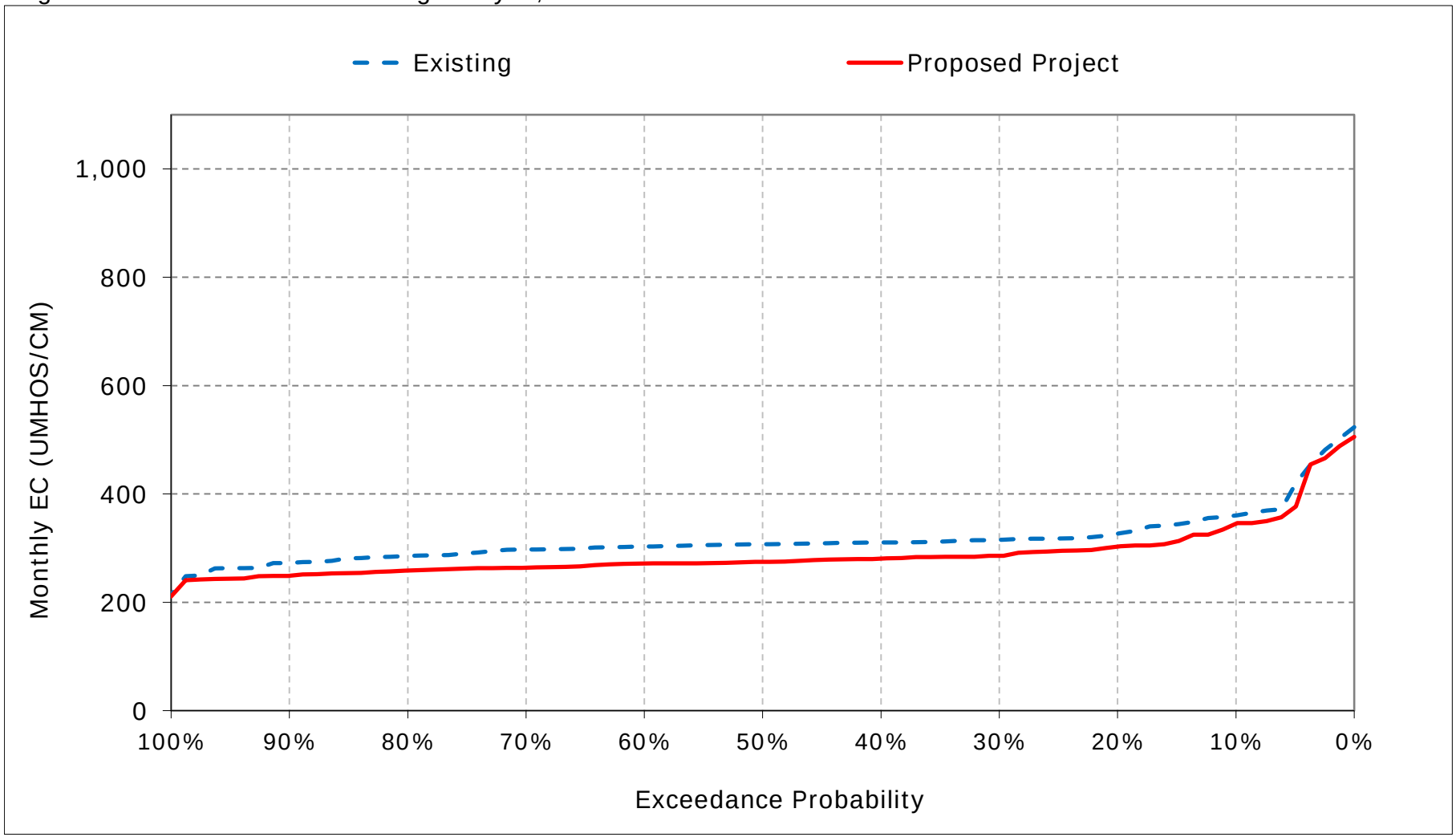


Figure 18-13. Old River at Highway 4, July EC

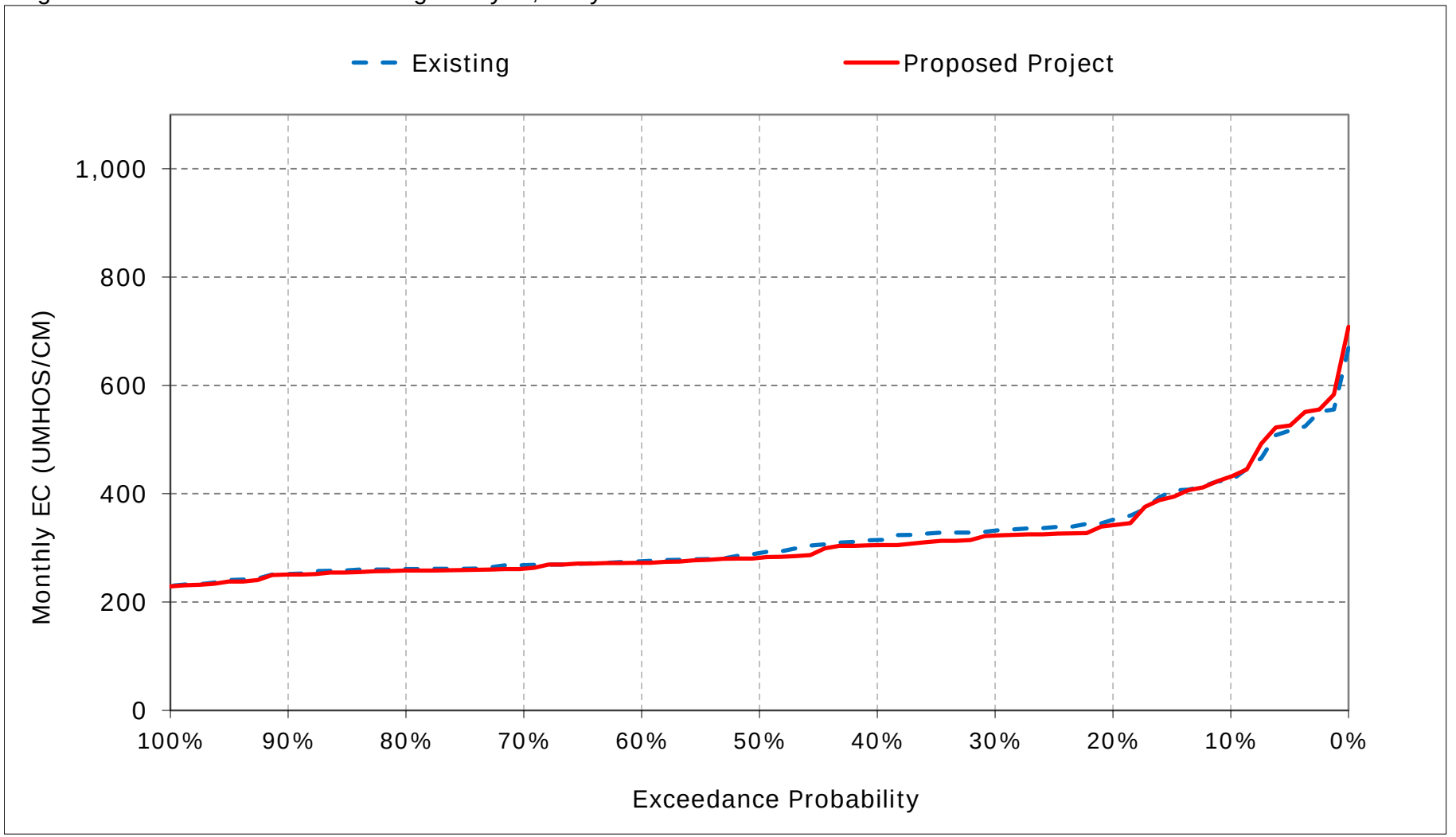


Figure 18-14. Old River at Highway 4, August EC

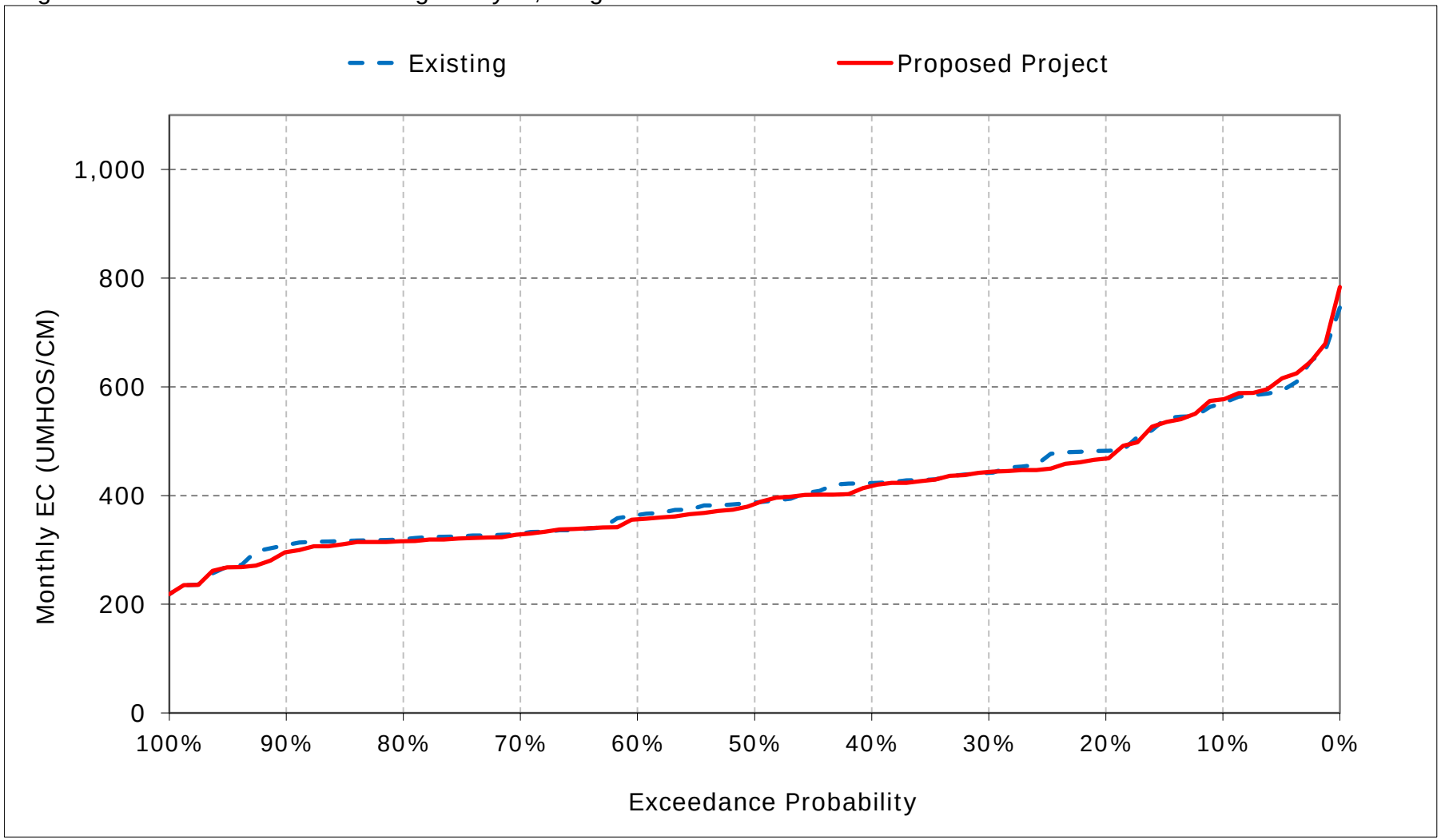


Figure 18-15. Old River at Highway 4, September EC

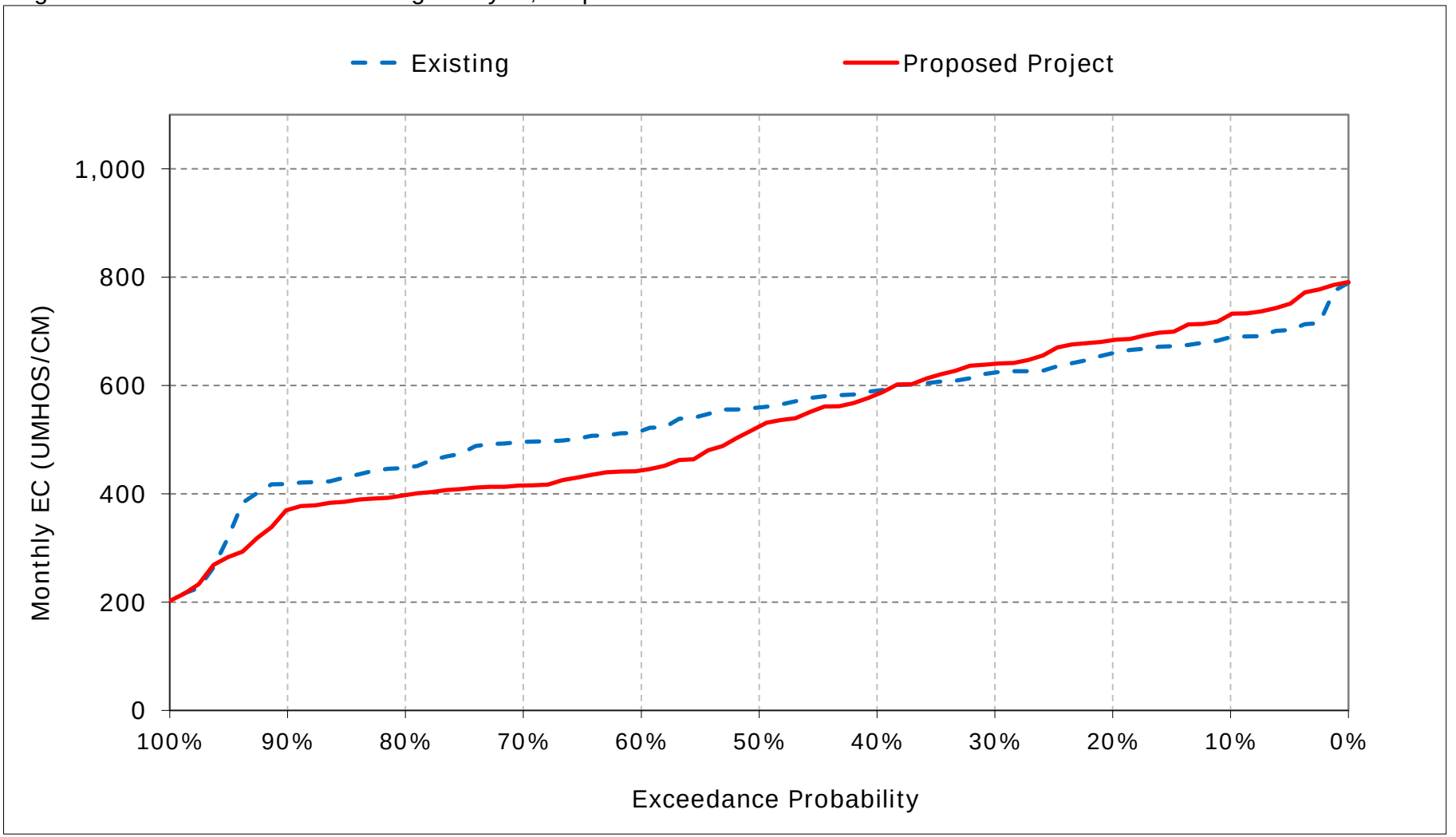


Figure 18-16. Old River at Highway 4, October EC

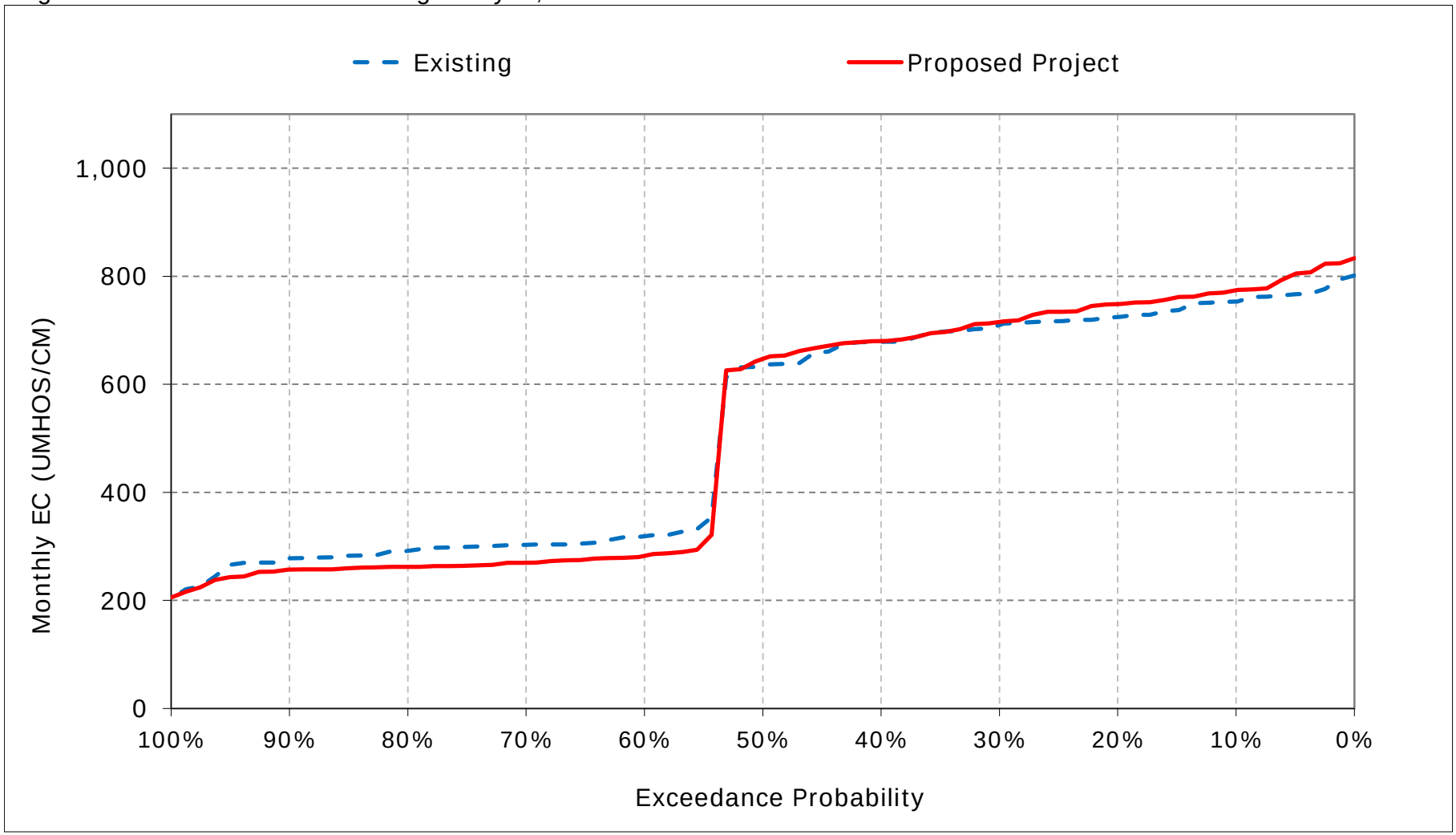


Figure 18-17. Old River at Highway 4, November EC

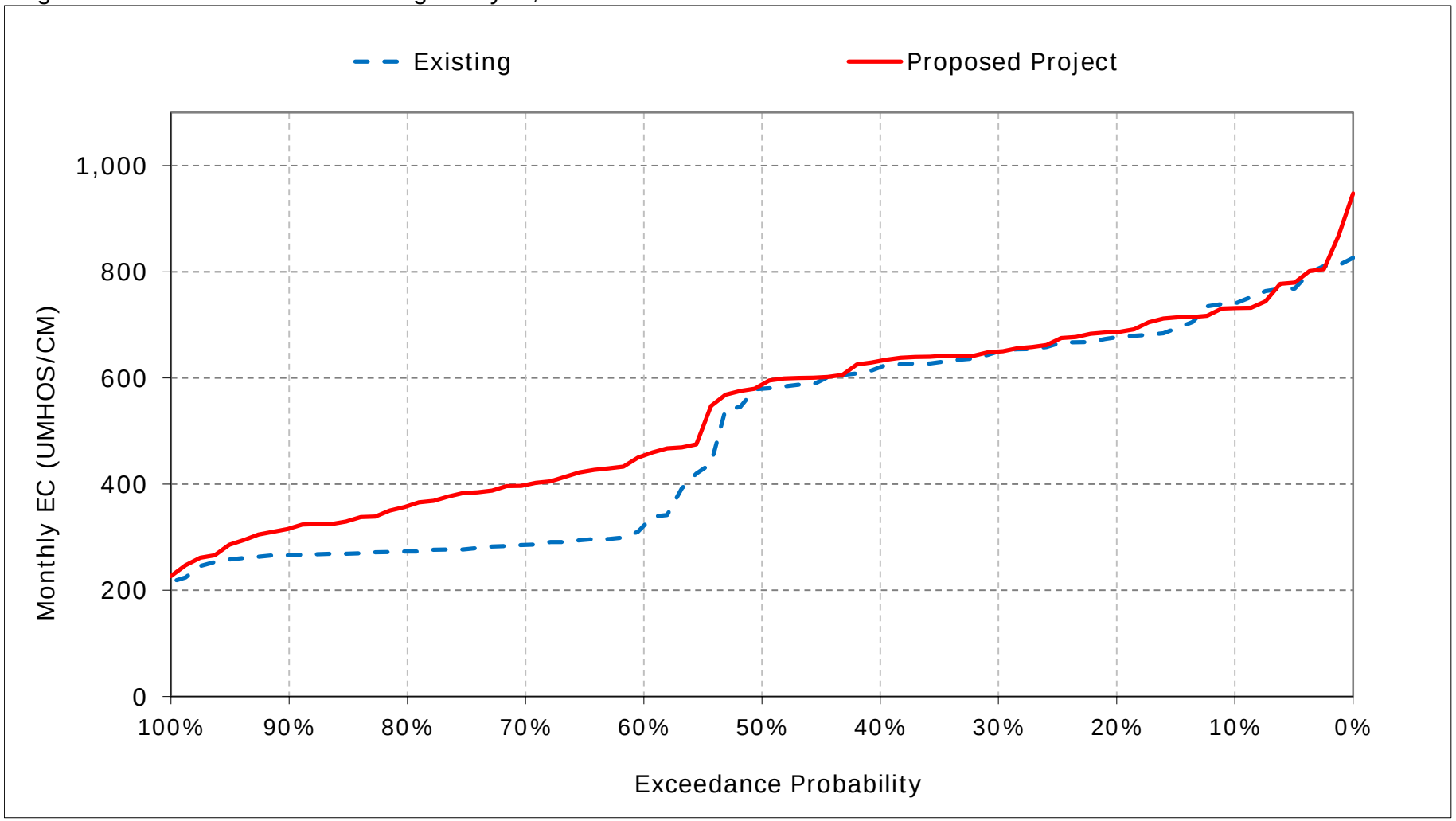


Figure 18-18. Old River at Highway 4, December EC

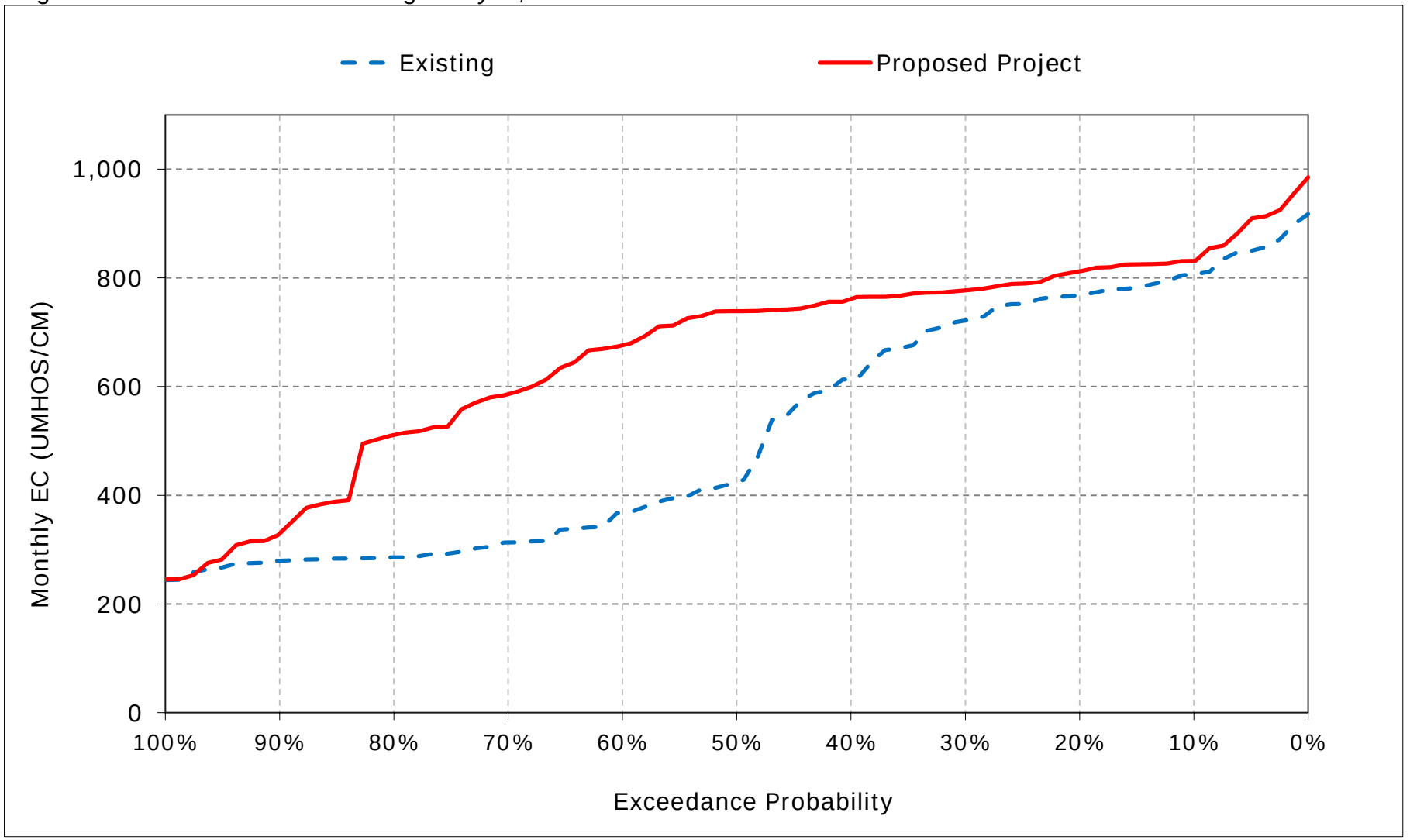


Table 19-1. Victoria Canal Salinity, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	512	528	585	672	620	535	496	471	426	368	427	458
20%	490	483	556	646	576	497	470	453	386	356	378	446
30%	477	467	538	583	550	481	450	438	375	327	350	439
40%	467	453	514	553	537	464	430	420	369	310	330	427
50%	446	431	436	526	503	440	410	389	363	298	308	412
60%	368	359	377	502	482	419	369	374	358	289	301	394
70%	354	348	337	481	469	395	333	359	348	280	293	386
80%	333	341	318	448	432	347	302	327	336	271	284	355
90%	320	330	295	427	368	323	246	215	322	258	270	338
Long Term												
Full Simulation Period[a]	418	414	443	541	501	433	387	379	365	311	330	401
Water Year Types[b]												
Wet (32%)	388	377	400	477	428	362	292	293	330	303	285	374
Above Normal (15%)	440	433	440	544	528	427	375	370	360	295	281	344
Below Normal (17%)	421	414	455	572	513	447	402	398	360	282	321	425
Dry (22%)	420	424	463	549	535	488	462	438	376	301	380	418
Critical (15%)	451	463	498	628	568	492	471	466	432	391	416	465

Proposed Project

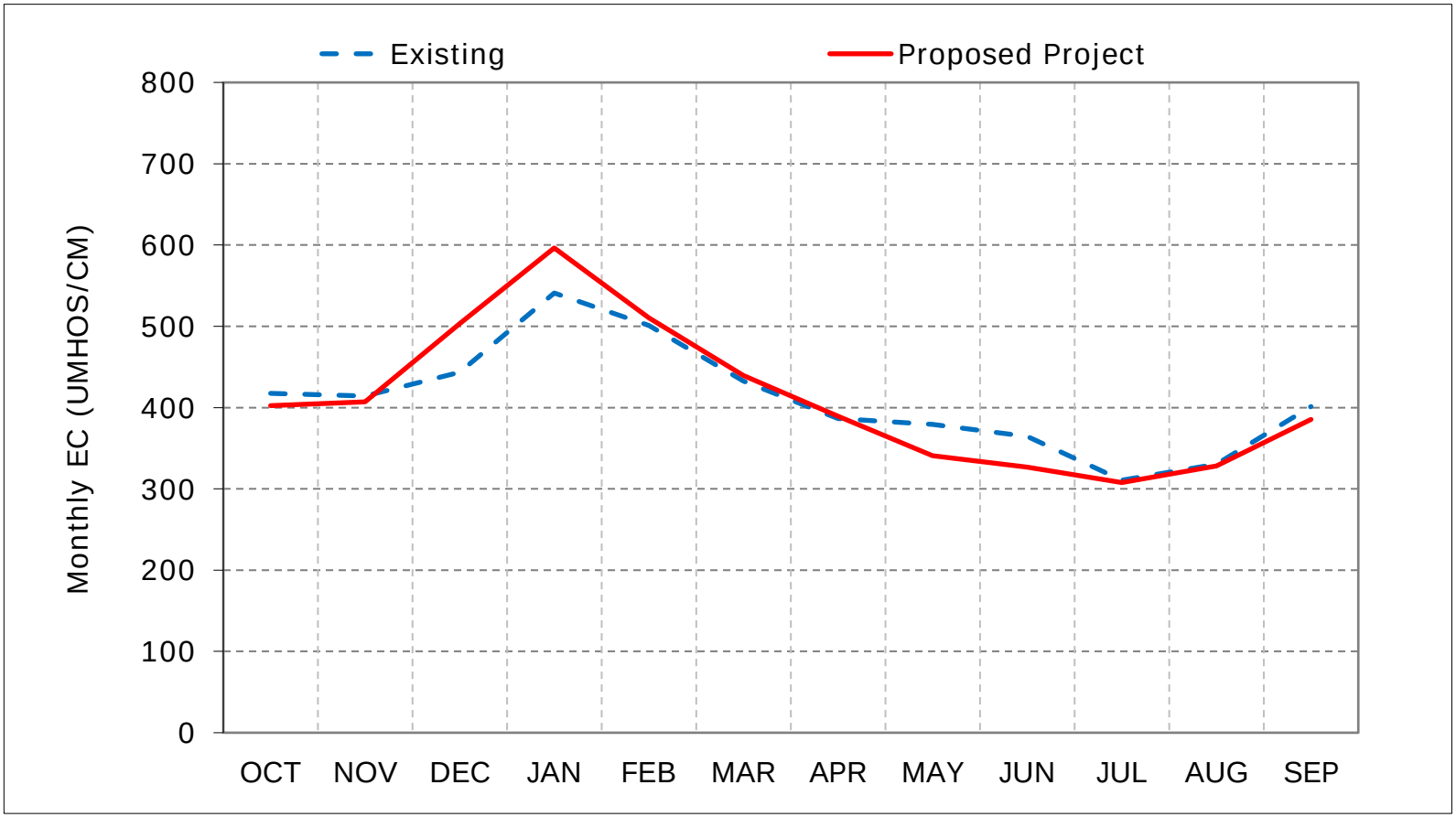
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	527	522	619	770	655	548	483	411	365	371	426	464
20%	498	501	572	720	609	509	462	388	350	356	363	453
30%	484	469	552	674	567	486	441	375	335	328	343	434
40%	470	448	542	646	533	470	425	354	329	307	325	419
50%	457	436	519	582	511	446	407	344	322	296	306	391
60%	310	338	500	556	484	424	378	336	317	284	299	353
70%	301	326	471	516	465	384	346	327	310	274	291	337
80%	295	313	426	481	441	359	319	317	301	260	283	330
90%	287	305	357	434	370	327	289	253	290	254	271	313
Long Term												
Full Simulation Period[a]	402	407	503	596	510	439	389	341	327	308	328	386
Water Year Types[b]												
Wet (32%)	366	368	449	494	427	366	309	283	313	302	283	314
Above Normal (15%)	426	439	536	648	546	434	372	328	321	287	282	339
Below Normal (17%)	402	401	506	630	515	454	417	348	315	277	317	441
Dry (22%)	406	417	524	633	551	500	462	381	323	299	373	419
Critical (15%)	453	450	553	672	590	495	439	410	382	390	418	471

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	16	-6	34	99	35	13	-13	-60	-60	4	-1	7
20%	8	18	16	74	34	12	-8	-65	-37	-1	-15	7
30%	7	2	14	90	16	5	-9	-63	-40	1	-7	-5
40%	2	-5	29	93	-4	7	-4	-66	-40	-3	-5	-8
50%	11	5	83	57	8	5	-3	-44	-41	-2	-2	-21
60%	-58	-21	123	54	2	4	9	-38	-41	-4	-2	-41
70%	-53	-22	133	35	-3	-11	13	-32	-39	-6	-2	-49
80%	-38	-28	109	32	9	12	17	-9	-34	-11	0	-25
90%	-32	-25	62	6	2	4	43	38	-31	-4	1	-25
Long Term												
Full Simulation Period[a]	-15	-7	60	55	9	7	3	-38	-38	-3	-2	-16
Water Year Types[b]												
Wet (32%)	-22	-9	49	17	-1	4	17	-10	-17	-2	-2	-59
Above Normal (15%)	-14	7	96	104	18	8	-2	-42	-39	-7	1	-5
Below Normal (17%)	-19	-12	50	58	1	7	15	-49	-45	-5	-4	16
Dry (22%)	-14	-7	61	84	17	12	0	-57	-53	-1	-7	1
Critical (15%)	2	-13	55	45	22	3	-31	-56	-50	-1	2	6

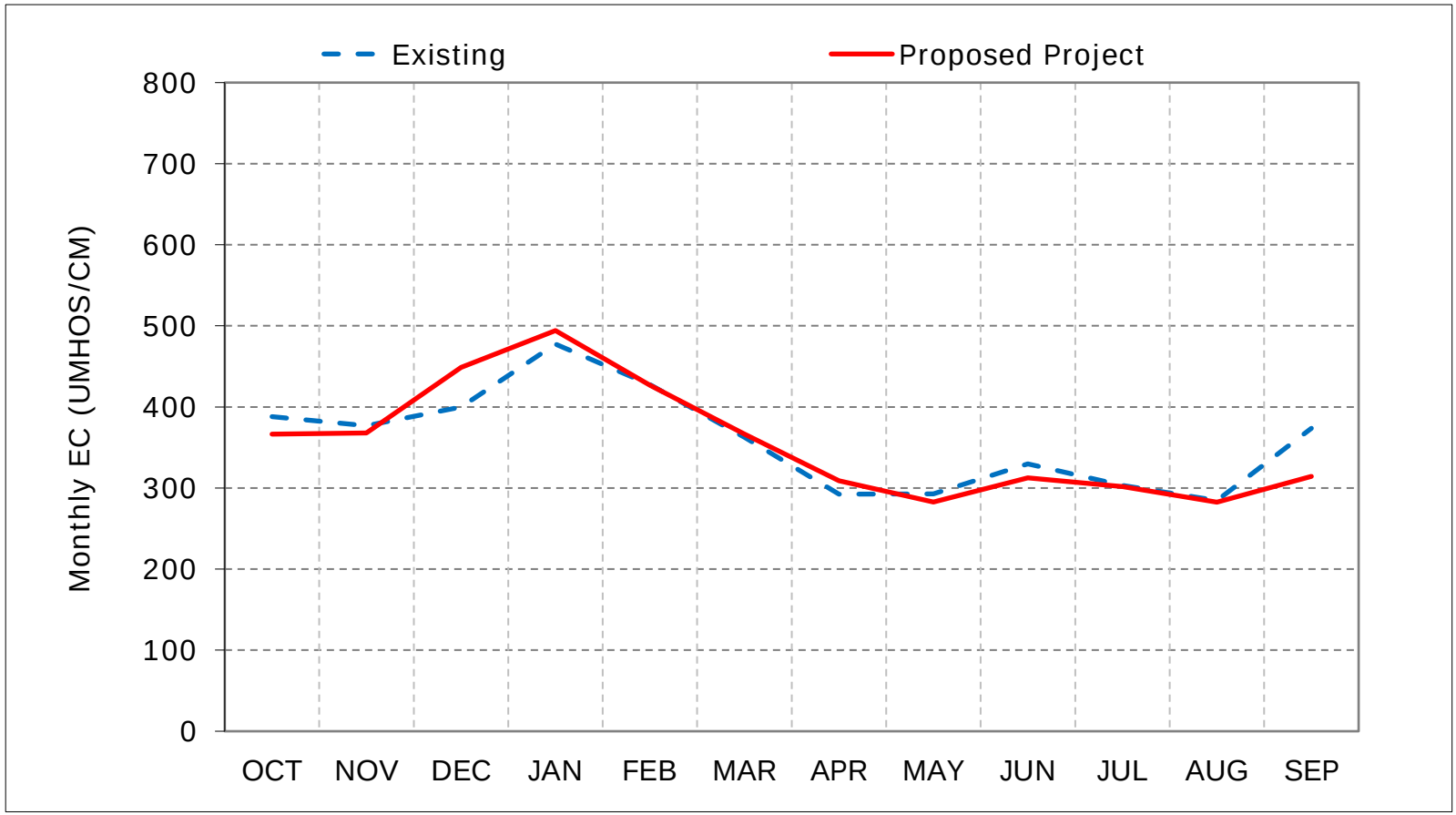
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 19-1. Victoria Canal Salinity, Long-Term Average EC



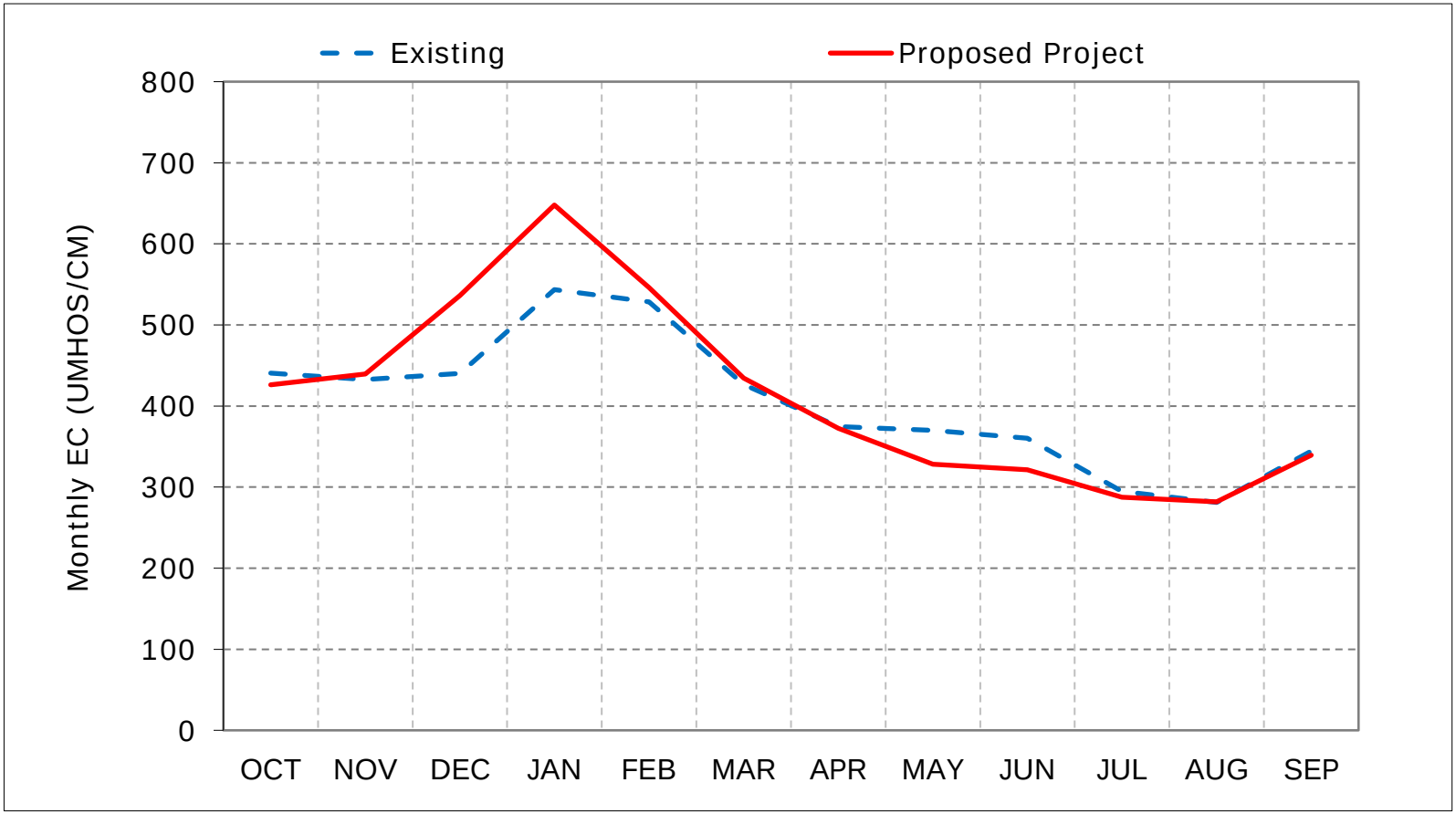
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 19-2. Victoria Canal Salinity, Wet Year Average EC



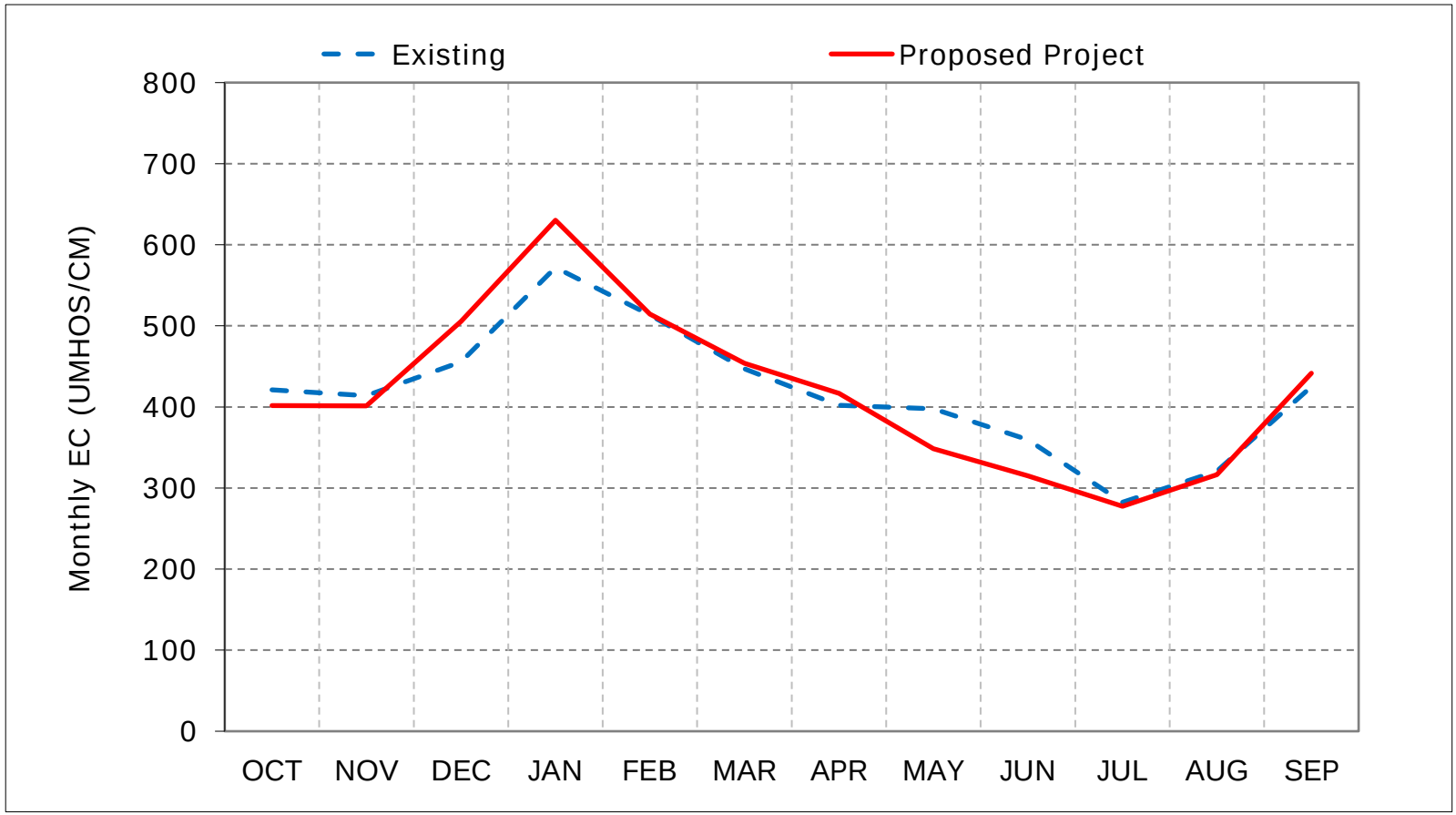
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 19-3. Victoria Canal Salinity, Above Normal Year Average EC



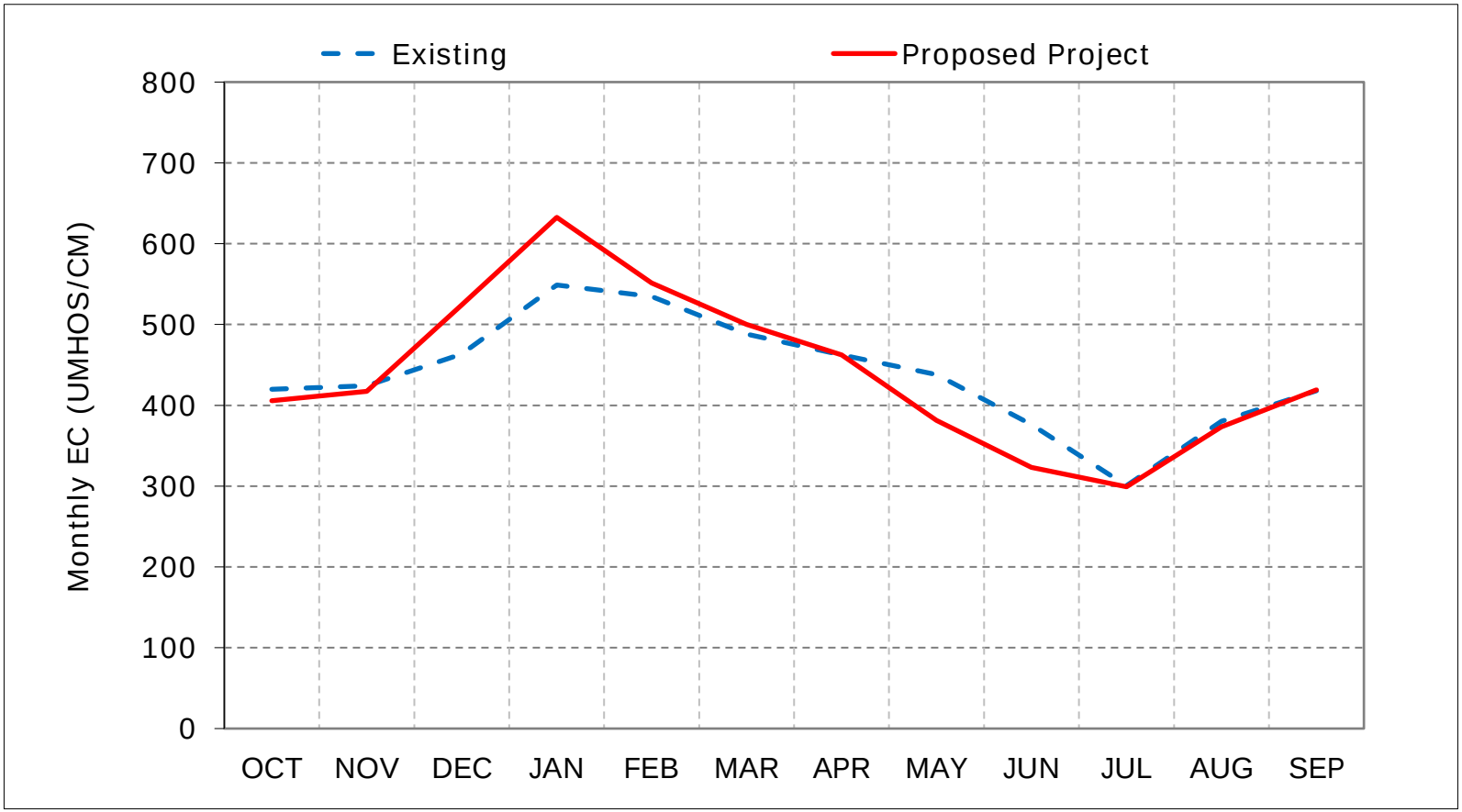
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 19-4. Victoria Canal Salinity, Below Normal Year Average EC



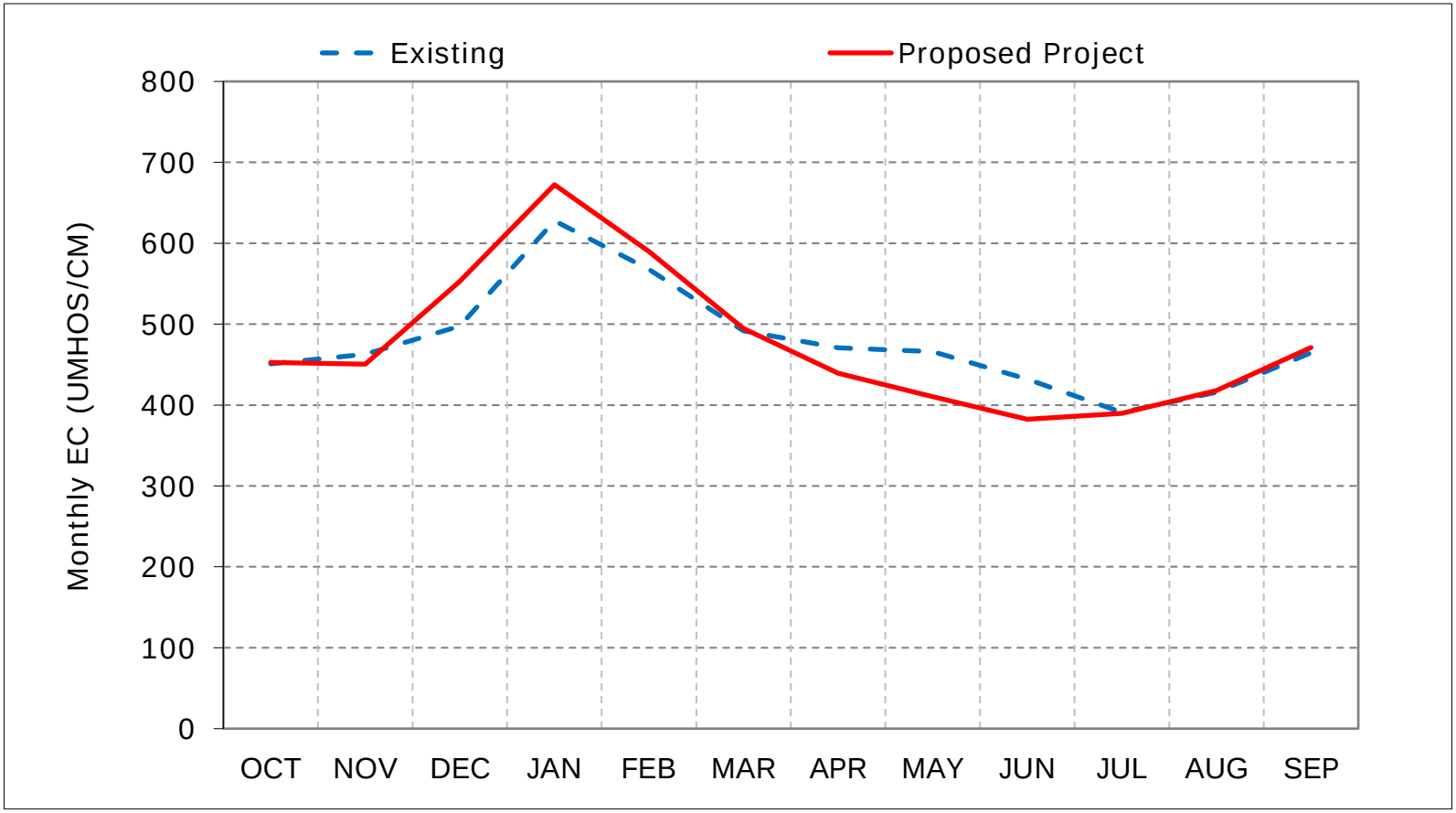
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 19-5. Victoria Canal Salinity, Dry Year Average EC



*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.

Figure 19-6. Victoria Canal Salinity, Critical Year Average EC



*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.

Figure 19-7. Victoria Canal Salinity, January EC

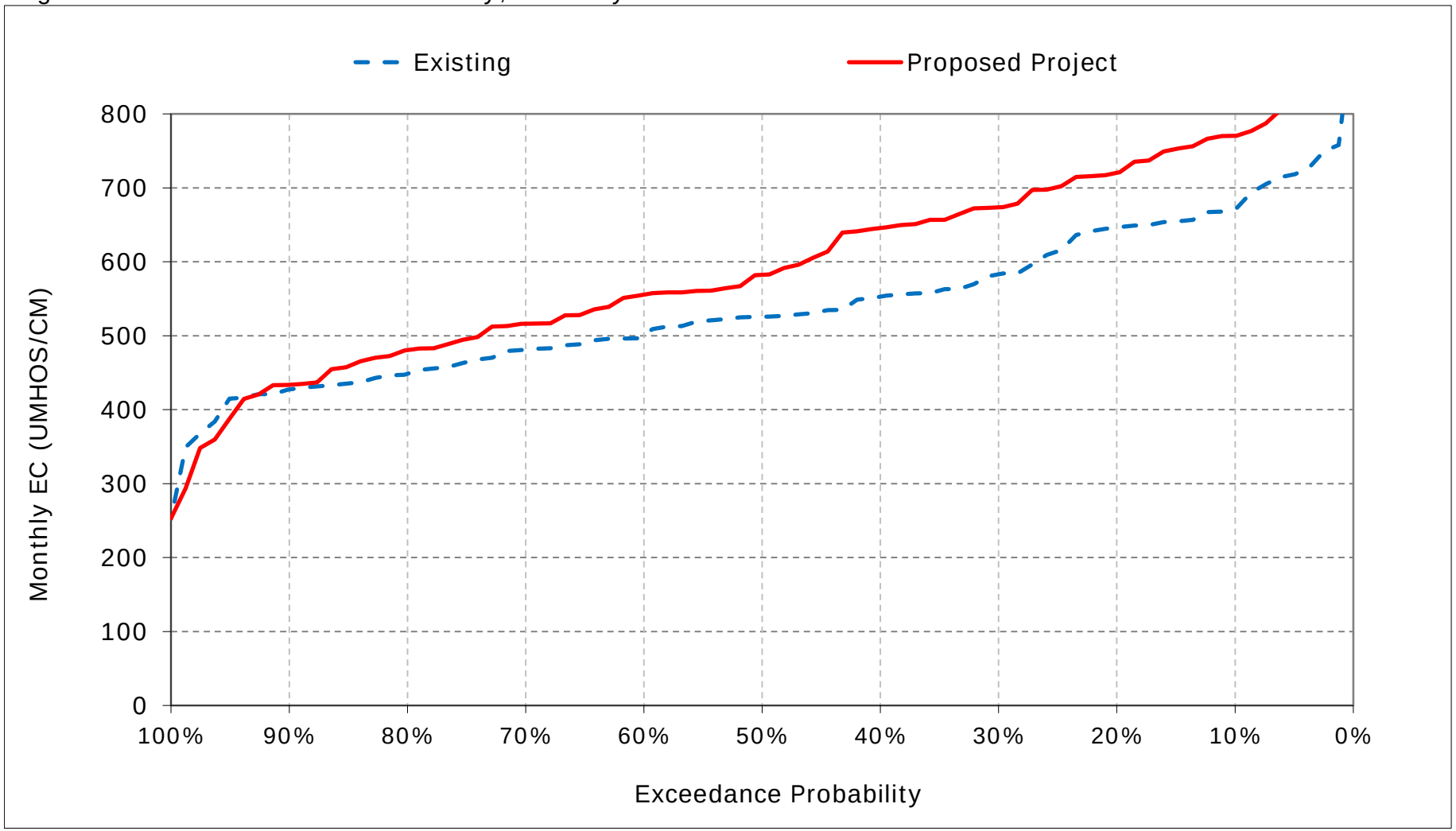


Figure 19-8. Victoria Canal Salinity, February EC

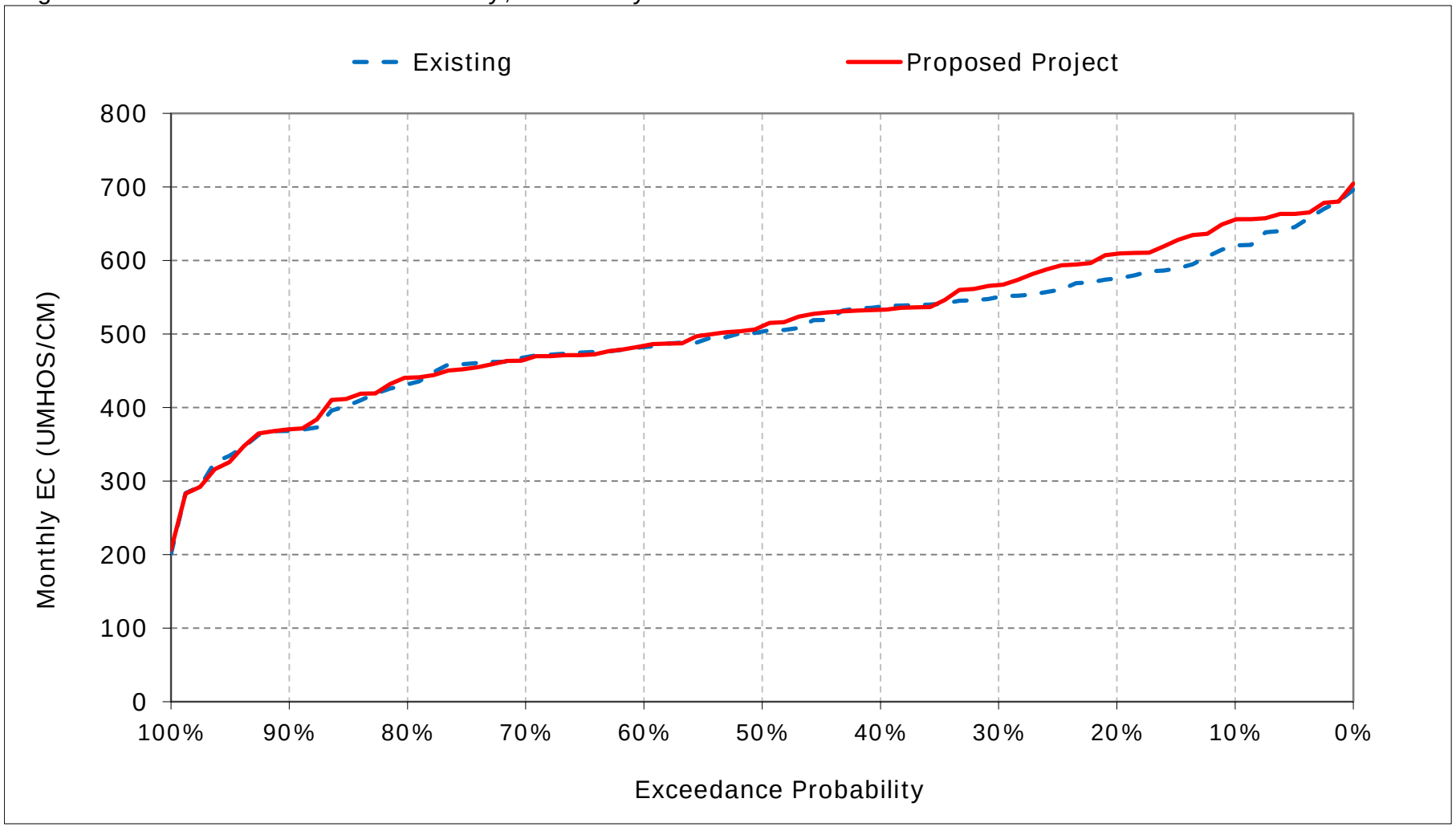


Figure 19-9. Victoria Canal Salinity, March EC

Figure 19-10. Victoria Canal Salinity, April EC

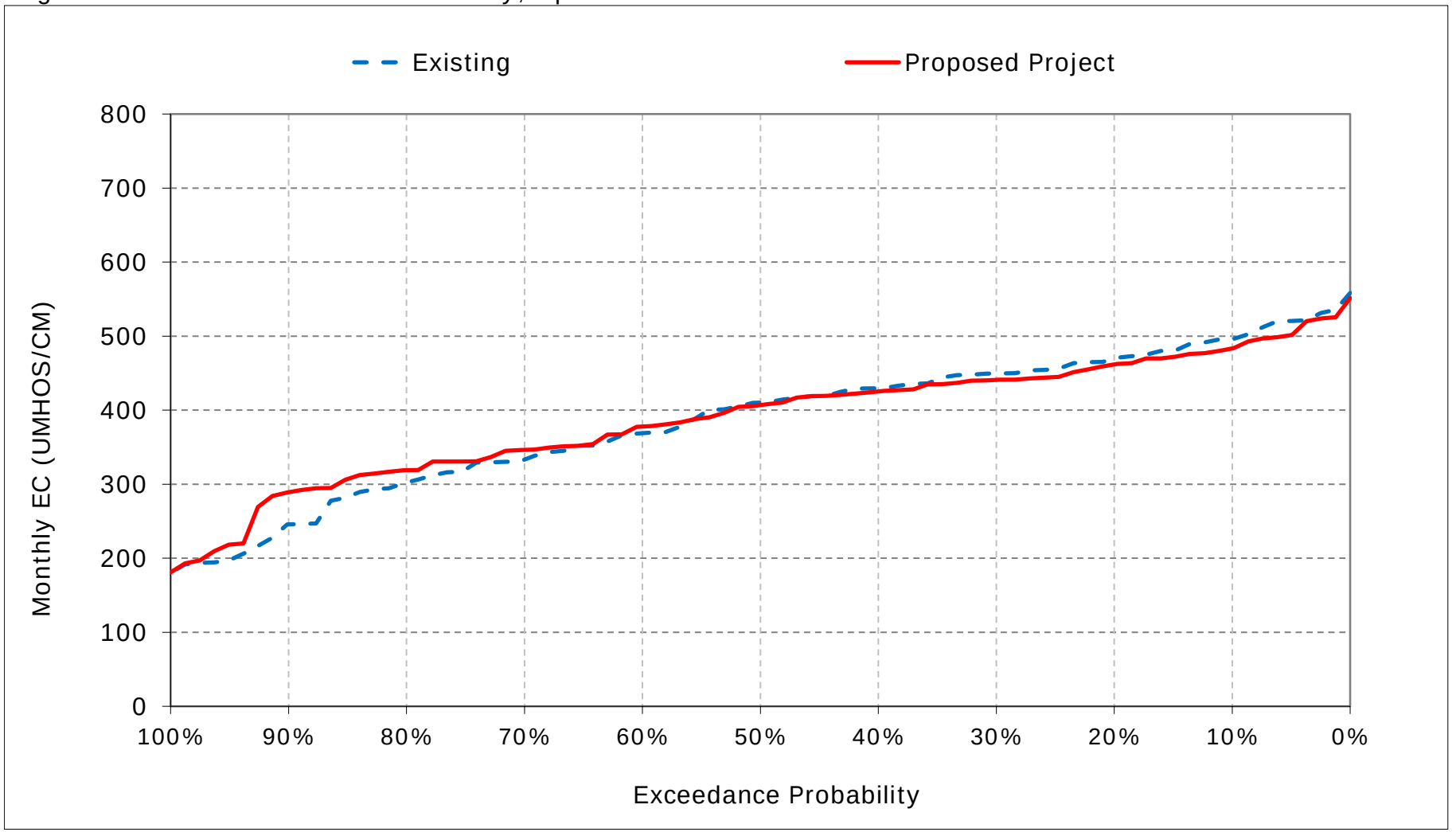


Figure 19-11. Victoria Canal Salinity, May EC

Figure 19-12. Victoria Canal Salinity, June EC

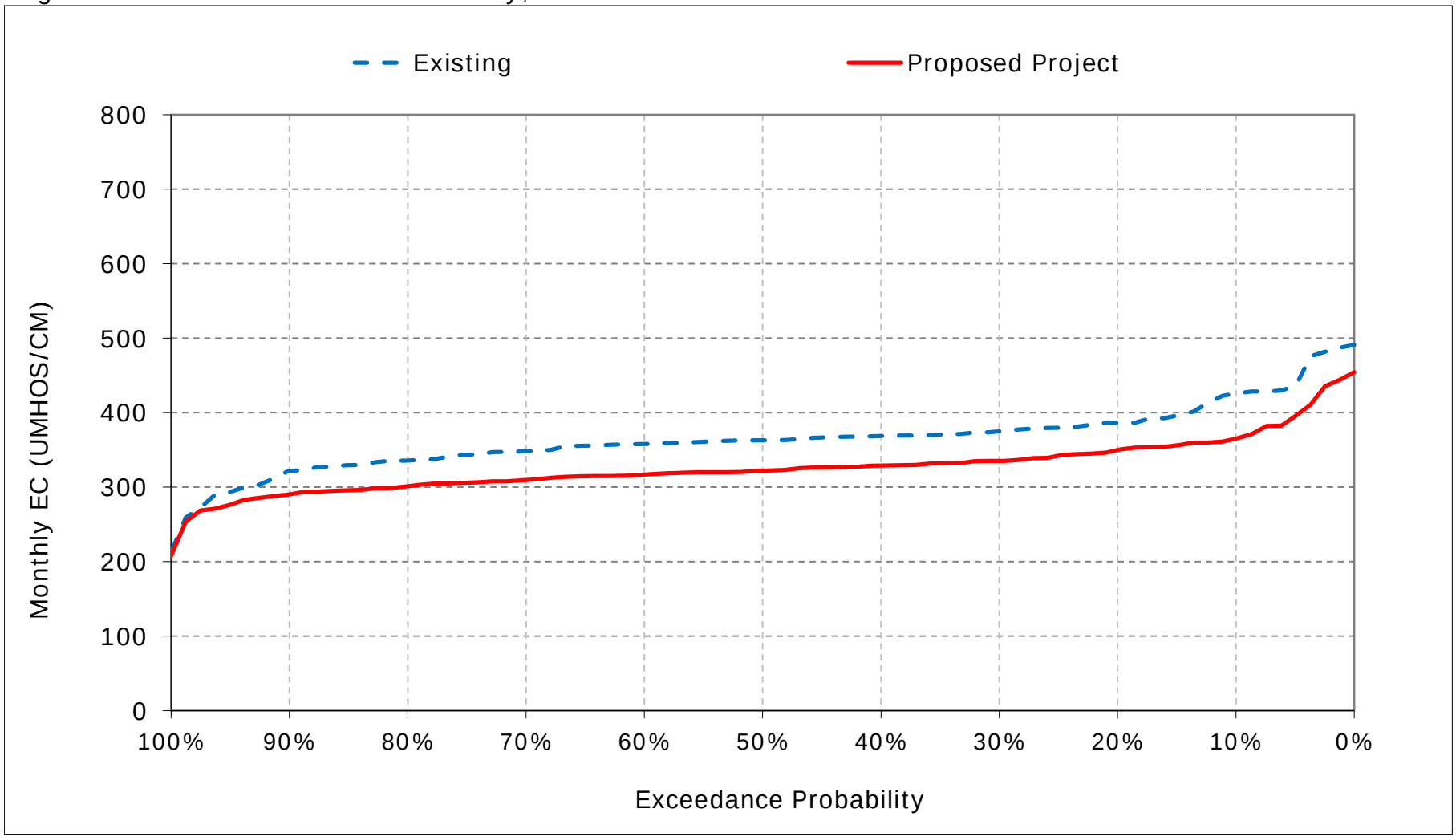


Figure 19-13. Victoria Canal Salinity, July EC

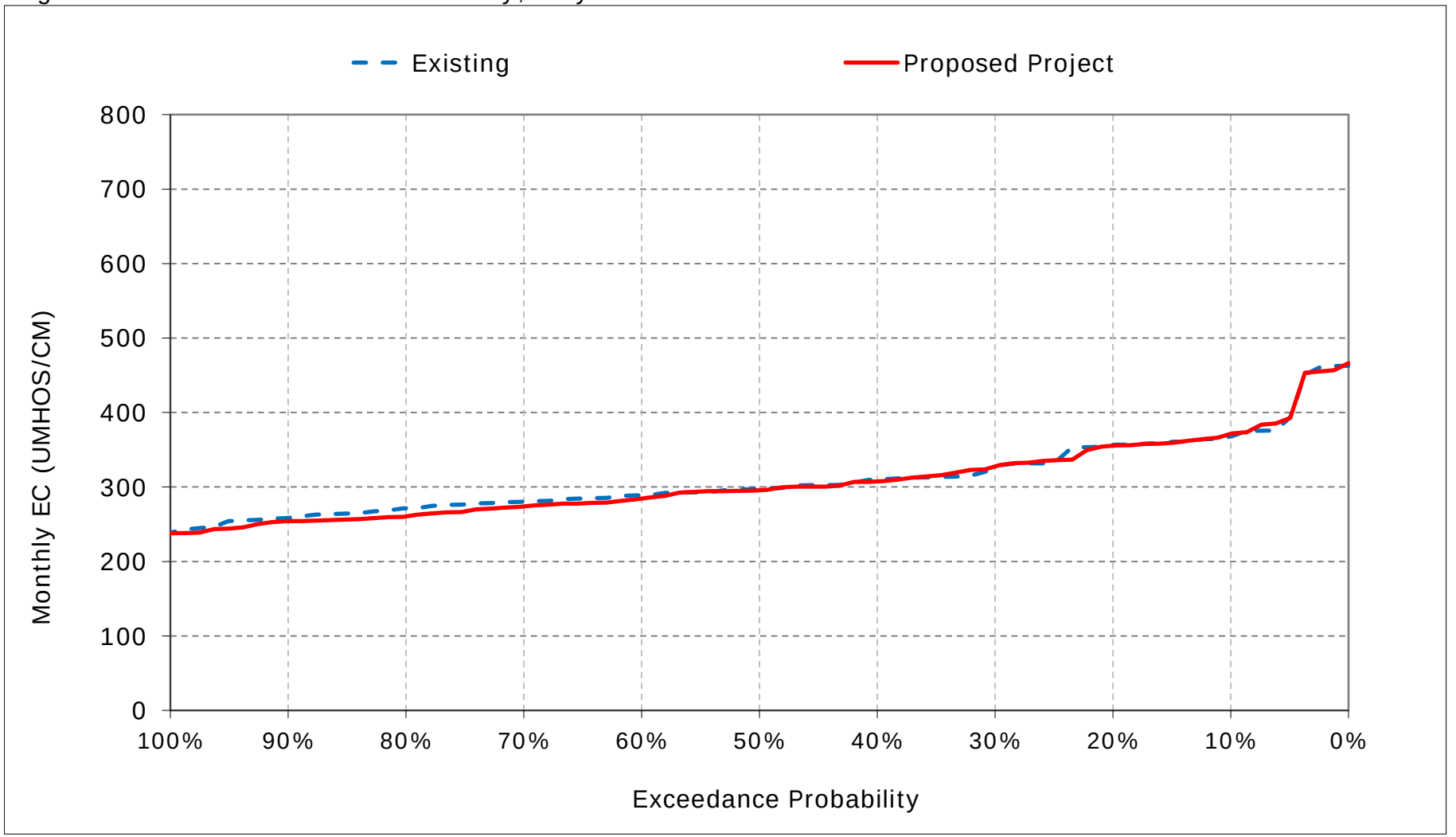


Figure 19-14. Victoria Canal Salinity, August EC

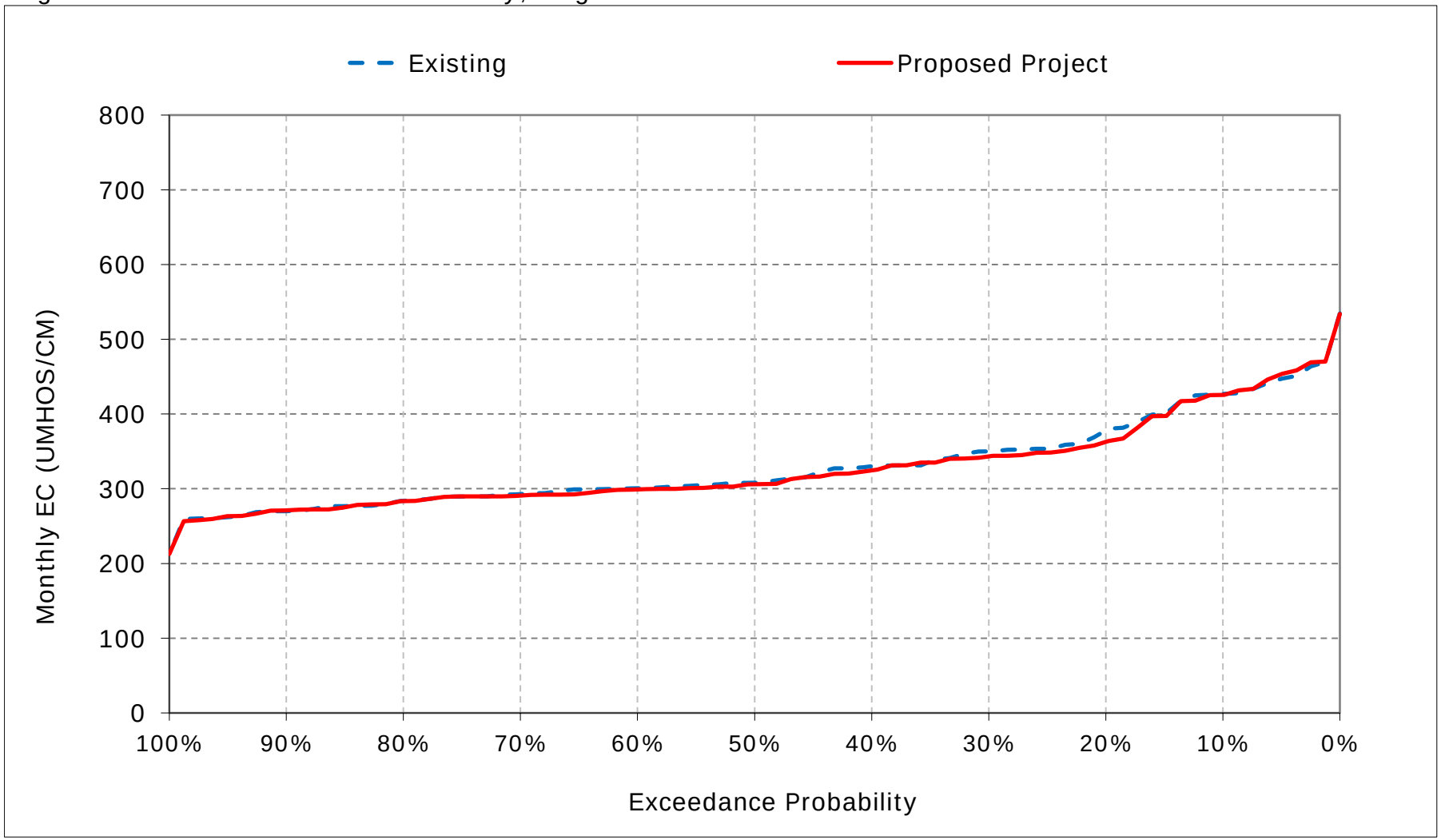


Figure 19-15. Victoria Canal Salinity, September EC

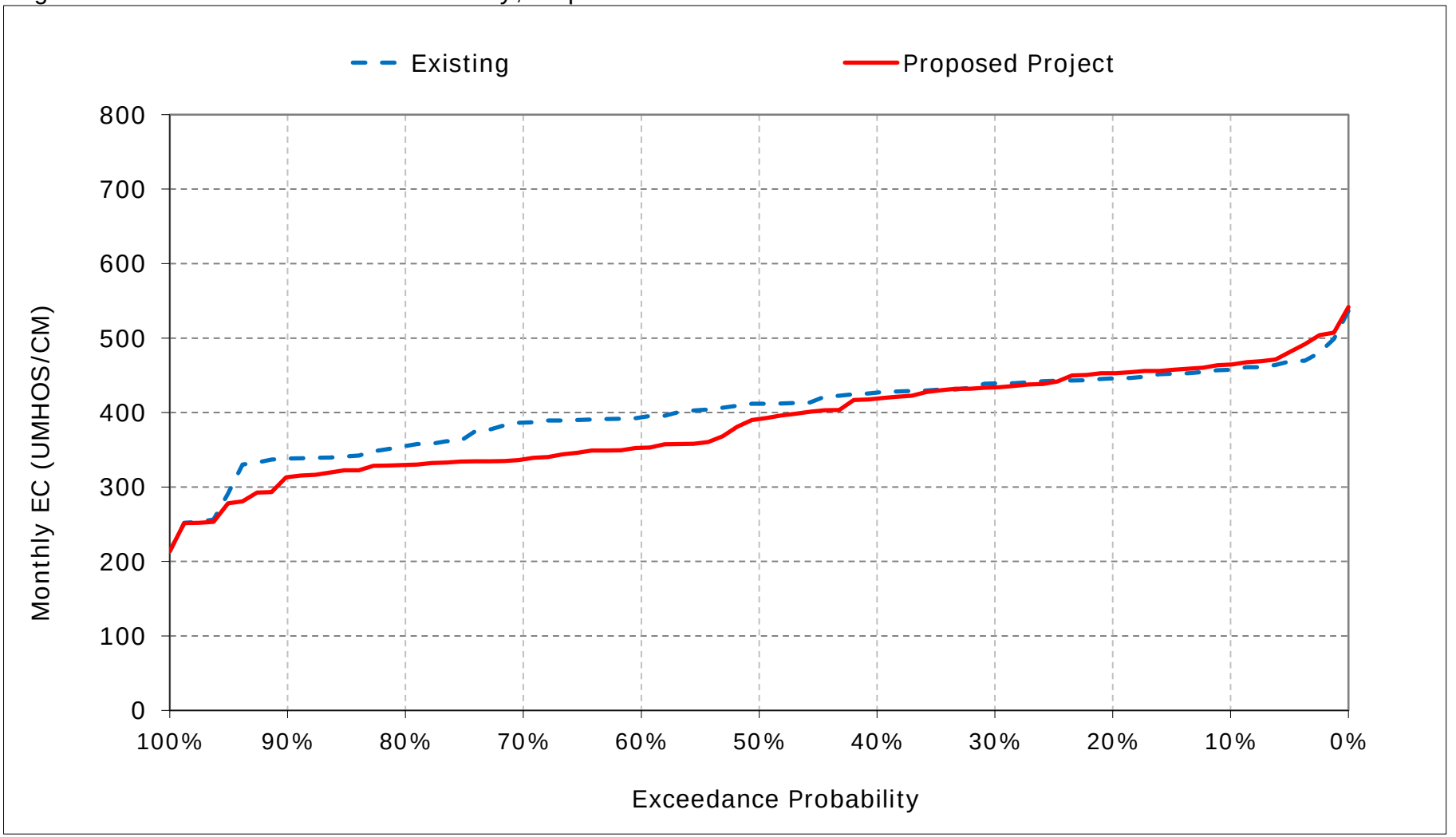


Figure 19-16. Victoria Canal Salinity, October EC

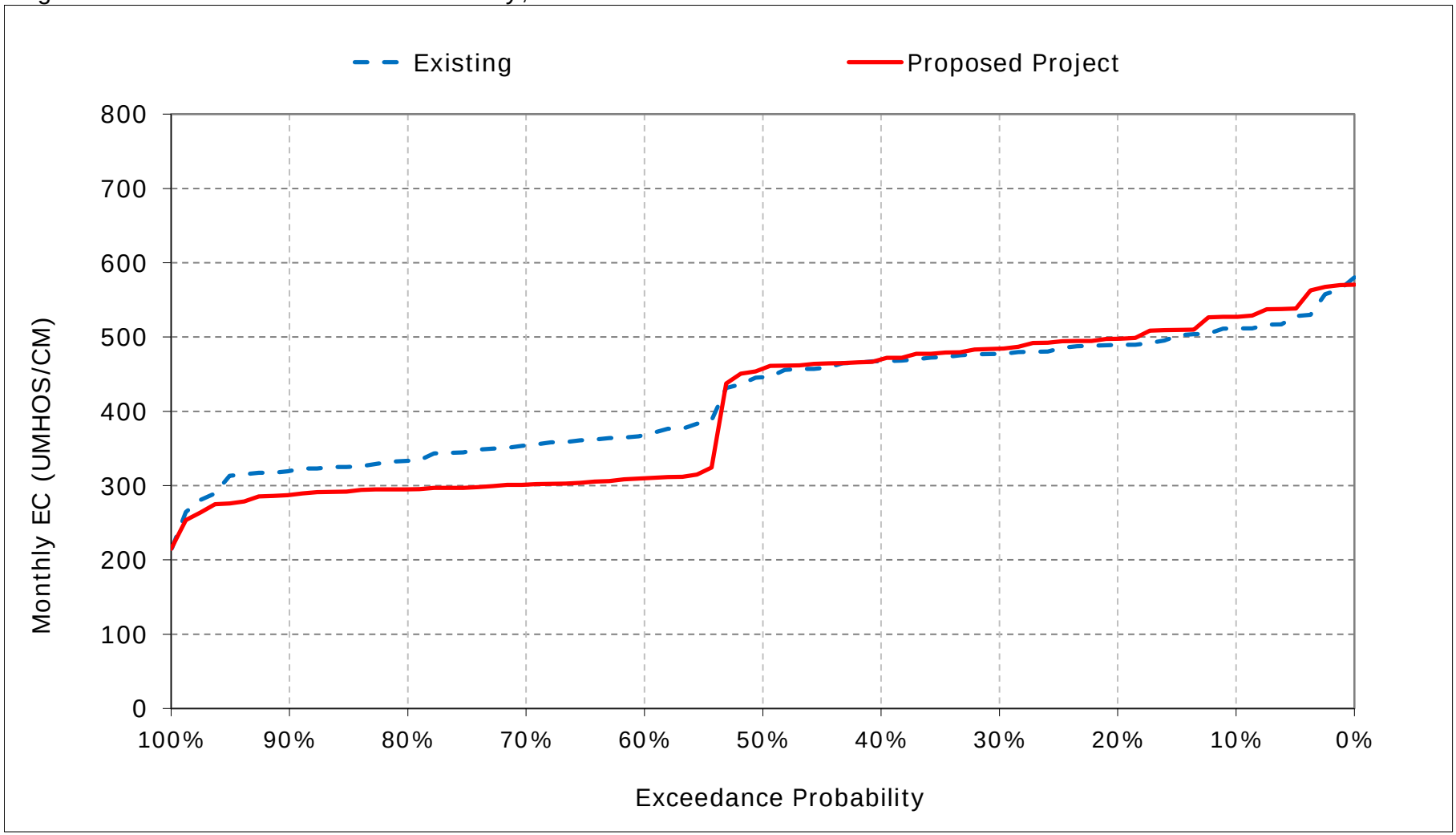


Figure 19-17. Victoria Canal Salinity, November EC

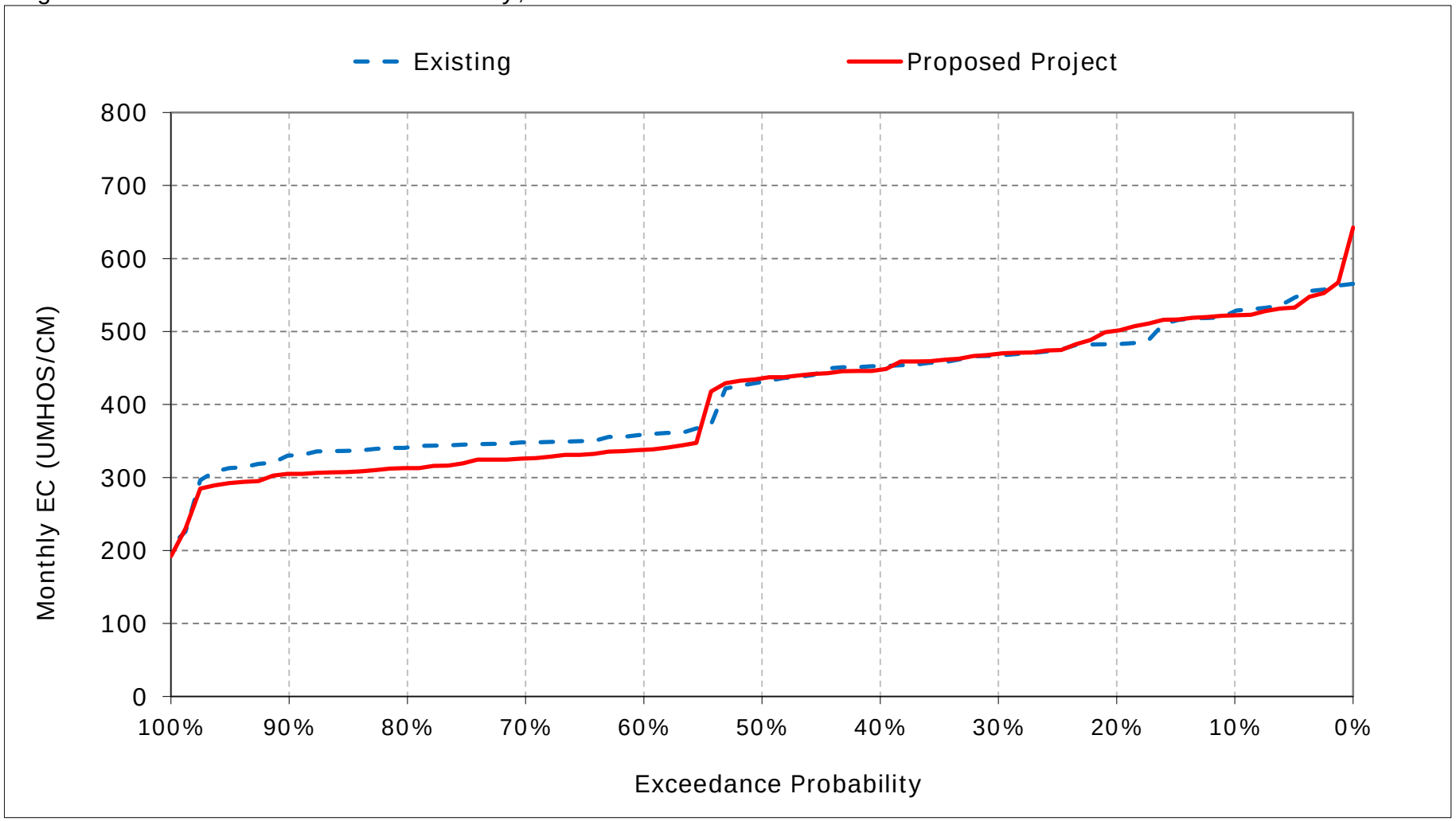


Figure 19-18. Victoria Canal Salinity, December EC

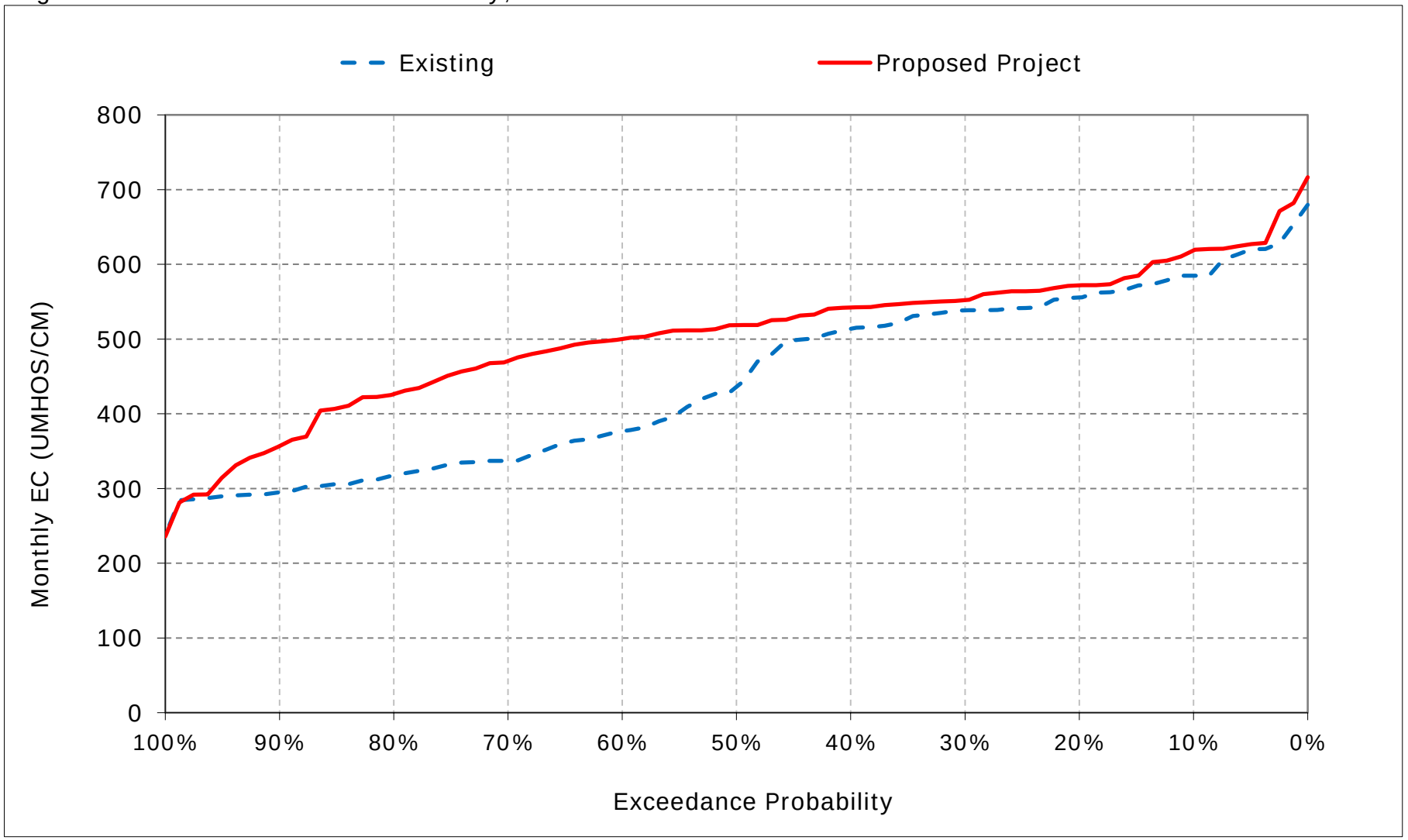


Table 20-1. Montezuma Slough at Hunter Cut, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	14,303	13,057	12,428	8,885	5,277	7,041	8,378	9,233	11,109	13,262	15,769	17,520
20%	13,613	12,740	11,353	7,778	3,597	4,779	5,007	7,390	9,703	12,148	14,600	16,623
30%	13,446	12,375	9,063	6,661	2,354	2,382	3,009	6,006	8,988	11,691	14,302	16,320
40%	13,049	11,875	7,384	4,663	1,667	1,942	2,465	4,098	7,777	10,014	12,642	15,391
50%	11,963	7,496	5,410	4,054	1,009	1,394	2,116	2,838	6,228	9,244	11,794	14,703
60%	6,829	6,147	5,020	2,313	587	578	895	1,861	5,217	8,225	11,379	10,866
70%	4,377	4,057	3,532	783	380	345	568	1,202	4,086	7,598	10,682	8,378
80%	4,087	3,878	2,109	425	256	267	294	537	2,288	6,285	10,276	8,012
90%	3,952	3,596	826	267	225	214	220	223	513	4,037	10,092	7,606
Long Term												
Full Simulation Period[a]	9,361	8,338	6,453	4,148	1,994	2,333	2,847	3,994	6,400	9,152	12,245	12,699
Water Year Types[b]												
Wet (32%)	7,609	5,949	2,748	930	345	428	588	1,023	2,551	5,354	9,579	7,450
Above Normal (15%)	9,683	8,294	6,445	2,967	906	587	851	1,651	4,553	7,411	10,619	10,803
Below Normal (17%)	9,724	9,042	7,837	4,942	1,574	2,075	2,419	3,513	6,467	9,511	12,205	15,013
Dry (22%)	9,817	9,417	7,993	6,187	3,273	3,494	4,332	6,146	8,990	11,860	14,461	16,483
Critical (15%)	11,730	11,119	10,564	8,319	5,223	6,765	8,012	10,109	12,627	14,640	16,371	17,592

Proposed Project

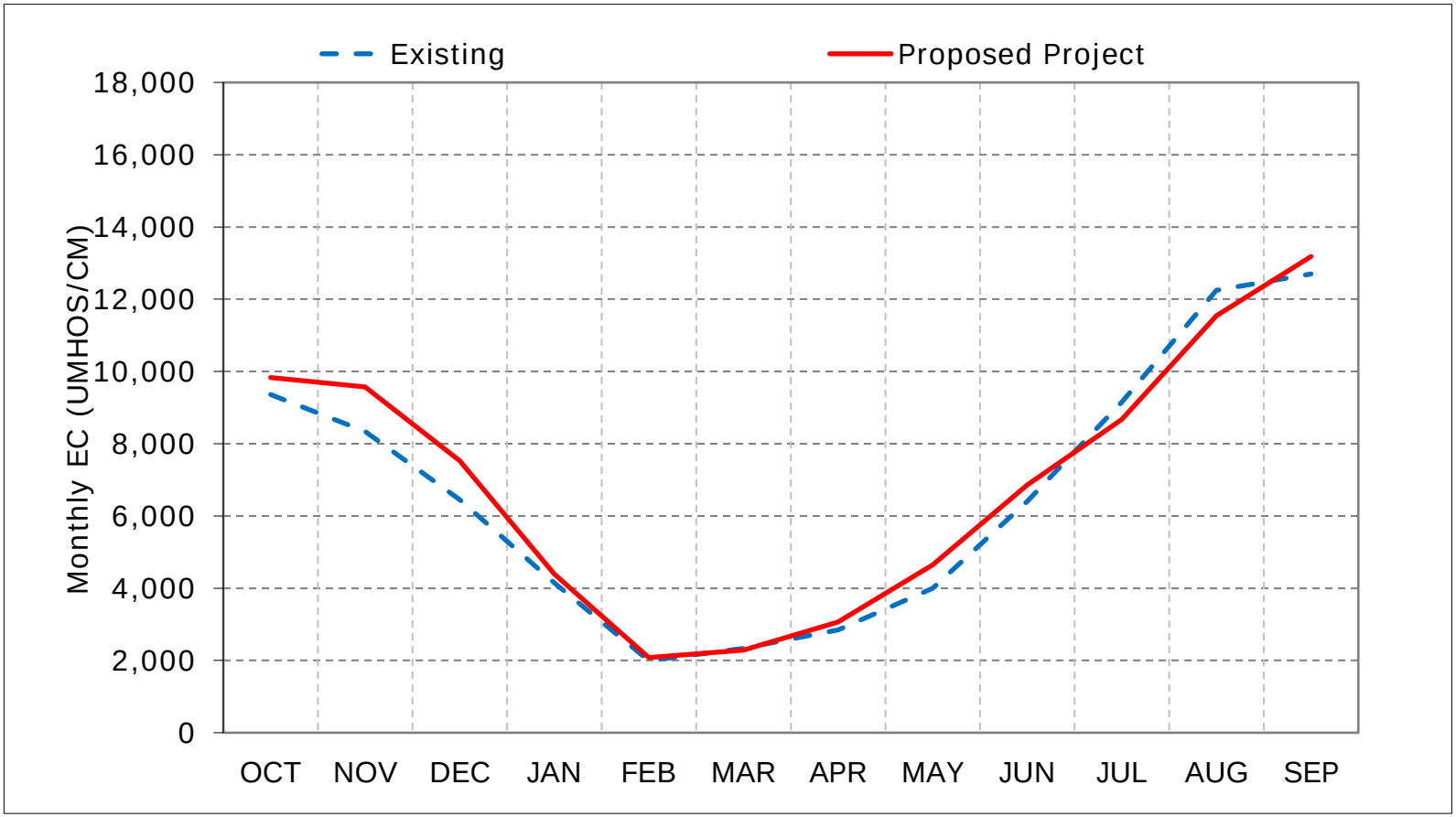
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	14,267	13,064	12,423	9,696	5,334	6,969	8,787	9,519	11,291	13,287	15,774	17,469
20%	13,593	12,688	11,261	8,620	3,574	4,844	5,411	8,580	10,312	12,358	14,720	16,632
30%	13,413	12,273	10,122	7,310	2,605	2,361	3,487	7,209	9,543	11,724	14,373	16,444
40%	12,985	11,609	9,739	5,072	1,656	1,670	2,800	5,326	8,507	8,505	11,416	14,546
50%	11,598	8,831	9,178	4,098	1,017	1,138	2,474	3,849	6,957	8,078	10,738	13,770
60%	6,488	8,429	7,615	2,319	556	542	1,158	2,758	6,197	7,073	10,379	10,748
70%	6,389	8,173	4,518	805	375	325	658	1,757	4,479	6,513	10,068	10,430
80%	6,138	7,821	3,122	424	255	268	320	740	2,424	5,534	8,677	10,341
90%	5,659	5,038	1,322	310	232	222	222	252	552	4,043	7,852	9,734
Long Term												
Full Simulation Period[a]	9,828	9,575	7,532	4,396	2,080	2,286	3,065	4,642	6,859	8,672	11,542	13,181
Water Year Types[b]												
Wet (32%)	8,230	7,563	3,600	973	342	410	716	1,454	2,965	5,438	9,501	9,550
Above Normal (15%)	10,244	9,670	7,946	3,195	835	515	1,047	2,446	5,107	7,388	10,660	10,439
Below Normal (17%)	10,213	10,224	9,072	5,089	1,532	1,921	2,731	4,514	7,053	6,334	8,084	14,146
Dry (22%)	10,299	10,501	9,192	6,711	3,514	3,401	4,601	6,949	9,511	11,993	14,538	16,540
Critical (15%)	11,721	11,695	11,353	8,732	5,577	6,877	8,258	10,431	12,844	14,711	16,385	17,628

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-36	7	-5	811	57	-72	409	286	182	25	6	-51
20%	-20	-52	-92	842	-23	65	405	1,190	609	210	121	9
30%	-33	-102	1,059	648	251	-21	478	1,203	555	33	71	125
40%	-63	-265	2,355	409	-11	-272	335	1,227	730	-1,509	-1,226	-845
50%	-364	1,335	3,767	44	8	-256	357	1,011	729	-1,166	-1,056	-934
60%	-340	2,282	2,595	7	-32	-37	264	897	981	-1,152	-1,000	-118
70%	2,013	4,115	987	21	-5	-20	90	556	393	-1,085	-614	2,051
80%	2,050	3,944	1,012	0	-1	1	26	204	137	-750	-1,599	2,328
90%	1,707	1,442	496	43	7	7	2	29	39	6	-2,240	2,128
Long Term												
Full Simulation Period[a]	467	1,237	1,079	247	86	-46	218	647	459	-479	-704	482
Water Year Types[b]												
Wet (32%)	621	1,614	852	42	-4	-18	127	431	414	84	-78	2,100
Above Normal (15%)	561	1,376	1,501	228	-70	-72	196	795	554	-23	41	-364
Below Normal (17%)	488	1,183	1,234	147	-42	-153	311	1,000	586	-3,177	-4,122	-867
Dry (22%)	482	1,084	1,199	523	241	-92	270	803	521	133	77	57
Critical (15%)	-9	576	789	413	354	112	247	322	217	71	13	35

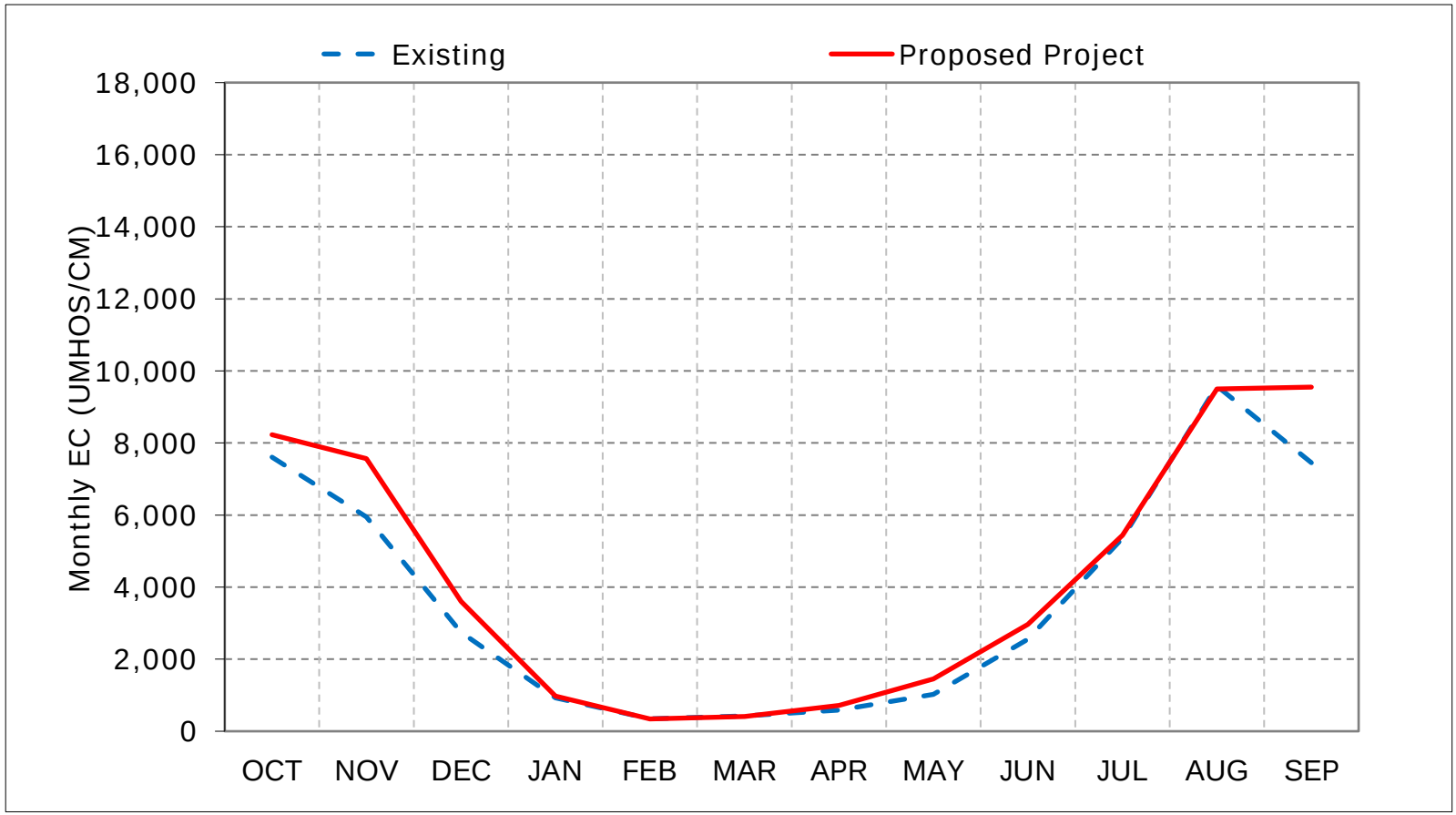
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 20-1. Montezuma Slough at Hunter Cut, Long-Term Average EC



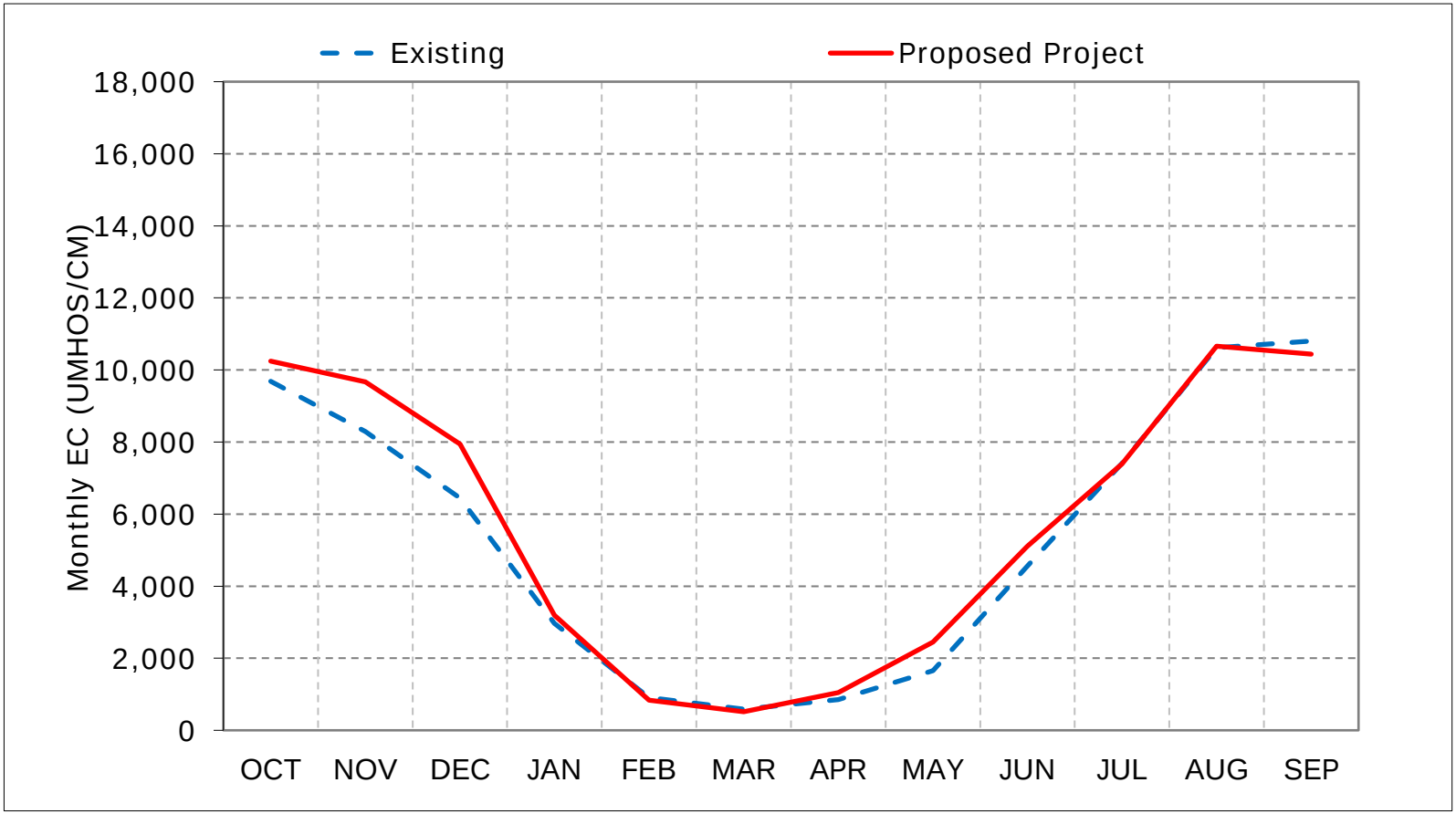
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 20-2. Montezuma Slough at Hunter Cut, Wet Year Average EC



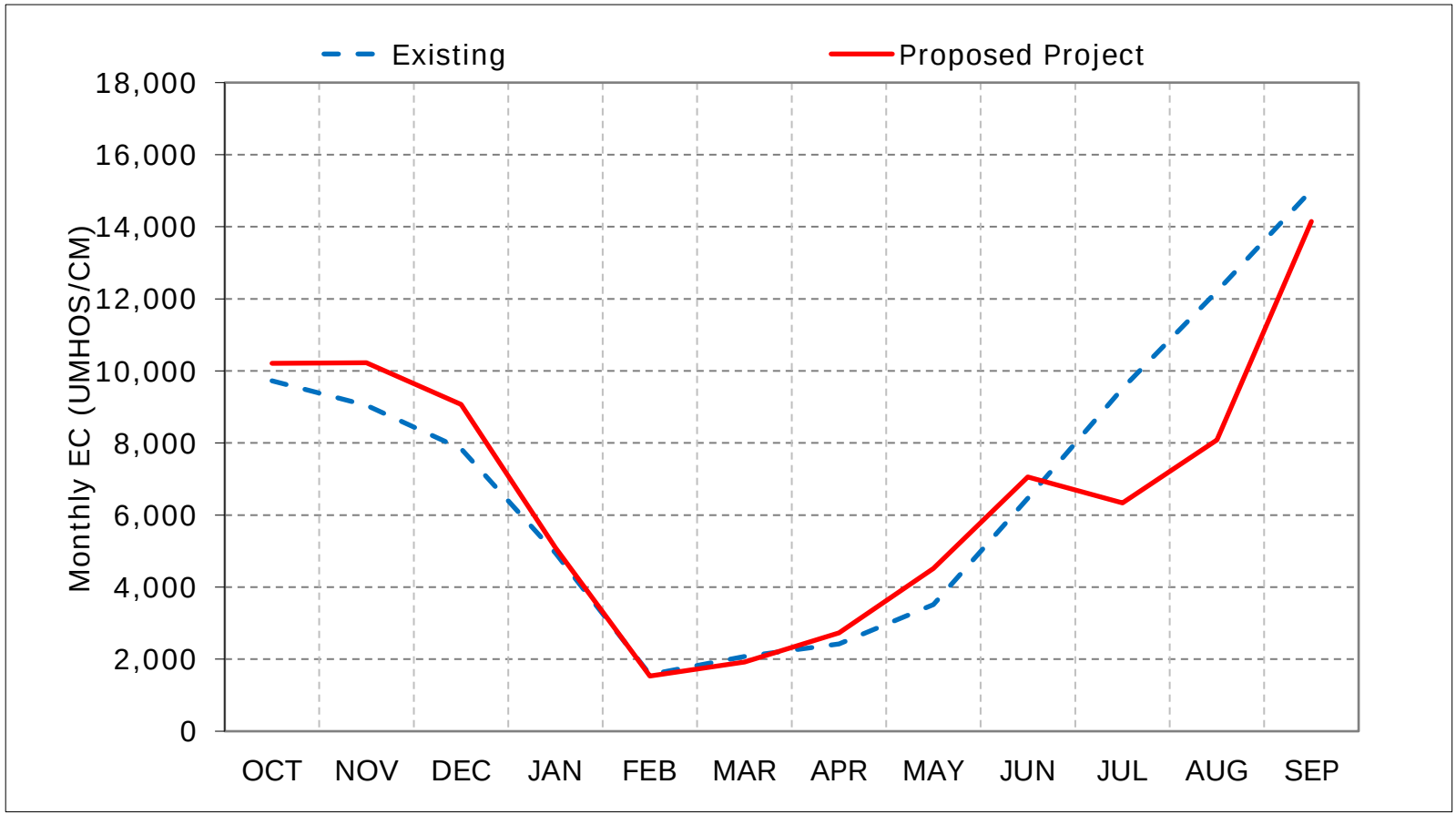
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 20-3. Montezuma Slough at Hunter Cut, Above Normal Year Average EC



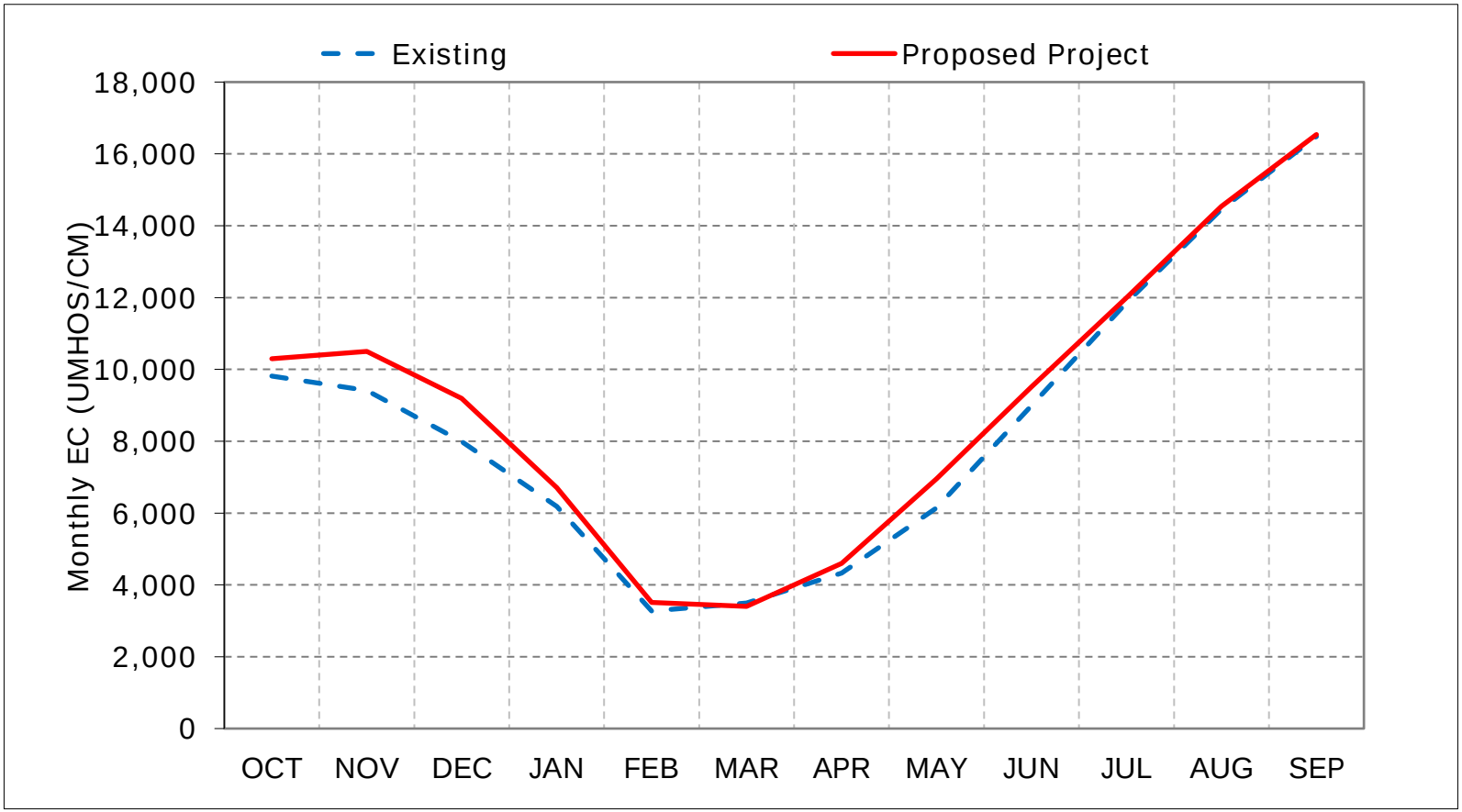
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 20-4. Montezuma Slough at Hunter Cut, Below Normal Year Average EC



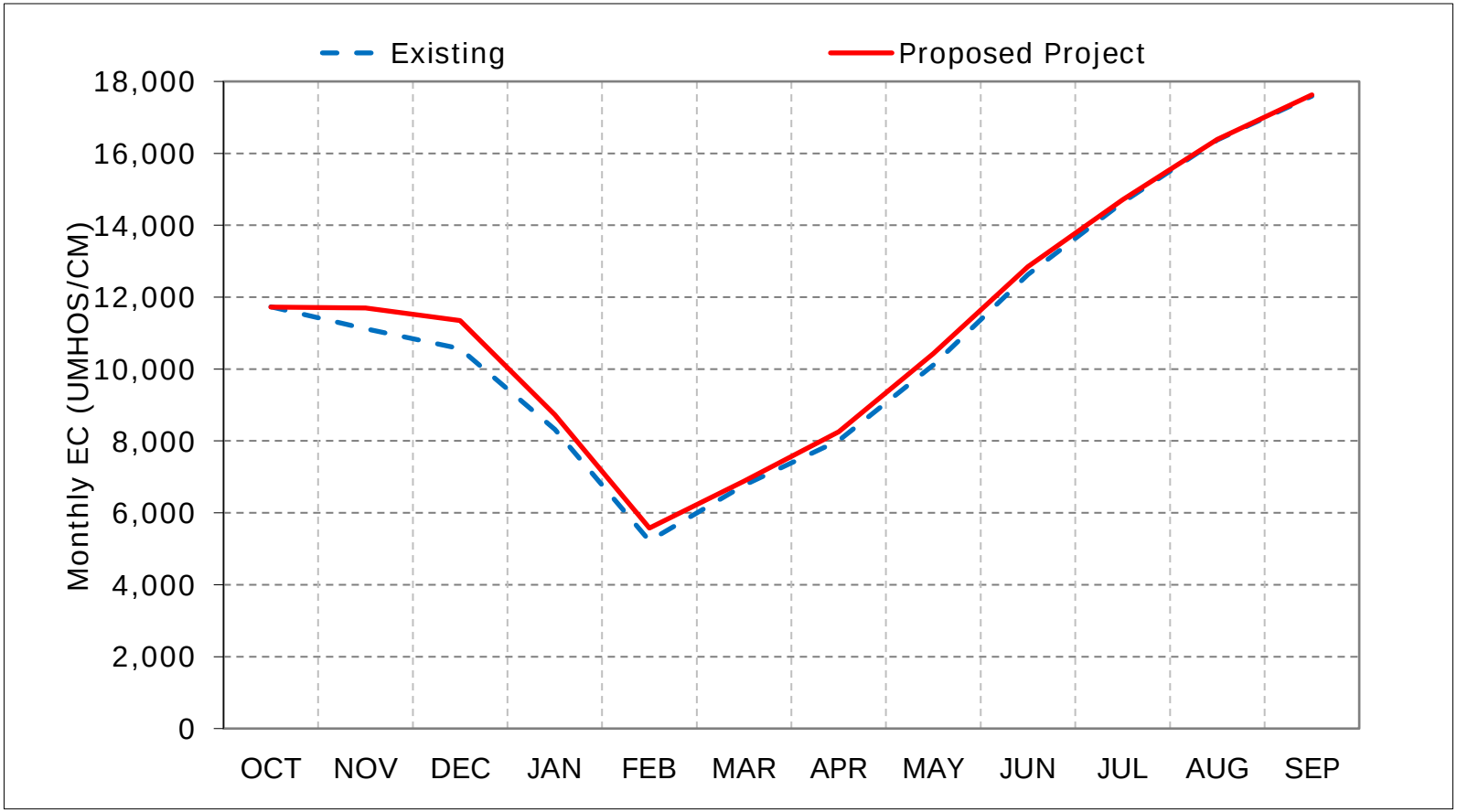
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 20-5. Montezuma Slough at Hunter Cut, Dry Year Average EC



*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.

Figure 20-6. Montezuma Slough at Hunter Cut, Critical Year Average EC



*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.

Figure 20-7. Montezuma Slough at Hunter Cut, January EC

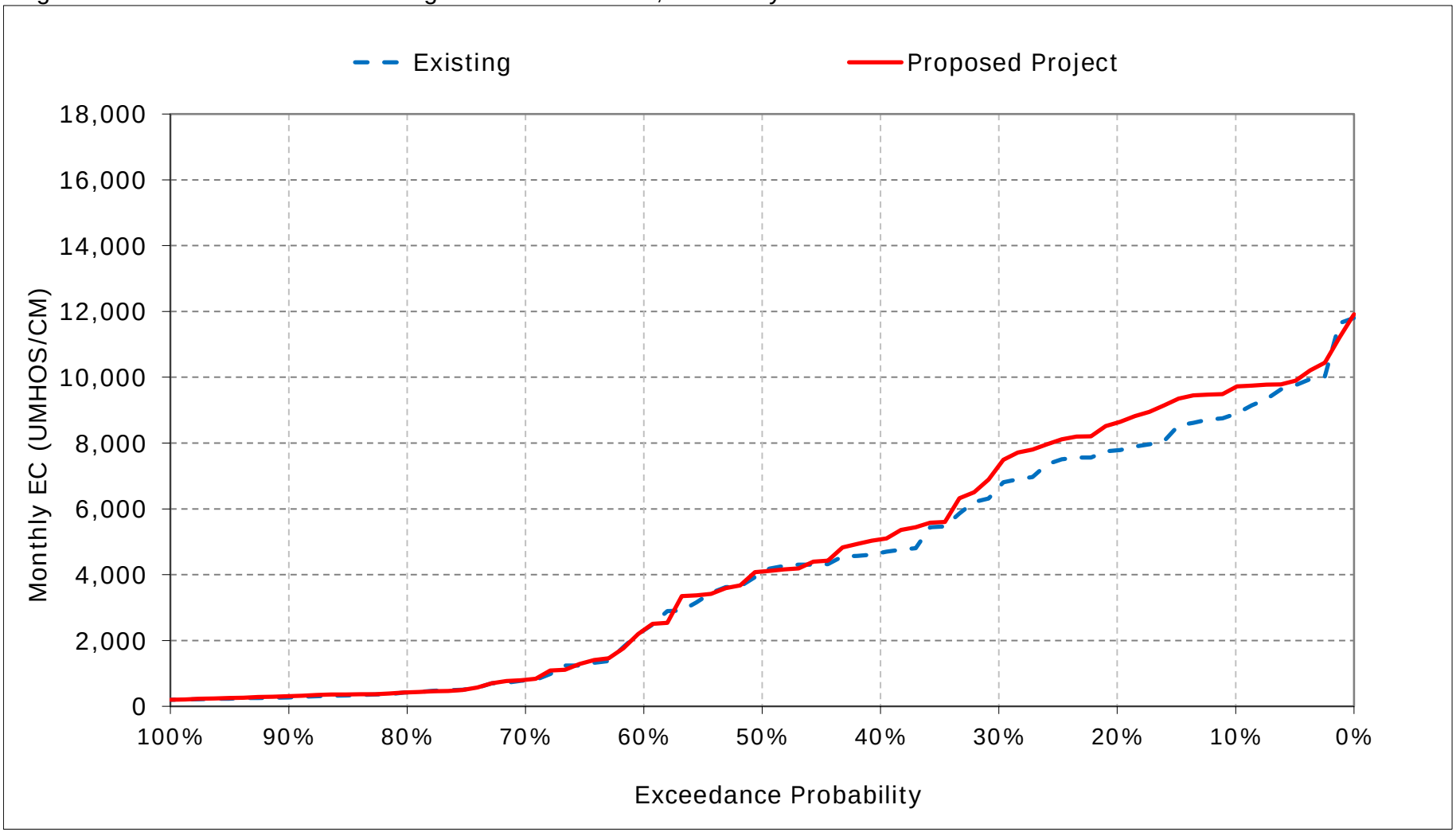


Figure 20-8. Montezuma Slough at Hunter Cut, February EC

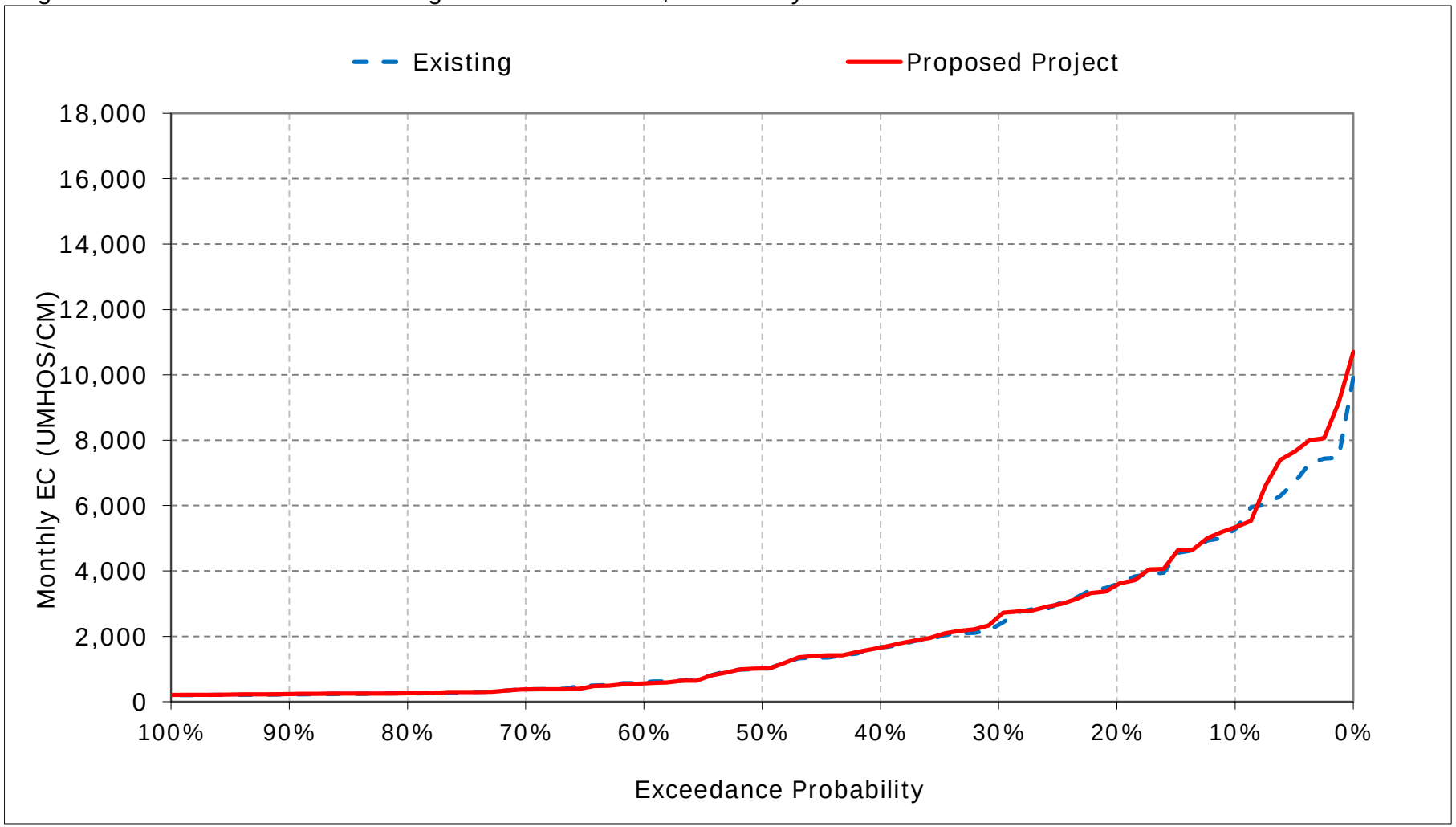


Figure 20-9. Montezuma Slough at Hunter Cut, March EC

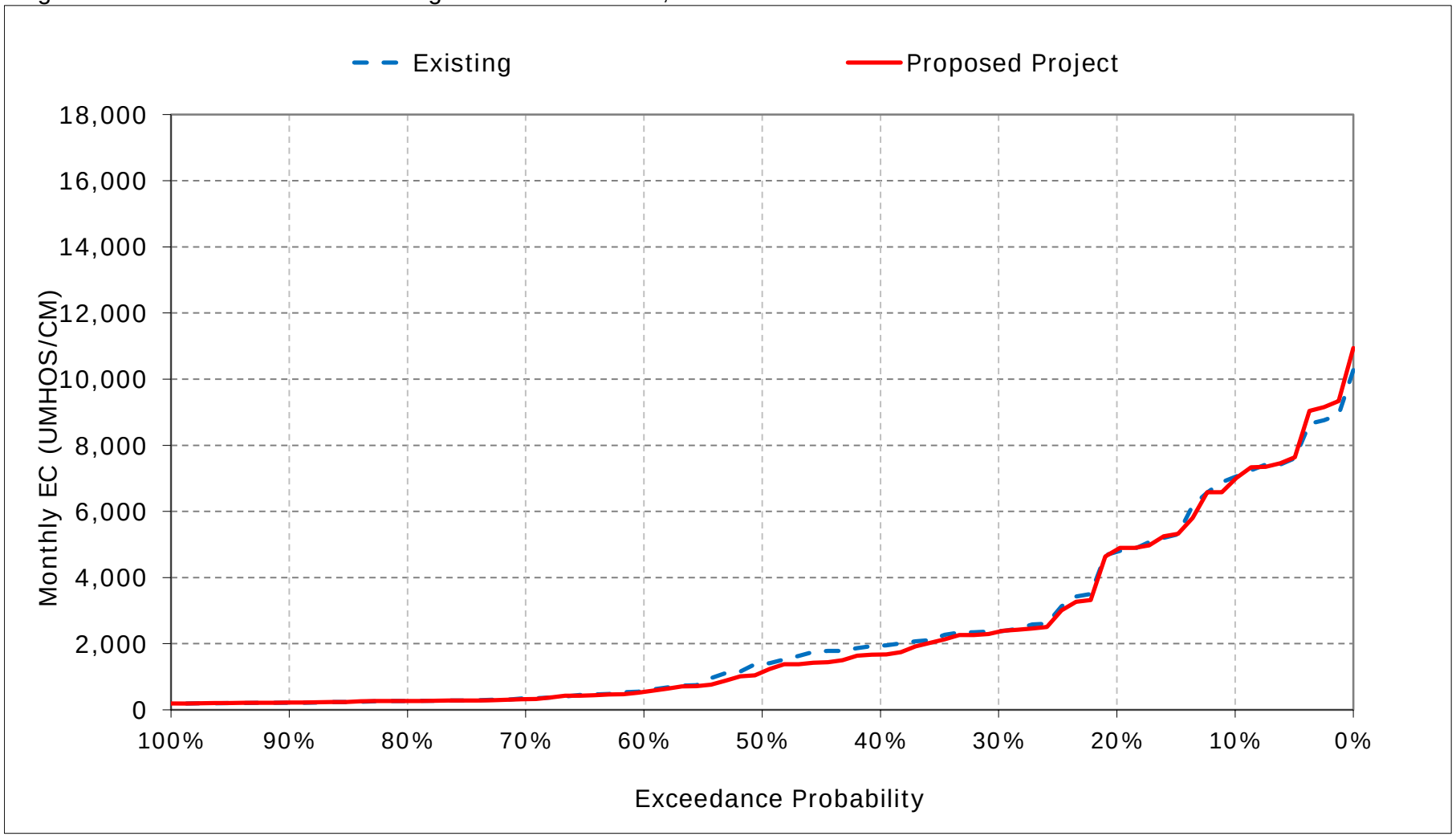


Figure 20-10. Montezuma Slough at Hunter Cut, April EC

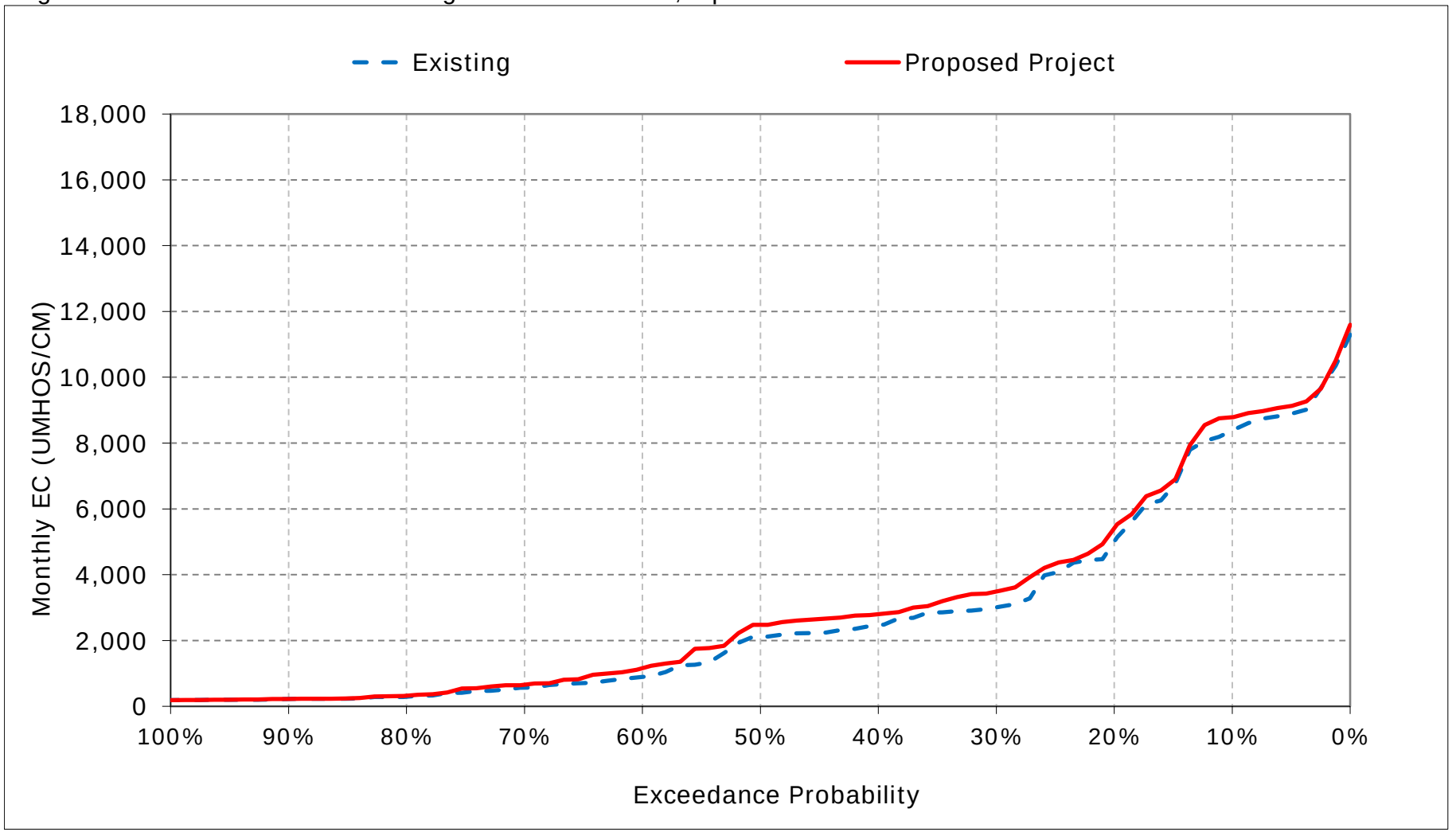


Figure 20-11. Montezuma Slough at Hunter Cut, May EC

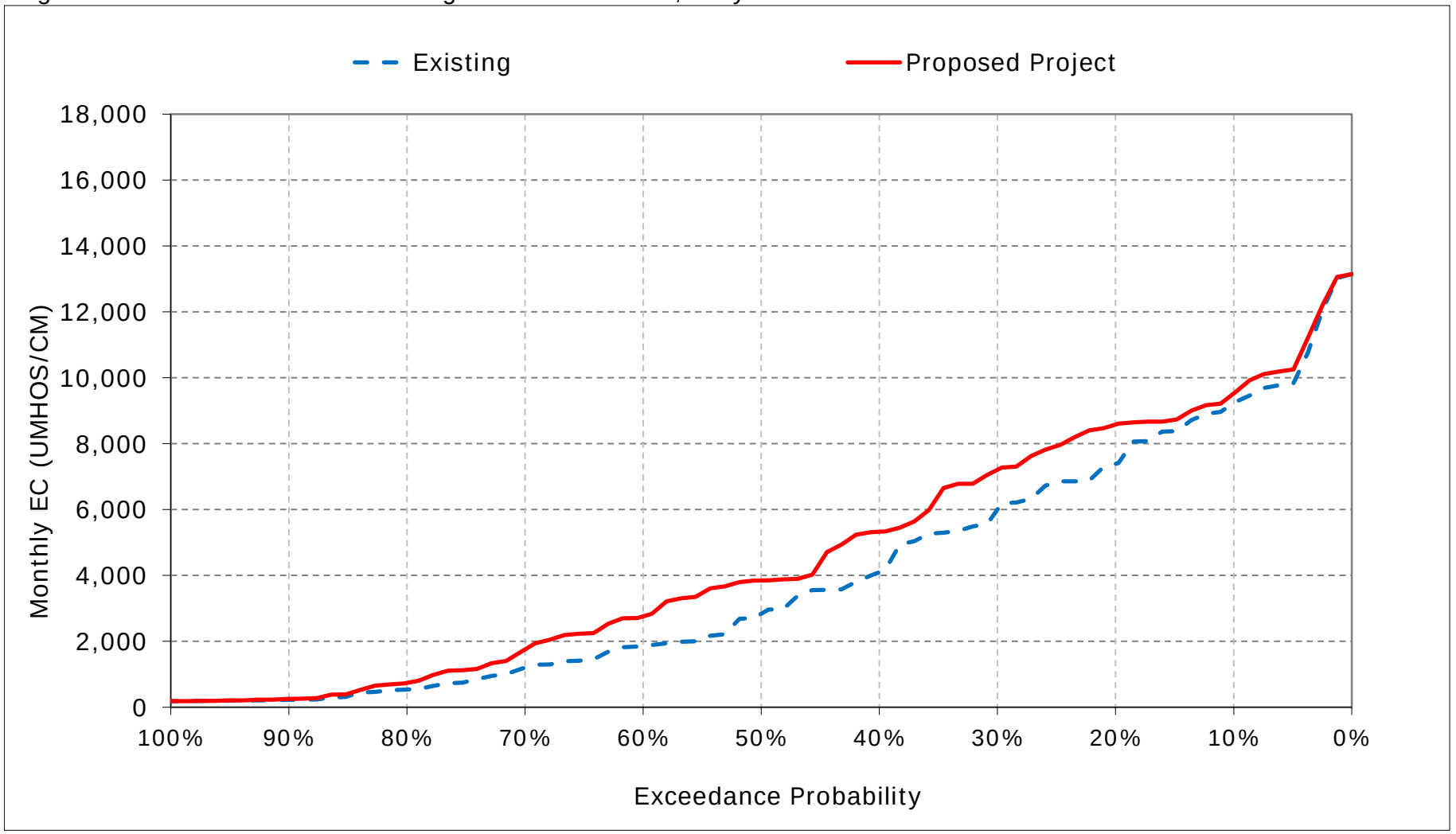


Figure 20-12. Montezuma Slough at Hunter Cut, June EC

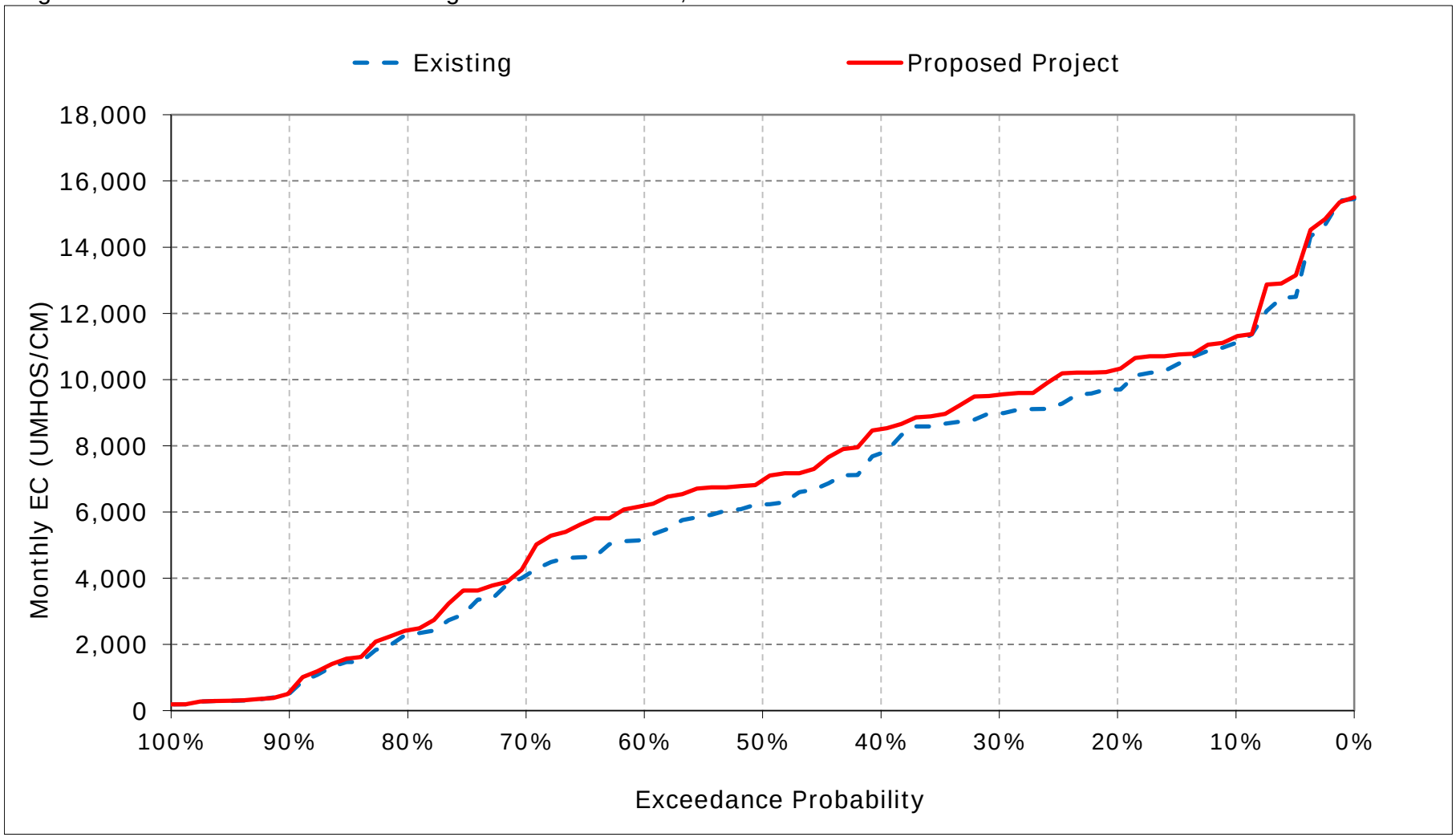


Figure 20-13. Montezuma Slough at Hunter Cut, July EC

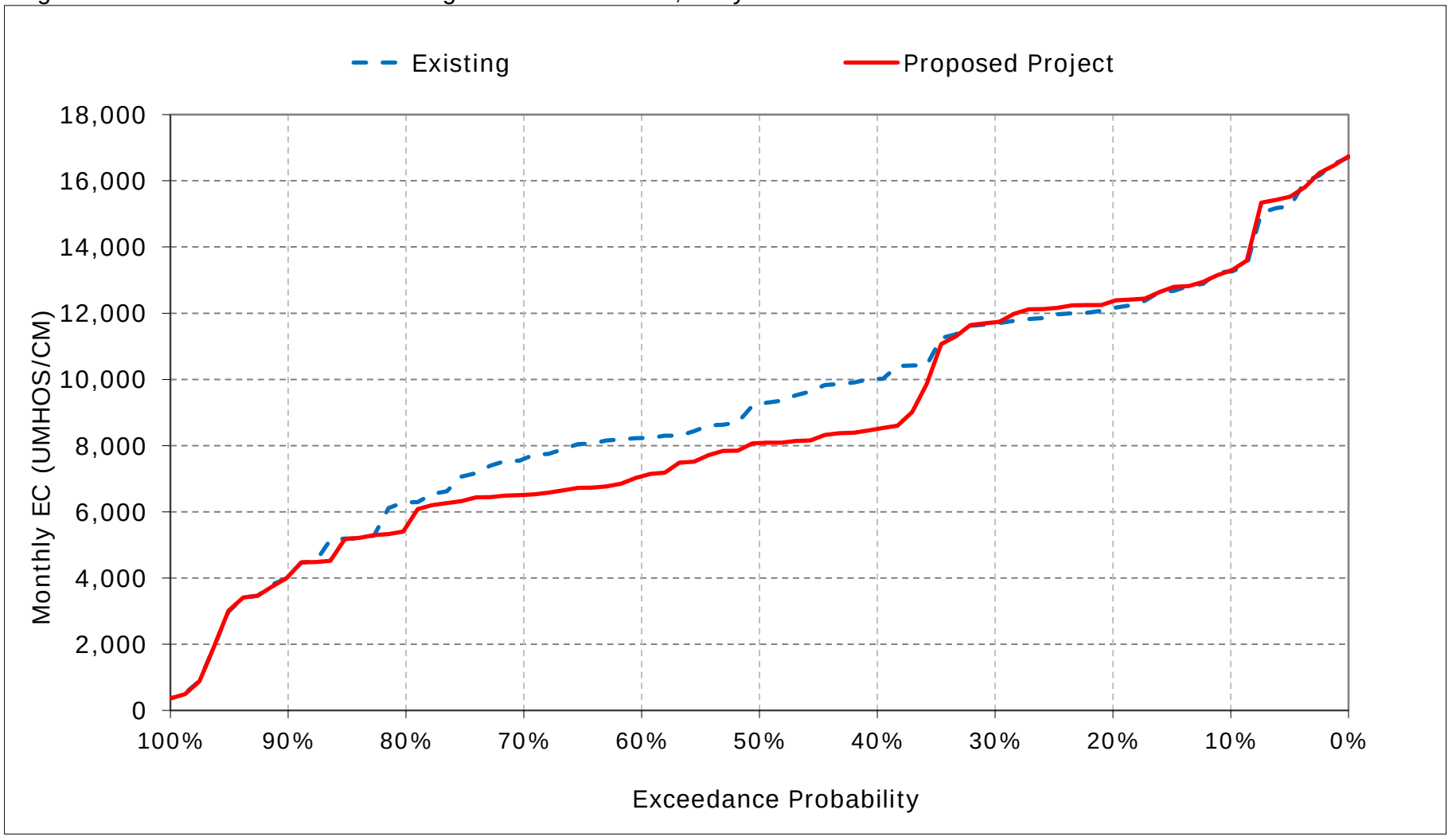


Figure 20-14. Montezuma Slough at Hunter Cut, August EC

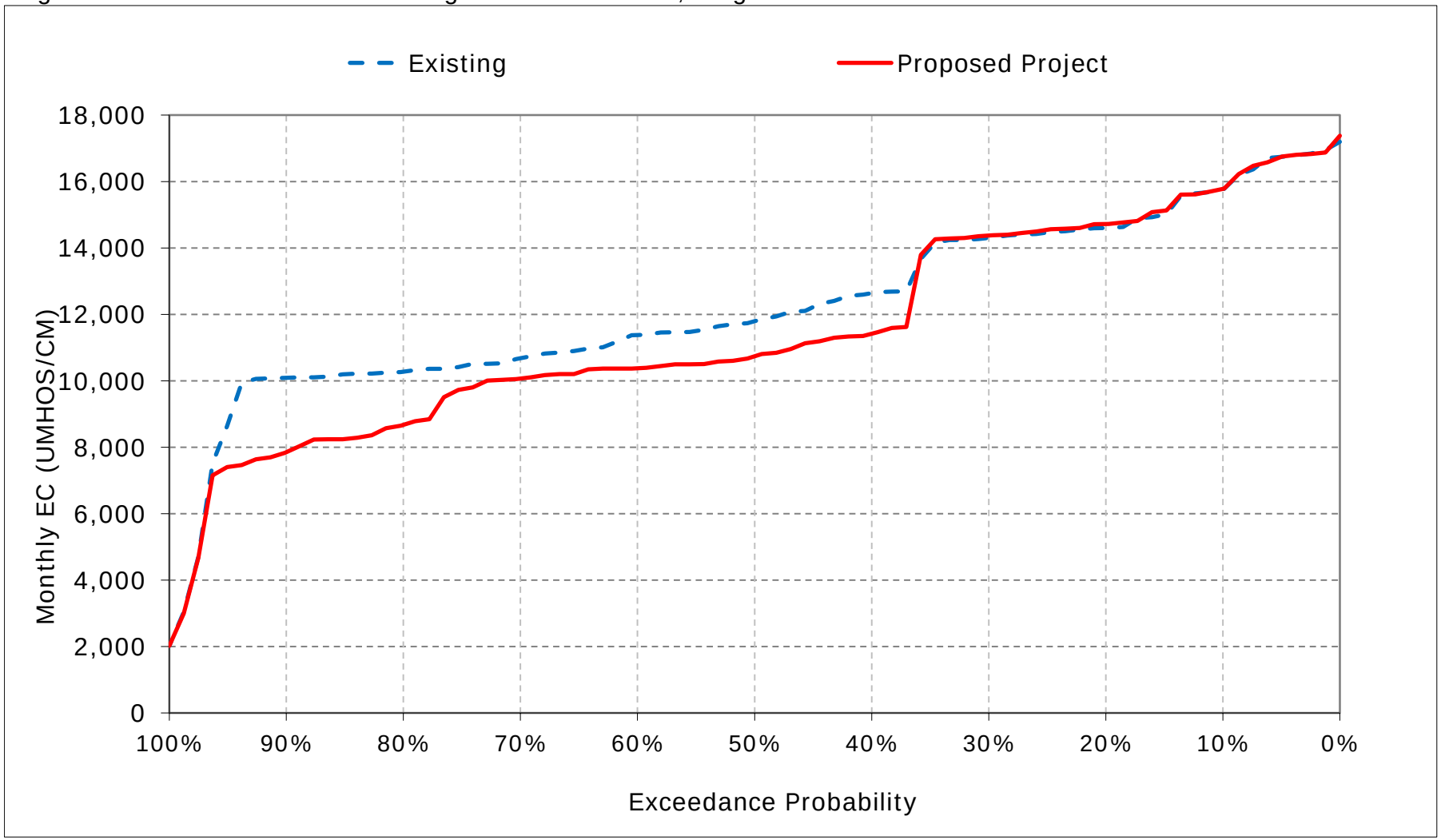


Figure 20-15. Montezuma Slough at Hunter Cut, September EC

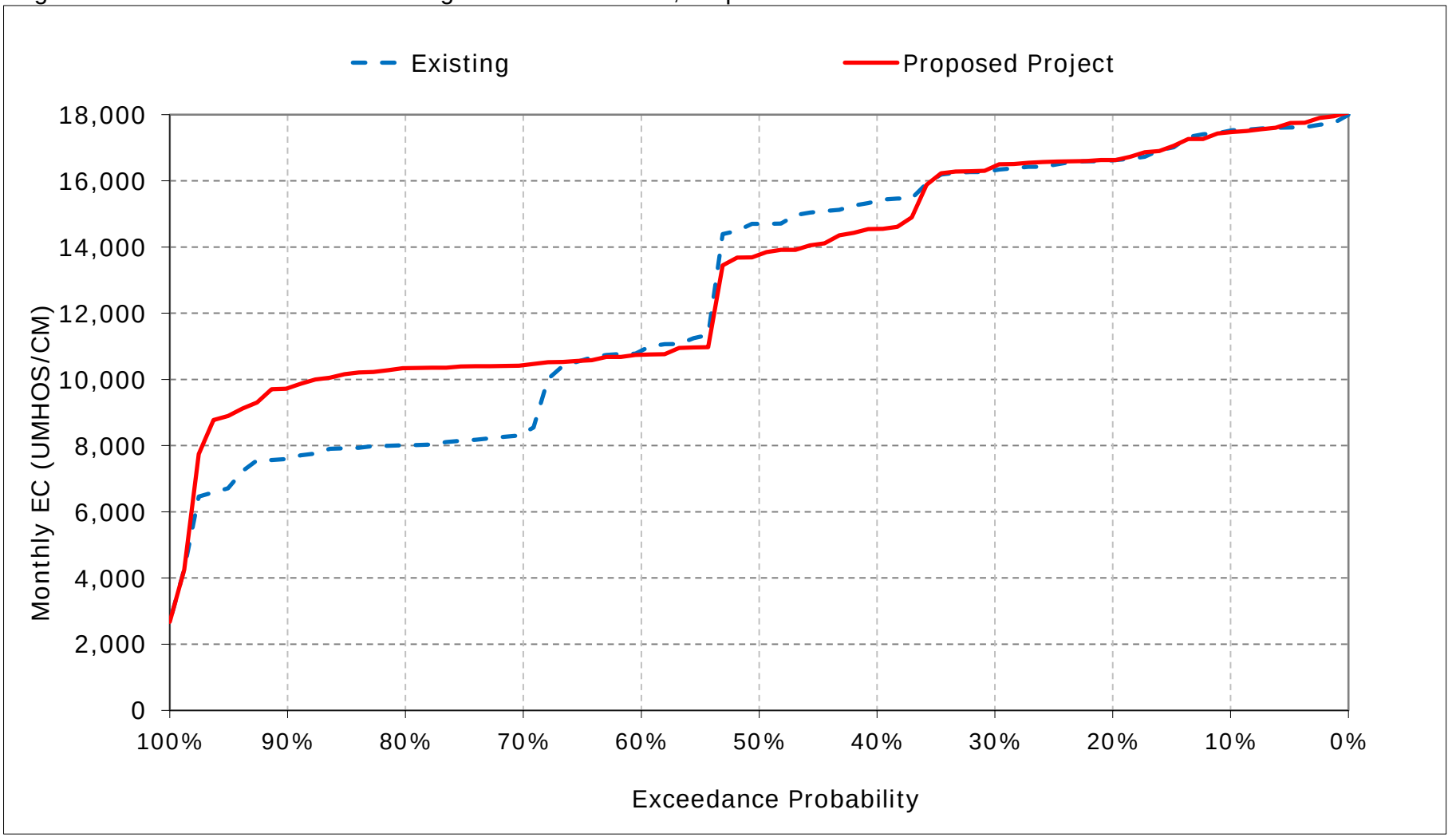


Figure 20-16. Montezuma Slough at Hunter Cut, October EC

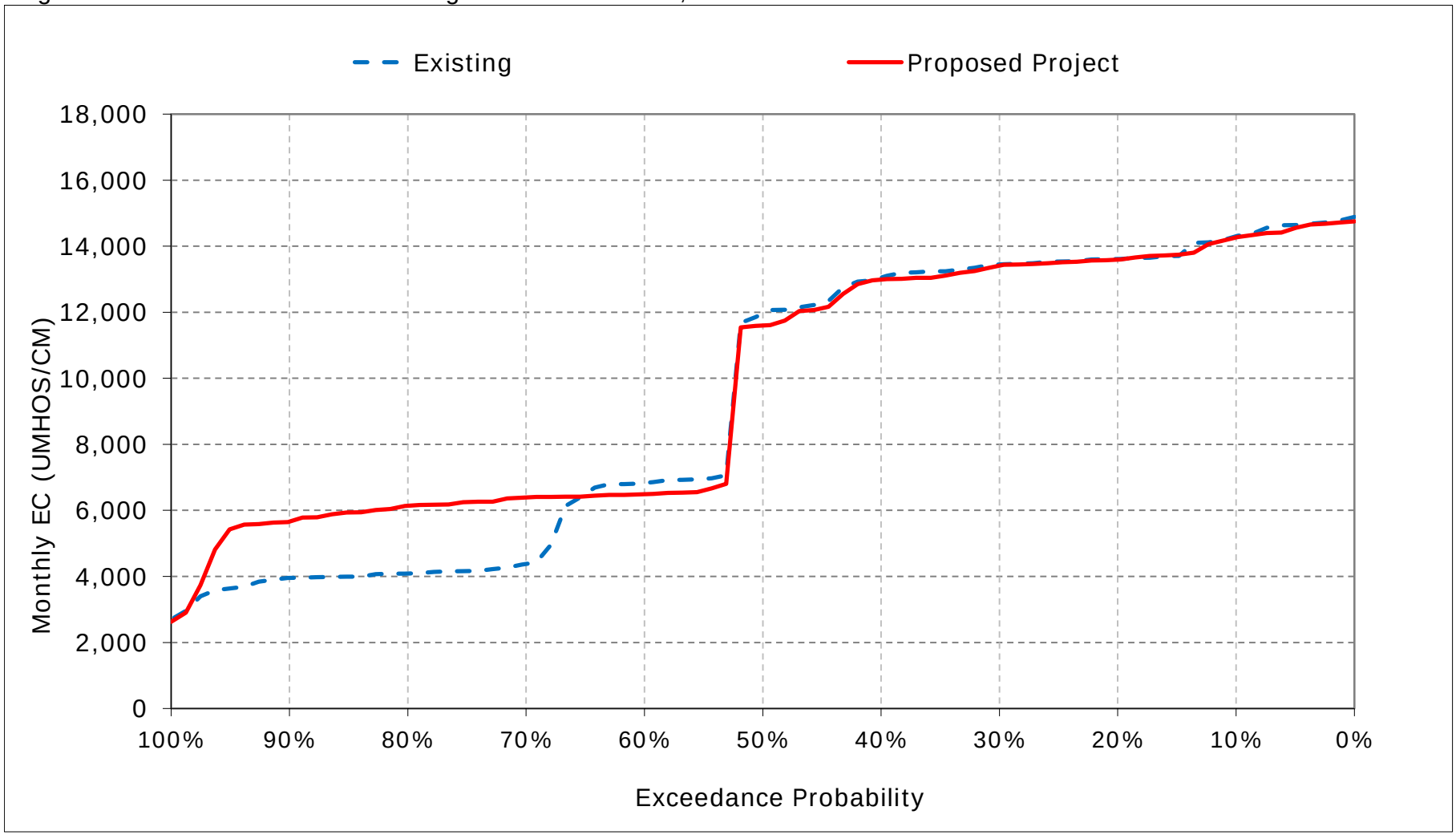


Figure 20-17. Montezuma Slough at Hunter Cut, November EC

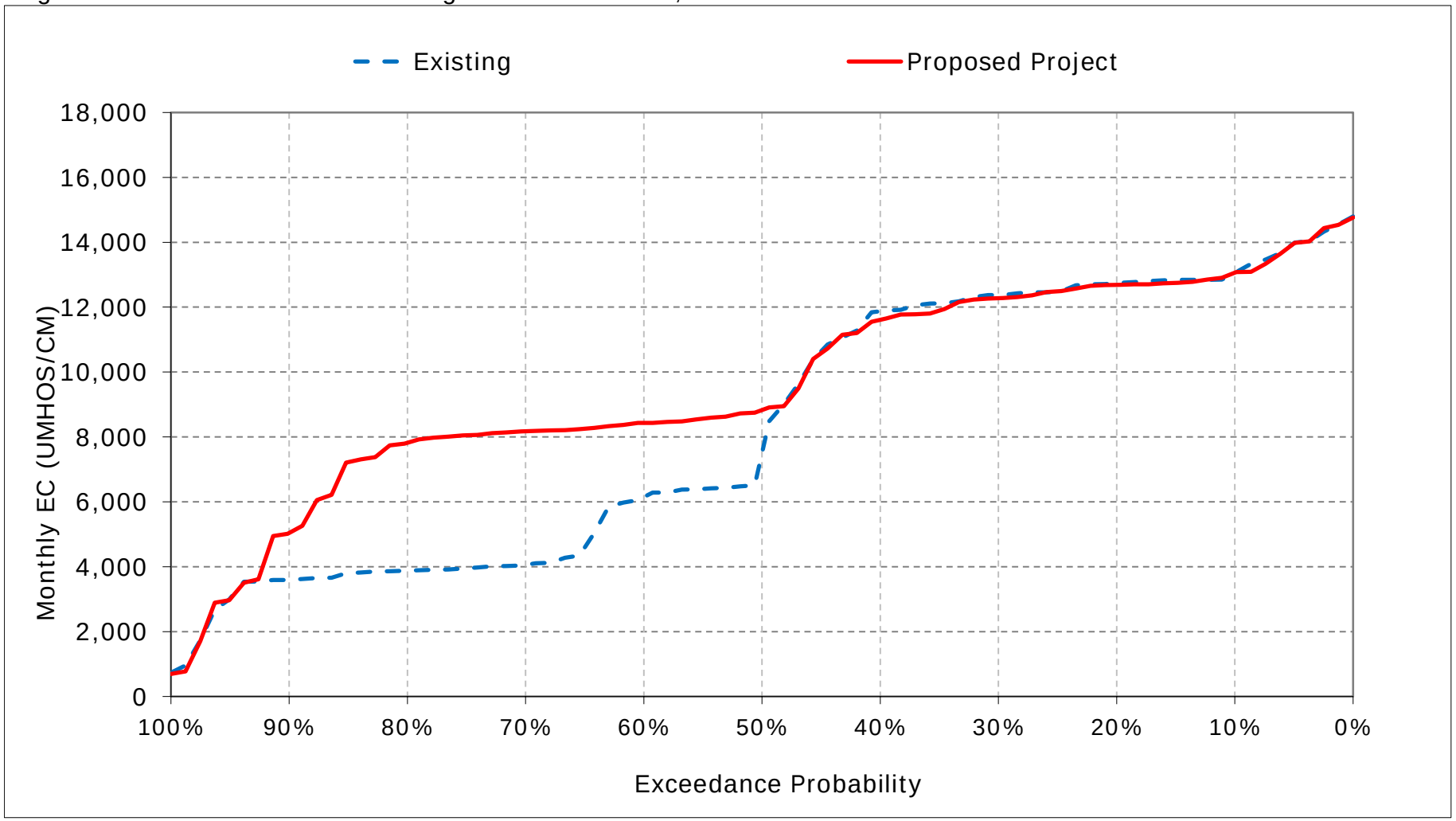


Figure 20-18. Montezuma Slough at Hunter Cut, December EC

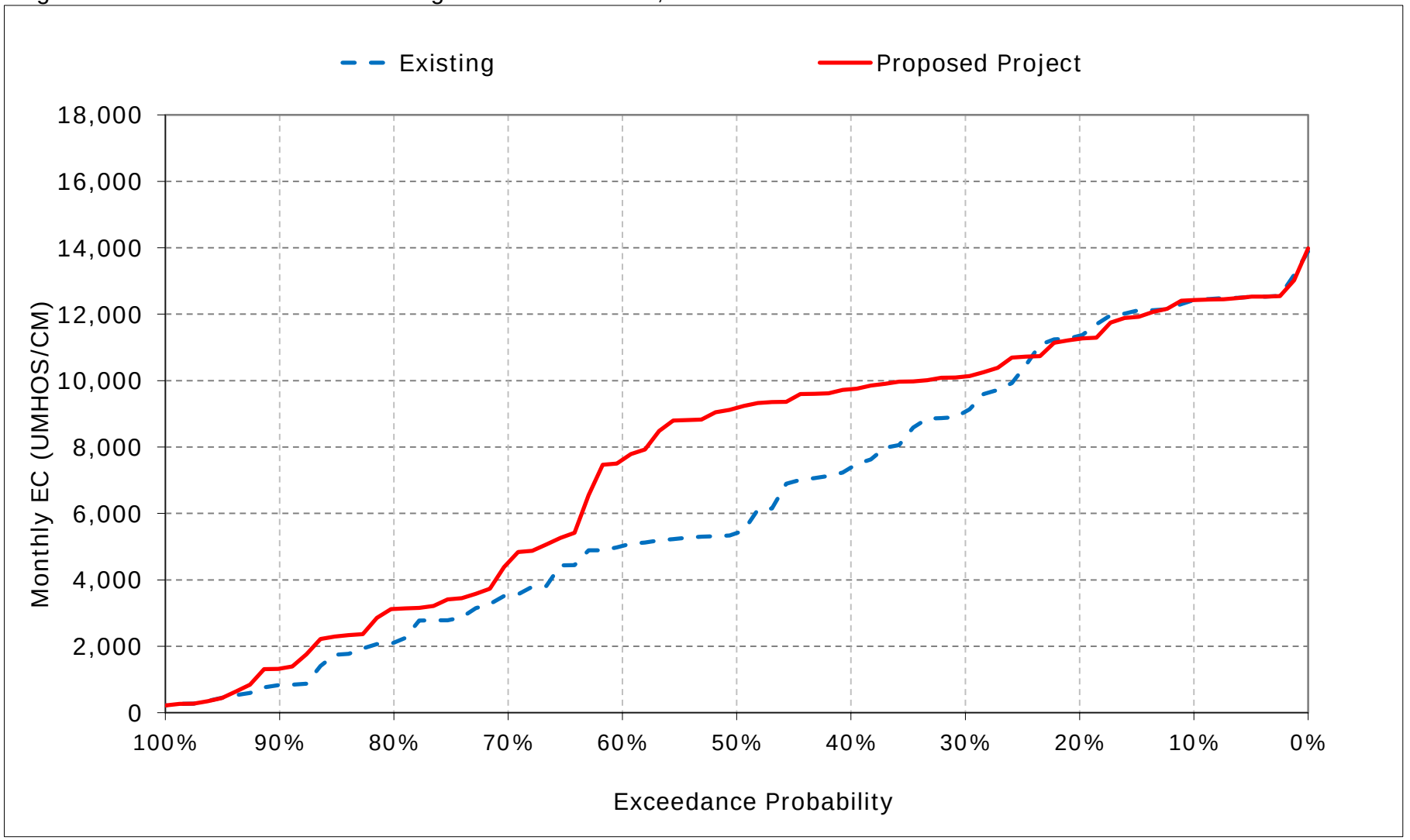


Table 21-1. Montezuma Slough at Beldons Landing, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	10,397	9,185	8,459	4,859	1,913	4,528	6,910	7,642	9,408	11,291	13,926	16,150
20%	9,726	8,768	6,977	4,038	1,247	2,844	3,734	5,911	7,904	10,245	12,836	15,110
30%	9,507	8,484	4,779	3,185	773	1,475	2,438	4,408	6,998	9,651	12,376	14,722
40%	9,254	7,931	3,817	1,903	557	1,021	1,574	2,715	5,707	8,399	10,521	13,462
50%	7,993	3,576	2,678	1,632	309	853	1,248	1,882	4,248	7,091	9,759	12,895
60%	3,553	2,817	2,383	718	232	347	586	1,126	3,297	6,637	9,000	9,885
70%	1,942	1,552	1,139	269	208	236	365	672	2,535	5,545	8,218	8,353
80%	1,727	1,379	809	210	198	210	239	366	1,132	4,226	8,042	7,889
90%	1,622	1,278	280	196	191	195	195	200	293	2,201	7,617	7,573
Long Term												
Full Simulation Period[a]	6,094	5,097	3,652	2,040	821	1,517	2,173	3,003	4,836	7,331	10,172	11,631
Water Year Types[b]												
Wet (32%)	4,627	3,136	1,198	410	220	288	391	672	1,598	3,726	7,266	7,212
Above Normal (15%)	6,377	5,107	3,446	1,297	368	370	528	1,022	2,874	5,632	8,335	9,858
Below Normal (17%)	6,393	5,547	4,642	2,292	548	1,255	1,742	2,463	4,577	7,545	10,081	13,190
Dry (22%)	6,458	5,971	4,487	3,024	1,240	2,210	3,276	4,600	7,033	9,806	12,571	14,904
Critical (15%)	8,098	7,502	6,769	4,543	2,264	4,595	6,530	8,271	10,822	12,880	14,817	16,249

Proposed Project

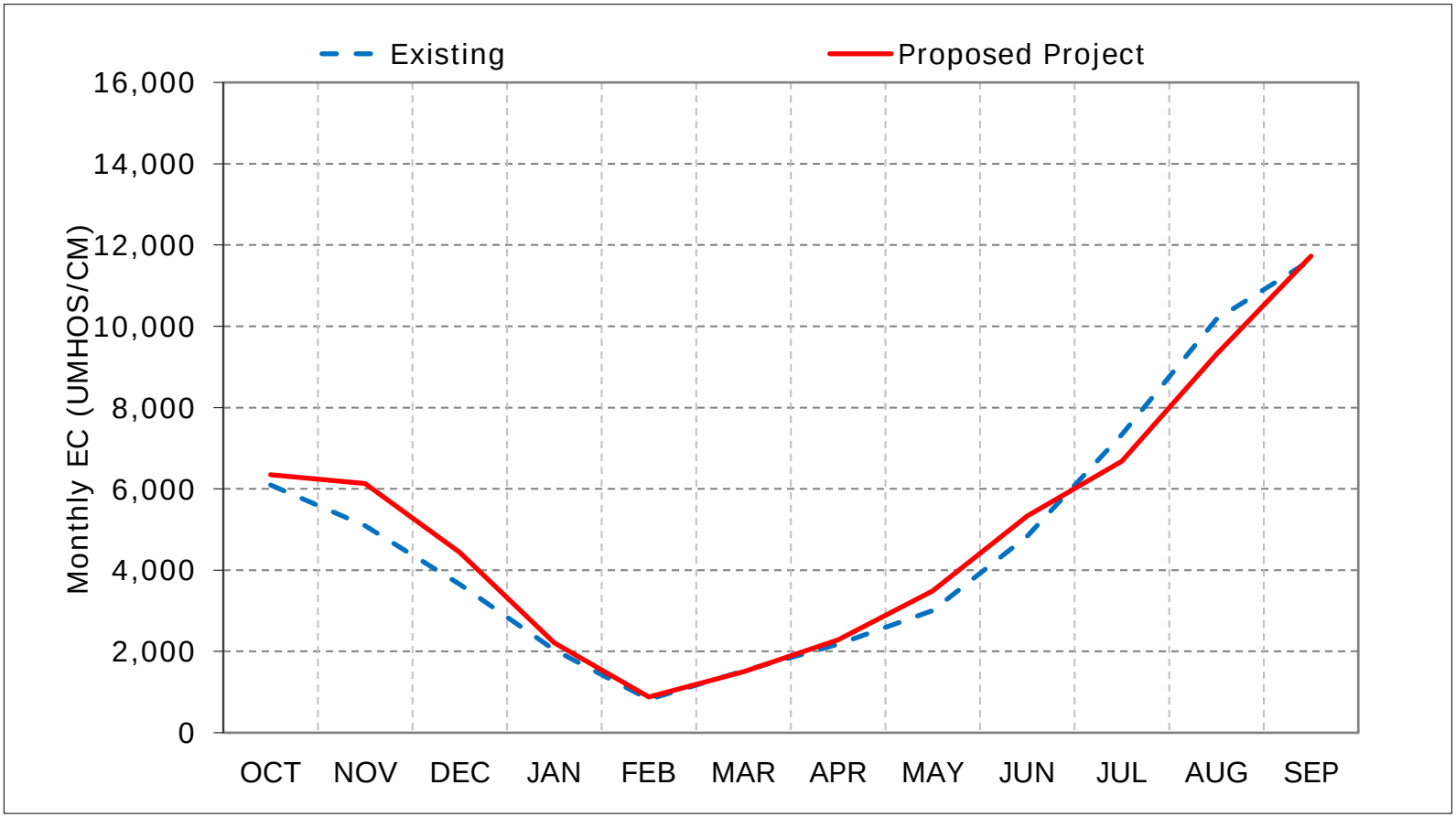
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	10,353	9,191	8,452	5,543	1,985	4,477	7,275	7,861	9,547	11,359	13,927	16,052
20%	9,690	8,738	6,987	4,531	1,232	2,829	3,663	6,531	8,622	10,406	12,964	15,064
30%	9,432	8,419	6,315	3,429	829	1,496	2,622	5,458	7,890	9,703	12,467	14,832
40%	8,912	7,831	5,745	2,107	554	888	1,778	3,810	6,151	7,127	9,181	11,493
50%	7,649	5,324	4,938	1,672	311	680	1,456	2,352	4,851	6,365	8,350	10,787
60%	3,289	4,936	3,689	728	222	335	674	1,822	4,295	4,818	8,101	9,977
70%	3,129	4,761	1,862	270	207	230	410	1,022	2,902	3,286	7,713	9,627
80%	2,951	4,480	1,131	213	200	208	243	442	1,457	3,109	5,547	9,406
90%	2,655	2,226	564	195	192	195	197	205	316	2,070	4,839	8,928
Long Term												
Full Simulation Period[a]	6,349	6,130	4,440	2,213	880	1,499	2,285	3,488	5,333	6,676	9,308	11,727
Water Year Types[b]												
Wet (32%)	4,995	4,471	1,731	420	214	279	449	957	1,990	3,863	7,223	8,666
Above Normal (15%)	6,650	6,190	4,562	1,453	333	326	613	1,543	3,476	5,673	8,378	9,617
Below Normal (17%)	6,664	6,523	5,580	2,384	533	1,167	1,886	3,206	5,266	3,068	4,920	11,149
Dry (22%)	6,744	6,926	5,435	3,390	1,370	2,173	3,399	5,265	7,628	10,007	12,667	14,970
Critical (15%)	8,018	8,011	7,368	4,892	2,538	4,688	6,729	8,579	11,071	12,986	14,833	16,282

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-44	6	-6	684	72	-51	365	219	139	68	1	-98
20%	-35	-29	10	493	-15	-15	-72	620	719	161	128	-46
30%	-76	-65	1,536	244	55	21	184	1,050	891	52	90	110
40%	-342	-100	1,927	204	-3	-134	204	1,095	444	-1,272	-1,339	-1,968
50%	-344	1,747	2,261	41	3	-172	208	470	603	-726	-1,408	-2,108
60%	-264	2,118	1,306	10	-10	-12	87	696	998	-1,819	-899	92
70%	1,187	3,209	723	1	-1	-7	45	350	367	-2,259	-505	1,275
80%	1,224	3,101	322	3	2	-2	3	76	325	-1,117	-2,496	1,516
90%	1,033	948	284	0	0	0	2	5	23	-131	-2,778	1,355
Long Term												
Full Simulation Period[a]	254	1,032	788	173	59	-19	112	484	497	-655	-865	96
Water Year Types[b]												
Wet (32%)	369	1,334	533	10	-6	-9	58	284	392	138	-43	1,454
Above Normal (15%)	273	1,083	1,116	156	-34	-44	85	521	602	41	43	-241
Below Normal (17%)	271	976	937	92	-15	-88	144	743	689	-4,476	-5,160	-2,041
Dry (22%)	285	955	948	366	130	-37	123	665	595	200	97	66
Critical (15%)	-80	509	599	350	273	93	200	308	249	106	16	33

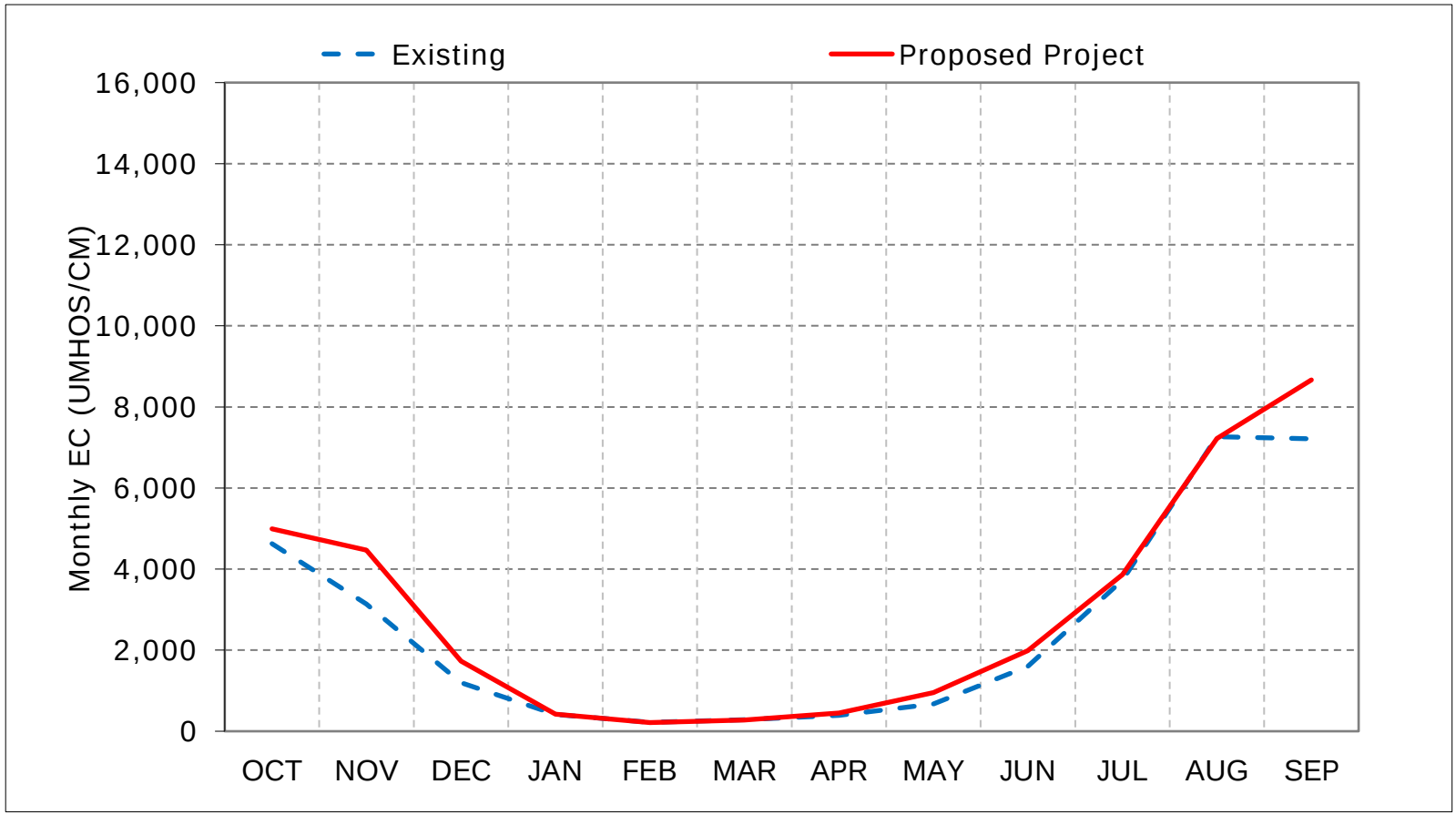
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 21-1. Montezuma Slough at Beldons Landing, Long-Term Average EC



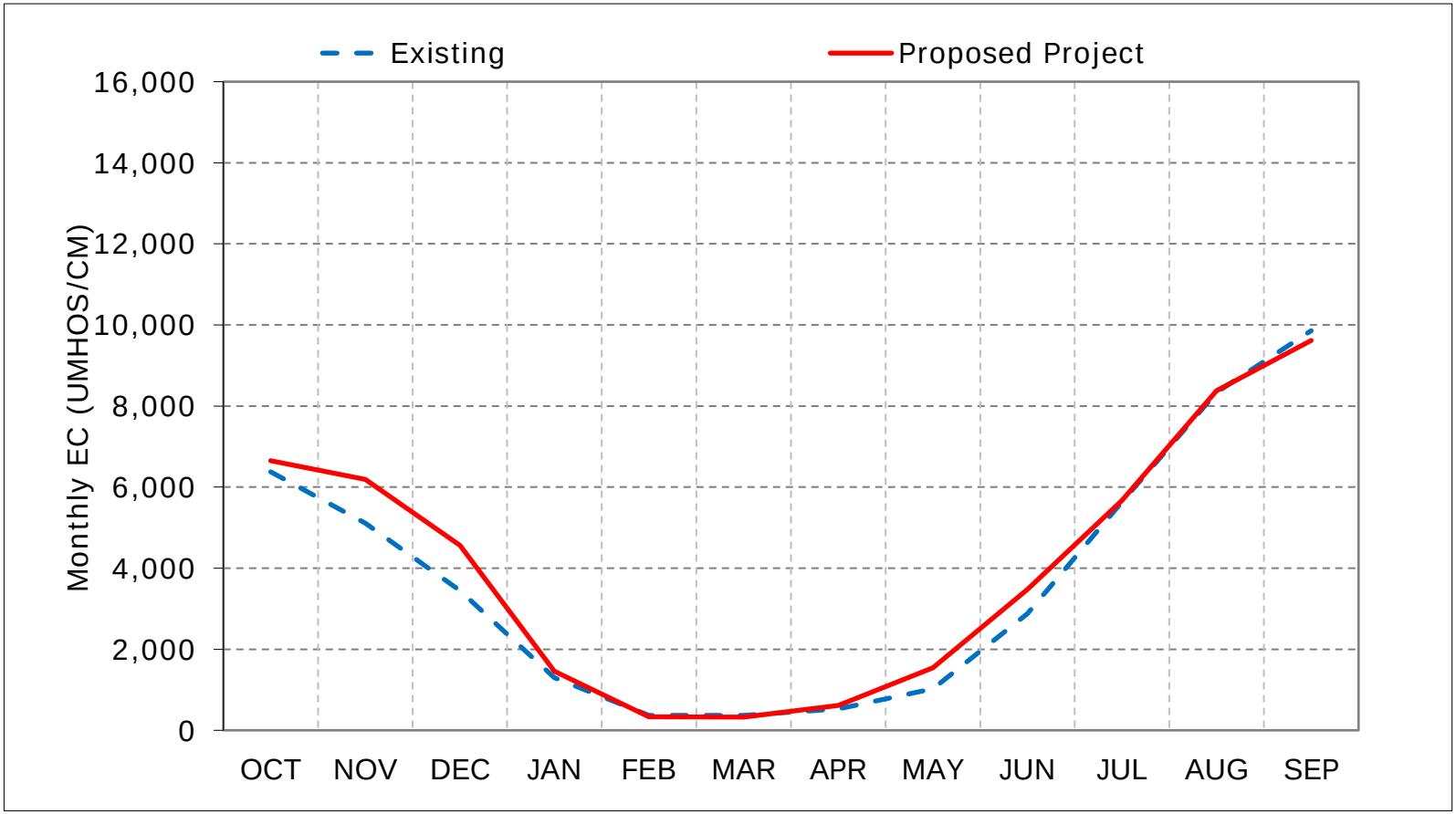
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 21-2. Montezuma Slough at Beldons Landing, Wet Year Average EC



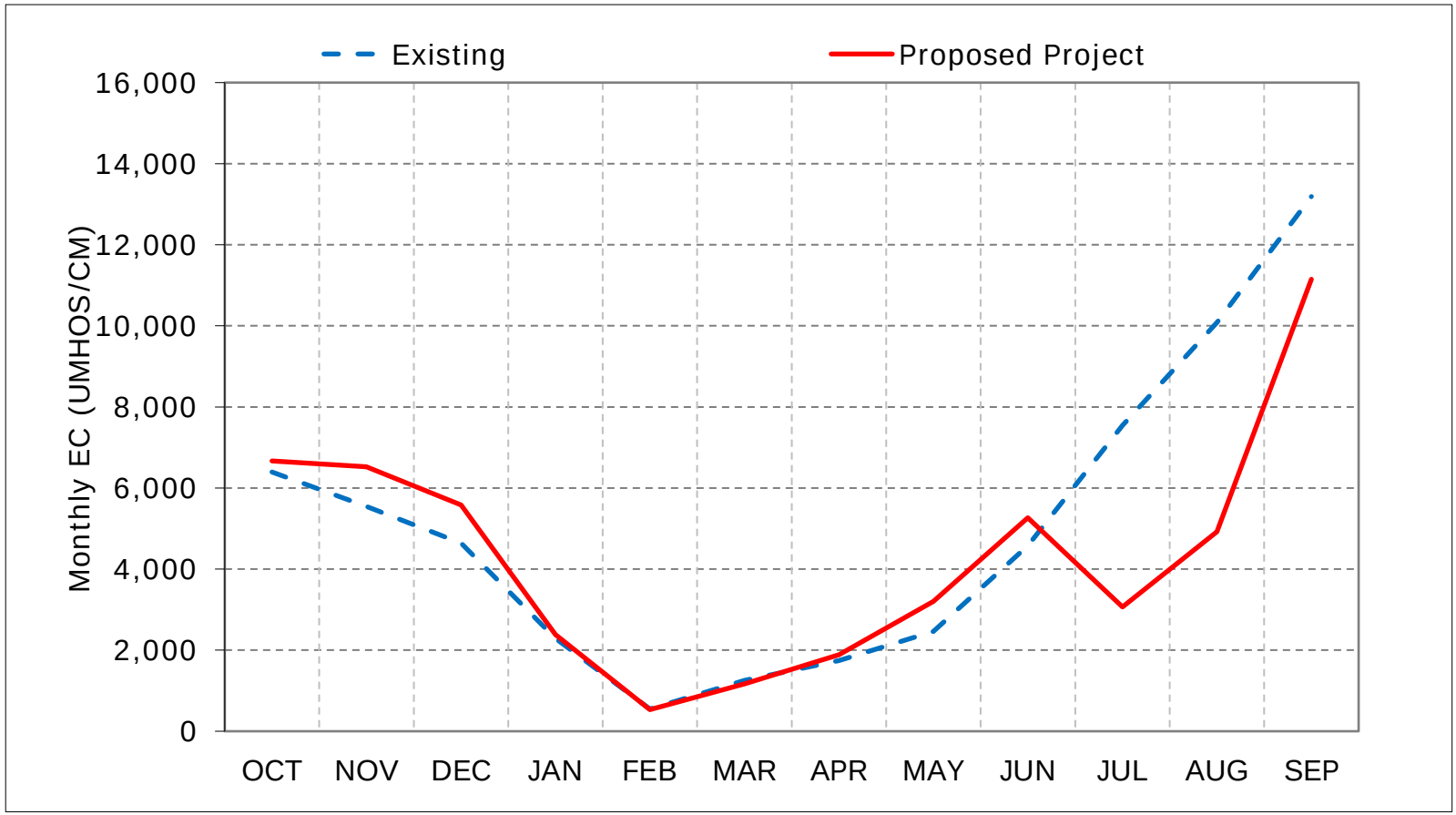
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 21-3. Montezuma Slough at Beldons Landing, Above Normal Year Average I



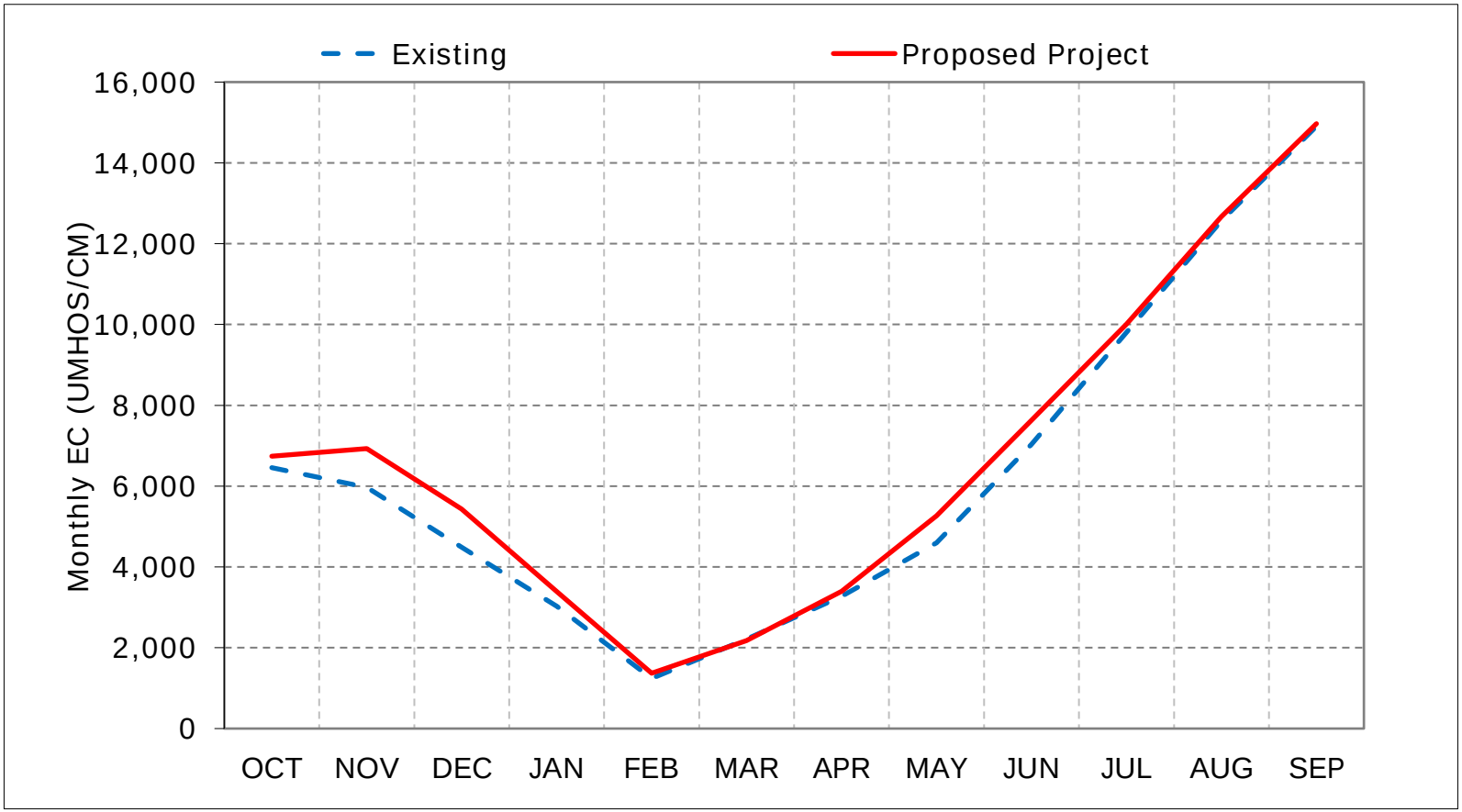
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 21-4. Montezuma Slough at Beldons Landing, Below Normal Year Average E



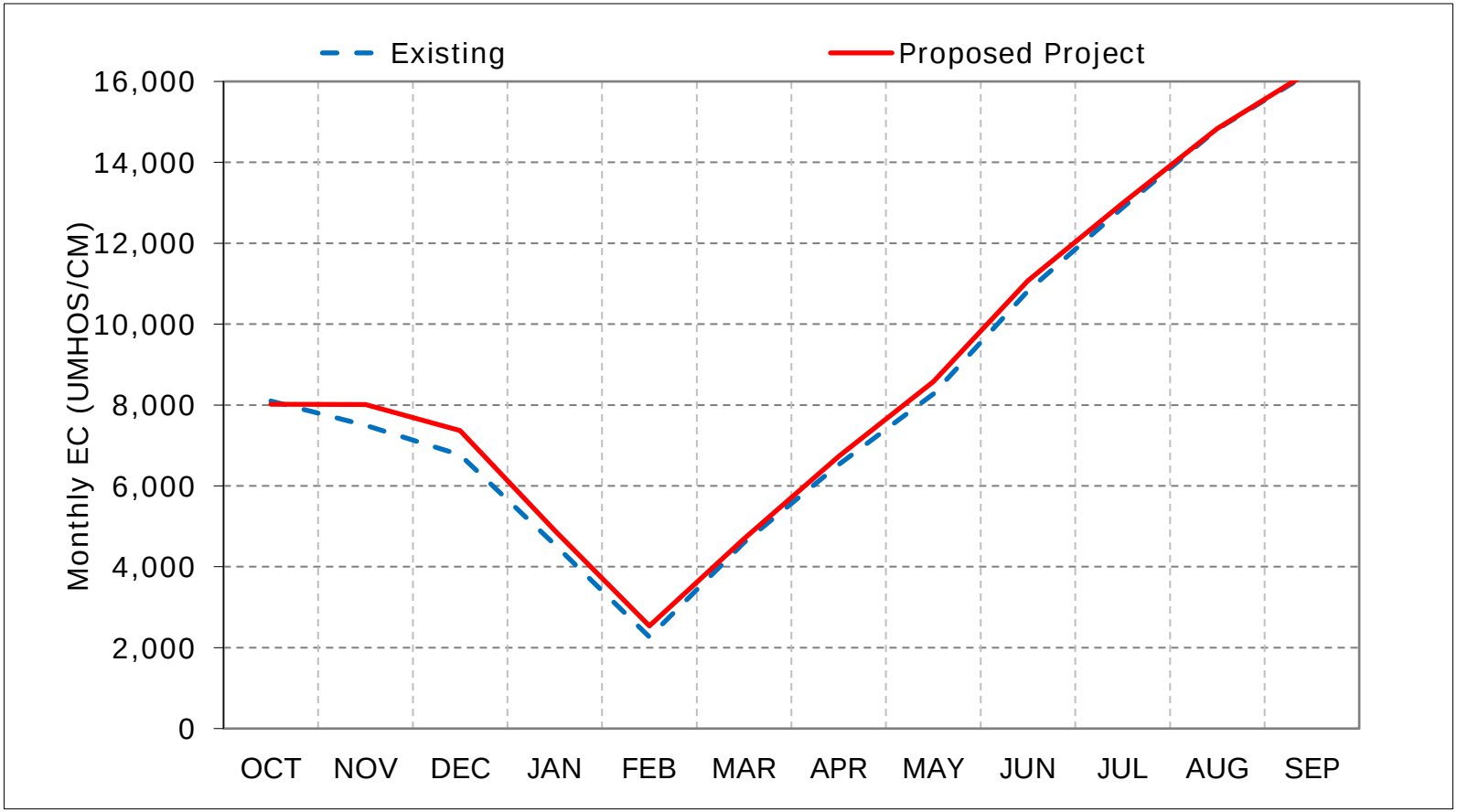
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 21-5. Montezuma Slough at Beldons Landing, Dry Year Average EC



*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.

Figure 21-6. Montezuma Slough at Beldons Landing, Critical Year Average EC



*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.

Figure 21-7. Montezuma Slough at Beldons Landing, January EC

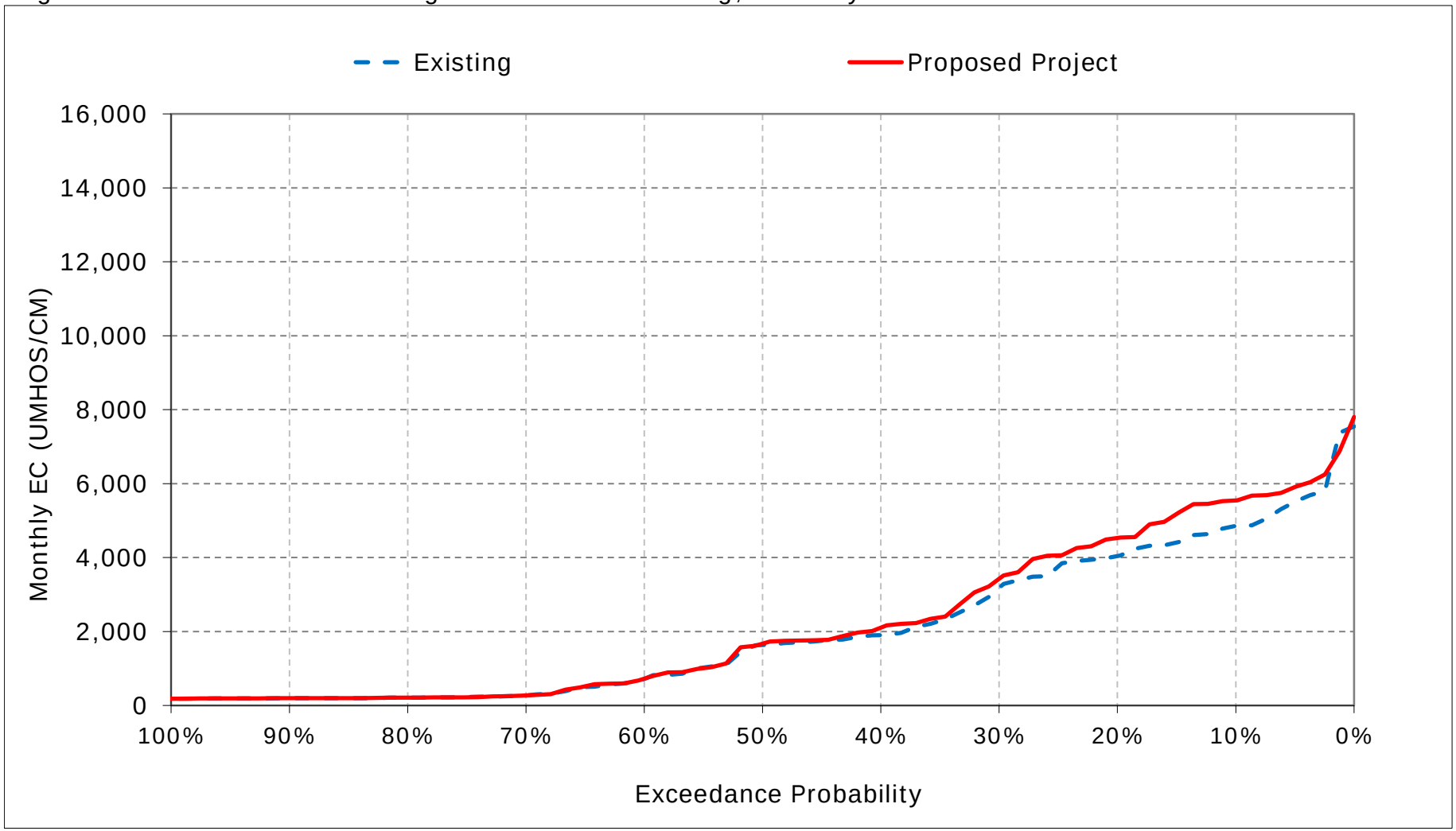


Figure 21-8. Montezuma Slough at Beldons Landing, February EC

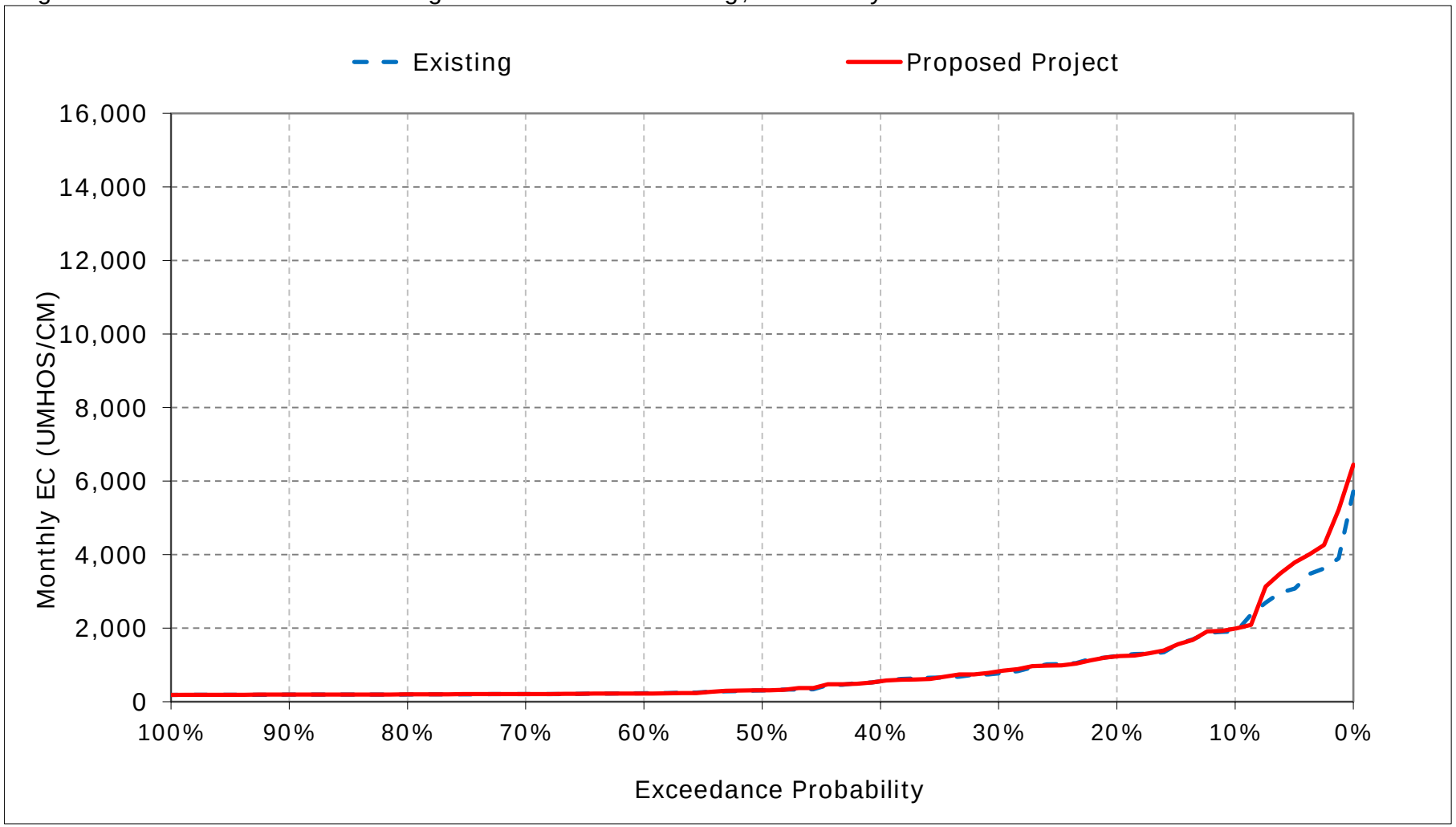


Figure 21-9. Montezuma Slough at Beldons Landing, March EC

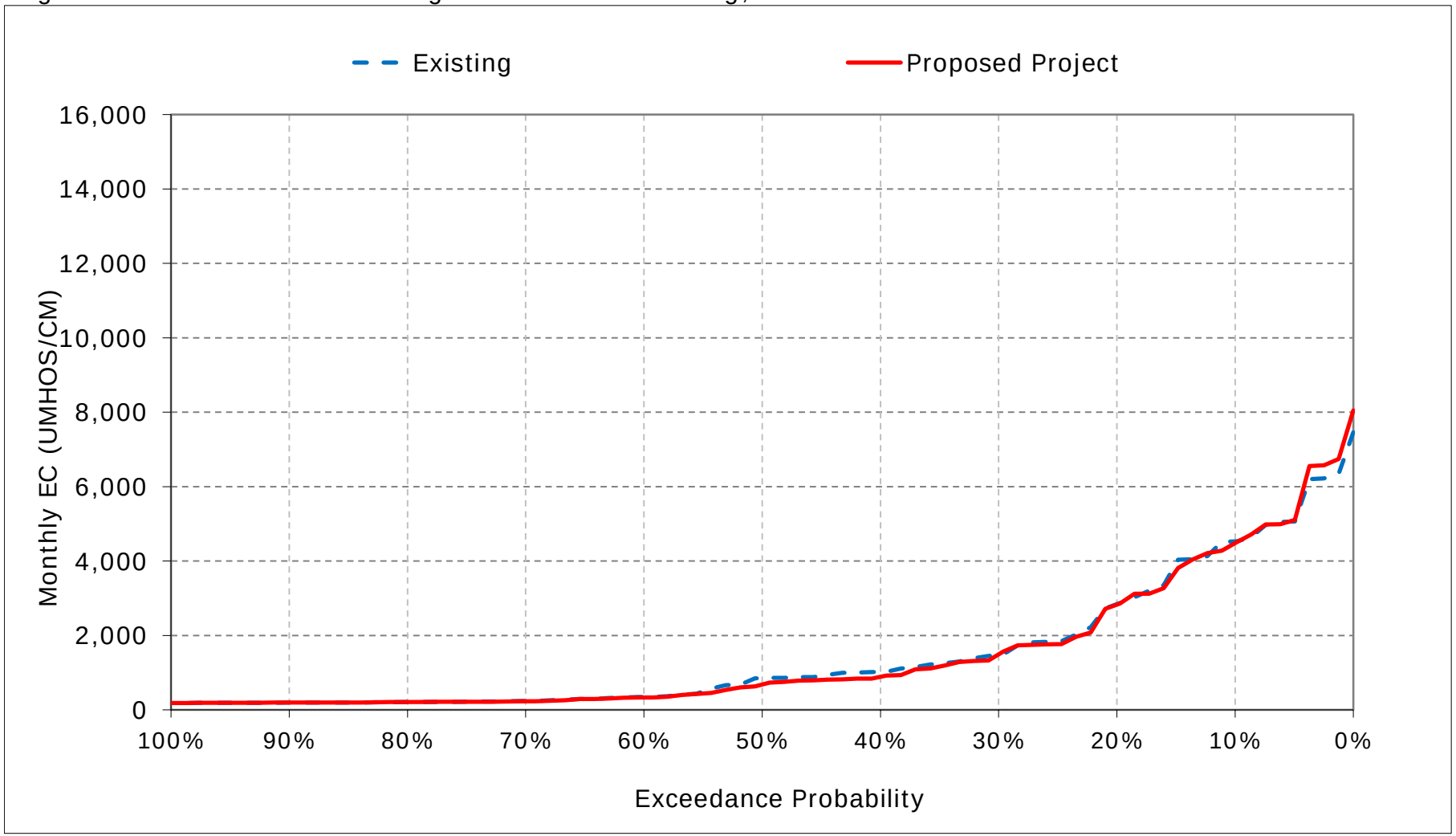


Figure 21-10. Montezuma Slough at Beldons Landing, April EC

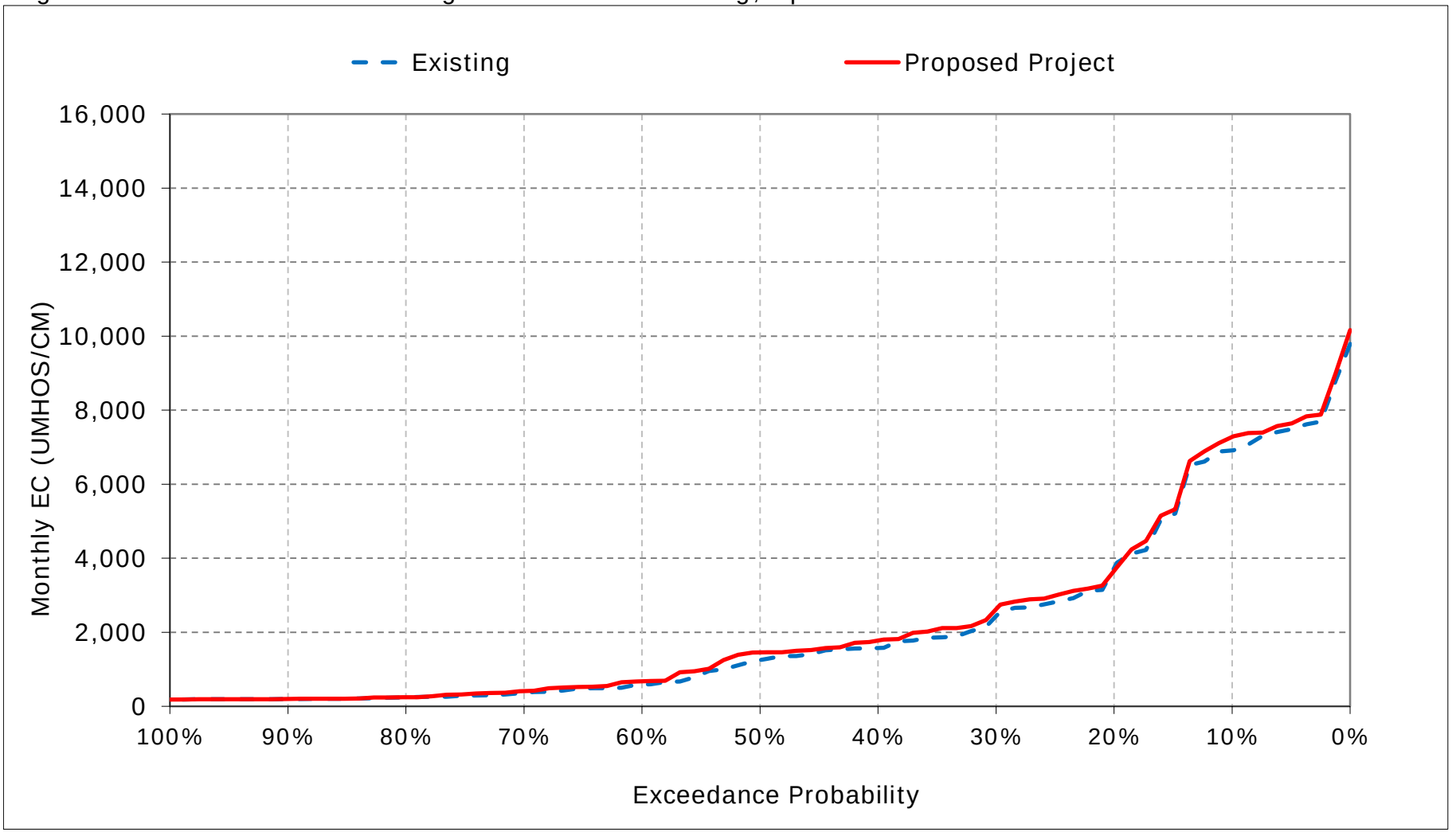


Figure 21-11. Montezuma Slough at Beldons Landing, May EC

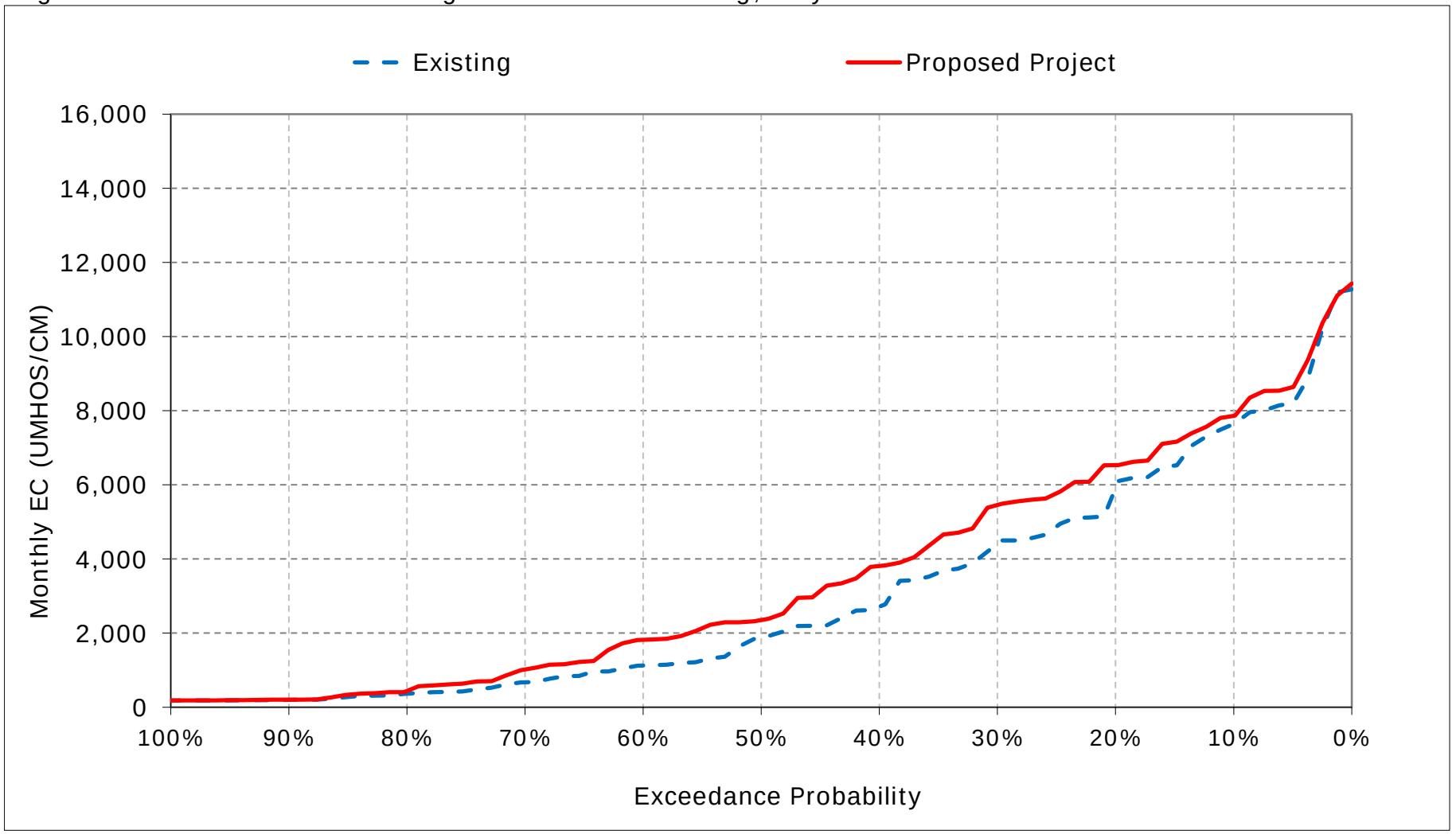


Figure 21-12. Montezuma Slough at Beldons Landing, June EC

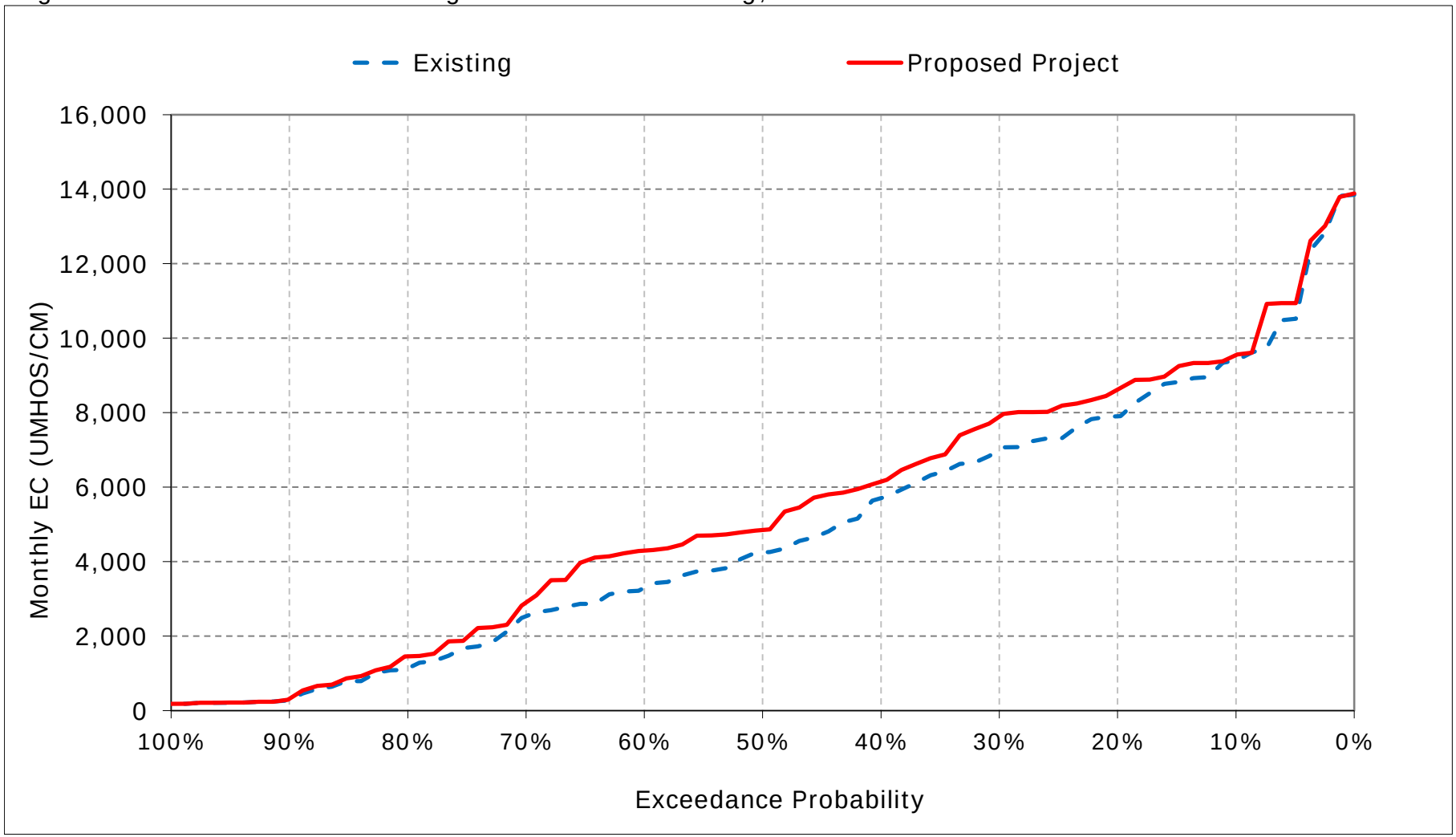


Figure 21-13. Montezuma Slough at Beldons Landing, July EC

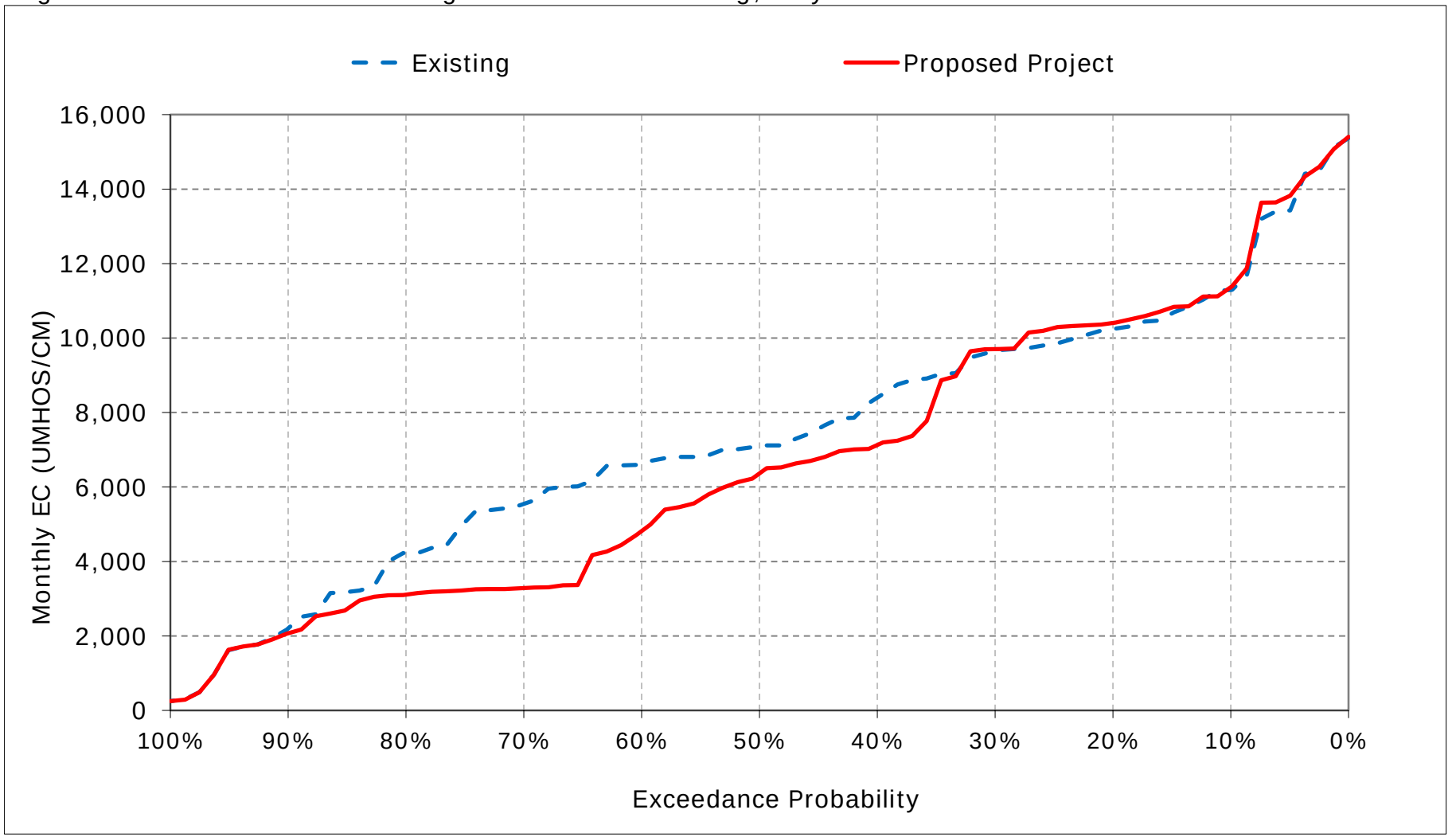


Figure 21-14. Montezuma Slough at Beldons Landing, August EC

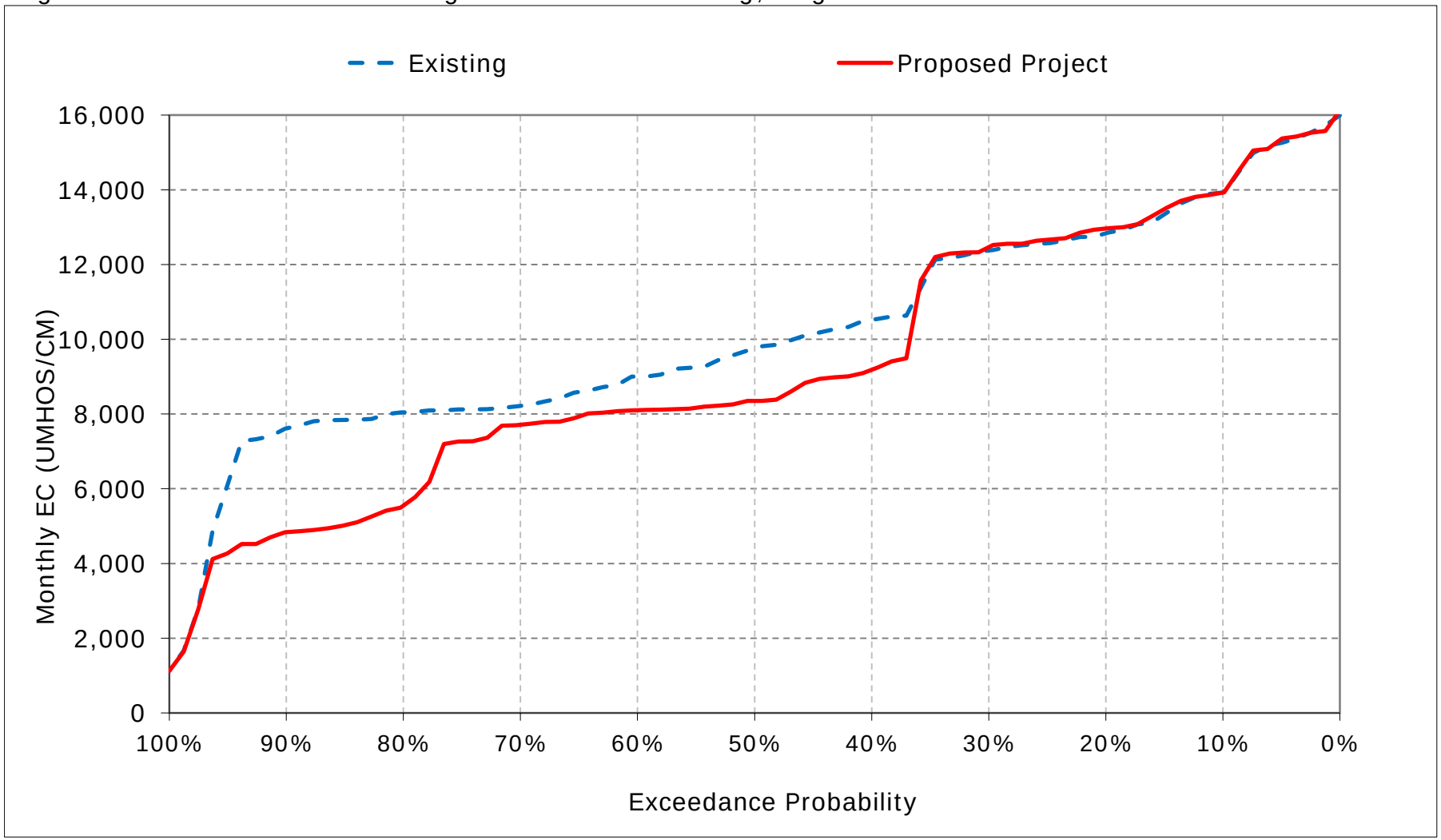


Figure 21-15. Montezuma Slough at Beldons Landing, September EC

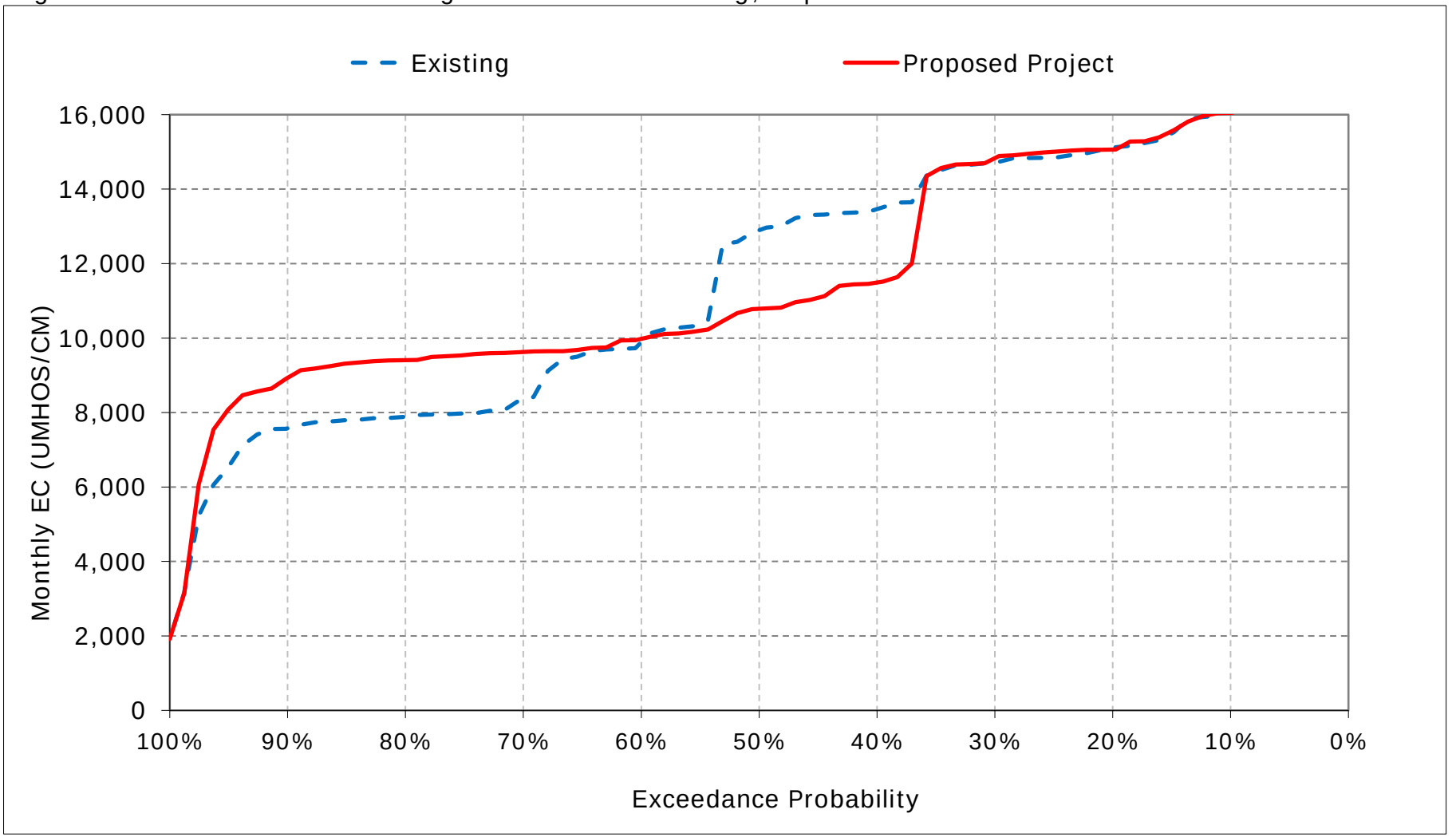


Figure 21-16. Montezuma Slough at Beldons Landing, October EC

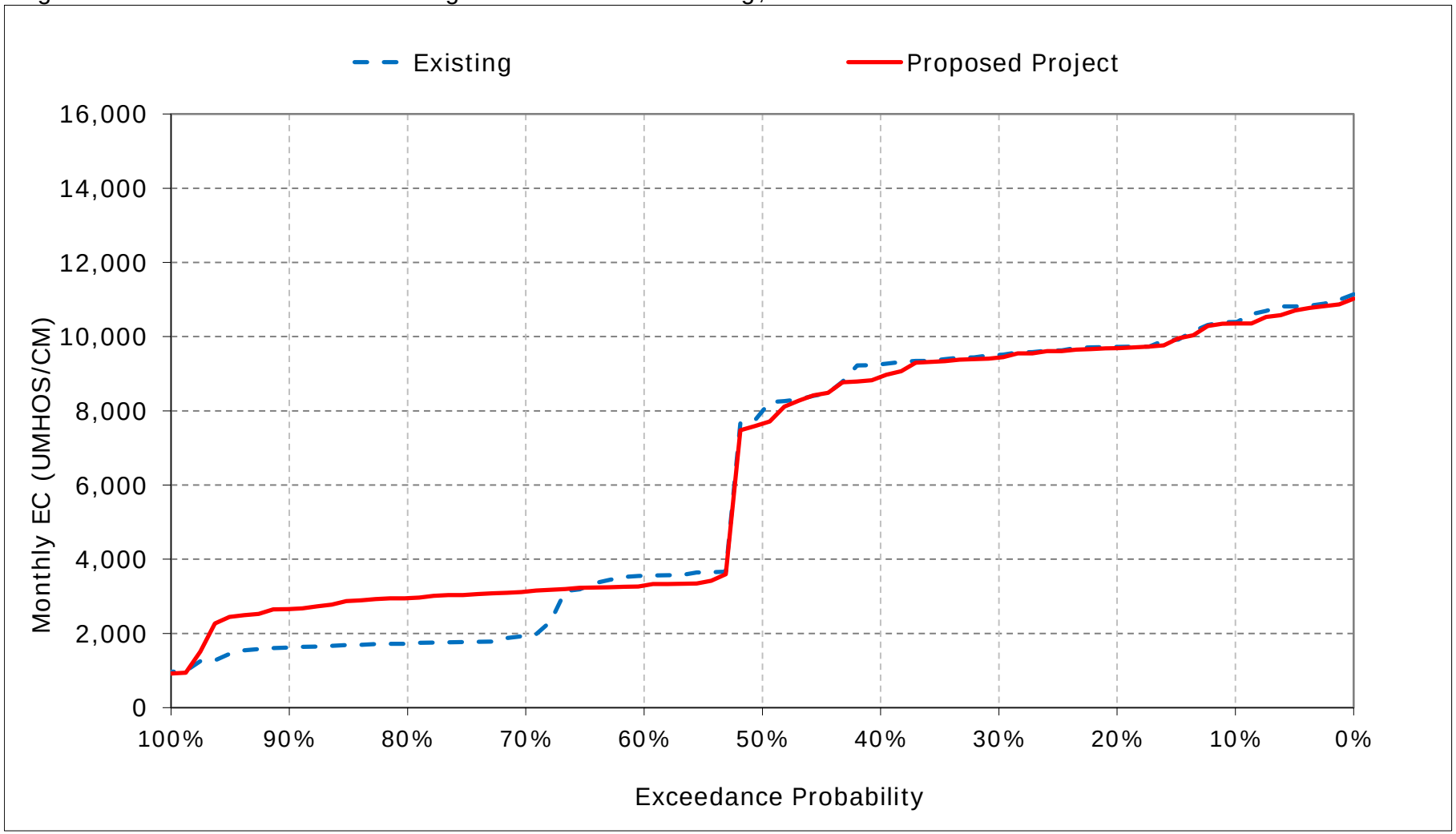


Figure 21-17. Montezuma Slough at Beldons Landing, November EC

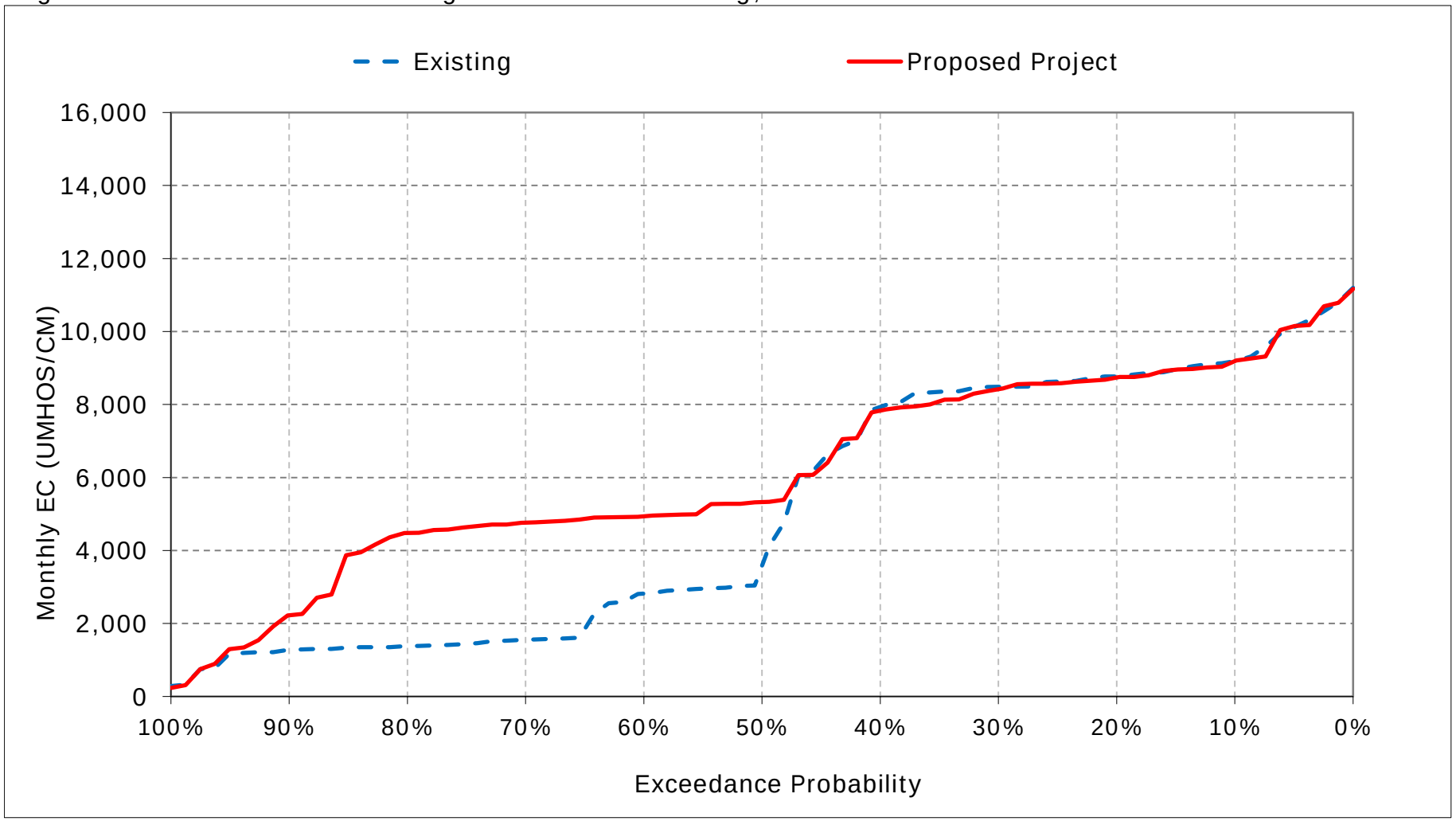


Figure 21-18. Montezuma Slough at Beldons Landing, December EC

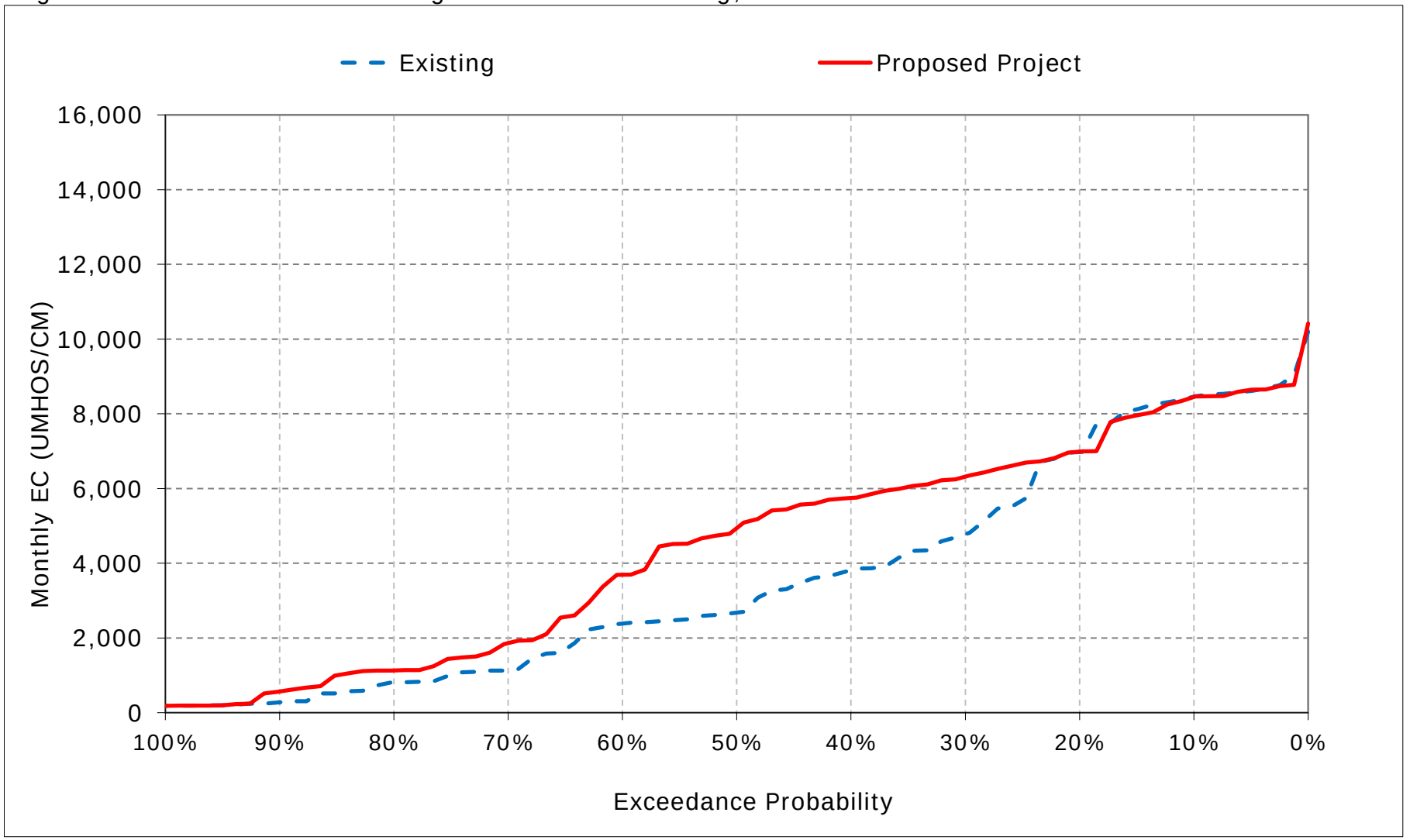


Table 22-1. Montezuma Slough at National Steel, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	9,954	9,125	8,457	4,653	1,816	2,545	3,804	4,644	6,213	8,195	10,808	12,703
20%	9,229	8,637	6,804	3,899	1,124	1,367	1,768	3,345	4,995	7,041	9,632	11,765
30%	9,052	8,374	4,484	2,833	652	572	901	2,305	4,418	6,564	9,202	11,431
40%	8,727	7,798	3,679	1,533	404	420	647	1,272	3,512	5,011	7,333	10,280
50%	7,640	3,102	2,891	1,212	294	314	517	795	2,474	4,376	6,703	9,444
60%	3,261	2,578	2,661	560	216	219	258	476	1,892	3,681	6,260	5,782
70%	1,713	1,418	984	234	201	197	219	317	1,279	3,211	5,581	3,969
80%	1,581	1,192	526	206	196	192	198	215	583	2,384	5,361	3,625
90%	1,454	1,079	216	194	190	188	190	191	202	1,260	5,181	3,495
Long Term												
Full Simulation Period[a]	5,761	4,915	3,553	1,861	748	792	1,141	1,755	3,112	4,810	7,313	7,990
Water Year Types[b]												
Wet (32%)	4,322	2,914	1,051	377	206	212	243	368	902	2,087	4,915	3,315
Above Normal (15%)	6,040	4,890	3,344	1,082	327	225	276	462	1,698	3,150	5,651	5,655
Below Normal (17%)	6,054	5,358	4,640	1,977	471	564	734	1,238	2,758	4,649	7,004	9,832
Dry (22%)	6,143	5,820	4,349	2,849	1,103	1,044	1,594	2,553	4,454	6,716	9,368	11,615
Critical (15%)	7,687	7,403	6,723	4,237	2,133	2,501	3,744	5,458	7,717	9,698	11,446	12,866

Proposed Project

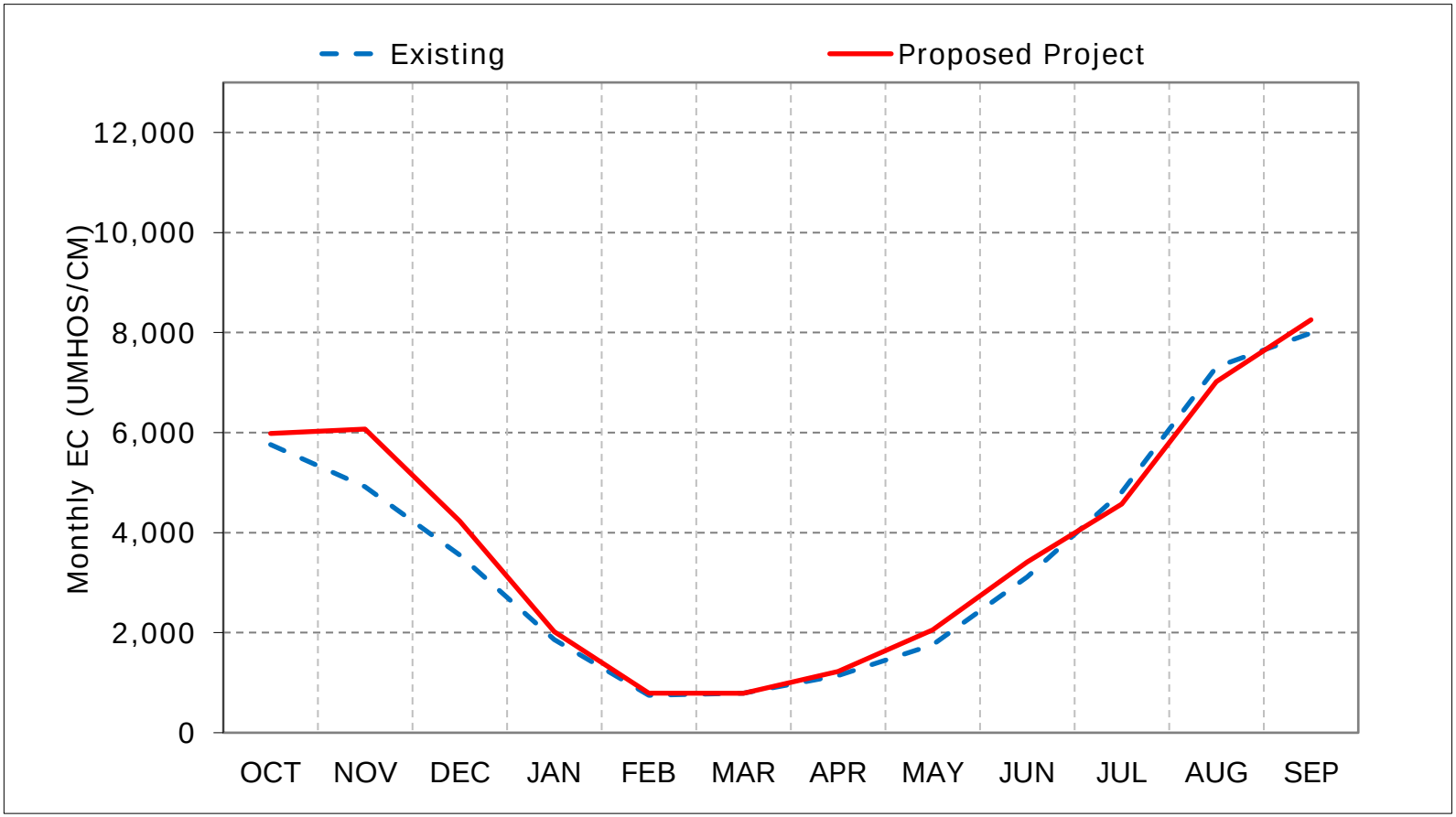
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	9,819	8,963	8,417	5,355	1,785	2,510	4,092	4,875	6,381	8,226	10,816	12,711
20%	9,224	8,644	6,803	4,345	1,111	1,341	1,880	3,926	5,486	7,243	9,698	11,745
30%	9,032	8,295	6,289	3,075	667	563	1,047	3,029	4,919	6,571	9,234	11,579
40%	8,379	7,795	5,692	1,684	393	361	756	1,899	3,984	3,904	6,355	9,242
50%	7,333	5,475	4,672	1,217	319	288	617	1,150	2,926	3,539	5,783	8,306
60%	3,039	5,127	3,284	549	216	215	295	806	2,428	3,122	5,483	5,679
70%	2,869	4,919	1,298	237	203	196	227	427	1,454	2,857	5,386	5,418
80%	2,691	4,303	789	203	196	192	198	228	614	2,325	5,216	5,240
90%	2,416	1,794	344	194	190	189	188	184	203	1,266	4,843	4,991
Long Term												
Full Simulation Period[a]	5,982	6,073	4,232	2,023	793	788	1,223	2,057	3,412	4,572	7,020	8,254
Water Year Types[b]												
Wet (32%)	4,654	4,390	1,438	375	203	209	270	514	1,123	2,156	4,858	4,814
Above Normal (15%)	6,262	6,110	4,358	1,199	281	215	313	715	1,999	3,155	5,686	5,364
Below Normal (17%)	6,295	6,448	5,488	2,034	454	530	837	1,684	3,131	2,876	5,260	8,743
Dry (22%)	6,409	6,883	5,205	3,208	1,205	1,026	1,719	3,036	4,863	6,865	9,451	11,675
Critical (15%)	7,576	8,028	7,236	4,624	2,359	2,561	3,906	5,708	7,931	9,763	11,446	12,898

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-135	-162	-39	702	-32	-34	288	231	168	31	8	9
20%	-5	7	-1	446	-13	-26	112	581	491	202	66	-20
30%	-20	-79	1,804	242	16	-9	146	724	501	7	32	148
40%	-348	-3	2,013	151	-11	-60	109	628	472	-1,107	-978	-1,038
50%	-307	2,373	1,781	6	25	-26	101	355	451	-838	-921	-1,138
60%	-221	2,549	623	-10	0	-4	37	329	536	-559	-777	-103
70%	1,156	3,501	314	4	2	-1	9	110	175	-354	-196	1,449
80%	1,111	3,110	263	-4	1	0	0	14	31	-59	-144	1,615
90%	962	715	128	0	0	0	-2	-7	1	5	-338	1,496
Long Term												
Full Simulation Period[a]	221	1,158	679	162	45	-3	82	302	299	-238	-293	265
Water Year Types[b]												
Wet (32%)	333	1,476	387	-2	-3	-3	26	146	222	69	-58	1,499
Above Normal (15%)	222	1,220	1,014	117	-46	-10	37	254	302	5	35	-291
Below Normal (17%)	240	1,090	848	57	-18	-34	103	446	373	-1,773	-1,744	-1,089
Dry (22%)	266	1,063	856	360	102	-19	125	483	409	149	83	60
Critical (15%)	-112	625	512	387	226	60	162	249	214	65	0	32

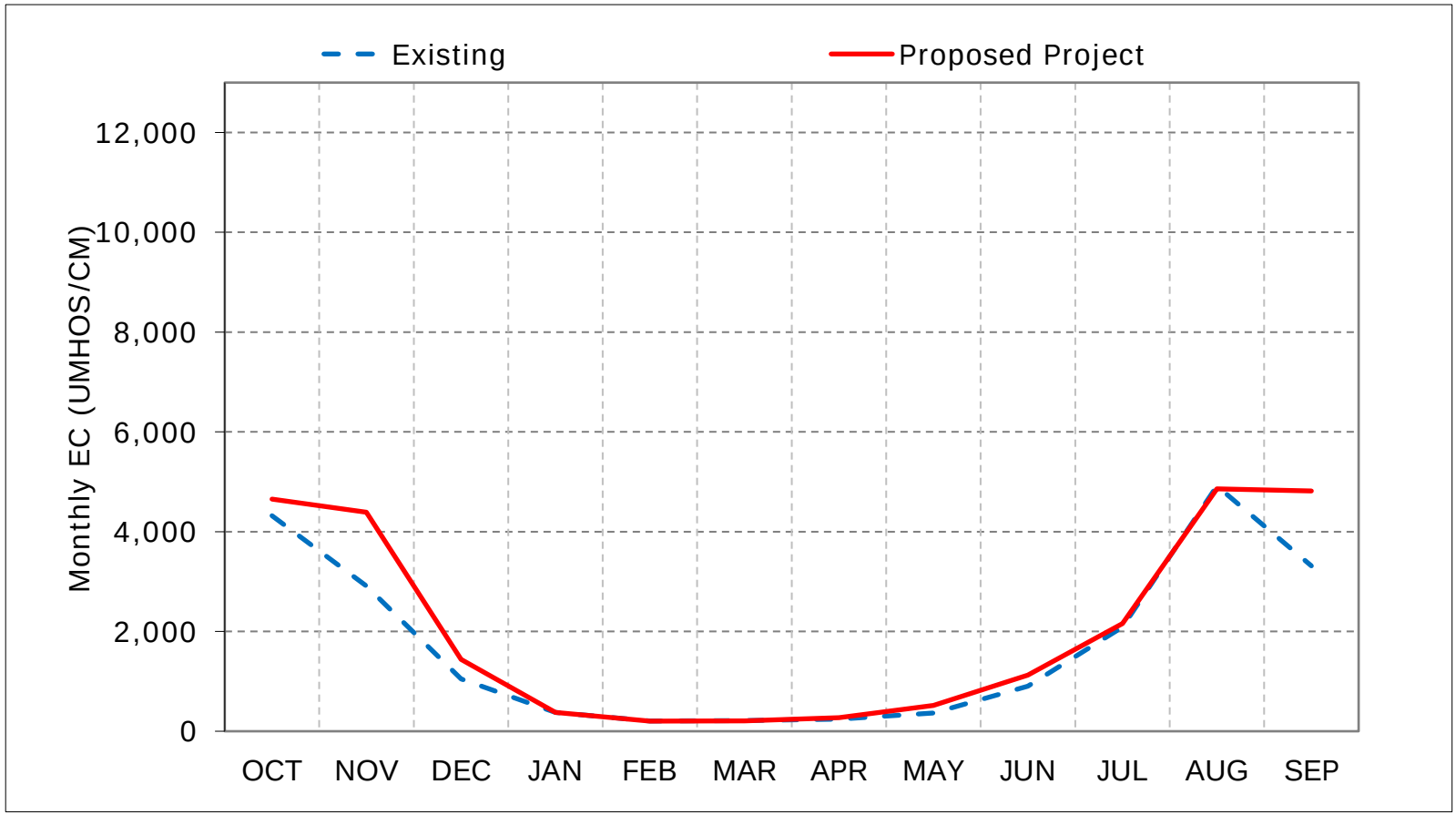
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 22-1. Montezuma Slough at National Steel, Long-Term Average EC



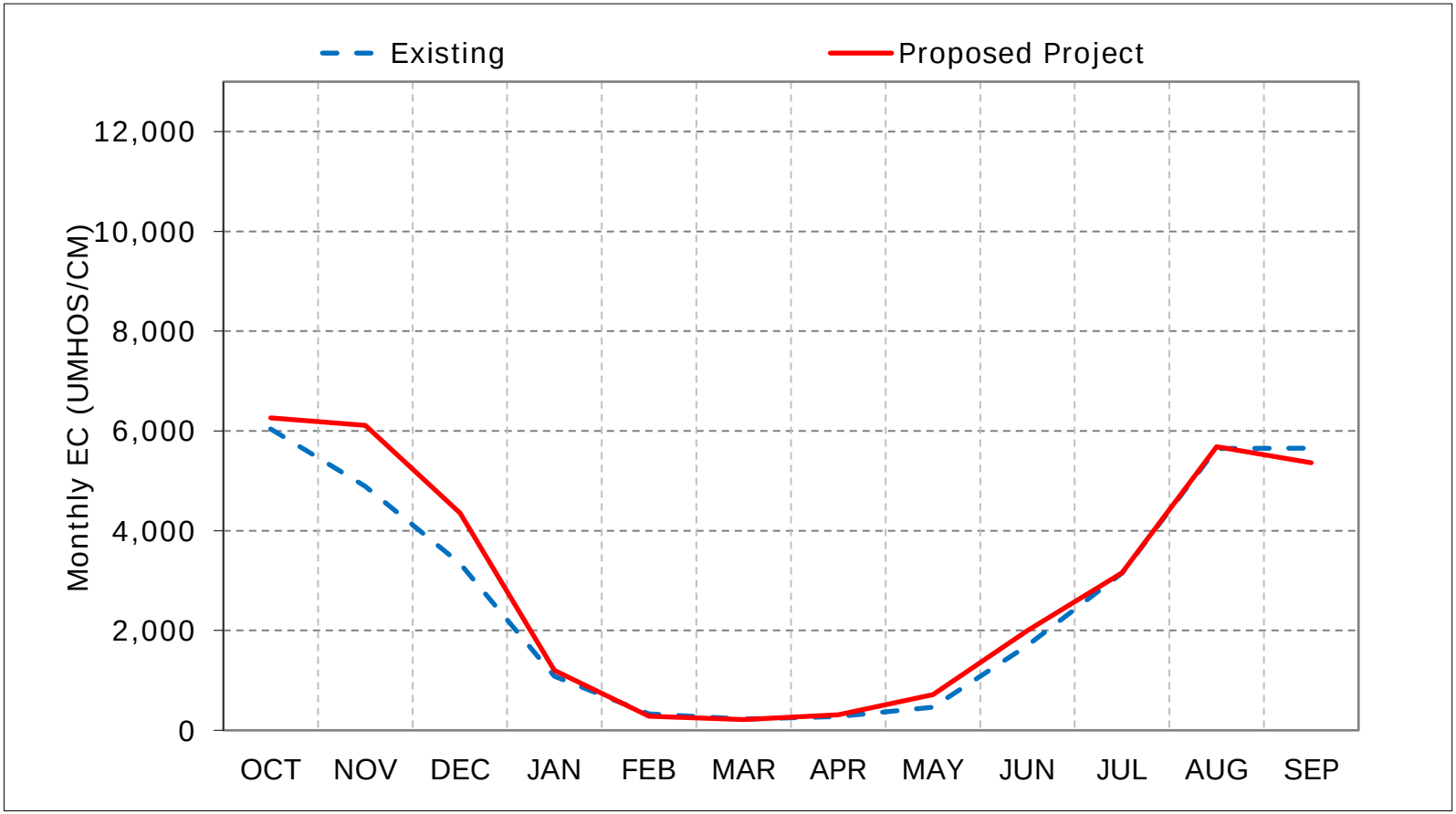
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 22-2. Montezuma Slough at National Steel, Wet Year Average EC



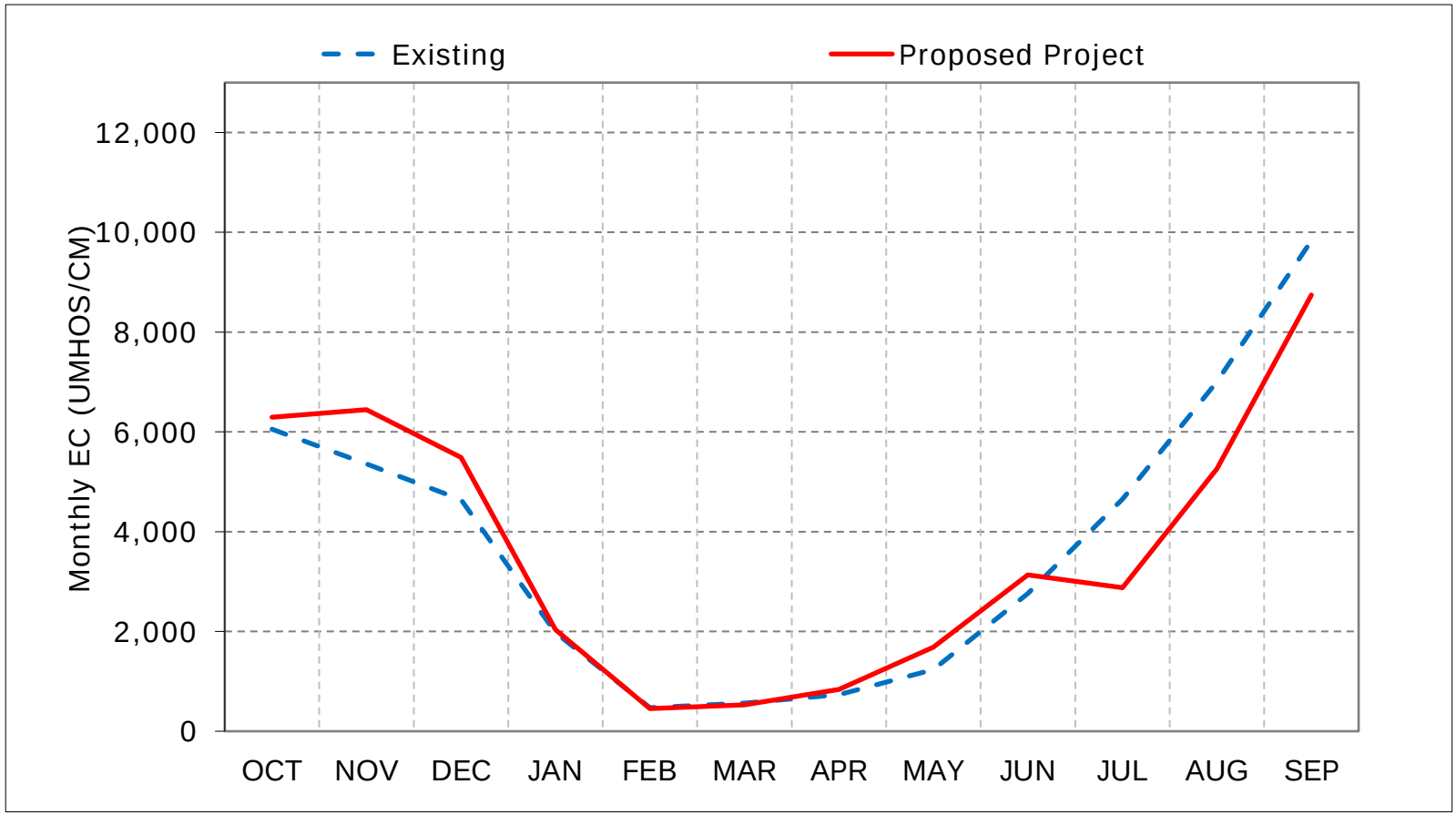
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 22-3. Montezuma Slough at National Steel, Above Normal Year Average EC



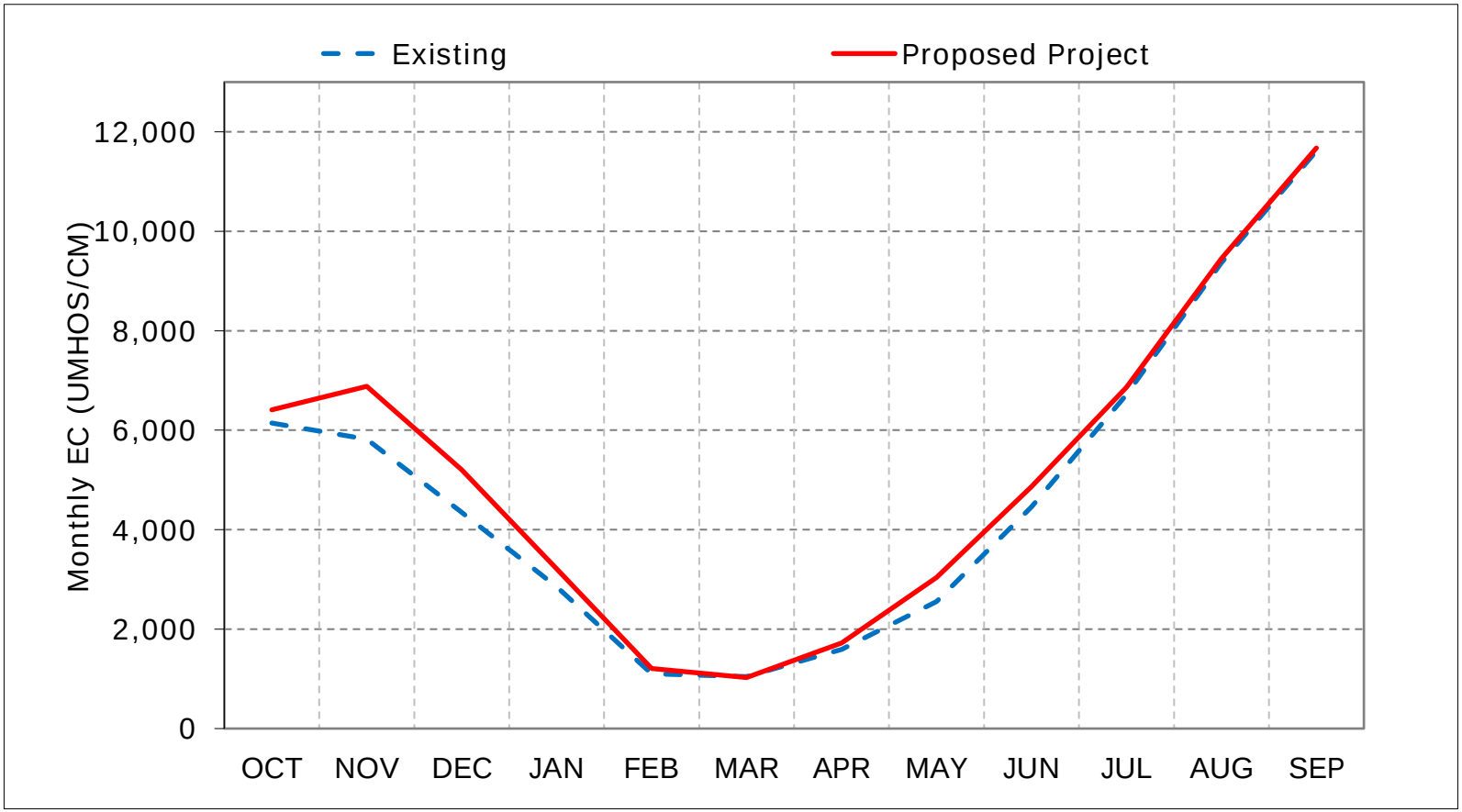
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 22-4. Montezuma Slough at National Steel, Below Normal Year Average EC



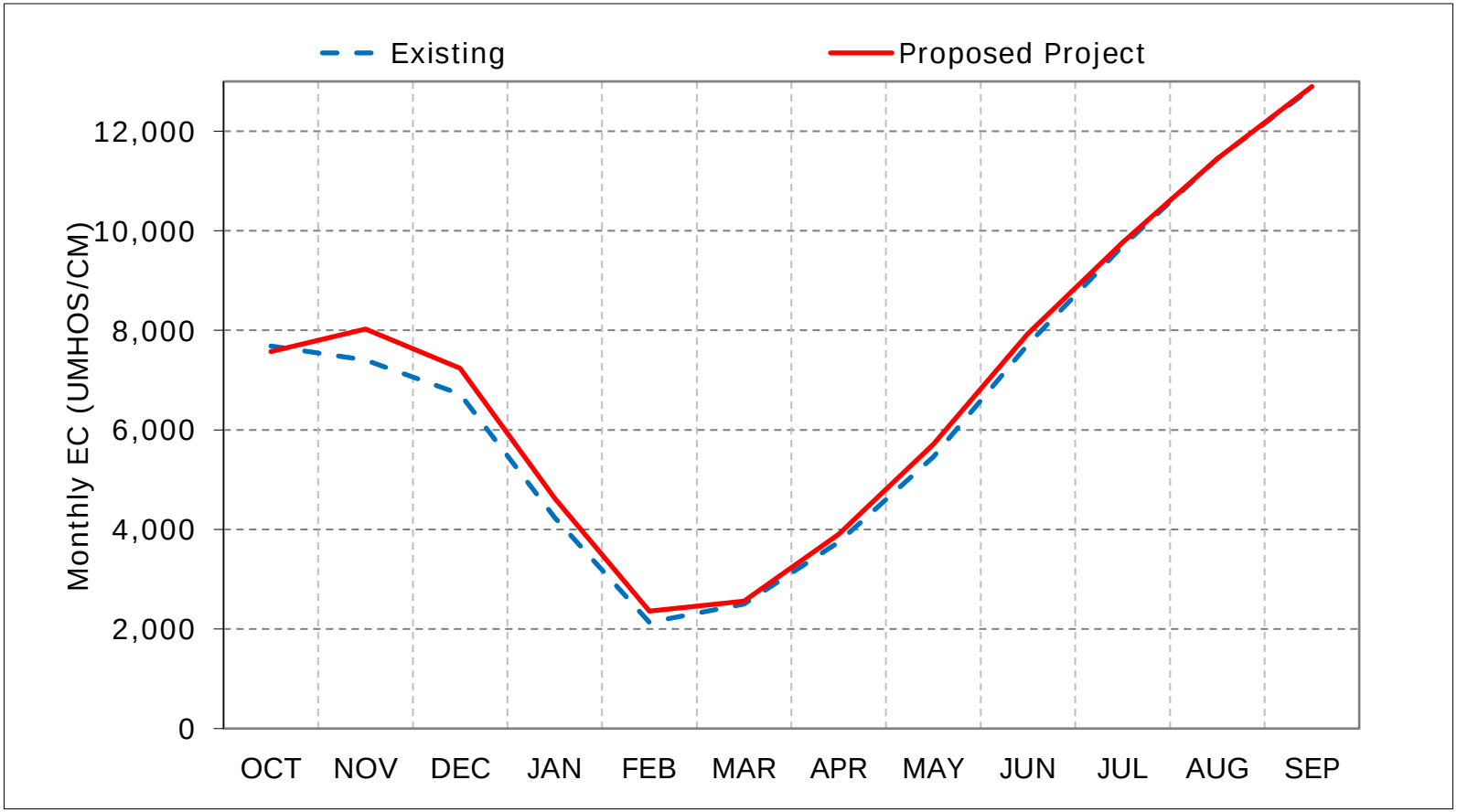
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 22-5. Montezuma Slough at National Steel, Dry Year Average EC



*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.

Figure 22-6. Montezuma Slough at National Steel, Critical Year Average EC



*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.

Figure 22-7. Montezuma Slough at National Steel, January EC

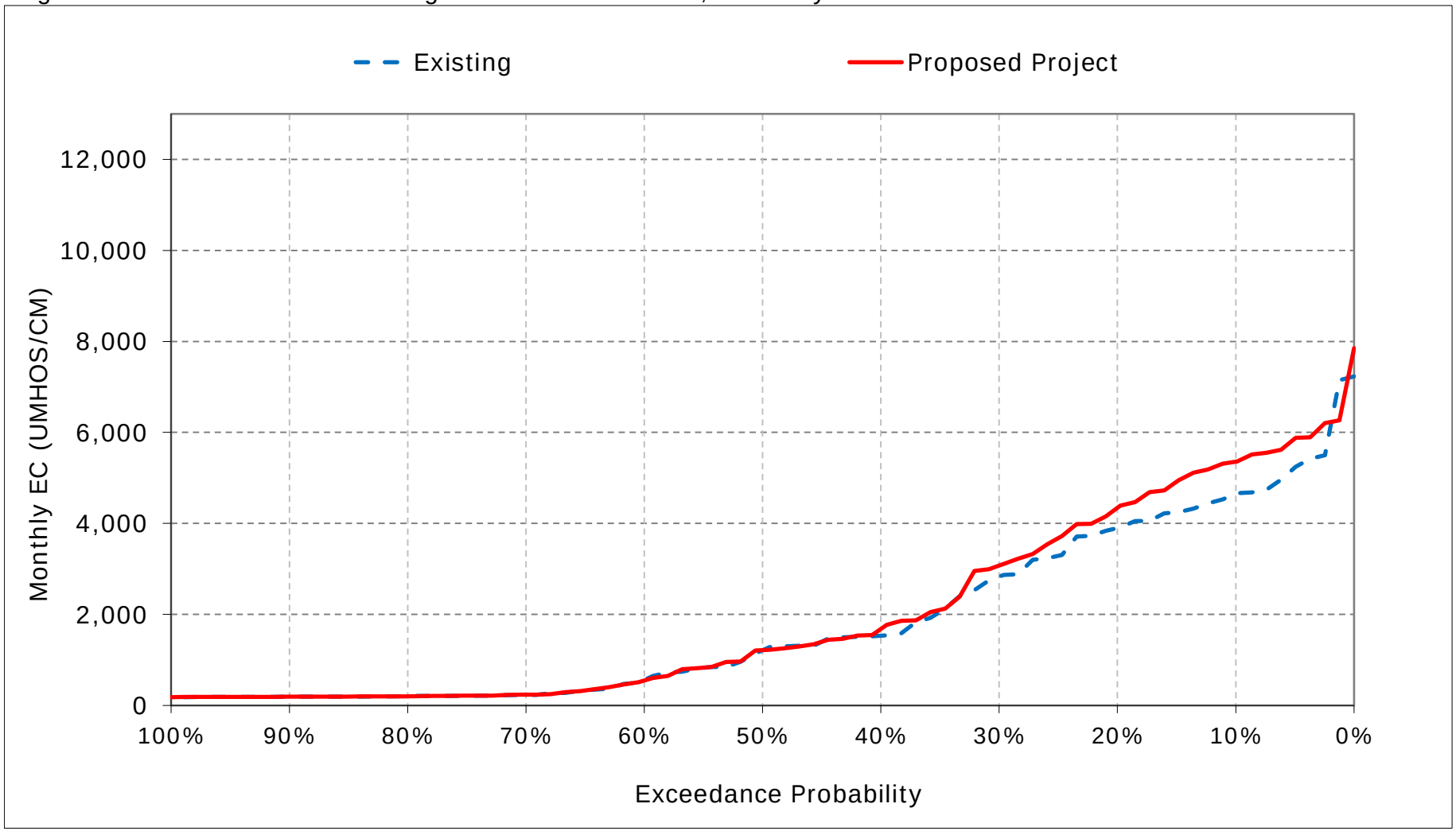


Figure 22-8. Montezuma Slough at National Steel, February EC

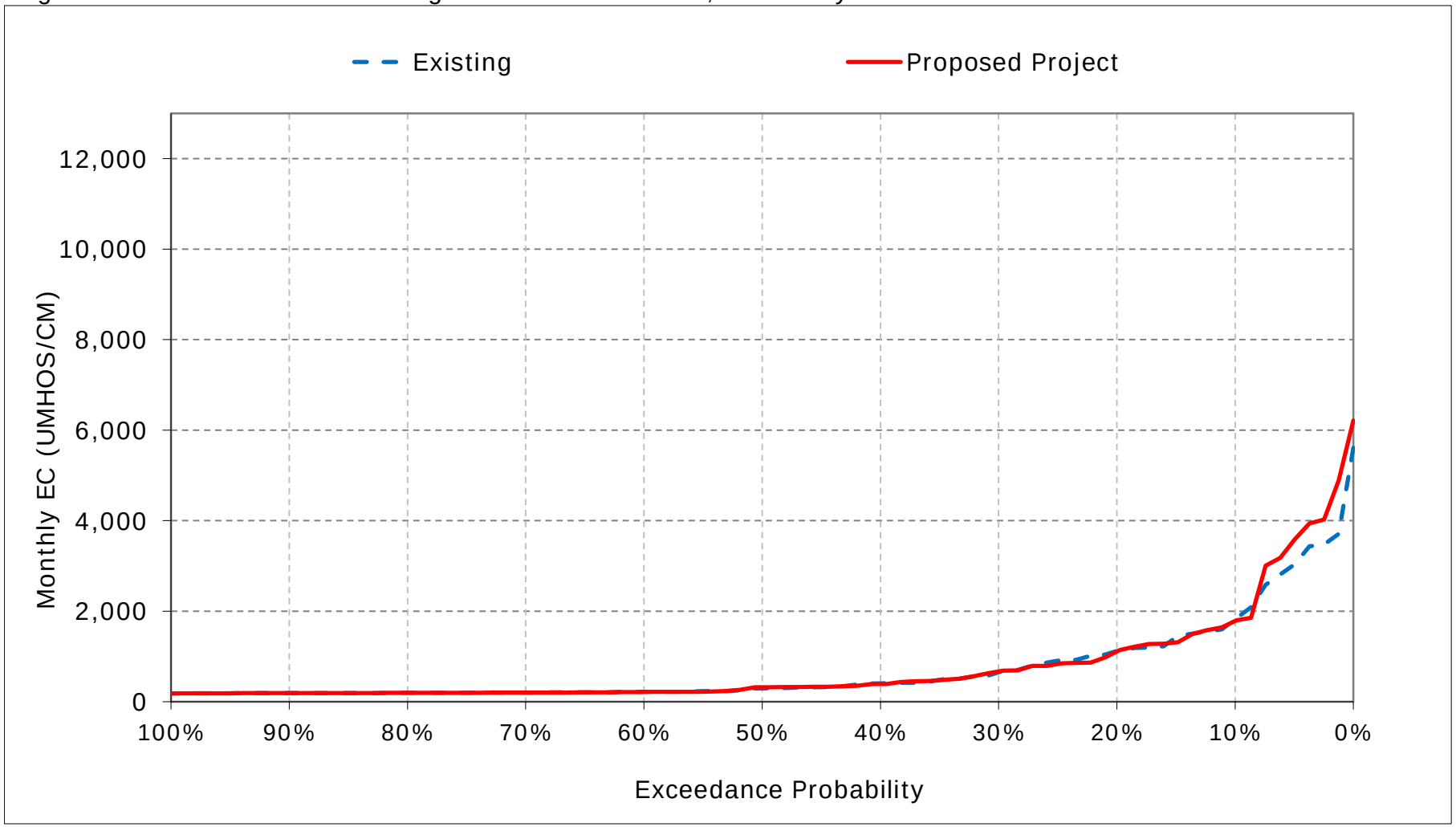


Figure 22-9. Montezuma Slough at National Steel, March EC

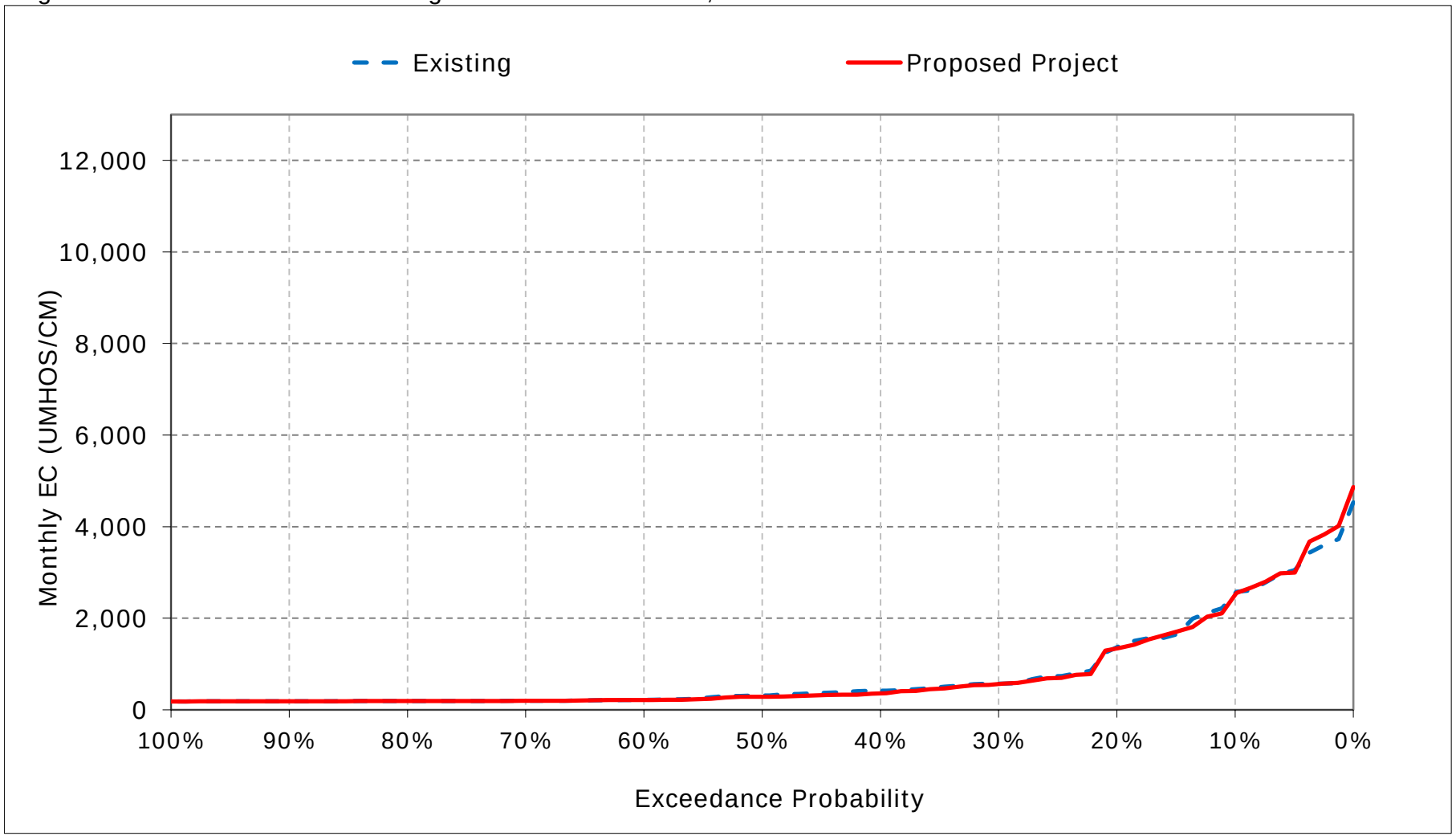


Figure 22-10. Montezuma Slough at National Steel, April EC

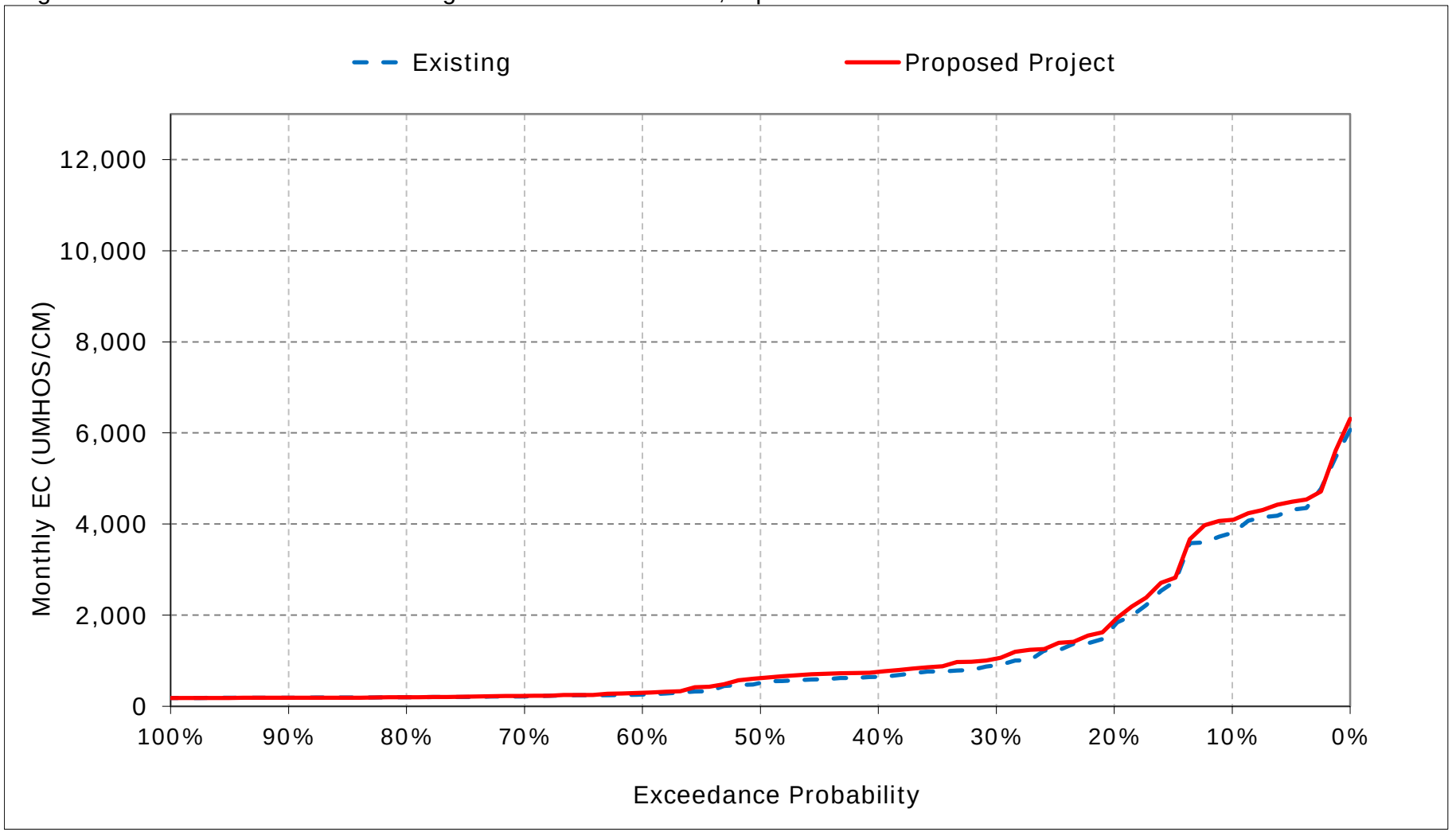


Figure 22-11. Montezuma Slough at National Steel, May EC

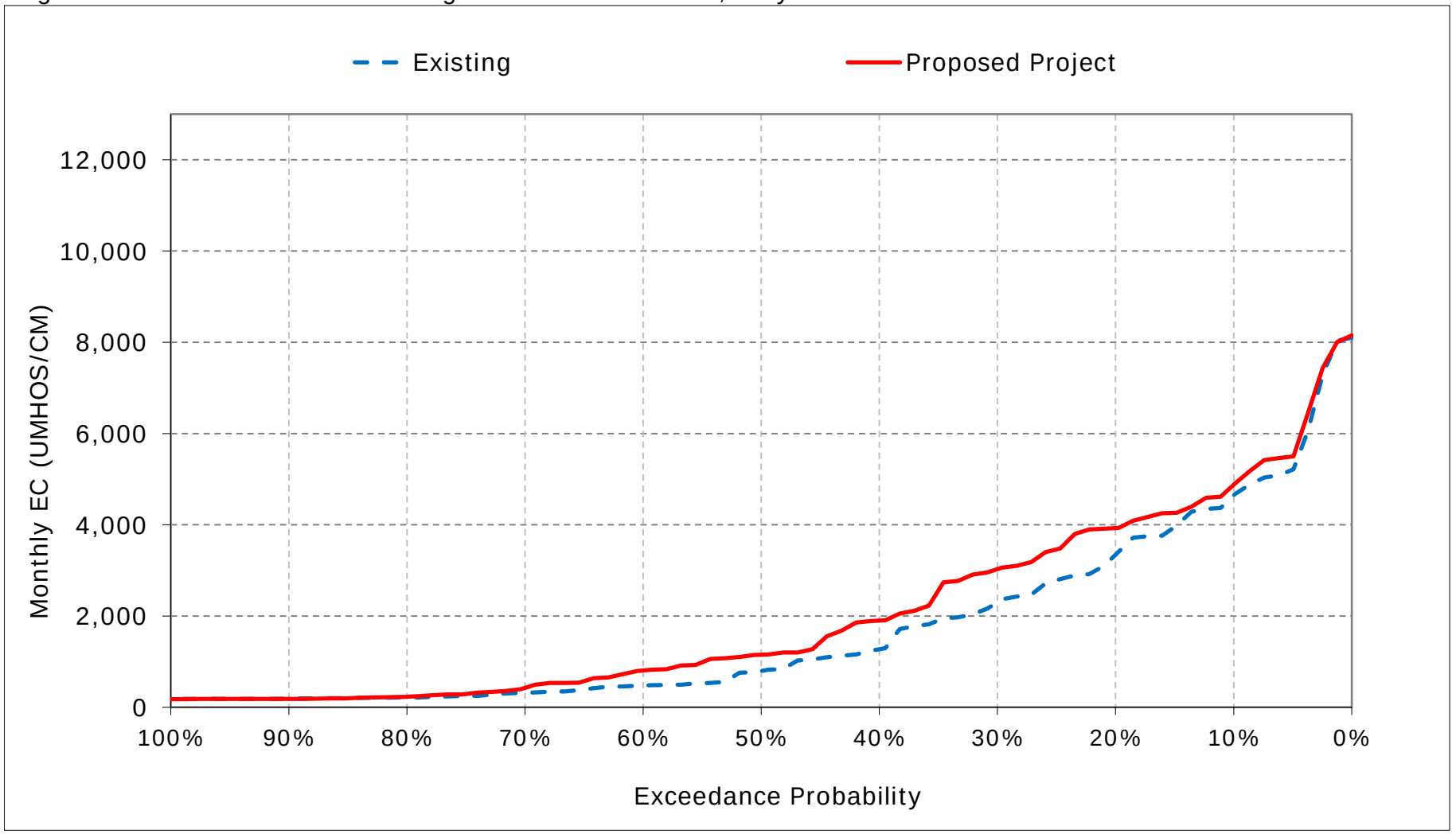


Figure 22-12. Montezuma Slough at National Steel, June EC

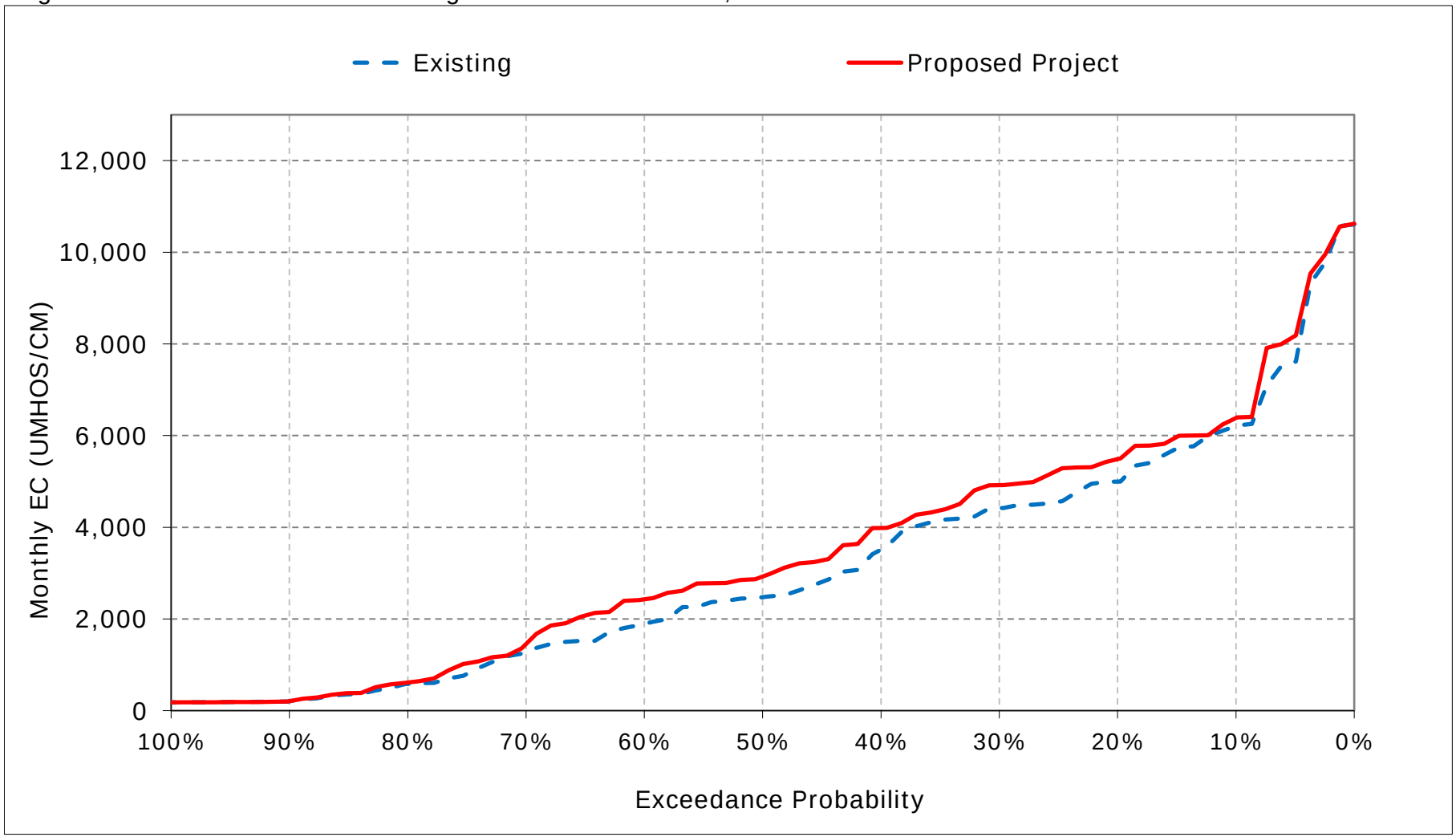


Figure 22-13. Montezuma Slough at National Steel, July EC

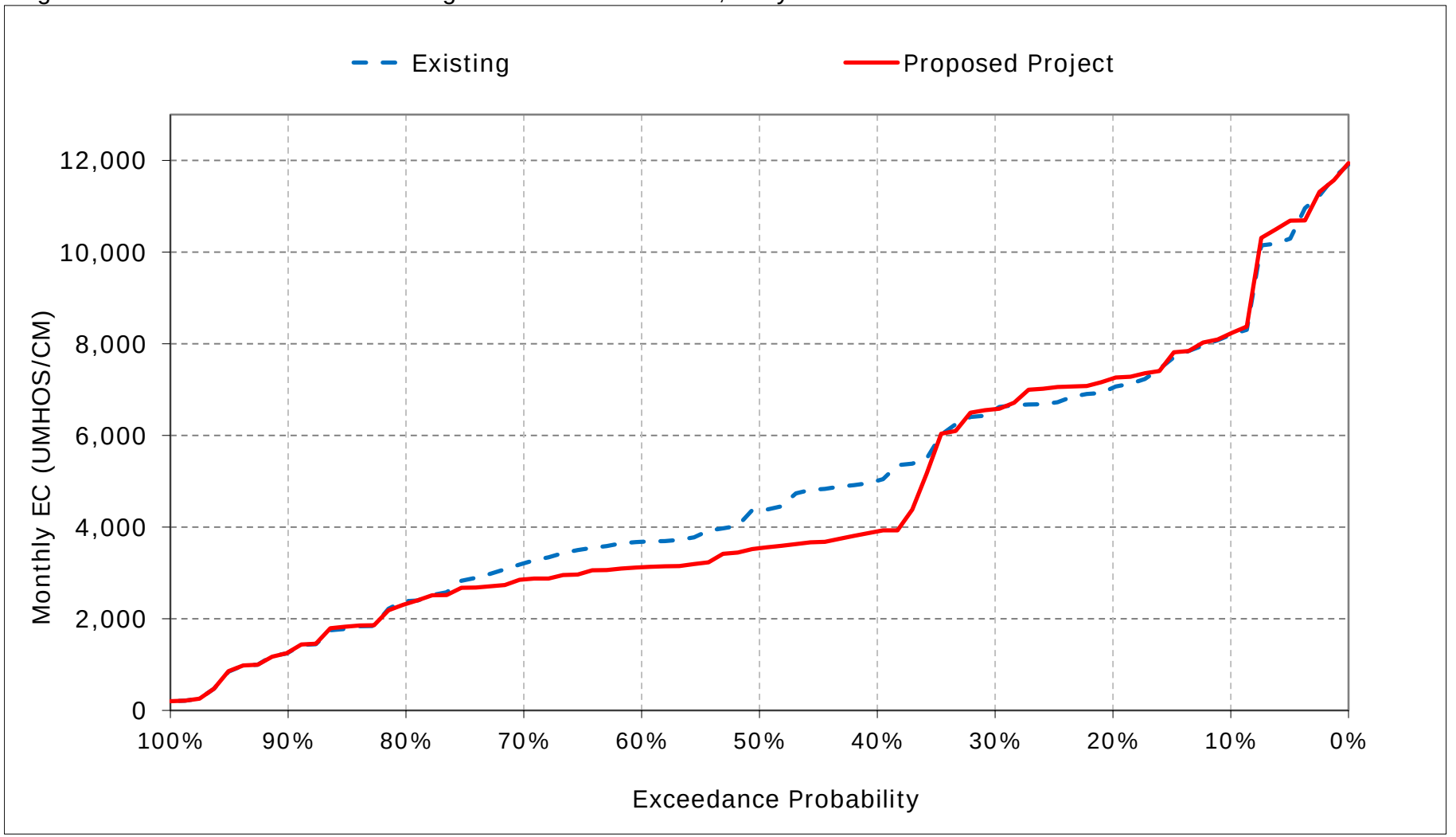


Figure 22-14. Montezuma Slough at National Steel, August EC

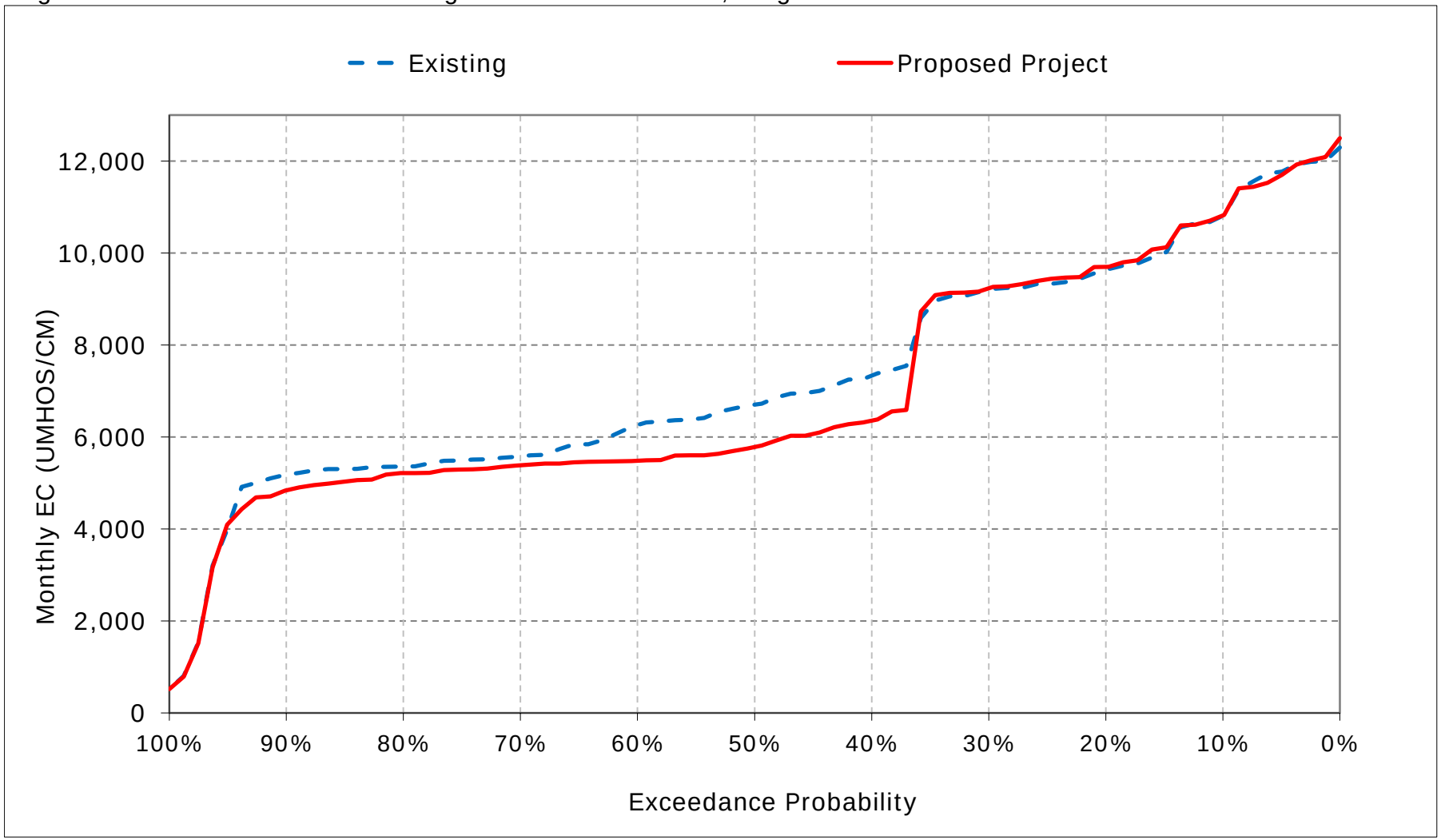


Figure 22-15. Montezuma Slough at National Steel, September EC

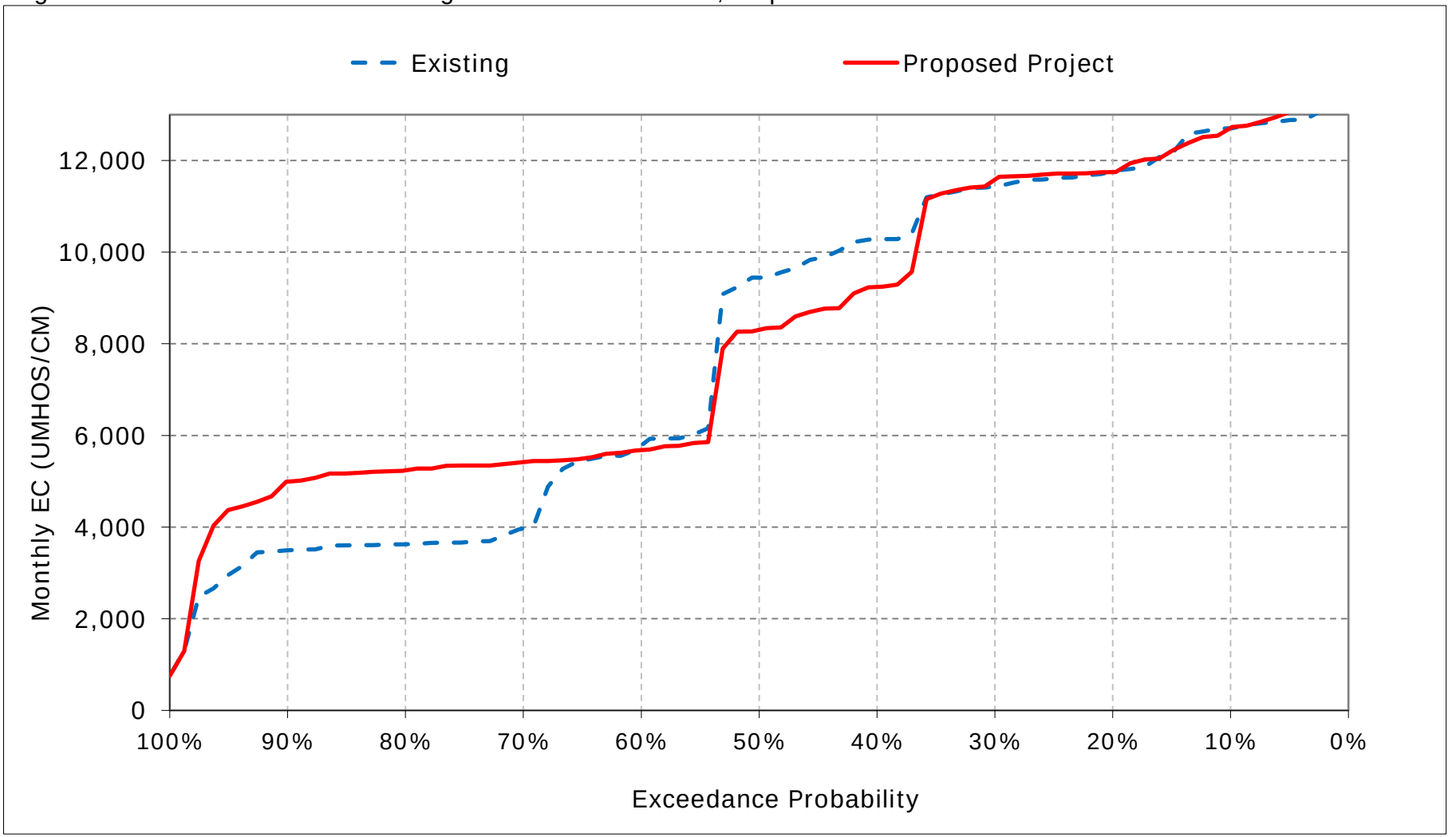


Figure 22-16. Montezuma Slough at National Steel, October EC

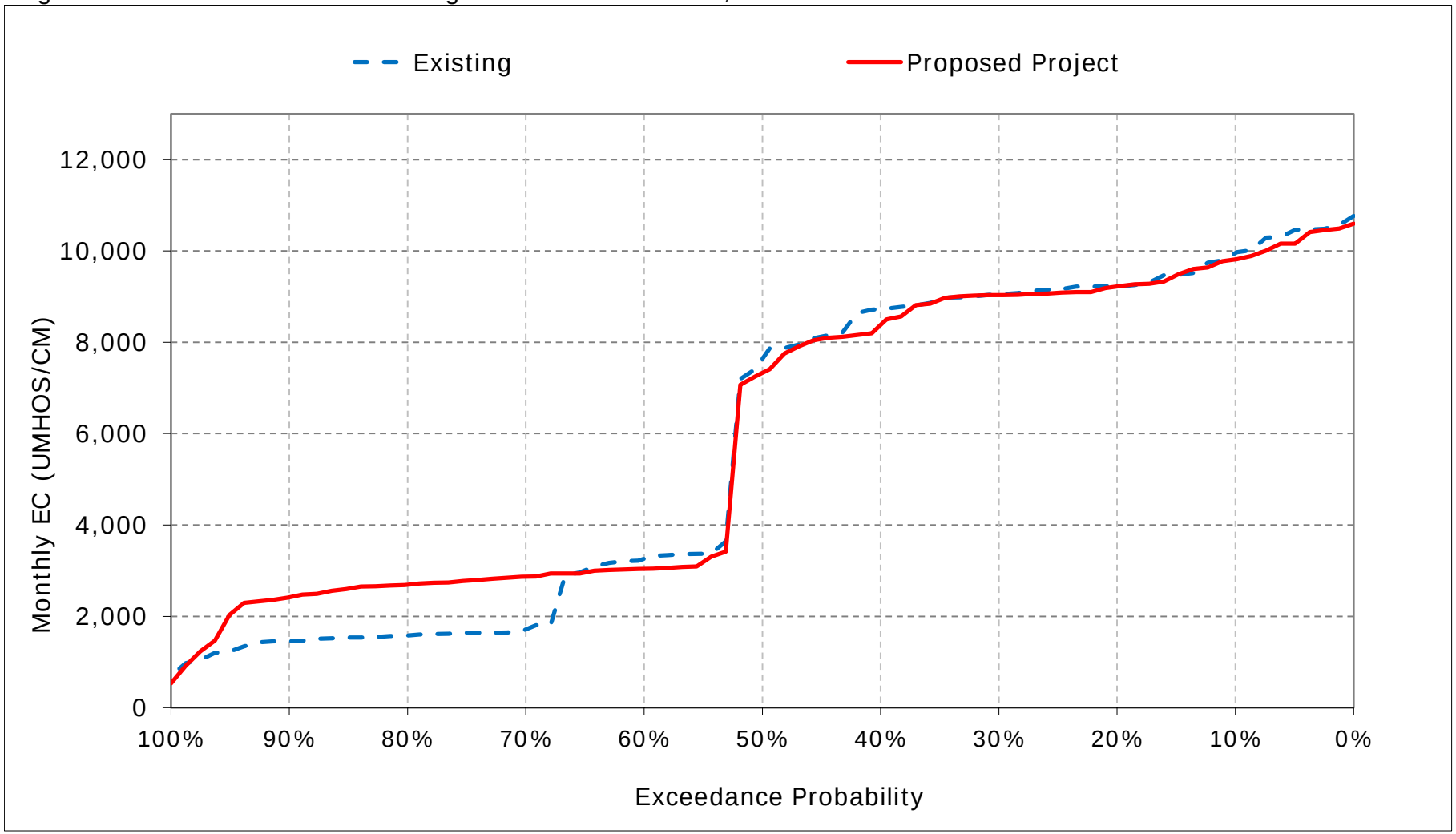


Figure 22-17. Montezuma Slough at National Steel, November EC

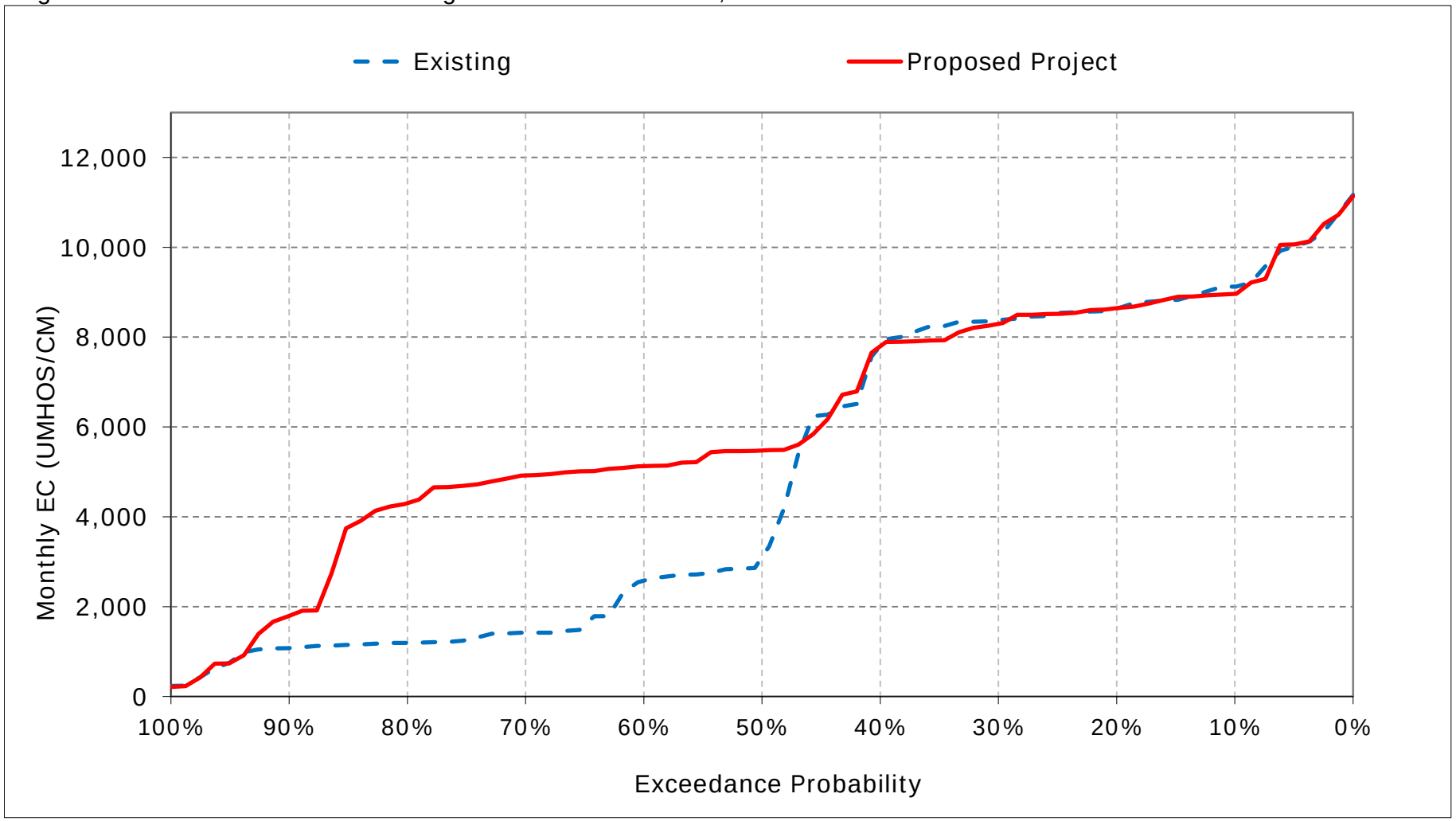


Figure 22-18. Montezuma Slough at National Steel, December EC

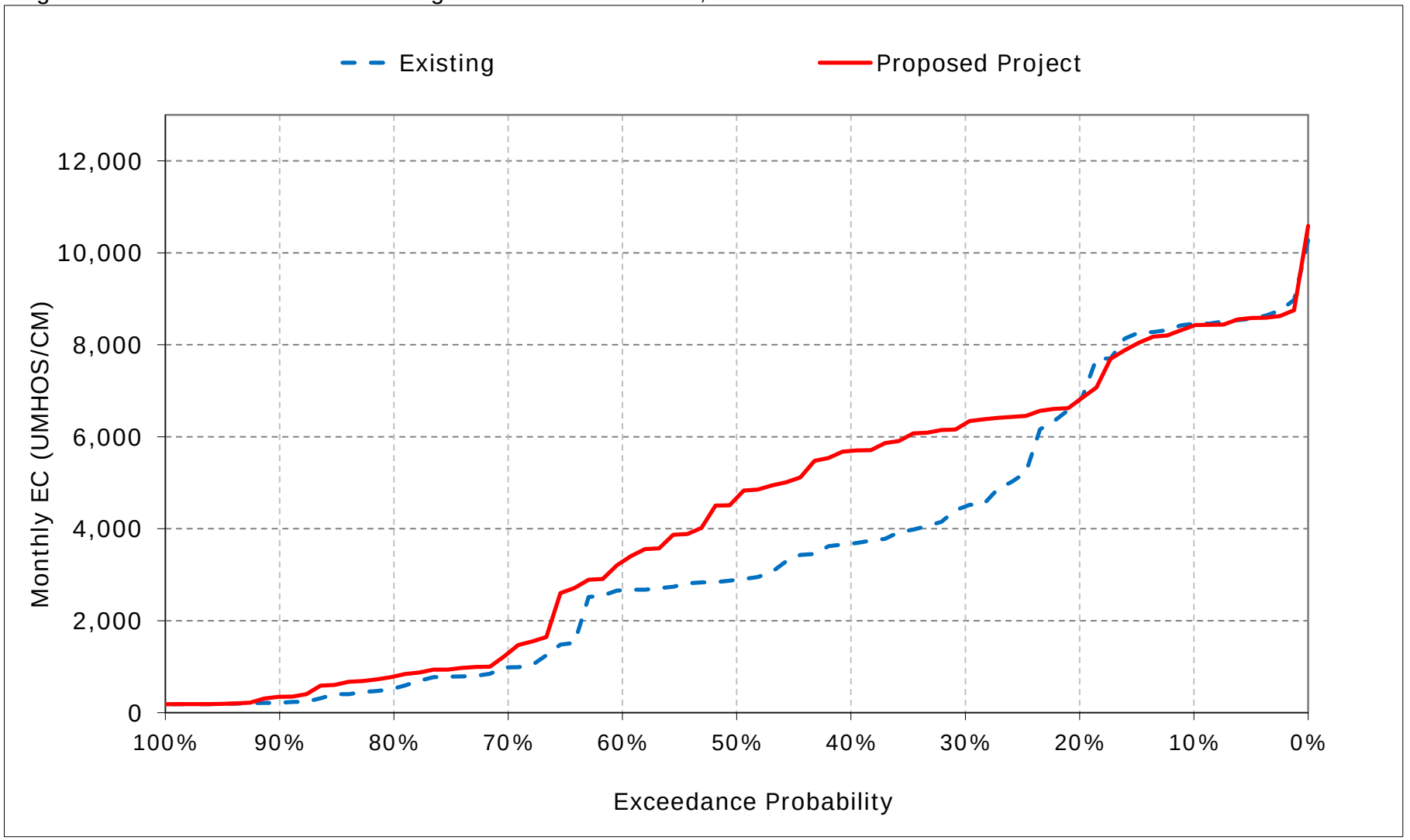


Table 24-1. Suisun Bay near Ryer, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	16,703	16,015	15,488	11,386	7,089	6,452	6,809	8,008	10,019	12,230	14,812	16,142
20%	16,148	15,774	14,171	10,495	4,725	3,858	3,849	6,638	8,637	11,068	13,505	15,448
30%	15,916	15,470	11,450	8,581	2,917	1,699	2,338	5,281	8,222	10,697	13,287	15,185
40%	15,735	14,990	9,986	5,728	1,498	1,354	1,874	3,479	7,141	8,868	11,631	14,351
50%	14,602	9,441	8,019	4,311	971	778	1,301	2,191	5,868	8,434	10,884	13,391
60%	8,926	8,249	7,489	2,674	460	410	657	1,505	4,956	6,859	10,648	8,464
70%	5,620	5,430	3,989	611	227	232	375	901	3,747	6,559	10,126	5,357
80%	5,344	5,115	1,942	256	209	200	235	424	2,021	5,757	9,751	4,985
90%	5,183	4,760	700	200	195	193	194	203	408	3,978	9,429	4,569
Long Term												
Full Simulation Period[a]	11,389	10,451	8,186	5,114	2,419	1,908	2,260	3,446	5,856	8,256	11,405	10,801
Water Year Types[b]												
Wet (32%)	9,330	7,468	3,198	977	293	340	467	836	2,318	4,779	9,075	4,646
Above Normal (15%)	11,798	10,318	8,360	3,352	937	390	637	1,293	4,323	6,367	9,917	8,307
Below Normal (17%)	11,868	11,458	10,147	5,928	1,744	1,595	1,737	2,893	5,947	8,438	11,257	13,867
Dry (22%)	11,938	11,818	10,281	8,042	4,052	2,794	3,382	5,287	8,126	10,864	13,402	15,325
Critical (15%)	14,060	13,820	13,391	10,499	6,844	5,860	6,696	9,139	11,546	13,558	15,118	16,271

Proposed Project

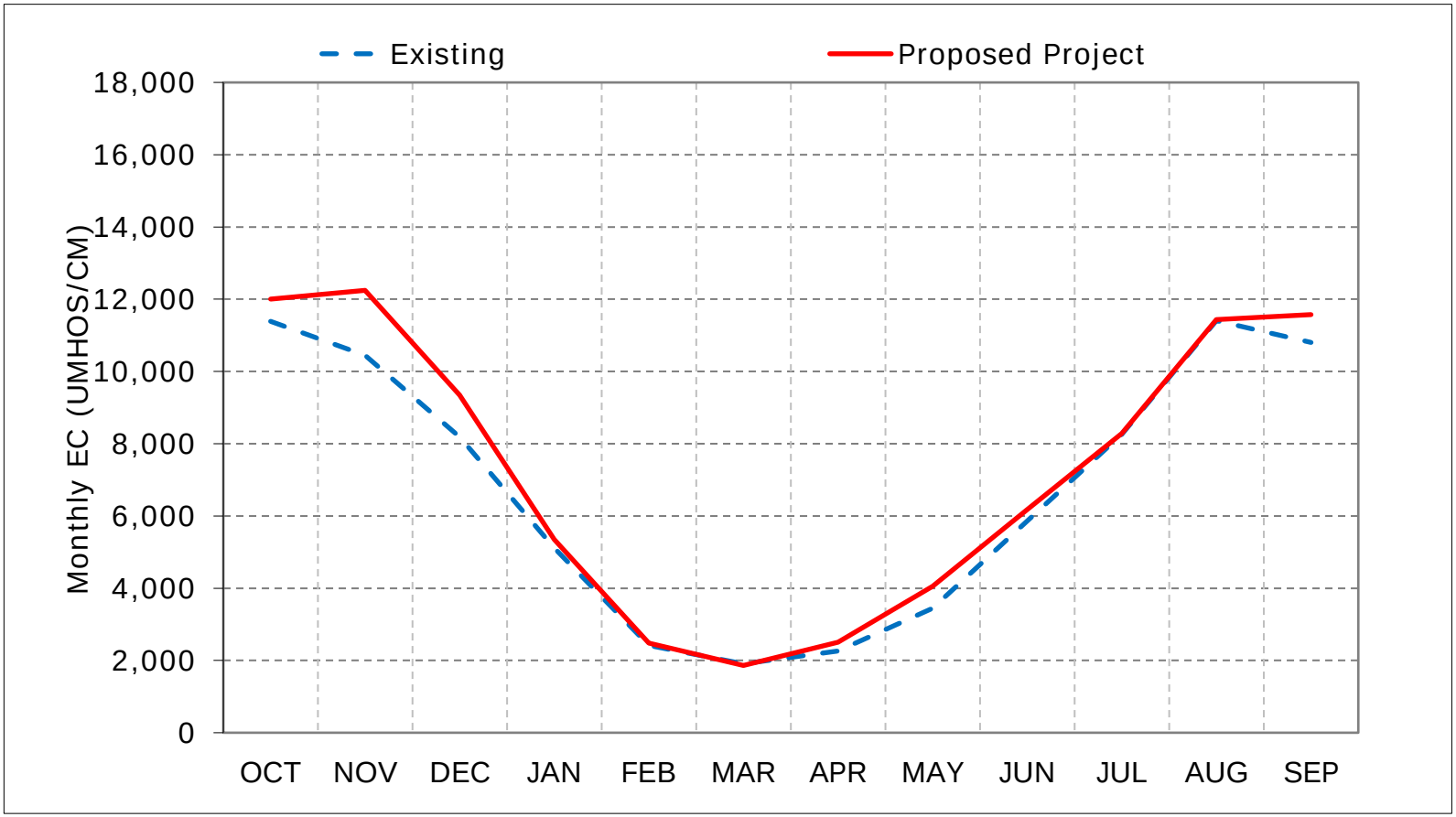
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	16,640	16,023	15,483	12,591	7,000	6,423	7,154	8,388	10,051	12,236	14,822	16,123
20%	16,110	15,757	14,007	11,228	4,178	3,775	4,671	7,478	9,177	11,175	13,611	15,482
30%	15,918	15,377	13,297	9,190	2,893	1,587	2,964	6,411	8,300	10,711	13,337	15,297
40%	15,481	14,734	12,738	6,090	1,592	1,231	2,245	4,483	7,908	8,938	12,004	14,543
50%	14,449	11,770	11,732	4,377	904	688	1,506	3,181	6,299	8,257	11,007	13,456
60%	8,422	11,447	9,765	2,589	358	343	775	2,396	5,674	6,815	10,509	8,117
70%	8,246	11,267	4,902	613	226	225	488	1,442	4,031	6,612	10,053	7,946
80%	7,940	10,794	2,896	249	211	202	245	574	2,136	5,791	9,718	7,686
90%	7,593	6,276	819	200	196	193	193	211	426	3,984	9,291	7,269
Long Term												
Full Simulation Period[a]	12,004	12,244	9,347	5,350	2,483	1,862	2,509	4,055	6,180	8,286	11,435	11,576
Water Year Types[b]												
Wet (32%)	10,137	9,796	3,991	973	282	322	594	1,225	2,634	4,804	8,963	7,183
Above Normal (15%)	12,551	12,361	10,093	3,477	770	348	835	2,021	4,655	6,305	9,954	7,821
Below Normal (17%)	12,515	13,173	11,523	5,965	1,660	1,462	2,104	3,834	6,295	8,485	11,523	14,012
Dry (22%)	12,578	13,312	11,625	8,655	4,302	2,678	3,739	6,076	8,522	10,944	13,466	15,374
Critical (15%)	14,045	14,747	14,250	11,030	7,199	5,957	6,957	9,449	11,739	13,592	15,122	16,309

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-63	8	-4	1,205	-89	-29	345	379	32	7	10	-19
20%	-37	-17	-164	733	-546	-84	822	840	540	107	106	34
30%	2	-93	1,847	609	-24	-112	626	1,130	77	14	50	112
40%	-254	-256	2,752	362	93	-123	371	1,004	767	71	373	192
50%	-154	2,329	3,713	66	-67	-91	205	989	432	-177	123	65
60%	-504	3,197	2,276	-85	-102	-68	117	892	718	-44	-139	-347
70%	2,626	5,838	913	2	-2	-7	113	541	285	53	-73	2,588
80%	2,596	5,679	954	-7	1	2	10	150	115	34	-33	2,701
90%	2,410	1,517	120	0	1	0	-1	9	18	5	-139	2,700
Long Term												
Full Simulation Period[a]	615	1,794	1,161	236	64	-46	249	609	323	29	30	775
Water Year Types[b]												
Wet (32%)	806	2,329	793	-4	-11	-19	127	389	316	25	-112	2,537
Above Normal (15%)	754	2,043	1,733	125	-167	-42	198	728	332	-62	37	-486
Below Normal (17%)	647	1,715	1,375	37	-84	-134	367	940	348	47	266	145
Dry (22%)	640	1,494	1,344	614	250	-116	358	789	395	80	64	49
Critical (15%)	-15	927	859	530	355	97	260	310	193	34	4	38

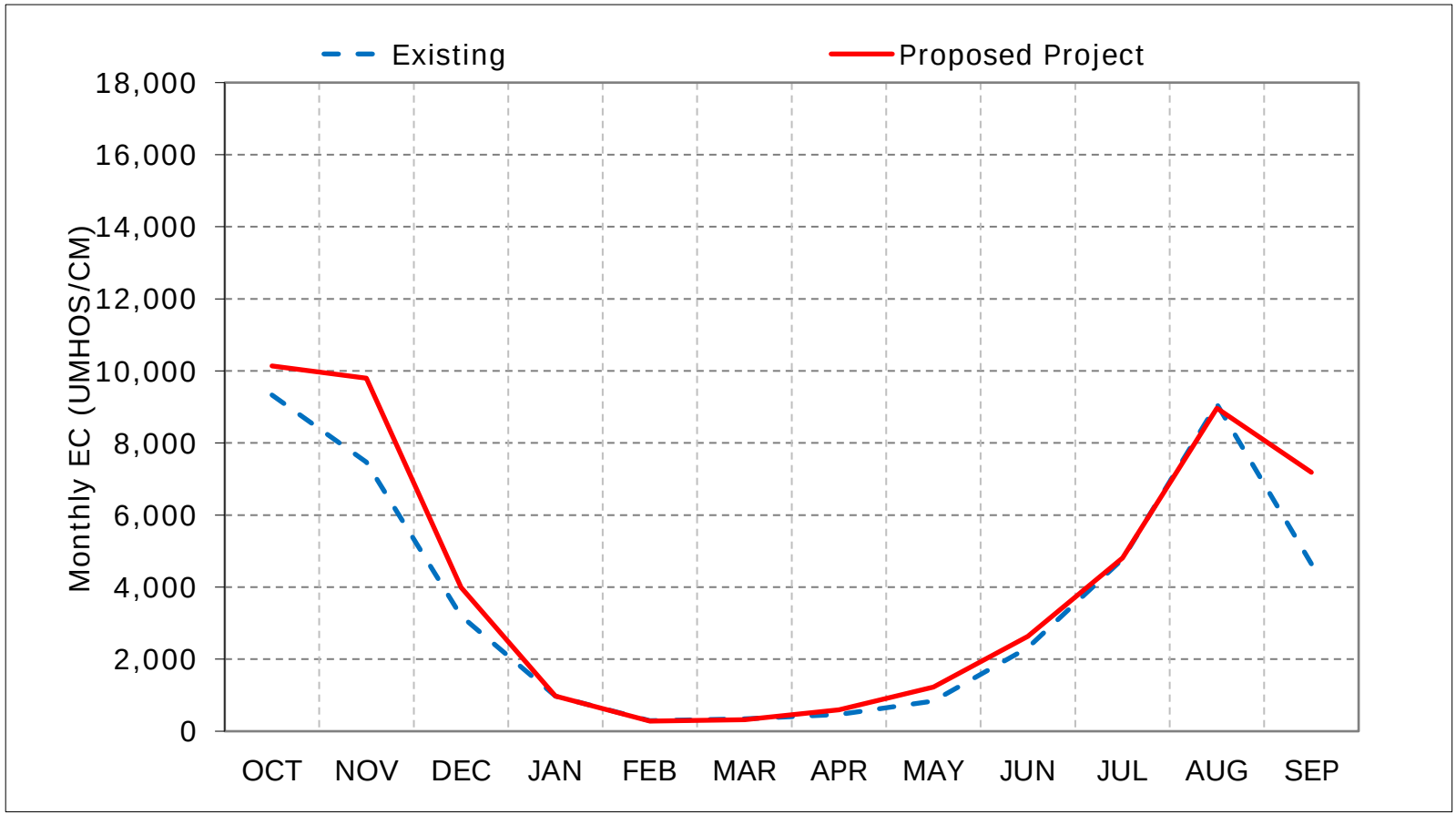
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 24-1. Suisun Bay near Ryer, Long-Term Average EC



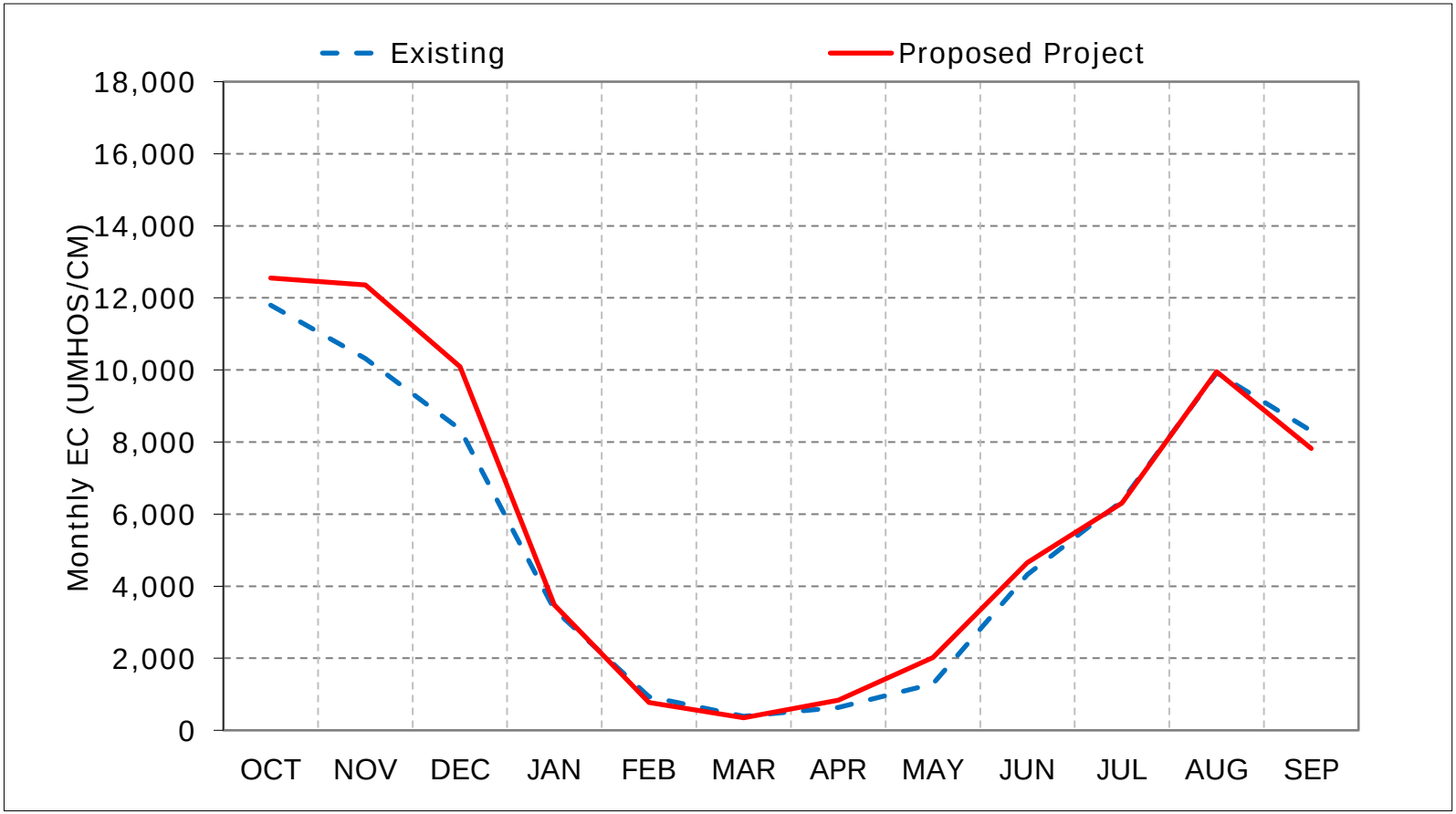
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 24-2. Suisun Bay near Ryer, Wet Year Average EC



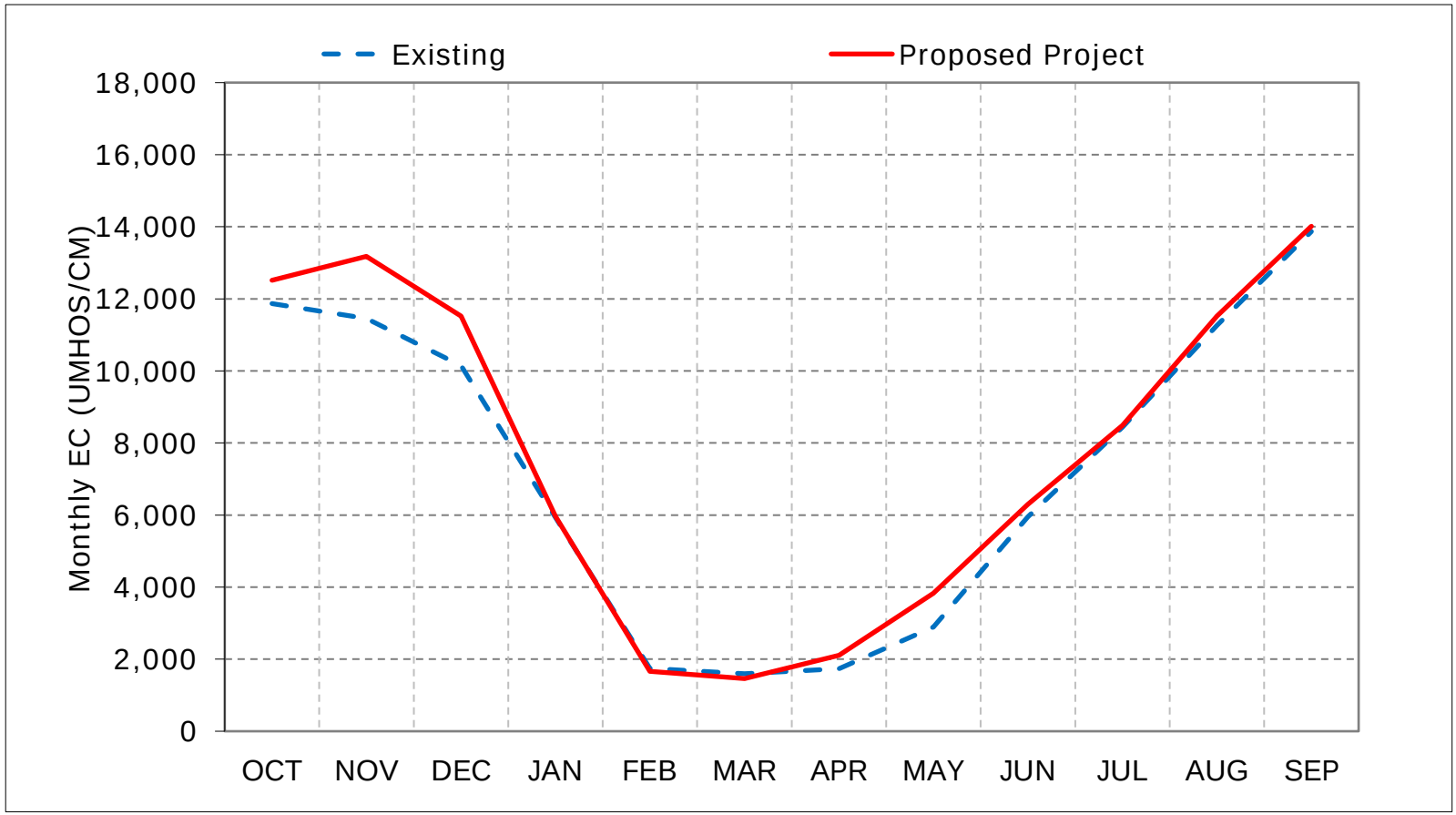
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 24-3. Suisun Bay near Ryer, Above Normal Year Average EC



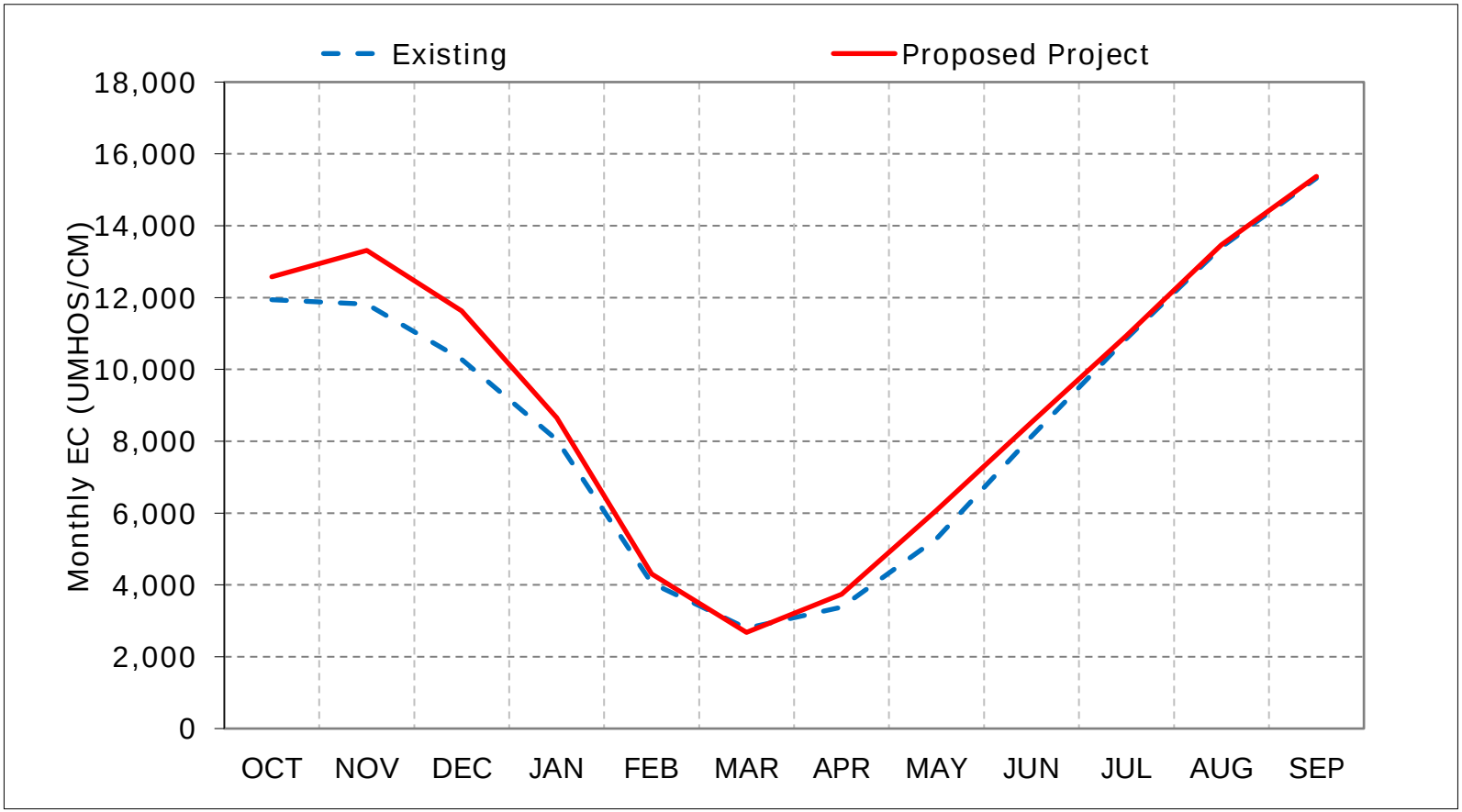
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 24-4. Suisun Bay near Ryer, Below Normal Year Average EC



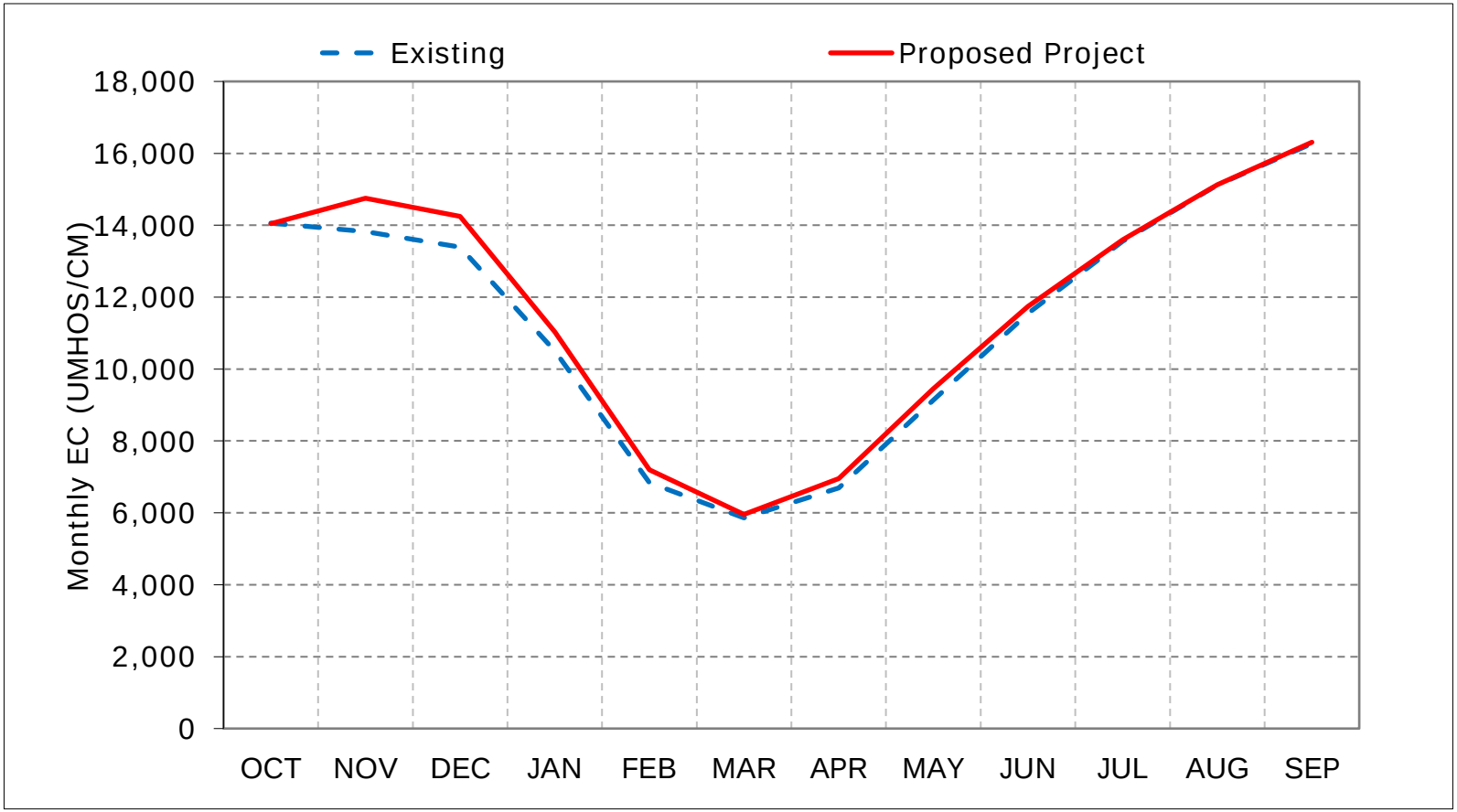
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 24-5. Suisun Bay near Ryer, Dry Year Average EC



*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.

Figure 24-6. Suisun Bay near Ryer, Critical Year Average EC



*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.

Figure 24-7. Suisun Bay near Ryer, January EC

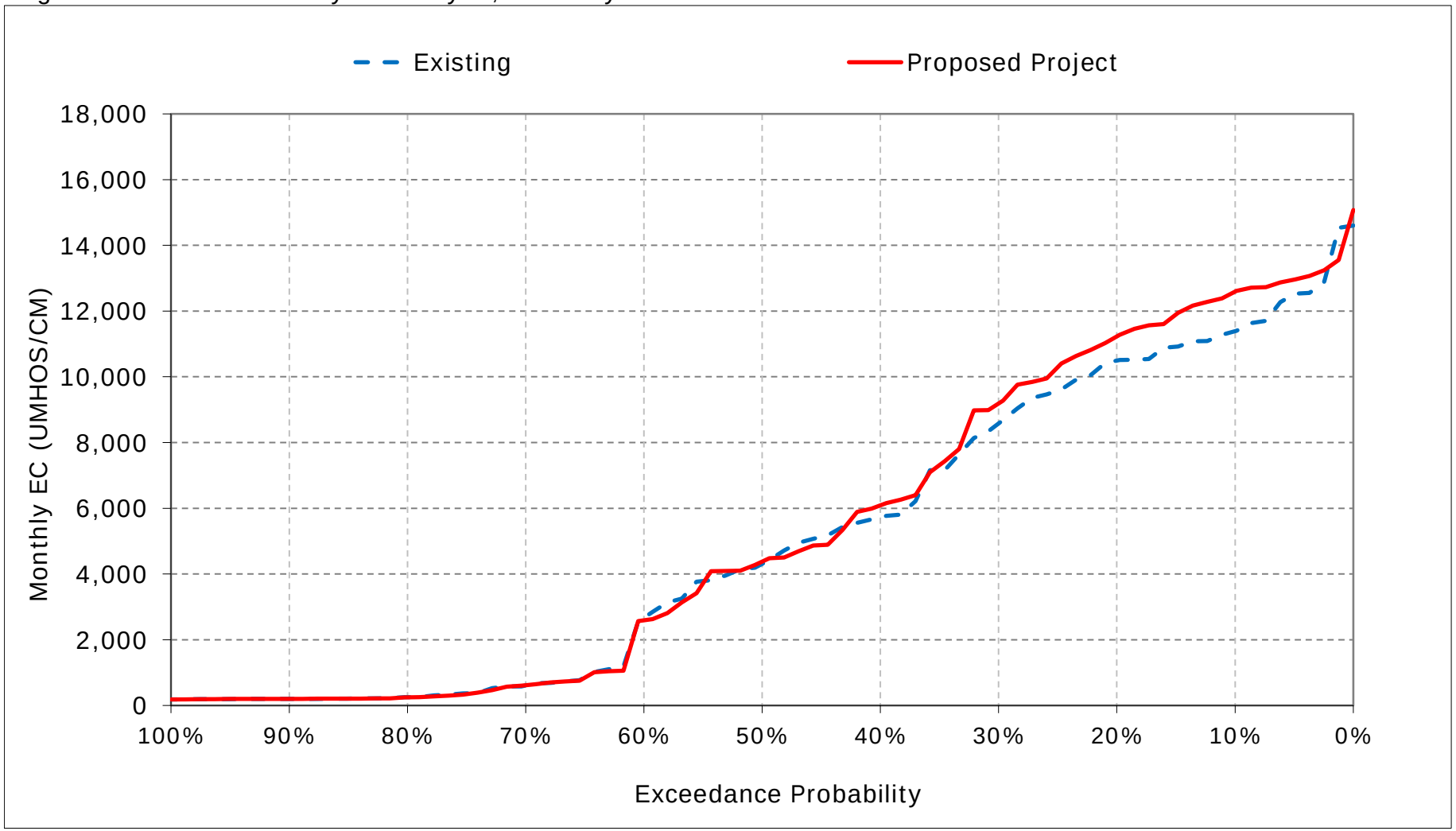


Figure 24-8. Suisun Bay near Ryer, February EC

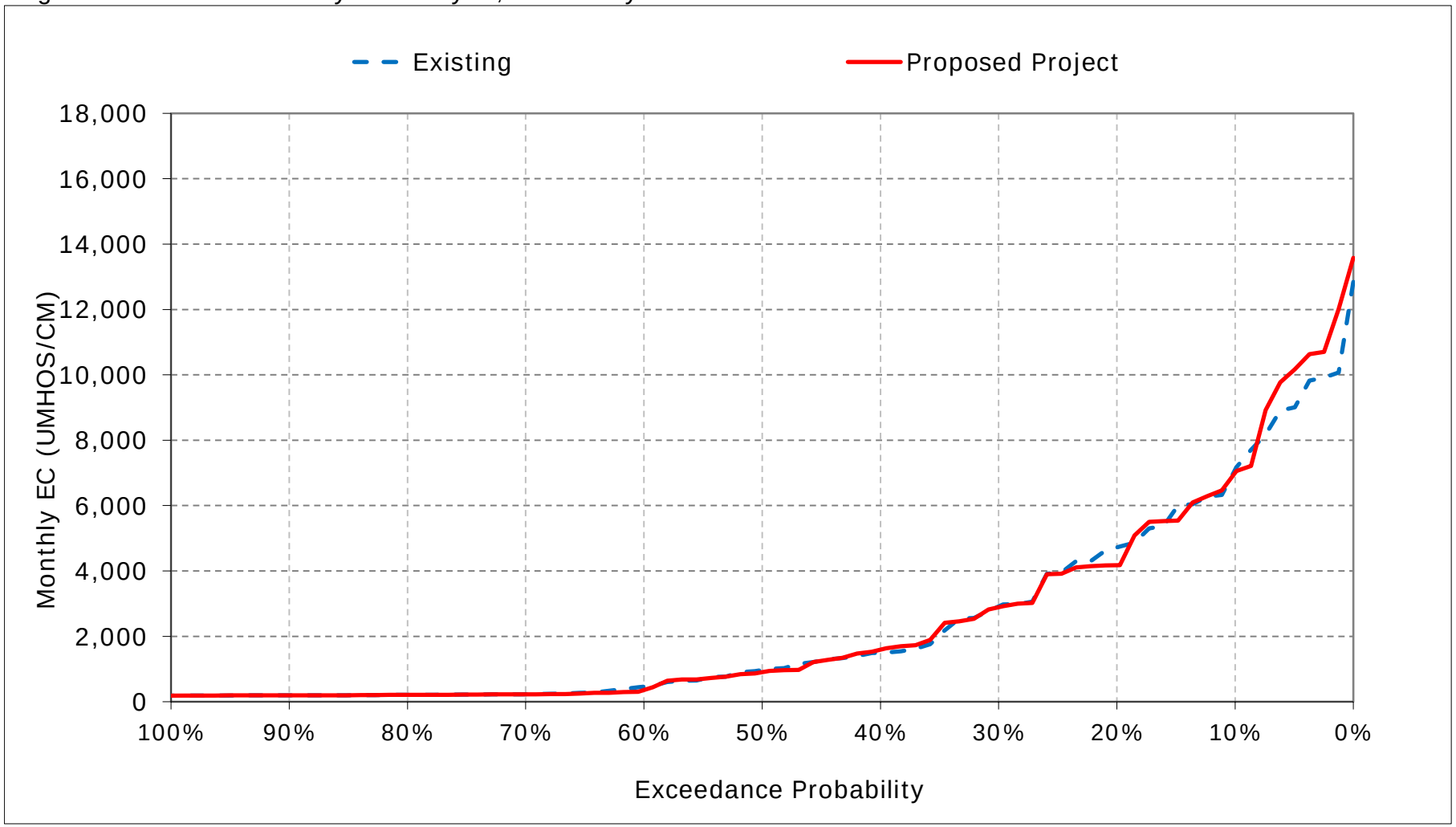


Figure 24-9. Suisun Bay near Ryer, March EC

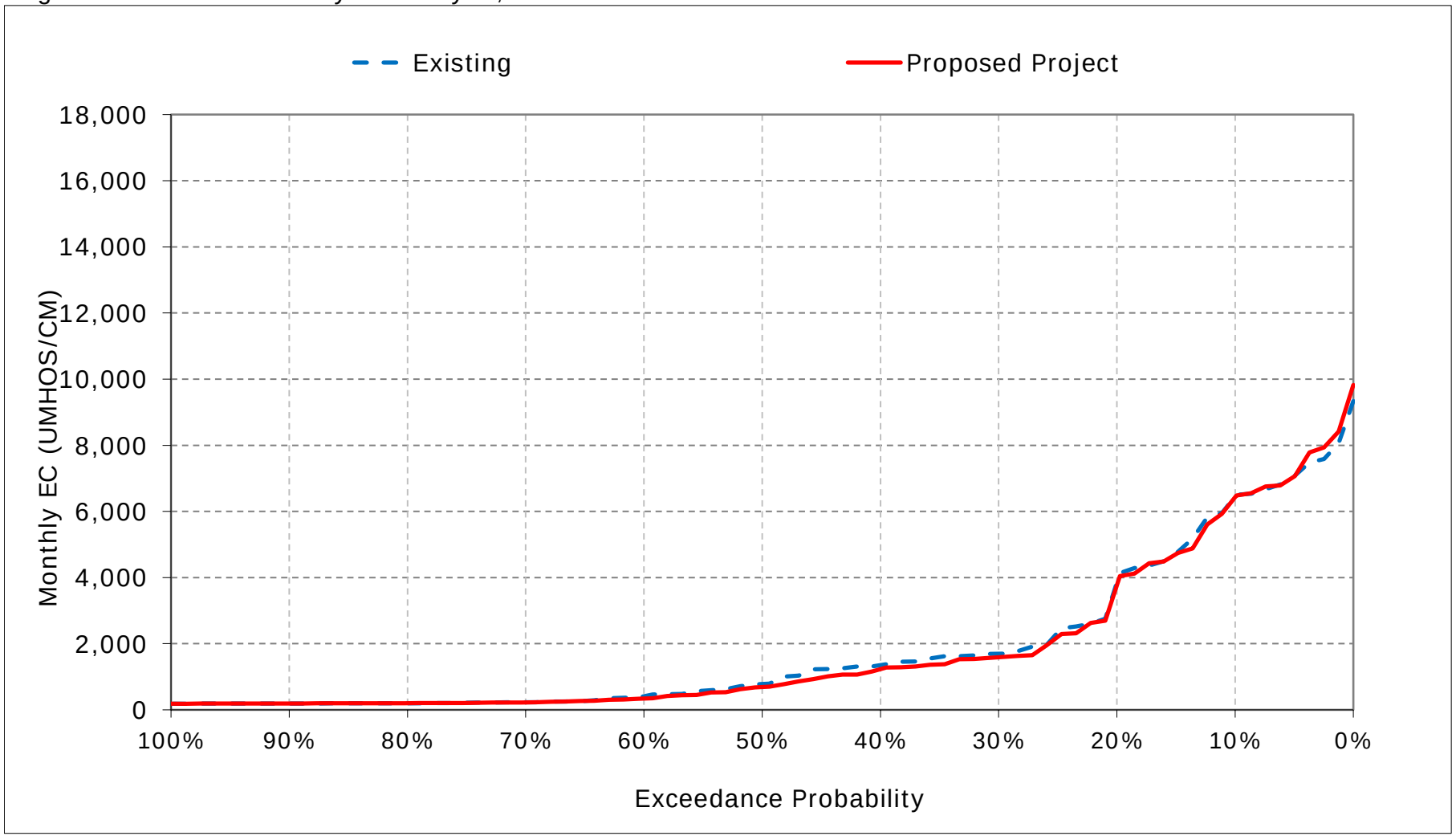


Figure 24-10. Suisun Bay near Ryer, April EC

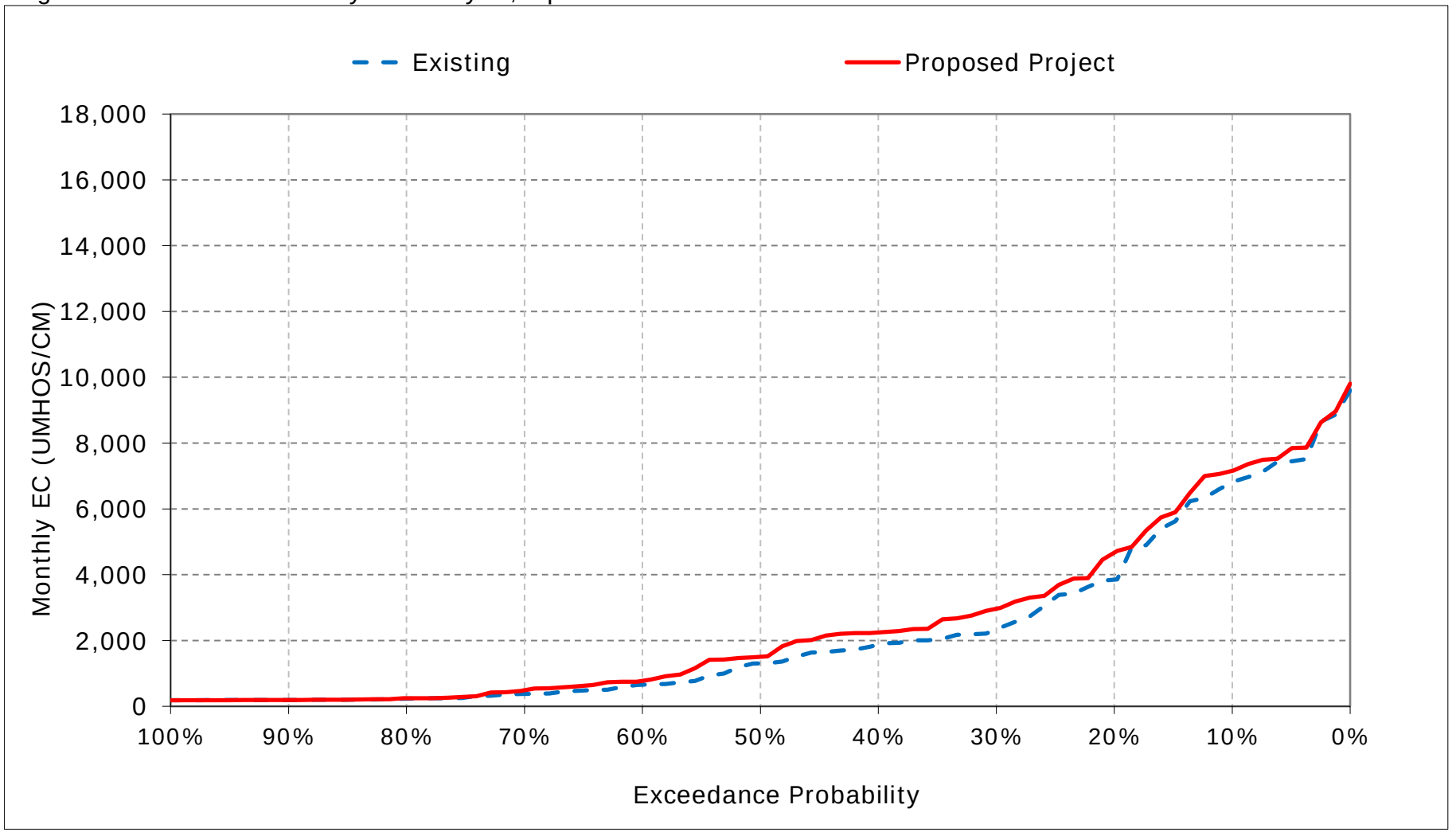


Figure 24-11. Suisun Bay near Ryer, May EC

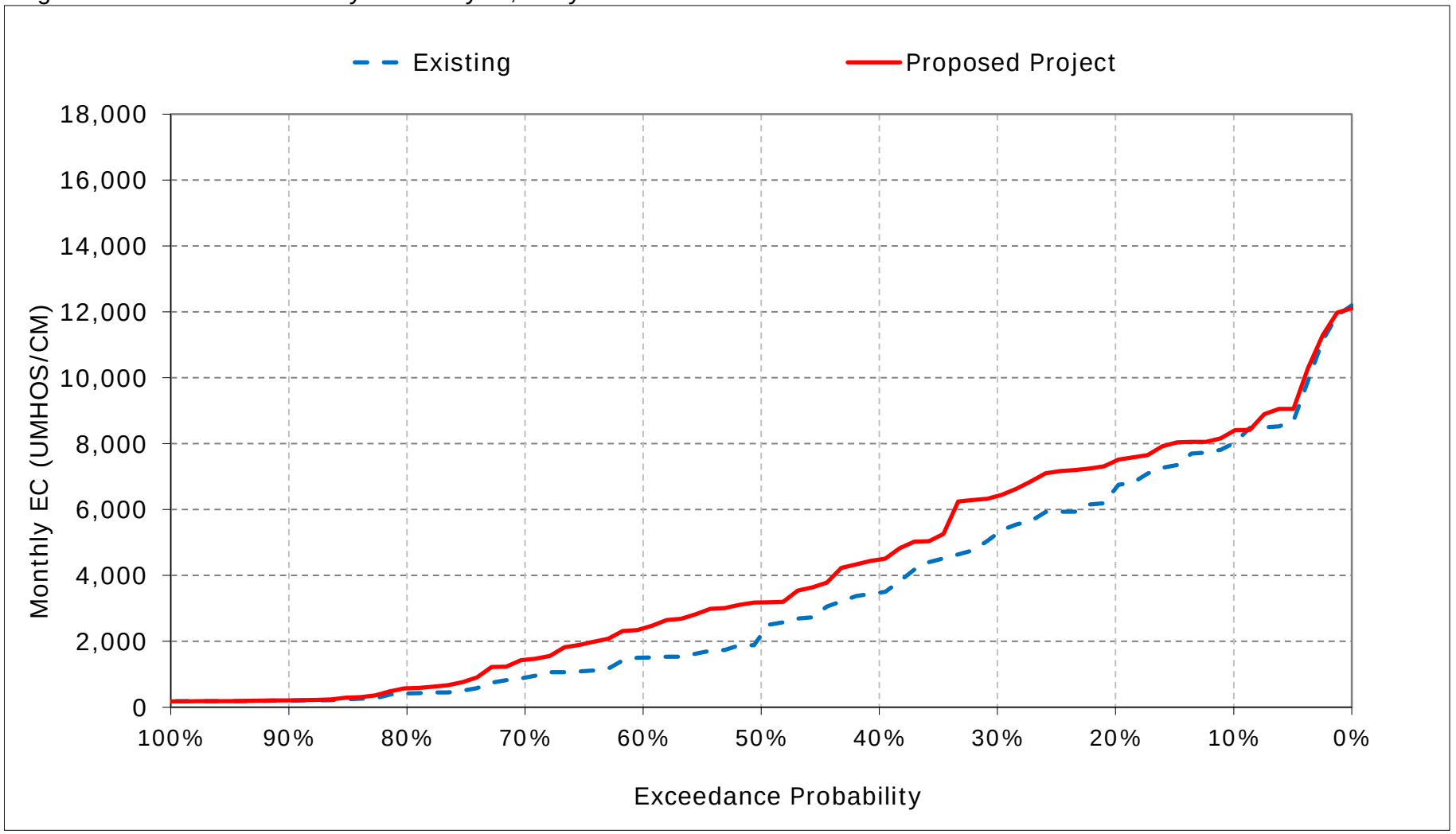


Figure 24-12. Suisun Bay near Ryer, June EC

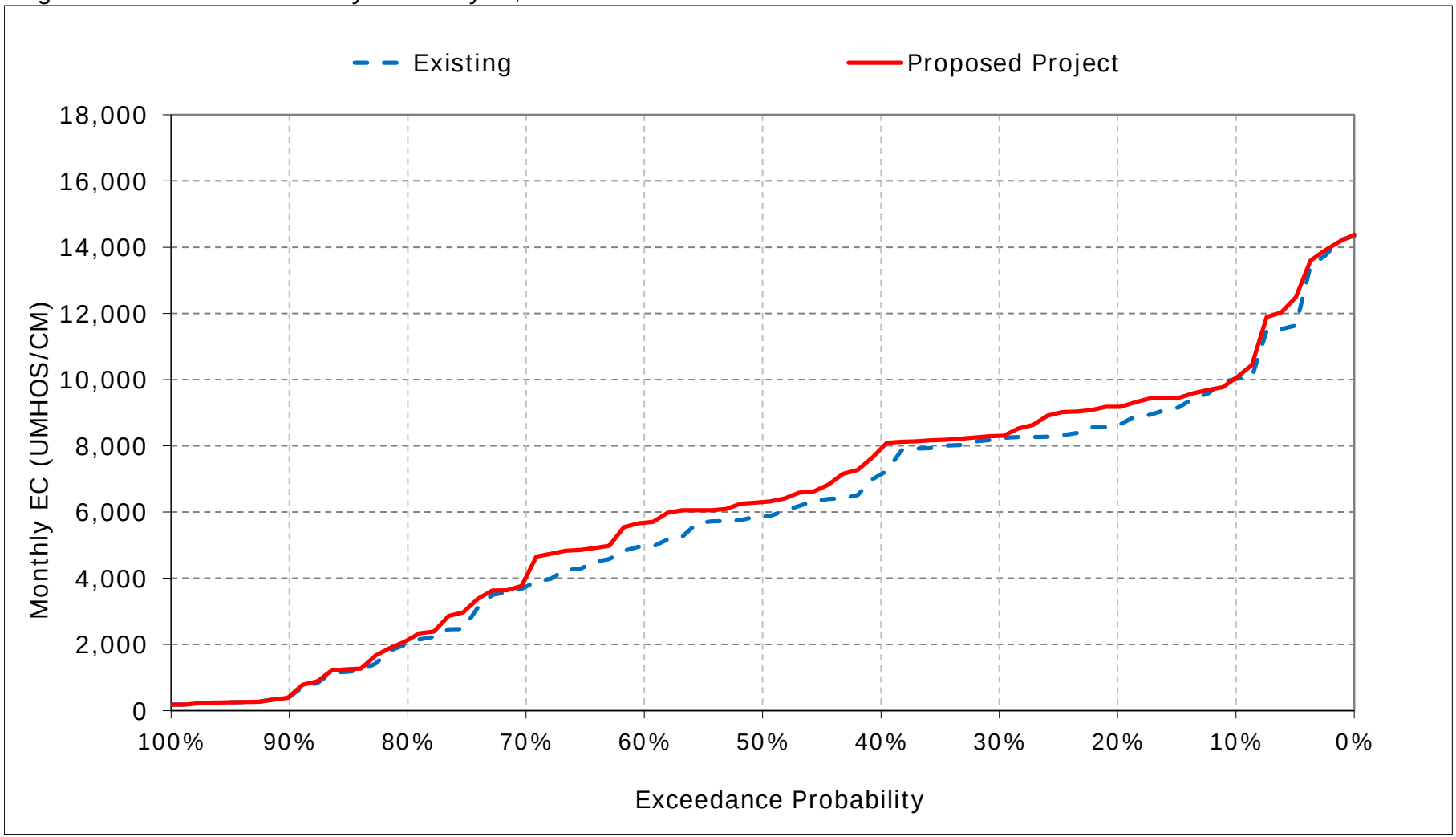


Figure 24-13. Suisun Bay near Ryer, July EC

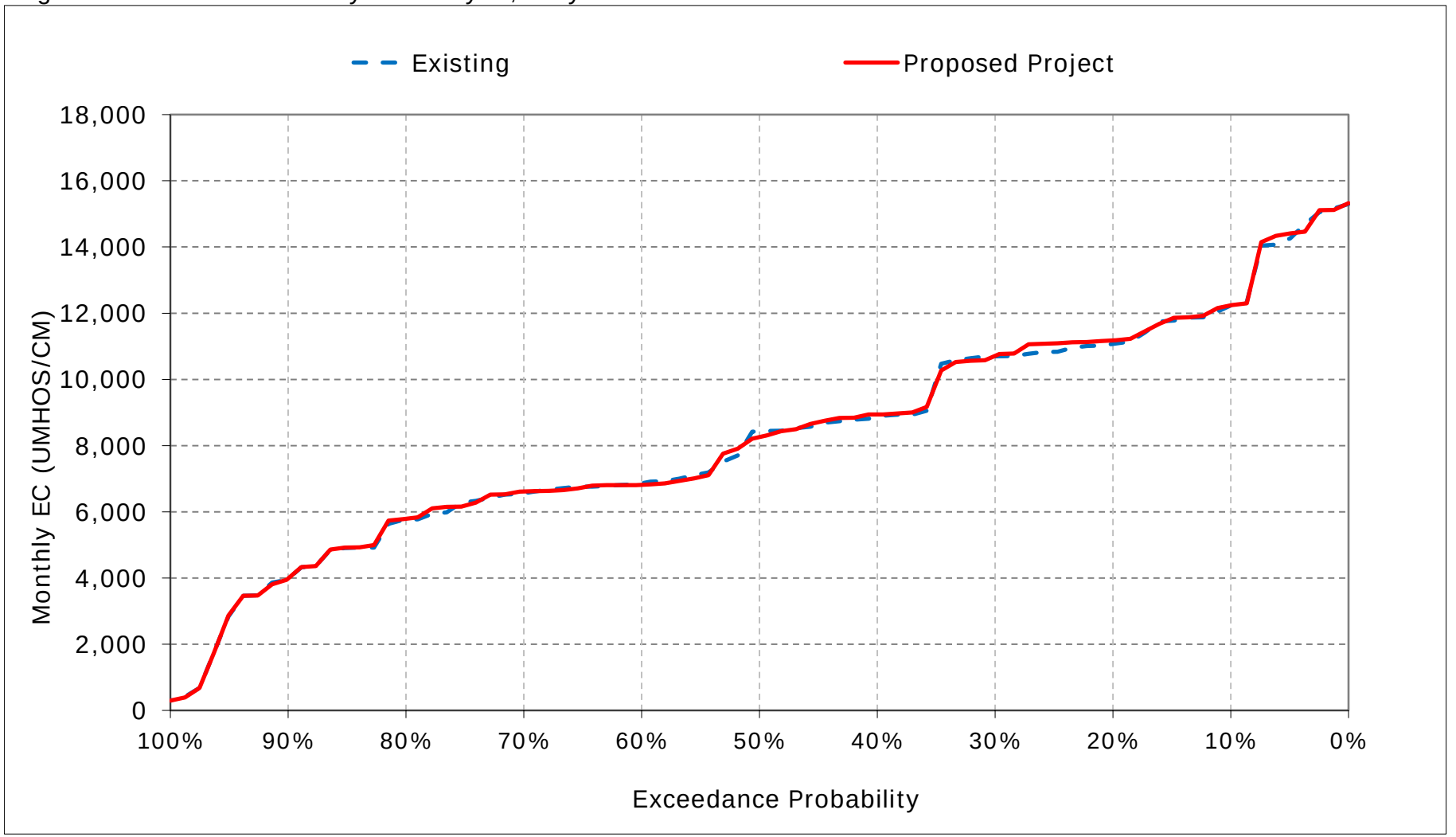


Figure 24-14. Suisun Bay near Ryer, August EC

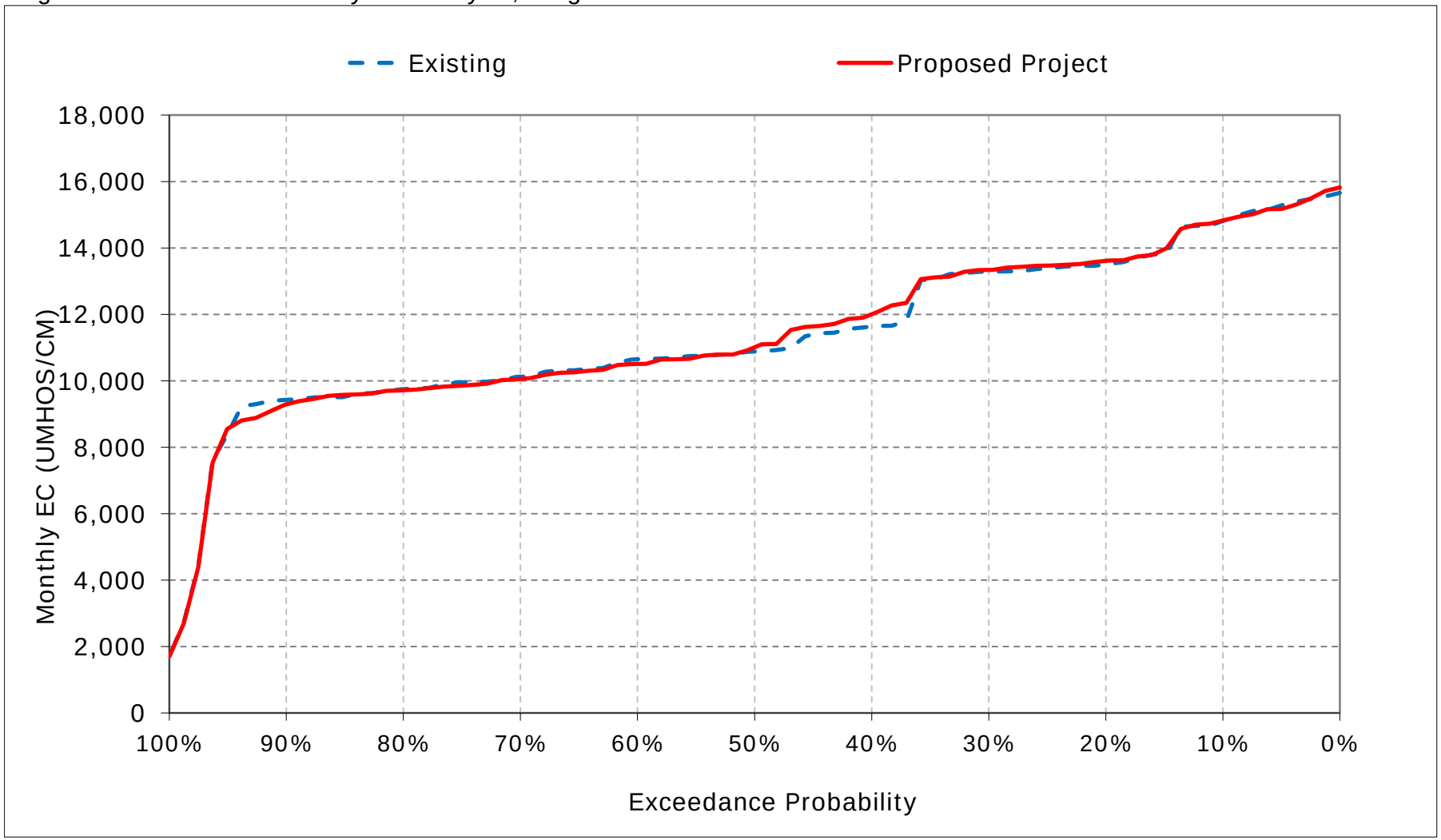


Figure 24-15. Suisun Bay near Ryer, September EC

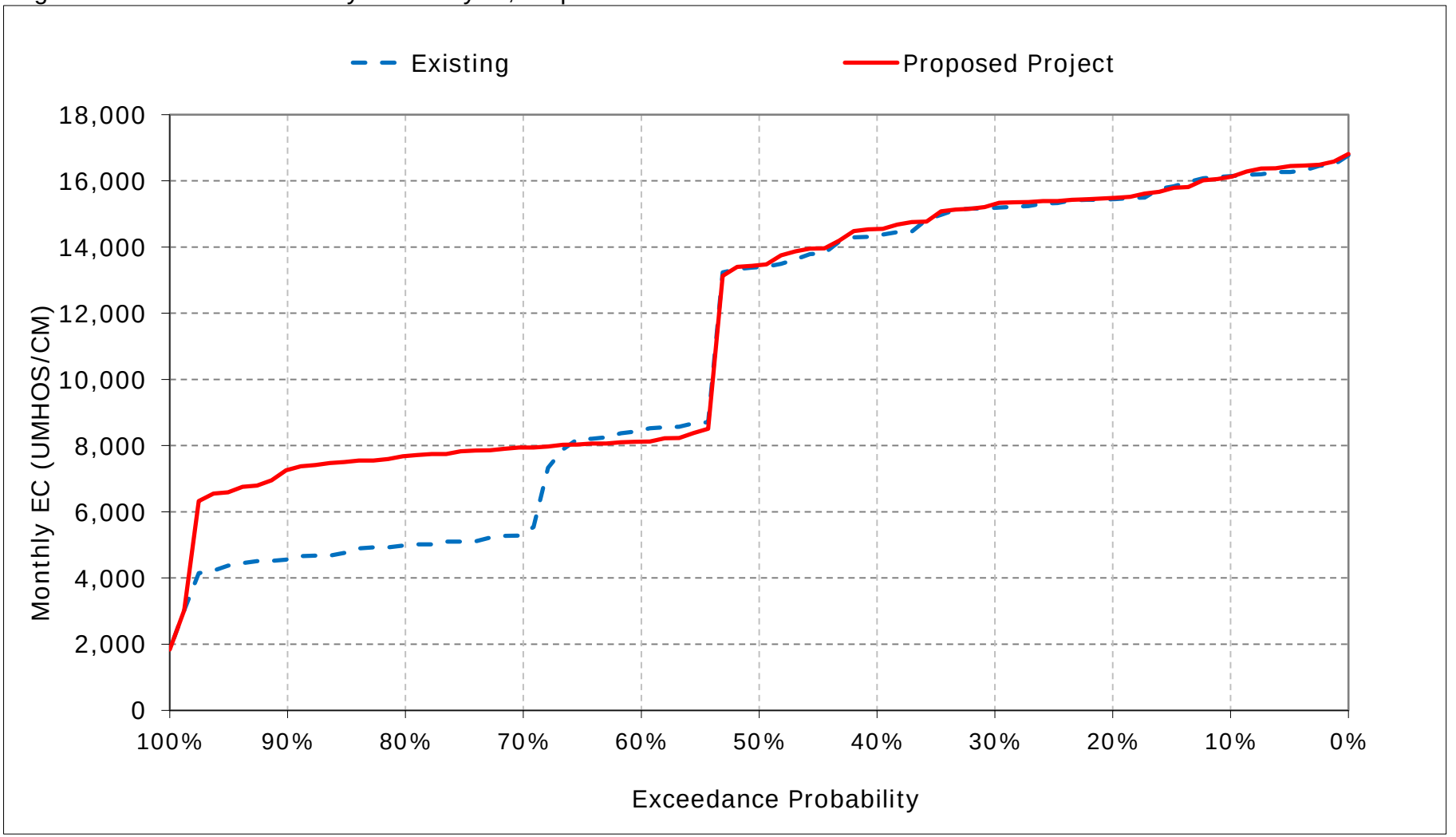


Figure 24-16. Suisun Bay near Ryer, October EC

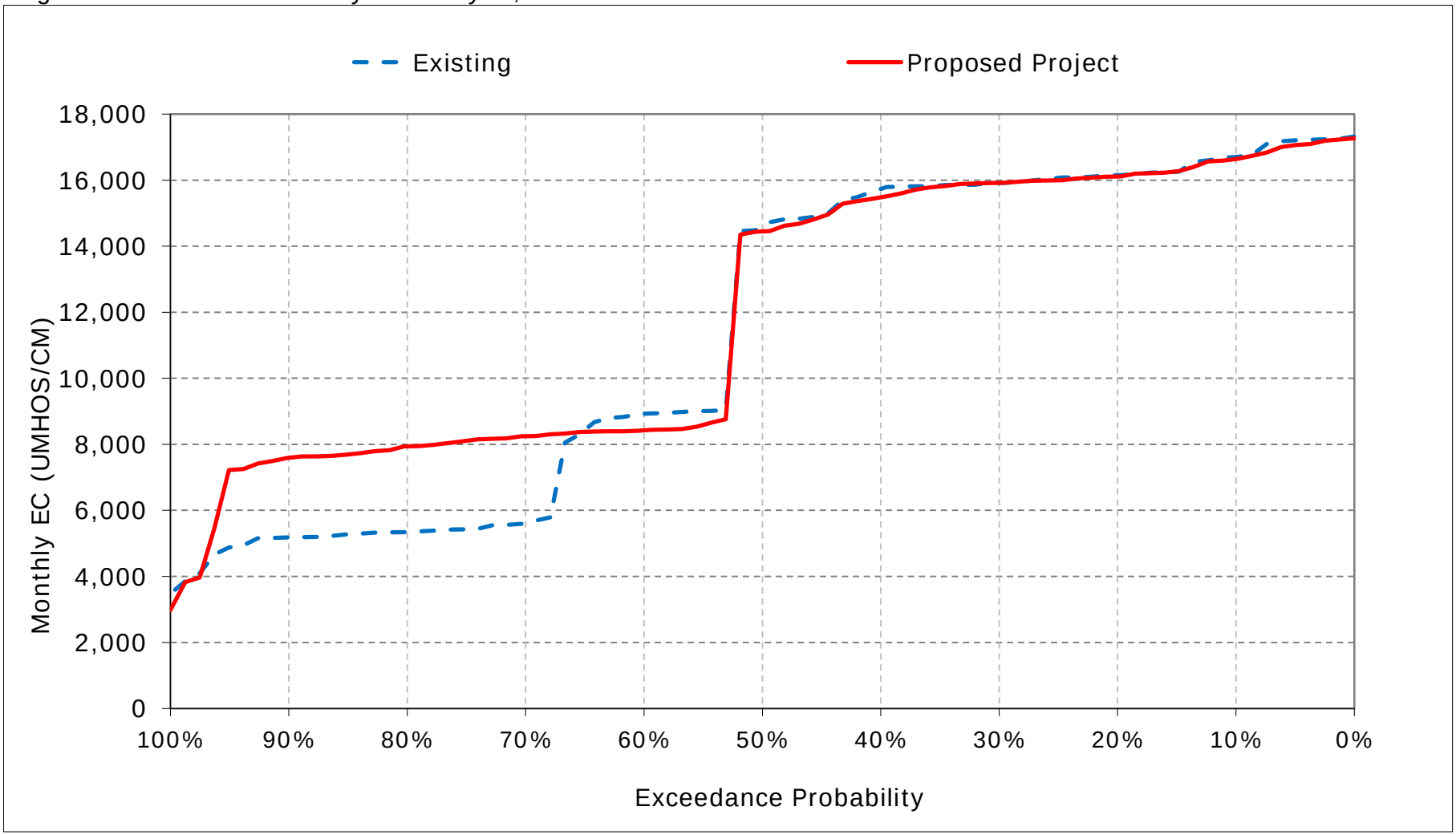


Figure 24-17. Suisun Bay near Ryer, November EC

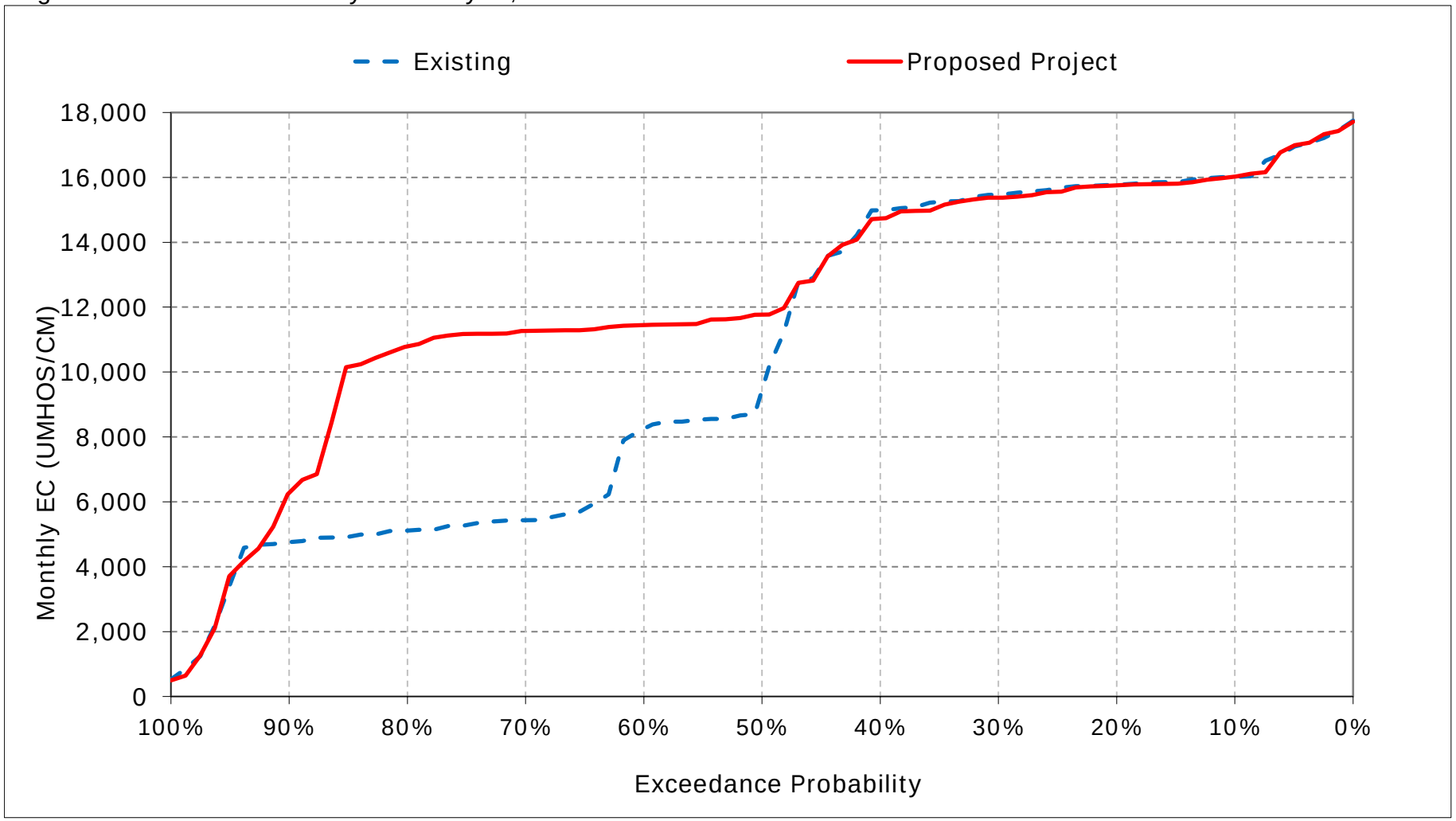


Figure 24-18. Suisun Bay near Ryer, December EC

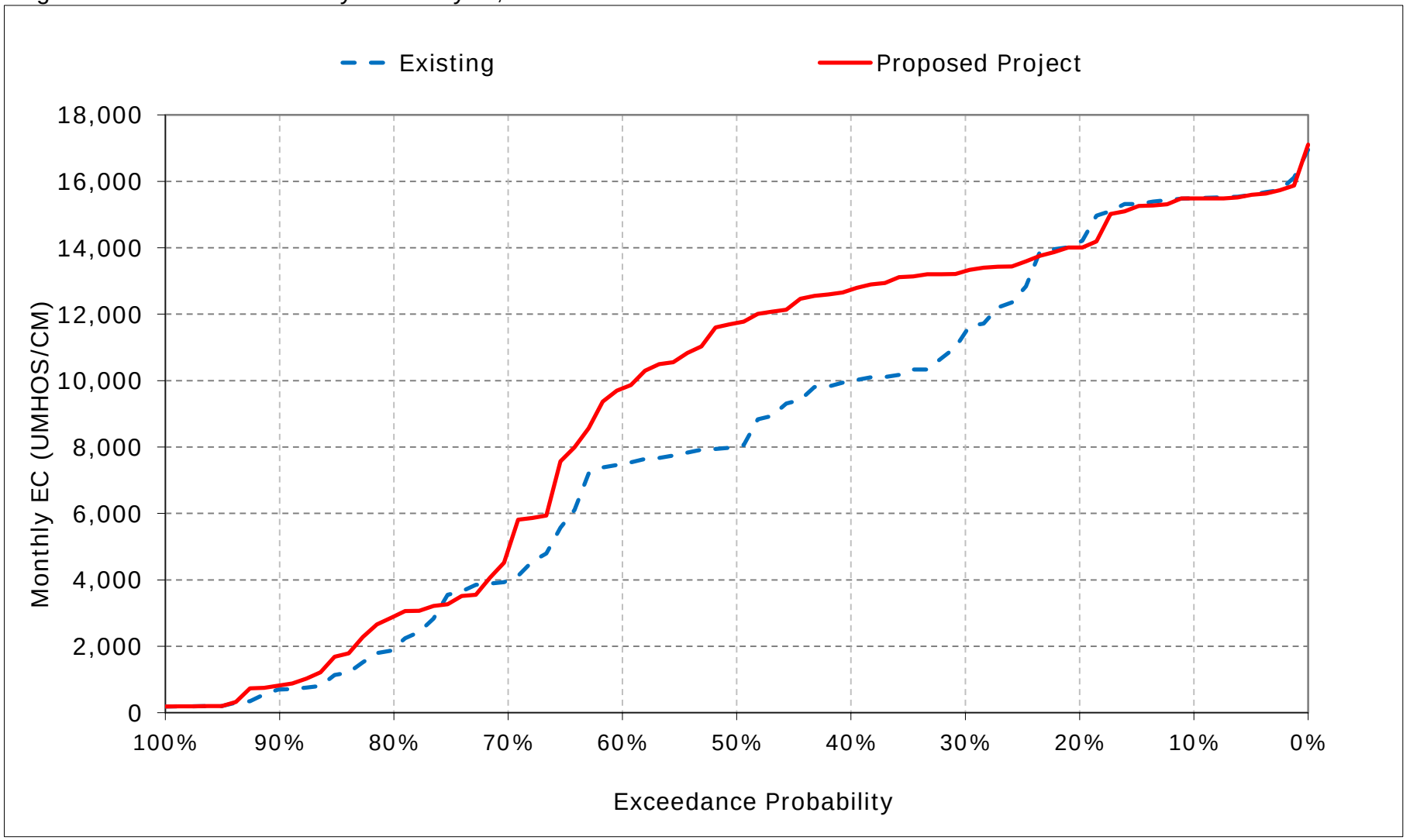


Table 25-1. Goodyear Slough Outfall at Naval Fleet, Monthly EC

Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	15,892	14,512	13,771	11,027	6,751	6,925	8,314	9,177	10,969	13,003	15,505	17,386
20%	15,210	14,126	13,187	9,217	5,084	4,597	5,072	7,317	9,558	11,956	14,356	16,448
30%	15,018	13,803	11,361	8,298	3,298	2,680	3,253	5,694	8,748	11,430	14,002	16,127
40%	14,589	13,202	8,662	6,455	2,889	1,936	2,477	3,954	7,467	9,981	12,348	15,121
50%	13,454	9,486	6,219	5,439	1,454	1,551	1,999	2,768	5,876	8,944	11,483	14,507
60%	8,092	7,681	5,684	3,477	1,052	651	917	1,705	4,846	8,278	10,936	11,184
70%	5,206	5,149	4,838	1,426	591	444	622	1,129	3,773	7,413	10,196	9,021
80%	4,926	5,008	3,536	719	389	349	343	539	1,971	5,929	9,848	8,689
90%	4,779	4,733	1,399	394	273	269	243	238	470	3,501	9,518	8,221
Long Term												
Full Simulation Period[a]	10,631	9,660	7,630	5,272	2,747	2,402	2,853	3,891	6,149	8,927	11,897	12,834
Water Year Types[b]												
Wet (32%)	8,799	7,246	3,710	1,360	541	465	598	999	2,365	5,094	9,112	8,043
Above Normal (15%)	10,954	9,676	7,687	4,170	1,394	717	857	1,601	4,190	7,257	10,188	11,099
Below Normal (17%)	11,001	10,398	9,021	6,431	2,384	2,126	2,465	3,412	6,121	9,317	11,872	14,786
Dry (22%)	11,093	10,708	9,331	7,590	4,475	3,591	4,329	5,975	8,734	11,602	14,206	16,297
Critical (15%)	13,156	12,445	11,890	10,023	6,709	6,824	7,974	9,880	12,462	14,438	16,208	17,477

Proposed Project

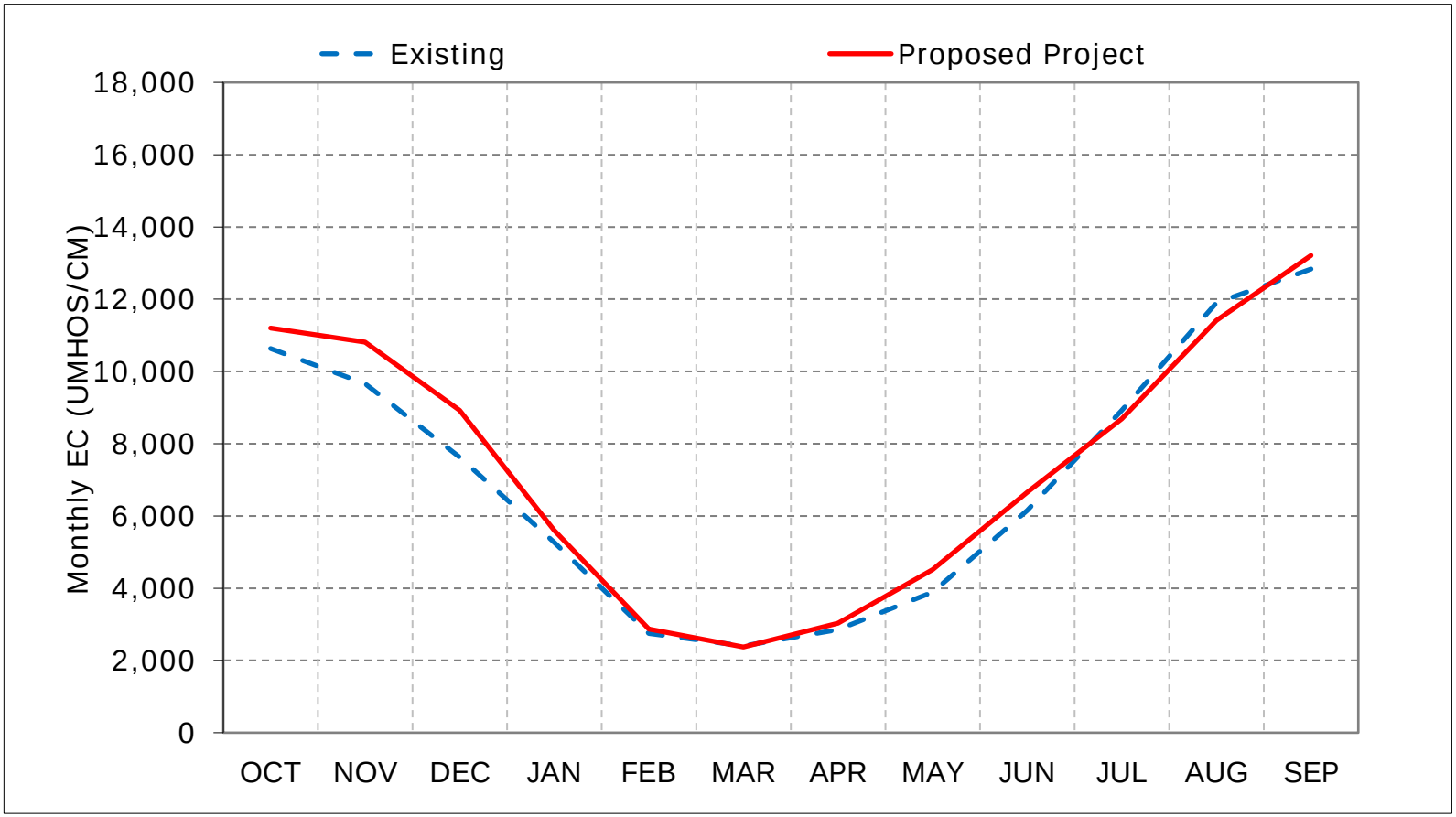
Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	15,872	14,389	13,763	11,145	6,962	6,751	8,822	9,348	11,112	13,007	15,501	17,339
20%	15,220	14,048	13,044	10,570	5,202	4,518	5,115	8,343	10,225	12,168	14,495	16,450
30%	15,038	13,724	11,491	9,027	3,520	2,672	3,389	6,933	9,403	11,478	14,085	16,253
40%	14,378	12,959	11,215	6,883	2,808	1,677	2,680	5,173	8,166	8,620	11,003	14,116
50%	13,073	10,051	10,768	5,540	1,553	1,228	2,323	3,625	6,597	8,184	10,248	13,418
60%	7,735	9,368	9,556	3,388	937	628	1,157	2,629	5,875	7,818	9,949	11,075
70%	7,570	9,097	6,021	1,499	626	436	703	1,587	4,201	7,145	9,706	10,821
80%	7,281	8,865	4,614	779	393	359	370	747	2,225	5,957	9,301	10,643
90%	6,955	6,708	2,527	515	326	271	274	269	516	3,508	8,597	10,143
Long Term												
Full Simulation Period[a]	11,199	10,813	8,921	5,602	2,871	2,372	3,029	4,511	6,657	8,692	11,407	13,210
Water Year Types[b]												
Wet (32%)	9,541	8,764	4,879	1,471	551	457	703	1,406	2,808	5,199	9,046	9,857
Above Normal (15%)	11,652	10,977	9,395	4,518	1,348	638	1,017	2,345	4,825	7,242	10,232	10,797
Below Normal (17%)	11,588	11,503	10,438	6,693	2,351	1,991	2,704	4,366	6,803	7,492	8,968	13,771
Dry (22%)	11,656	11,722	10,678	8,211	4,805	3,541	4,532	6,759	9,300	11,751	14,288	16,358
Critical (15%)	13,199	12,918	12,800	10,449	7,129	6,948	8,204	10,203	12,691	14,521	16,223	17,513

Proposed Project minus Existing

Statistic	Monthly EC (UMHOS/CM)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-20	-123	-8	118	211	-174	509	171	143	3	-3	-47
20%	10	-78	-142	1,354	118	-79	43	1,026	667	212	139	2
30%	20	-79	130	729	222	-8	136	1,239	655	47	84	126
40%	-212	-243	2,553	428	-81	-259	203	1,219	699	-1,361	-1,346	-1,005
50%	-381	566	4,550	101	99	-323	325	856	721	-760	-1,234	-1,089
60%	-357	1,687	3,872	-89	-115	-22	241	924	1,029	-459	-987	-109
70%	2,365	3,948	1,183	73	35	-8	80	458	428	-268	-490	1,801
80%	2,355	3,857	1,078	60	4	10	27	208	253	28	-547	1,955
90%	2,176	1,976	1,128	121	52	3	31	31	46	8	-921	1,922
Long Term												
Full Simulation Period[a]	568	1,152	1,292	329	125	-30	176	620	508	-235	-490	376
Water Year Types[b]												
Wet (32%)	742	1,518	1,169	111	10	-8	105	407	444	106	-65	1,814
Above Normal (15%)	698	1,301	1,708	348	-47	-79	160	744	635	-15	44	-302
Below Normal (17%)	587	1,105	1,417	261	-33	-136	239	954	682	-1,825	-2,904	-1,015
Dry (22%)	564	1,015	1,347	621	330	-50	202	784	566	150	82	61
Critical (15%)	43	474	910	427	420	124	231	323	229	83	15	36

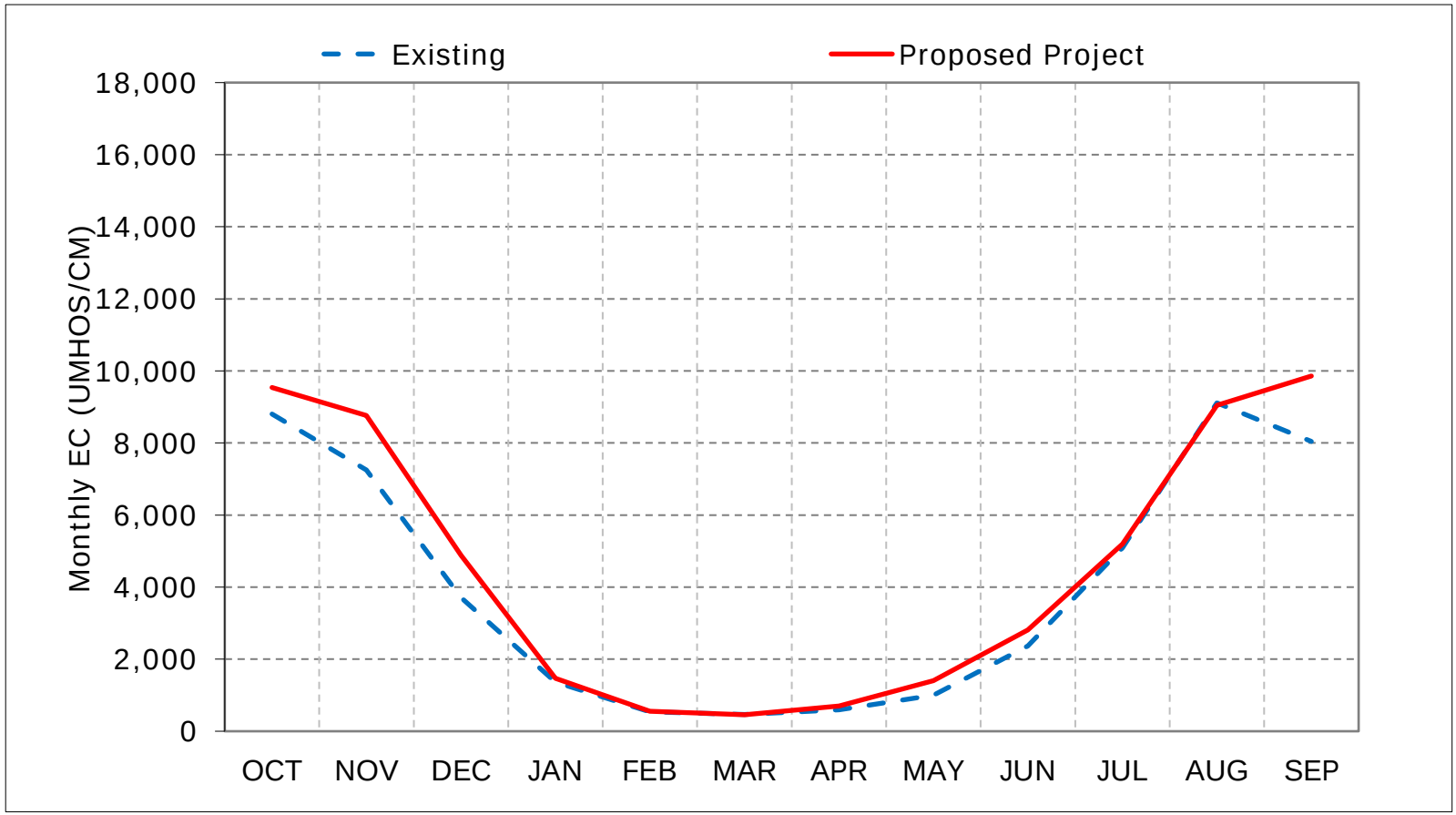
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 25-1. Goodyear Slough Outfall at Naval Fleet, Long-Term Average EC



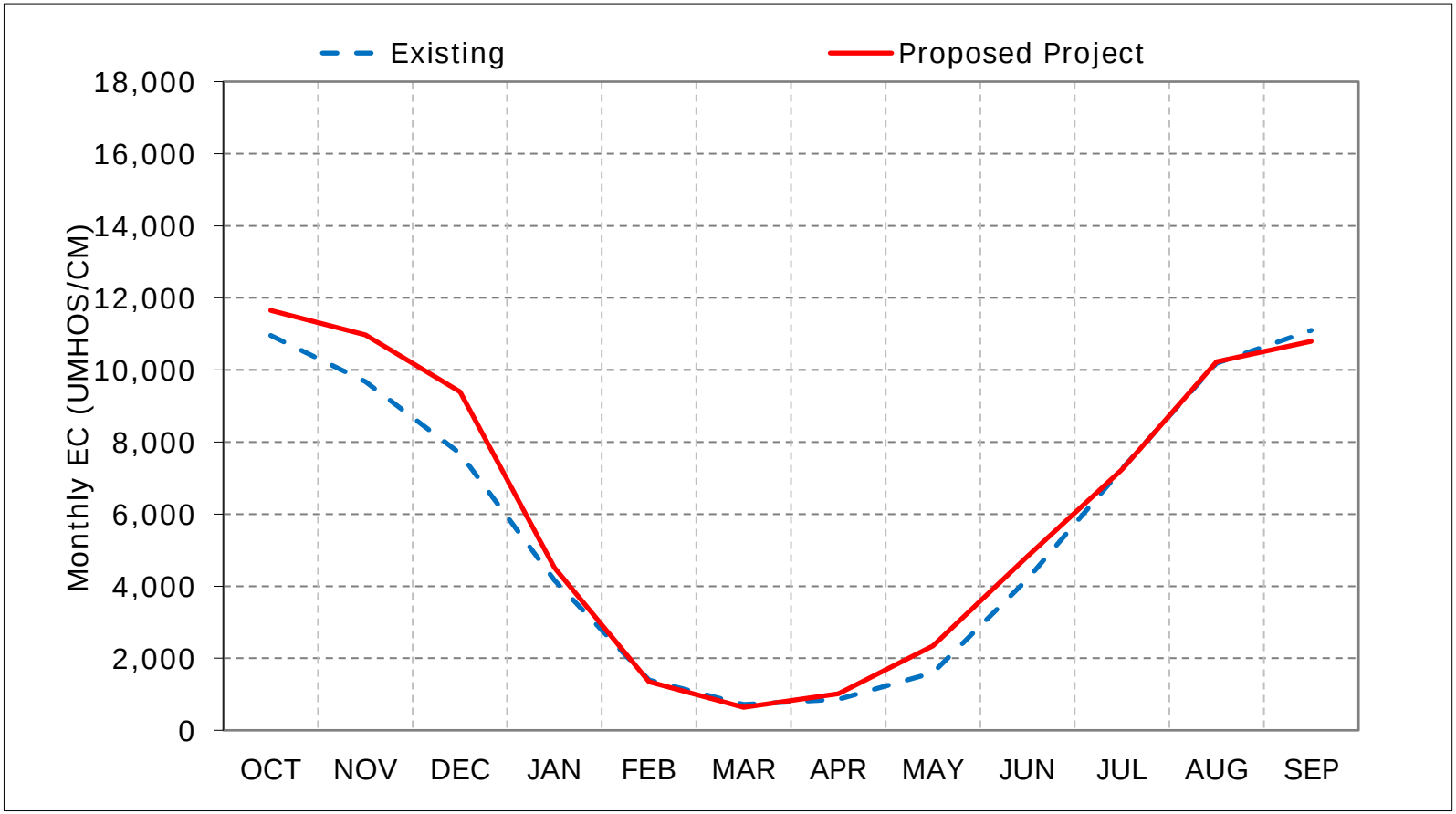
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 25-2. Goodyear Slough Outfall at Naval Fleet, Wet Year Average EC



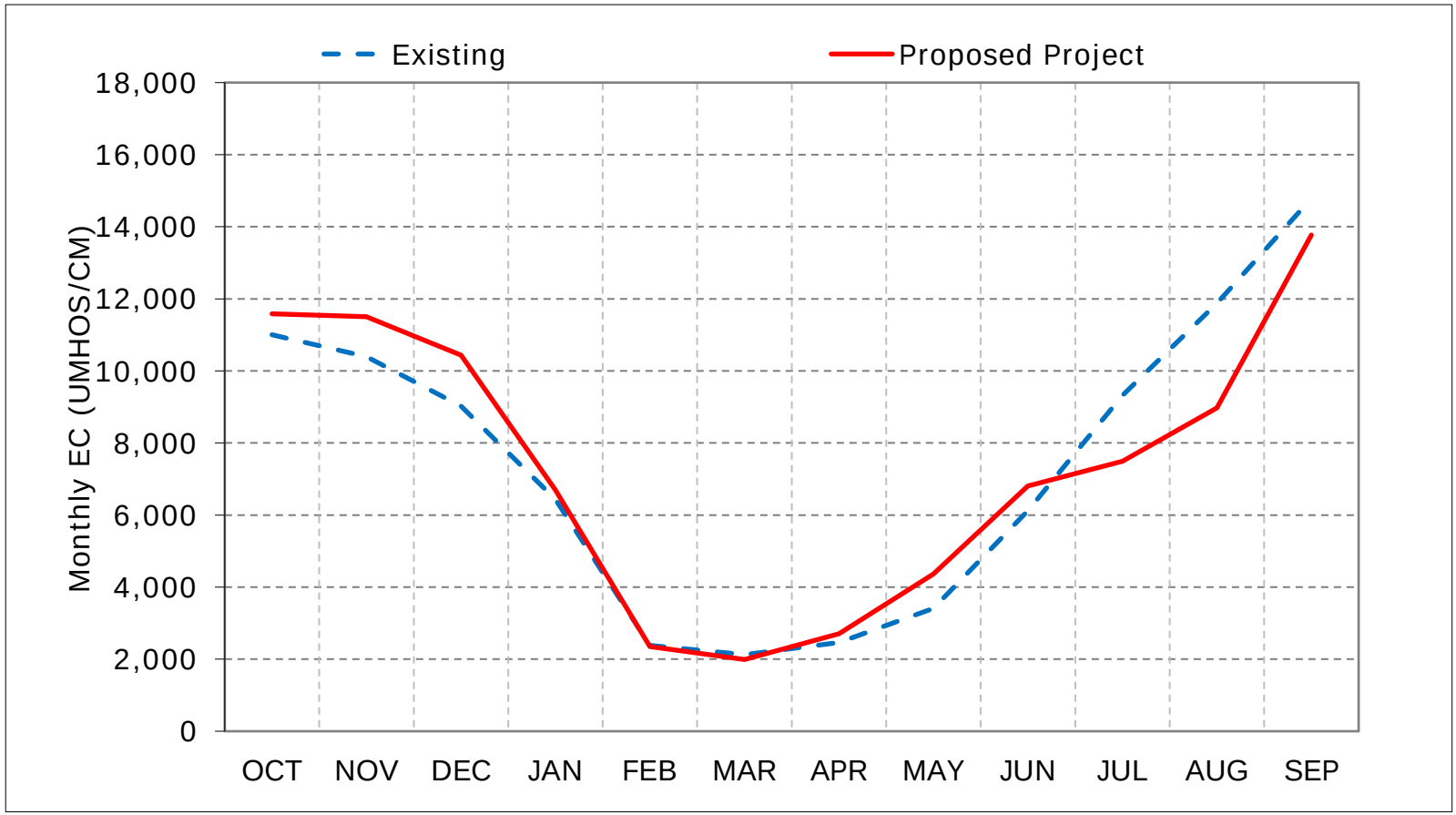
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 25-3. Goodyear Slough Outfall at Naval Fleet, Above Normal Year Average I



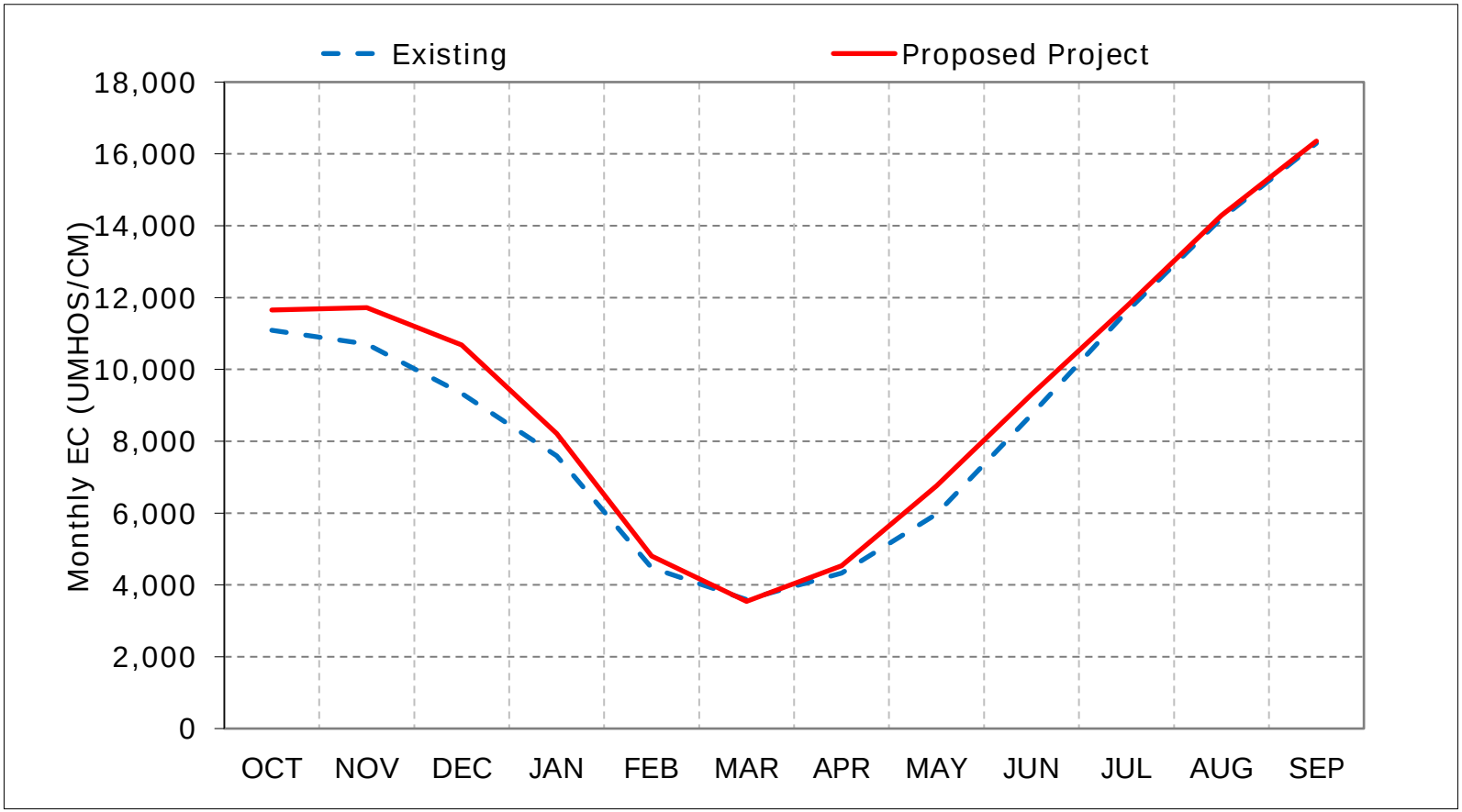
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 25-4. Goodyear Slough Outfall at Naval Fleet, Below Normal Year Average E



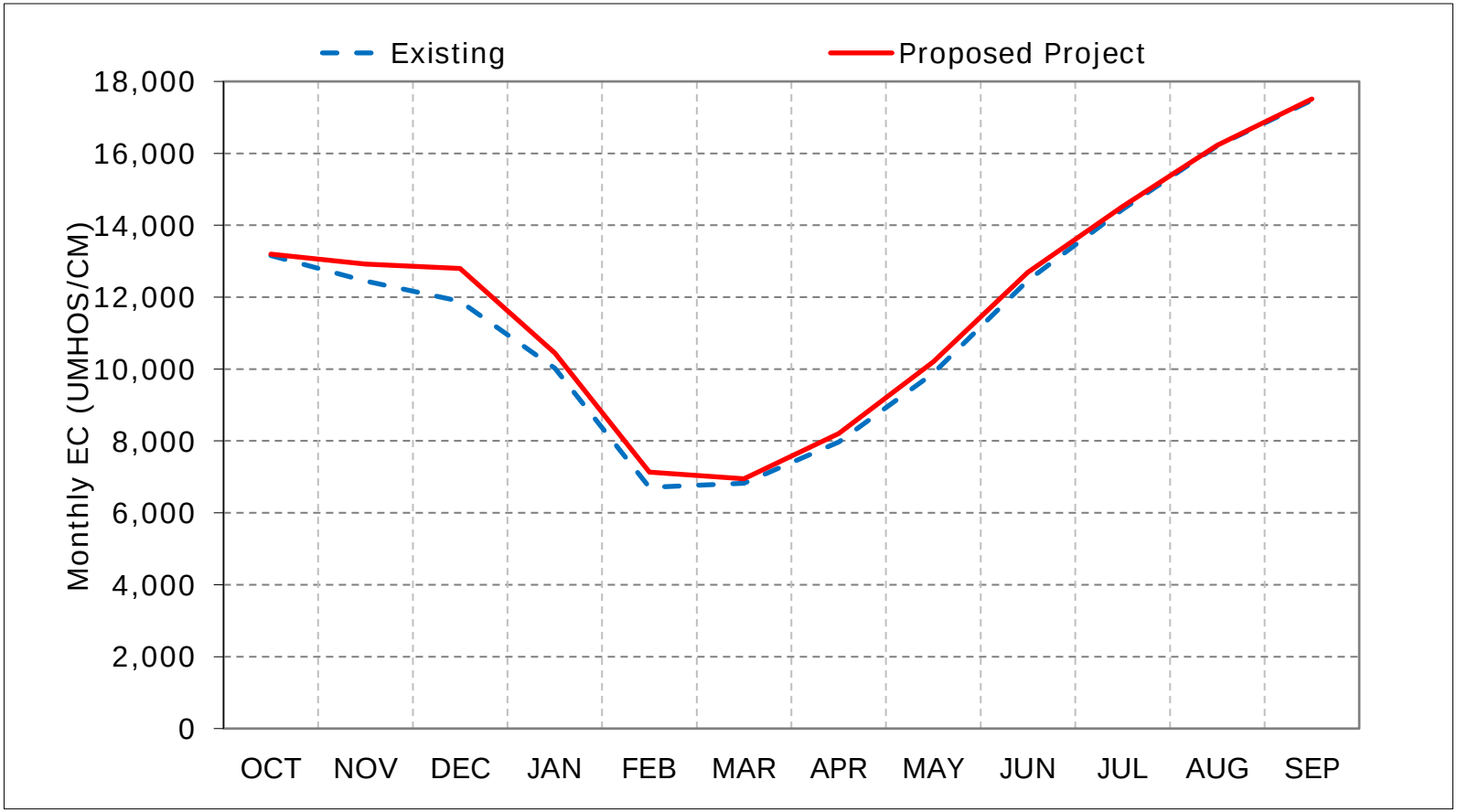
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 25-5. Goodyear Slough Outfall at Naval Fleet, Dry Year Average EC



*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.

Figure 25-6. Goodyear Slough Outfall at Naval Fleet, Critical Year Average EC



*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.

Figure 25-7. Goodyear Slough Outfall at Naval Fleet, January EC

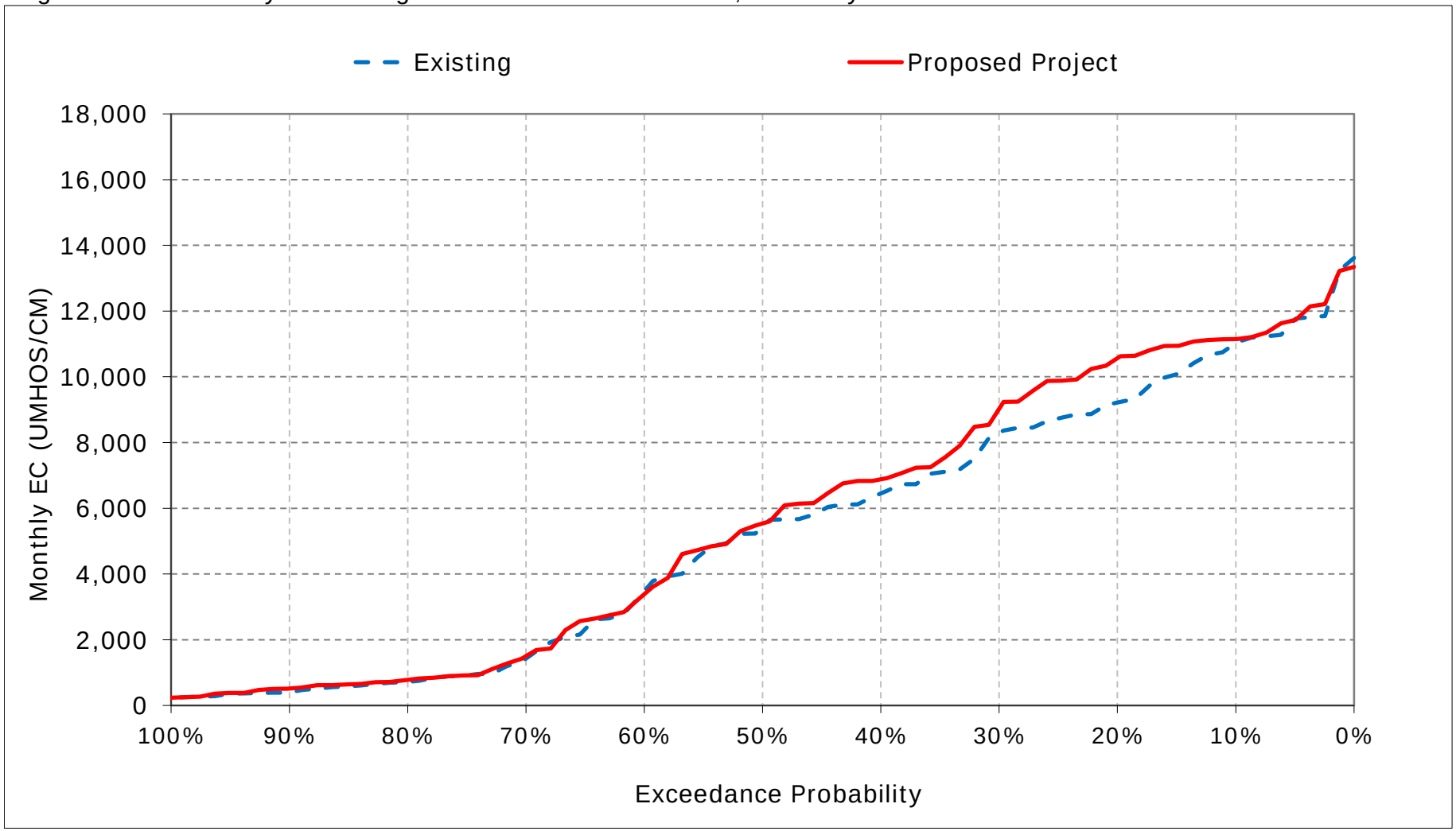


Figure 25-8. Goodyear Slough Outfall at Naval Fleet, February EC

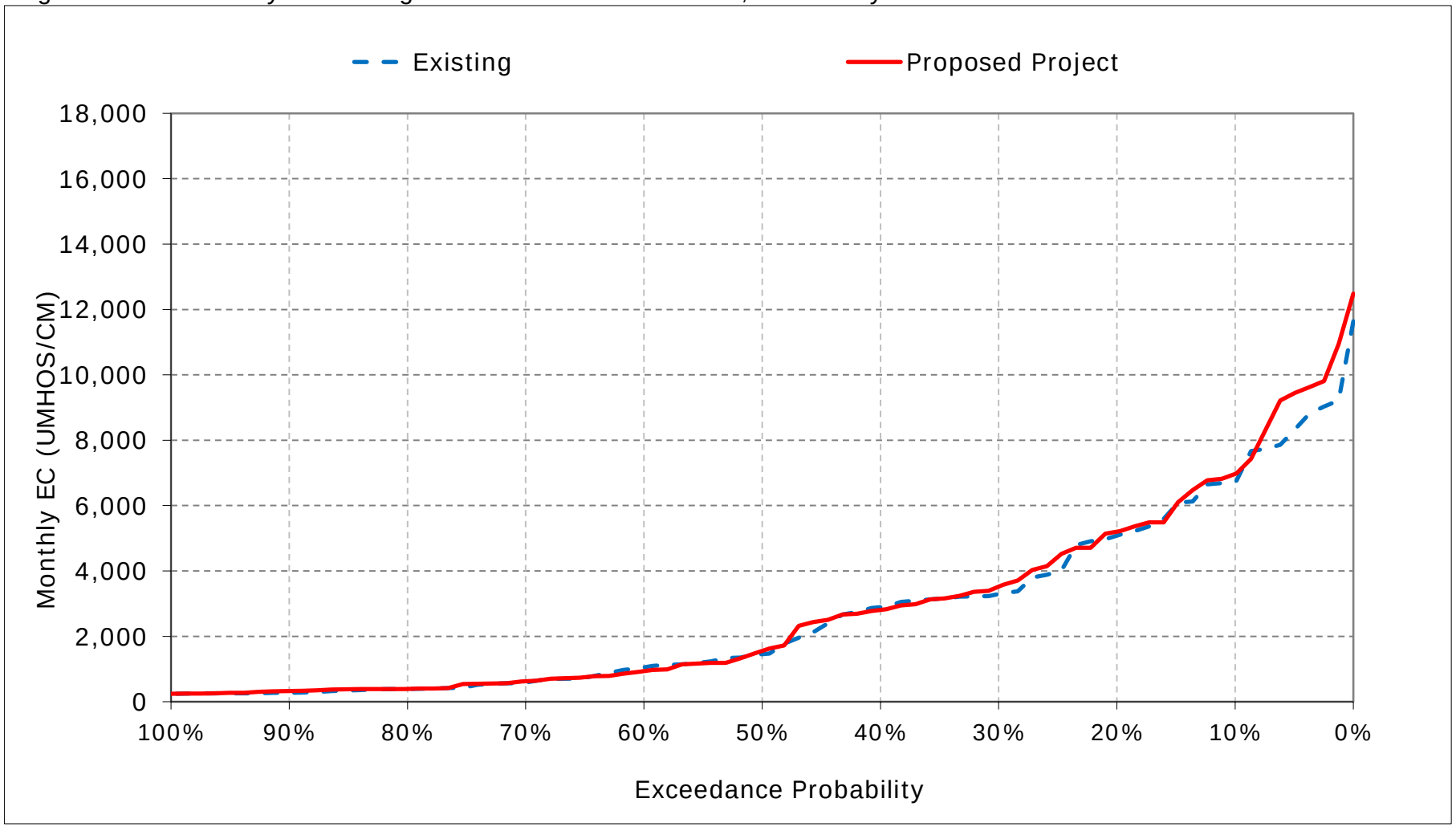


Figure 25-9. Goodyear Slough Outfall at Naval Fleet, March EC

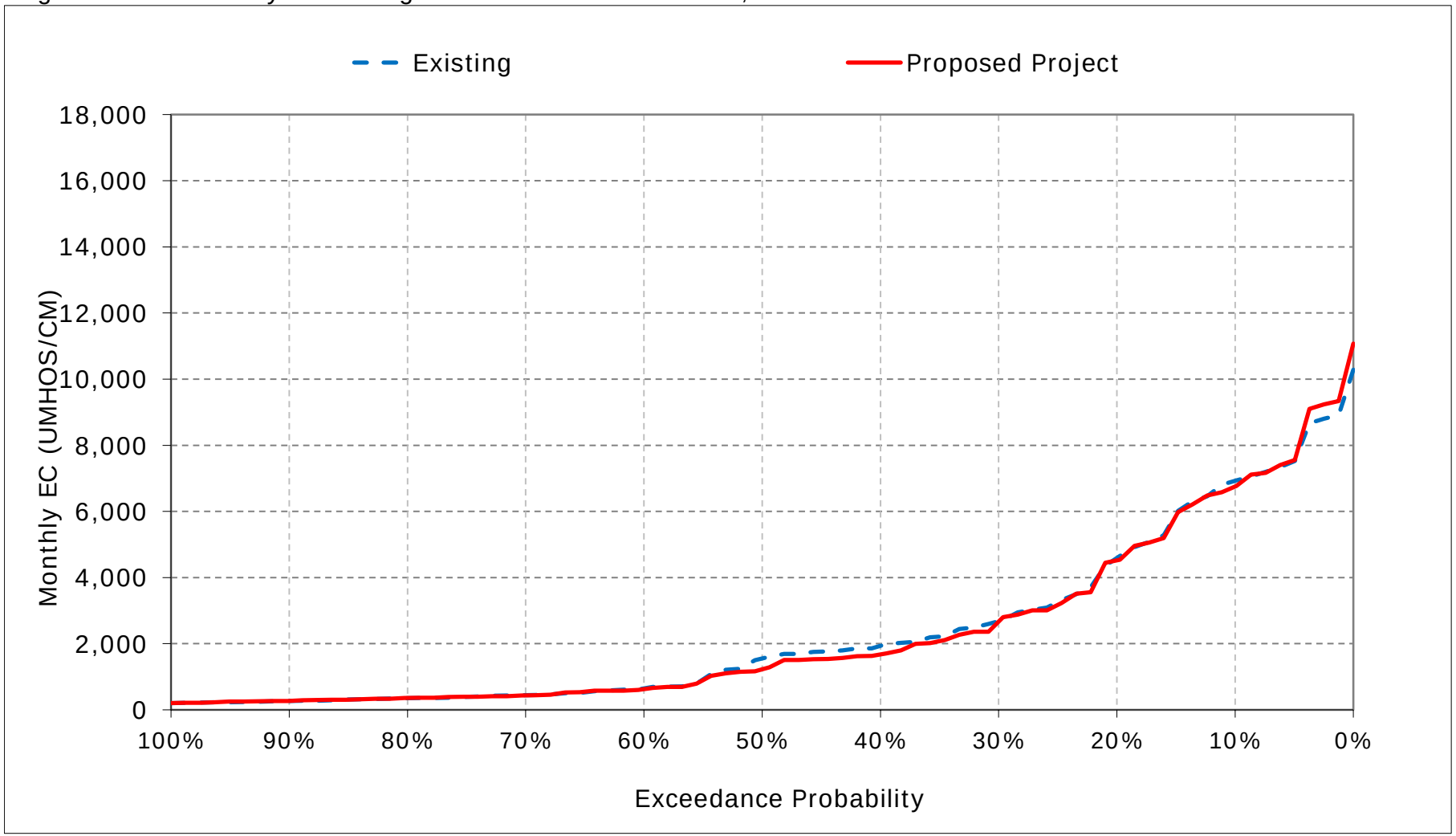


Figure 25-10. Goodyear Slough Outfall at Naval Fleet, April EC

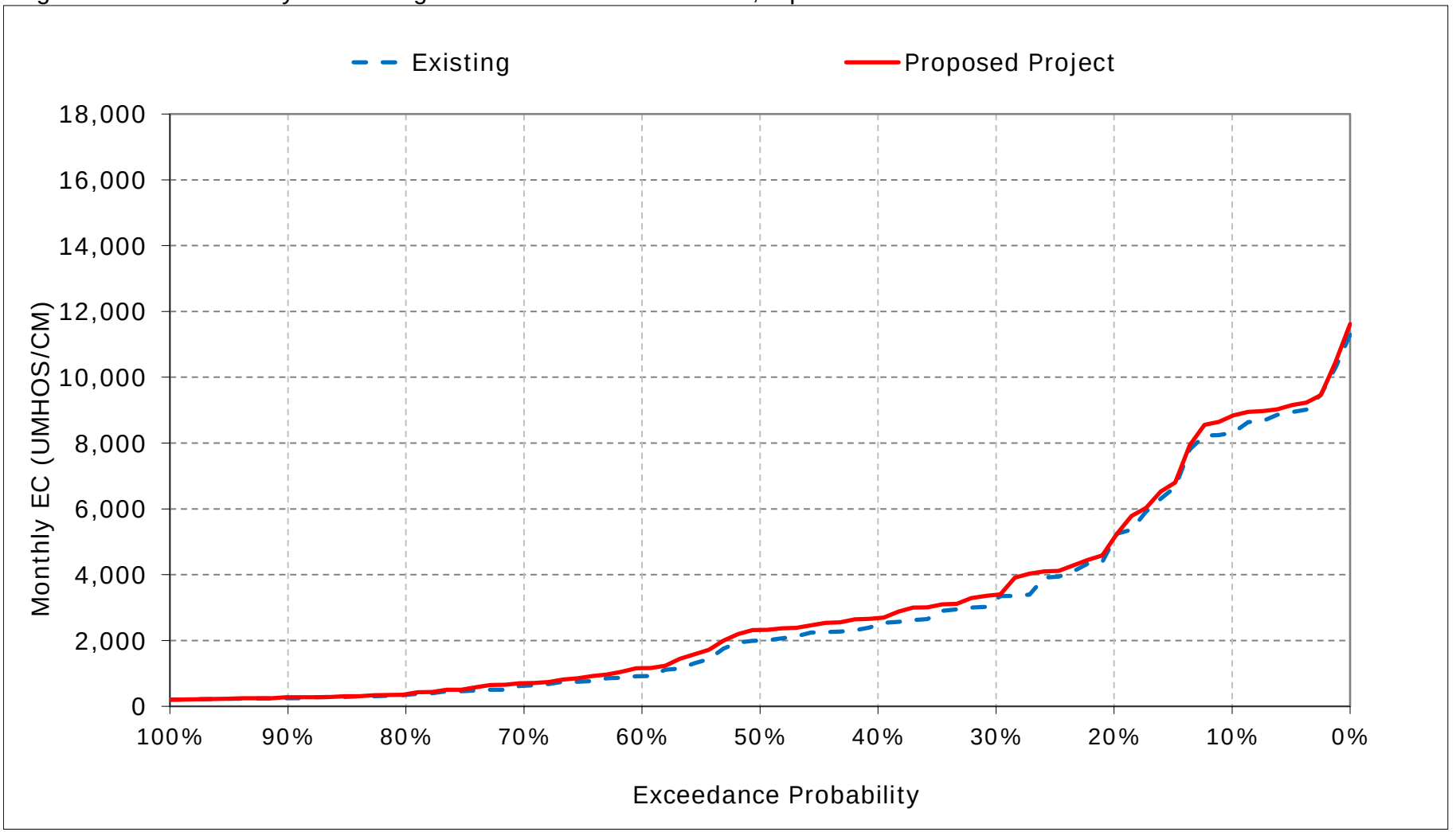


Figure 25-11. Goodyear Slough Outfall at Naval Fleet, May EC

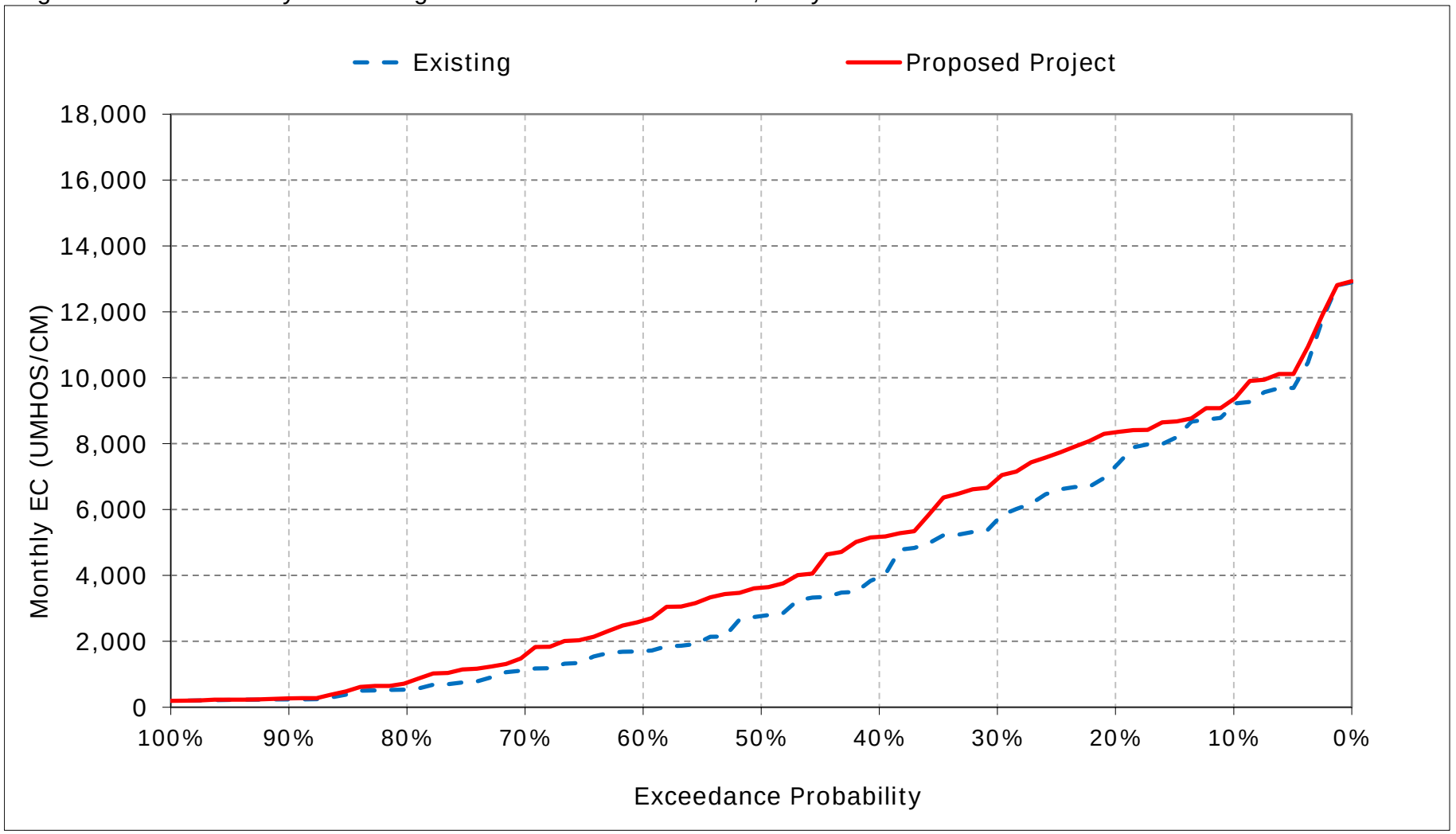


Figure 25-12. Goodyear Slough Outfall at Naval Fleet, June EC

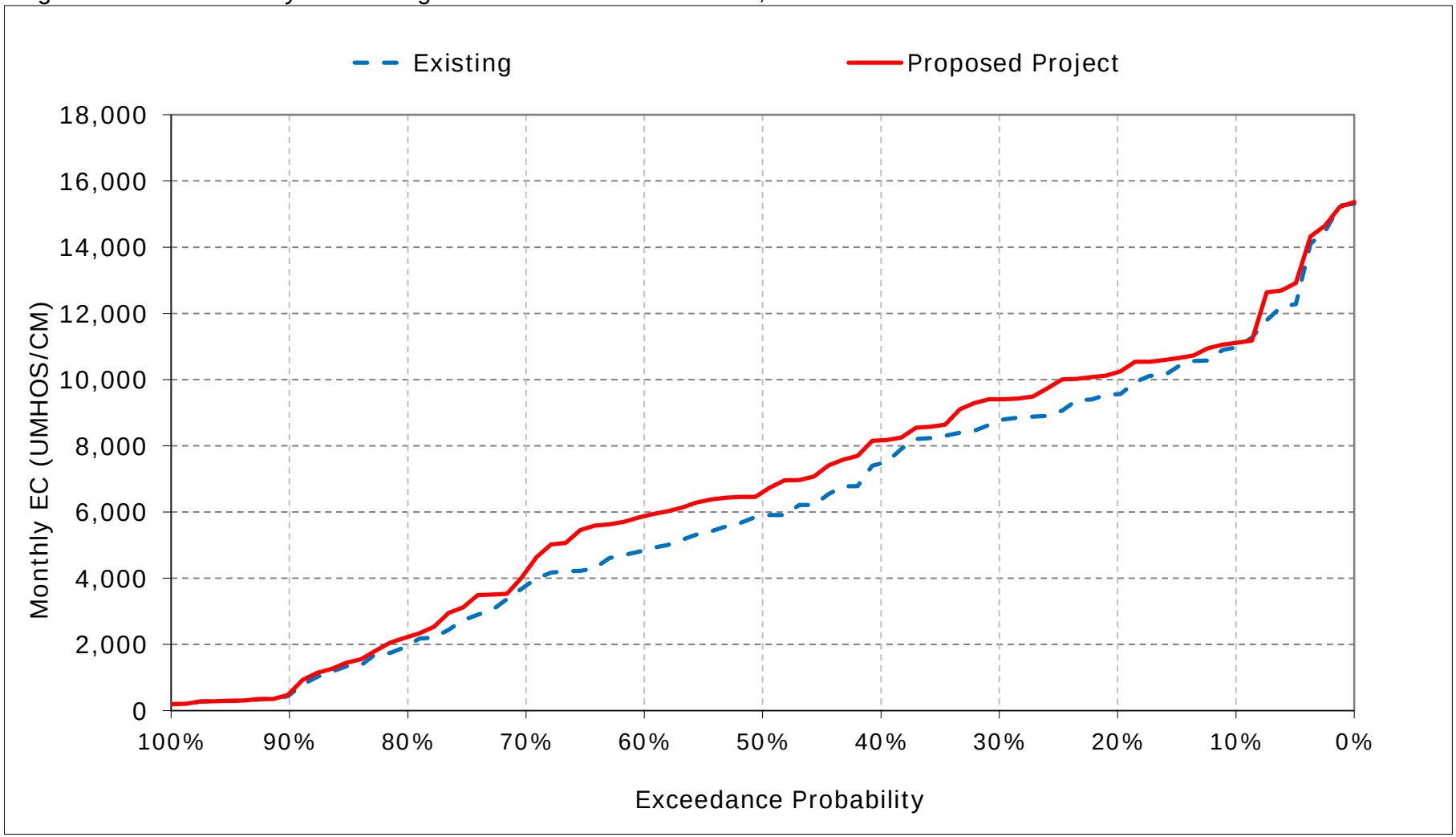


Figure 25-13. Goodyear Slough Outfall at Naval Fleet, July EC

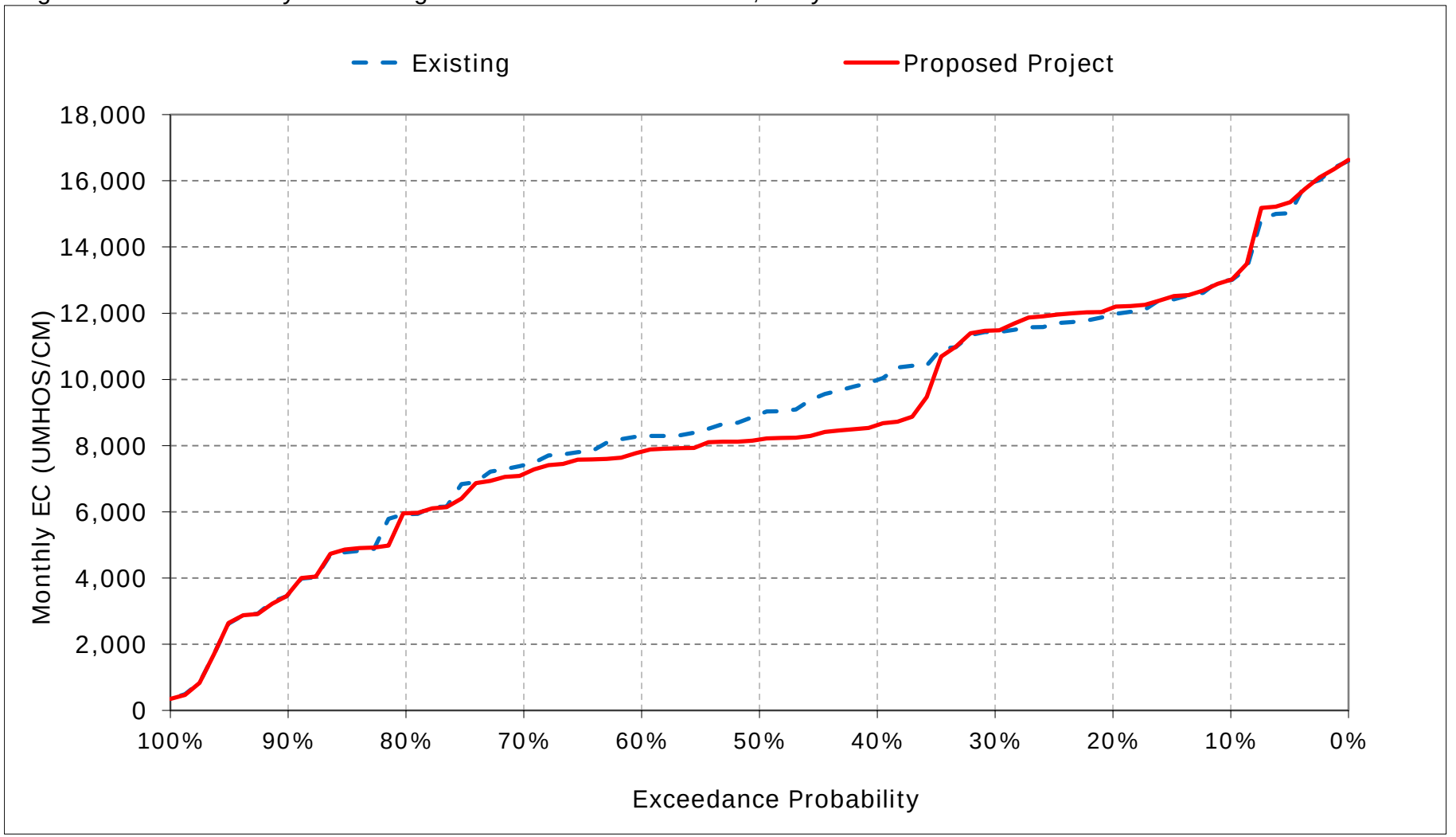


Figure 25-14. Goodyear Slough Outfall at Naval Fleet, August EC

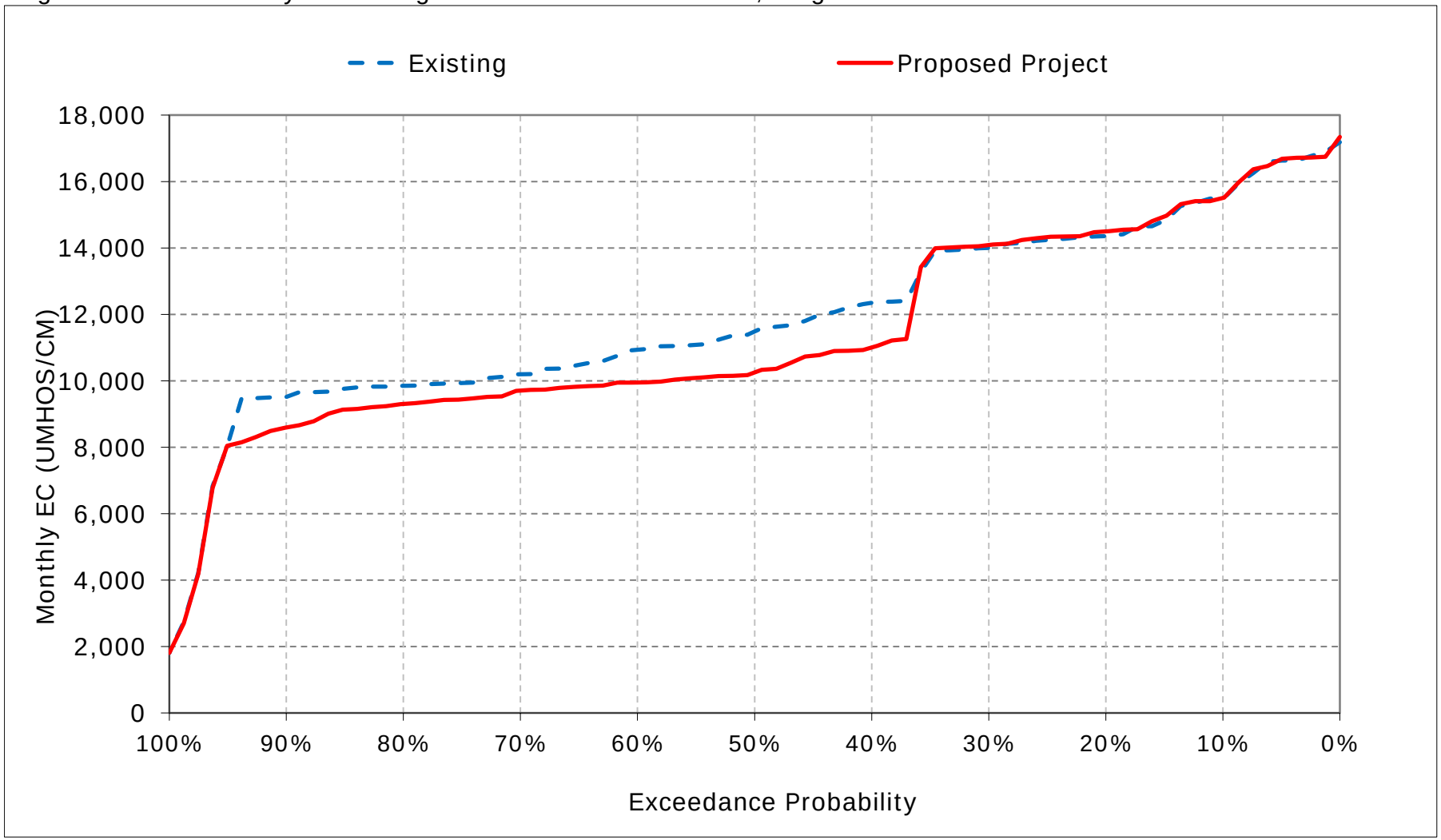


Figure 25-15. Goodyear Slough Outfall at Naval Fleet, September EC

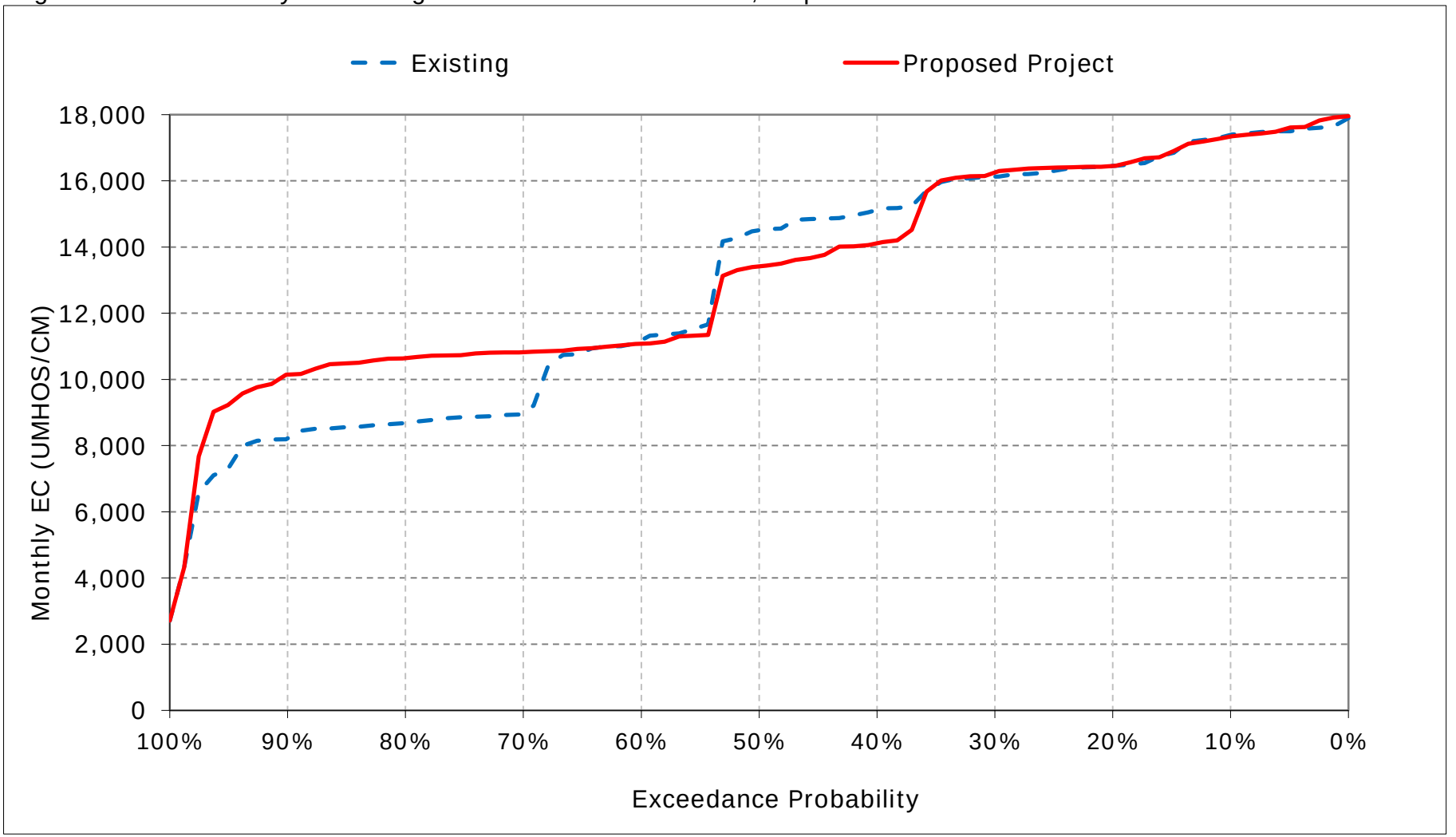


Figure 25-16. Goodyear Slough Outfall at Naval Fleet, October EC

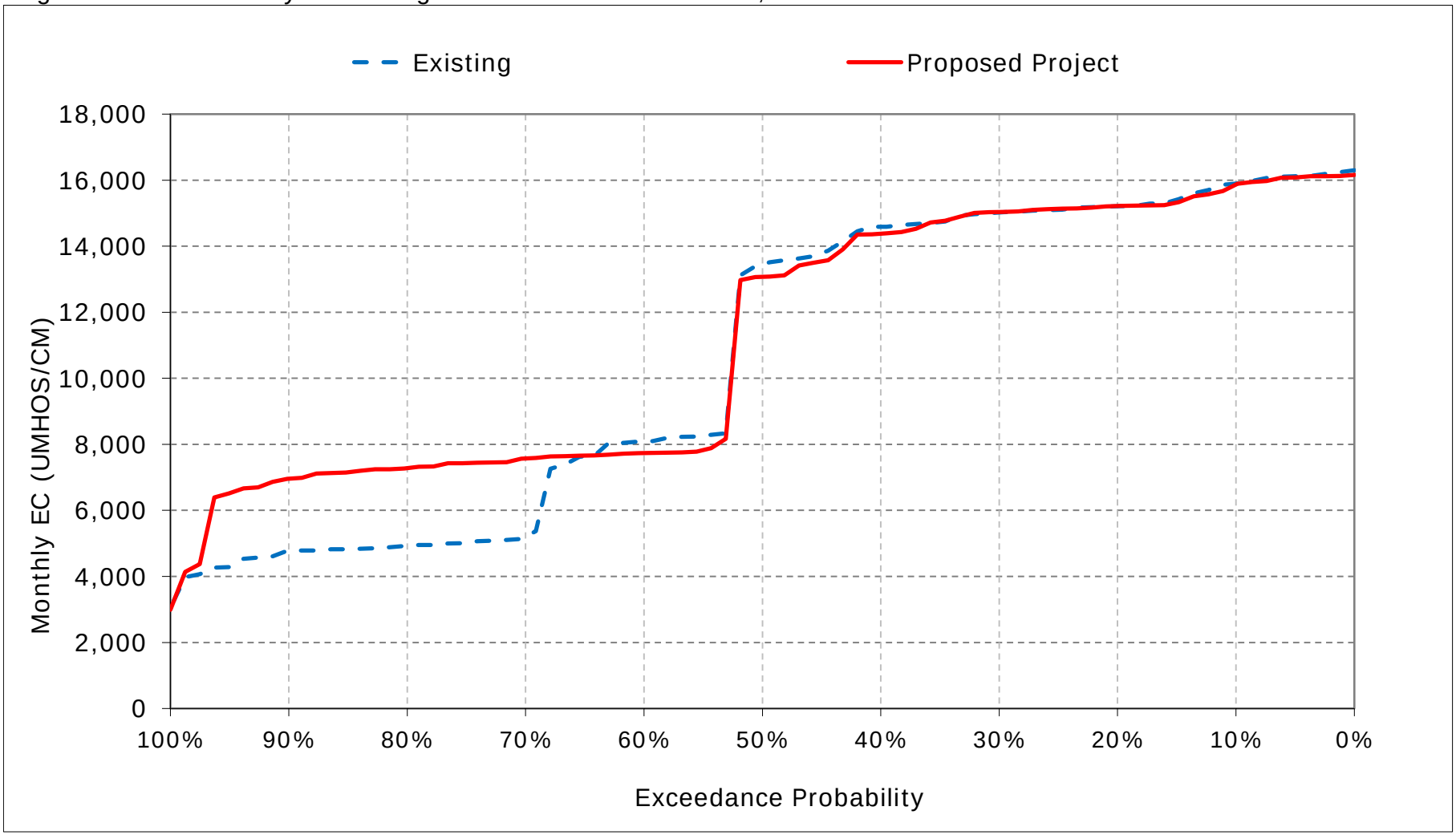


Figure 25-17. Goodyear Slough Outfall at Naval Fleet, November EC

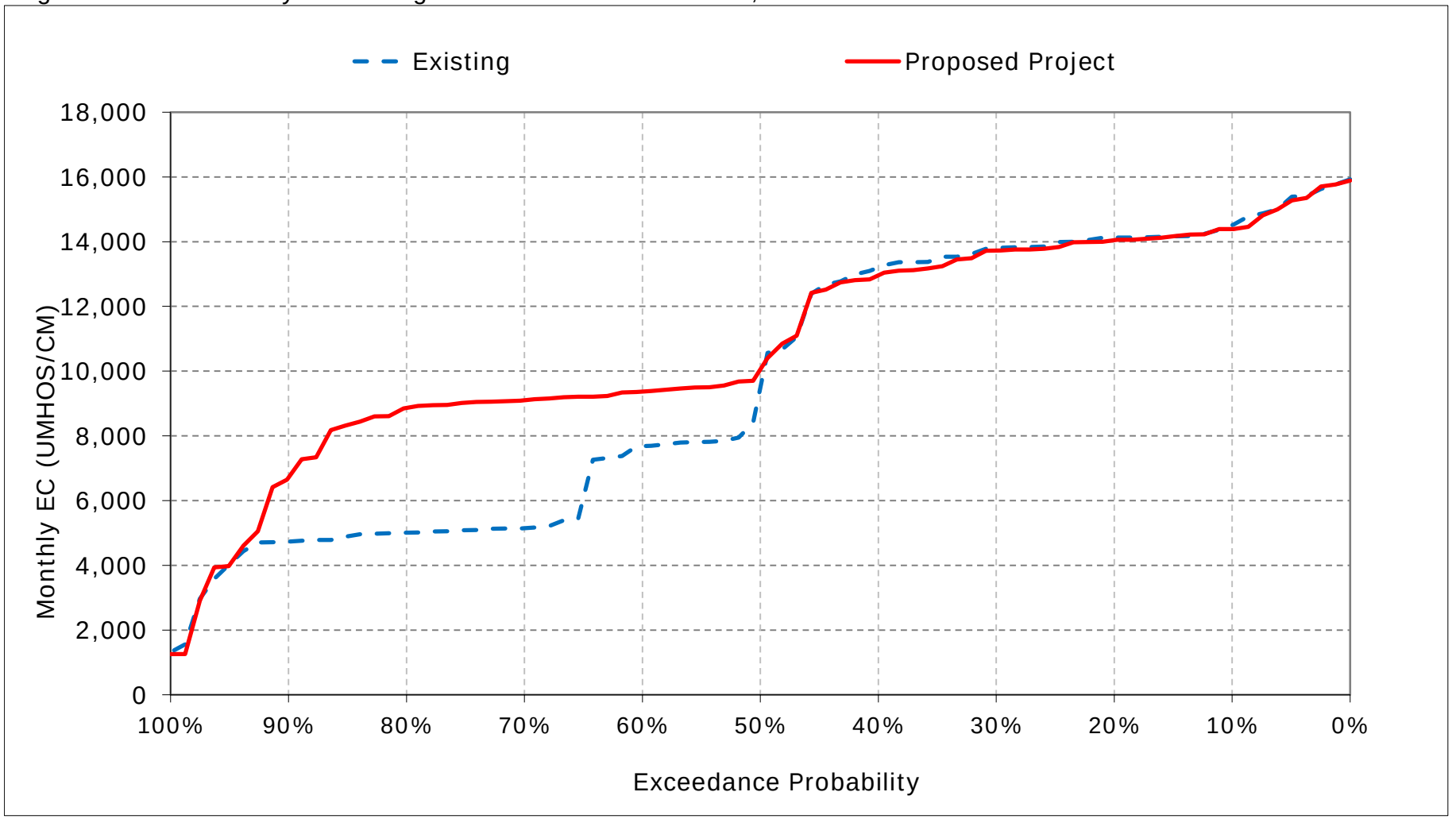
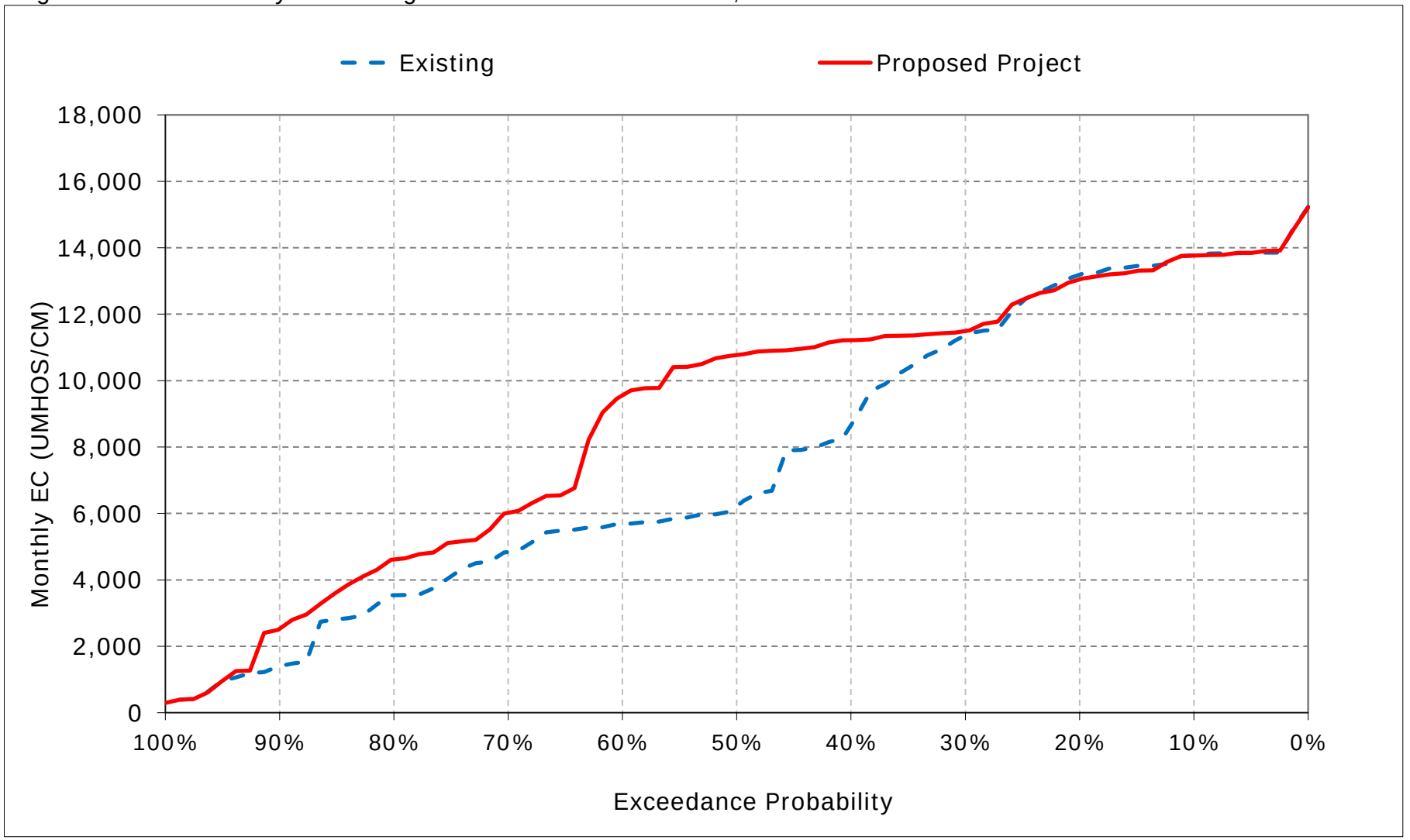


Figure 25-18. Goodyear Slough Outfall at Naval Fleet, December EC



Appendix C – Modeling

Attachment 2-8 – Chloride Results (DSM2-QUAL)

The following results of the DSM2-QUAL model are included for Delta chloride conditions for the following alternatives:

- Existing Conditions
- Proposed Project

Table 2-8.1. Chloride Results (DSM2-QUAL)

Title	Model Parameter	Table Numbers	Figure Numbers
Sacramento River at Mallard Slough Salinity	RSAC075	1-1	1-1 to 1-18
Sacramento River at Rio Vista Salinity	RSAC101	2-1	2-1 to 2-18
Sacramento River at Collinsville Salinity	RSAC081	3-1	3-1 to 3-18
San Joaquin River at Jersey Point Salinity	RSAN018	4-1	4-1 to 4-18
San Joaquin River at San Andreas Salinity	RSAN032	5-1	5-1 to 5-18
San Joaquin River at Prisoners Point Salinity	RSAN037	6-1	6-1 to 6-18
Old River at Highway 4	ROLD034	7-1	7-1 to 7-18
Victoria Canal	CHVCT000	8-1	8-1 to 8-18
Contra Costa Pumping Plant Chloride	ROLD024	9-1	9-1 to 9-18
San Joaquin River at Antioch Chloride	RSAN007	10-1	10-1 to 10-18
Banks Pumping Plant South Delta Exports Chloride	CLIFTON_COURT	11-1	11-1 to 11-18
Jones Pumping Plant South Delta Exports Chloride	CHDMC006	12-1	12-1 to 12-18
North Bay Aqueduct Chloride	SLBAR002	13-1	13-1 to 13-18

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 1-1. Sacramento River at Mallard Slough Chloride, Monthly Cl

Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	4,015	3,822	3,637	2,412	1,260	1,094	1,174	1,545	2,008	2,652	3,365	3,719
20%	3,828	3,720	3,179	2,137	783	590	617	1,178	1,669	2,310	2,998	3,544
30%	3,766	3,614	2,348	1,643	415	223	316	914	1,595	2,196	2,917	3,478
40%	3,689	3,468	1,973	946	181	149	236	544	1,352	1,697	2,436	3,232
50%	3,369	1,816	1,688	682	99	71	127	307	1,109	1,552	2,267	2,911
60%	1,826	1,581	1,537	367	32	29	53	182	867	1,225	2,209	1,505
70%	1,068	943	625	52	21	19	29	93	633	1,144	2,080	835
80%	1,001	848	256	21	18	18	19	29	282	1,004	1,998	746
90%	957	760	54	17	17	17	17	17	31	696	1,910	672
Long Term												
Full Simulation Period[a]	2,564	2,279	1,738	981	404	292	353	605	1,127	1,633	2,438	2,279
Water Year Types[b]												
Wet (32%)	2,021	1,495	562	147	27	31	48	106	378	831	1,852	686
Above Normal (15%)	2,675	2,250	1,740	575	125	35	66	162	779	1,119	2,036	1,473
Below Normal (17%)	2,687	2,514	2,225	1,090	249	208	229	447	1,098	1,600	2,353	3,062
Dry (22%)	2,713	2,638	2,183	1,578	677	422	517	919	1,575	2,241	2,957	3,511
Critical (15%)	3,265	3,198	3,046	2,170	1,272	1,020	1,199	1,840	2,458	3,012	3,430	3,778

Proposed Project

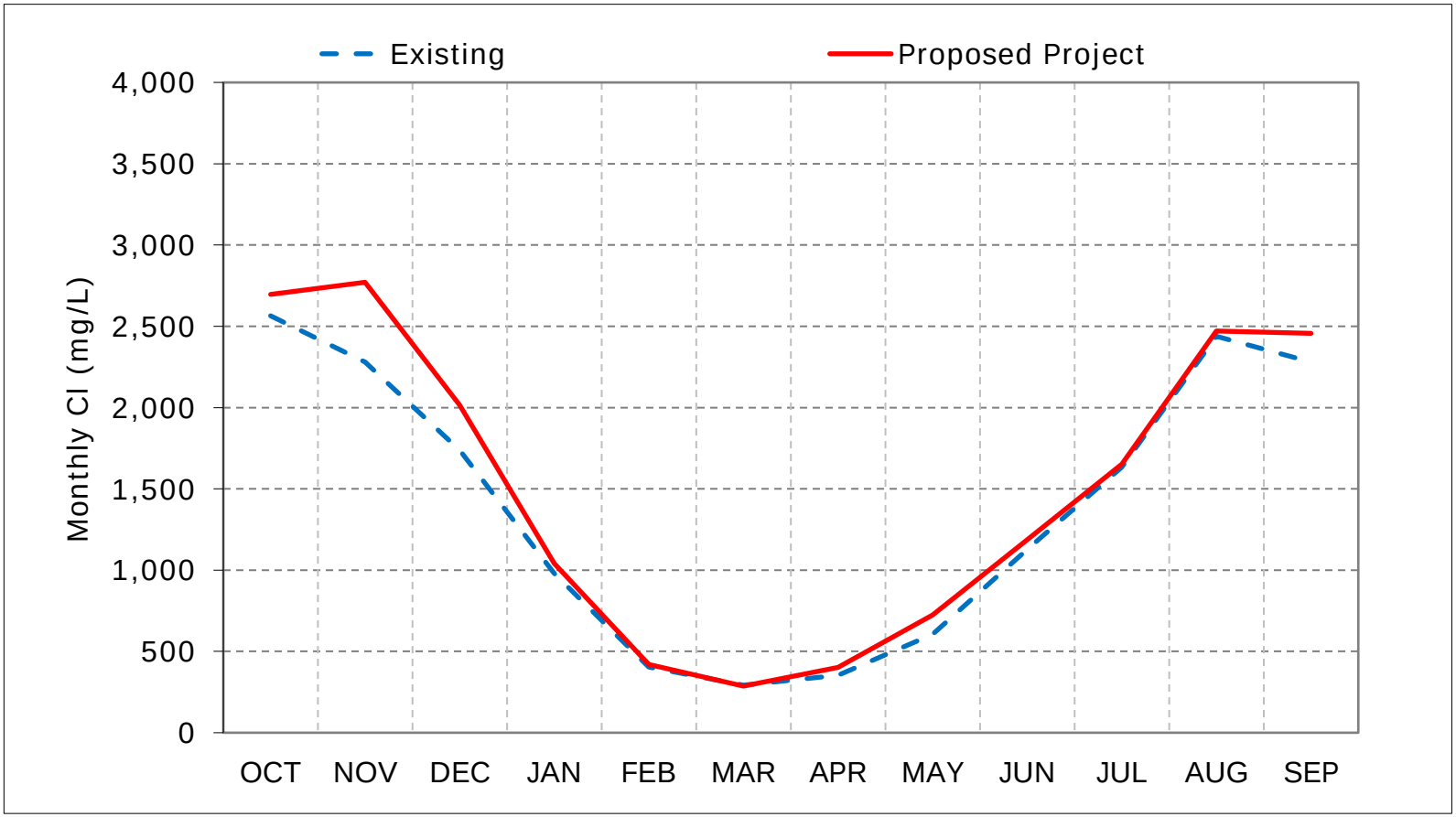
Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3,988	3,790	3,613	2,705	1,204	1,102	1,248	1,618	2,025	2,651	3,340	3,717
20%	3,805	3,712	3,167	2,298	741	556	757	1,387	1,801	2,340	3,009	3,559
30%	3,750	3,609	3,004	1,781	394	186	455	1,178	1,649	2,177	2,929	3,493
40%	3,590	3,422	2,813	1,014	201	134	315	722	1,496	1,790	2,708	3,348
50%	3,305	2,647	2,461	692	95	56	179	475	1,166	1,591	2,439	2,948
60%	1,717	2,538	1,898	343	25	25	71	341	1,007	1,212	2,191	1,437
70%	1,652	2,479	768	54	21	19	36	167	717	1,133	2,069	1,390
80%	1,572	2,275	443	21	18	18	19	43	299	1,014	1,984	1,320
90%	1,480	1,083	80	18	17	17	17	17	32	698	1,897	1,212
Long Term												
Full Simulation Period[a]	2,696	2,771	2,015	1,042	420	287	402	725	1,187	1,651	2,471	2,456
Water Year Types[b]												
Wet (32%)	2,200	2,126	728	145	26	29	69	176	437	834	1,822	1,236
Above Normal (15%)	2,830	2,795	2,164	608	90	31	98	287	826	1,104	2,046	1,356
Below Normal (17%)	2,825	2,980	2,563	1,100	234	189	299	627	1,151	1,684	2,573	3,151
Dry (22%)	2,856	3,061	2,522	1,730	727	402	596	1,092	1,659	2,262	2,974	3,525
Critical (15%)	3,244	3,464	3,253	2,319	1,357	1,041	1,258	1,916	2,509	3,016	3,429	3,789

Proposed Project minus Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-27	-31	-24	293	-56	9	74	73	17	-1	-25	-2
20%	-23	-8	-13	161	-43	-34	139	209	131	31	10	15
30%	-16	-5	656	138	-20	-36	139	264	54	-18	11	16
40%	-99	-47	840	68	20	-15	78	178	144	93	272	116
50%	-63	831	773	9	-4	-14	52	168	57	39	173	37
60%	-109	956	361	-24	-6	-4	18	159	140	-13	-18	-68
70%	585	1,537	143	2	0	0	8	73	84	-11	-12	554
80%	571	1,427	187	0	0	0	0	14	18	10	-14	573
90%	523	323	25	0	0	0	-1	0	0	1	-13	540
Long Term												
Full Simulation Period[a]	131	491	277	61	16	-6	49	120	61	18	33	177
Water Year Types[b]												
Wet (32%)	179	631	166	-2	-2	-2	21	69	59	3	-31	550
Above Normal (15%)	155	546	424	33	-35	-4	32	126	47	-15	10	-117
Below Normal (17%)	139	466	338	10	-14	-19	70	180	53	84	220	89
Dry (22%)	143	423	339	152	51	-20	79	173	84	21	17	14
Critical (15%)	-21	266	207	149	86	22	60	75	51	4	-1	11

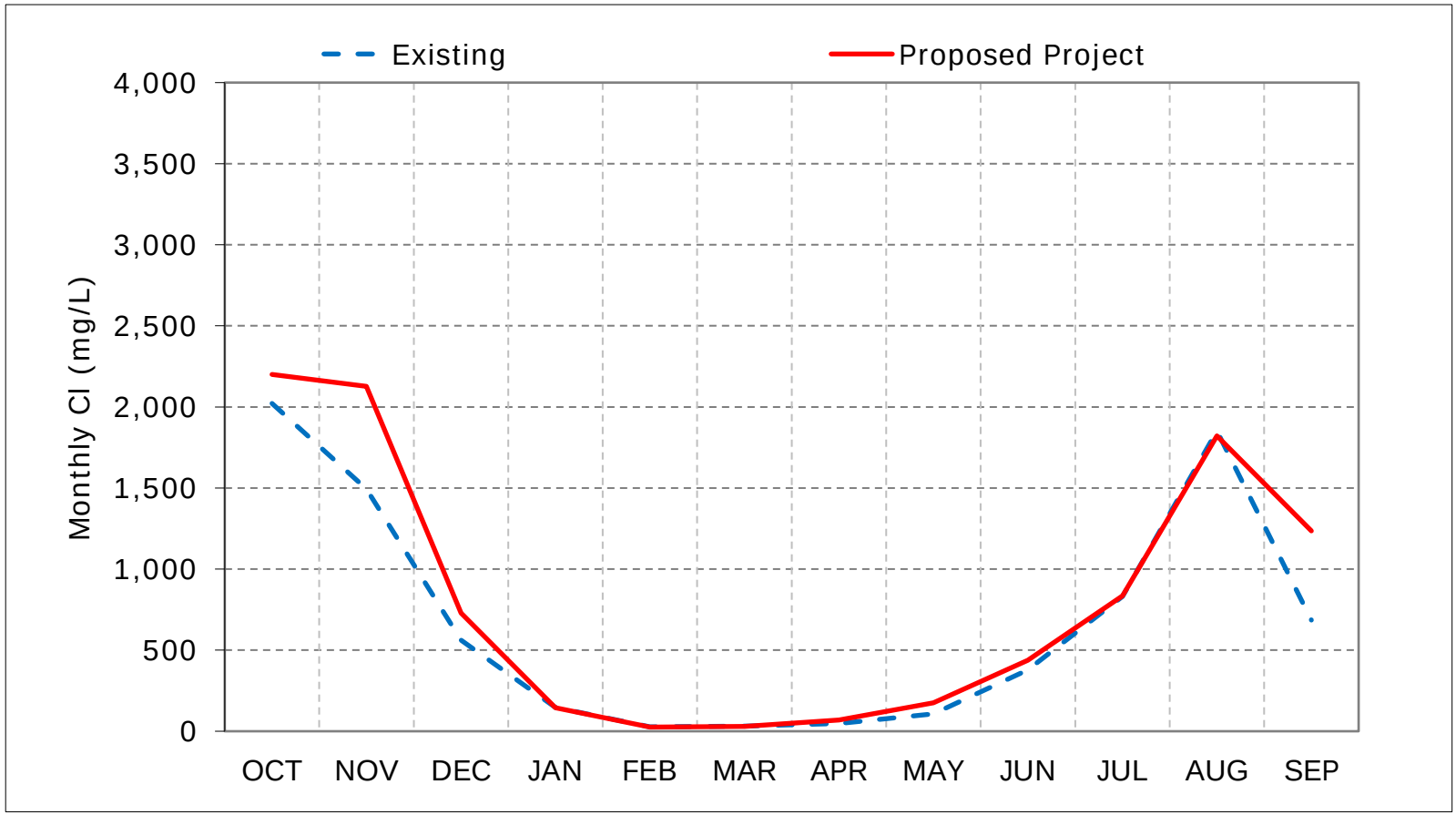
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 1-1. Sacramento River at Mallard Slough Chloride, Long-Term Average Cl



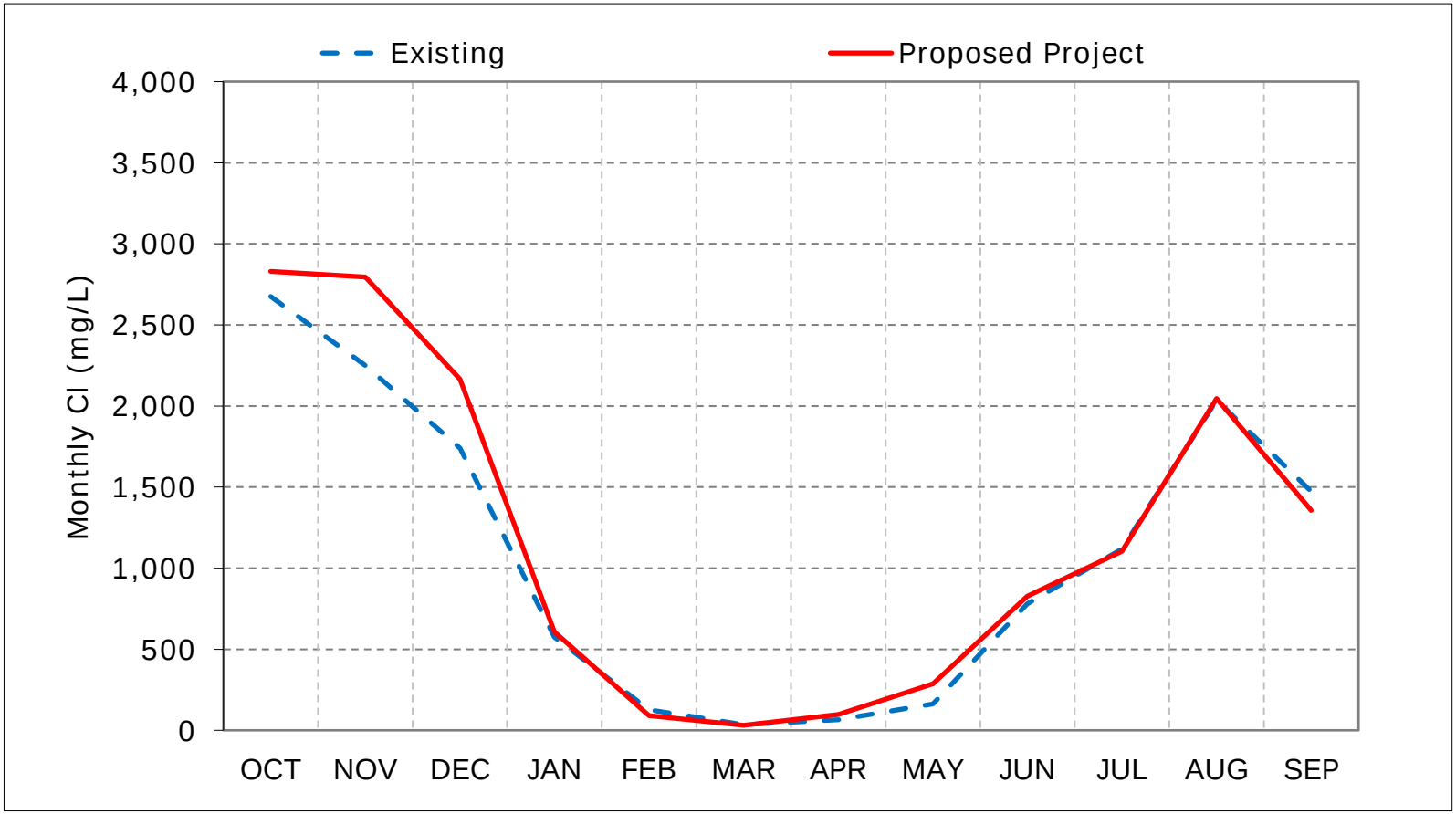
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-2. Sacramento River at Mallard Slough Chloride, Wet Year Average Cl



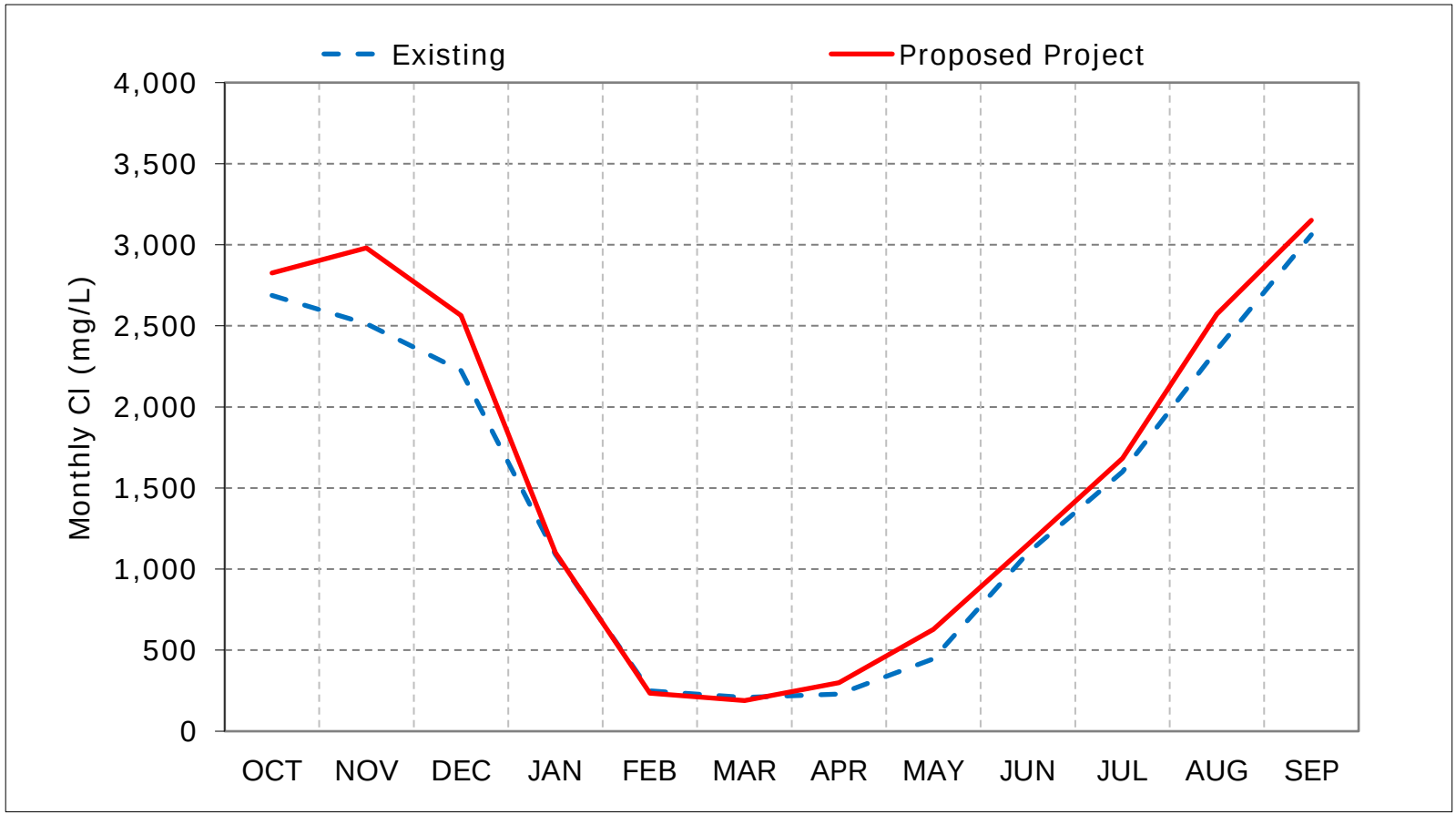
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-3. Sacramento River at Mallard Slough Chloride, Above Normal Year Aver



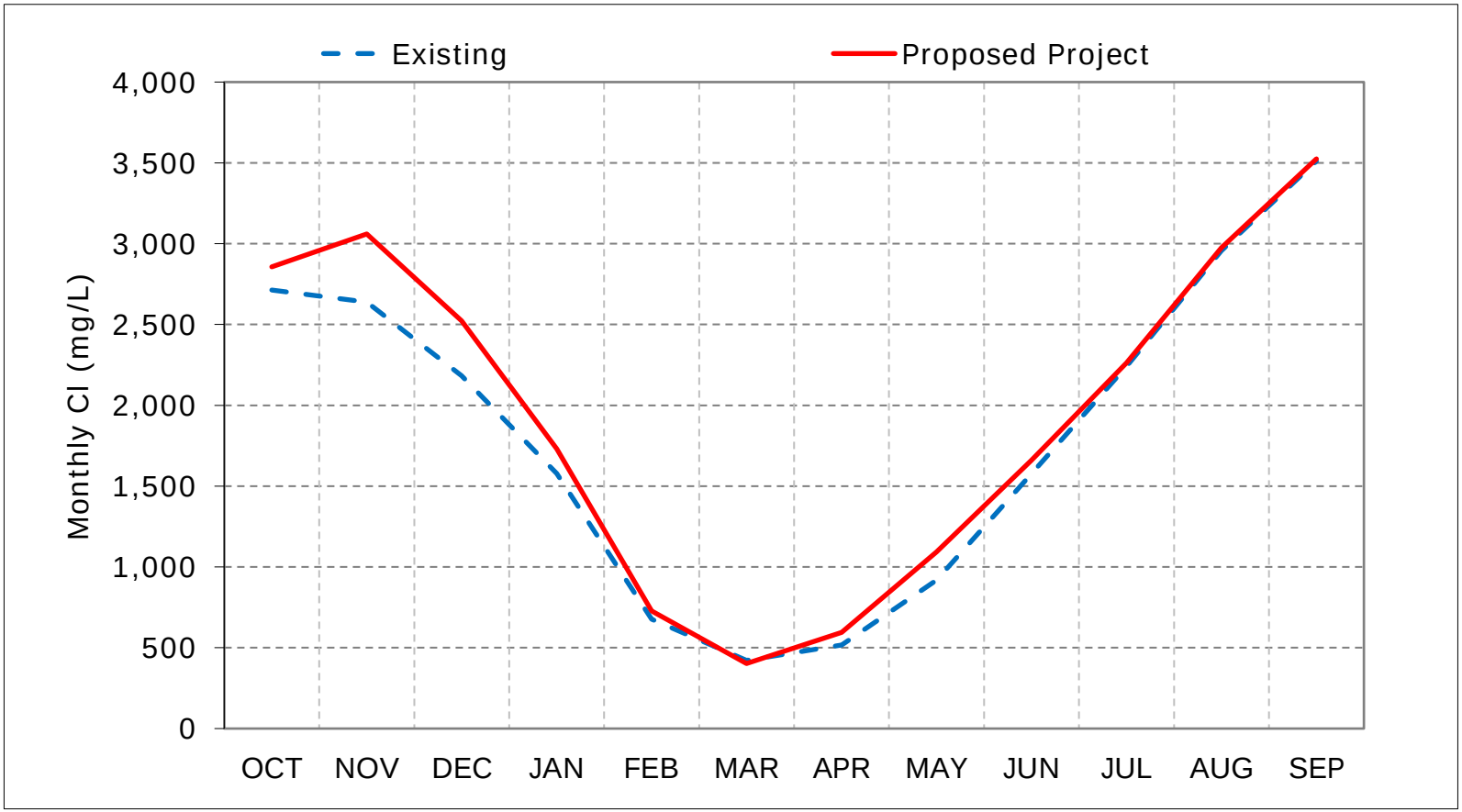
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-4. Sacramento River at Mallard Slough Chloride, Below Normal Year Aver



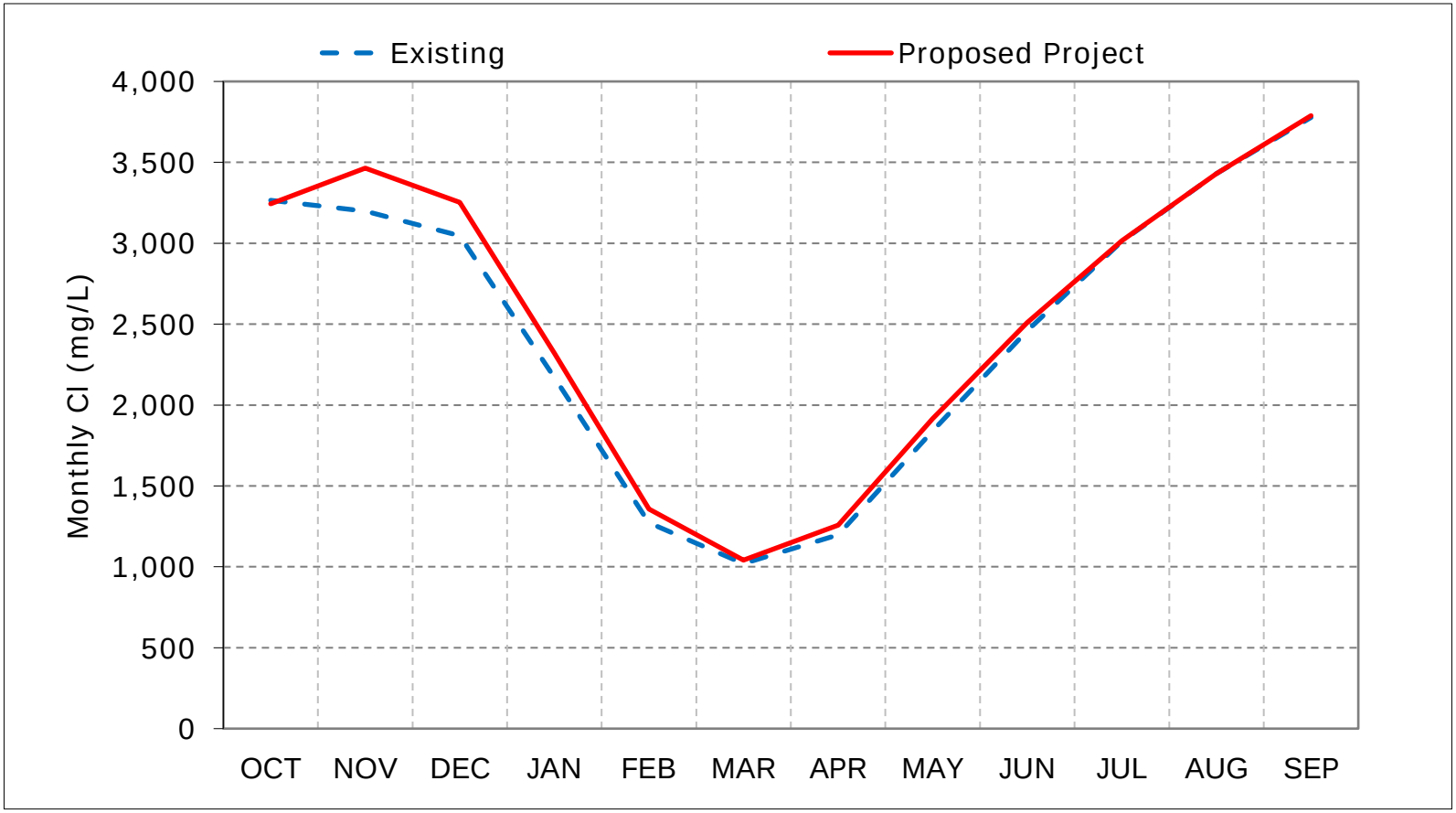
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 1-5. Sacramento River at Mallard Slough Chloride, Dry Year Average Cl



*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.

Figure 1-6. Sacramento River at Mallard Slough Chloride, Critical Year Average Cl



*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.

Figure 1-7. Sacramento River at Mallard Slough Chloride, January Cl

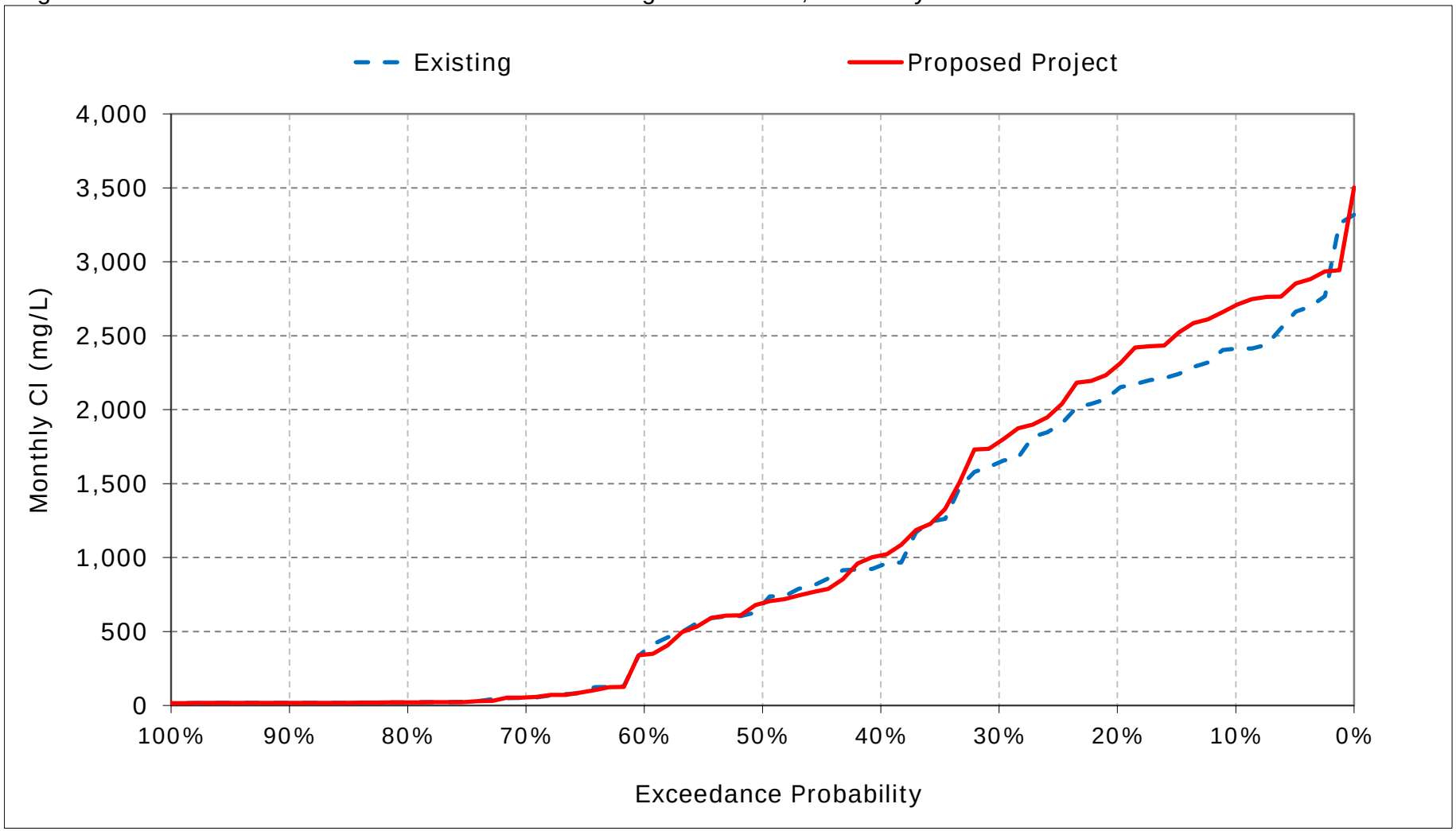


Figure 1-8. Sacramento River at Mallard Slough Chloride, February Cl

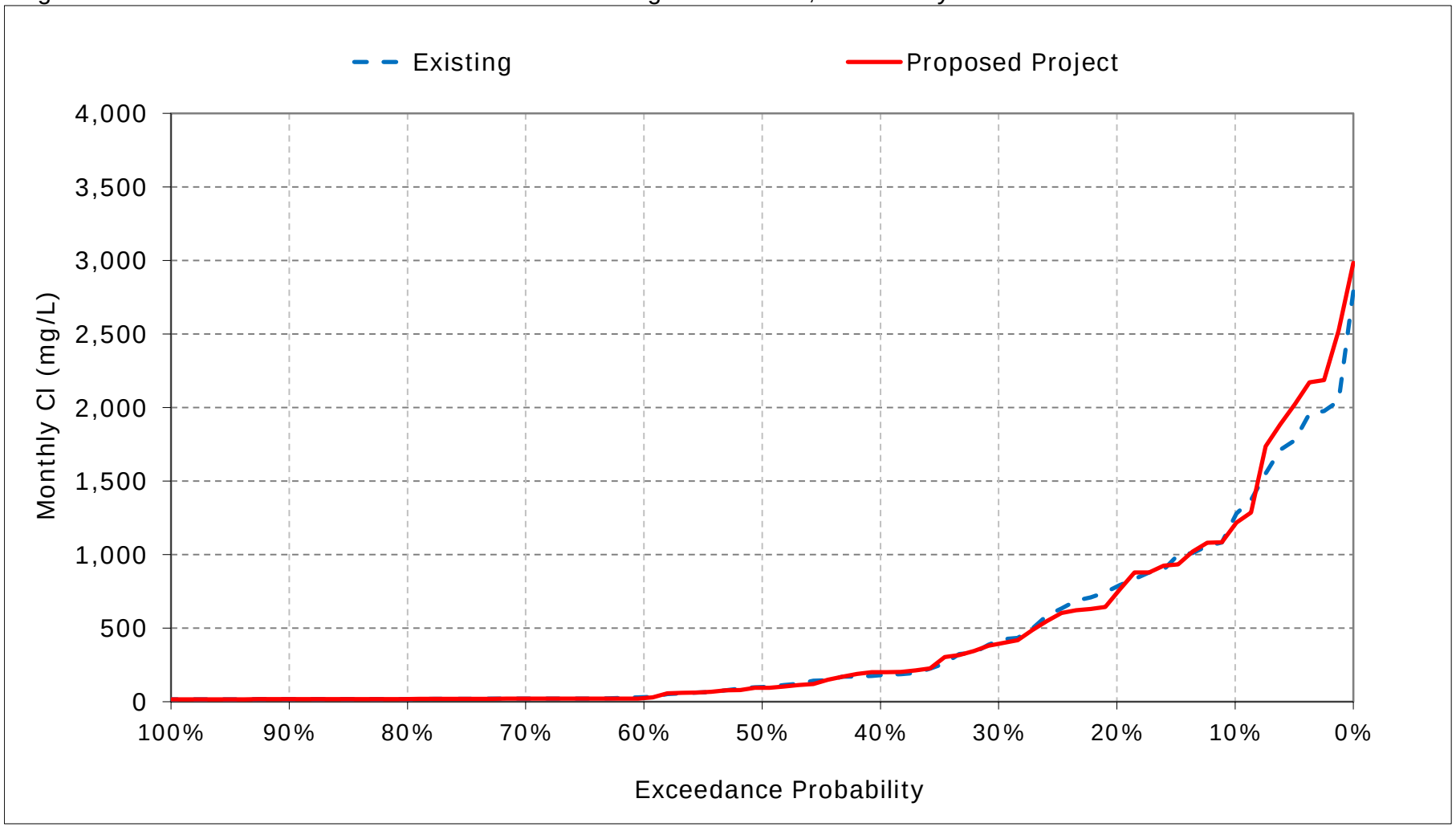


Figure 1-9. Sacramento River at Mallard Slough Chloride, March Cl

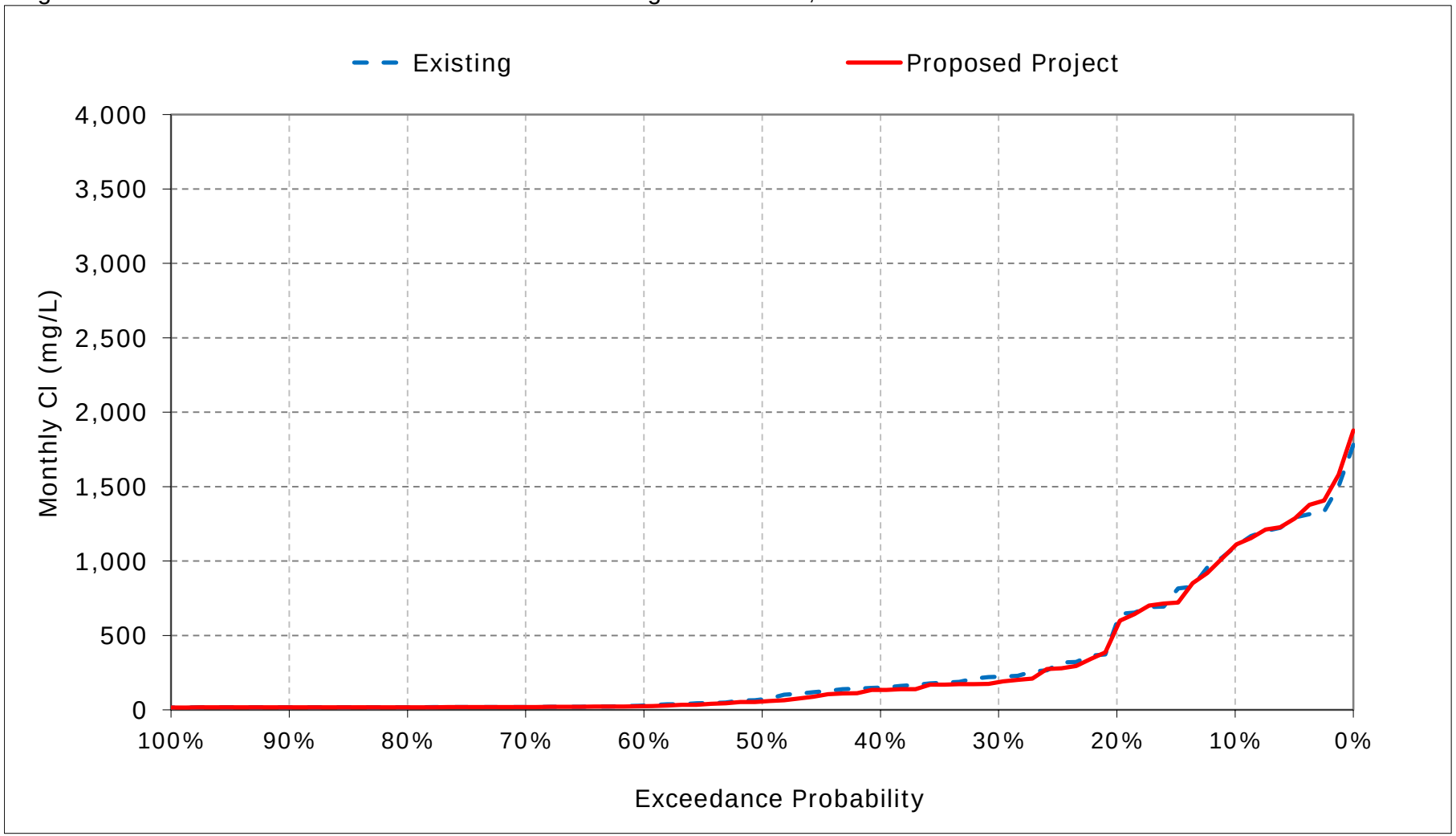


Figure 1-10. Sacramento River at Mallard Slough Chloride, April Cl

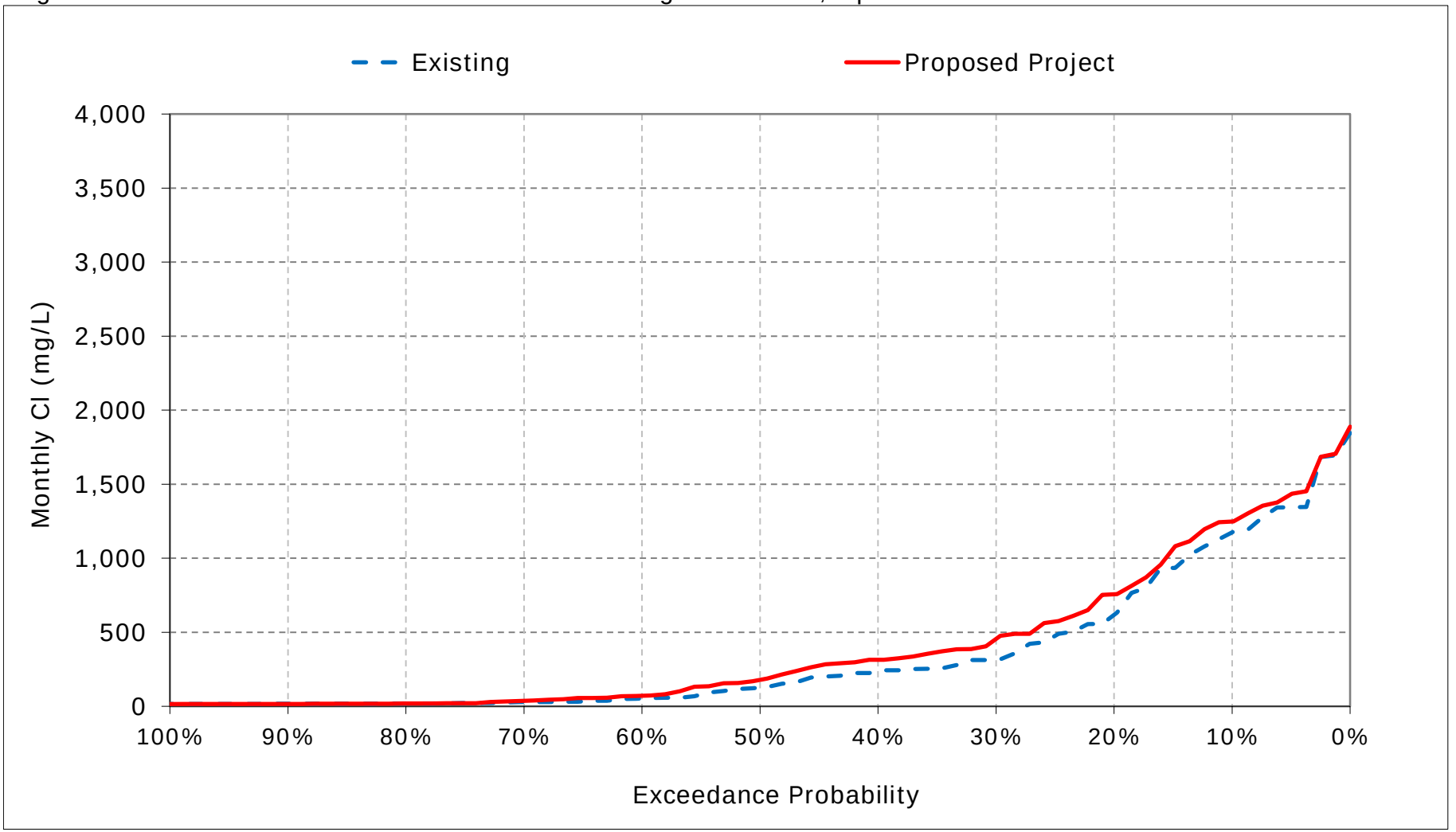


Figure 1-11. Sacramento River at Mallard Slough Chloride, May Cl

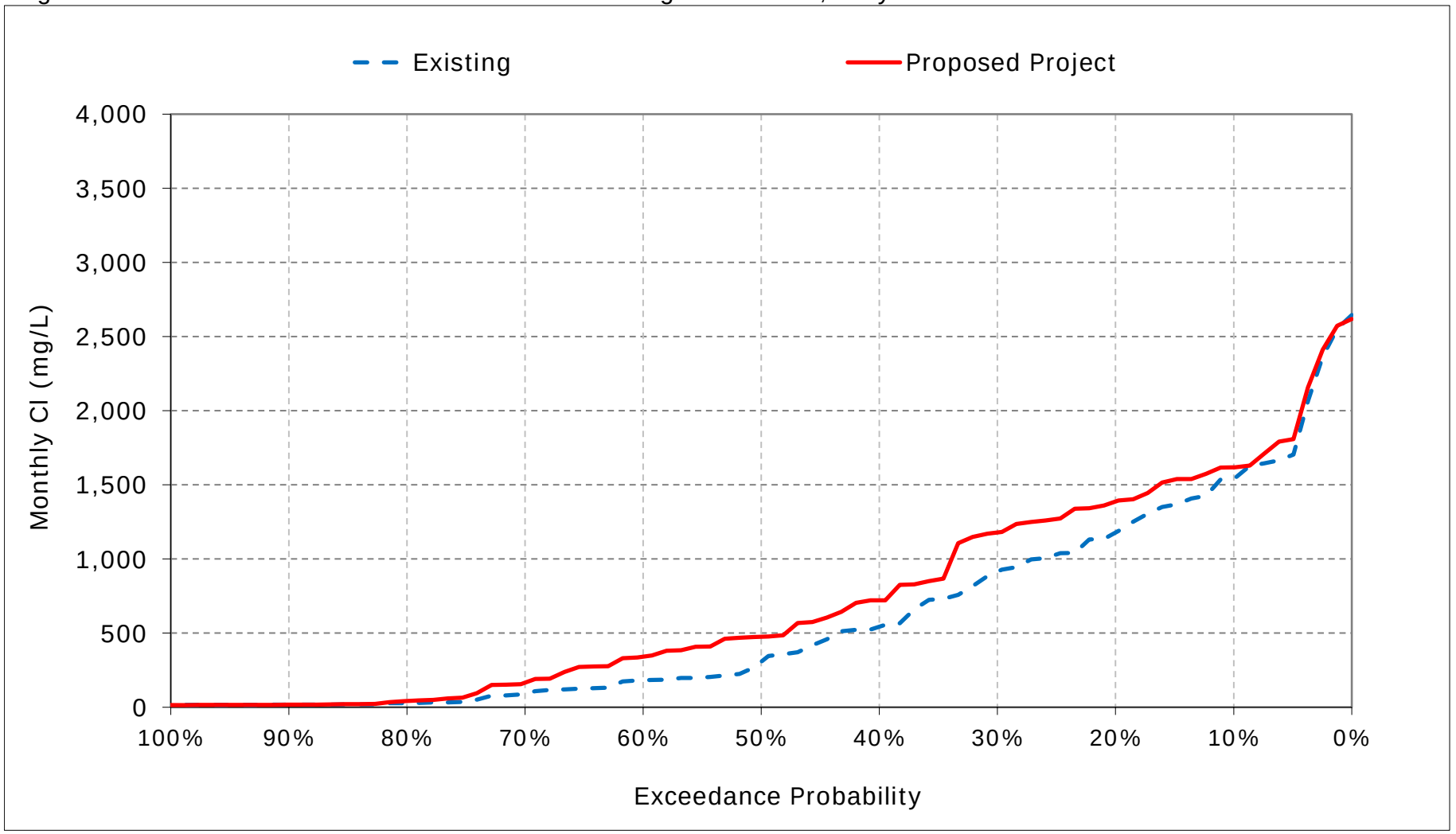


Figure 1-12. Sacramento River at Mallard Slough Chloride, June Cl

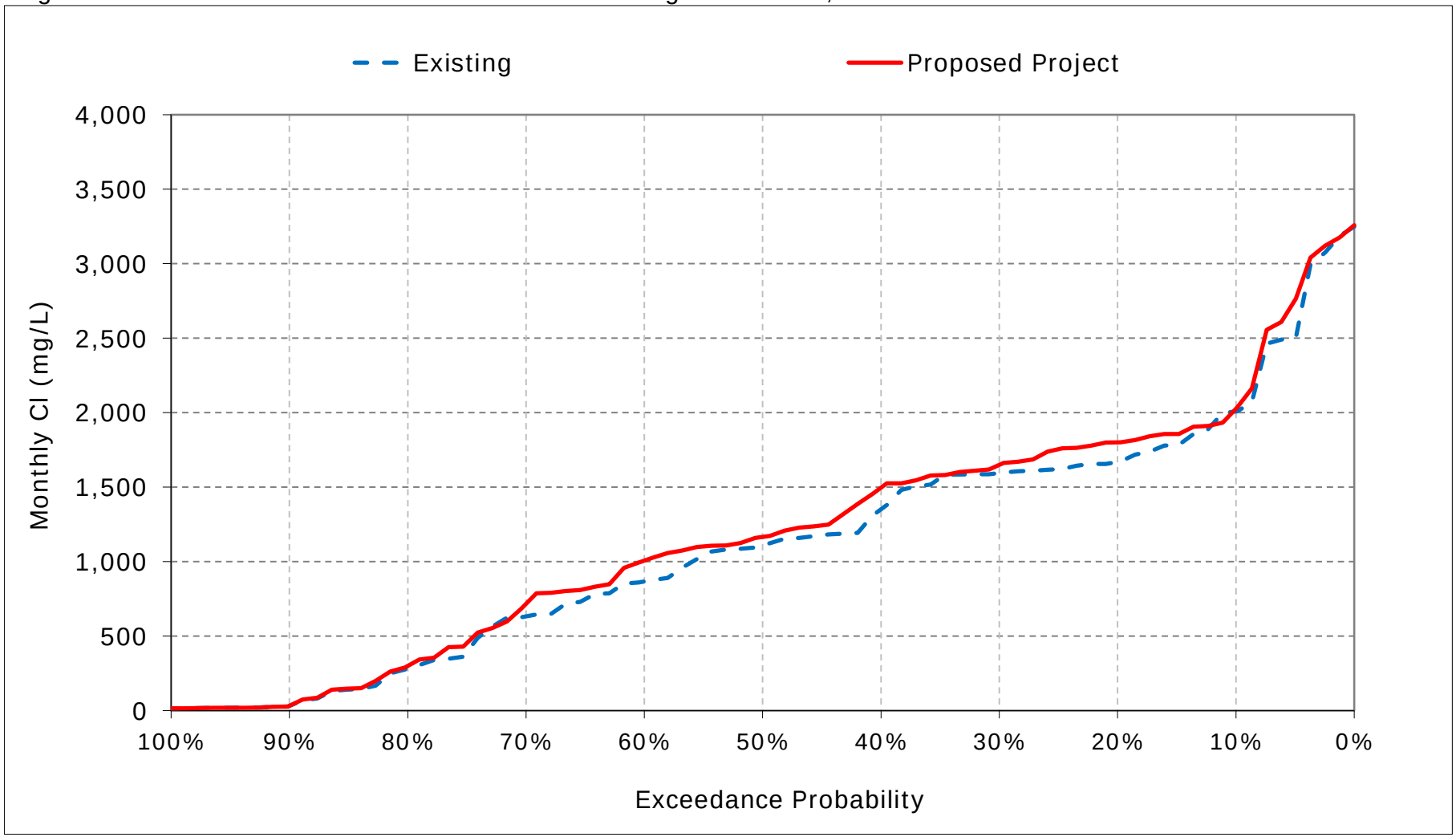


Figure 1-13. Sacramento River at Mallard Slough Chloride, July Cl

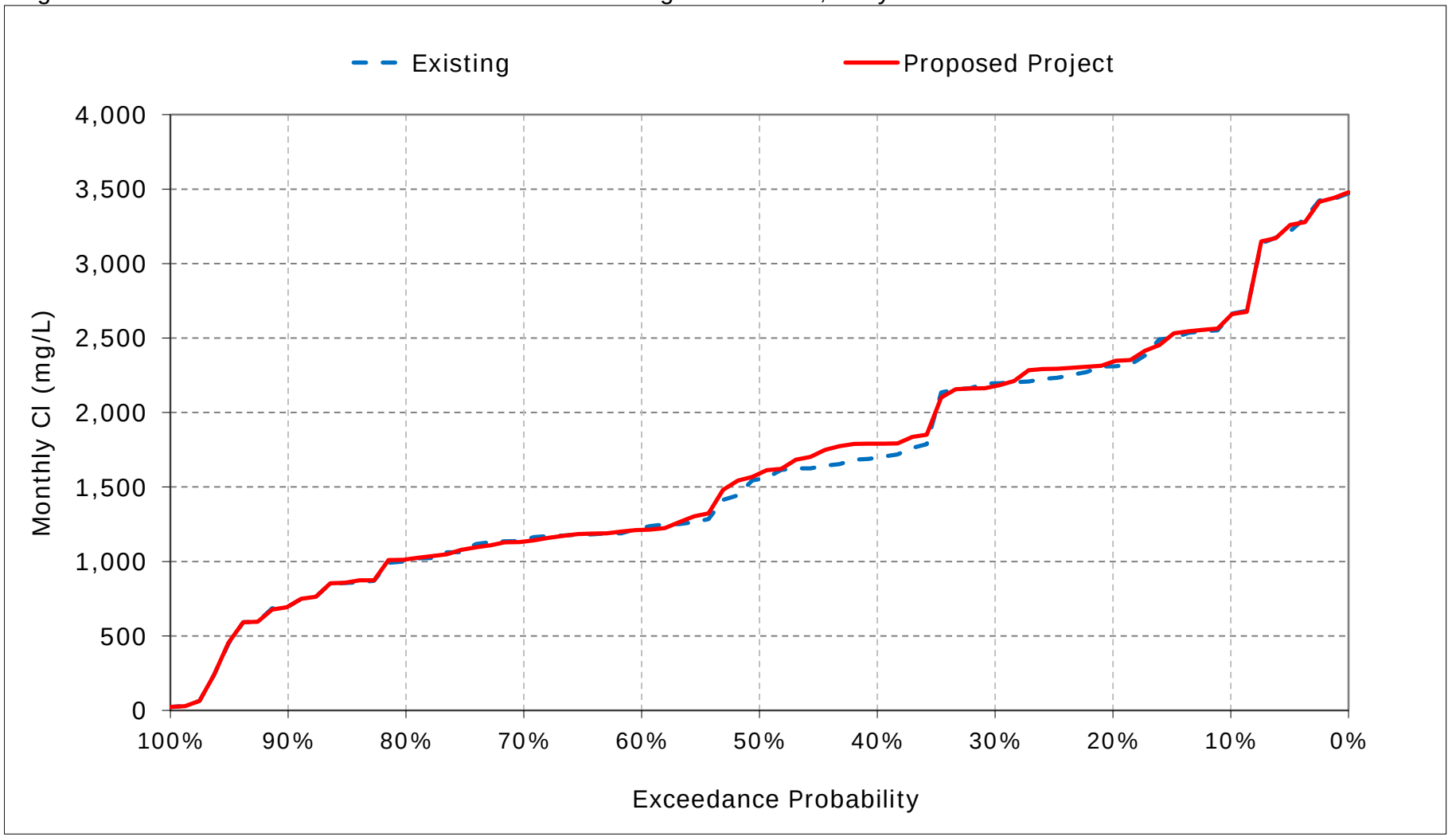


Figure 1-14. Sacramento River at Mallard Slough Chloride, August Cl

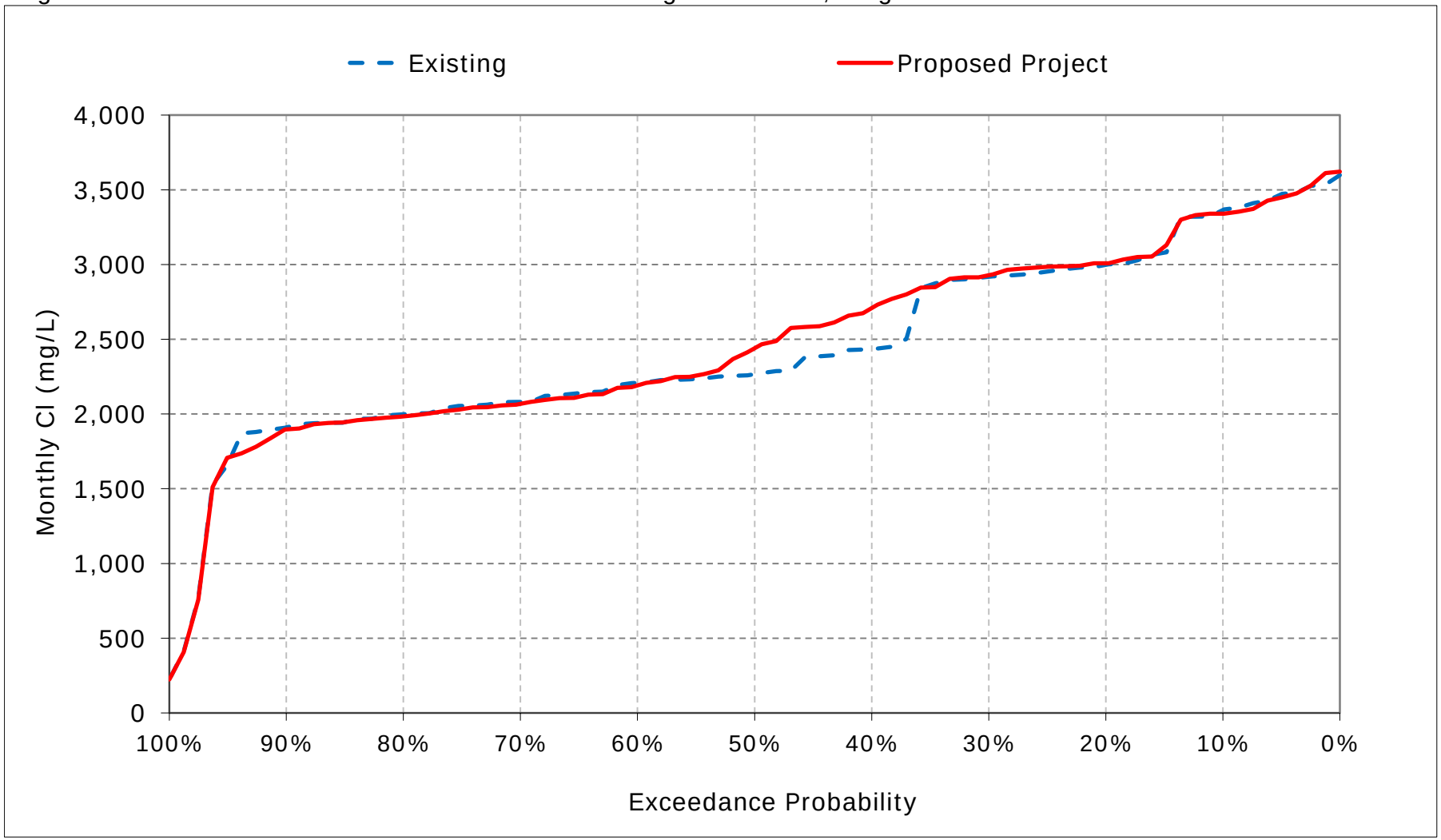


Figure 1-15. Sacramento River at Mallard Slough Chloride, September Cl

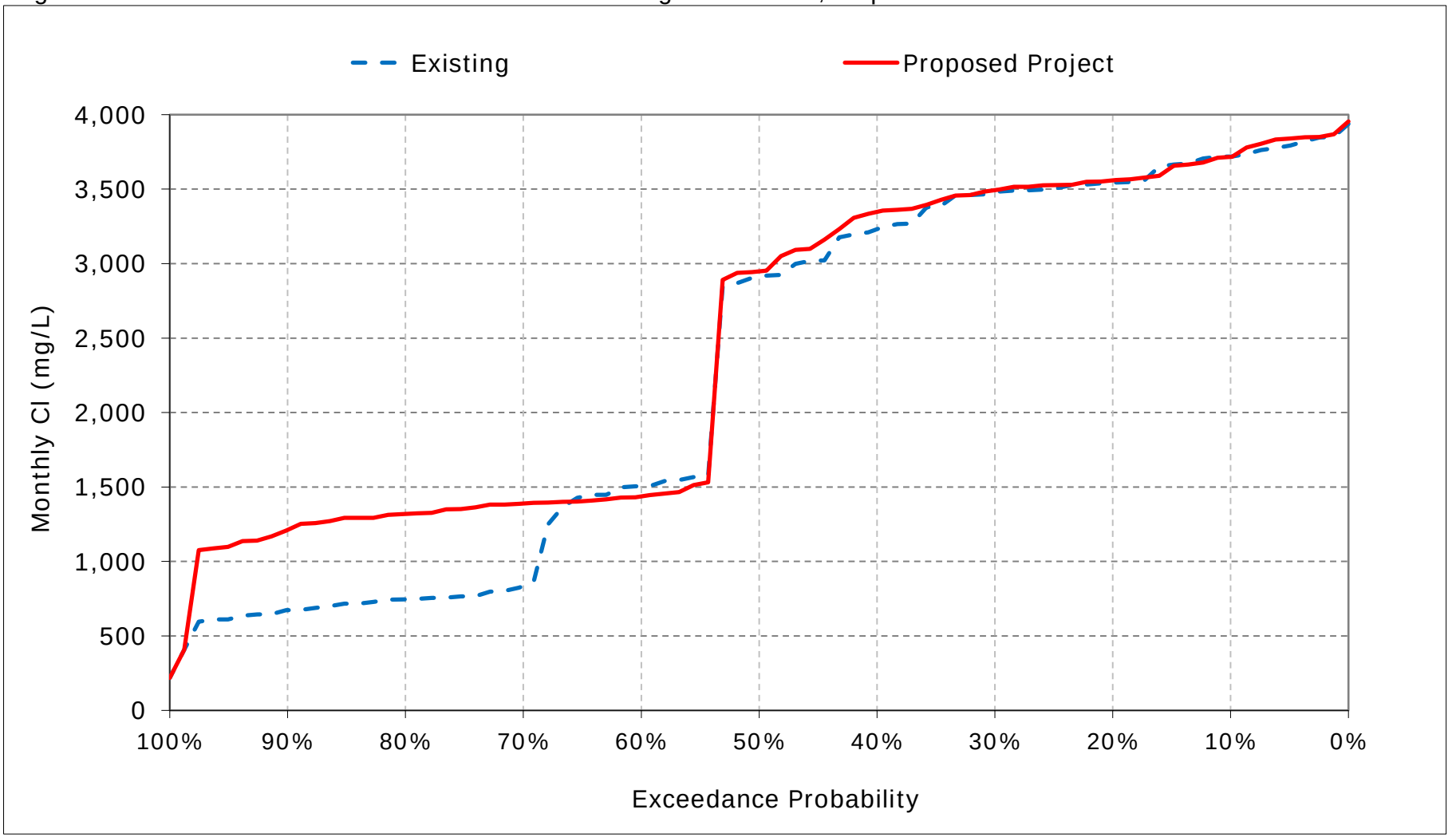


Figure 1-16. Sacramento River at Mallard Slough Chloride, October Cl

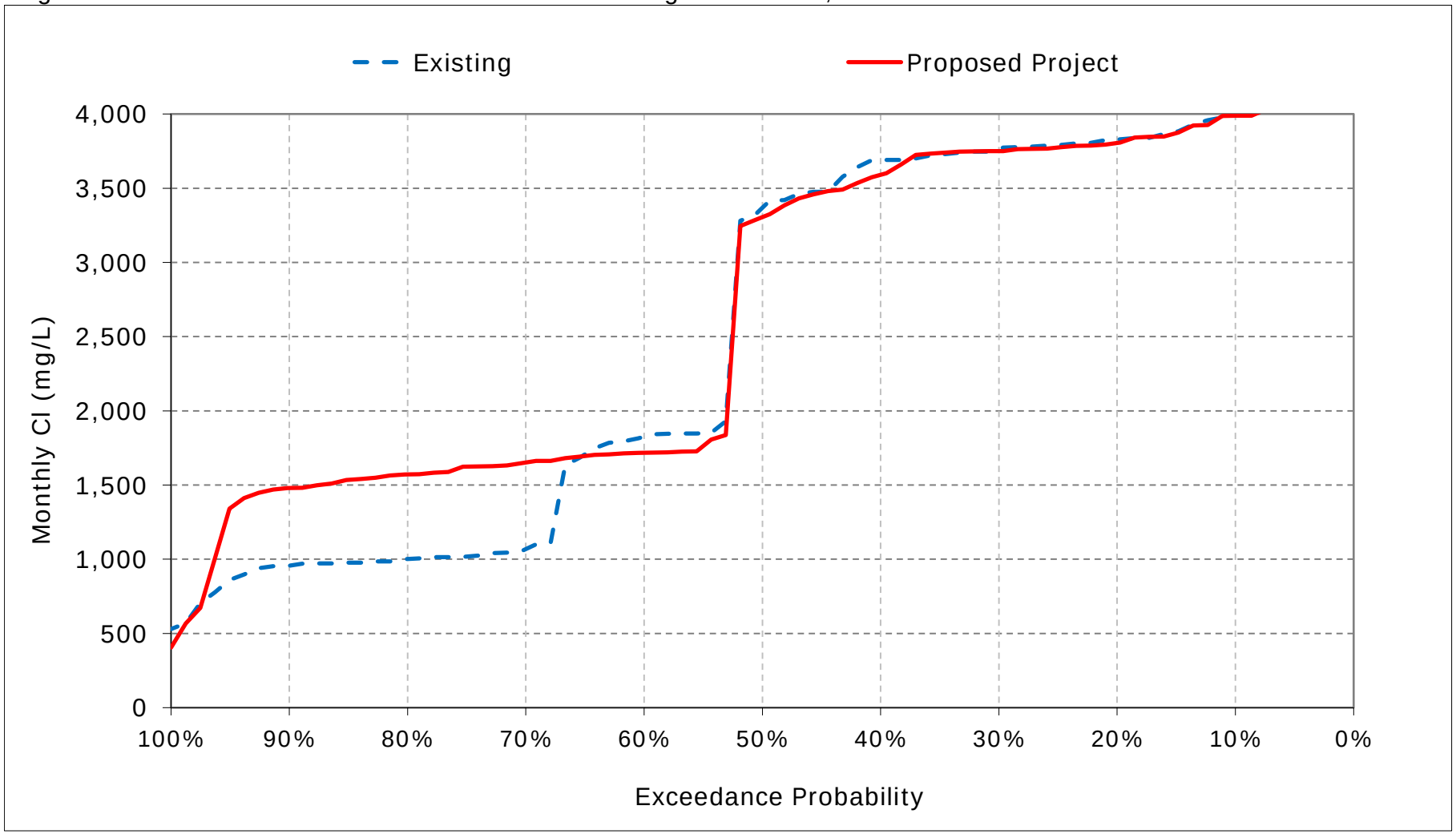


Figure 1-17. Sacramento River at Mallard Slough Chloride, November Cl

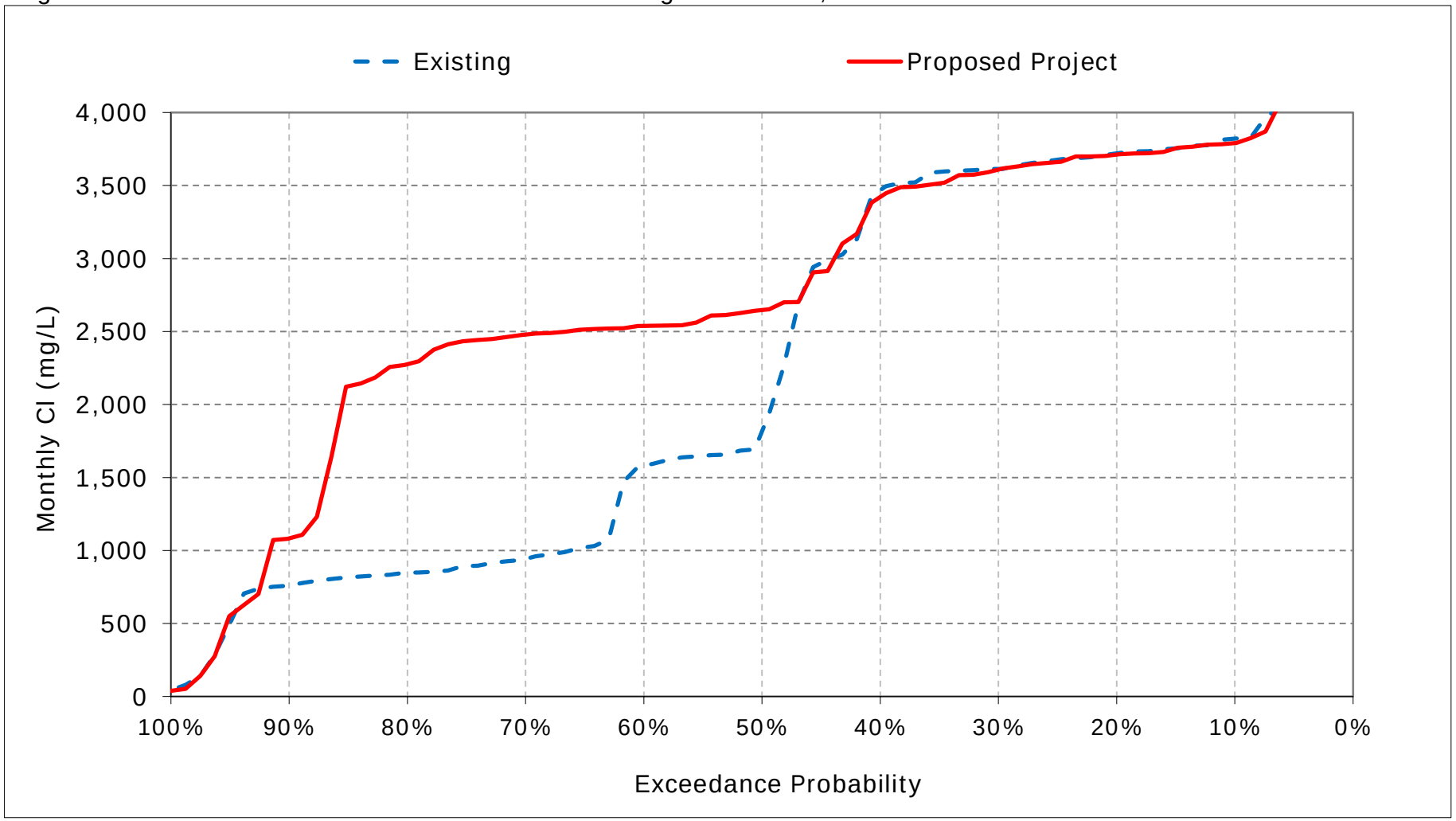


Figure 1-18. Sacramento River at Mallard Slough Chloride, December Cl

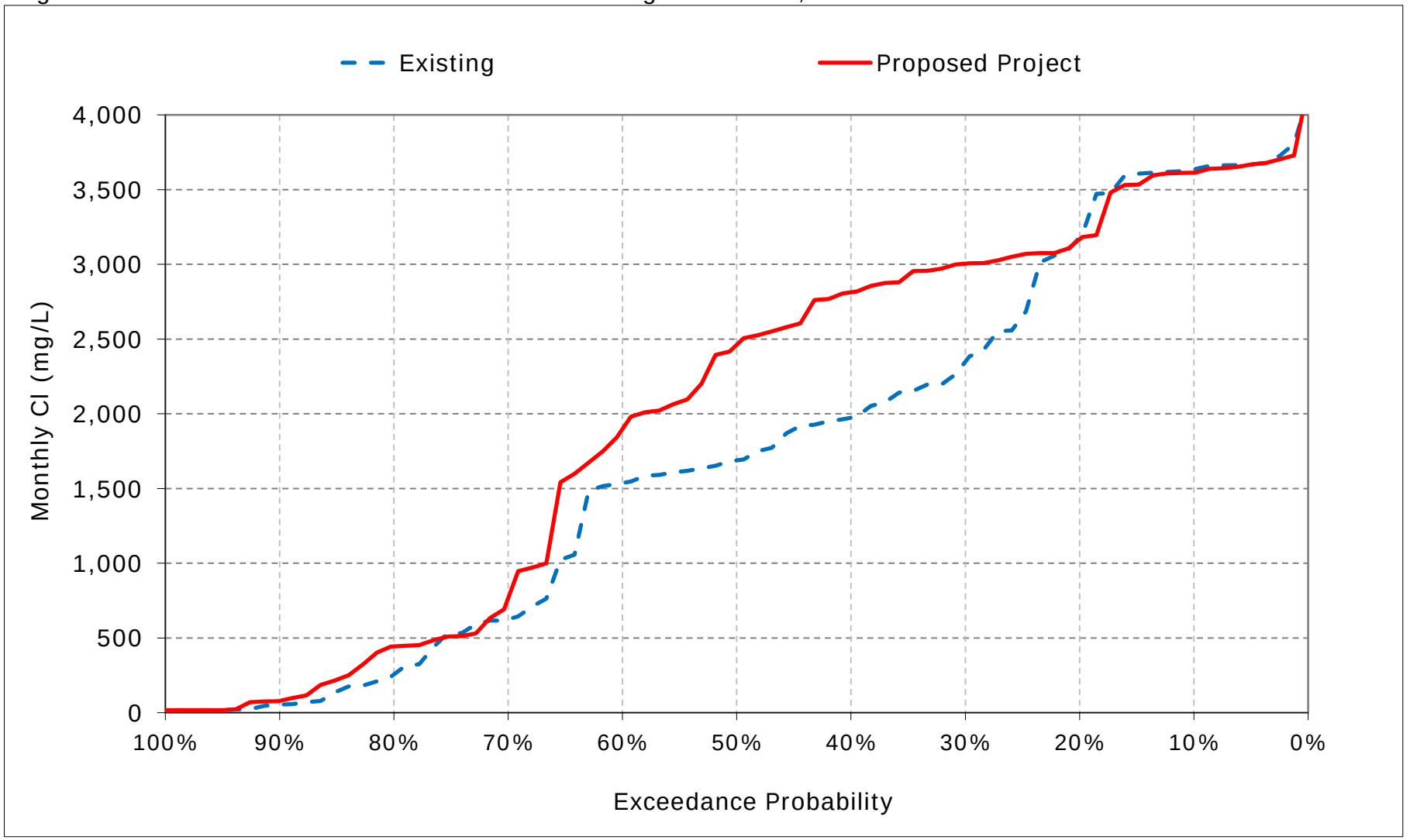


Table 2-1. Sacramento River at Rio Vista Chloride, Monthly Cl

Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	90	70	55	25	18	17	17	18	20	30	55	80
20%	70	52	34	22	17	16	16	17	18	23	44	60
30%	64	46	23	20	17	16	16	16	17	21	40	56
40%	56	35	20	19	17	16	16	16	17	18	24	44
50%	42	18	19	18	16	15	15	16	17	17	23	31
60%	18	16	18	17	16	15	15	15	16	16	22	17
70%	16	15	16	17	15	15	15	15	16	16	21	15
80%	16	15	16	16	15	15	15	15	15	16	20	15
90%	16	15	15	15	15	15	15	15	15	15	20	15
Long Term												
Full Simulation Period[a]	45	35	26	19	16	16	16	16	19	22	31	39
Water Year Types[b]												
Wet (32%)	34	22	17	16	15	15	15	15	15	16	20	15
Above Normal (15%)	45	36	22	18	16	15	15	15	16	16	21	17
Below Normal (17%)	44	31	32	19	16	16	16	16	16	17	23	38
Dry (22%)	50	43	27	21	17	16	16	16	18	22	41	57
Critical (15%)	61	55	45	25	19	17	17	21	32	45	60	87

Proposed Project

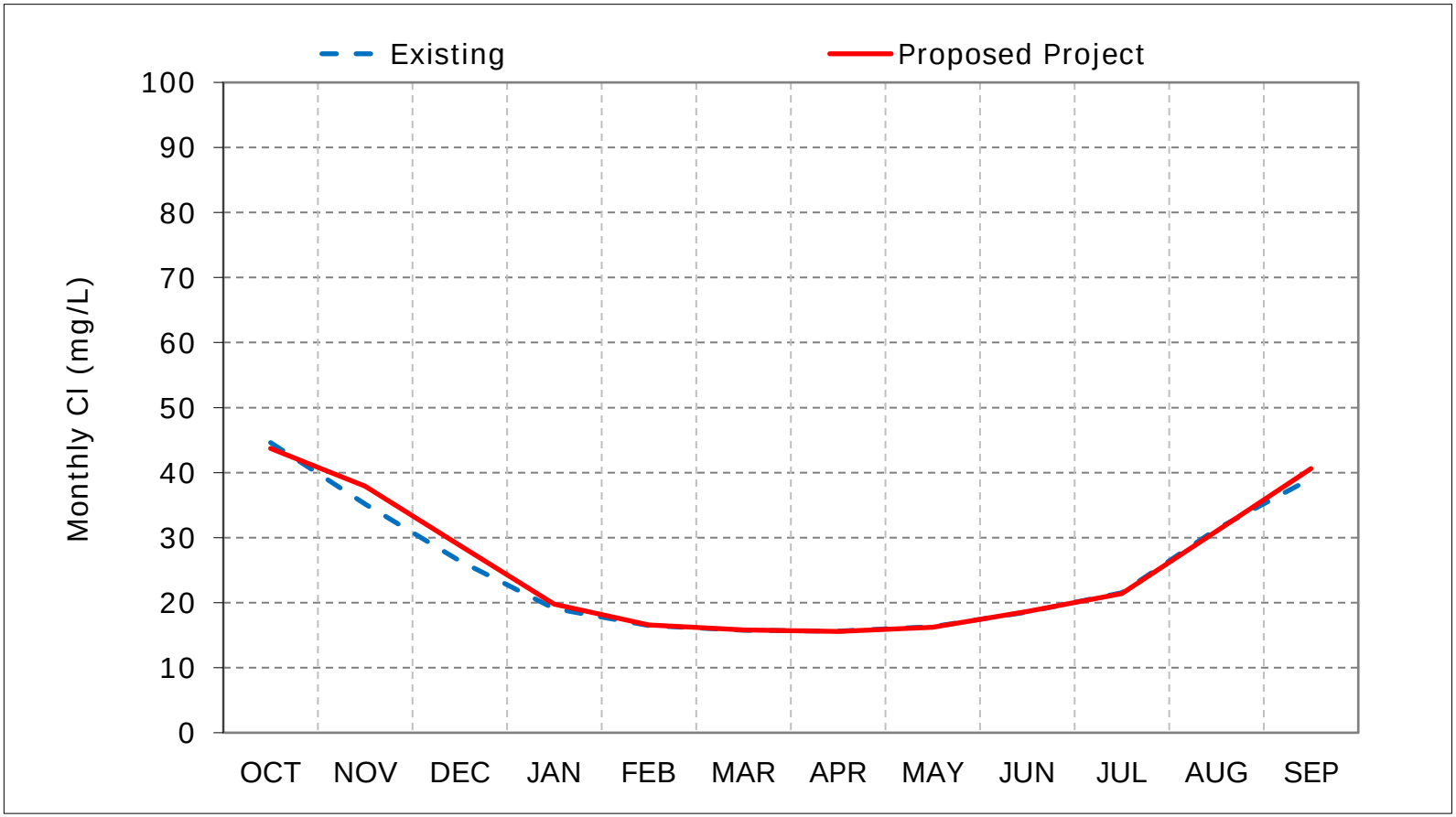
Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	84	70	54	27	18	17	17	18	20	29	56	77
20%	70	53	38	23	17	16	16	17	18	23	43	60
30%	63	47	30	21	17	16	16	16	18	21	39	56
40%	50	36	27	18	17	16	16	16	17	17	25	51
50%	38	24	23	18	16	15	15	15	16	17	24	35
60%	17	24	20	17	16	15	15	15	16	16	22	17
70%	17	23	17	16	15	15	15	15	15	16	21	17
80%	17	21	16	16	15	15	15	15	15	16	20	17
90%	16	16	15	15	15	15	15	15	15	15	20	16
Long Term												
Full Simulation Period[a]	44	38	29	20	17	16	16	16	19	21	31	41
Water Year Types[b]												
Wet (32%)	33	25	17	16	15	15	15	15	15	16	20	17
Above Normal (15%)	43	39	25	18	16	15	15	15	16	16	21	17
Below Normal (17%)	44	34	35	19	16	16	15	15	16	17	24	43
Dry (22%)	49	46	31	22	17	16	16	16	18	22	41	58
Critical (15%)	60	57	48	27	19	17	17	21	33	44	58	87

Proposed Project minus Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-7	-1	0	3	0	0	0	0	0	0	0	-3
20%	0	1	4	1	0	0	0	0	0	0	-1	0
30%	-1	1	7	1	0	0	0	0	0	0	-1	1
40%	-5	1	7	0	0	0	0	0	0	0	1	7
50%	-3	6	5	0	0	0	0	0	0	0	1	4
60%	0	7	3	0	0	0	0	0	0	0	0	0
70%	1	8	0	0	0	0	0	0	0	0	0	1
80%	1	6	0	0	0	0	0	0	0	0	0	2
90%	1	1	0	0	0	0	0	0	0	0	0	1
Long Term												
Full Simulation Period[a]	-1	3	2	1	0	0	0	0	0	0	0	2
Water Year Types[b]												
Wet (32%)	-1	3	1	0	0	0	0	0	0	0	0	1
Above Normal (15%)	-3	3	3	0	0	0	0	0	0	0	0	0
Below Normal (17%)	0	3	3	0	0	0	0	0	0	0	1	5
Dry (22%)	0	3	4	1	0	0	0	0	0	0	0	1
Critical (15%)	-1	2	2	2	1	0	0	0	1	-1	-2	0

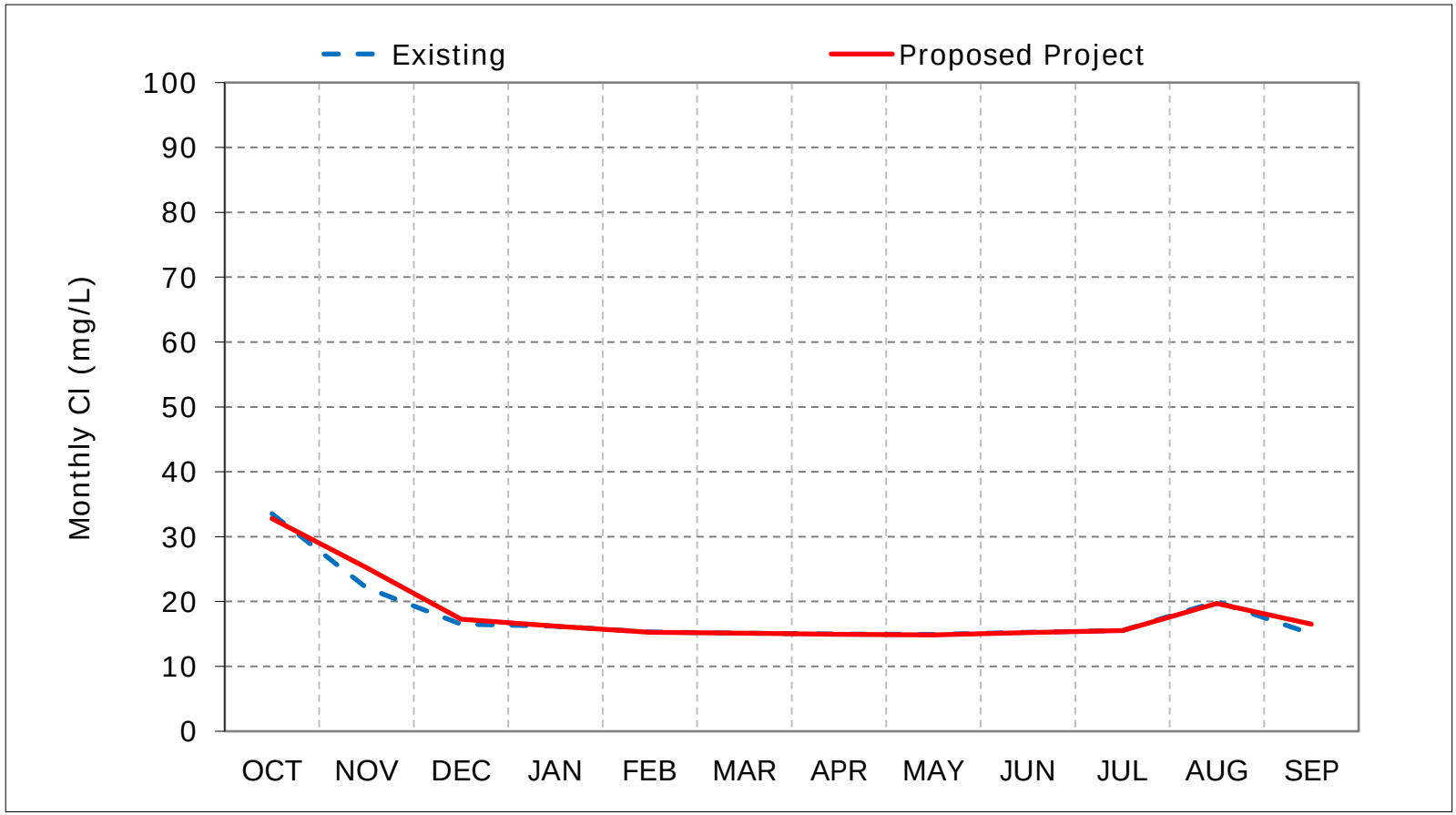
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 2-1. Sacramento River at Rio Vista Chloride, Long-Term Average Cl



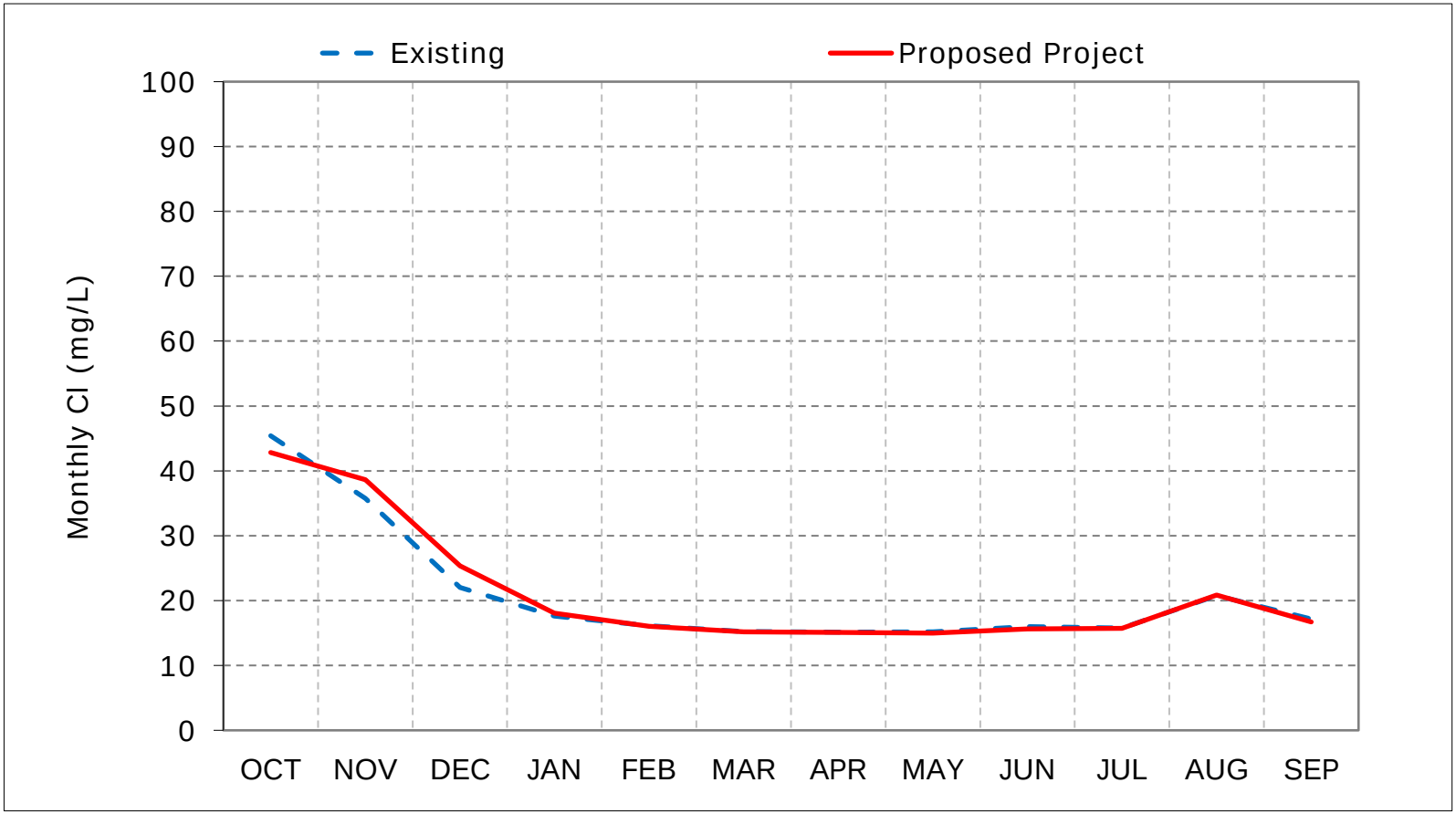
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-2. Sacramento River at Rio Vista Chloride, Wet Year Average Cl



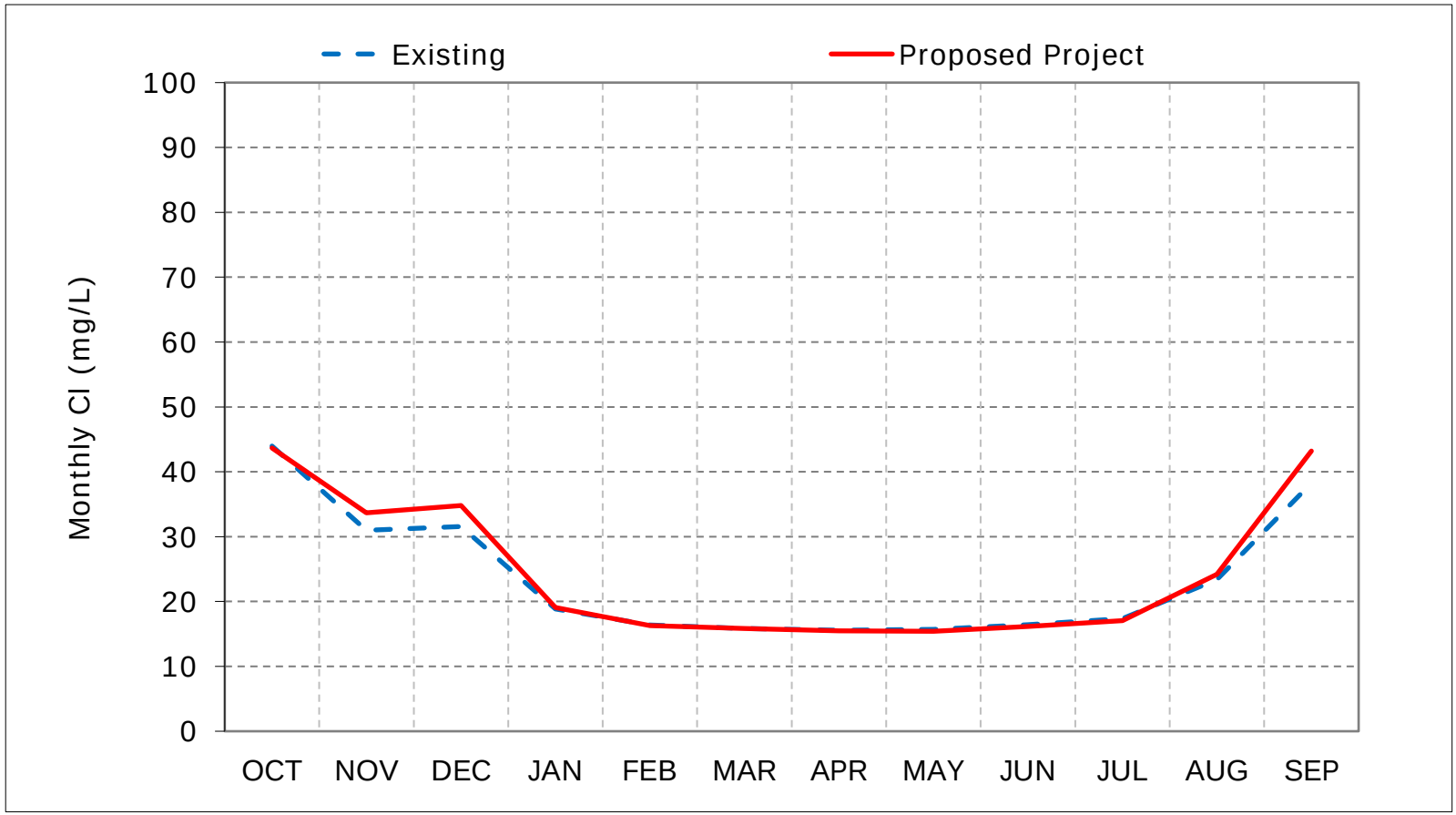
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-3. Sacramento River at Rio Vista Chloride, Above Normal Year Average Cl



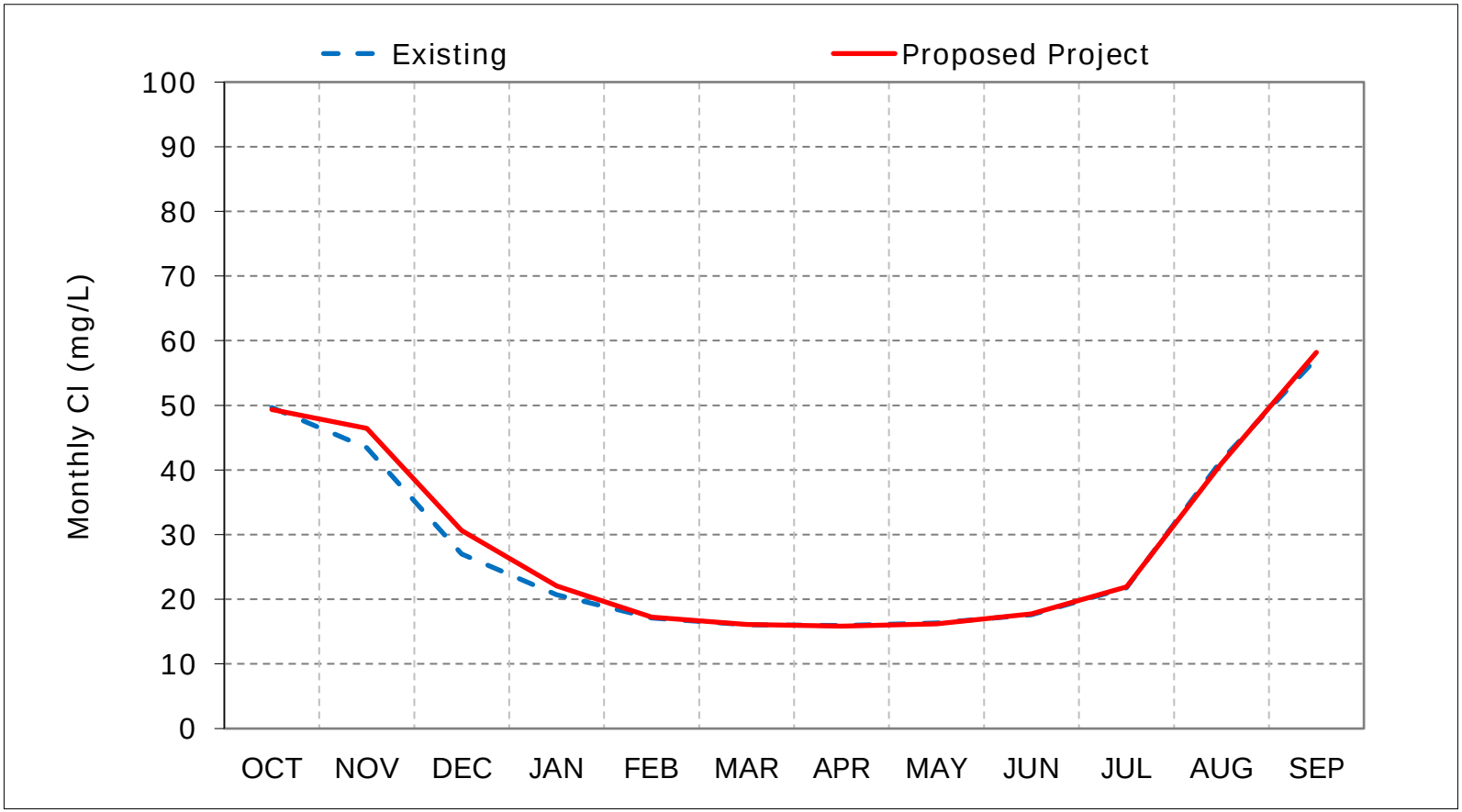
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-4. Sacramento River at Rio Vista Chloride, Below Normal Year Average Cl



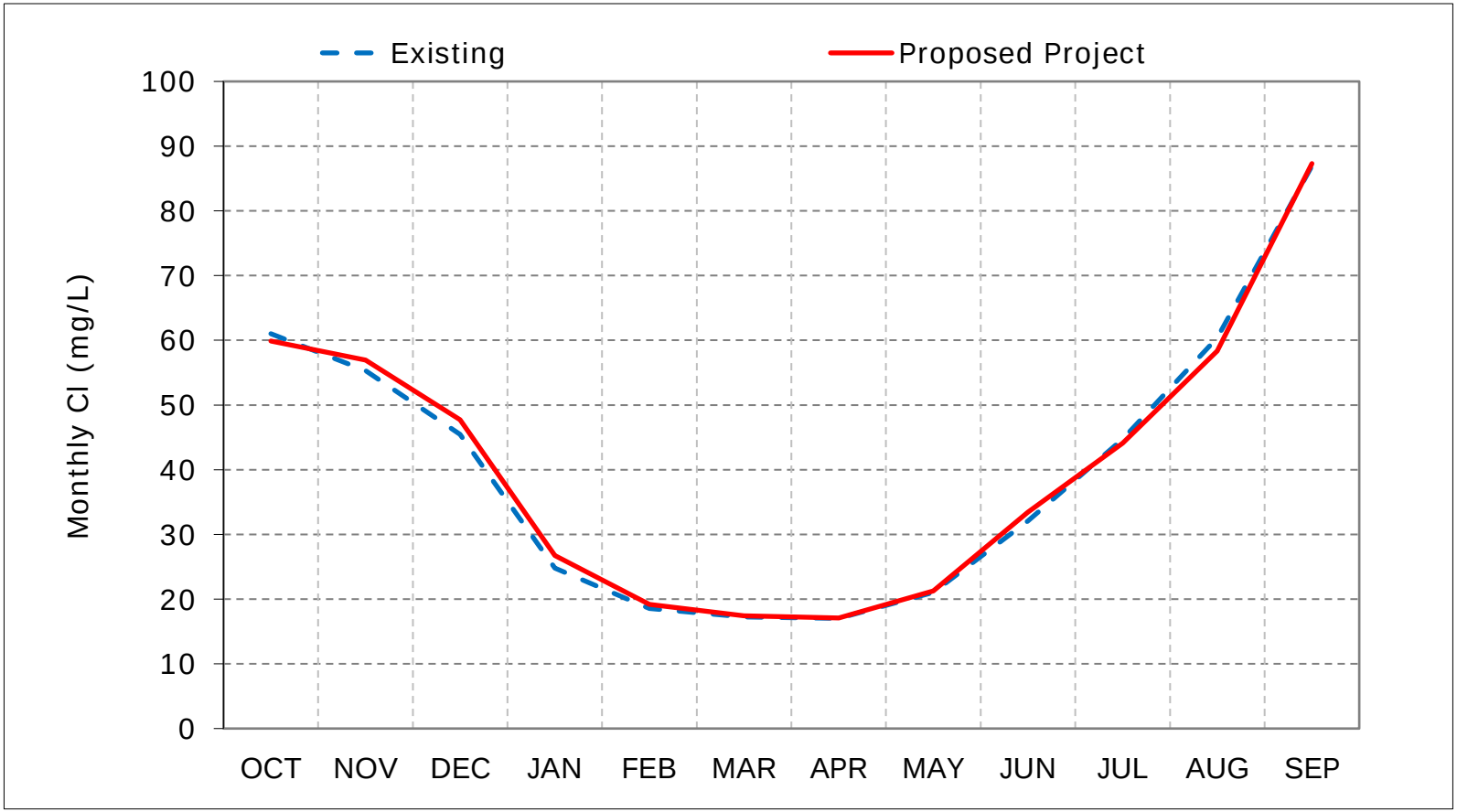
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 2-5. Sacramento River at Rio Vista Chloride, Dry Year Average Cl



*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.

Figure 2-6. Sacramento River at Rio Vista Chloride, Critical Year Average Cl



*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.

Figure 2-7. Sacramento River at Rio Vista Chloride, January Cl

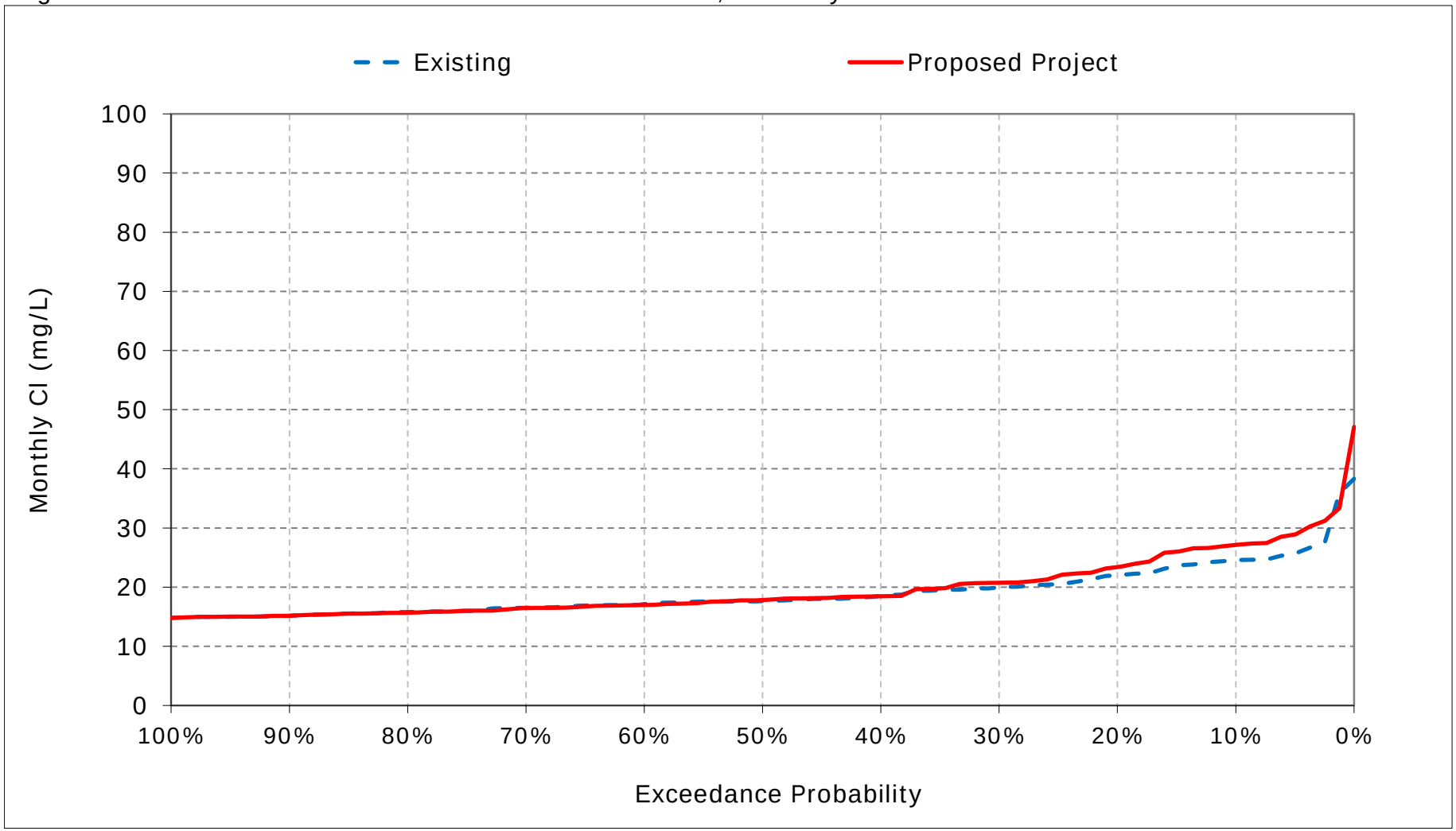


Figure 2-8. Sacramento River at Rio Vista Chloride, February Cl

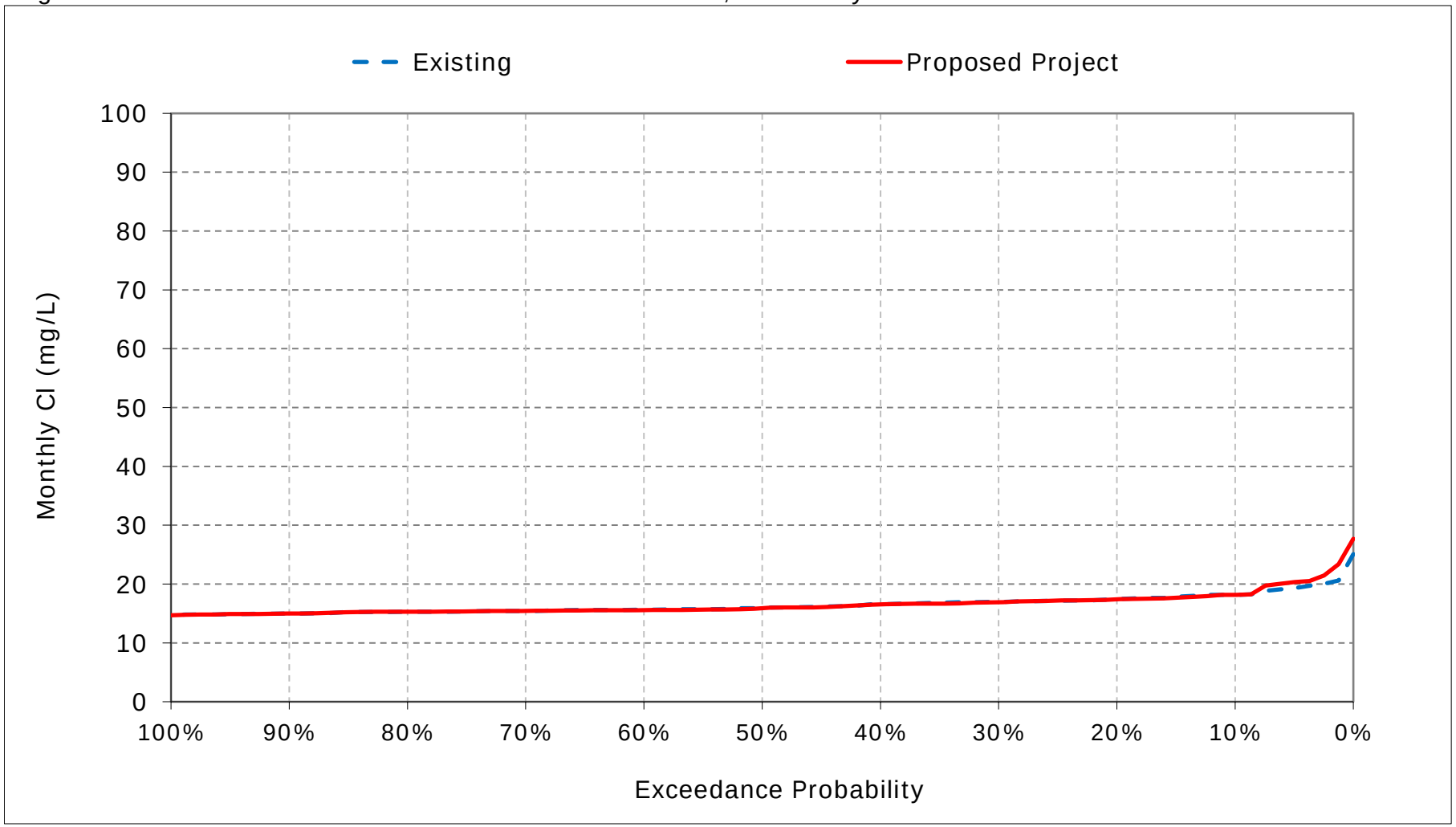


Figure 2-9. Sacramento River at Rio Vista Chloride, March Cl

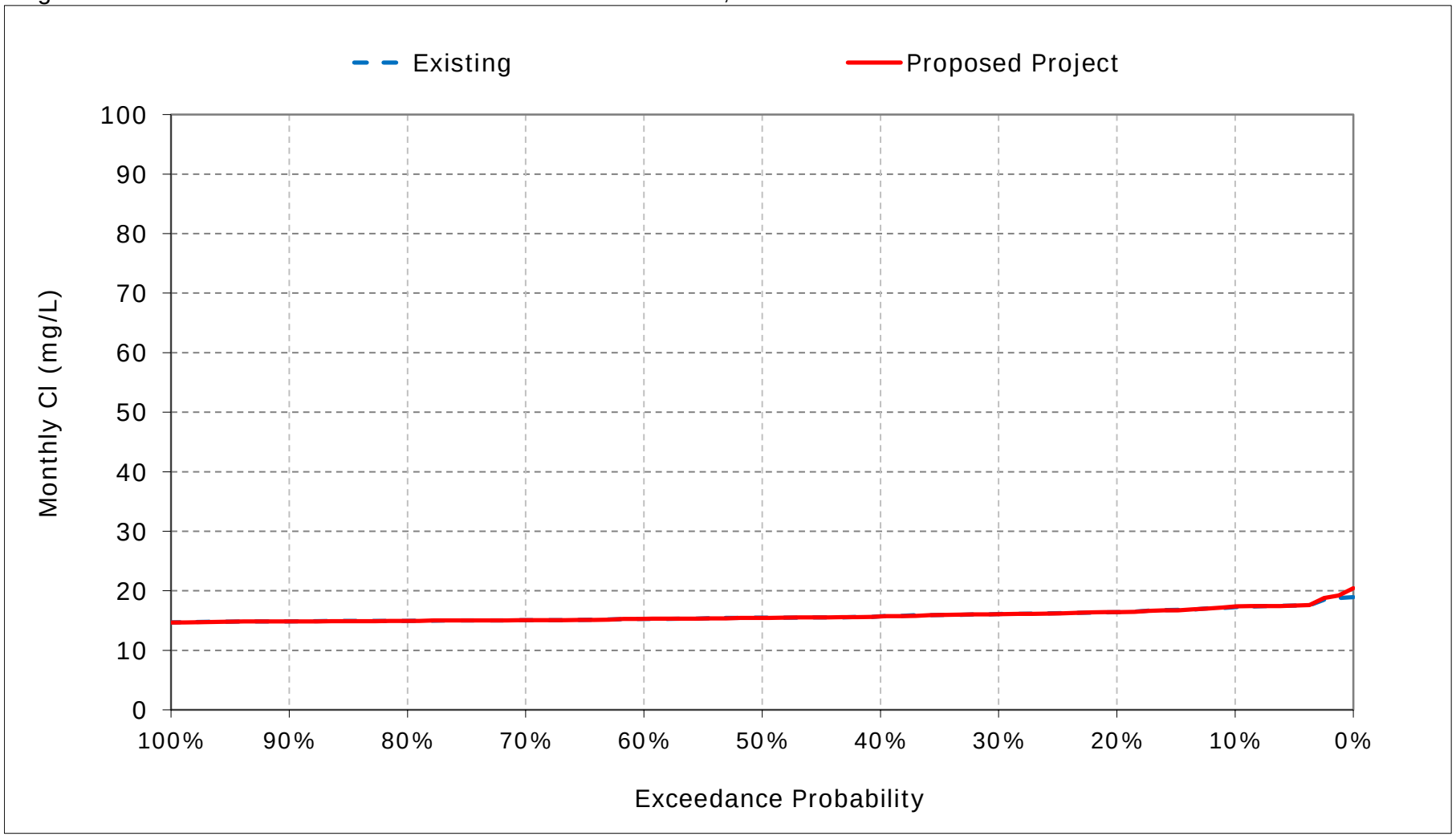


Figure 2-10. Sacramento River at Rio Vista Chloride, April Cl

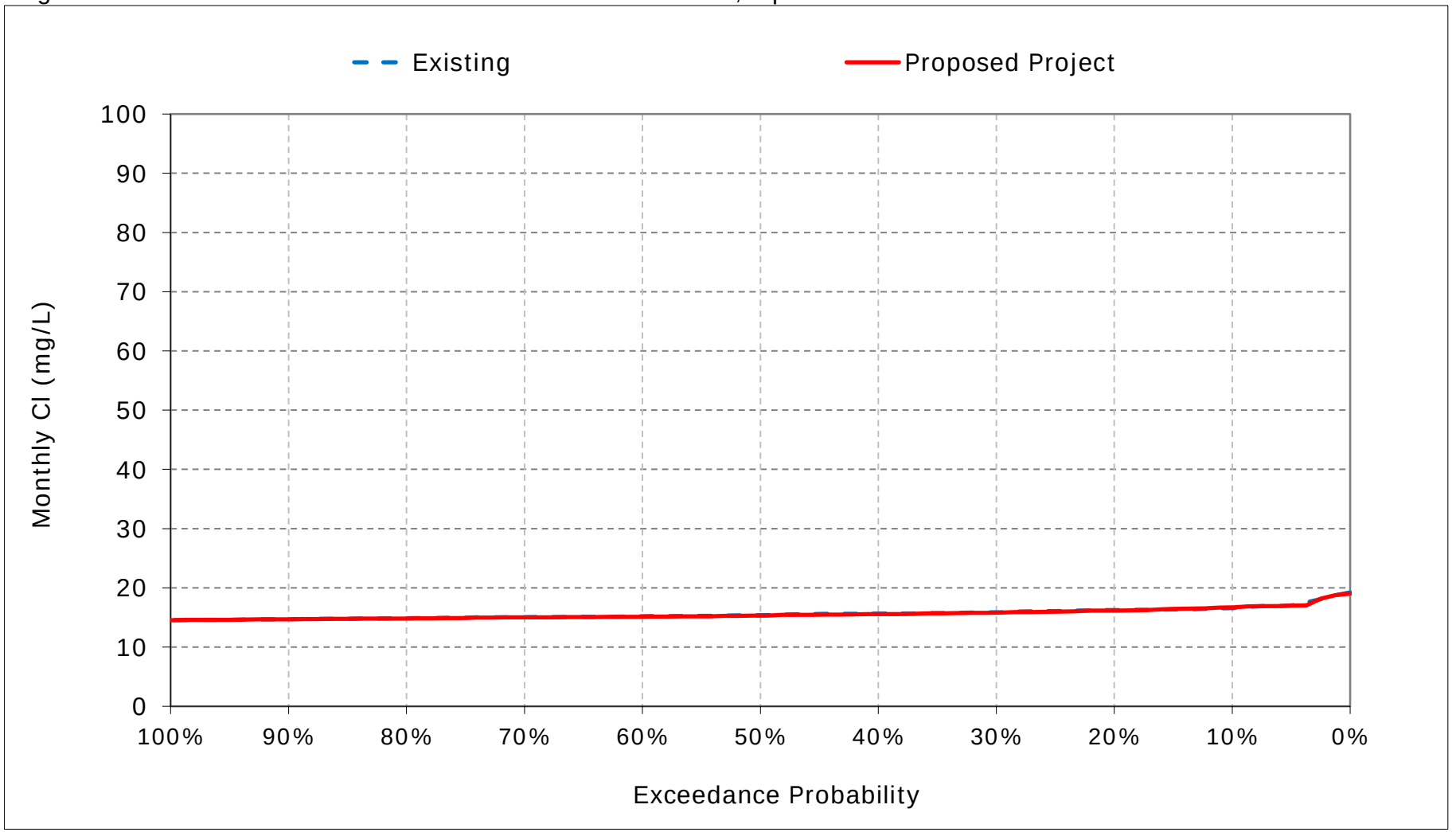


Figure 2-11. Sacramento River at Rio Vista Chloride, May Cl

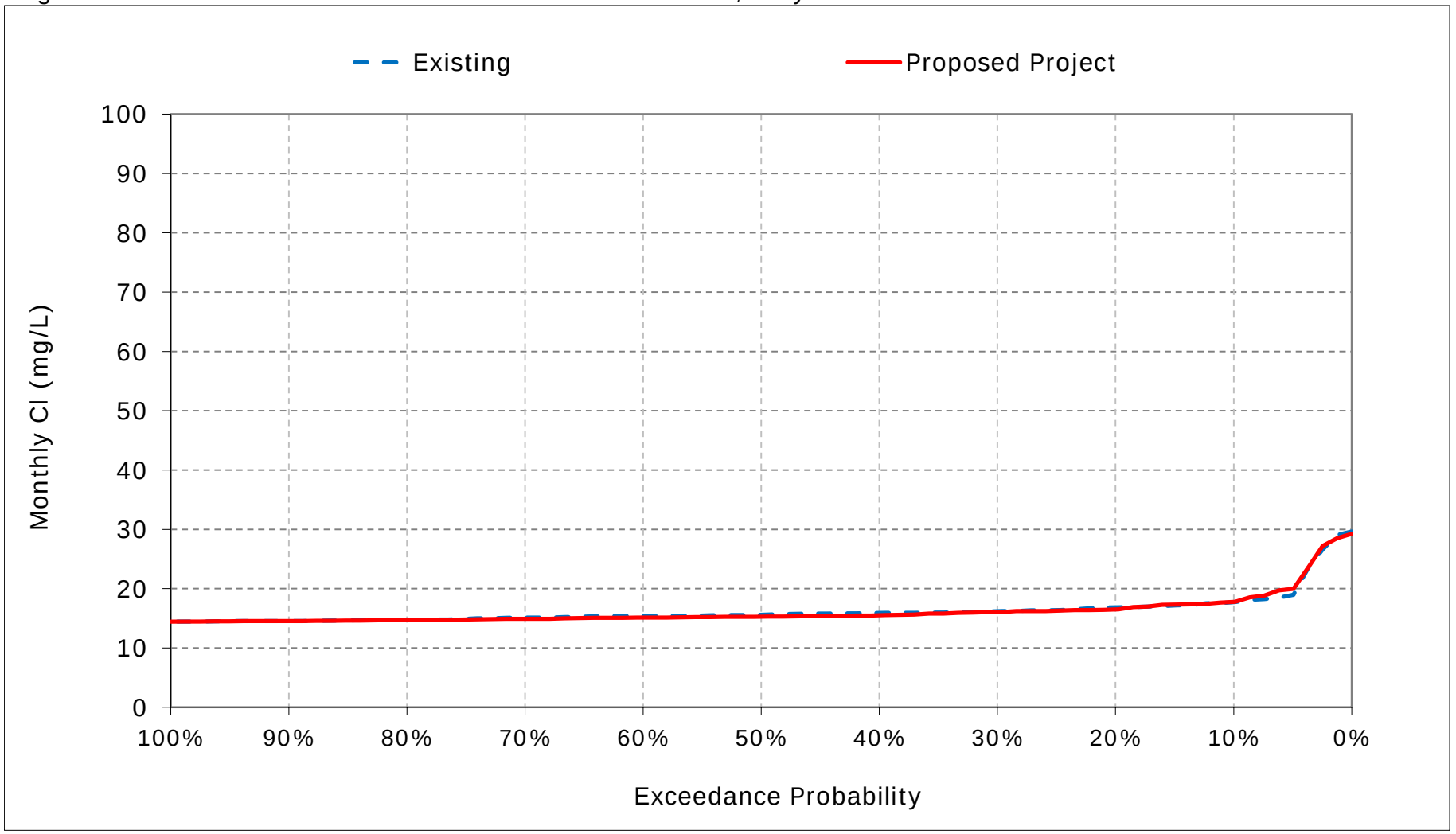


Figure 2-12. Sacramento River at Rio Vista Chloride, June Cl

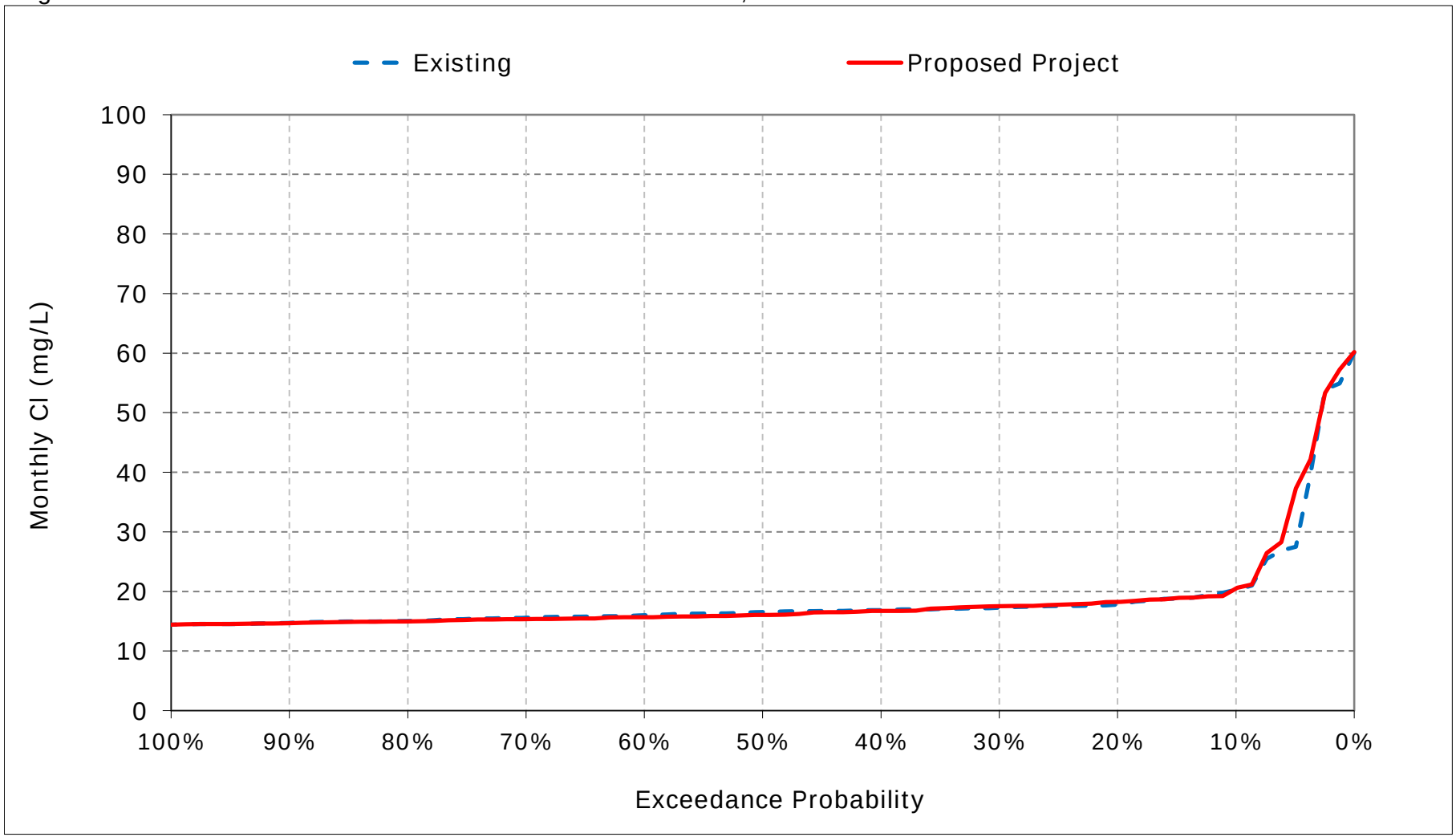


Figure 2-13. Sacramento River at Rio Vista Chloride, July Cl

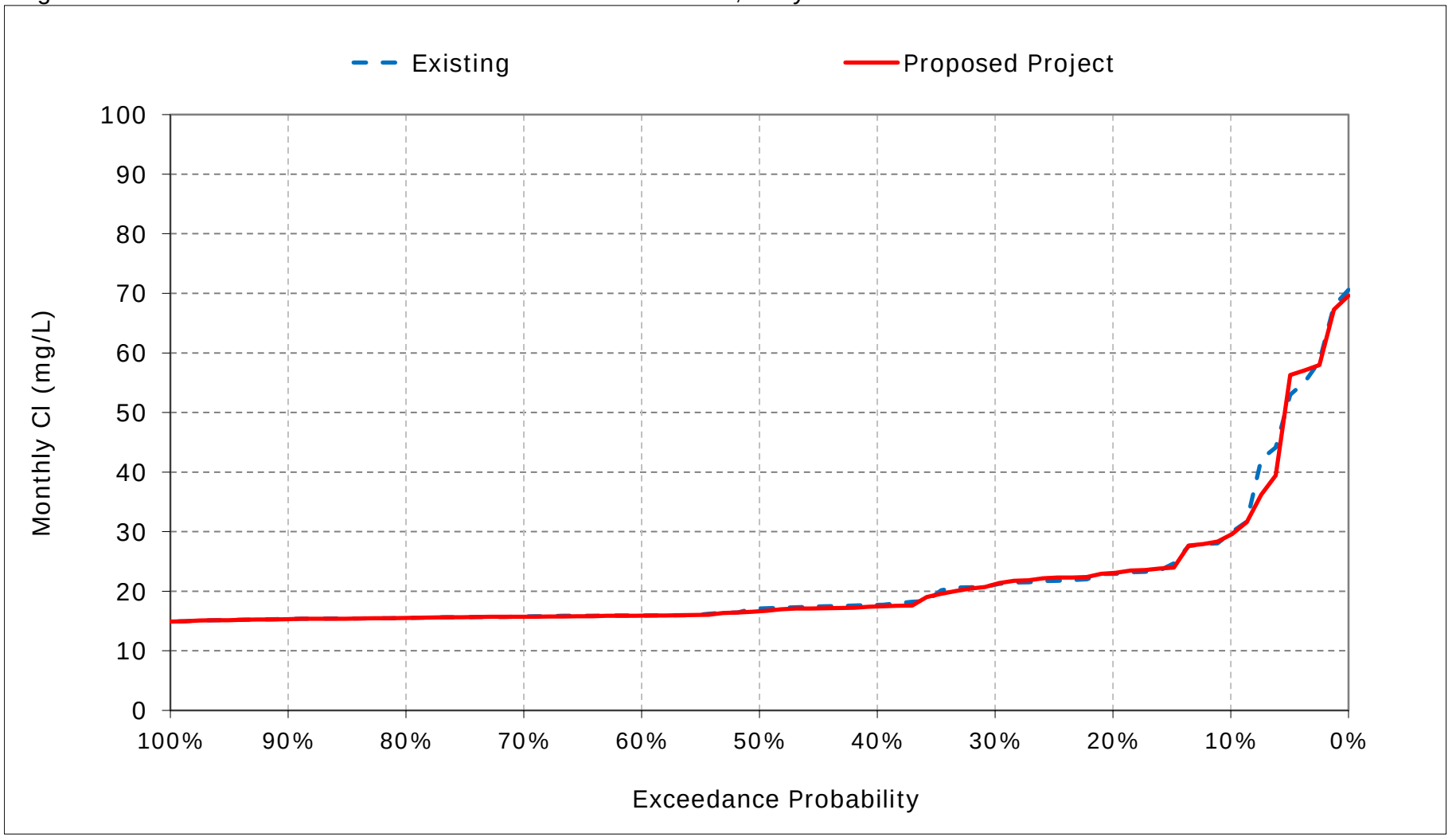


Figure 2-14. Sacramento River at Rio Vista Chloride, August Cl

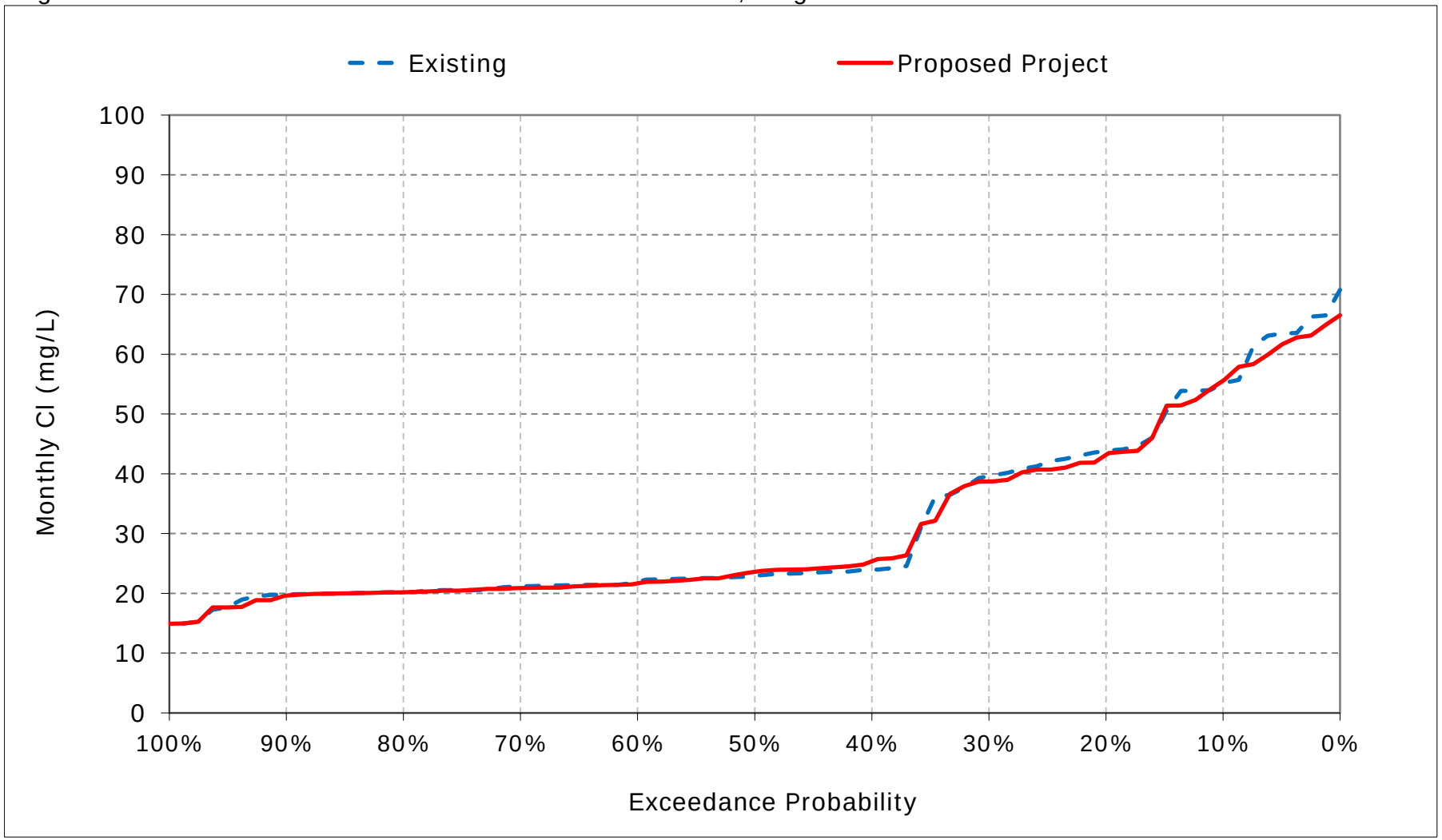


Figure 2-15. Sacramento River at Rio Vista Chloride, September Cl

Figure 2-16. Sacramento River at Rio Vista Chloride, October Cl

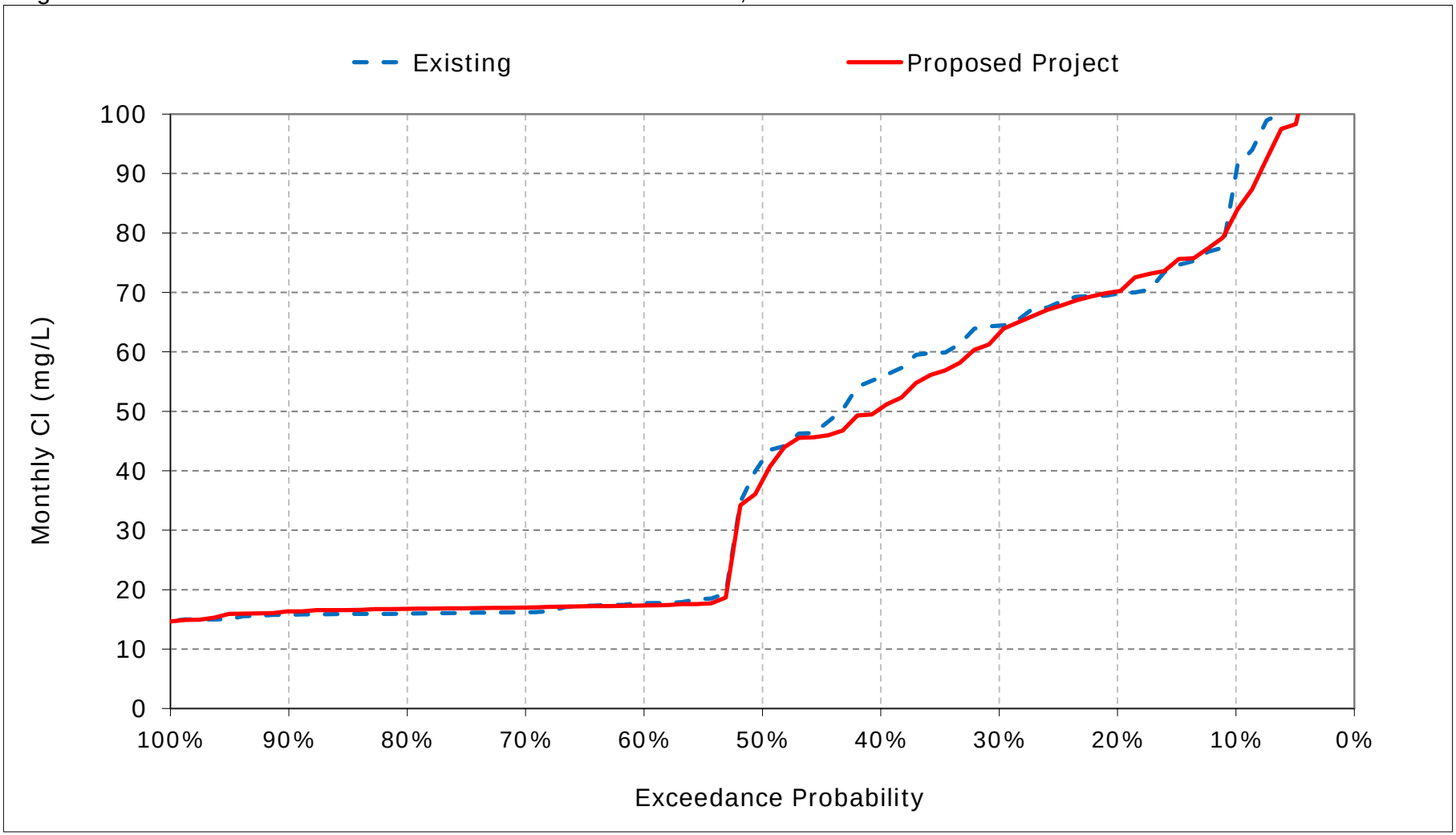


Figure 2-17. Sacramento River at Rio Vista Chloride, November Cl

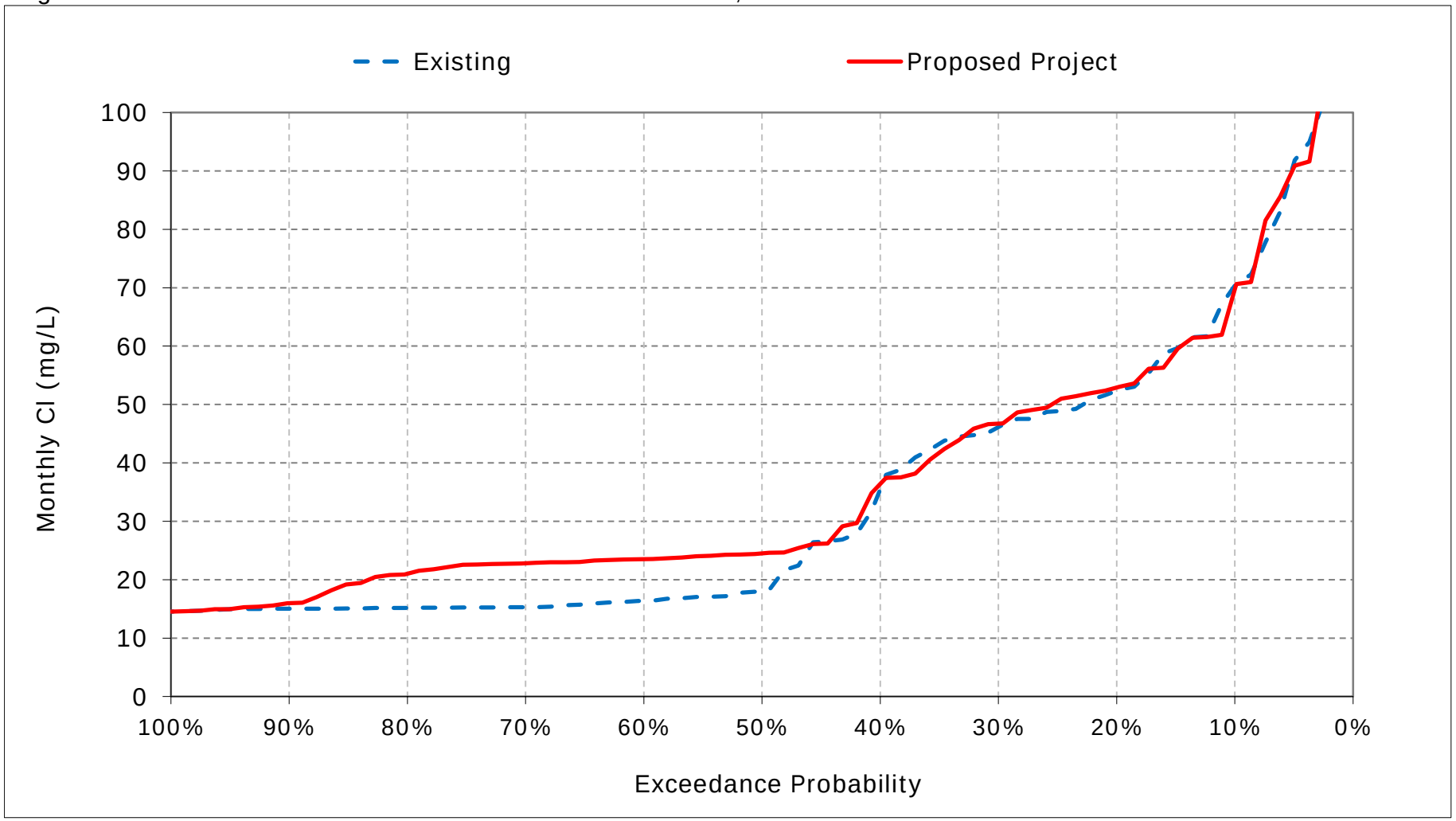


Figure 2-18. Sacramento River at Rio Vista Chloride, December Cl

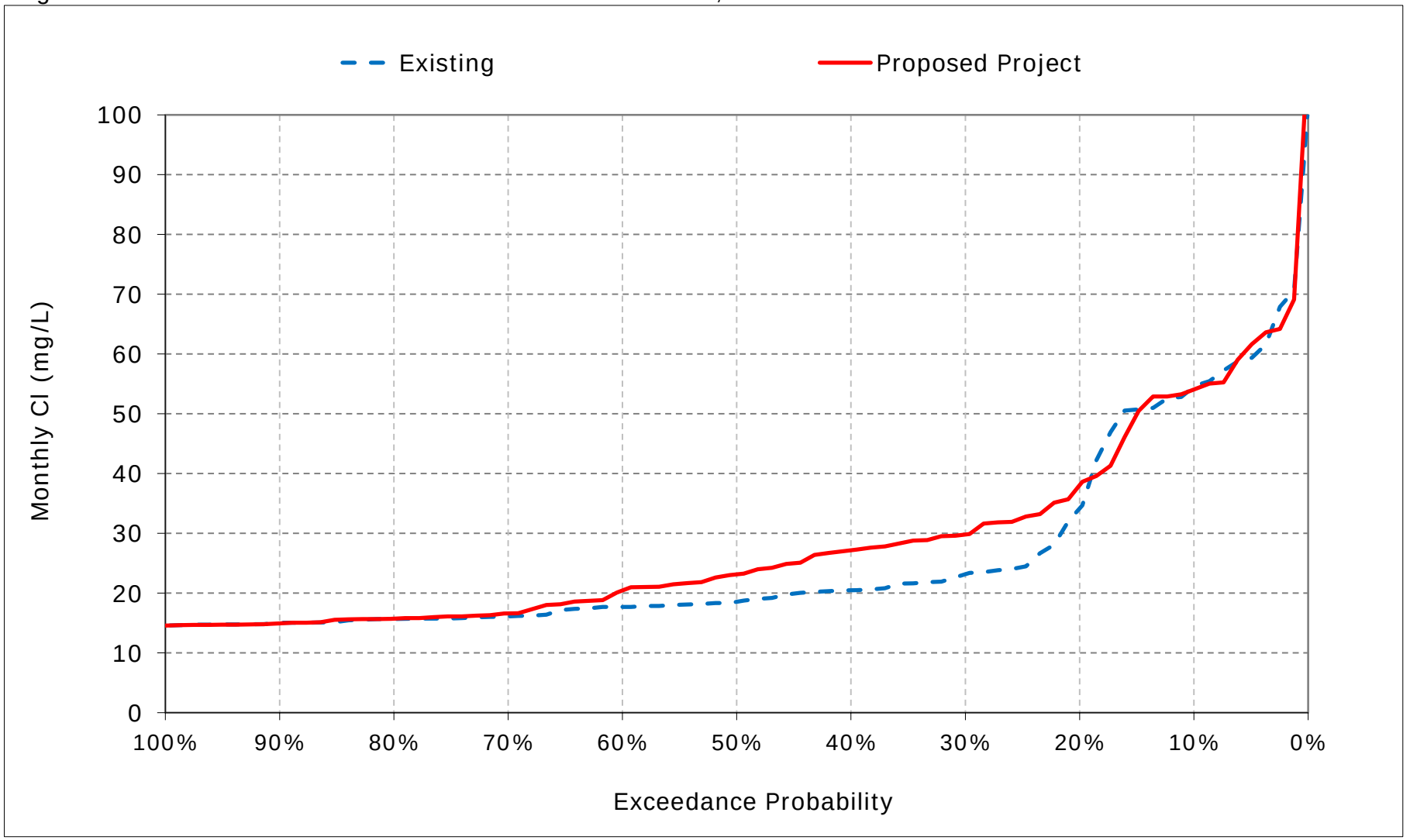


Table 3-1. Sacramento River at Collinsville Chloride, Monthly Cl

Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,964	2,757	2,546	1,405	564	475	527	828	1,134	1,699	2,329	2,681
20%	2,755	2,593	2,051	1,164	332	225	243	552	893	1,378	1,993	2,497
30%	2,699	2,527	1,366	835	142	67	103	399	851	1,249	1,923	2,440
40%	2,607	2,353	1,119	422	62	39	66	193	676	874	1,456	2,189
50%	2,303	928	893	304	37	24	30	94	555	752	1,331	1,866
60%	1,010	788	826	135	20	19	21	49	375	560	1,295	739
70%	520	412	239	23	18	17	19	27	258	508	1,204	359
80%	479	342	98	19	17	16	17	18	83	433	1,135	309
90%	444	307	22	16	16	16	16	16	18	304	1,068	278
Long Term												
Full Simulation Period[a]	1,724	1,470	1,062	533	190	126	153	295	603	906	1,519	1,479
Water Year Types[b]												
Wet (32%)	1,290	859	281	74	19	18	23	43	161	366	1,053	279
Above Normal (15%)	1,810	1,460	1,010	283	56	19	27	51	364	504	1,163	719
Below Normal (17%)	1,814	1,610	1,401	563	99	72	80	175	533	807	1,393	2,014
Dry (22%)	1,847	1,752	1,317	851	303	167	201	413	832	1,297	1,952	2,468
Critical (15%)	2,290	2,221	2,029	1,268	634	471	574	1,048	1,539	2,007	2,383	2,732

Proposed Project

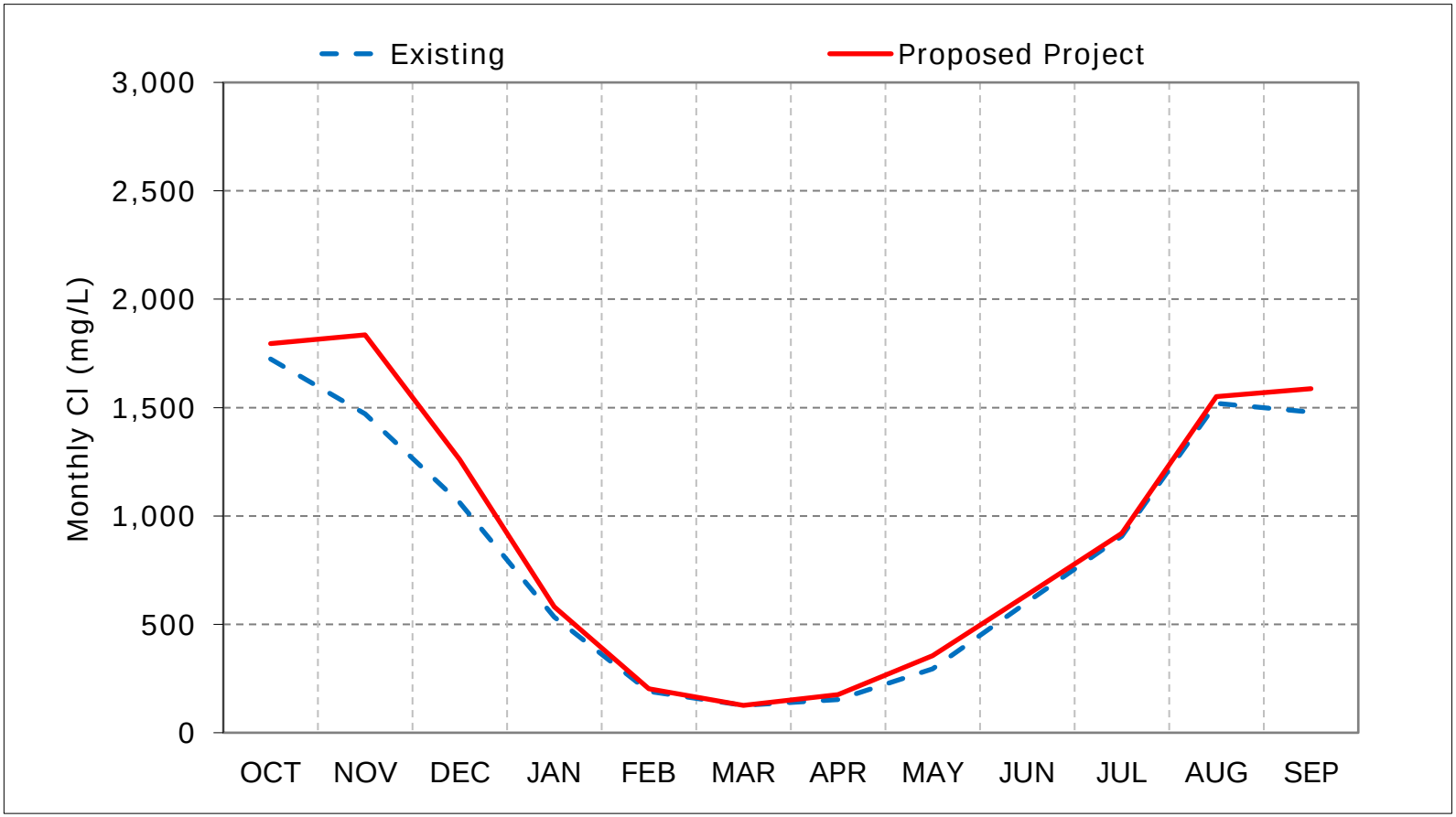
Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,925	2,692	2,545	1,627	533	480	578	885	1,153	1,684	2,292	2,671
20%	2,741	2,600	2,060	1,296	324	205	318	685	974	1,409	1,997	2,513
30%	2,690	2,534	1,916	941	147	54	155	572	880	1,235	1,935	2,446
40%	2,499	2,337	1,761	469	58	32	96	288	757	951	1,738	2,315
50%	2,214	1,681	1,406	295	39	22	48	165	562	799	1,495	1,902
60%	948	1,575	985	118	20	19	22	106	441	550	1,281	702
70%	885	1,526	335	24	18	17	19	44	310	500	1,197	668
80%	833	1,331	194	18	17	16	17	18	88	440	1,117	622
90%	742	520	35	16	16	16	16	16	18	306	1,055	553
Long Term												
Full Simulation Period[a]	1,796	1,835	1,261	581	203	126	176	356	637	921	1,551	1,587
Water Year Types[b]												
Wet (32%)	1,396	1,323	388	72	18	18	29	72	192	368	1,029	583
Above Normal (15%)	1,884	1,849	1,314	314	39	18	36	98	378	493	1,171	646
Below Normal (17%)	1,891	1,953	1,652	577	93	67	110	260	555	875	1,605	2,119
Dry (22%)	1,932	2,084	1,569	961	333	161	242	515	886	1,316	1,966	2,481
Critical (15%)	2,257	2,422	2,179	1,387	699	484	610	1,101	1,582	2,005	2,378	2,742

Proposed Project minus Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-39	-65	-1	222	-30	6	50	58	19	-15	-37	-10
20%	-14	7	8	132	-8	-20	75	133	82	31	4	16
30%	-9	7	549	106	5	-12	52	174	29	-14	12	6
40%	-108	-16	641	47	-4	-7	30	96	81	78	282	126
50%	-89	753	513	-9	2	-2	17	70	7	48	164	36
60%	-63	788	160	-17	0	-1	1	57	66	-10	-14	-37
70%	365	1,114	96	1	0	0	0	18	51	-8	-7	309
80%	354	989	96	-1	0	0	-1	0	5	7	-18	313
90%	298	213	13	0	0	0	0	-1	0	1	-13	275
Long Term												
Full Simulation Period[a]	72	365	199	48	12	0	23	61	34	15	32	108
Water Year Types[b]												
Wet (32%)	106	464	107	-1	-1	0	7	29	31	2	-24	305
Above Normal (15%)	74	389	304	31	-17	-1	9	47	15	-11	8	-73
Below Normal (17%)	77	343	251	13	-6	-5	30	84	22	68	211	106
Dry (22%)	85	332	252	109	30	-6	41	103	54	20	14	13
Critical (15%)	-32	200	151	120	65	14	36	53	43	-2	-5	9

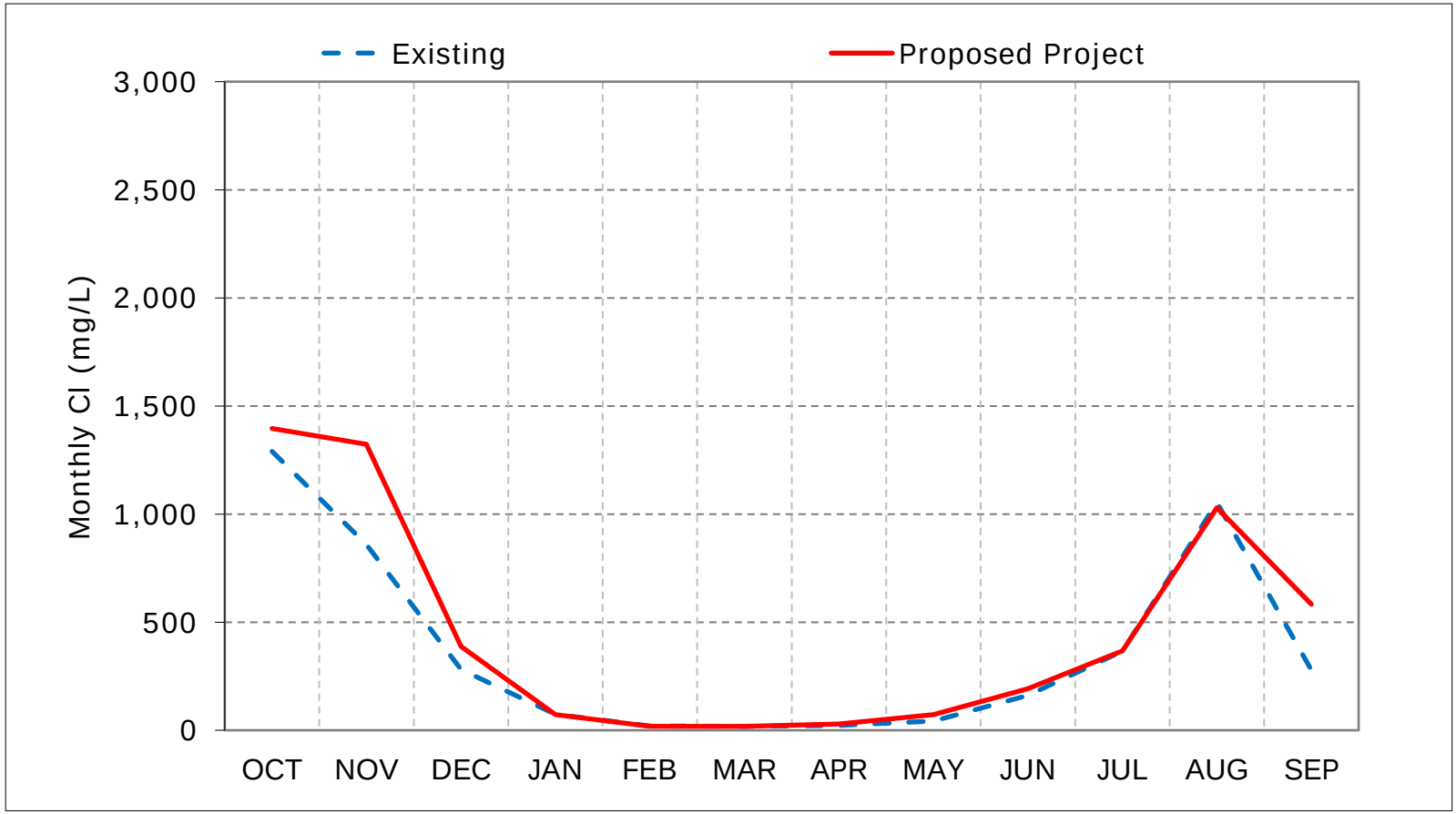
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 3-1. Sacramento River at Collinsville Chloride, Long-Term Average Cl



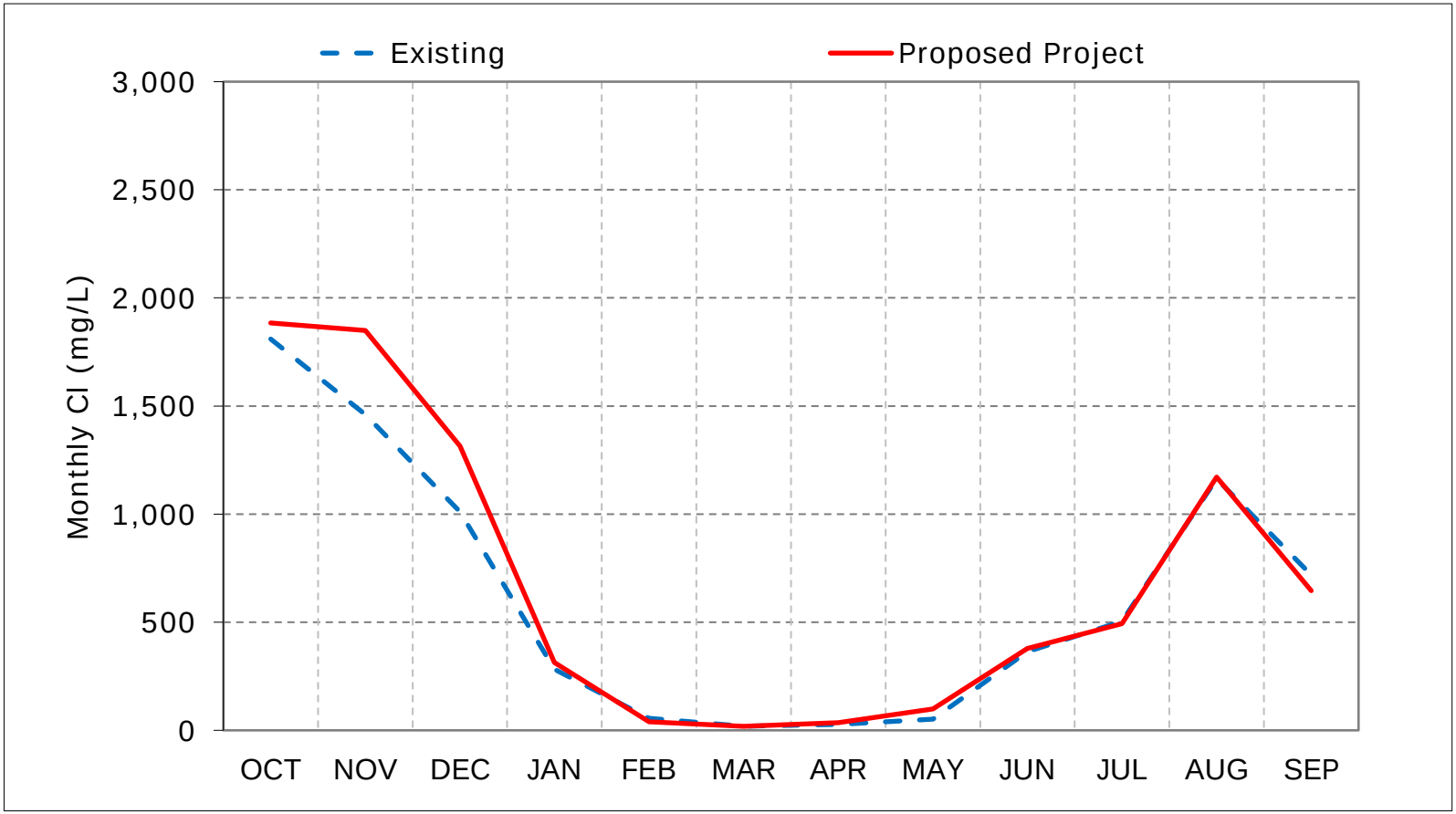
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-2. Sacramento River at Collinsville Chloride, Wet Year Average Cl



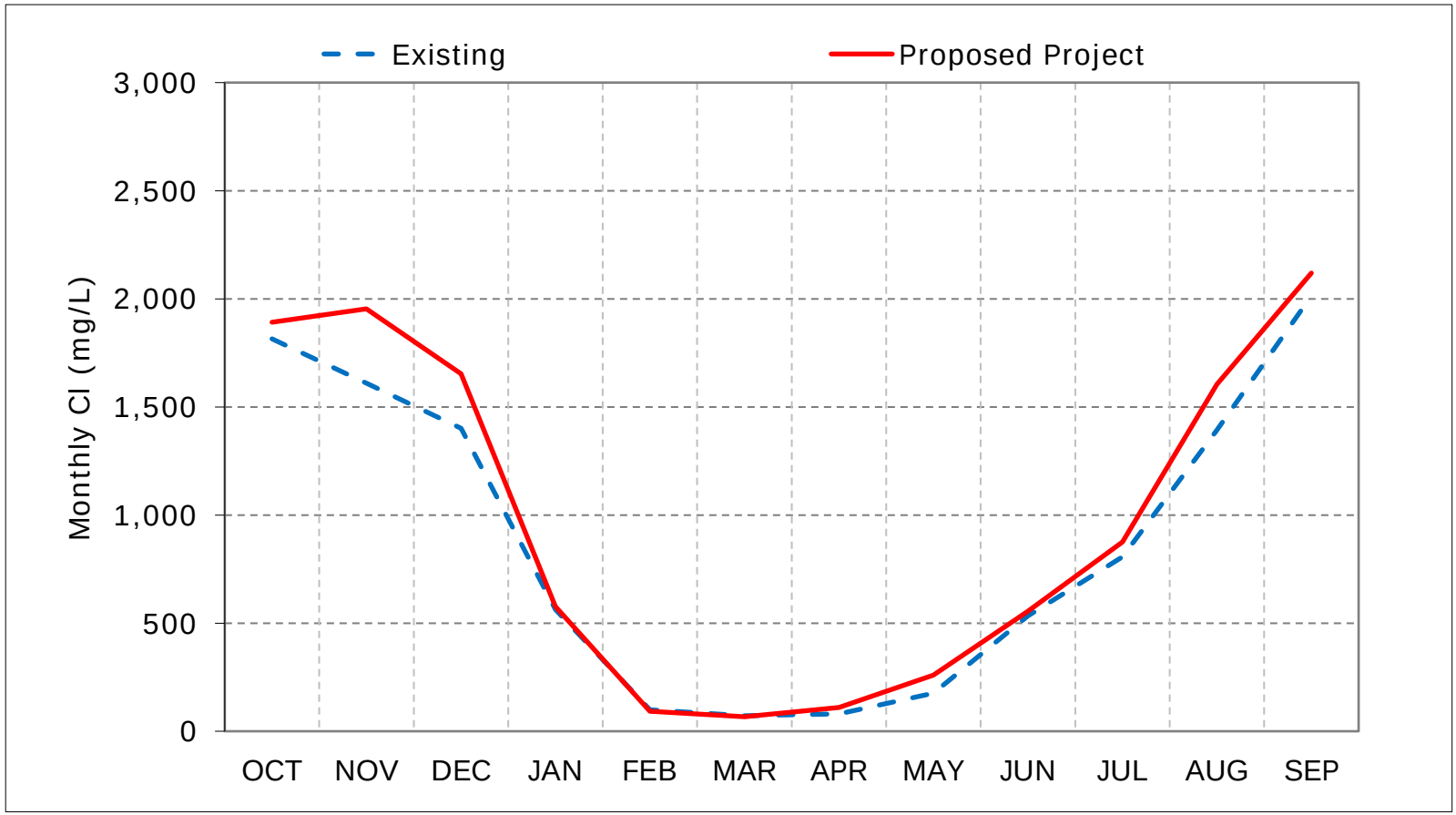
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-3. Sacramento River at Collinsville Chloride, Above Normal Year Average



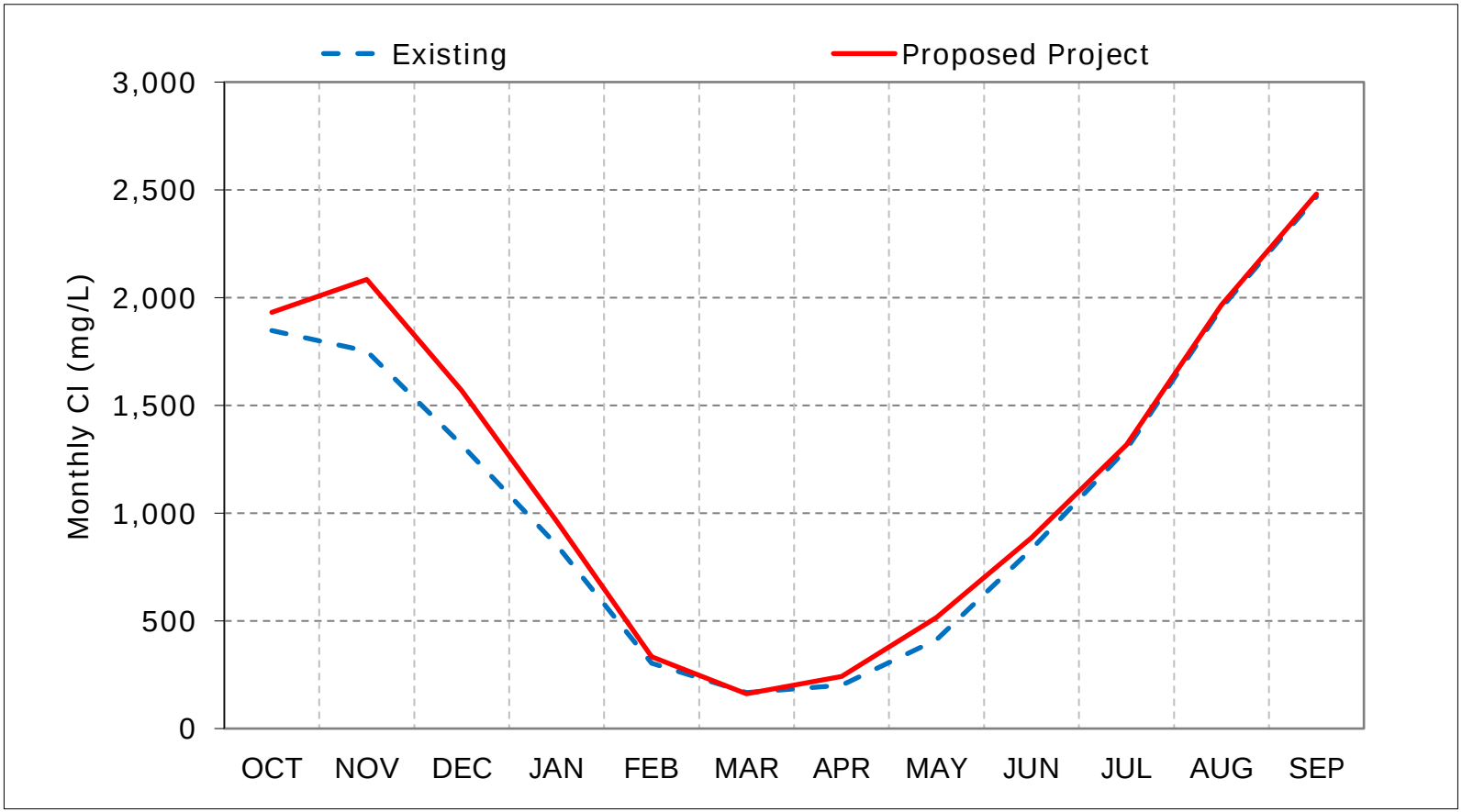
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-4. Sacramento River at Collinsville Chloride, Below Normal Year Average



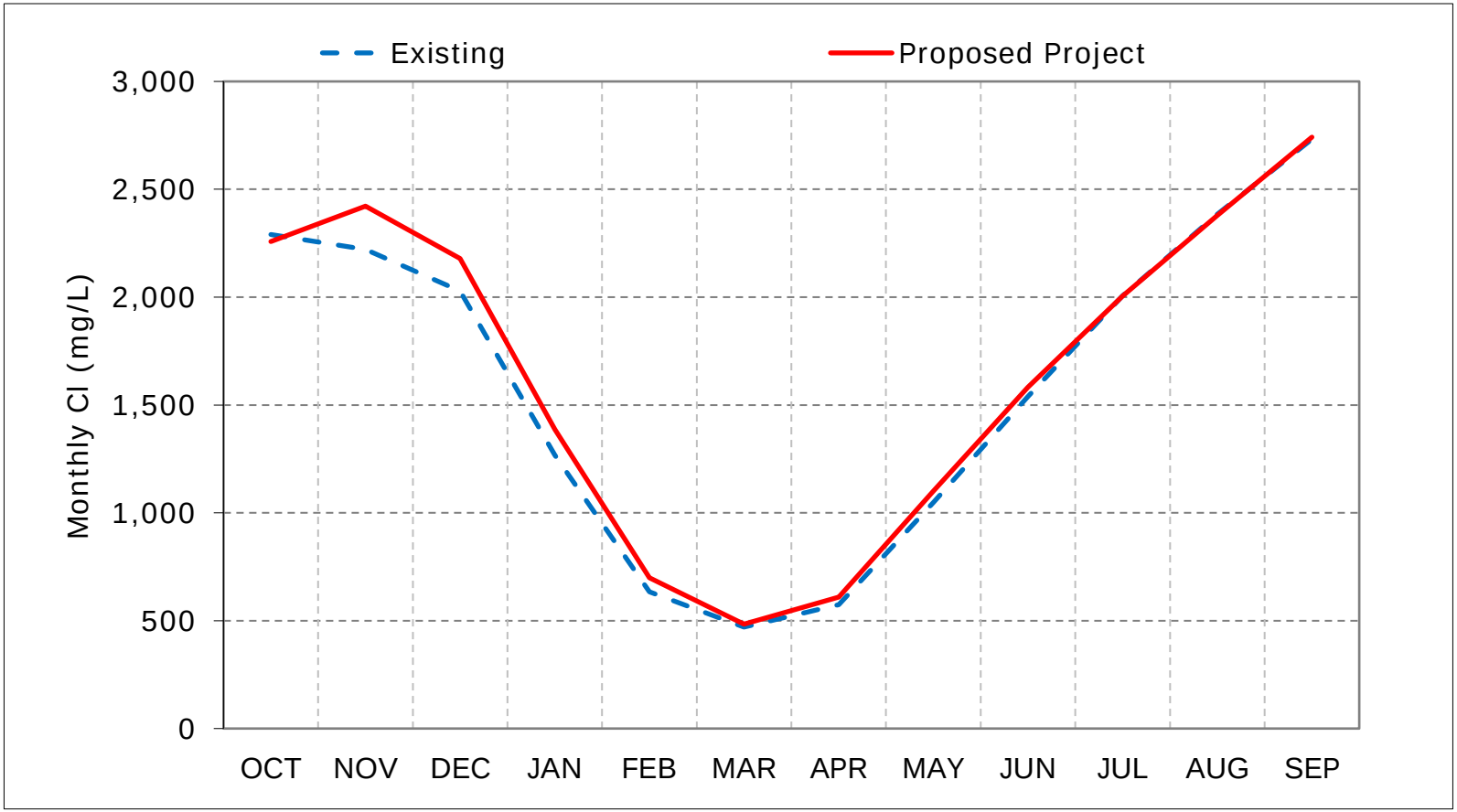
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 3-5. Sacramento River at Collinsville Chloride, Dry Year Average Cl



*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.

Figure 3-6. Sacramento River at Collinsville Chloride, Critical Year Average Cl



*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.

Figure 3-7. Sacramento River at Collinsville Chloride, January Cl

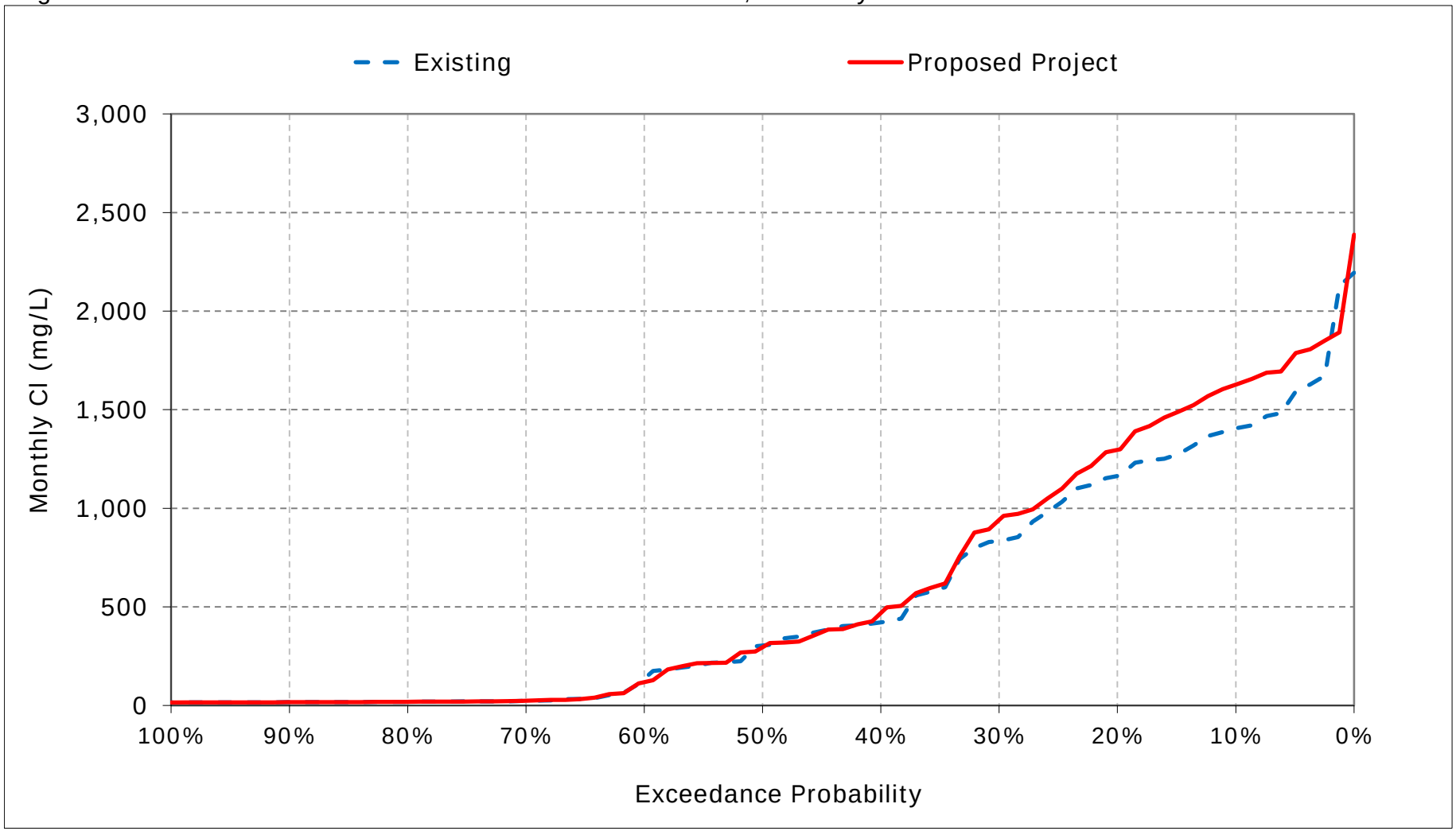


Figure 3-8. Sacramento River at Collinsville Chloride, February Cl

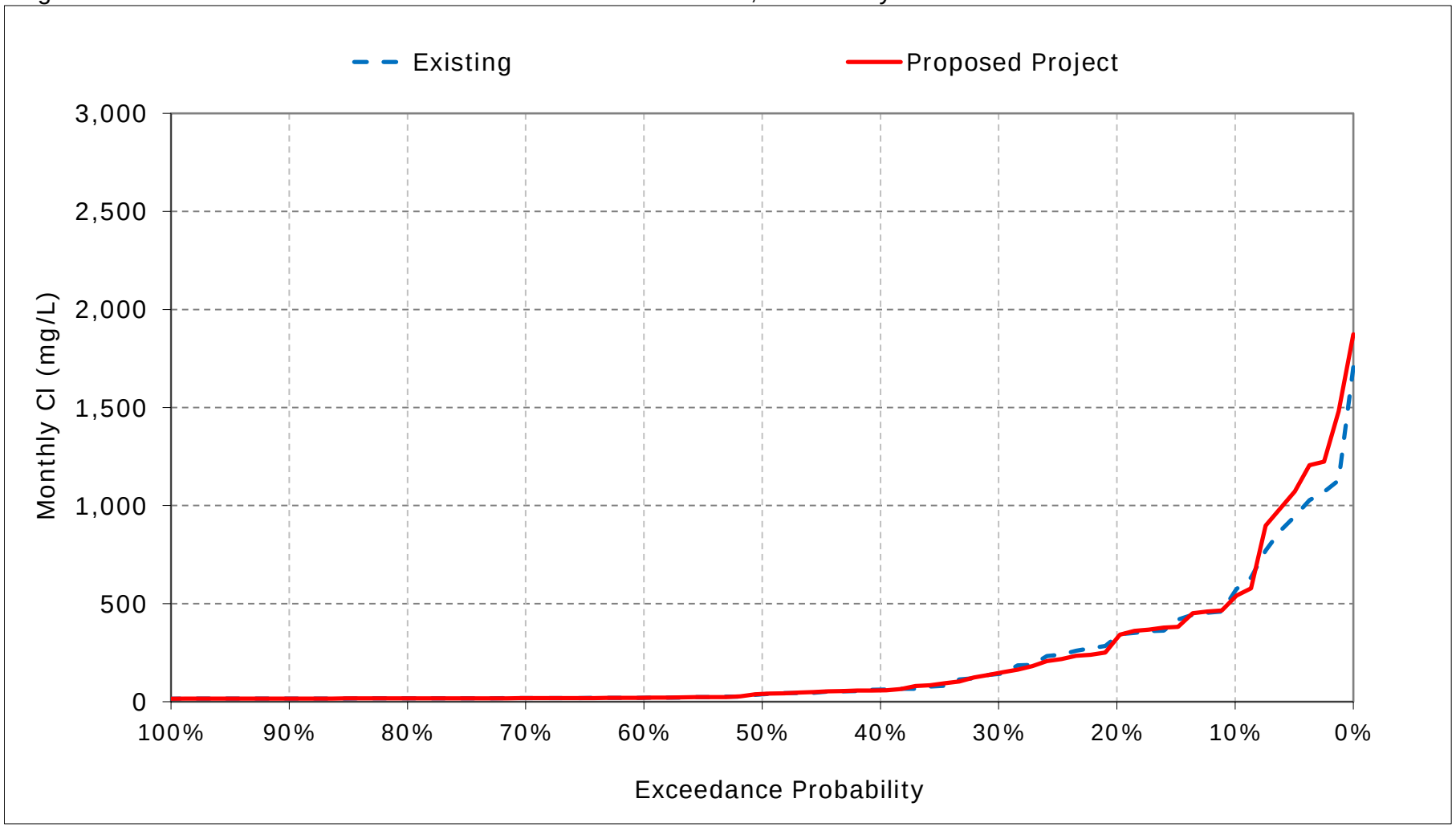


Figure 3-9. Sacramento River at Collinsville Chloride, March Cl

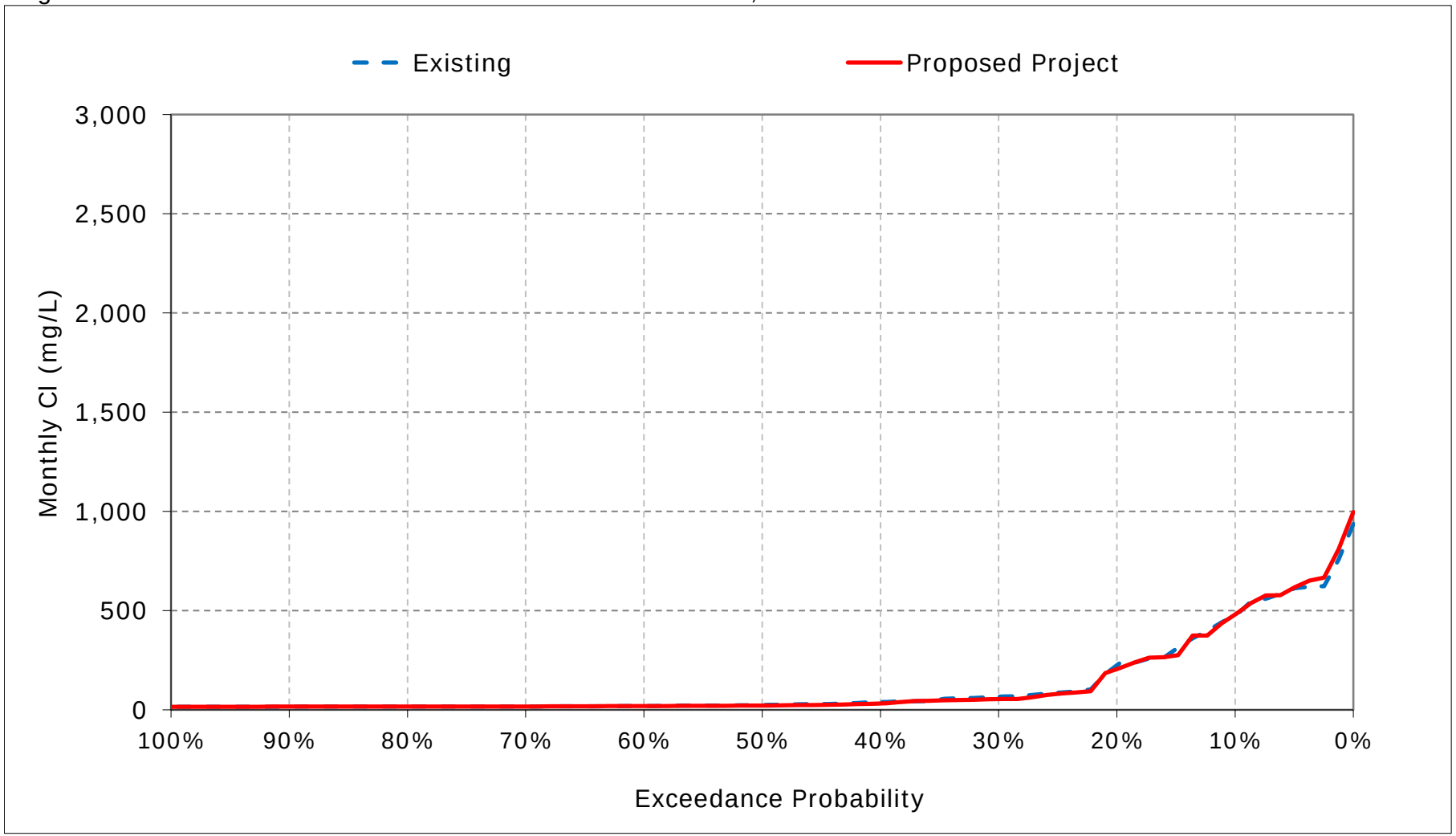


Figure 3-10. Sacramento River at Collinsville Chloride, April Cl

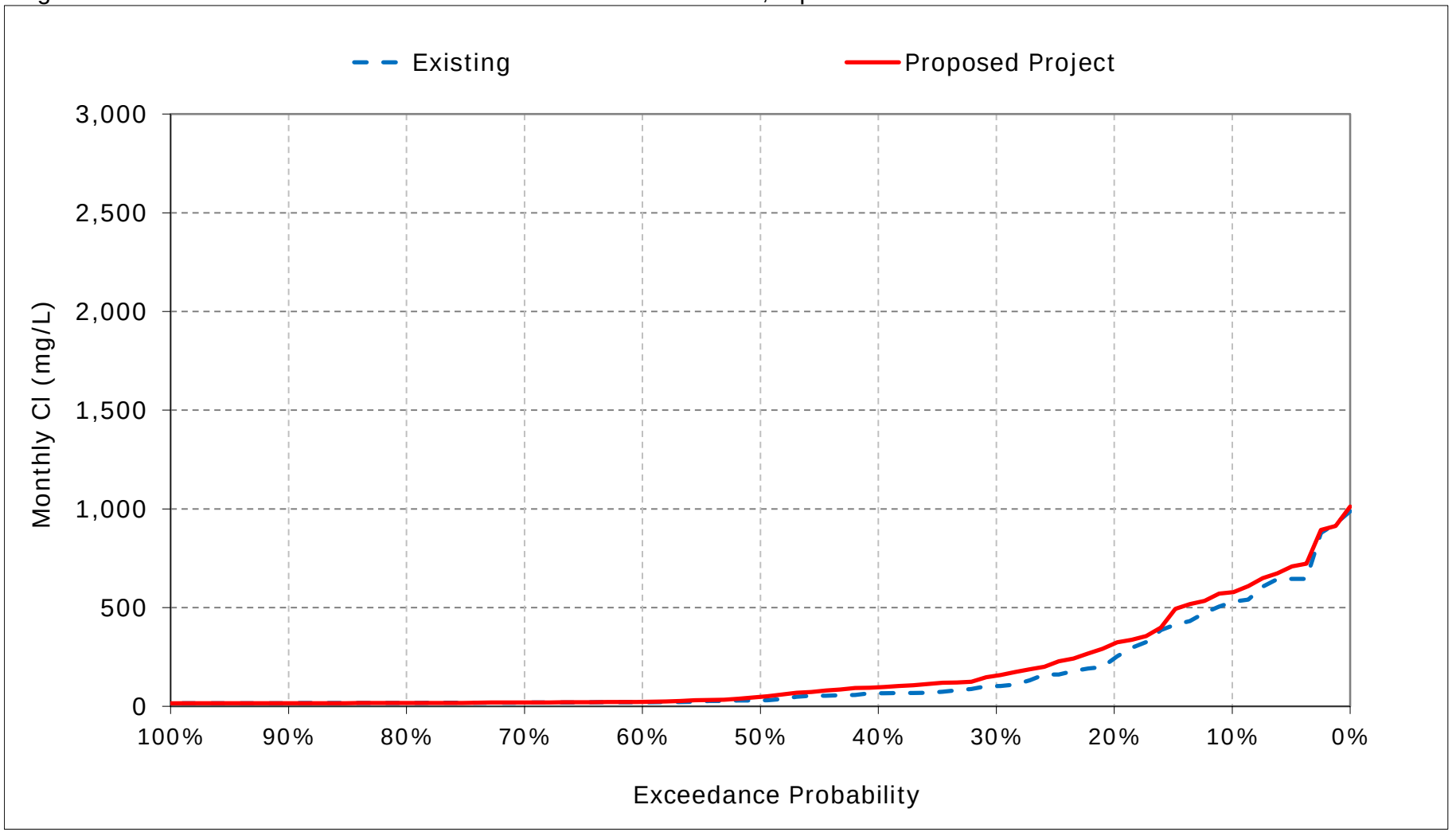


Figure 3-11. Sacramento River at Collinsville Chloride, May Cl

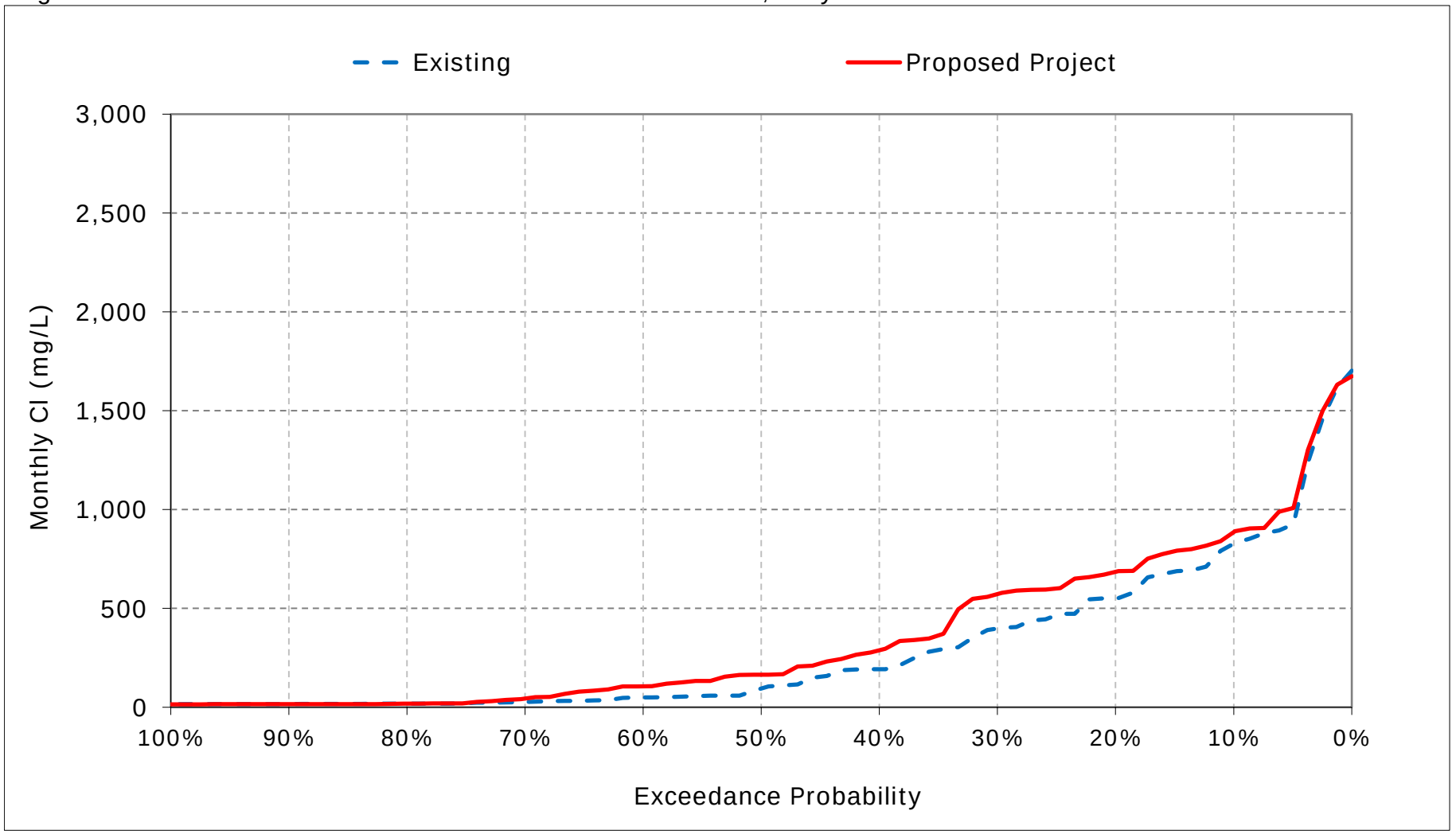


Figure 3-12. Sacramento River at Collinsville Chloride, June Cl

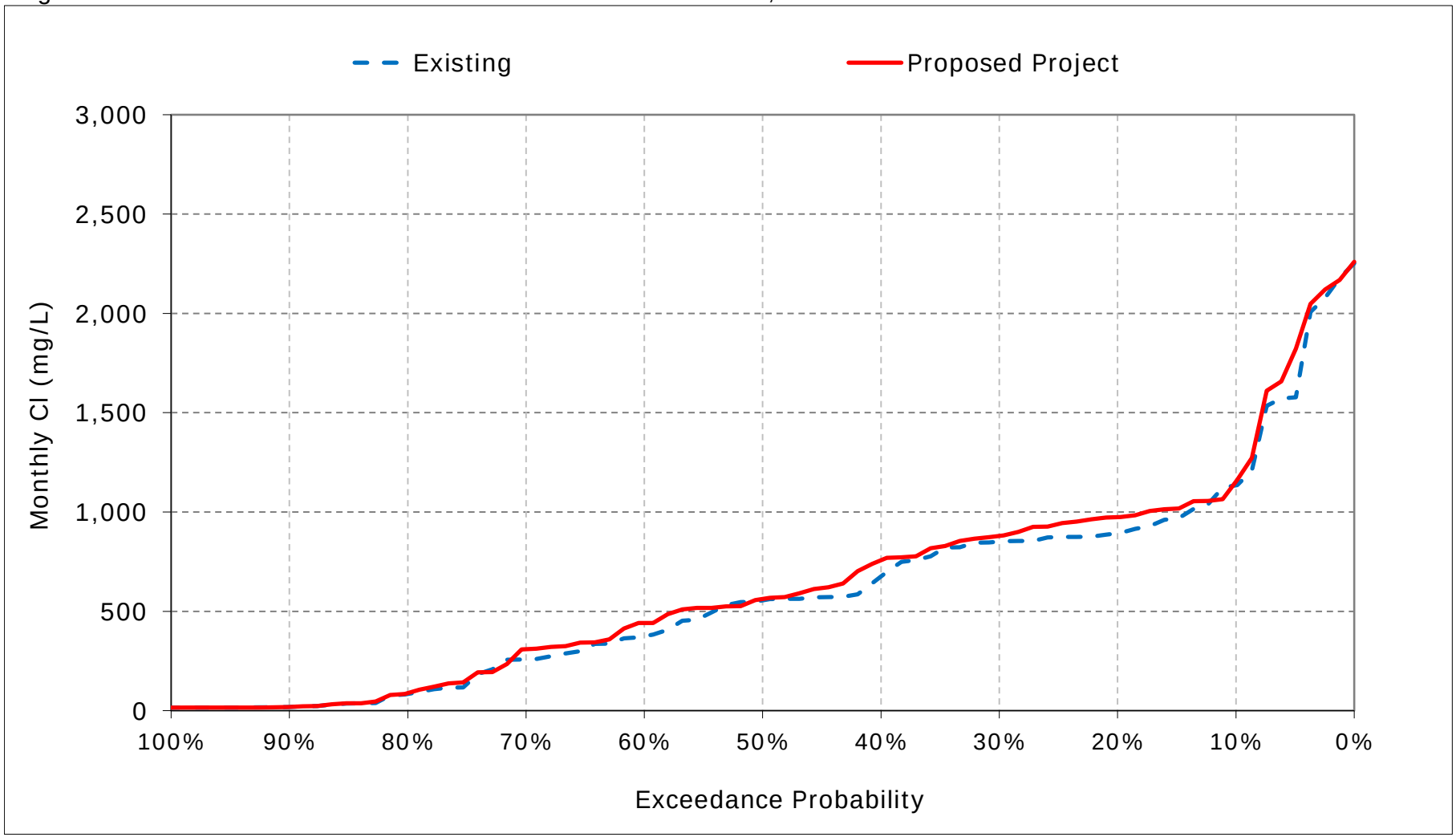


Figure 3-13. Sacramento River at Collinsville Chloride, July Cl

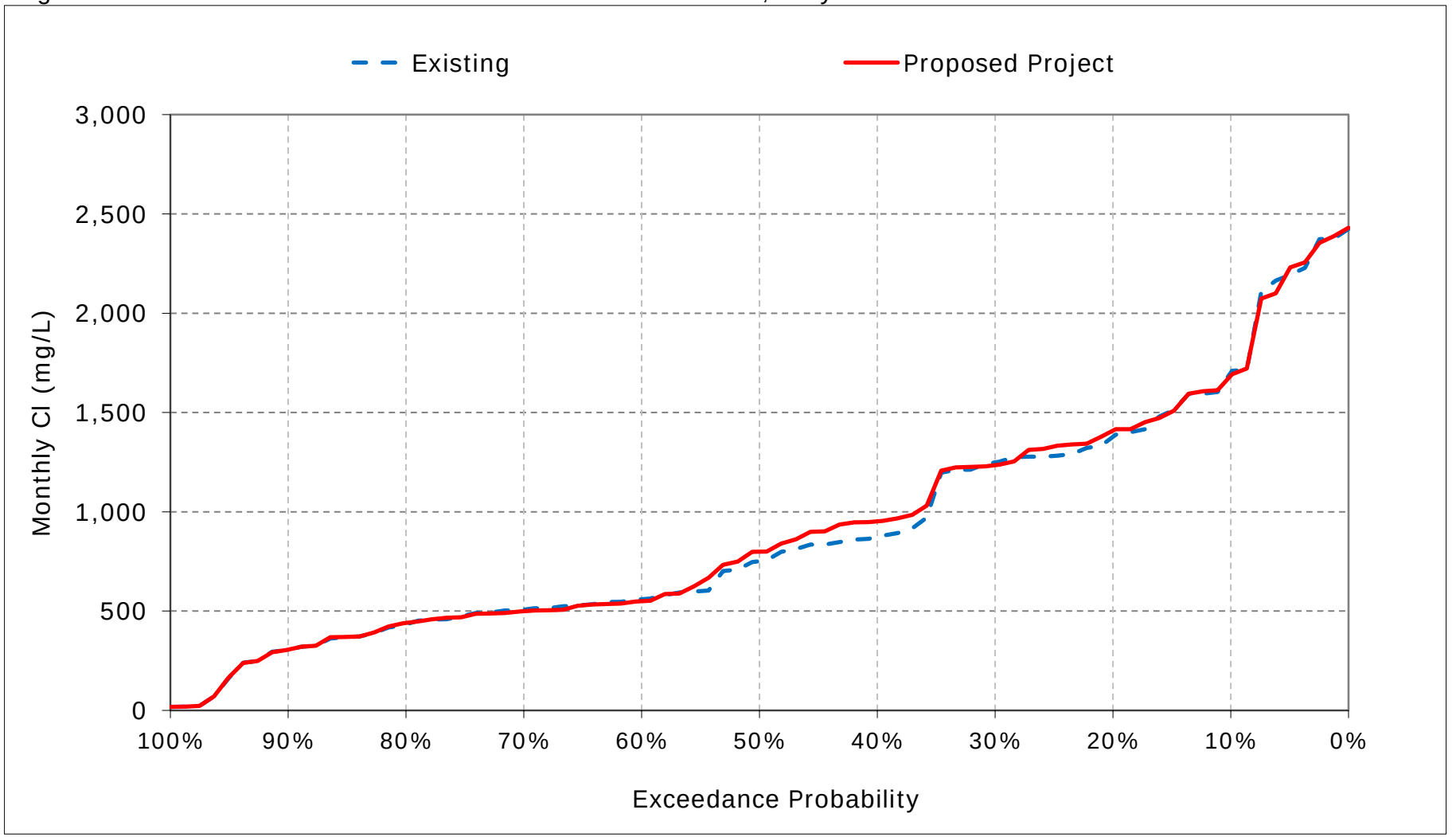


Figure 3-14. Sacramento River at Collinsville Chloride, August Cl

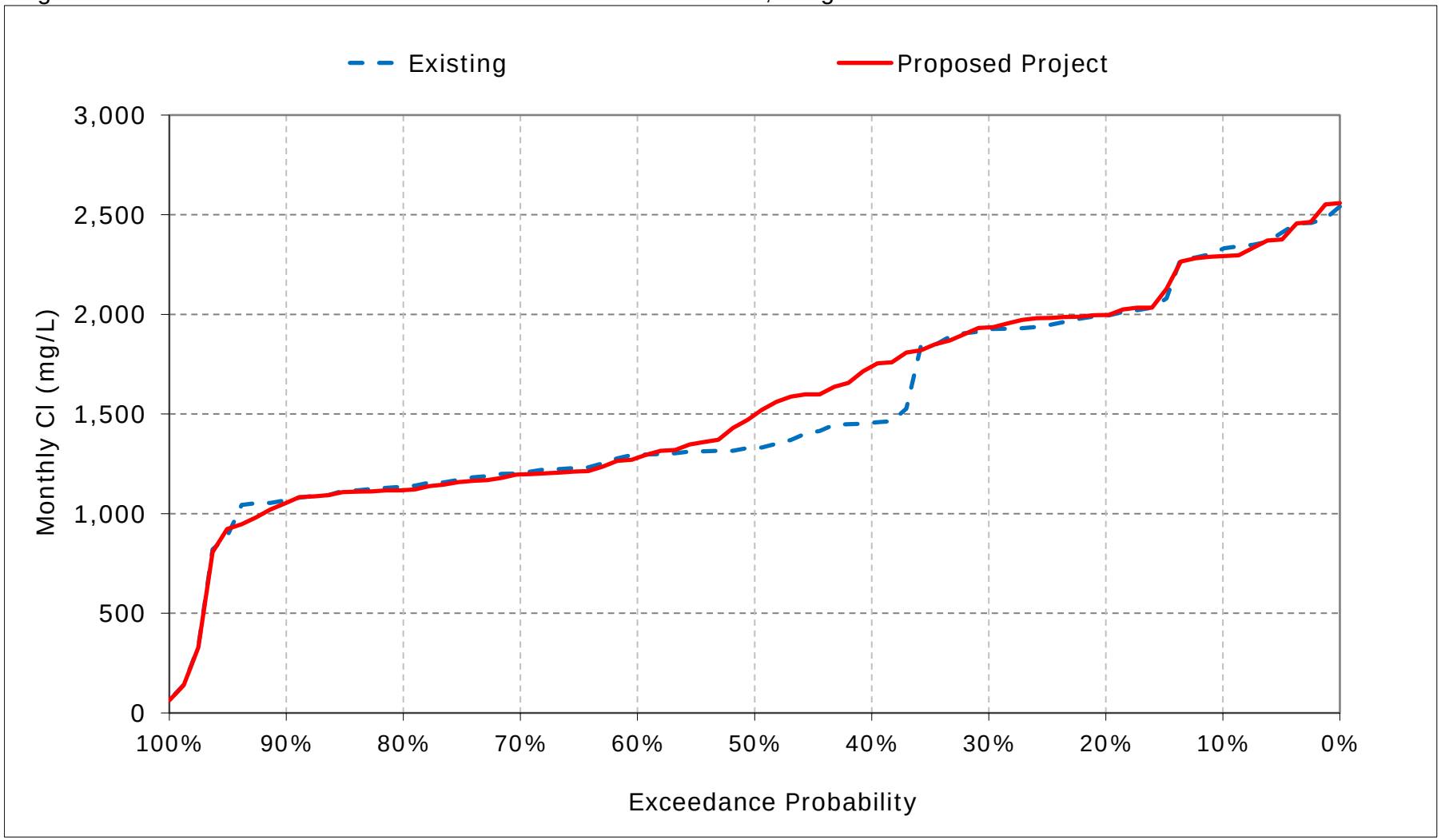


Figure 3-15. Sacramento River at Collinsville Chloride, September Cl

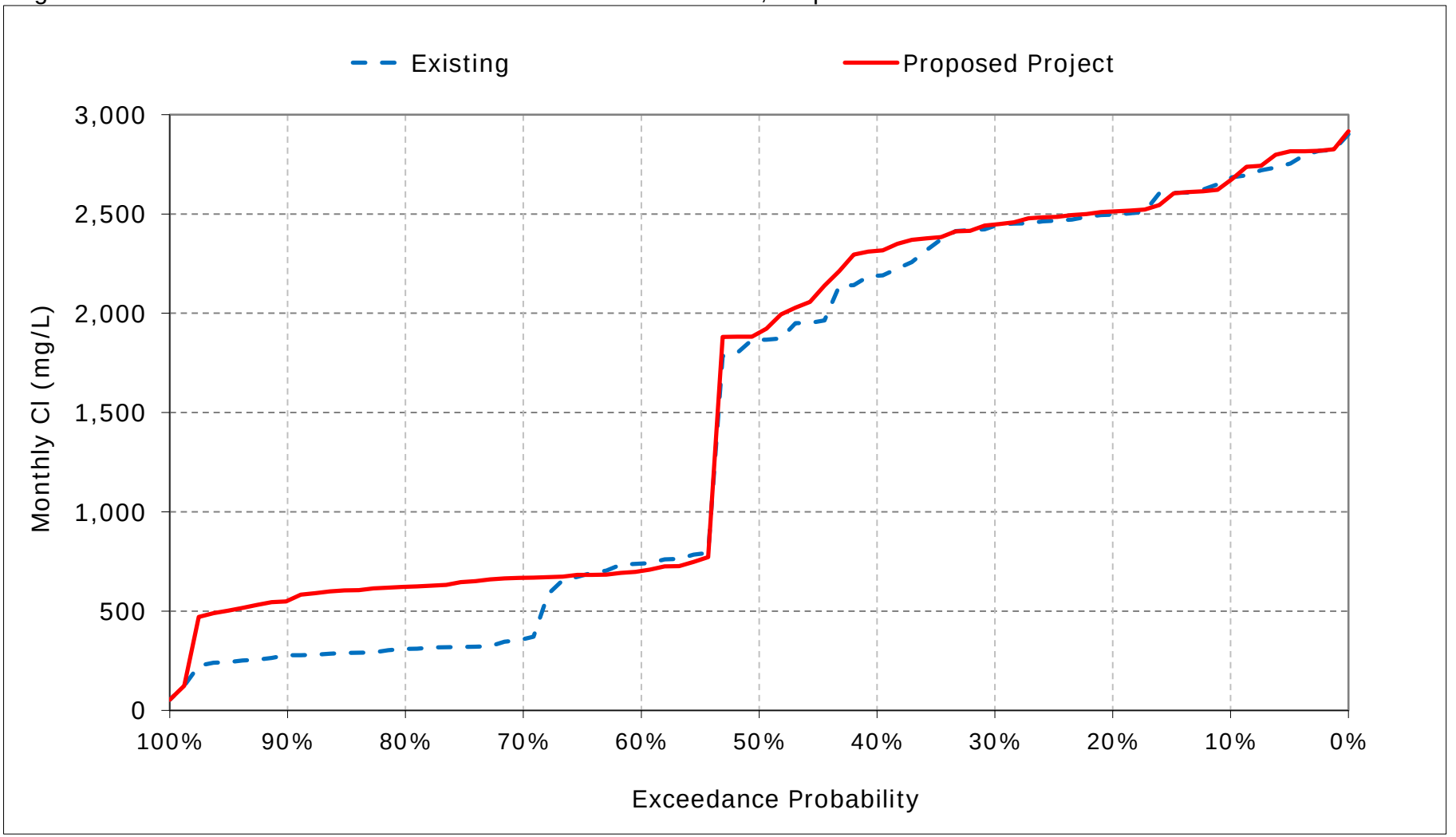


Figure 3-16. Sacramento River at Collinsville Chloride, October Cl

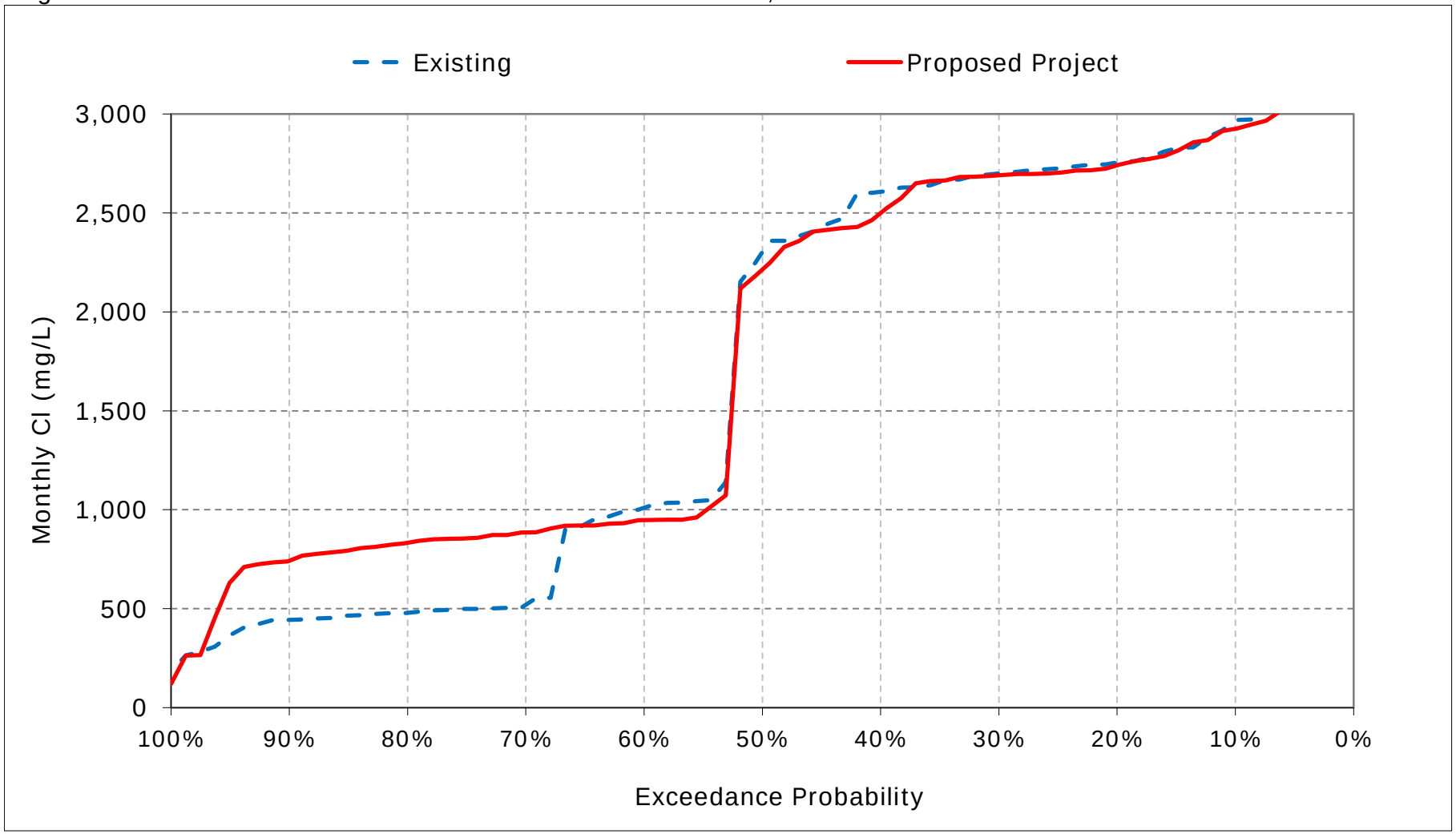


Figure 3-17. Sacramento River at Collinsville Chloride, November Cl

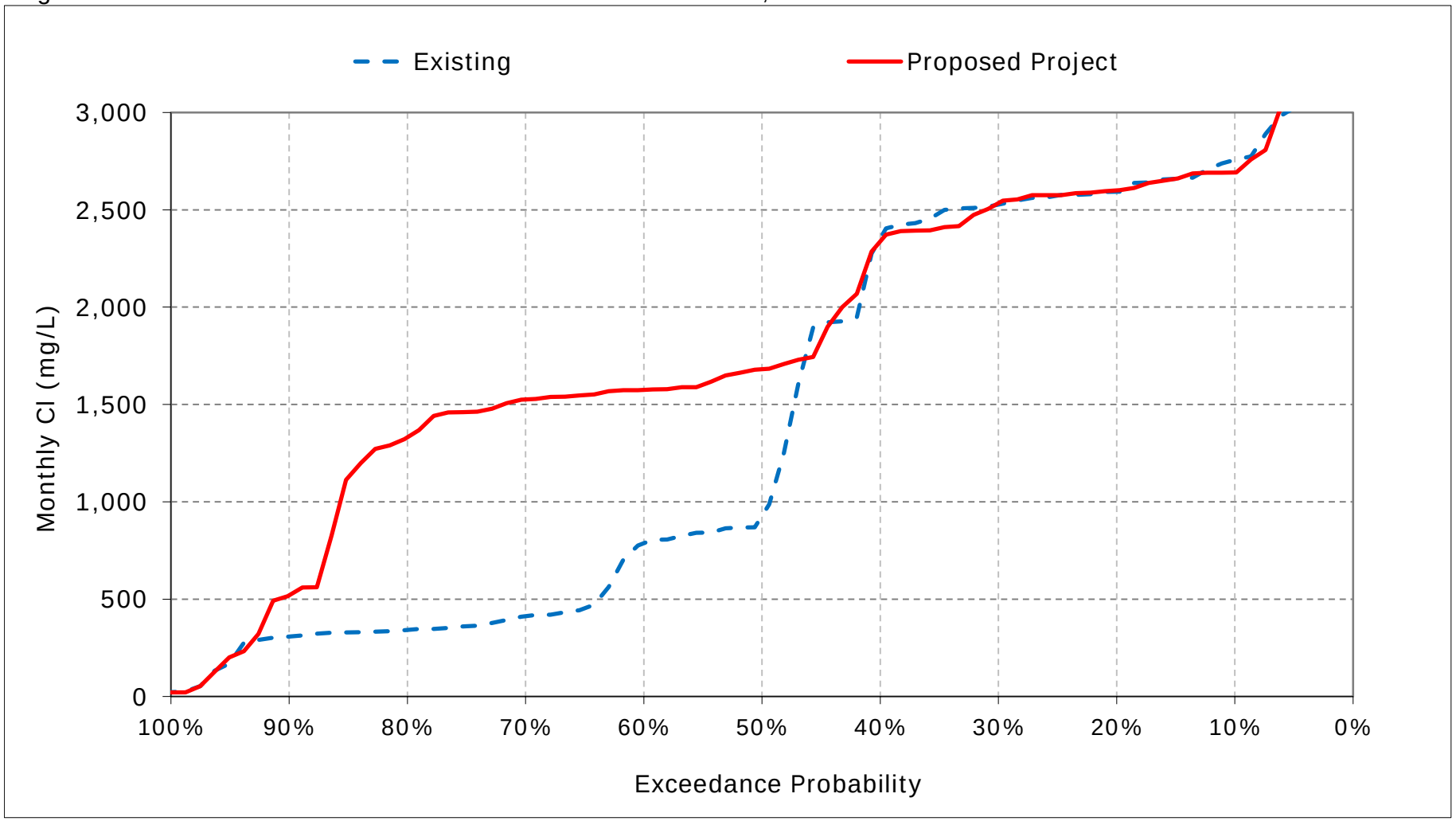


Figure 3-18. Sacramento River at Collinsville Chloride, December Cl

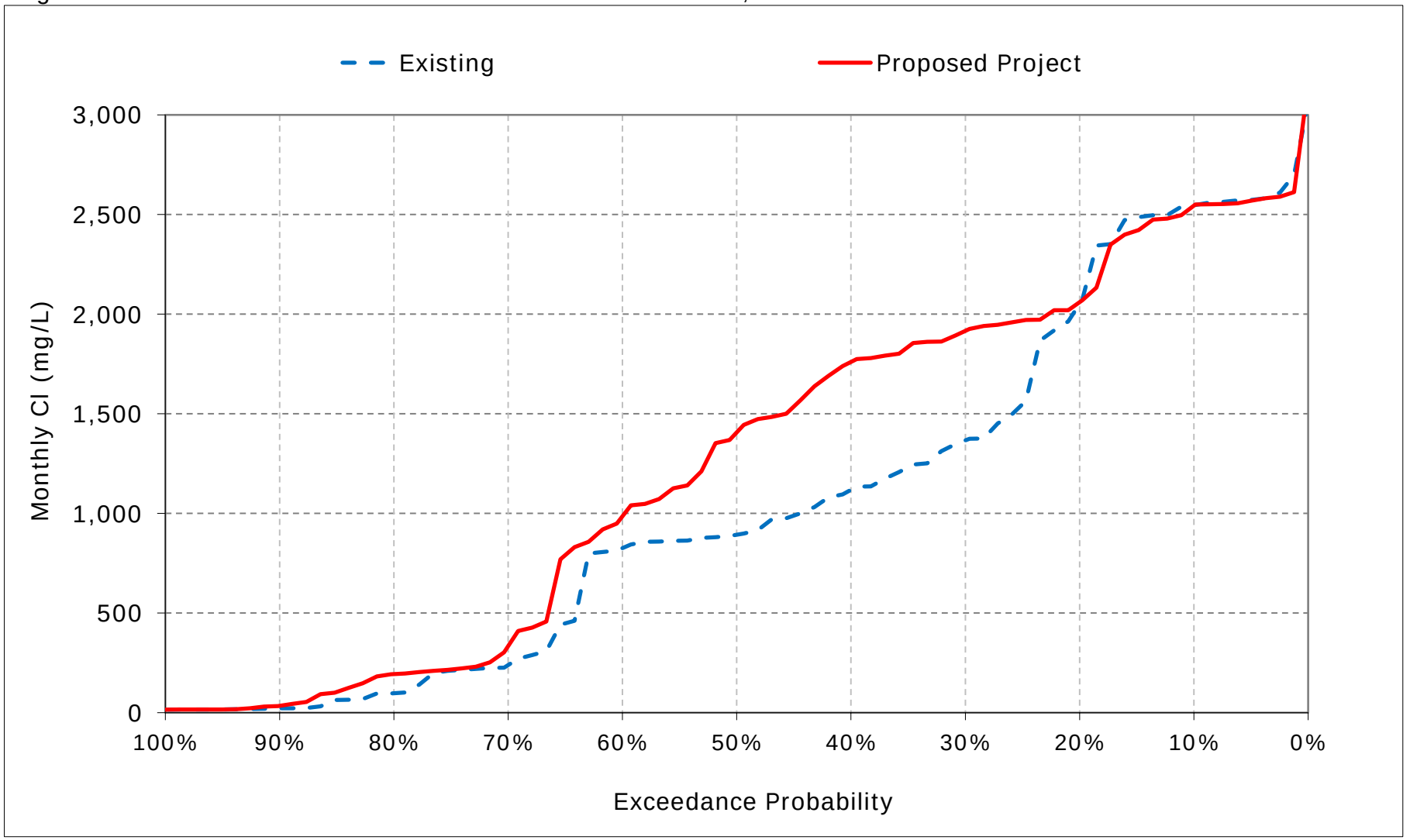


Table 4-1. San Joaquin River at Jersey Point Chloride, Monthly Cl

Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	645	636	613	338	112	47	37	63	110	358	447	640
20%	593	592	535	271	63	29	25	36	84	274	391	612
30%	565	557	387	203	38	25	23	28	77	203	370	591
40%	538	488	312	142	33	23	23	25	54	180	342	556
50%	456	316	187	97	29	22	22	24	39	120	320	494
60%	110	132	162	50	26	21	21	23	26	90	294	243
70%	55	64	95	28	24	20	21	22	23	76	277	226
80%	39	42	38	23	21	19	20	21	19	46	254	209
90%	32	28	20	21	20	18	19	19	18	25	235	200
Long Term												
Full Simulation Period[a]	336	324	274	143	51	29	26	36	68	166	322	410
Water Year Types[b]												
Wet (32%)	242	208	91	34	23	21	21	20	22	48	233	184
Above Normal (15%)	376	317	268	99	30	21	22	22	32	73	270	219
Below Normal (17%)	354	368	360	163	35	23	23	25	46	163	349	602
Dry (22%)	357	386	336	197	63	28	24	31	78	275	370	594
Critical (15%)	448	439	485	315	132	61	46	102	213	353	461	591

Proposed Project

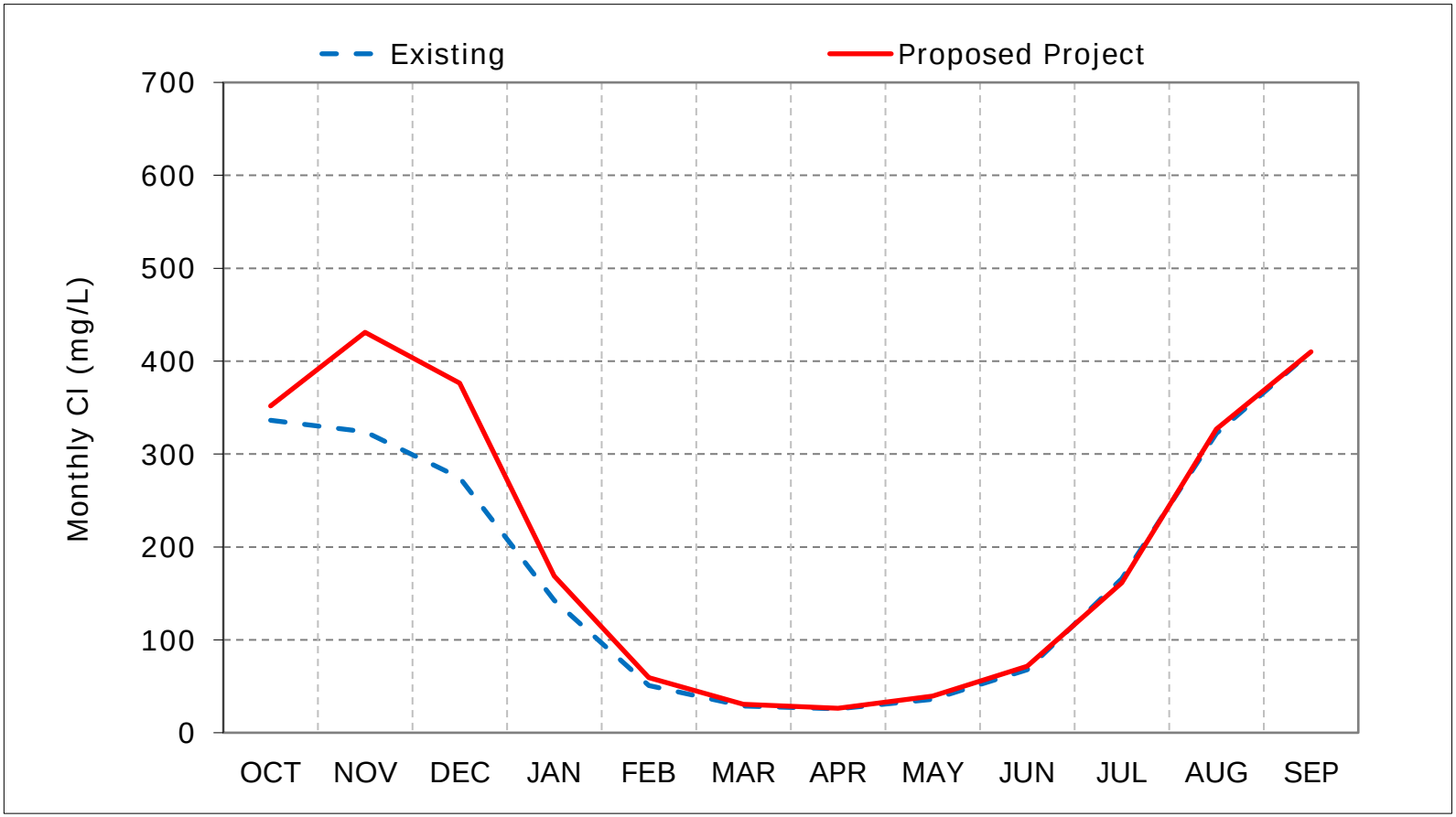
Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	639	645	651	414	127	46	43	78	118	364	465	675
20%	595	596	613	317	68	29	25	55	98	240	417	657
30%	573	541	573	254	43	25	22	38	79	184	383	616
40%	526	485	506	201	34	24	21	23	58	165	355	566
50%	456	447	414	103	29	23	20	21	35	109	322	507
60%	127	380	337	59	27	22	20	19	25	83	287	216
70%	110	361	146	28	23	21	19	18	21	70	273	197
80%	89	298	100	24	21	19	19	17	18	47	248	176
90%	67	151	29	22	20	19	18	17	17	25	216	139
Long Term												
Full Simulation Period[a]	352	431	376	169	59	31	26	39	71	161	327	410
Water Year Types[b]												
Wet (32%)	267	340	159	39	24	21	19	18	23	47	220	153
Above Normal (15%)	397	441	420	135	32	22	20	19	29	70	271	197
Below Normal (17%)	374	469	475	187	36	23	22	27	46	147	381	656
Dry (22%)	370	469	465	246	78	30	26	42	88	264	374	600
Critical (15%)	438	517	555	344	162	69	55	116	226	364	481	609

Proposed Project minus Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-6	8	38	76	15	0	6	16	7	6	18	35
20%	1	4	78	46	5	0	0	18	15	-33	27	45
30%	8	-16	186	51	5	0	-1	10	2	-19	13	26
40%	-12	-3	194	59	1	0	-1	-2	4	-15	13	9
50%	0	131	228	6	0	1	-1	-3	-3	-11	2	12
60%	16	248	175	8	1	1	-1	-4	-1	-7	-8	-26
70%	55	297	51	1	0	0	-2	-4	-1	-6	-4	-29
80%	50	257	62	1	0	0	-1	-4	-1	1	-5	-33
90%	36	123	9	1	0	0	-1	-2	-1	0	-19	-61
Long Term												
Full Simulation Period[a]	16	107	102	26	8	2	1	4	4	-4	5	0
Water Year Types[b]												
Wet (32%)	25	132	67	5	0	0	-2	-2	1	-1	-13	-32
Above Normal (15%)	21	124	152	36	2	1	-2	-4	-4	-3	1	-22
Below Normal (17%)	20	101	116	24	1	0	-1	2	0	-16	31	55
Dry (22%)	13	83	129	49	15	1	1	10	10	-11	3	6
Critical (15%)	-10	78	70	29	31	8	9	14	13	11	19	18

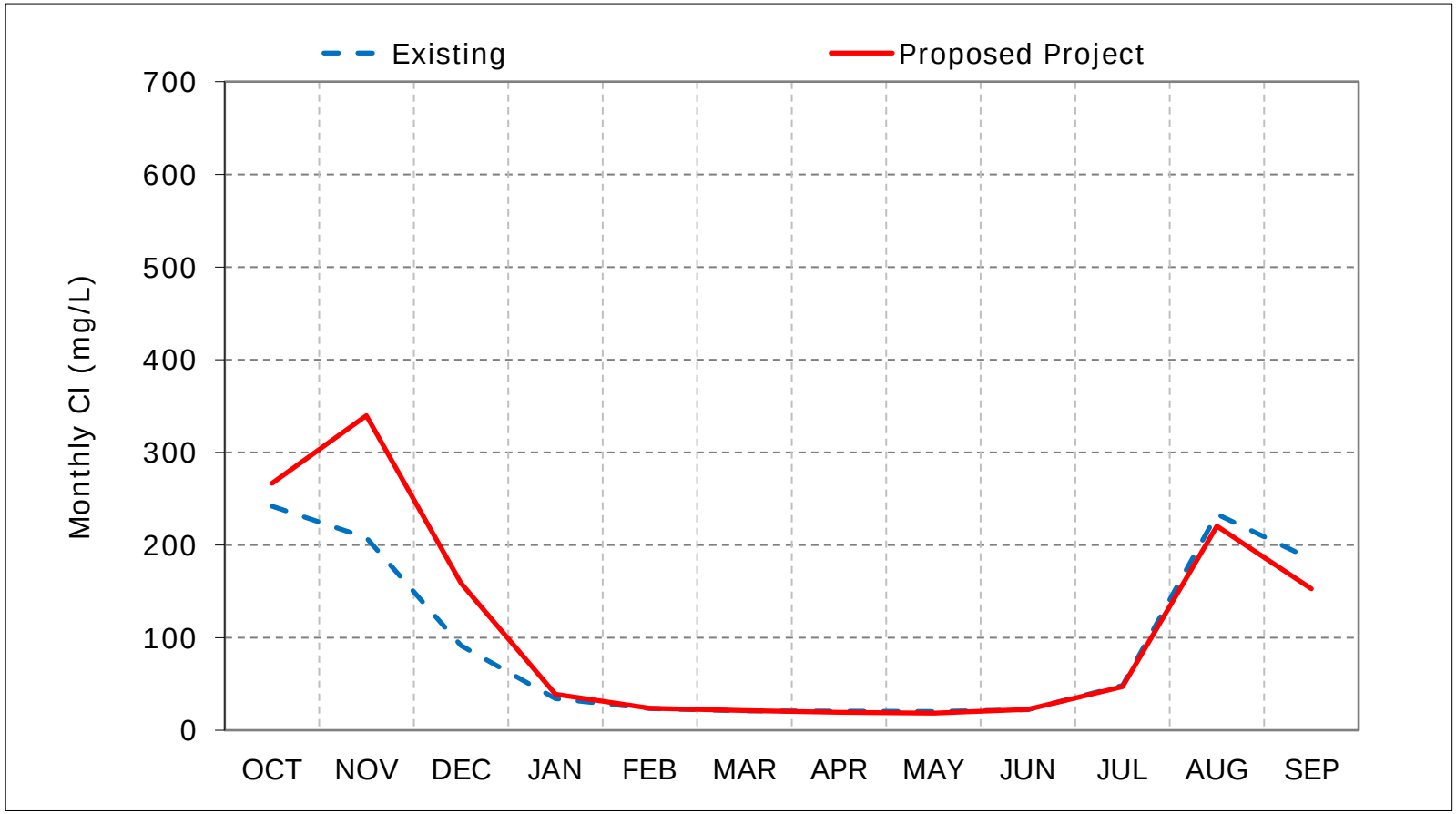
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 4-1. San Joaquin River at Jersey Point Chloride, Long-Term Average Cl



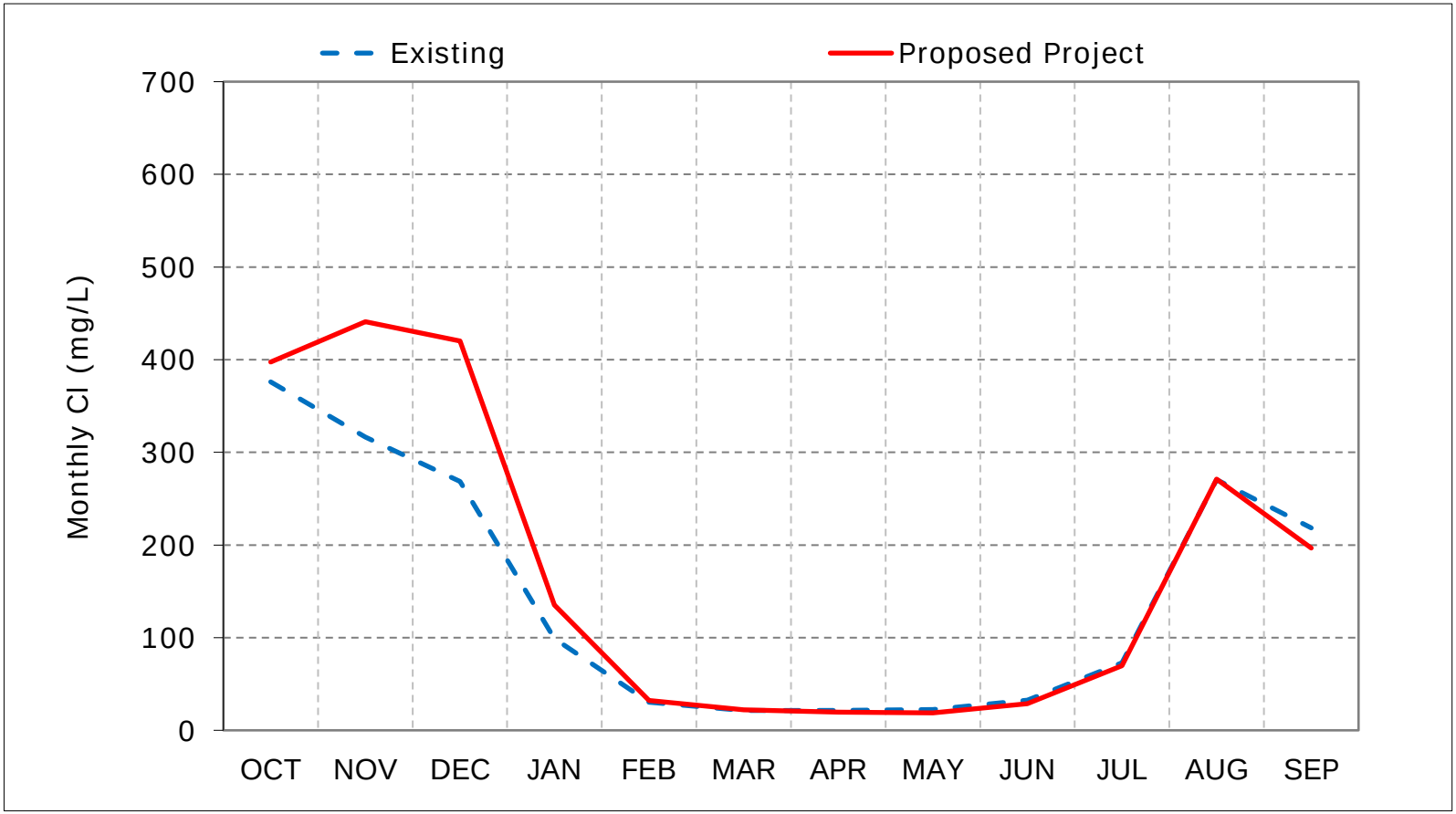
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-2. San Joaquin River at Jersey Point Chloride, Wet Year Average Cl



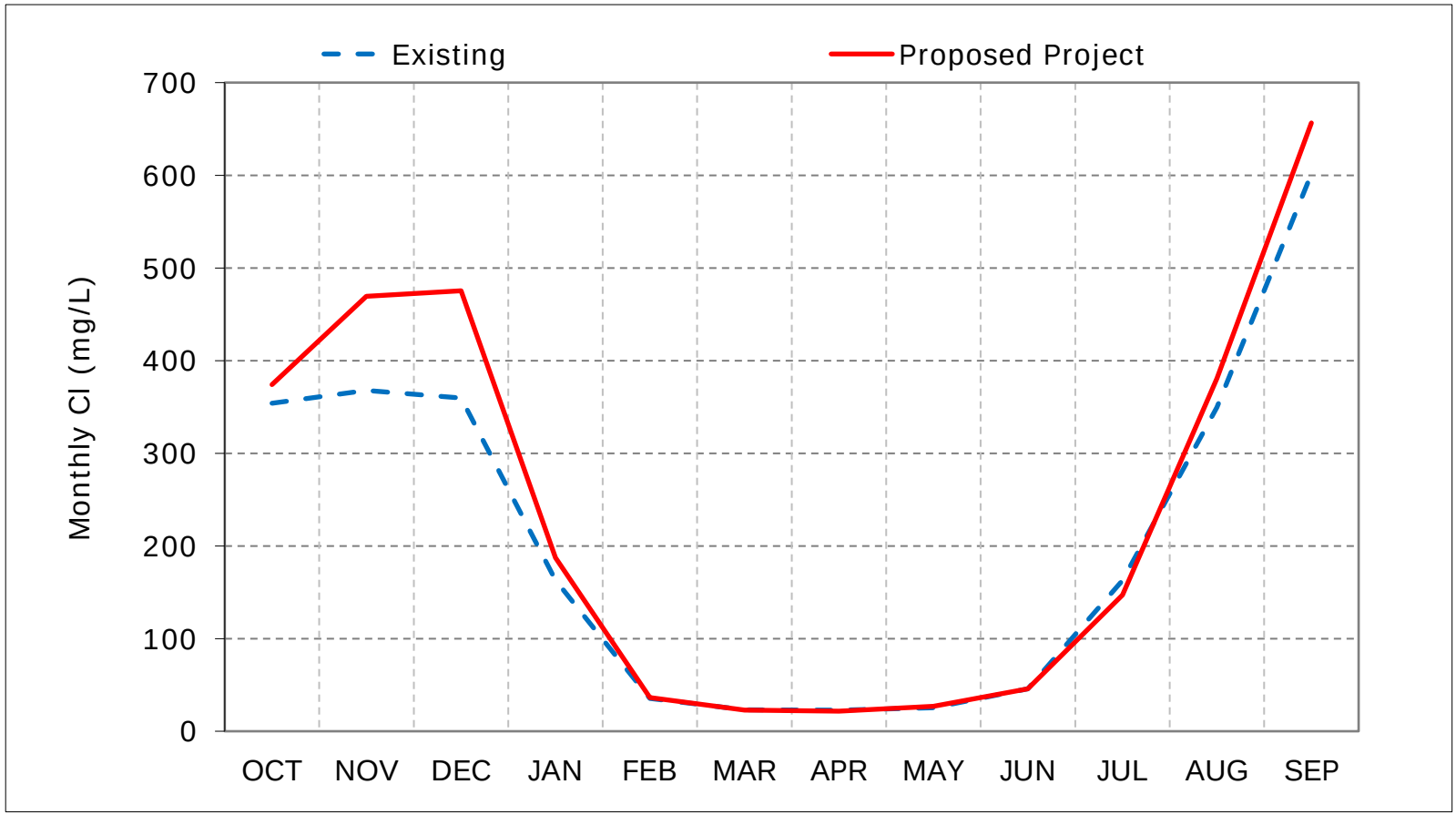
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-3. San Joaquin River at Jersey Point Chloride, Above Normal Year Averag



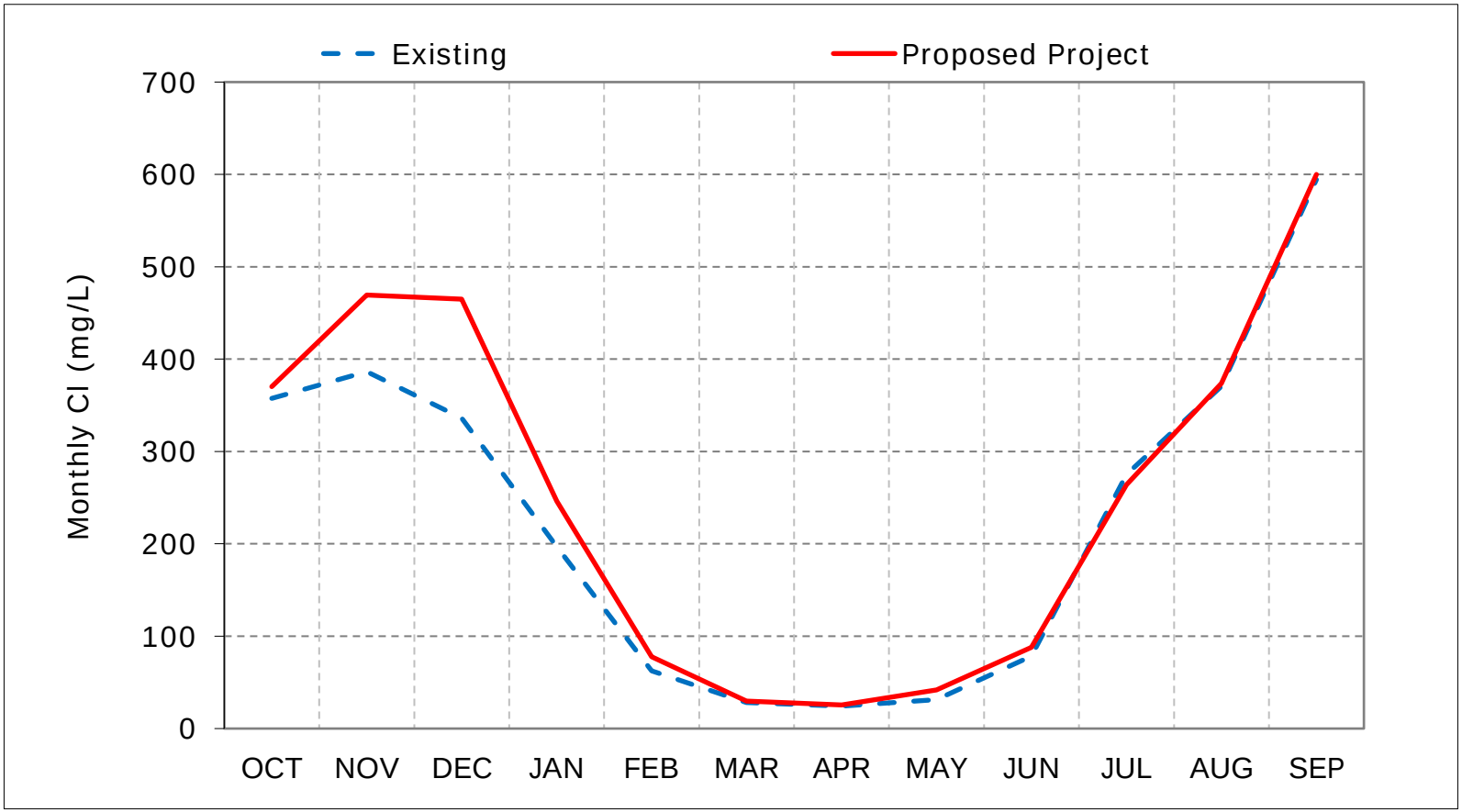
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-4. San Joaquin River at Jersey Point Chloride, Below Normal Year Averag



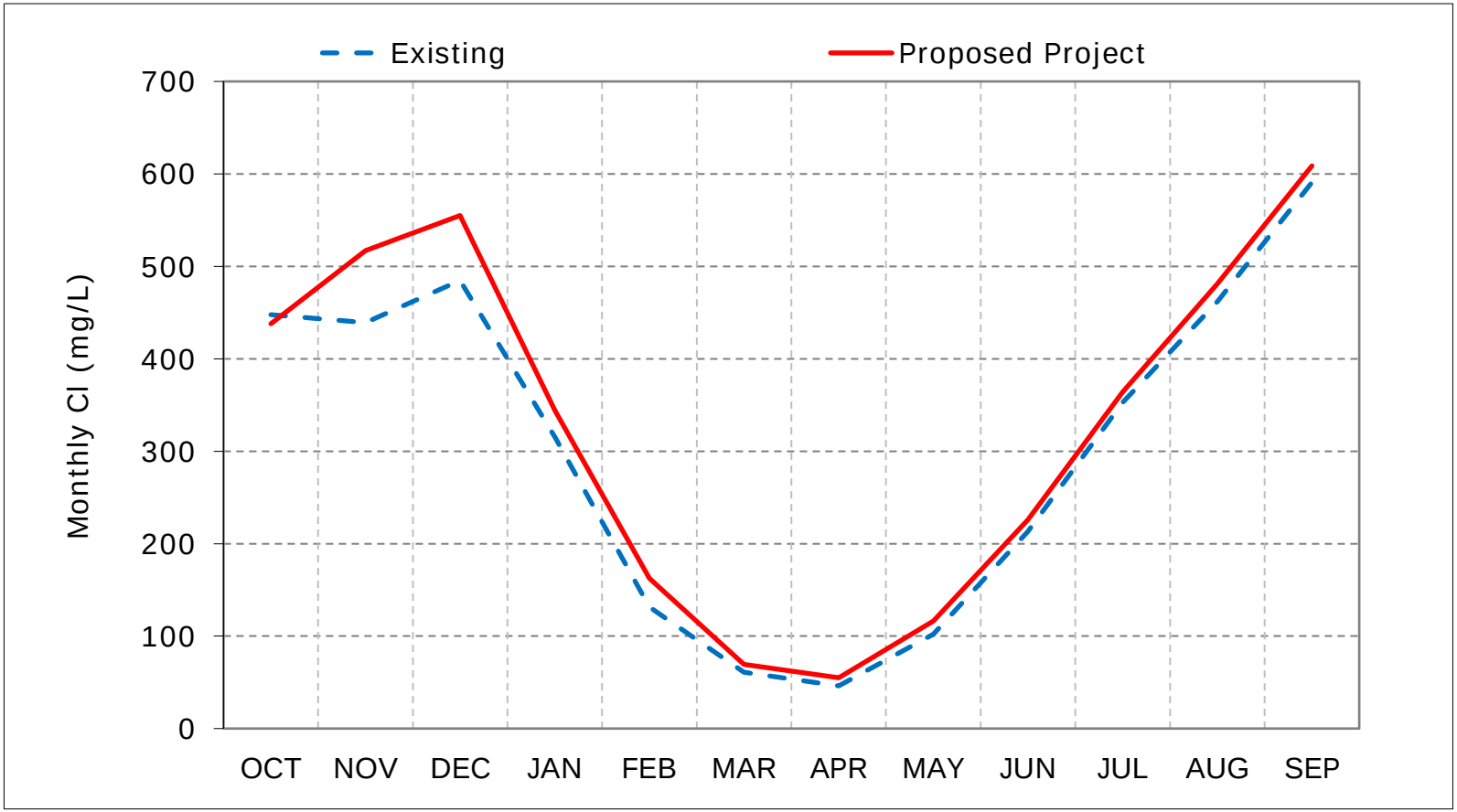
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 4-5. San Joaquin River at Jersey Point Chloride, Dry Year Average Cl



*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.

Figure 4-6. San Joaquin River at Jersey Point Chloride, Critical Year Average Cl



*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.

Figure 4-7. San Joaquin River at Jersey Point Chloride, January Cl

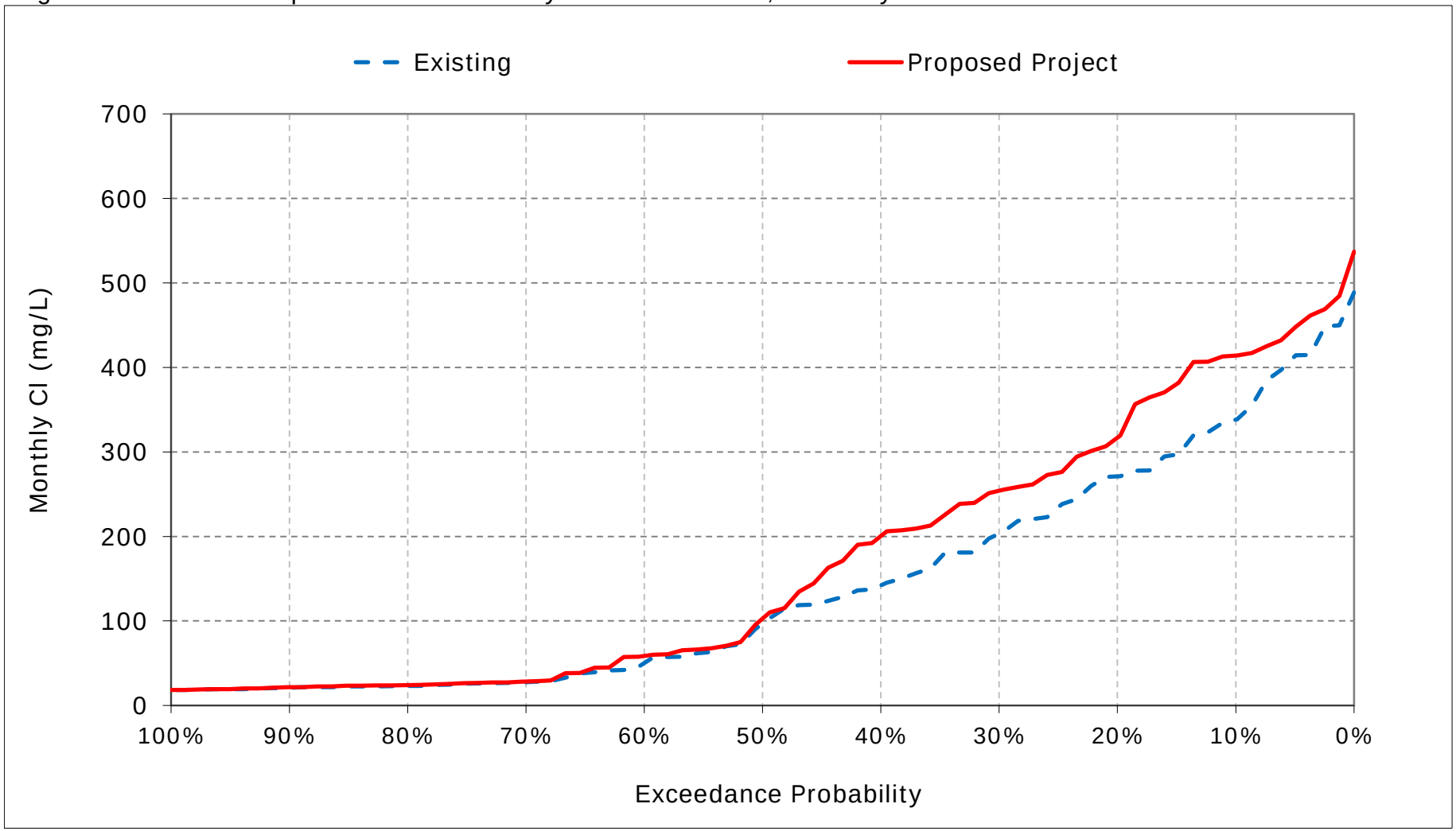


Figure 4-8. San Joaquin River at Jersey Point Chloride, February Cl

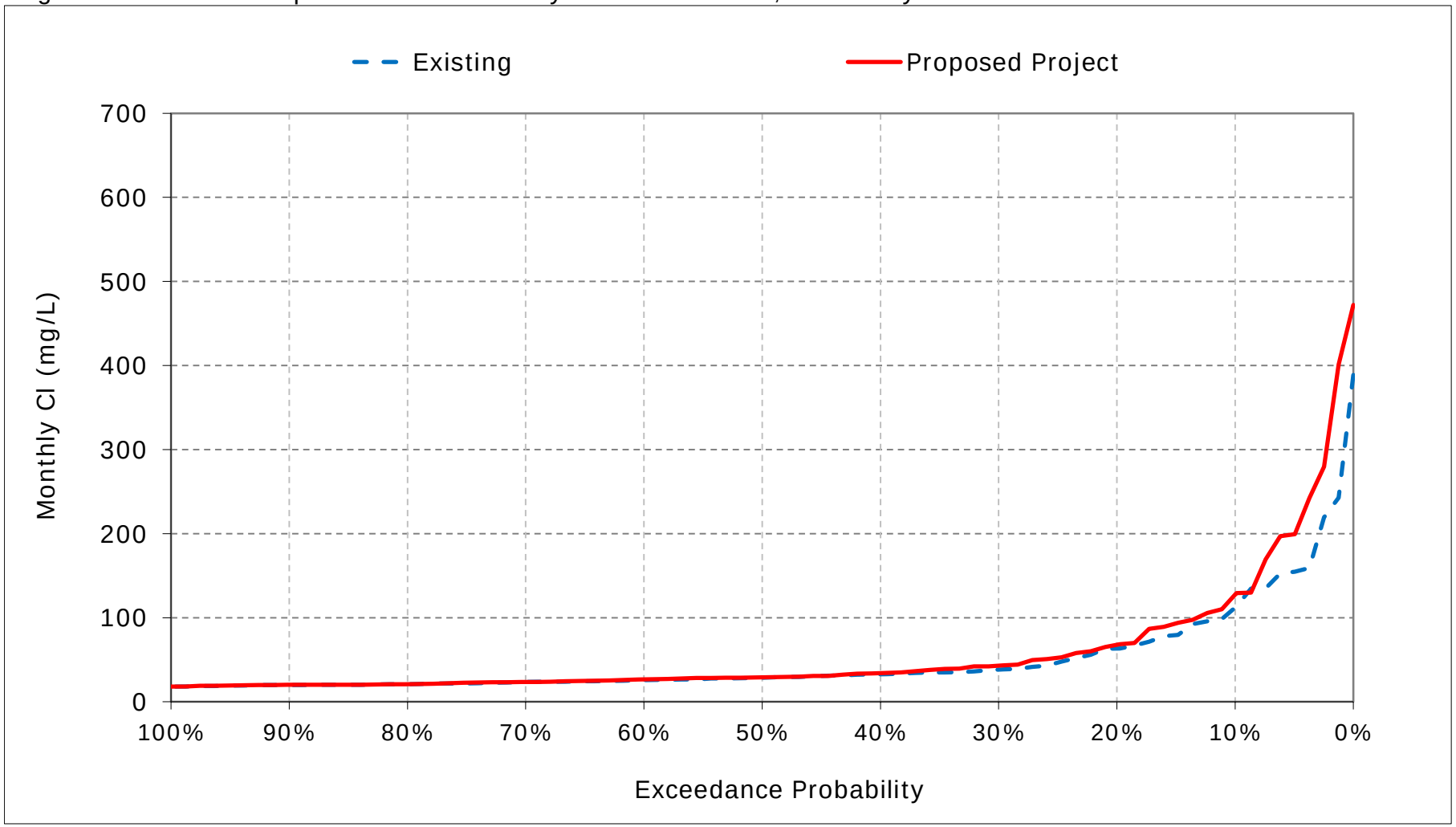


Figure 4-9. San Joaquin River at Jersey Point Chloride, March Cl

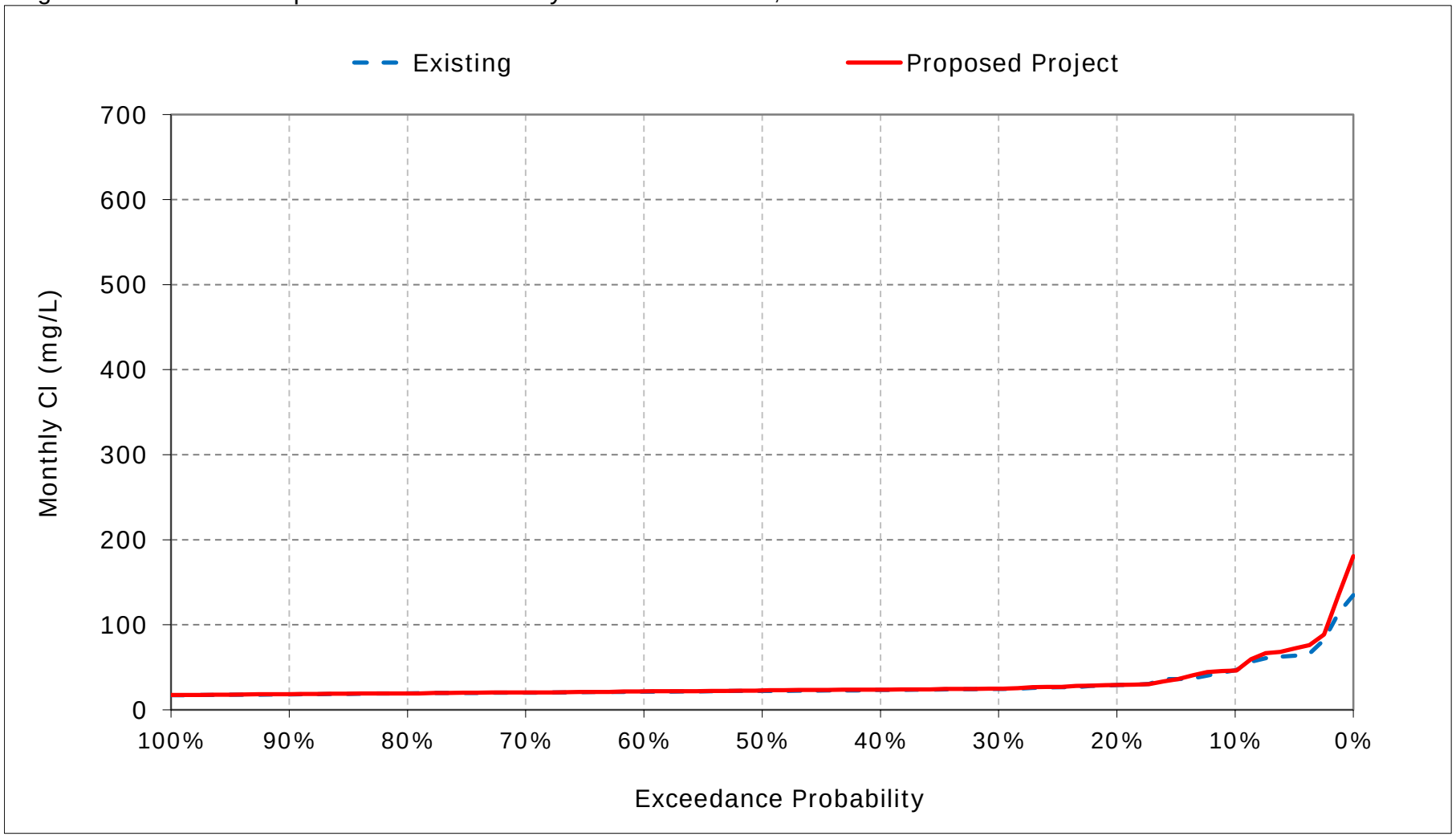


Figure 4-10. San Joaquin River at Jersey Point Chloride, April Cl

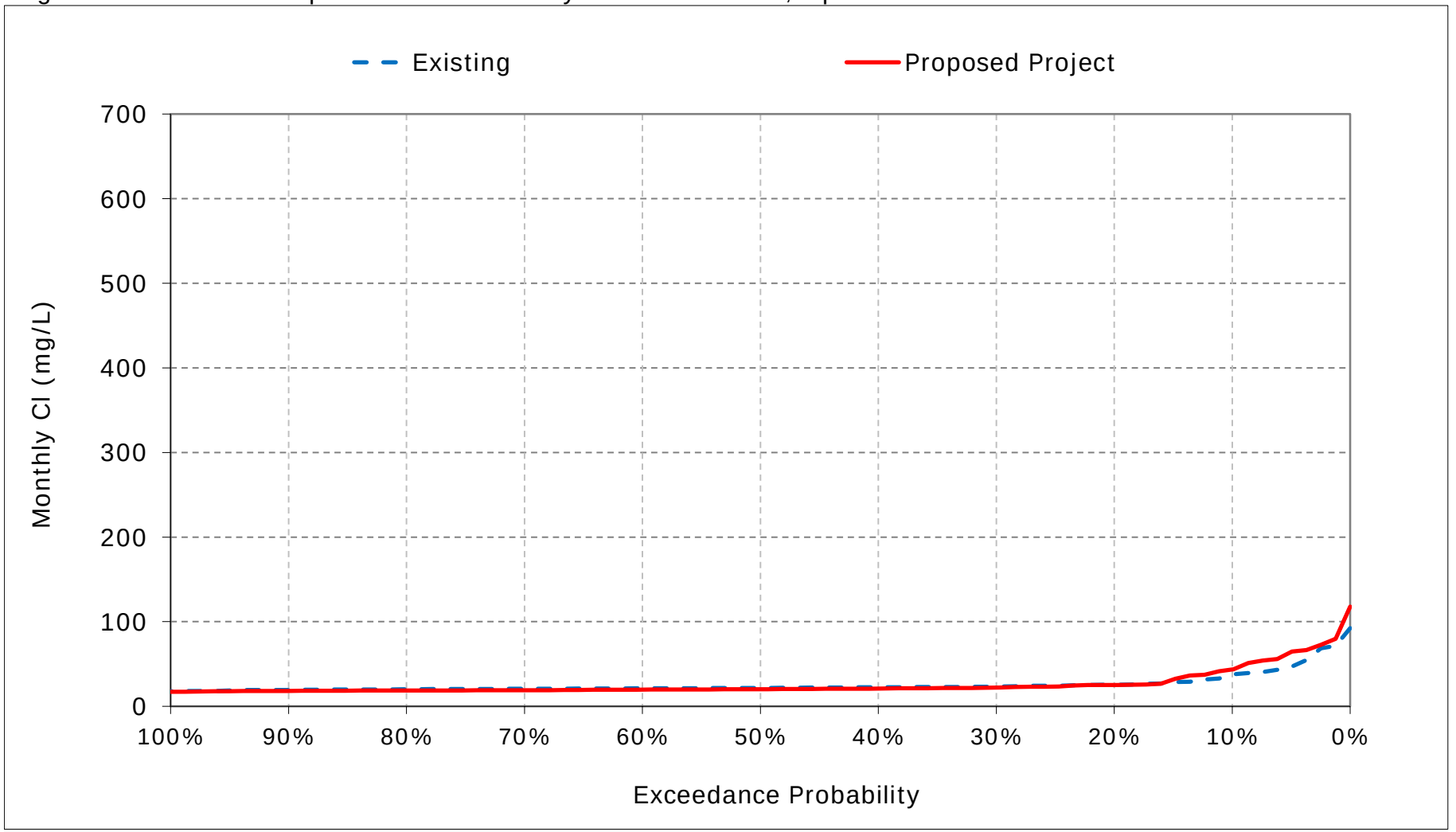


Figure 4-11. San Joaquin River at Jersey Point Chloride, May Cl

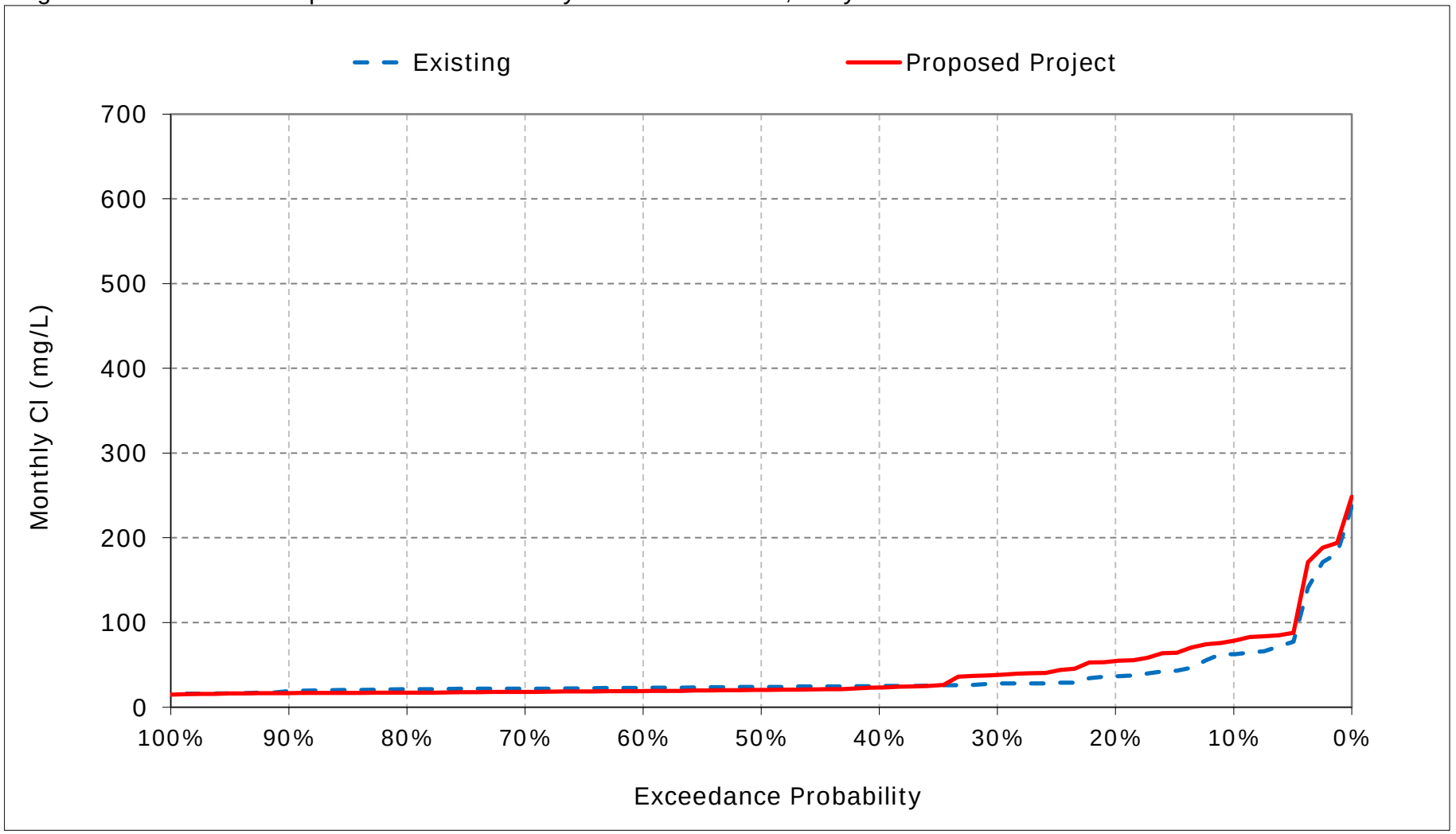


Figure 4-12. San Joaquin River at Jersey Point Chloride, June Cl

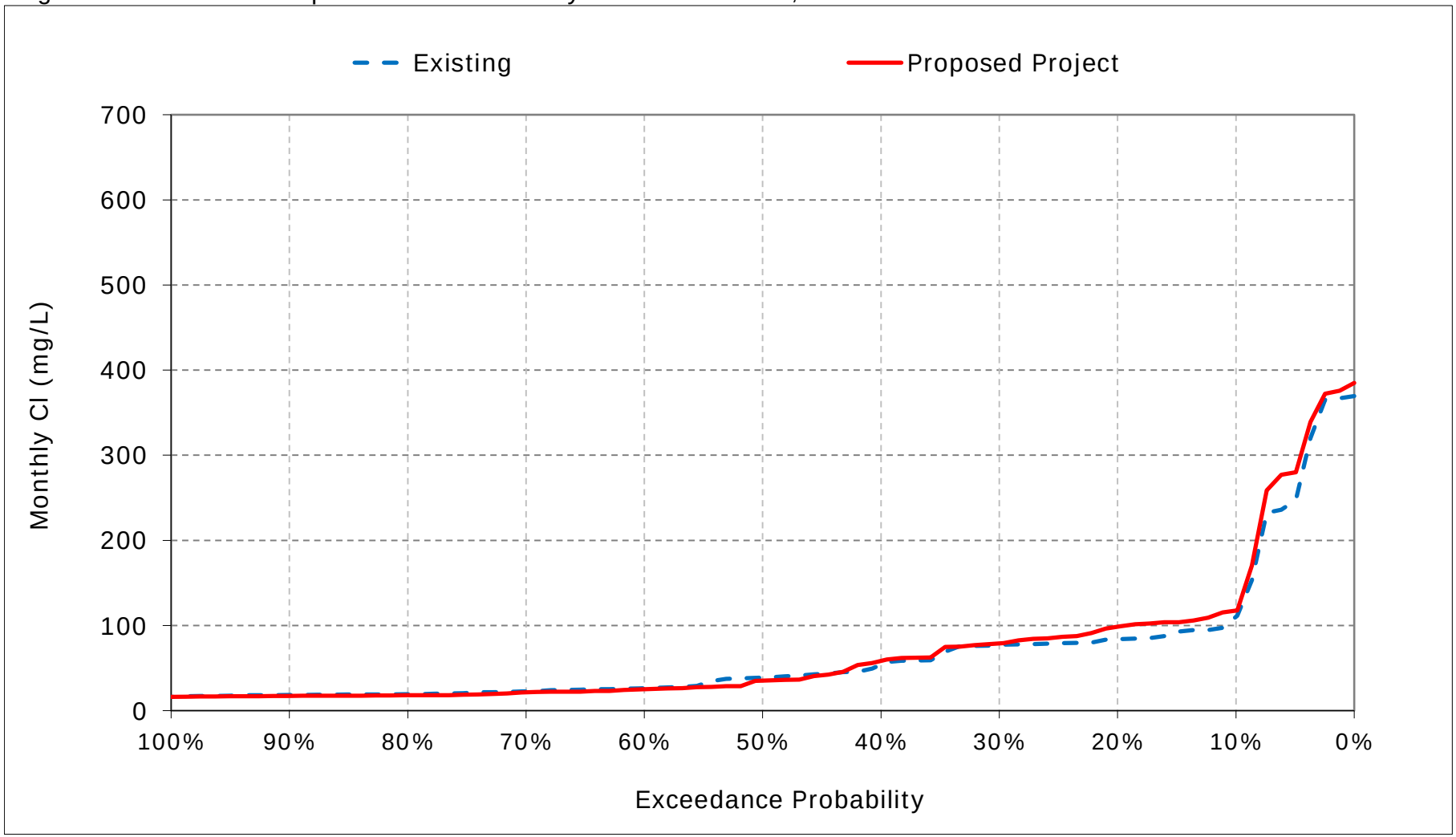


Figure 4-13. San Joaquin River at Jersey Point Chloride, July Cl

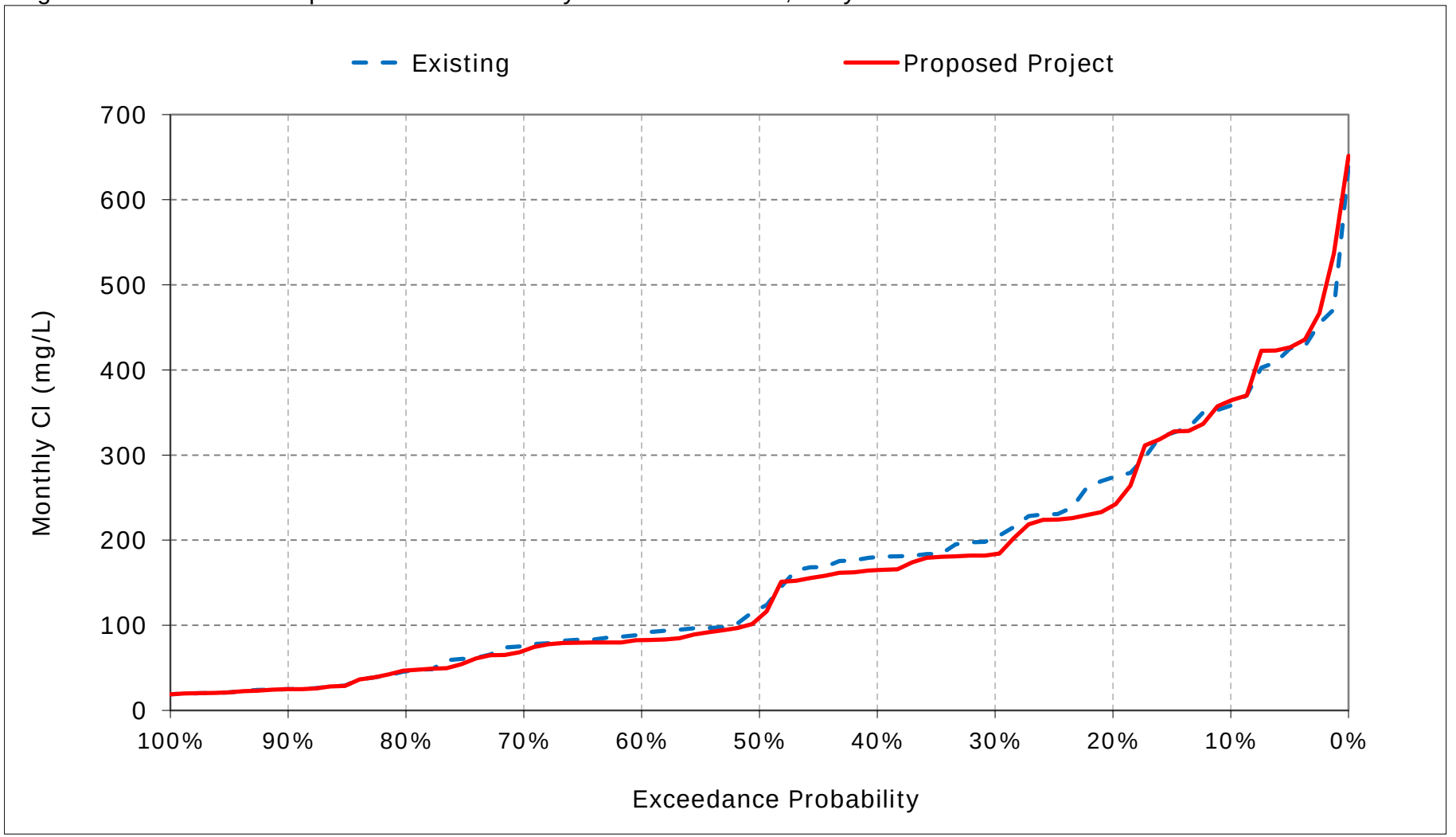


Figure 4-14. San Joaquin River at Jersey Point Chloride, August Cl

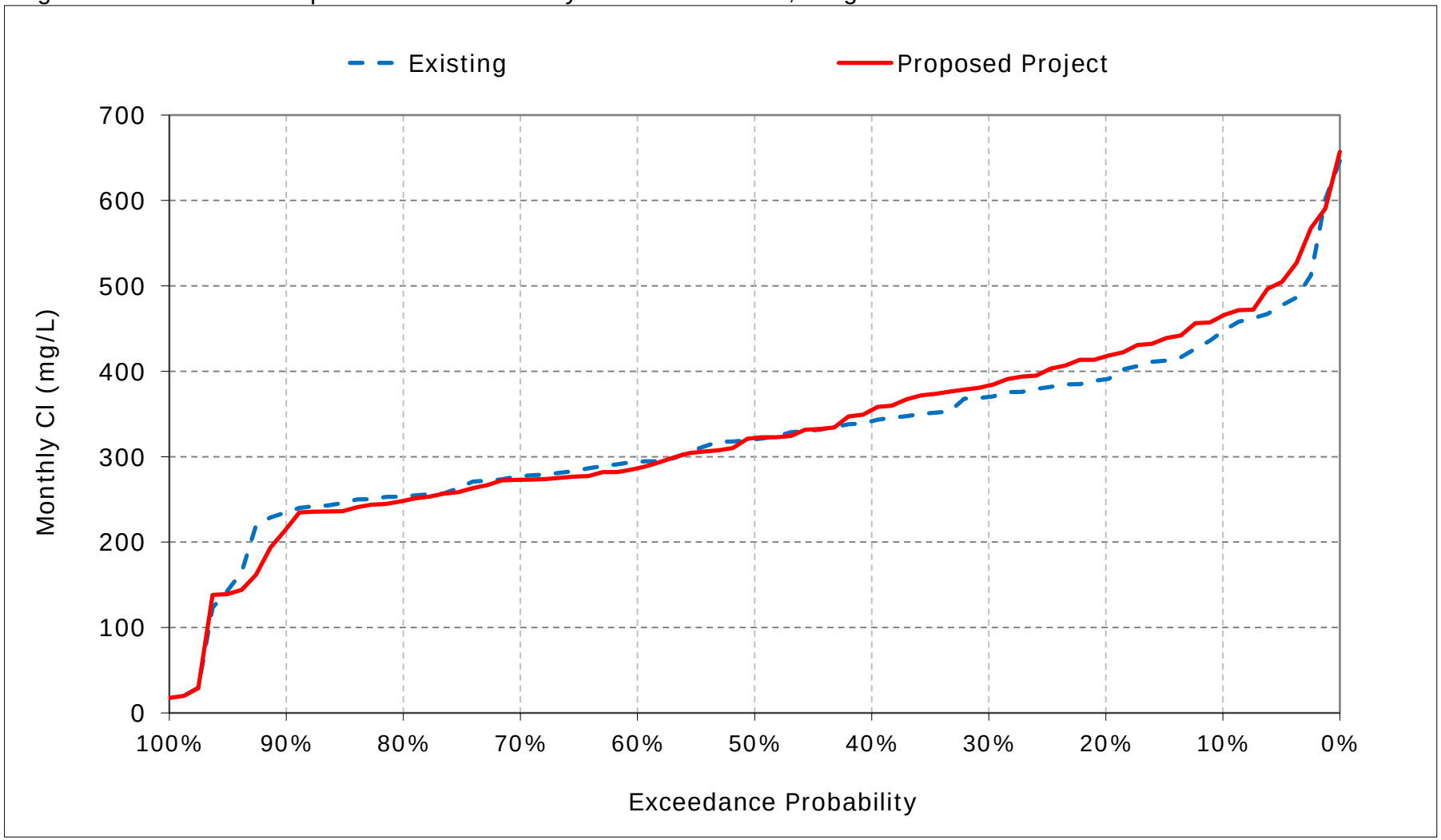


Figure 4-15. San Joaquin River at Jersey Point Chloride, September Cl

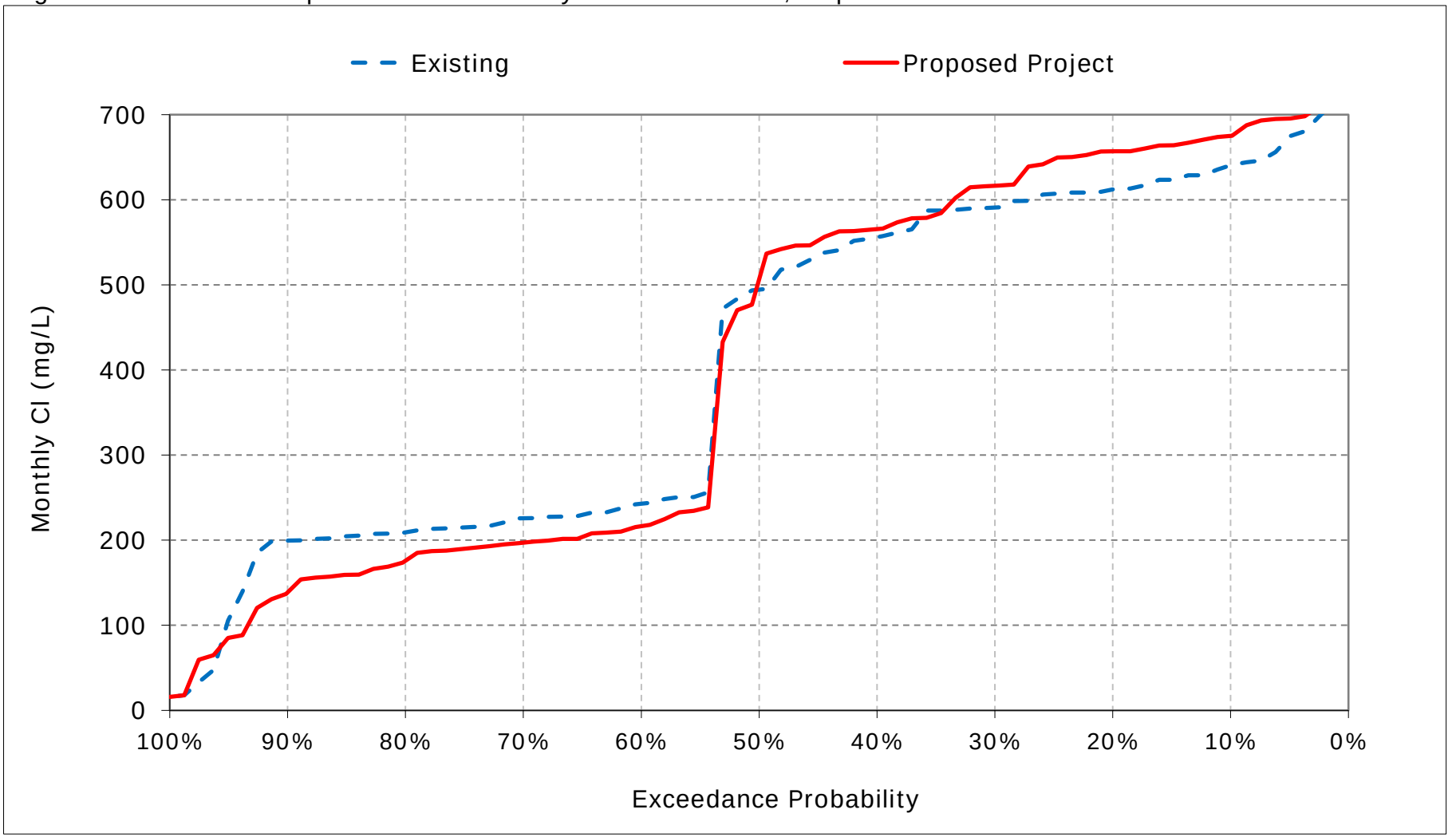


Figure 4-16. San Joaquin River at Jersey Point Chloride, October Cl

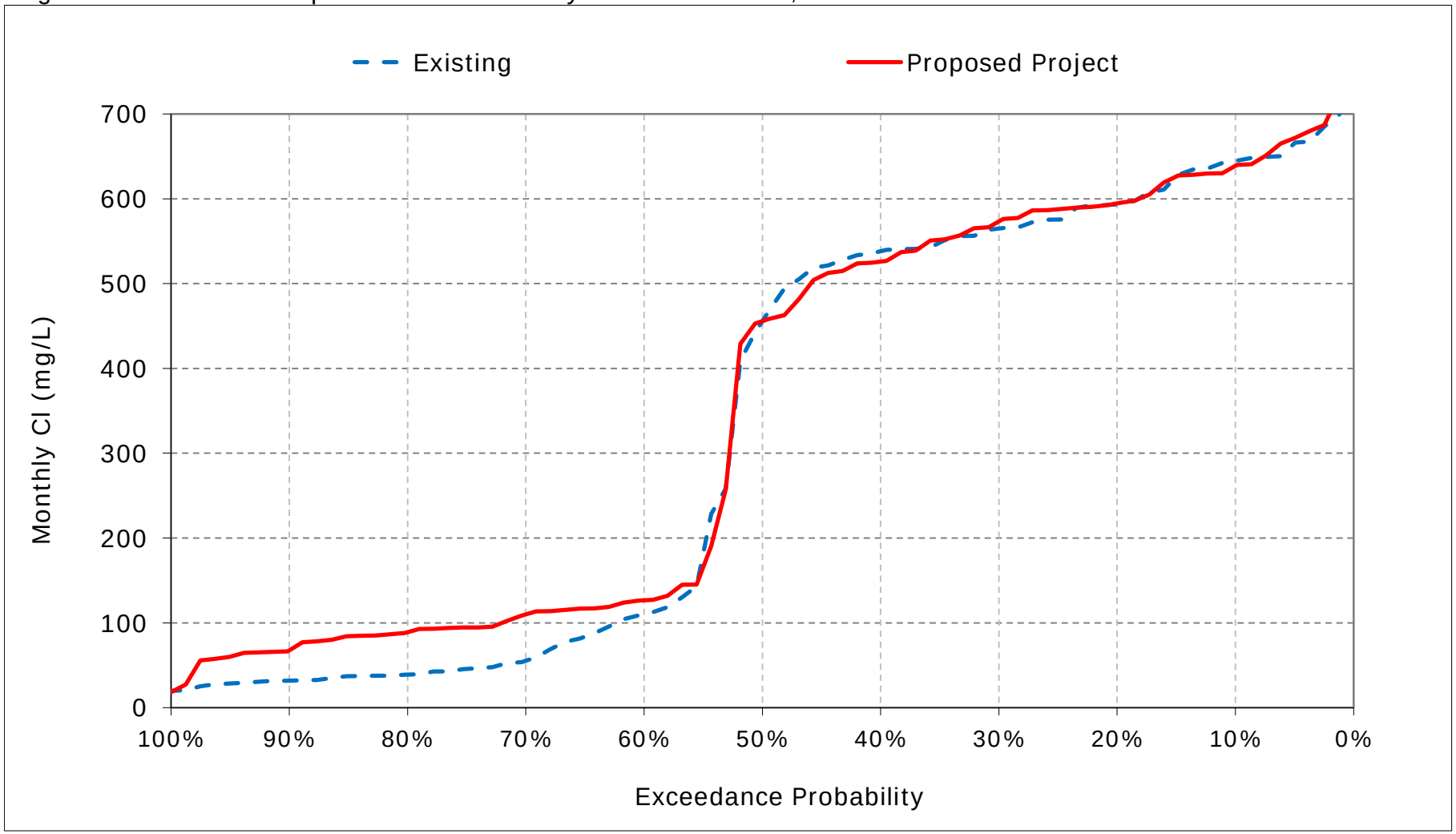


Figure 4-17. San Joaquin River at Jersey Point Chloride, November Cl

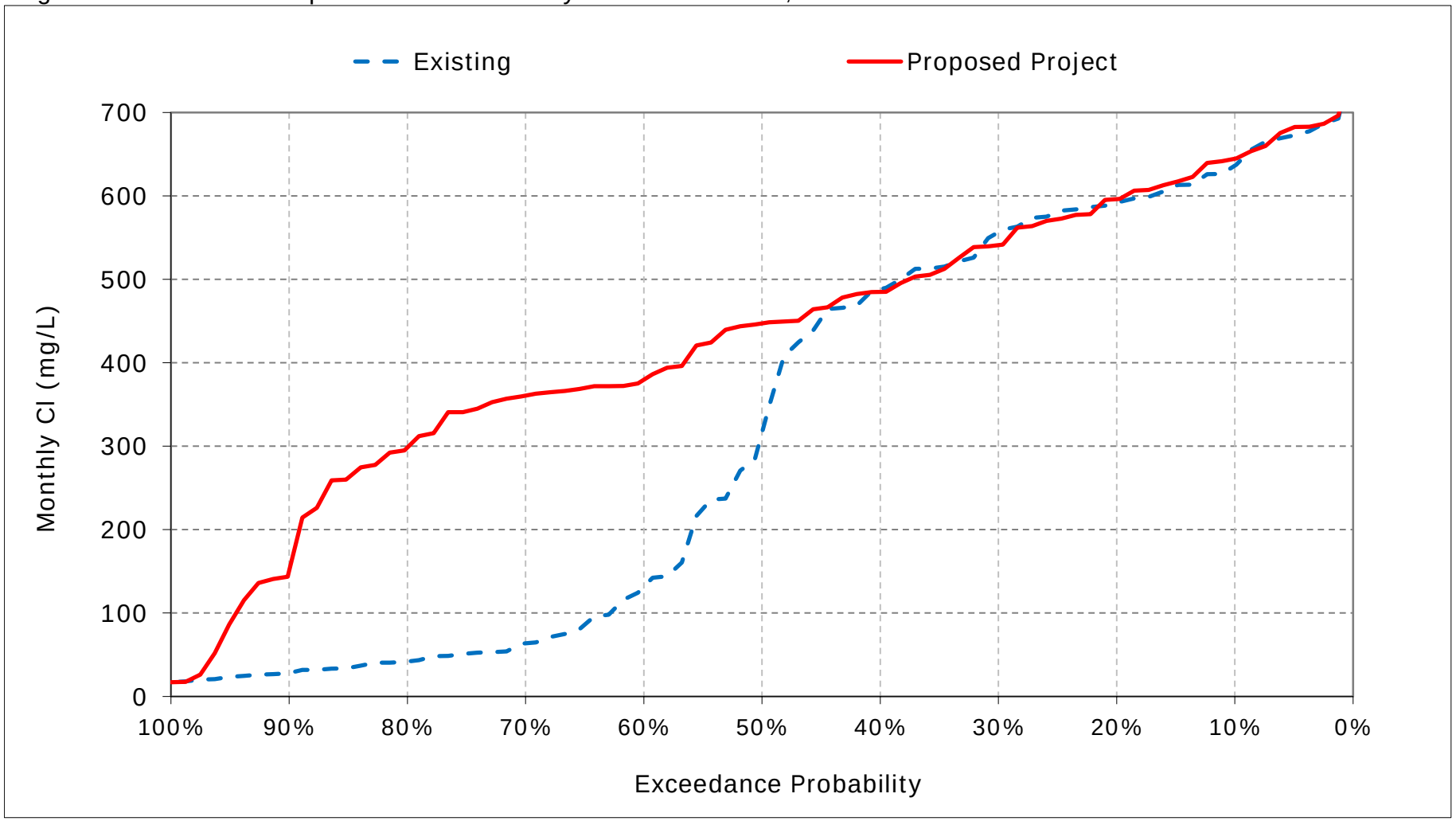


Figure 4-18. San Joaquin River at Jersey Point Chloride, December Cl

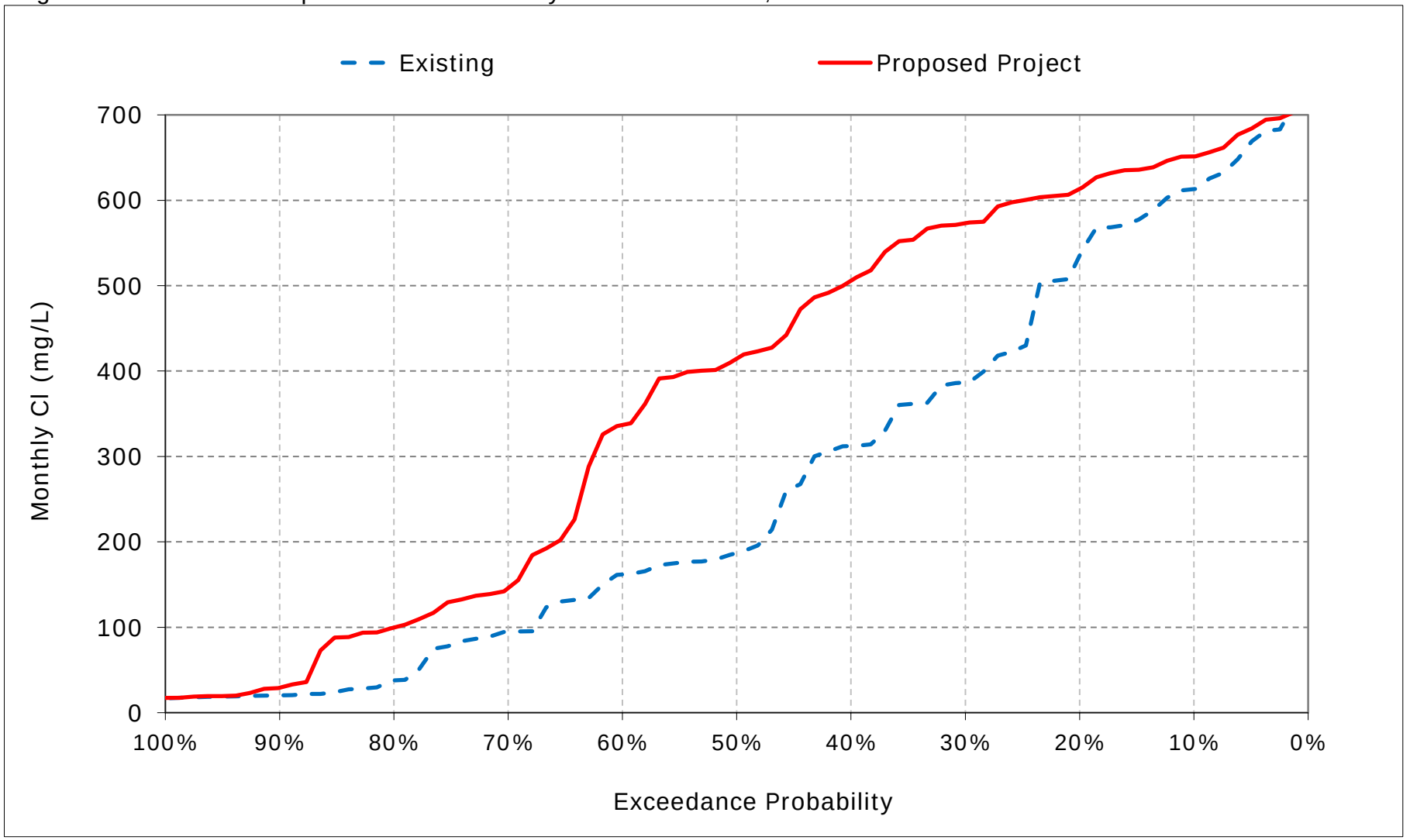


Table 5-1. San Joaquin River at San Andreas Chloride, Monthly Cl

Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	136	132	148	112	41	23	24	25	23	53	84	117
20%	117	117	136	91	29	22	23	24	21	36	71	112
30%	111	110	116	68	25	21	22	24	20	28	61	104
40%	105	99	84	53	23	20	21	23	19	26	52	97
50%	92	70	42	38	22	19	20	22	19	21	47	84
60%	21	27	33	27	21	18	20	21	18	19	42	67
70%	20	20	27	22	19	18	19	20	17	19	33	56
80%	19	19	21	20	18	17	19	19	17	18	31	37
90%	18	18	17	18	17	17	17	16	16	17	29	29
Long Term												
Full Simulation Period[a]	71	71	72	54	26	20	21	22	21	30	51	78
Water Year Types[b]												
Wet (32%)	53	49	33	23	19	18	18	18	17	18	31	52
Above Normal (15%)	81	70	70	41	22	18	20	21	18	19	34	31
Below Normal (17%)	72	76	89	61	23	20	21	22	19	25	51	102
Dry (22%)	75	82	85	68	29	20	22	23	20	38	67	100
Critical (15%)	94	94	119	107	46	26	23	29	39	62	86	124

Proposed Project

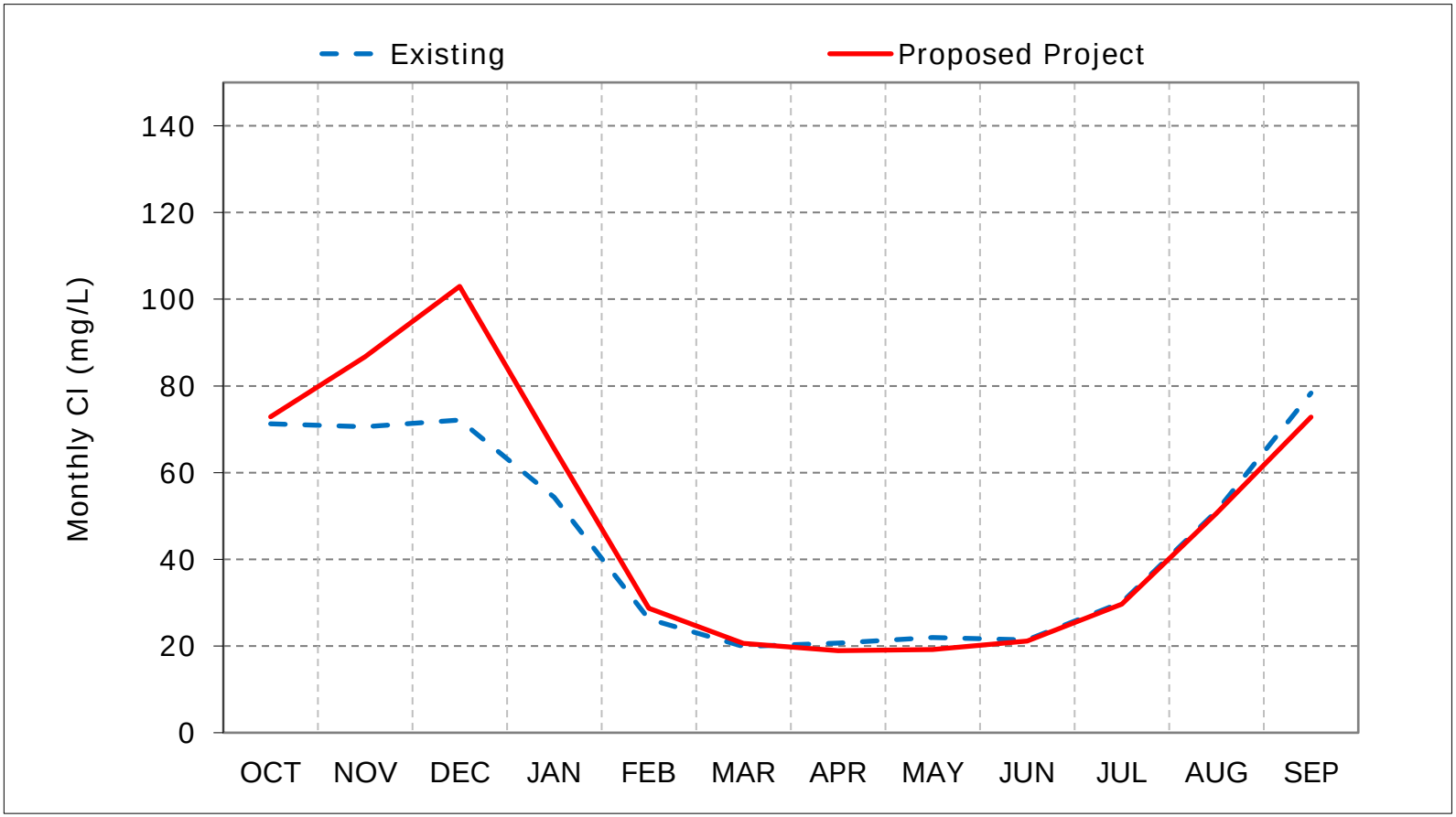
Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	132	139	166	144	46	23	22	23	24	54	83	127
20%	123	125	152	111	30	22	21	21	21	32	69	117
30%	114	113	148	93	26	21	20	20	20	28	60	111
40%	106	102	132	73	23	20	19	19	19	24	54	99
50%	100	90	123	38	22	19	18	18	17	21	46	86
60%	24	67	105	27	21	19	18	17	17	19	39	31
70%	21	57	46	23	19	18	17	16	16	18	32	28
80%	20	46	31	20	18	17	17	16	16	18	30	27
90%	18	30	19	18	17	17	16	15	16	17	26	25
Long Term												
Full Simulation Period[a]	73	87	103	66	29	21	19	19	21	30	51	73
Water Year Types[b]												
Wet (32%)	55	68	52	25	19	18	17	16	16	18	30	25
Above Normal (15%)	83	93	118	57	23	19	18	17	17	19	34	29
Below Normal (17%)	74	89	121	71	23	20	19	18	18	23	52	113
Dry (22%)	77	94	125	90	33	21	20	20	20	37	66	102
Critical (15%)	96	106	144	118	56	29	23	29	41	64	88	128

Proposed Project minus Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-4	7	18	32	6	0	-3	-2	0	1	-1	10
20%	7	8	17	20	1	0	-2	-3	0	-3	-2	5
30%	3	3	33	25	1	0	-2	-4	0	0	-1	8
40%	1	3	48	20	0	0	-2	-4	-1	-2	2	2
50%	8	20	81	0	0	0	-2	-4	-2	0	-1	2
60%	3	40	73	0	0	0	-2	-4	-1	0	-3	-36
70%	1	37	19	0	0	0	-2	-4	-1	0	-1	-28
80%	0	28	9	0	0	0	-2	-3	-1	0	-1	-10
90%	0	12	2	0	0	0	-1	-1	-1	0	-2	-4
Long Term												
Full Simulation Period[a]	2	16	31	11	3	1	-2	-3	0	0	0	-6
Water Year Types[b]												
Wet (32%)	2	19	19	2	0	0	-1	-2	-1	0	-2	-26
Above Normal (15%)	1	23	49	16	1	0	-2	-4	-1	0	0	-2
Below Normal (17%)	2	13	33	10	0	0	-3	-4	-1	-2	1	11
Dry (22%)	1	12	39	21	4	1	-3	-4	0	-1	-2	2
Critical (15%)	1	12	24	11	10	3	0	0	2	2	2	4

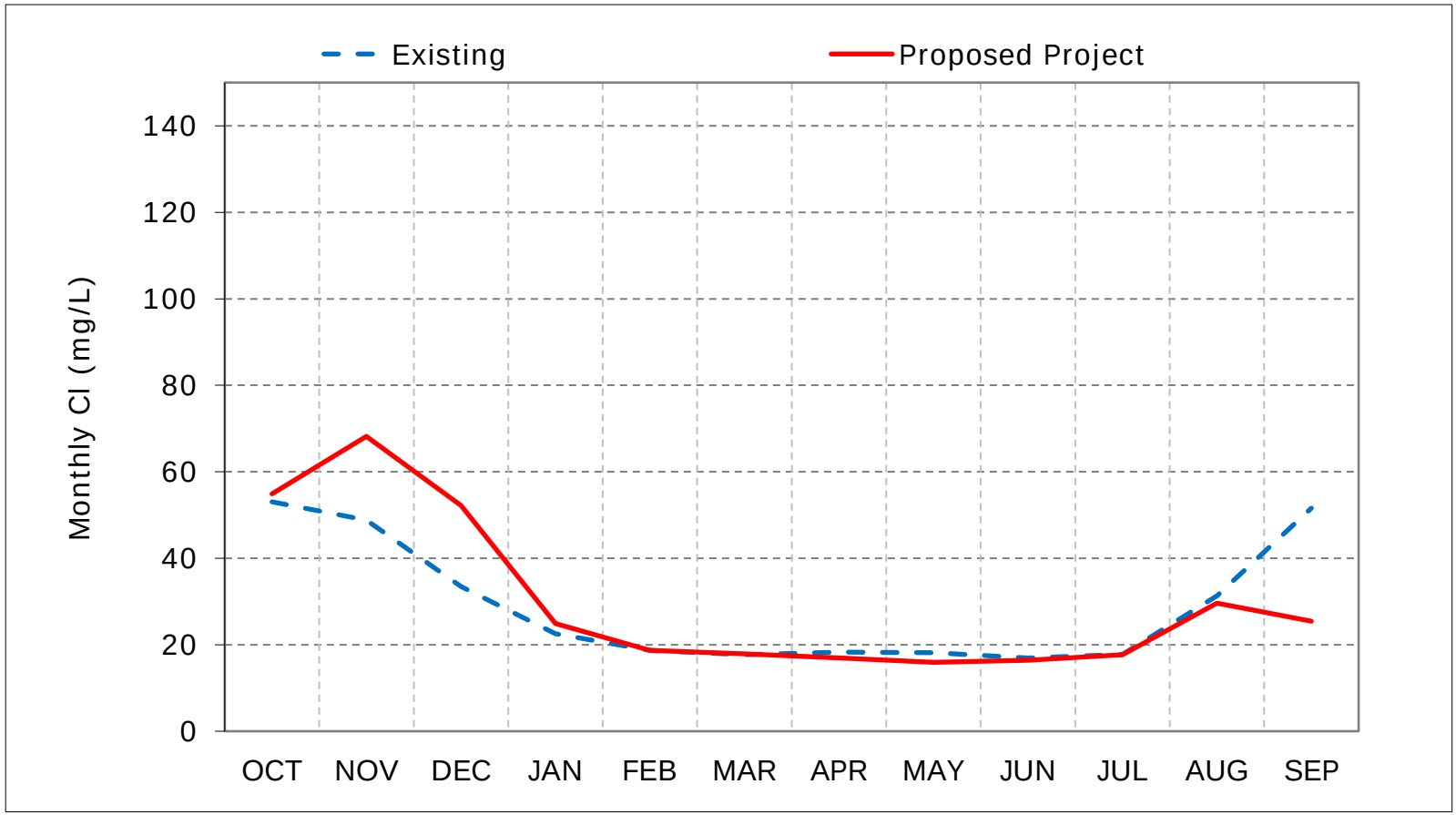
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 5-1. San Joaquin River at San Andreas Chloride, Long-Term Average Cl



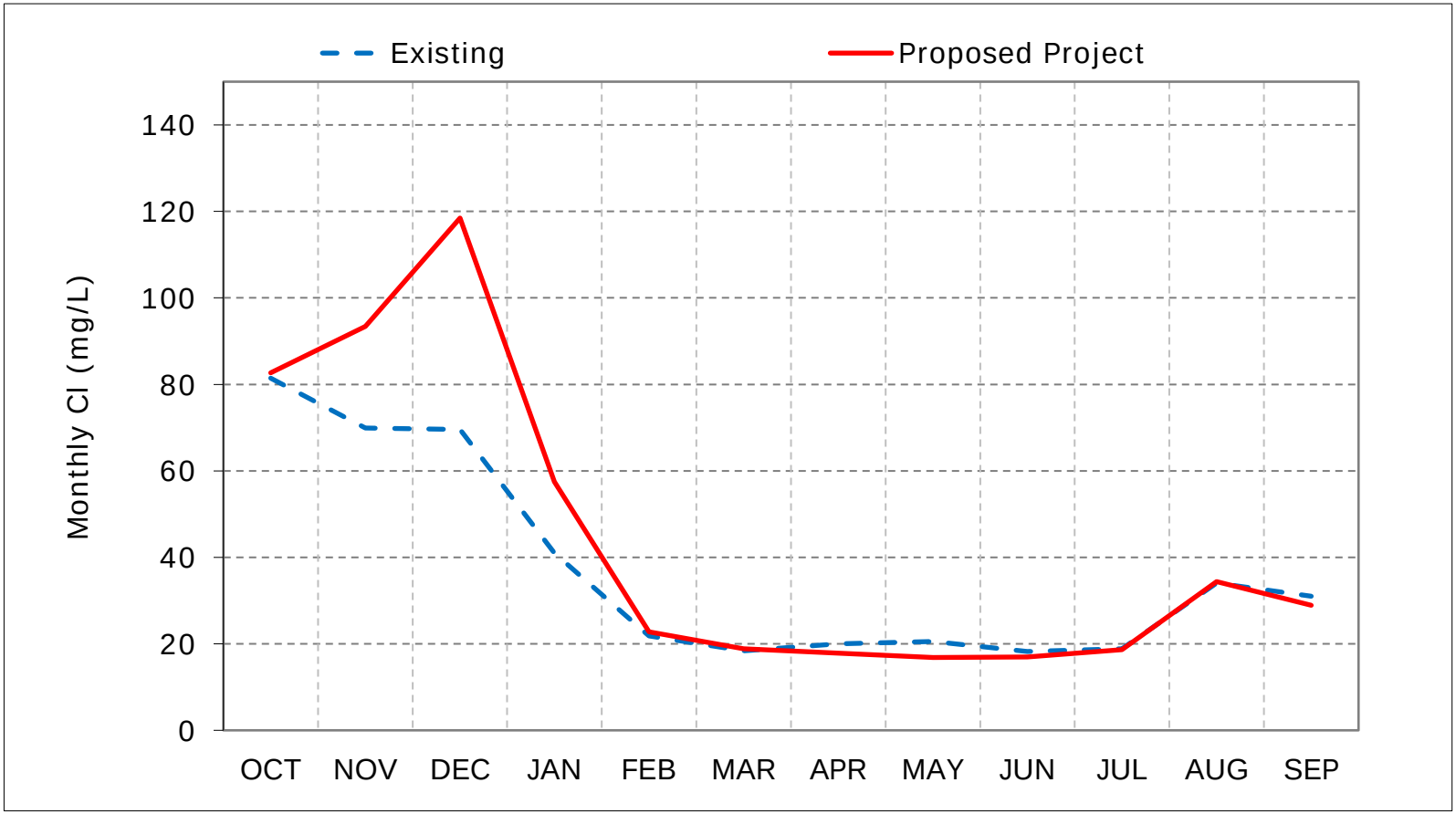
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-2. San Joaquin River at San Andreas Chloride, Wet Year Average Cl



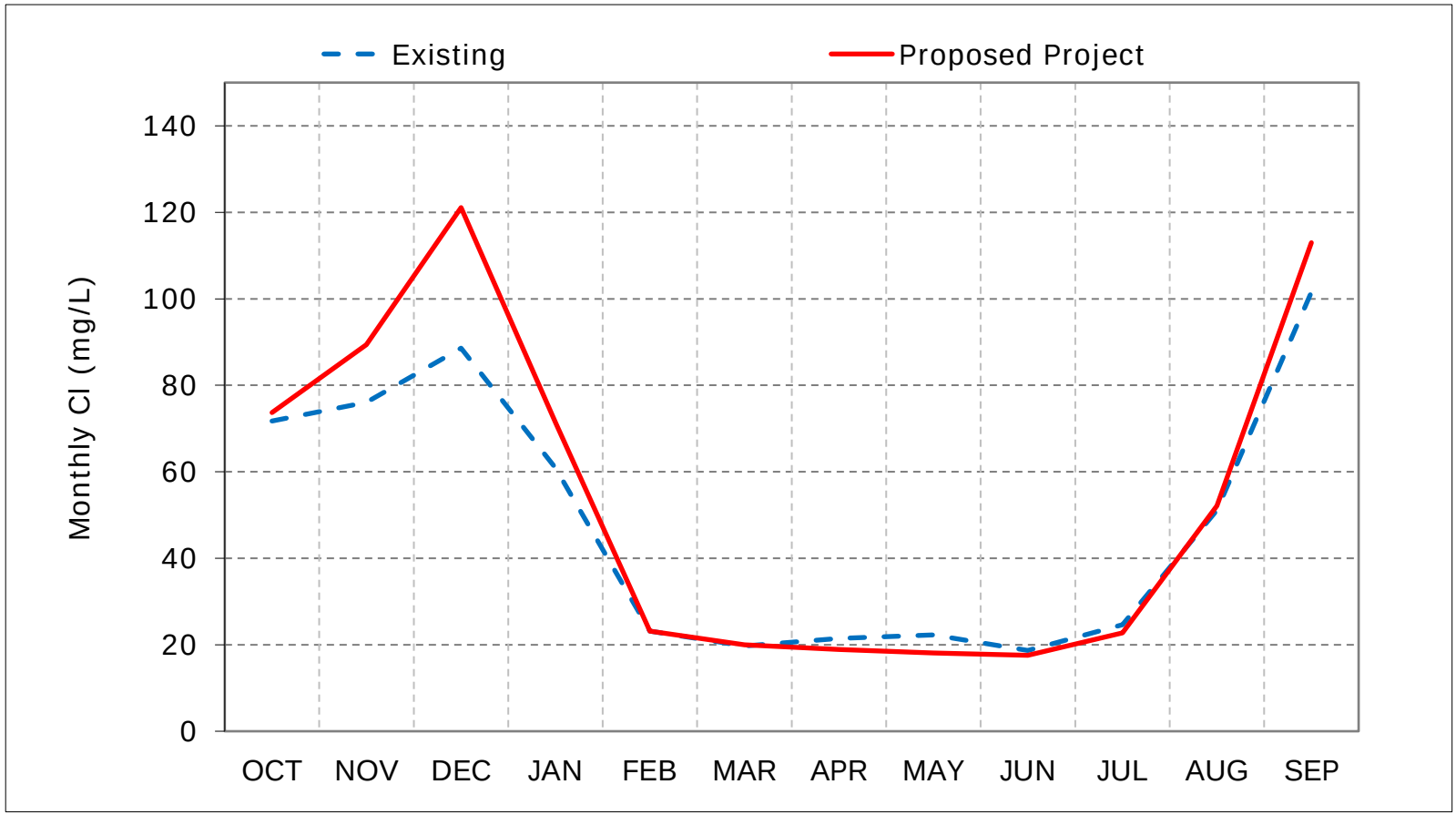
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-3. San Joaquin River at San Andreas Chloride, Above Normal Year Averag



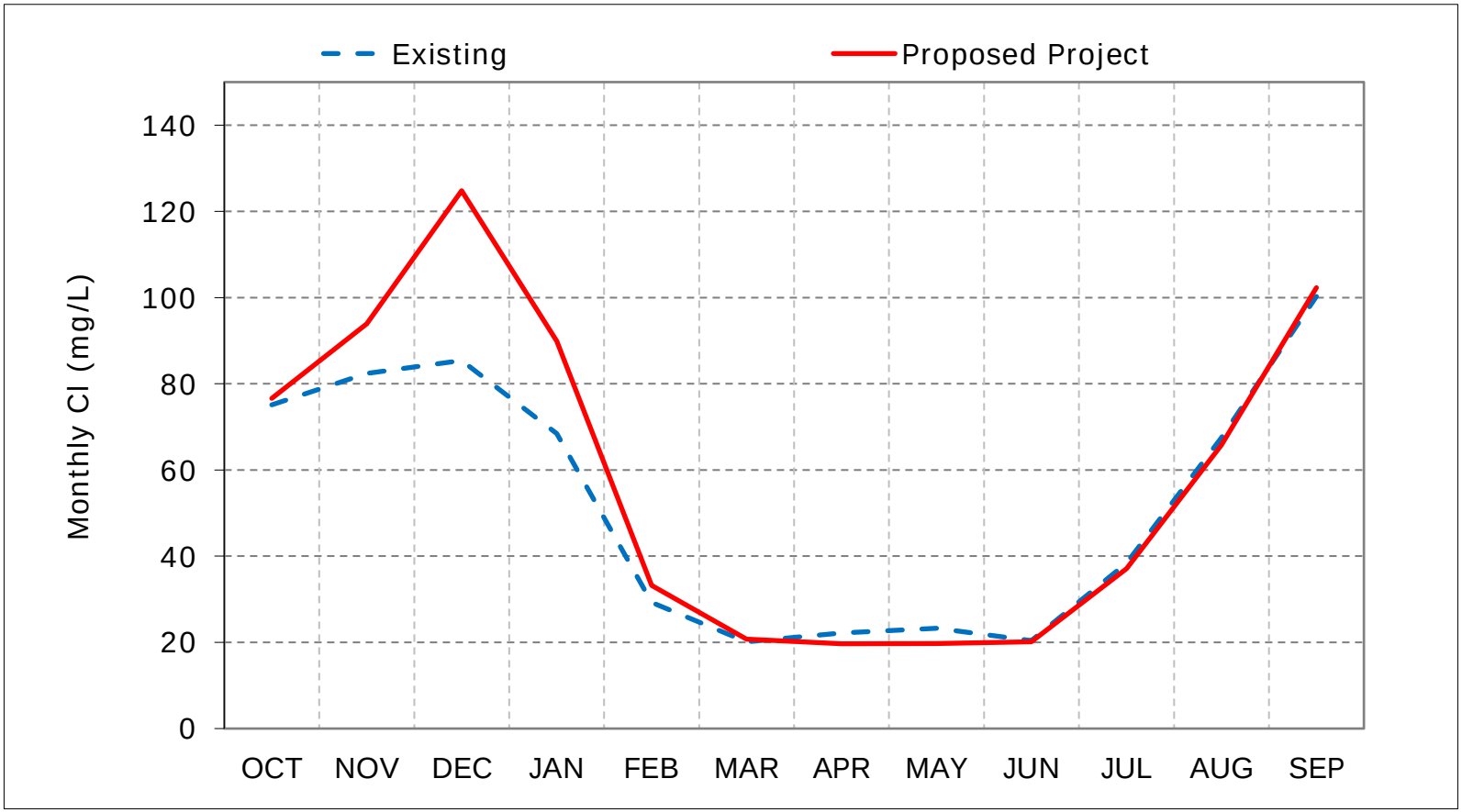
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-4. San Joaquin River at San Andreas Chloride, Below Normal Year Averag



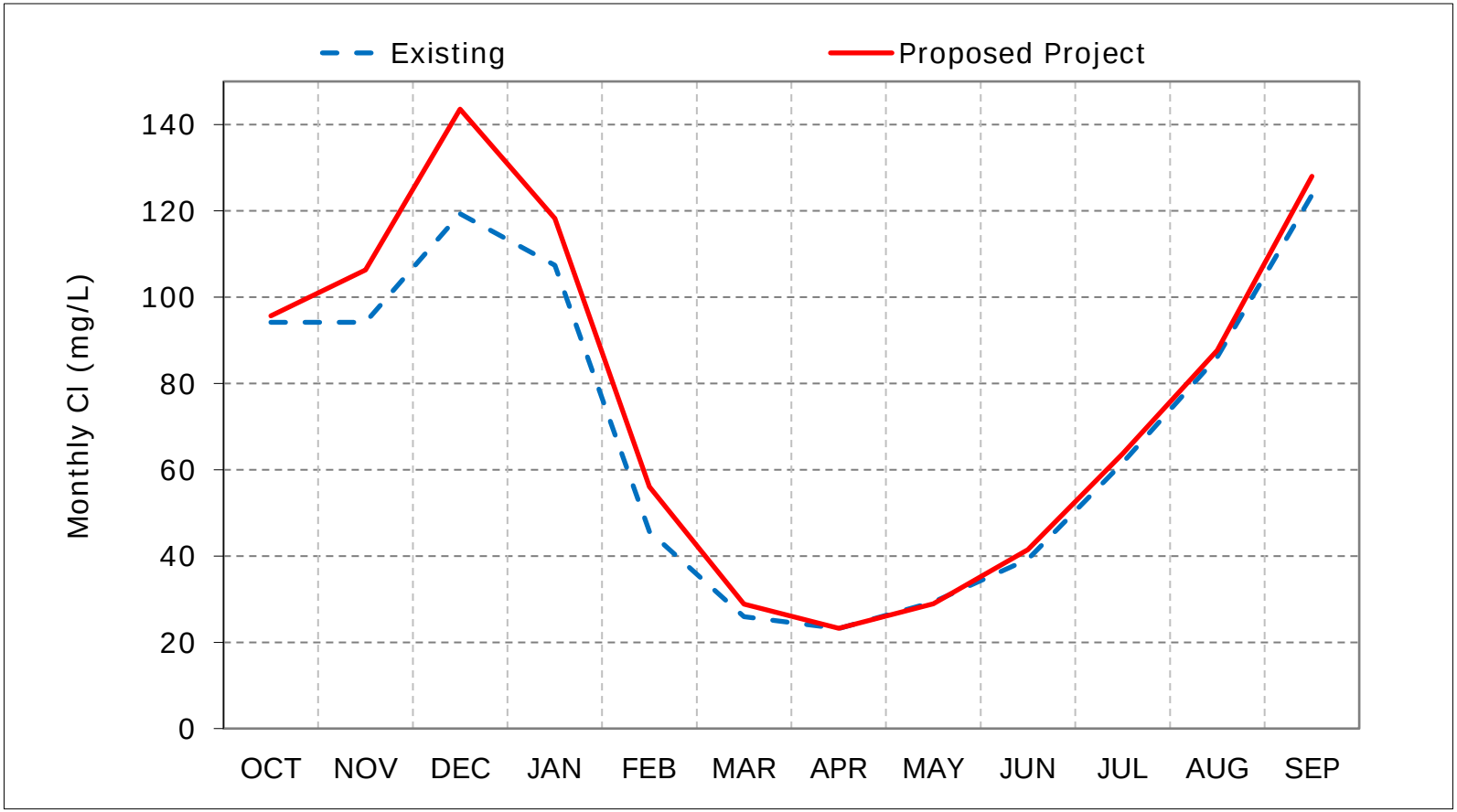
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 5-5. San Joaquin River at San Andreas Chloride, Dry Year Average Cl



*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.

Figure 5-6. San Joaquin River at San Andreas Chloride, Critical Year Average Cl



*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.

Figure 5-7. San Joaquin River at San Andreas Chloride, January Cl

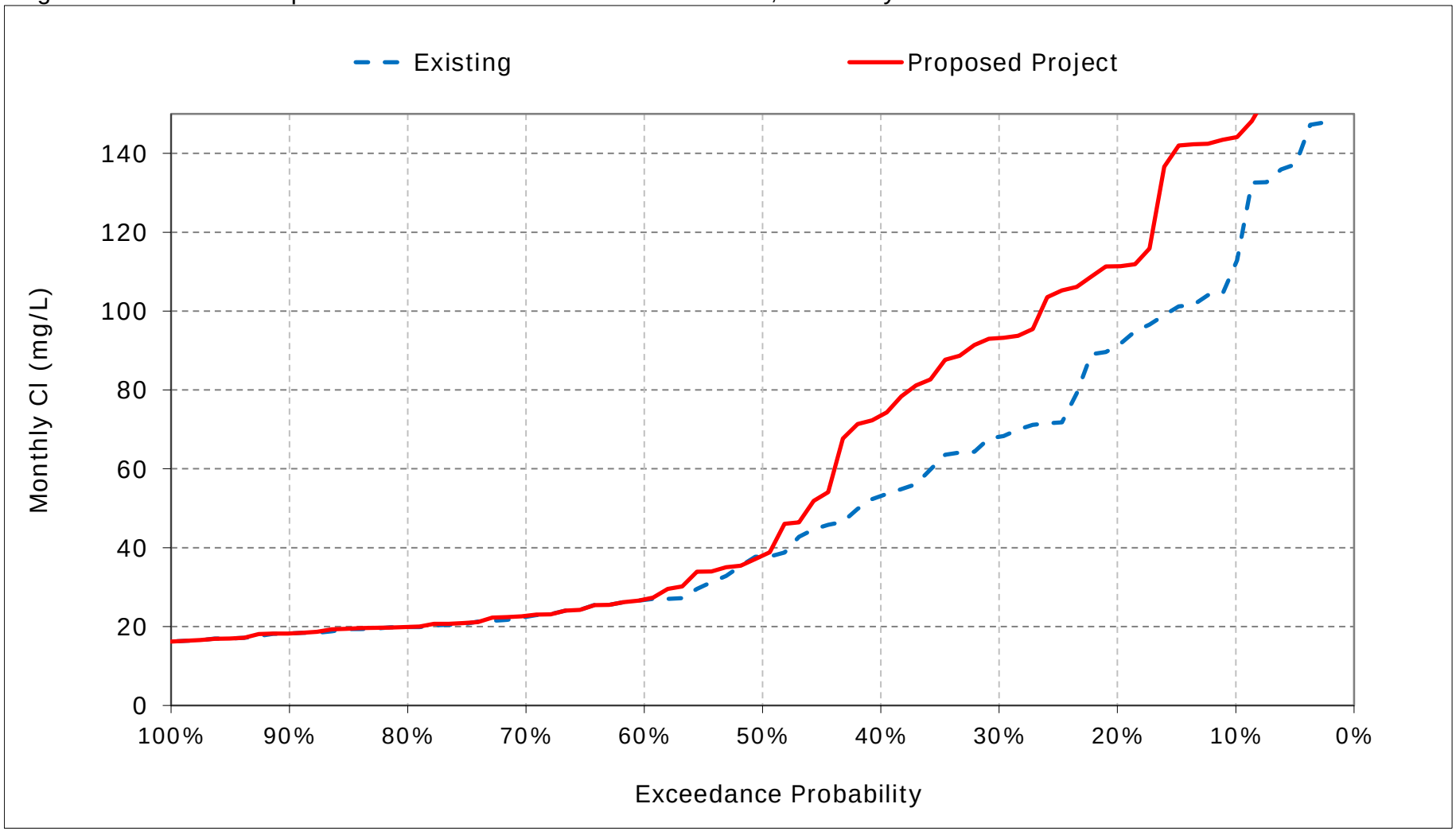


Figure 5-8. San Joaquin River at San Andreas Chloride, February Cl

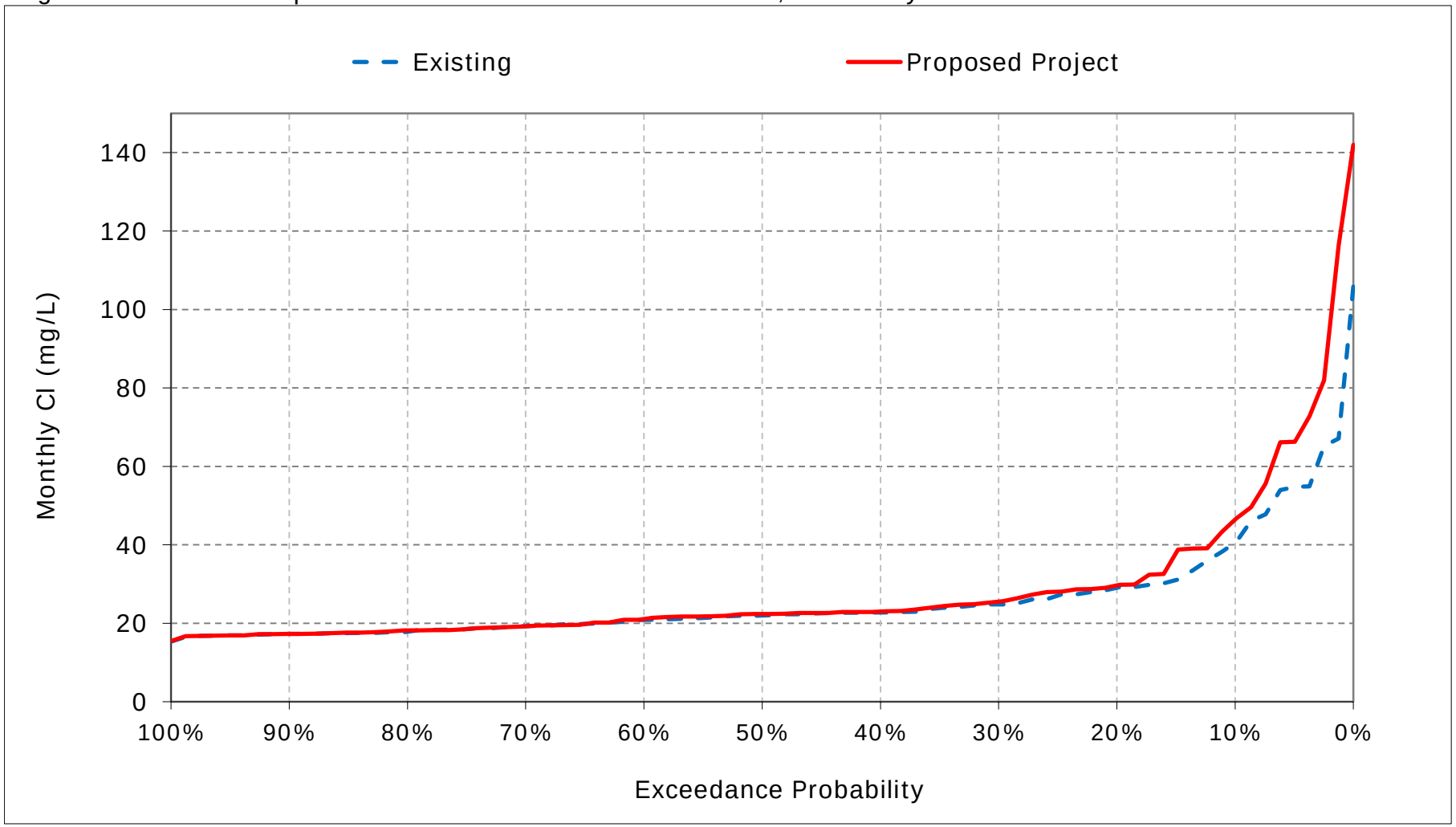


Figure 5-9. San Joaquin River at San Andreas Chloride, March Cl

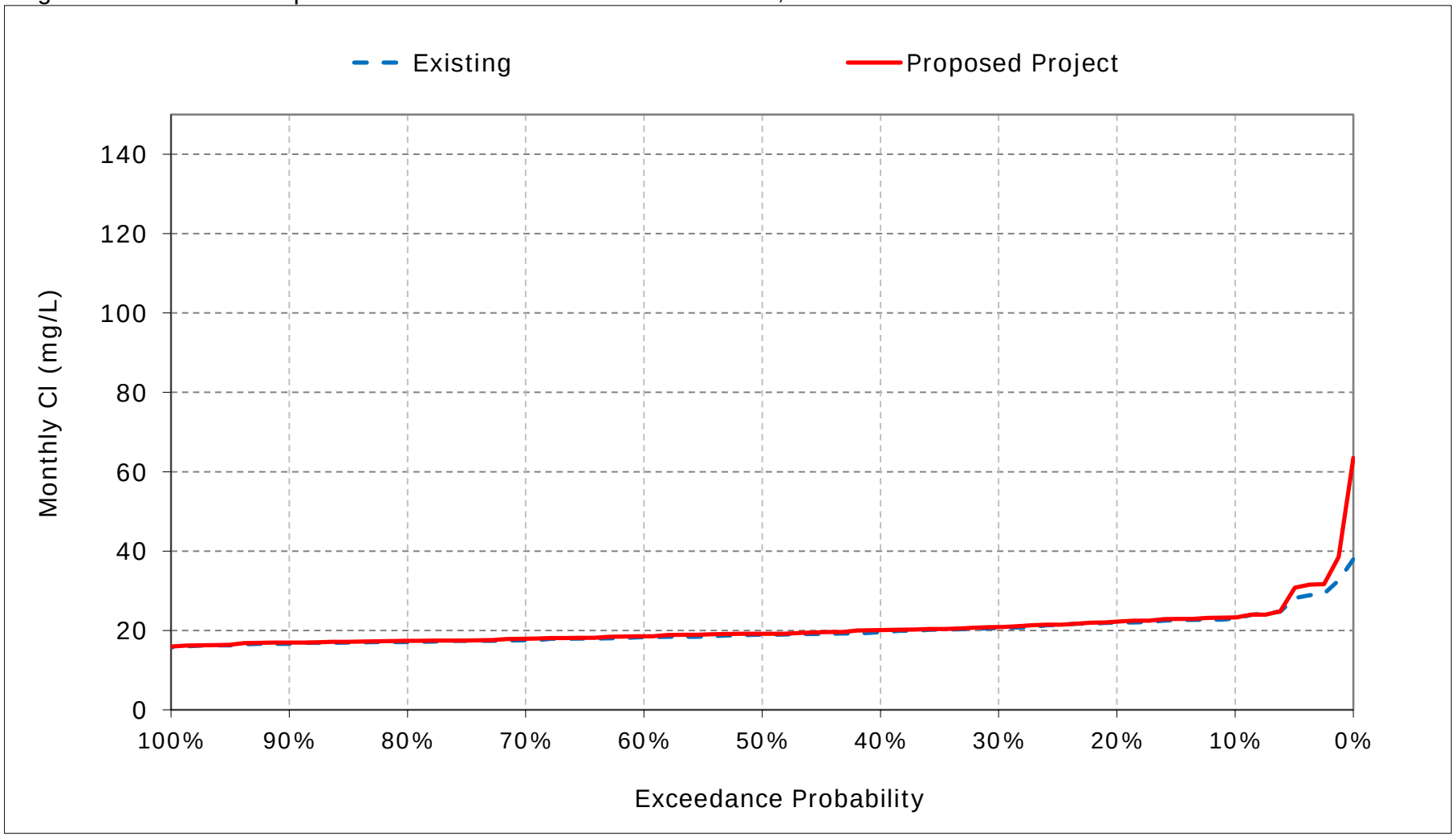


Figure 5-10. San Joaquin River at San Andreas Chloride, April Cl

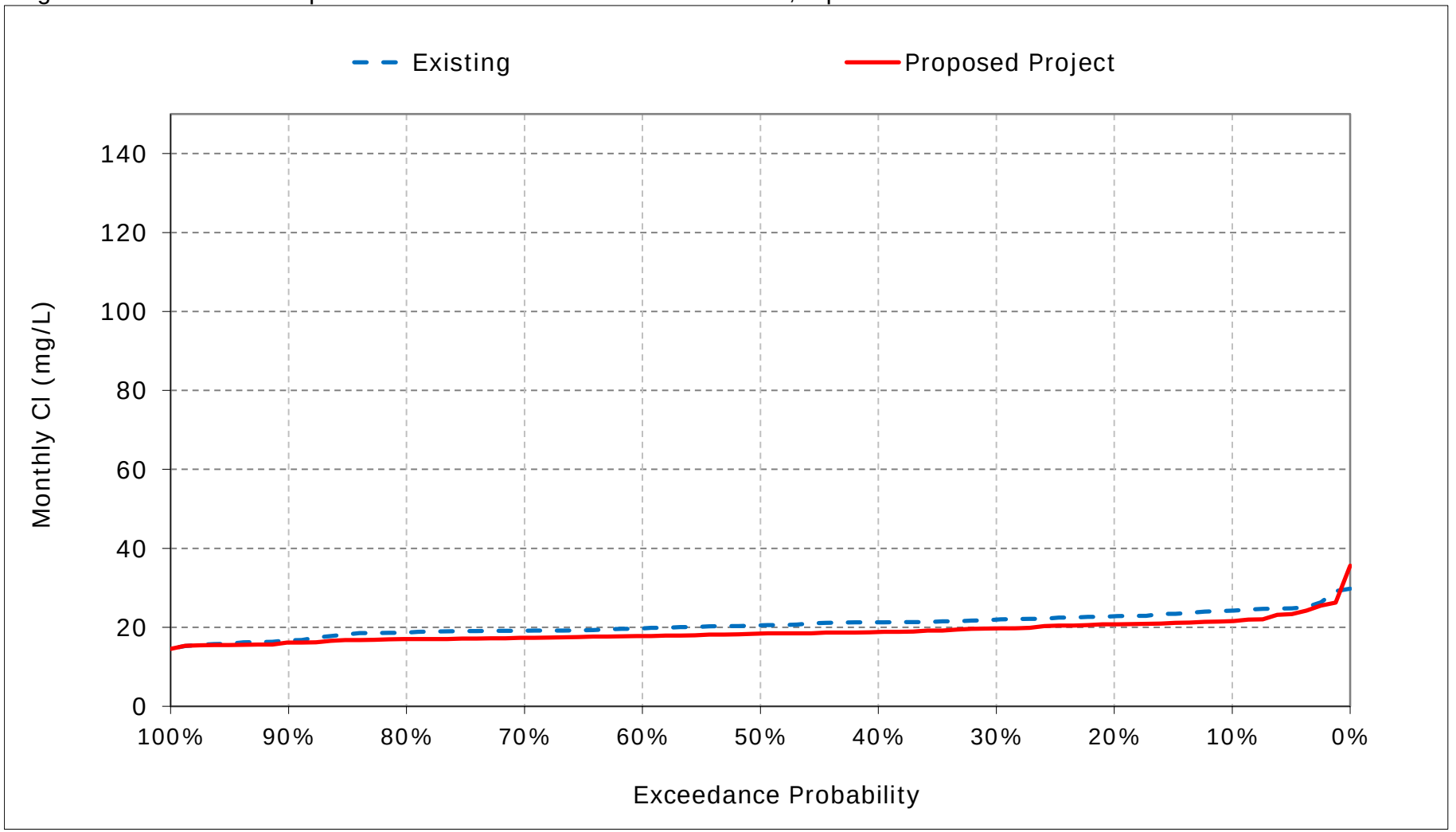


Figure 5-11. San Joaquin River at San Andreas Chloride, May Cl

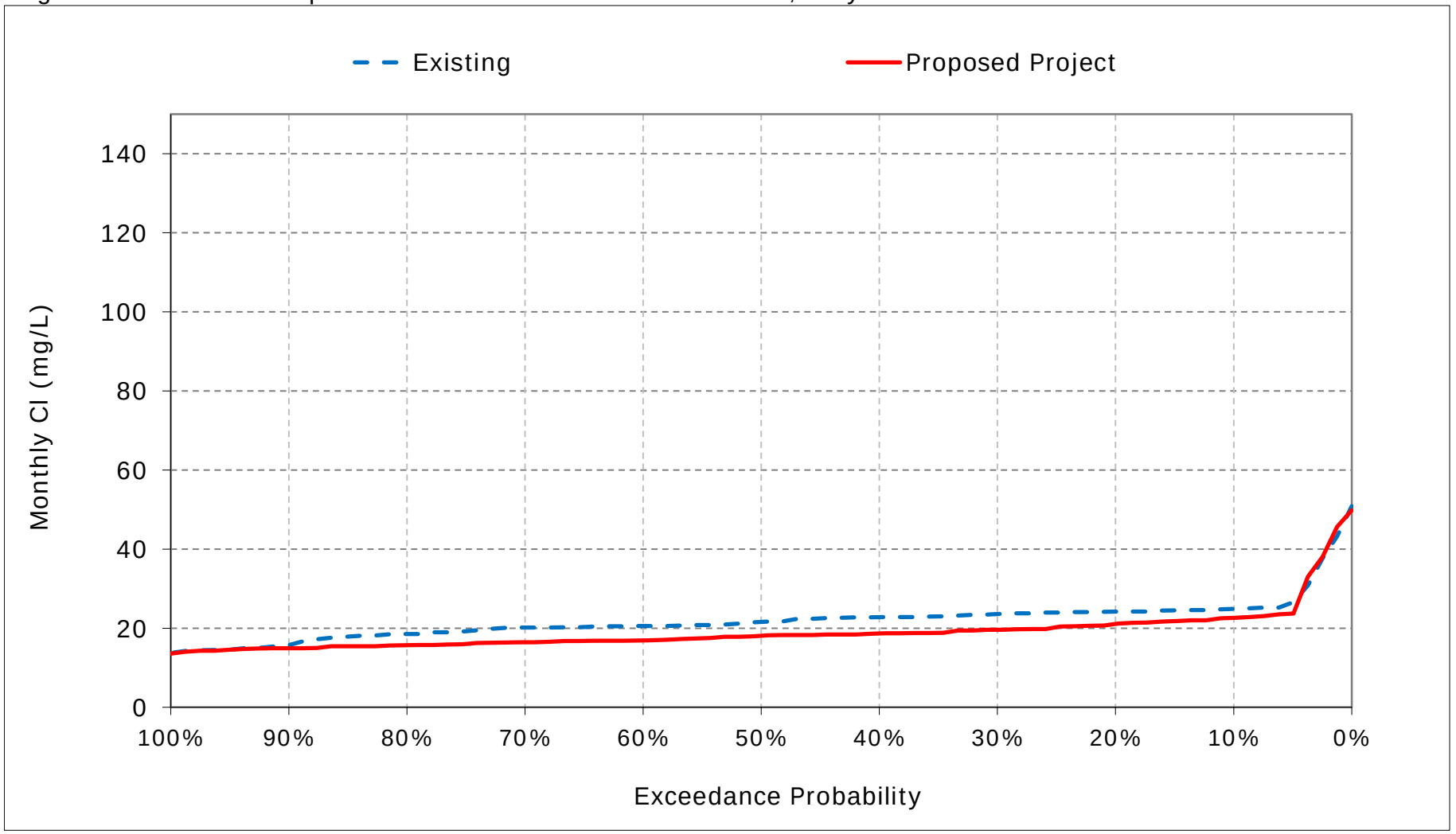


Figure 5-12. San Joaquin River at San Andreas Chloride, June Cl

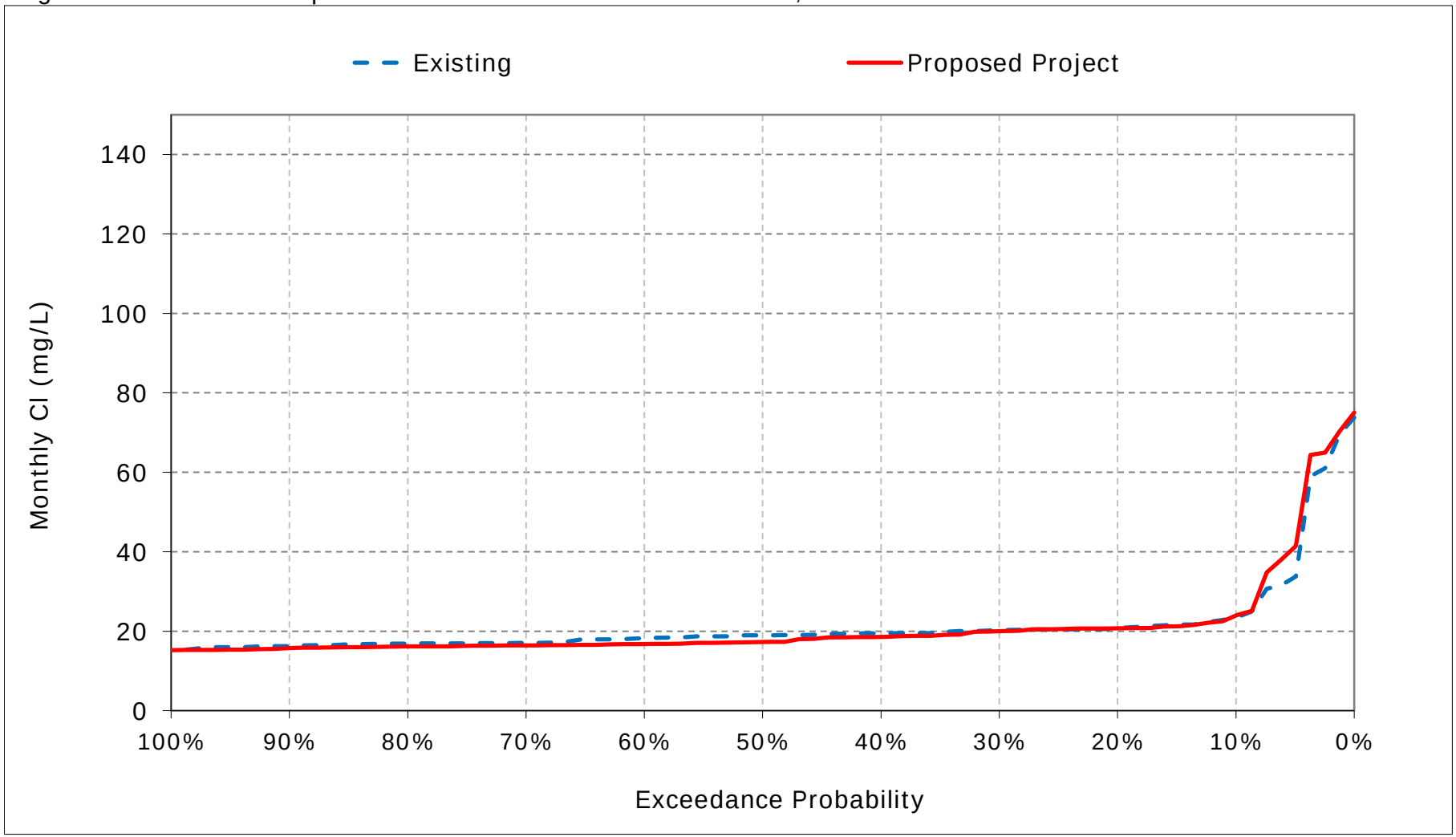


Figure 5-13. San Joaquin River at San Andreas Chloride, July Cl

Figure 5-14. San Joaquin River at San Andreas Chloride, August Cl

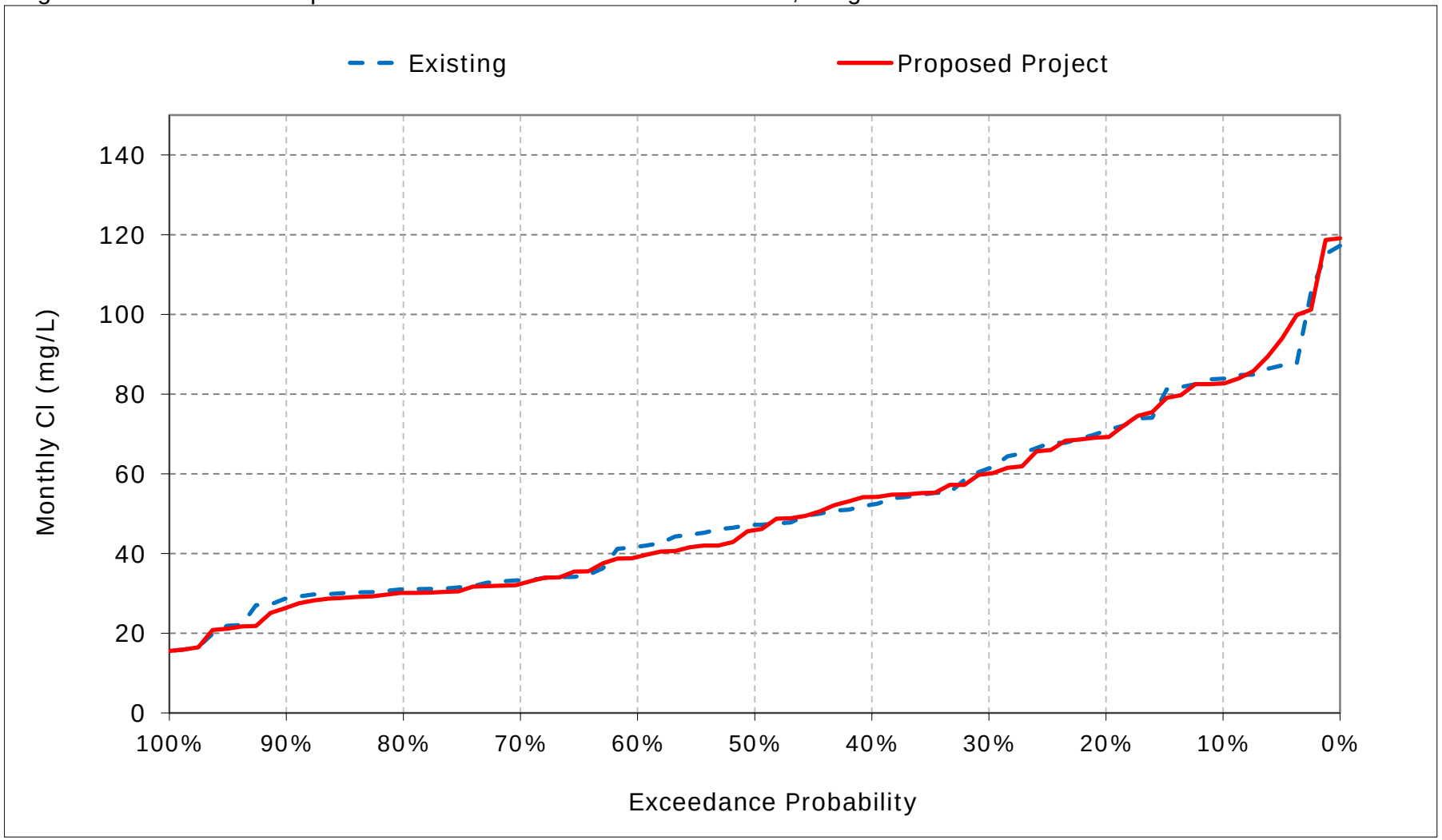


Figure 5-15. San Joaquin River at San Andreas Chloride, September Cl

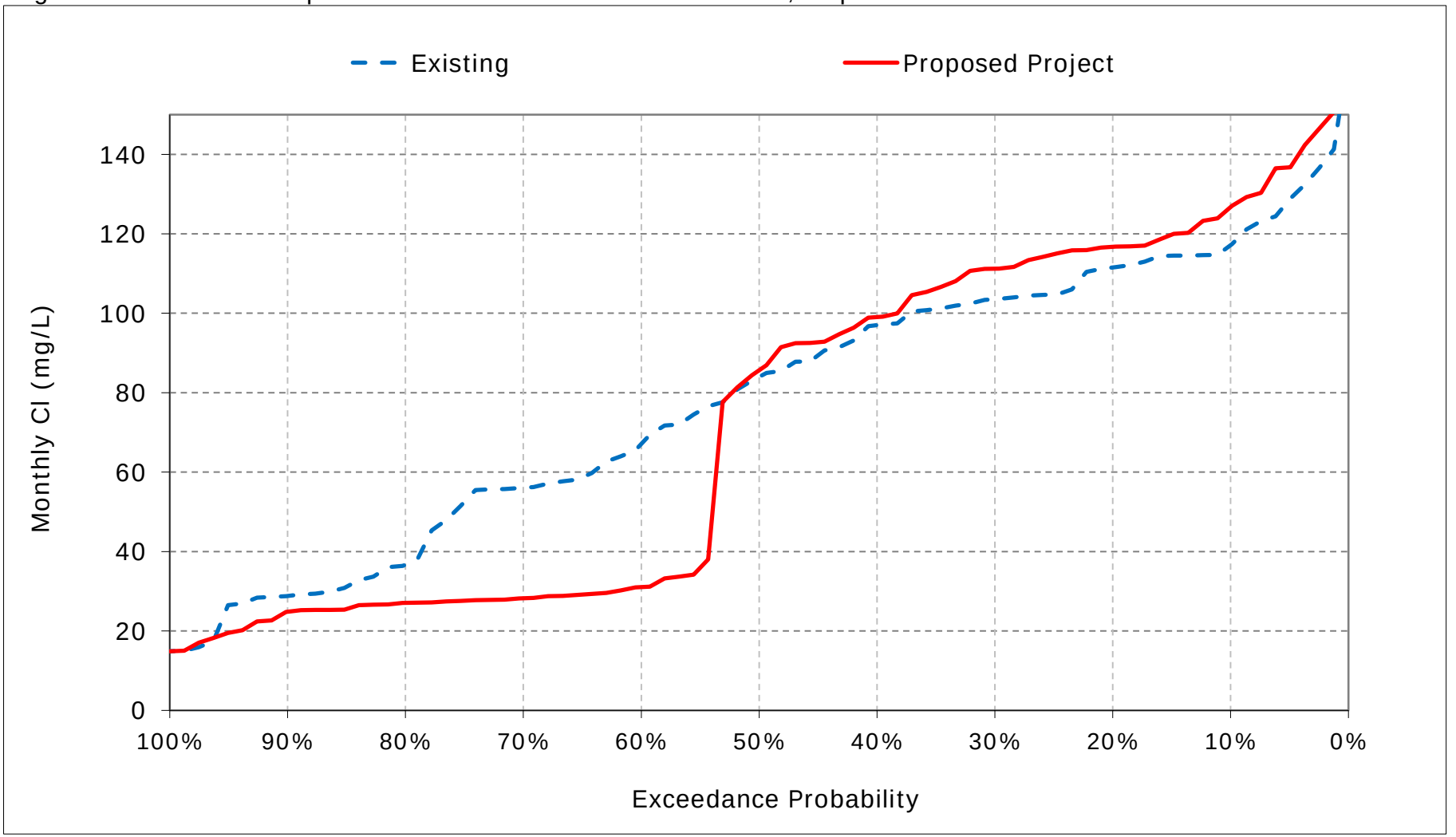


Figure 5-16. San Joaquin River at San Andreas Chloride, October Cl

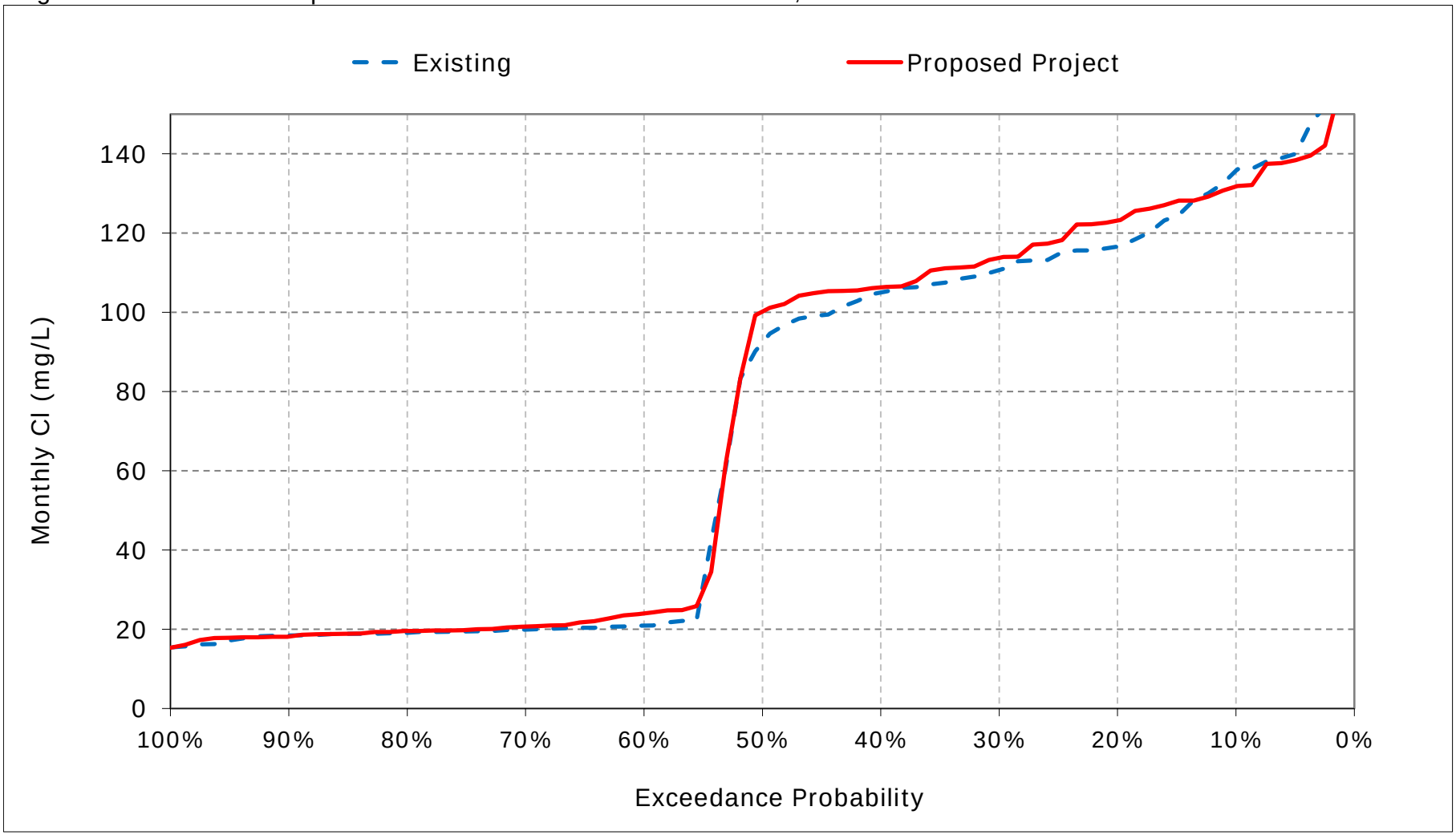


Figure 5-17. San Joaquin River at San Andreas Chloride, November Cl

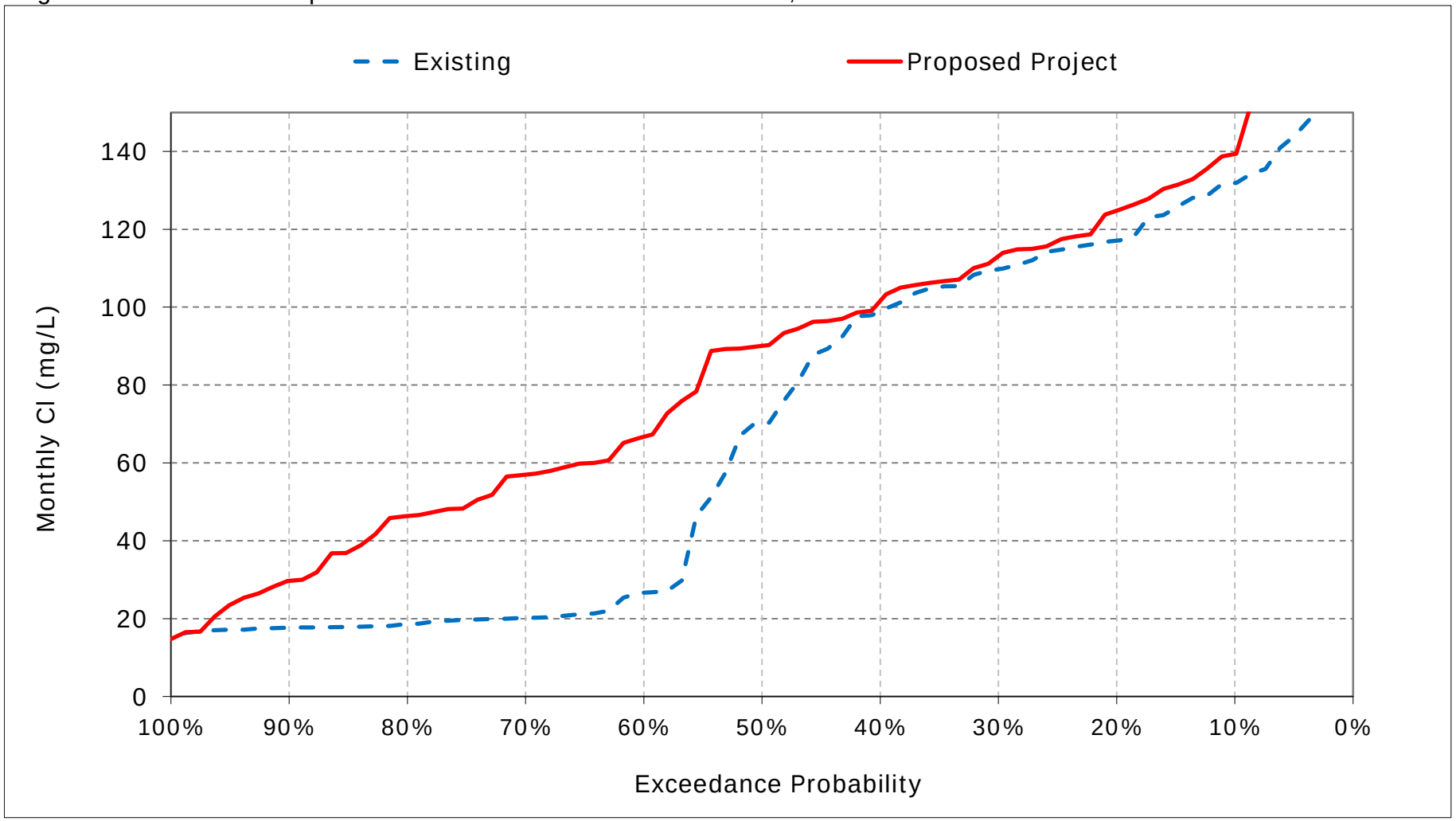


Figure 5-18. San Joaquin River at San Andreas Chloride, December Cl

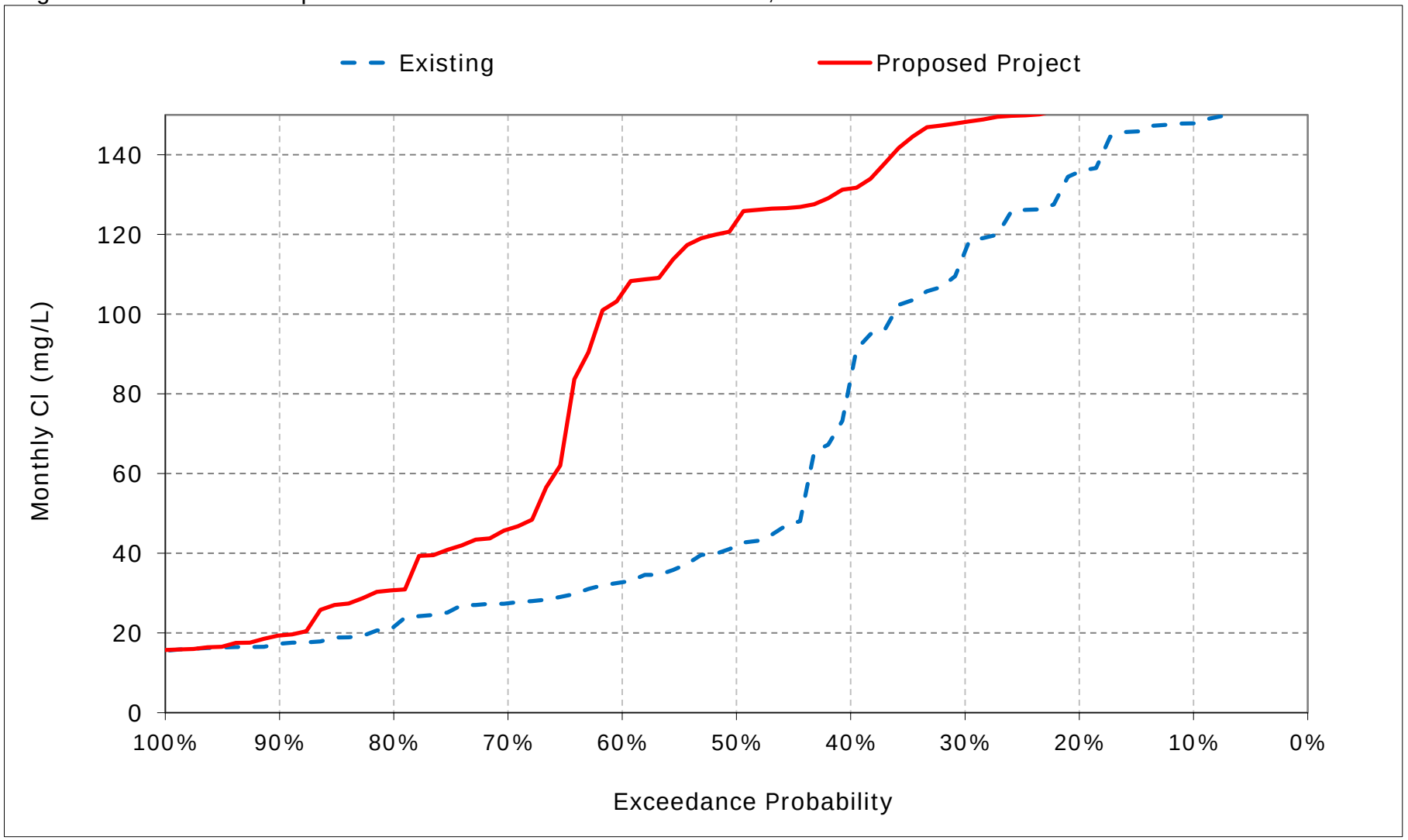


Table 6-1. San Joaquin River at Prisoners Point Chloride, Monthly Cl

Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	121	120	146	135	76	47	54	50	33	57	85	112
20%	111	107	135	105	63	42	51	46	29	36	66	107
30%	107	99	118	95	59	38	47	44	28	30	58	98
40%	102	88	94	71	51	35	44	42	26	27	52	91
50%	91	78	57	65	45	31	40	40	25	26	46	82
60%	27	29	38	57	40	29	39	37	24	23	40	74
70%	25	24	31	49	32	28	34	36	24	22	32	67
80%	23	23	26	41	30	26	29	31	23	21	30	52
90%	22	22	24	31	28	24	27	22	22	19	29	42
Long Term												
Full Simulation Period[a]	69	67	76	75	48	34	40	39	28	32	50	80
Water Year Types[b]												
Wet (32%)	55	51	45	46	40	32	31	30	26	22	31	61
Above Normal (15%)	80	69	75	69	52	39	41	38	26	21	33	45
Below Normal (17%)	72	72	91	87	48	35	47	43	24	26	53	106
Dry (22%)	71	74	88	81	46	32	48	45	25	40	66	92
Critical (15%)	86	83	110	121	62	37	41	44	42	59	79	104

Proposed Project

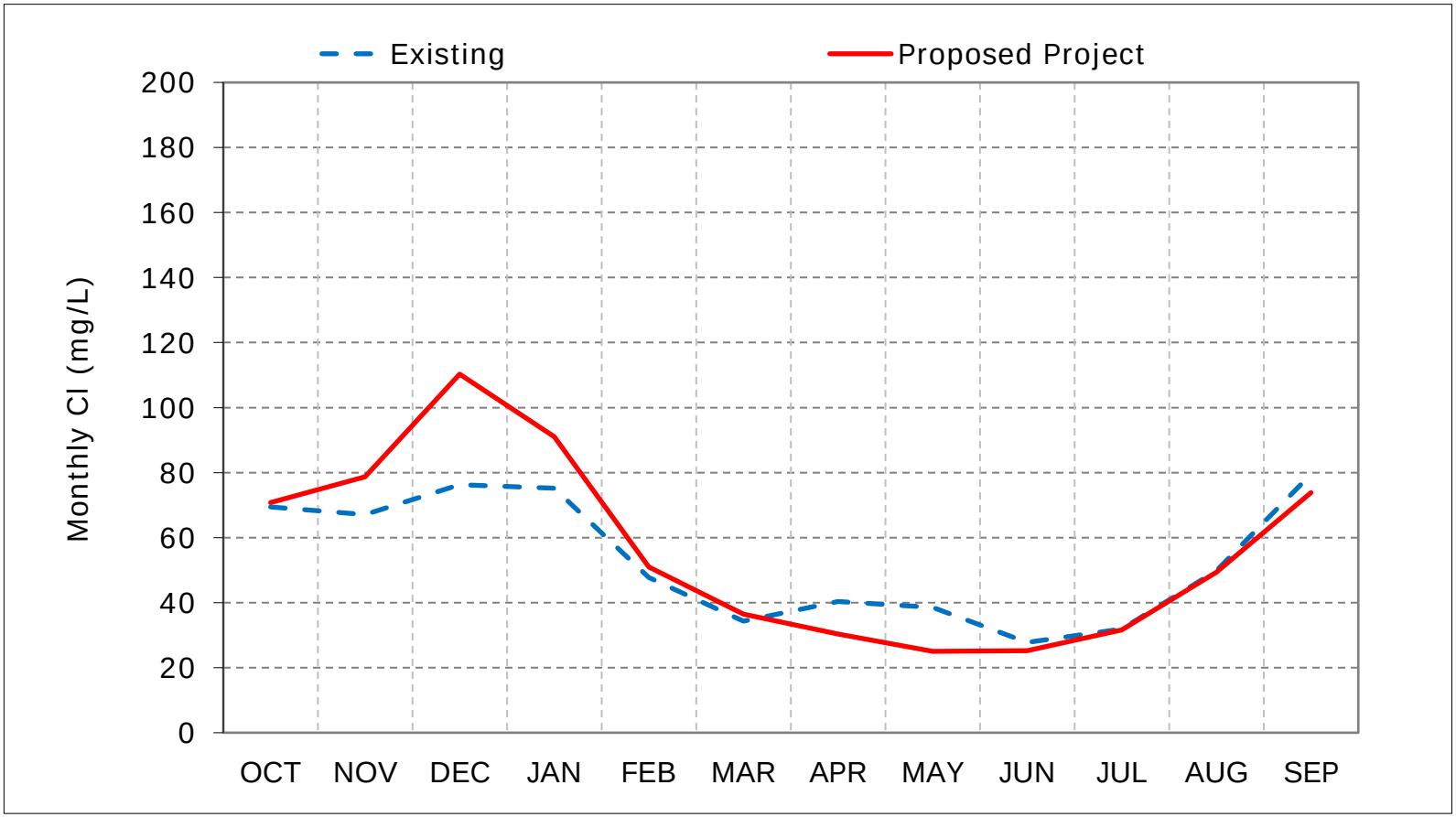
Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	122	126	163	163	77	51	41	28	32	57	85	125
20%	116	112	151	144	69	46	37	27	28	33	63	114
30%	110	103	143	127	62	40	32	26	26	28	57	106
40%	106	95	135	101	55	36	30	25	23	27	51	90
50%	95	83	128	73	48	33	29	25	22	24	47	74
60%	23	64	114	59	40	31	28	24	21	22	38	47
70%	22	50	73	49	34	29	26	23	21	21	31	41
80%	21	38	61	43	30	27	25	23	20	20	29	38
90%	20	28	34	34	28	24	23	20	19	19	26	32
Long Term												
Full Simulation Period[a]	71	79	110	91	51	37	30	25	25	32	49	74
Water Year Types[b]												
Wet (32%)	56	64	70	51	40	33	27	22	24	22	30	35
Above Normal (15%)	82	89	126	95	54	42	31	24	23	21	34	42
Below Normal (17%)	73	82	124	104	48	37	33	25	20	24	52	117
Dry (22%)	72	82	128	108	52	36	33	25	22	38	64	94
Critical (15%)	88	91	139	133	74	40	30	32	40	62	82	109

Proposed Project minus Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	1	6	17	28	0	4	-13	-22	-1	0	0	13
20%	6	6	16	39	6	4	-14	-19	-1	-3	-2	7
30%	4	4	25	32	3	2	-15	-17	-2	-2	-1	8
40%	3	7	41	31	4	1	-13	-16	-3	-1	-2	-1
50%	4	4	72	9	3	2	-11	-15	-3	-1	1	-8
60%	-4	35	77	2	0	1	-11	-13	-3	0	-2	-27
70%	-3	26	42	1	2	0	-7	-12	-4	0	0	-26
80%	-3	16	35	2	0	1	-4	-8	-4	0	-1	-14
90%	-2	7	11	3	0	0	-3	-2	-4	0	-2	-10
Long Term												
Full Simulation Period[a]	1	12	34	16	3	2	-10	-13	-3	0	0	-6
Water Year Types[b]												
Wet (32%)	1	14	25	5	0	0	-5	-8	-2	0	-2	-27
Above Normal (15%)	2	20	51	26	2	3	-10	-14	-4	0	0	-3
Below Normal (17%)	1	9	34	17	0	2	-14	-17	-4	-2	0	11
Dry (22%)	1	8	39	27	6	4	-15	-19	-3	-1	-2	2
Critical (15%)	2	8	29	11	11	3	-10	-13	-1	3	4	5

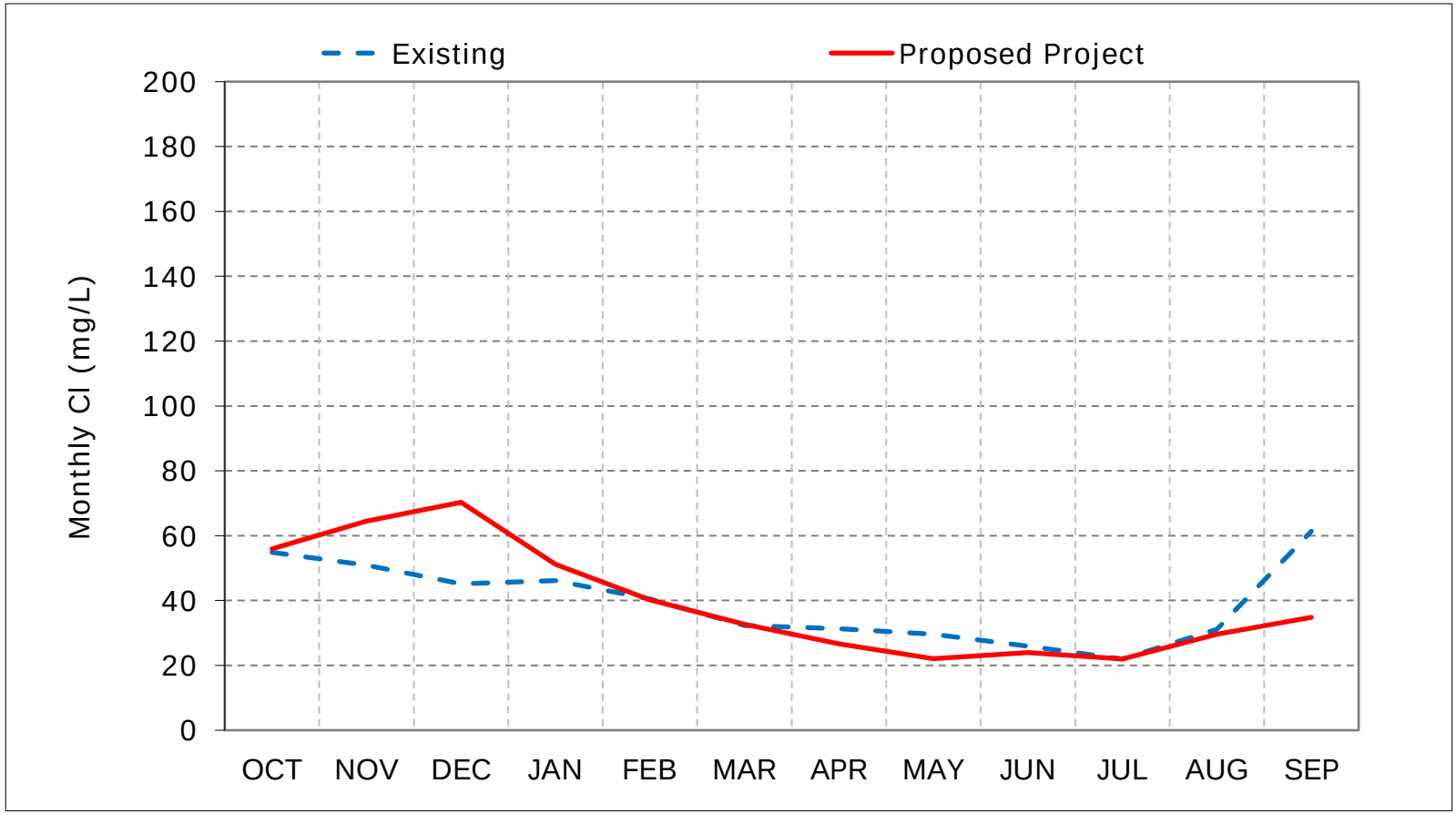
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 6-1. San Joaquin River at Prisoners Point Chloride, Long-Term Average Cl



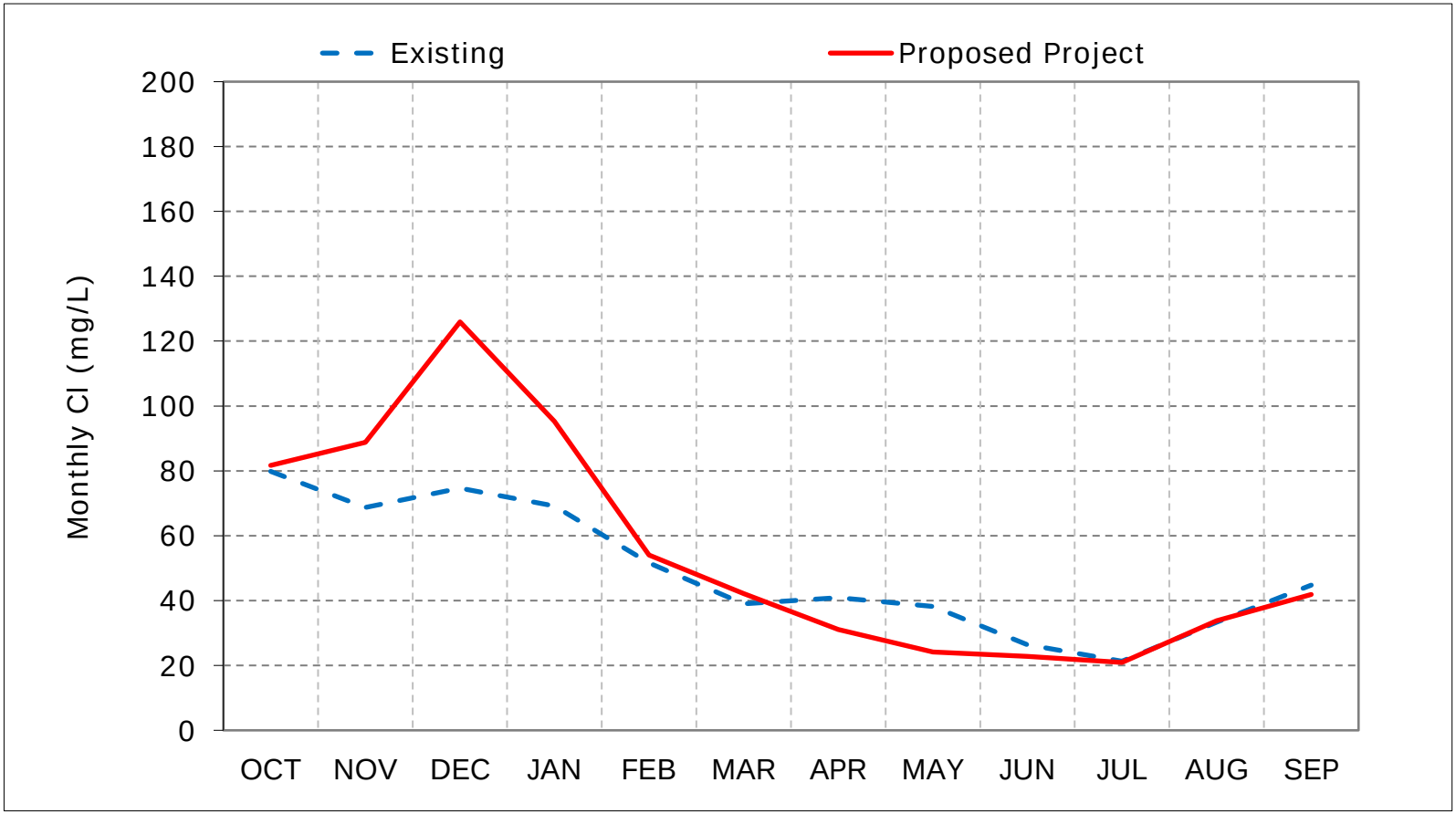
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 6-2. San Joaquin River at Prisoners Point Chloride, Wet Year Average Cl



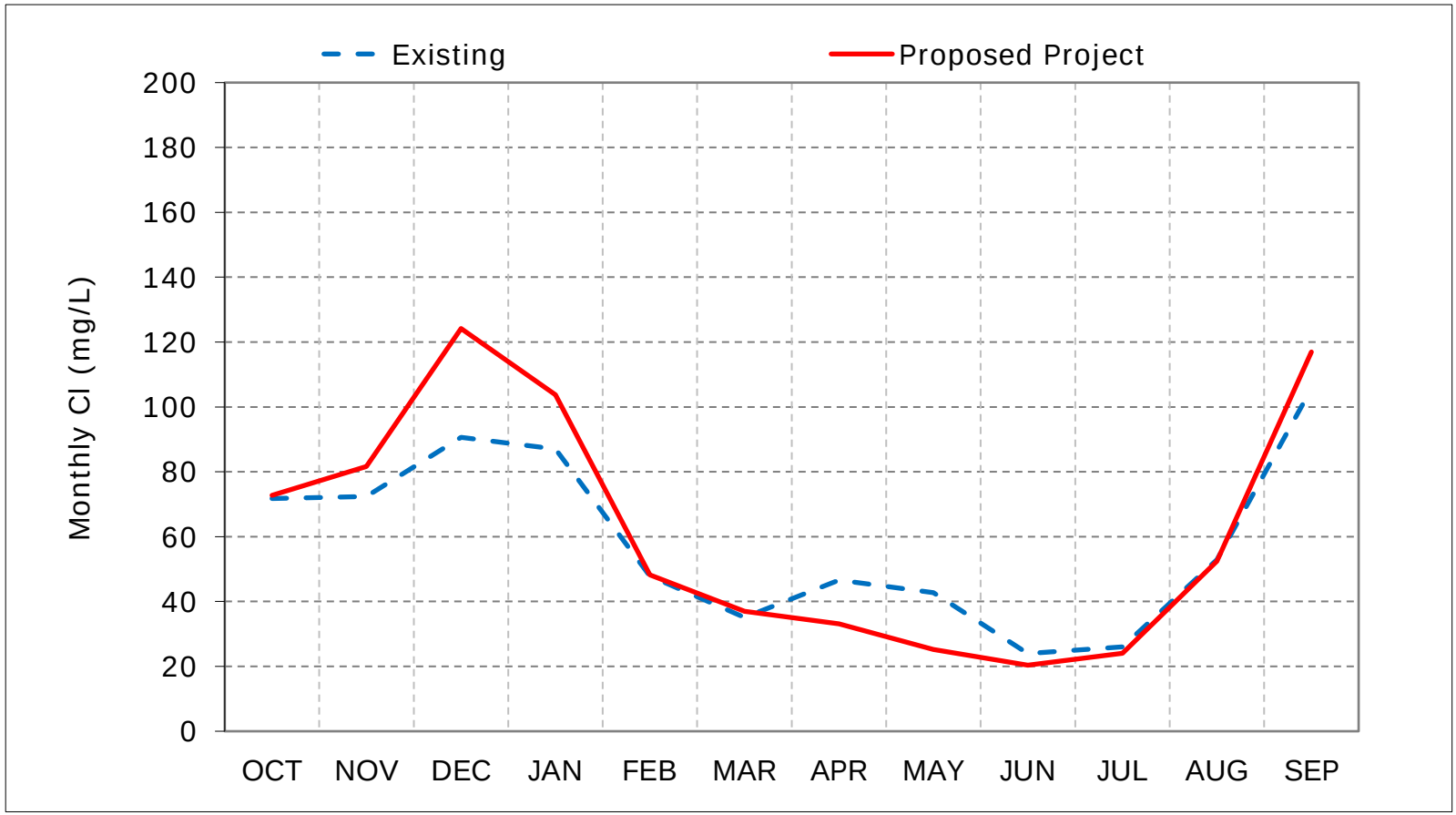
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 6-3. San Joaquin River at Prisoners Point Chloride, Above Normal Year Ave



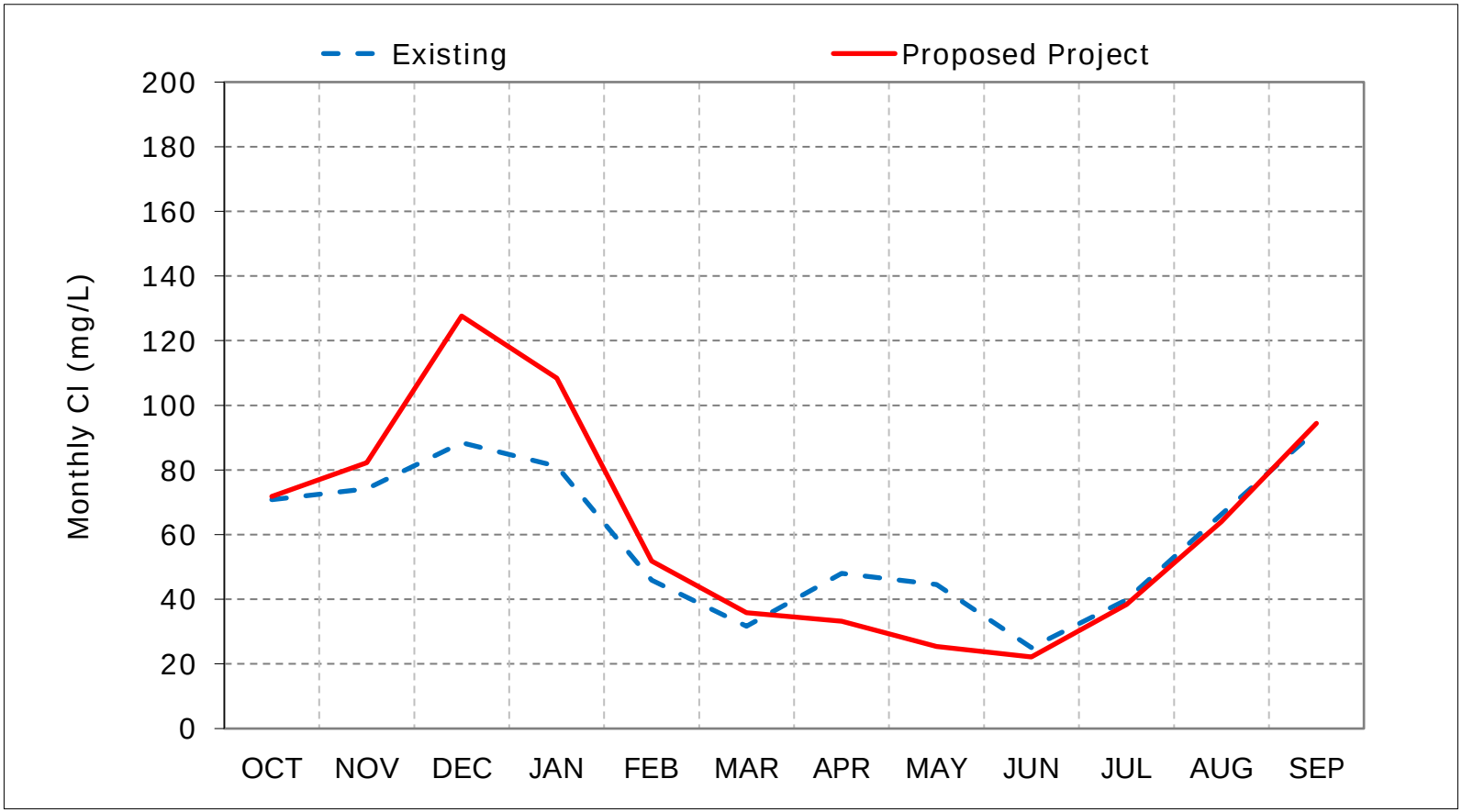
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 6-4. San Joaquin River at Prisoners Point Chloride, Below Normal Year Ave



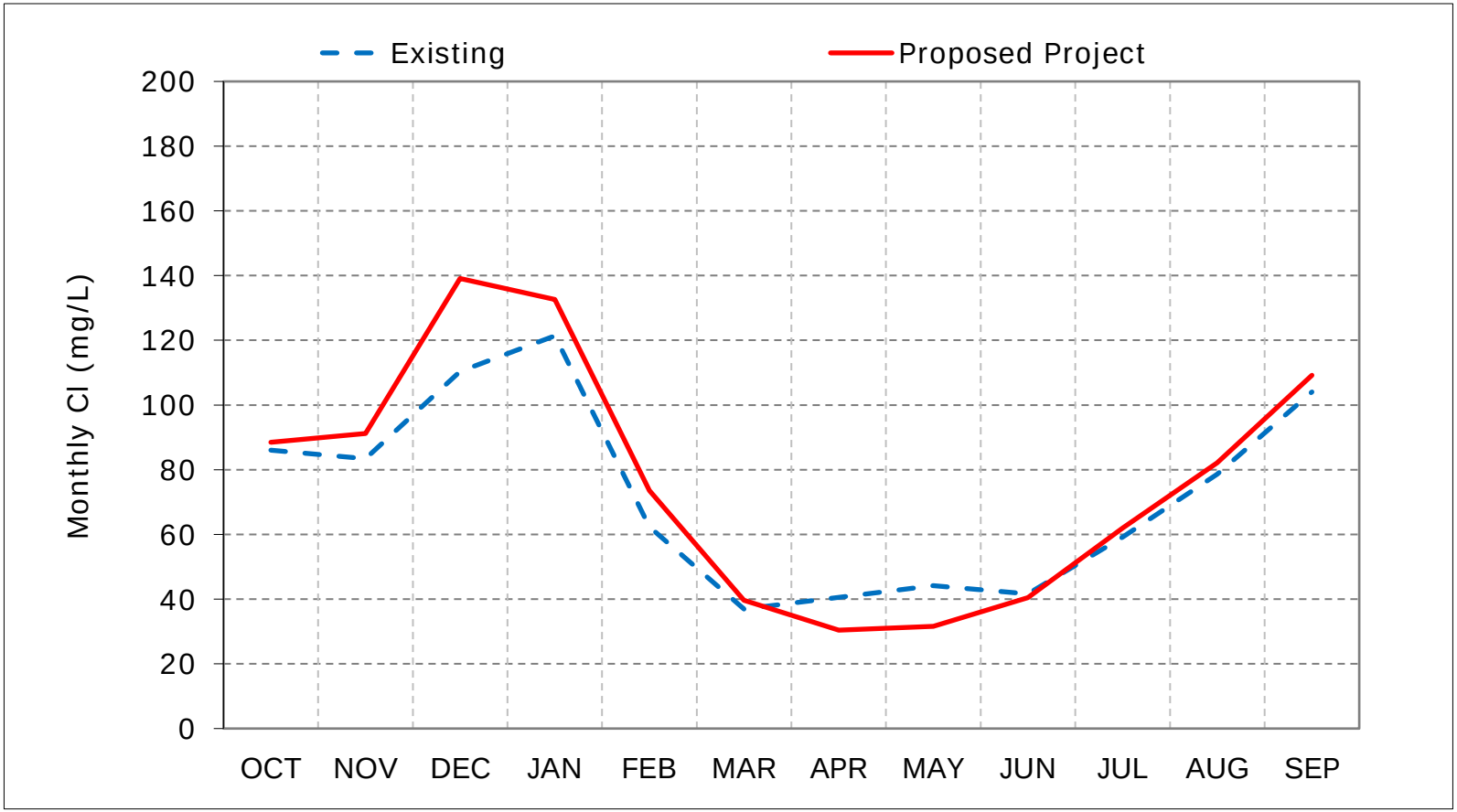
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 6-5. San Joaquin River at Prisoners Point Chloride, Dry Year Average Cl



*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.

Figure 6-6. San Joaquin River at Prisoners Point Chloride, Critical Year Average Cl



*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.

Figure 6-7. San Joaquin River at Prisoners Point Chloride, January Cl

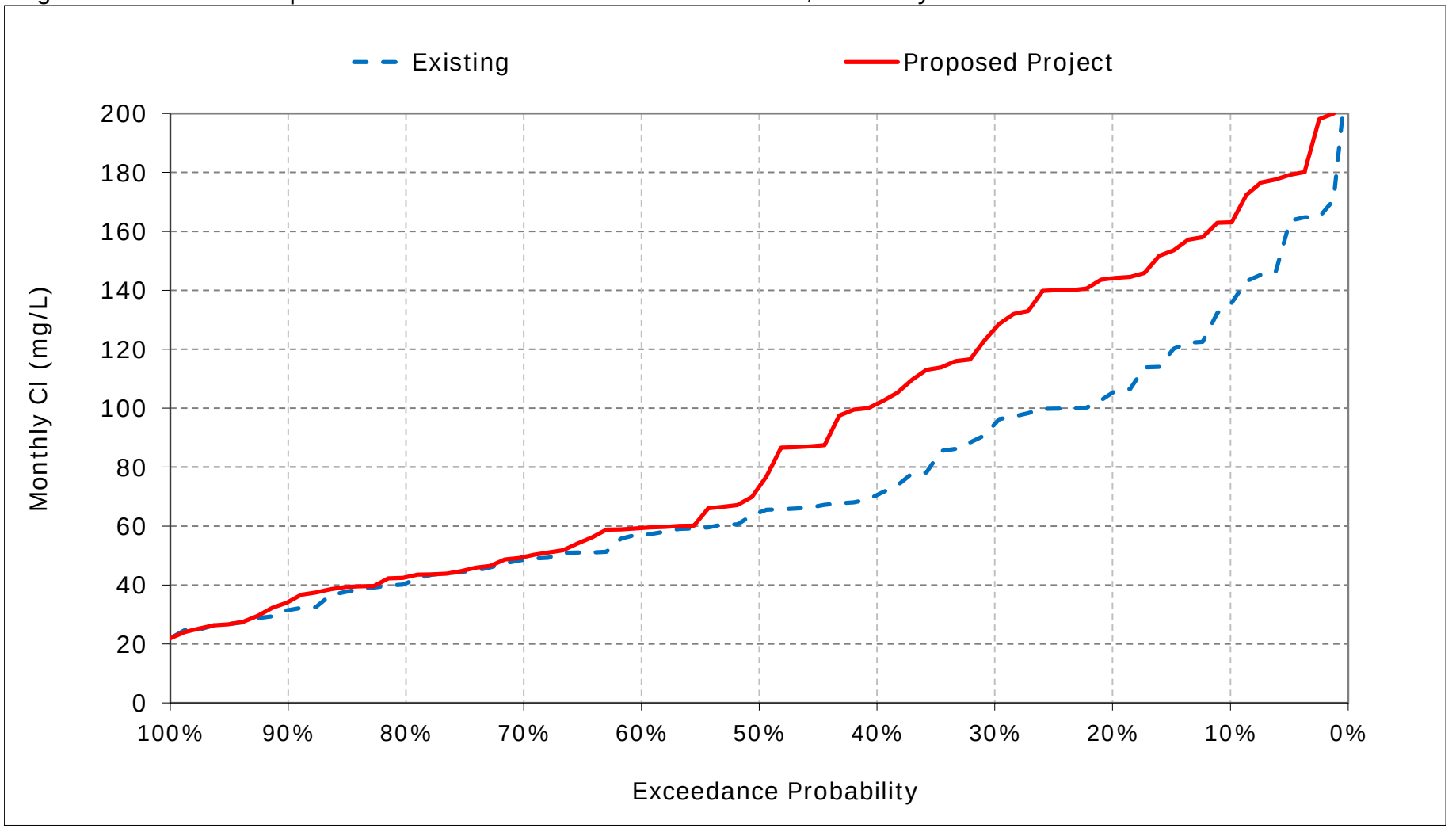


Figure 6-8. San Joaquin River at Prisoners Point Chloride, February Cl

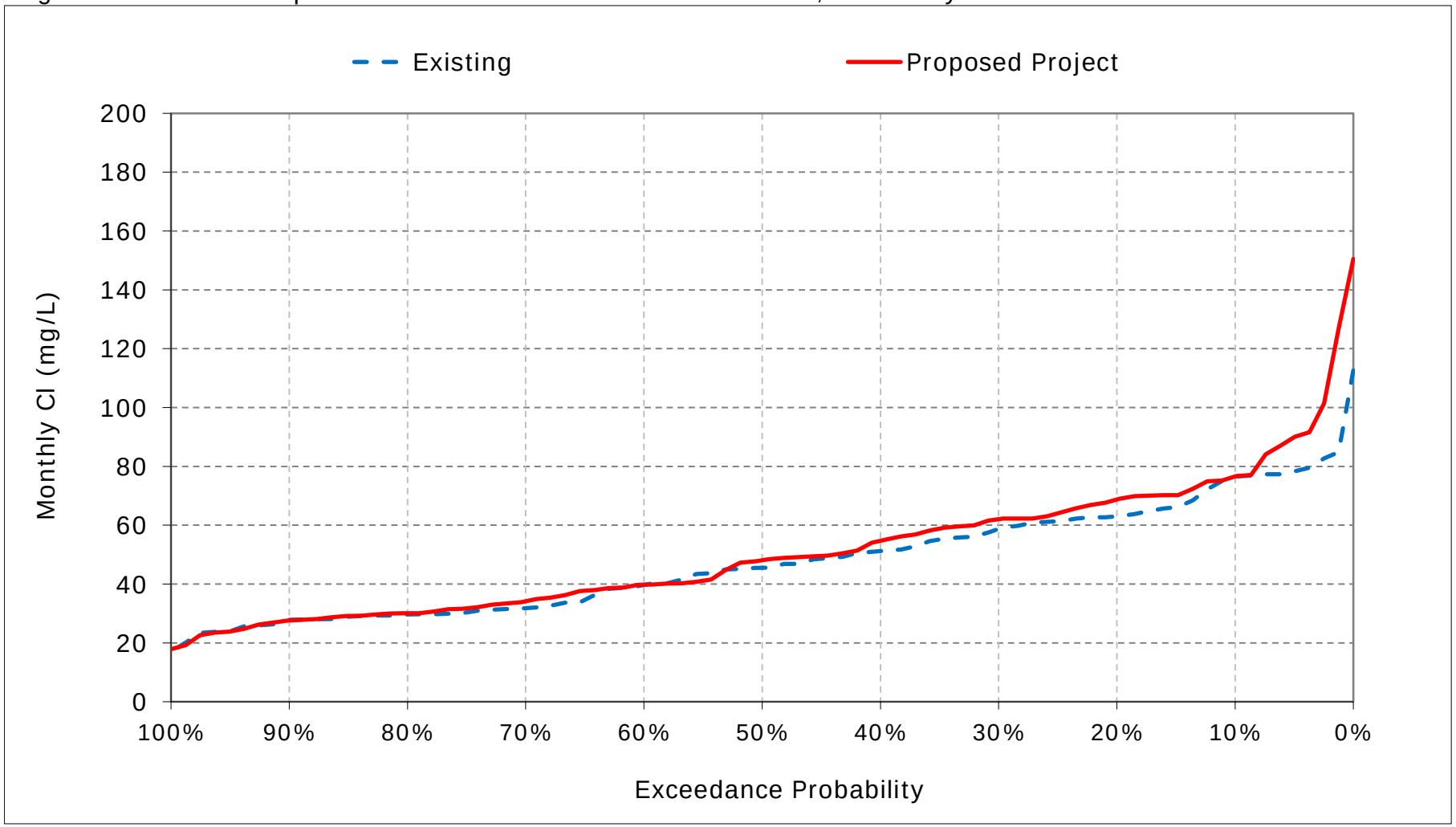


Figure 6-9. San Joaquin River at Prisoners Point Chloride, March Cl

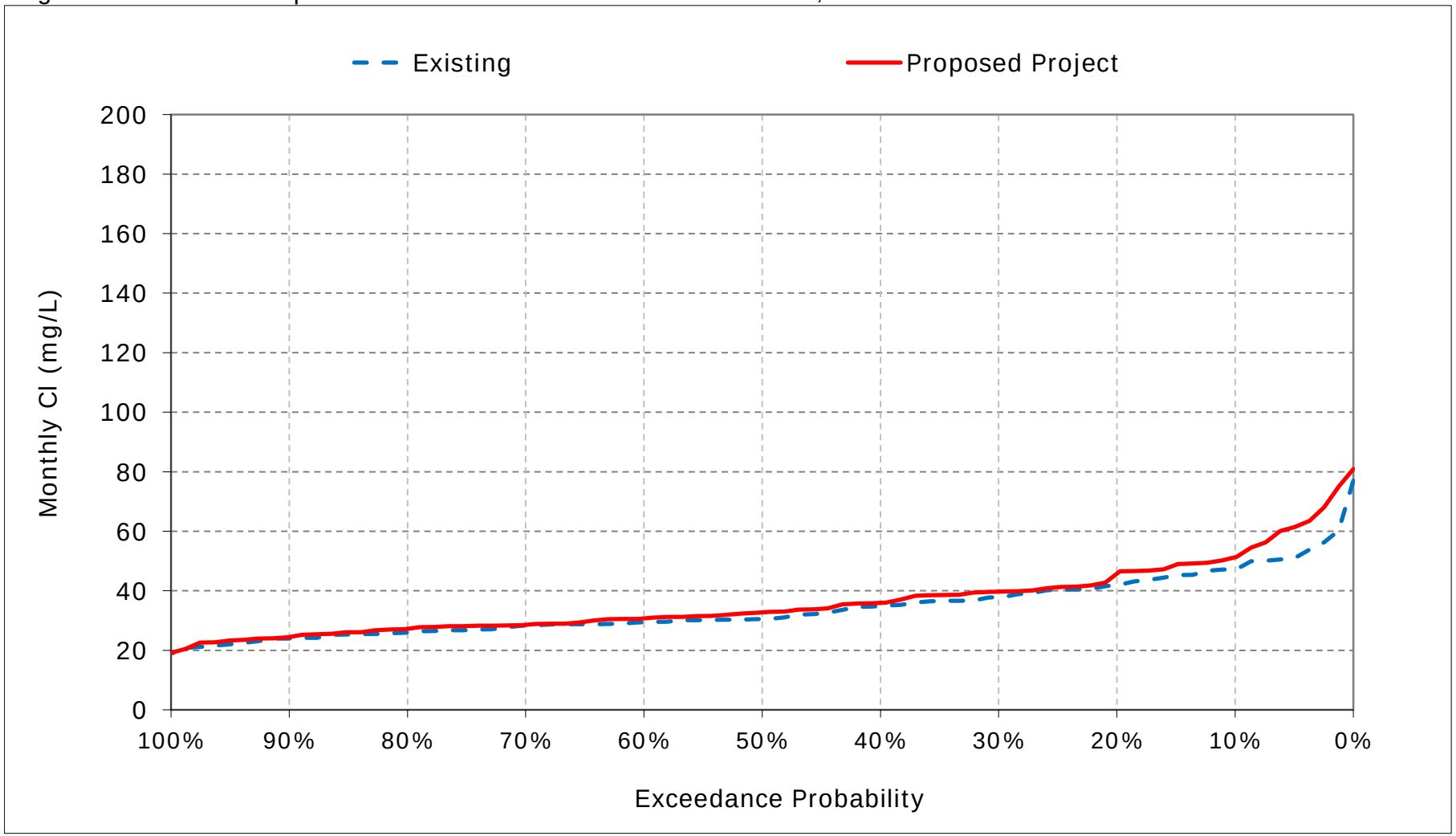


Figure 6-10. San Joaquin River at Prisoners Point Chloride, April Cl

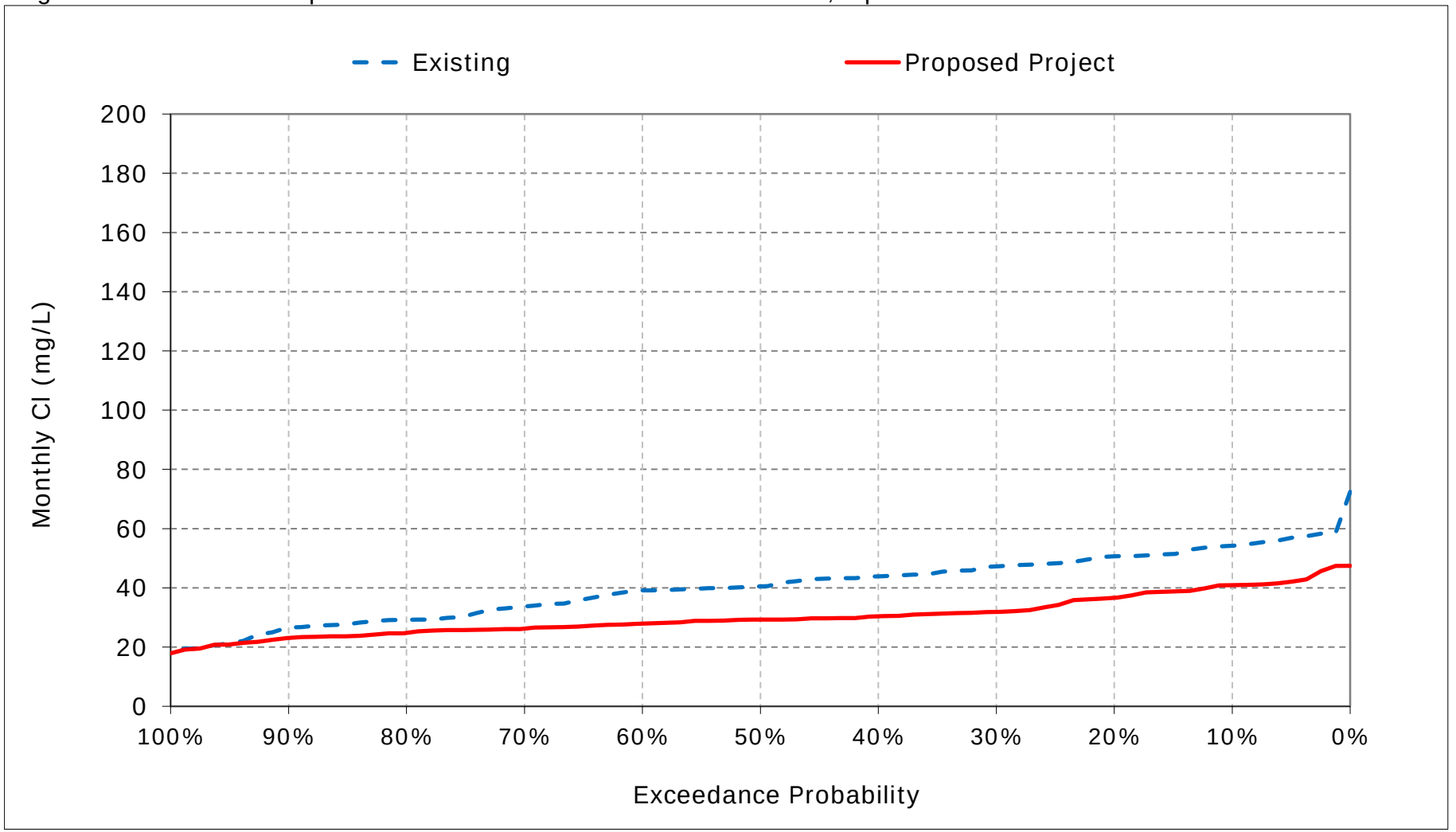


Figure 6-11. San Joaquin River at Prisoners Point Chloride, May Cl

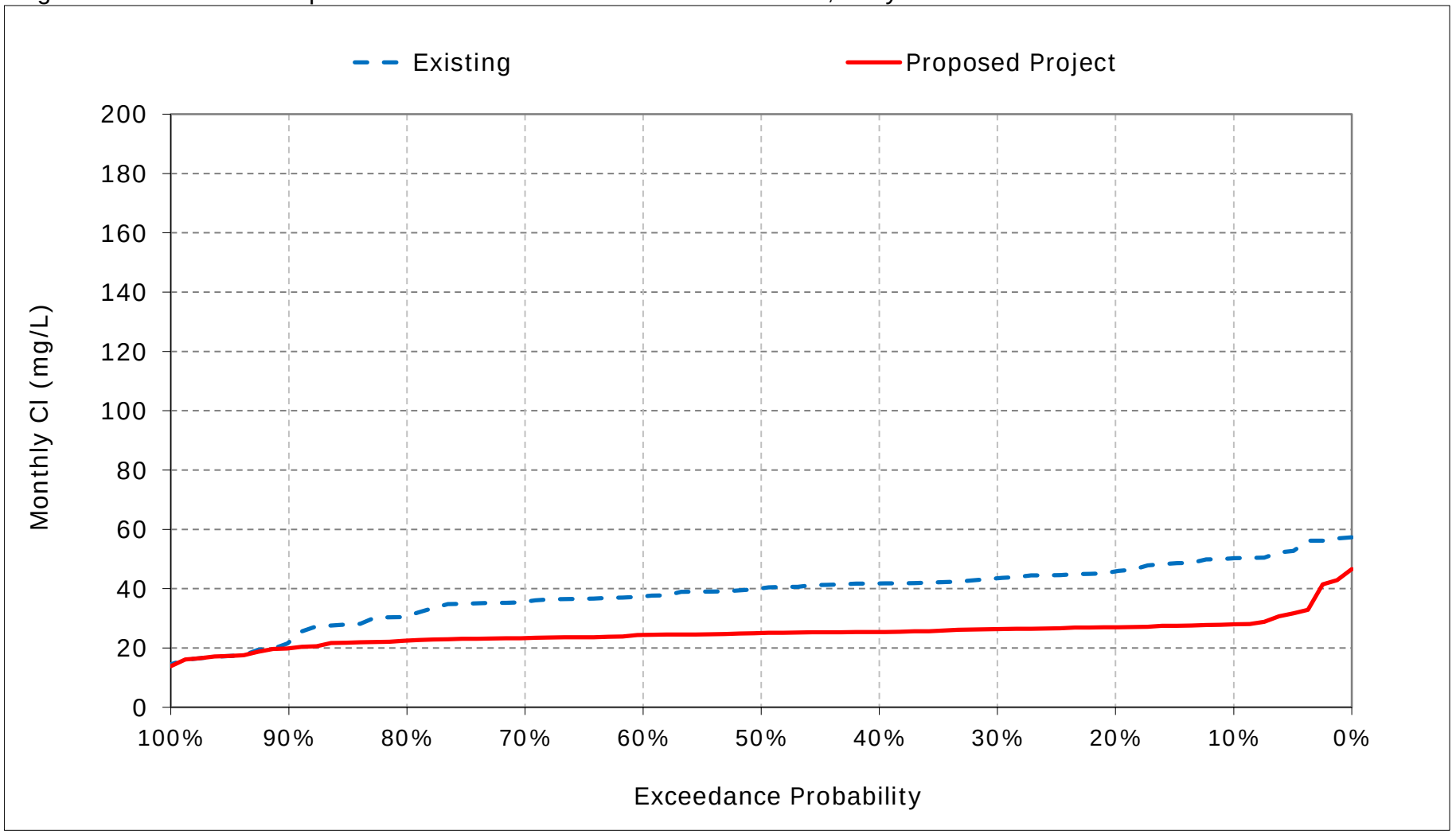


Figure 6-12. San Joaquin River at Prisoners Point Chloride, June Cl

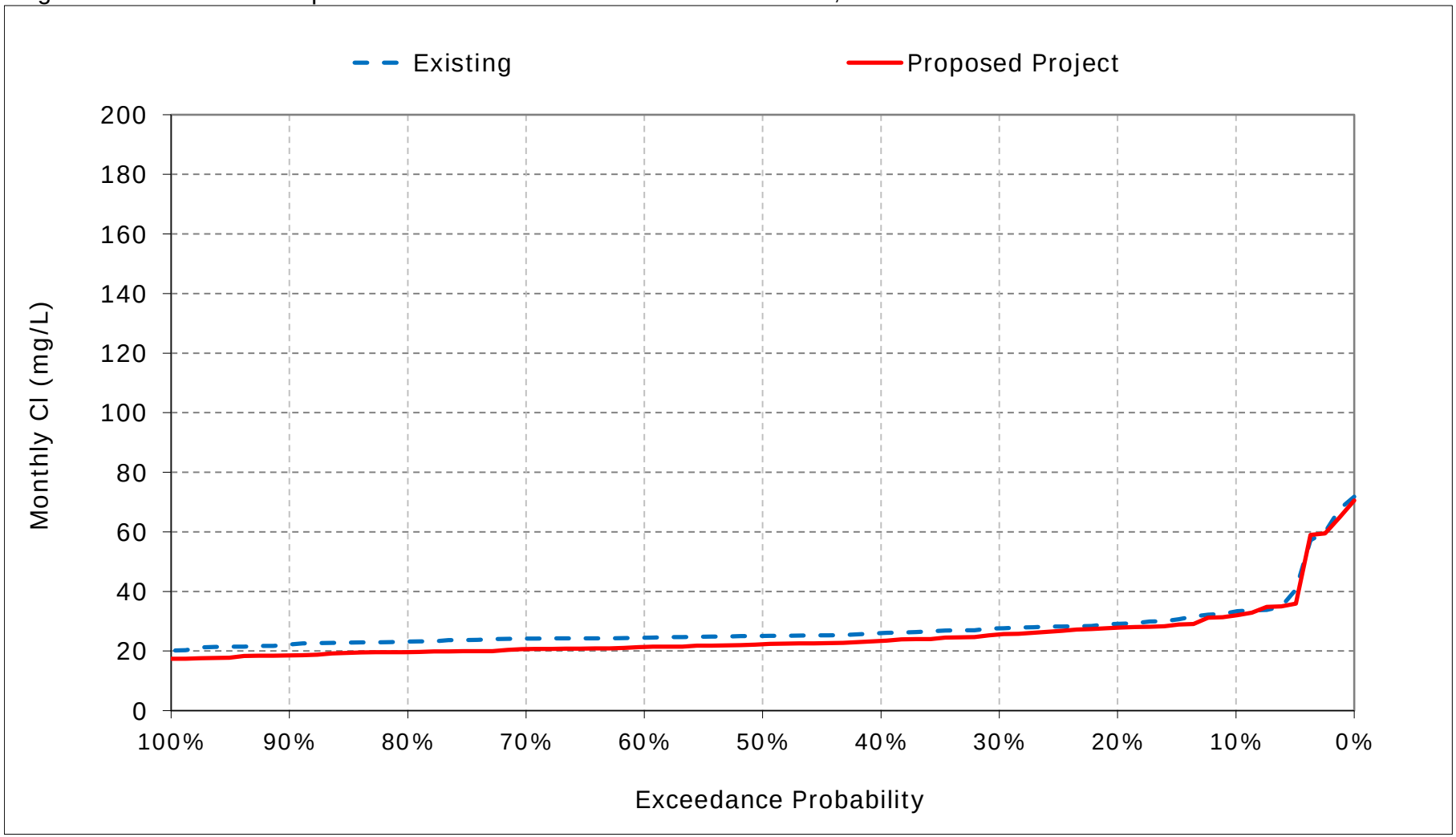


Figure 6-13. San Joaquin River at Prisoners Point Chloride, July Cl

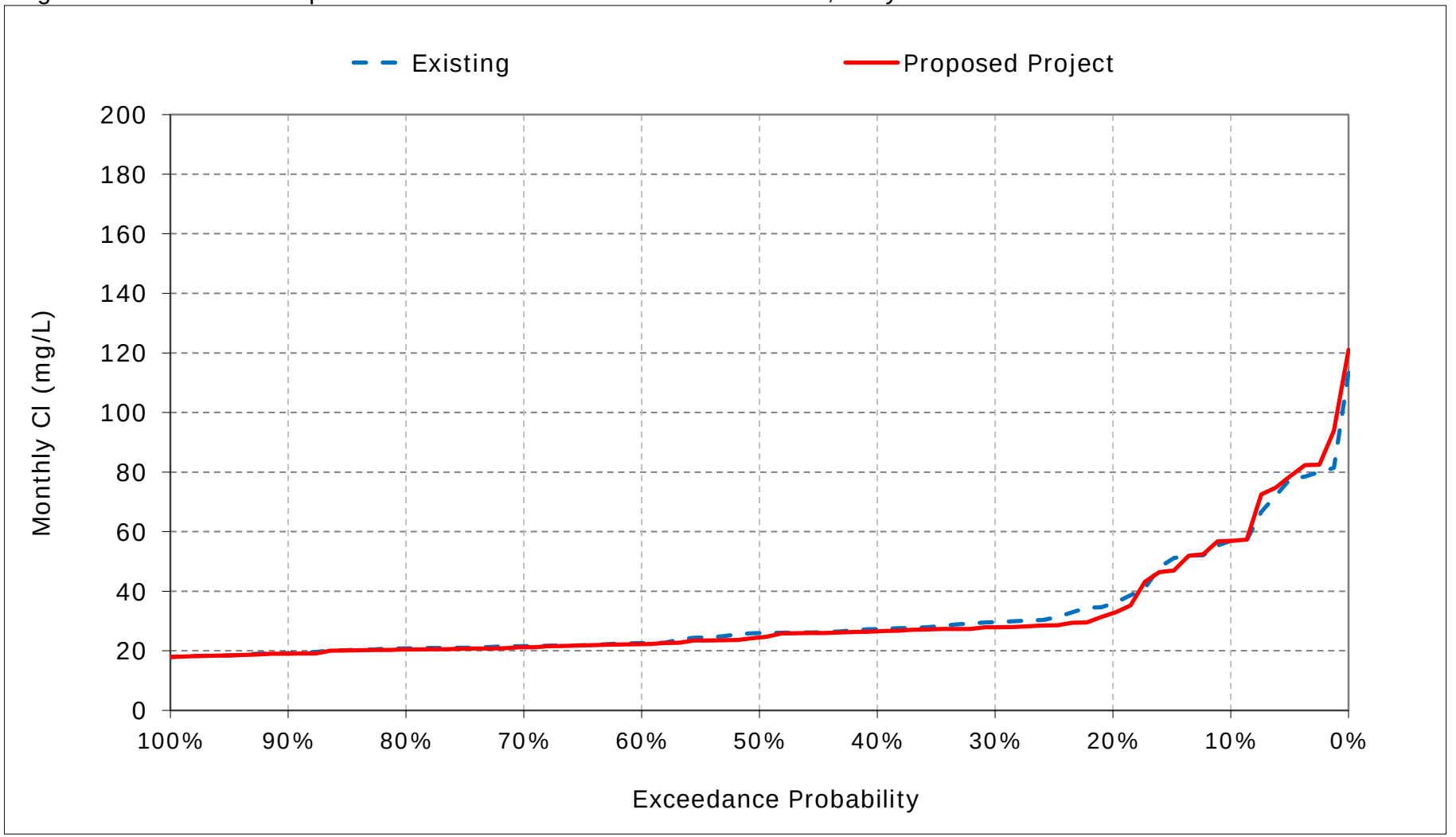


Figure 6-14. San Joaquin River at Prisoners Point Chloride, August Cl

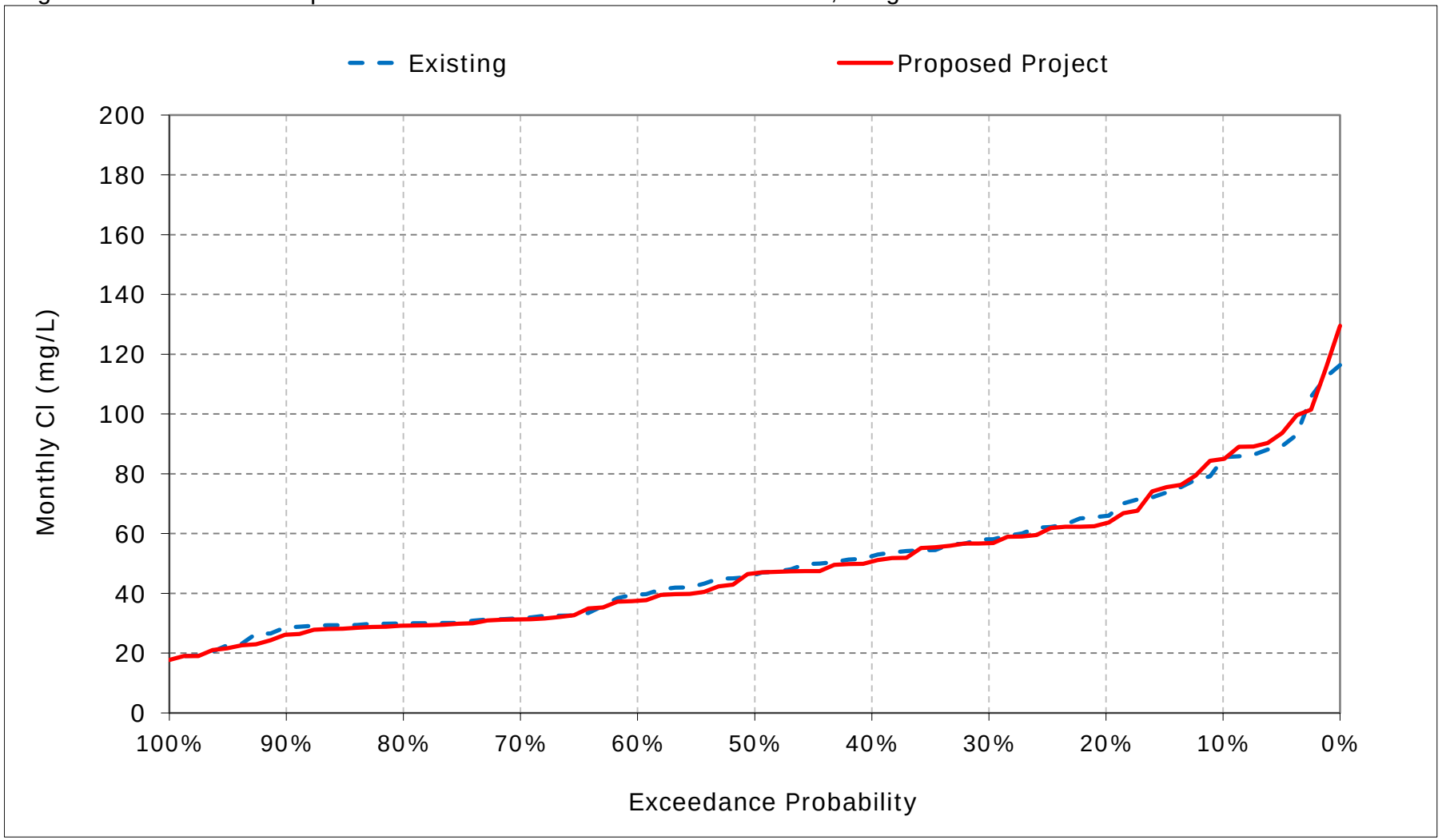


Figure 6-15. San Joaquin River at Prisoners Point Chloride, September Cl

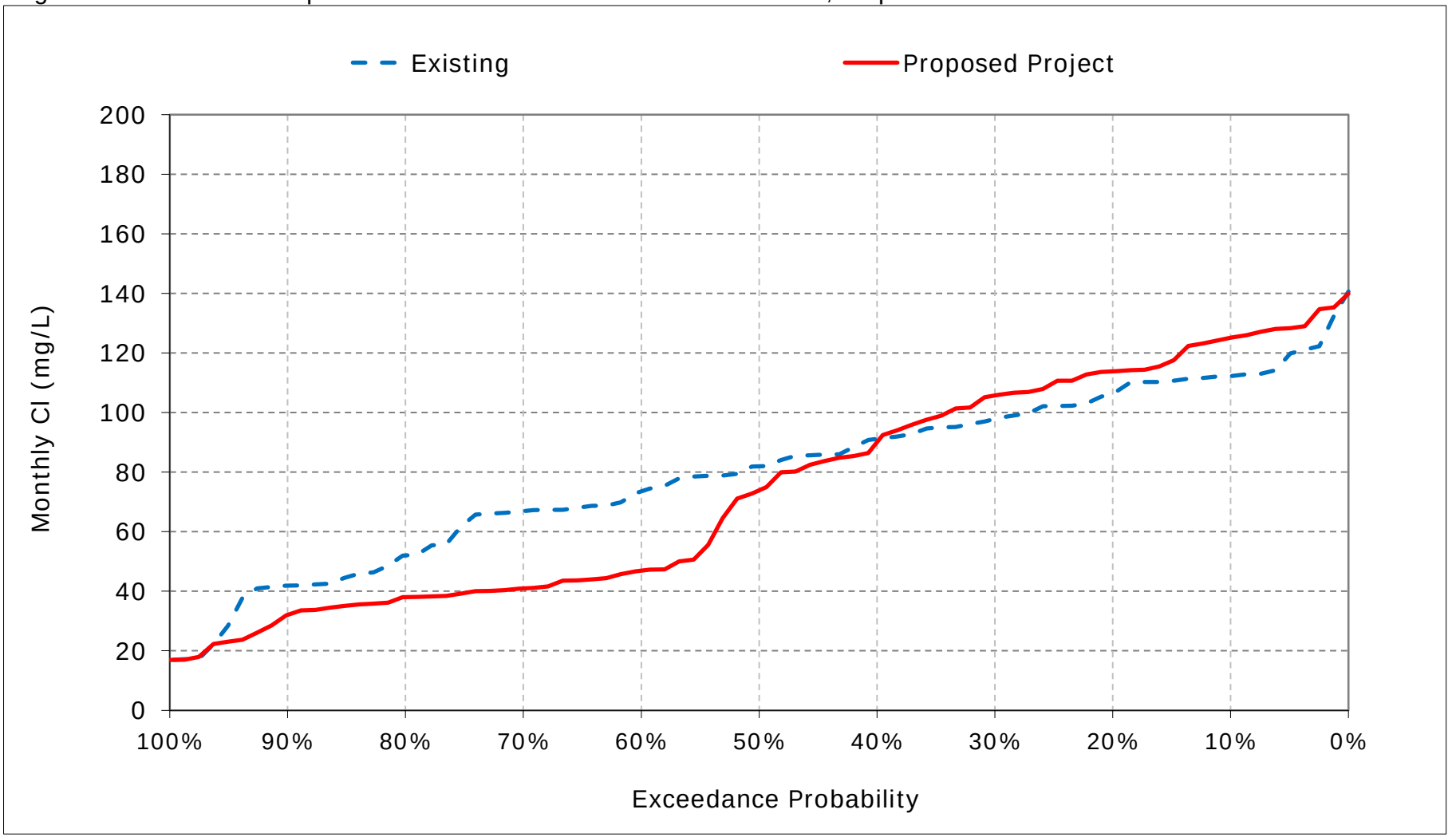


Figure 6-16. San Joaquin River at Prisoners Point Chloride, October Cl

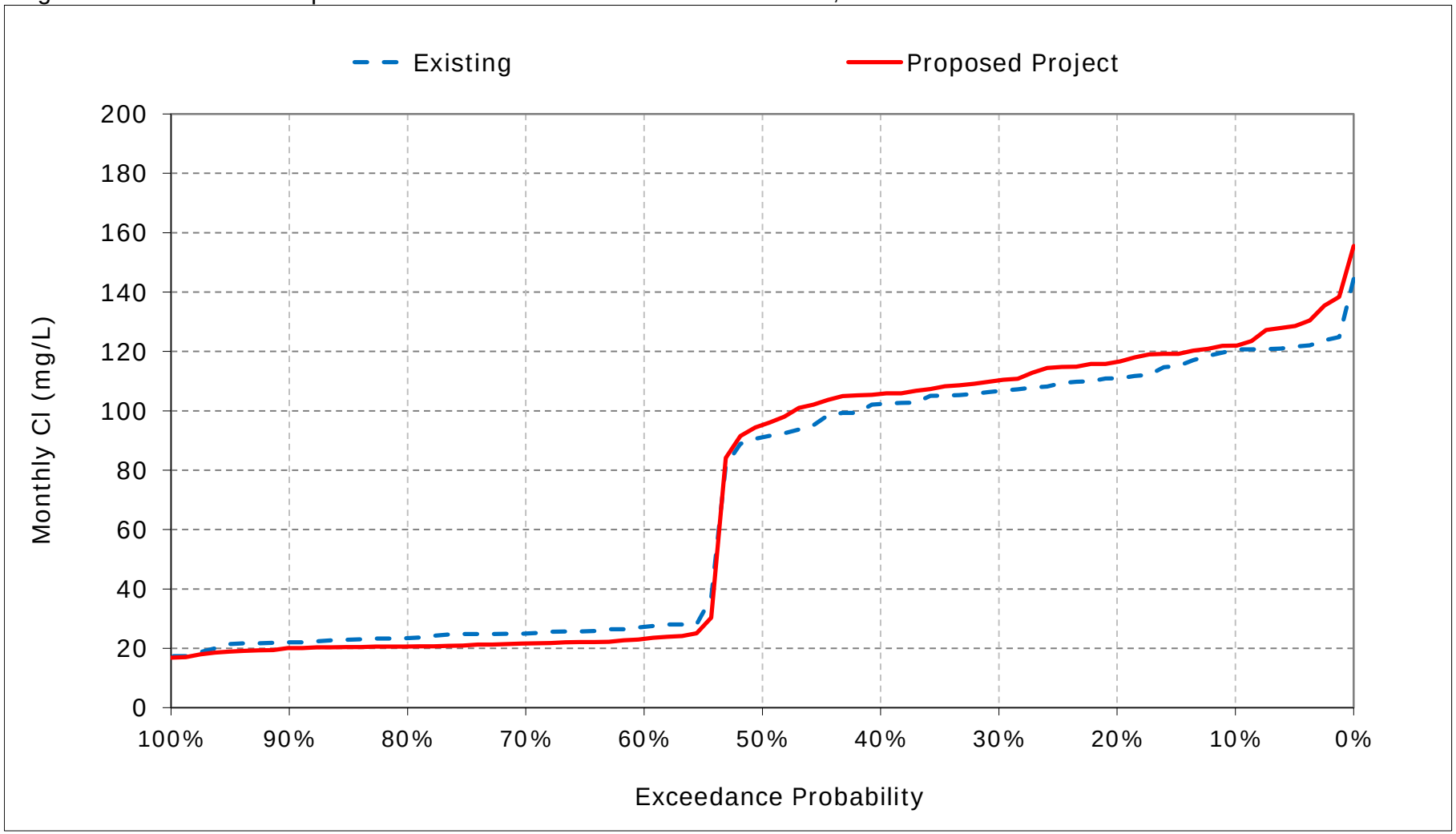


Figure 6-17. San Joaquin River at Prisoners Point Chloride, November Cl

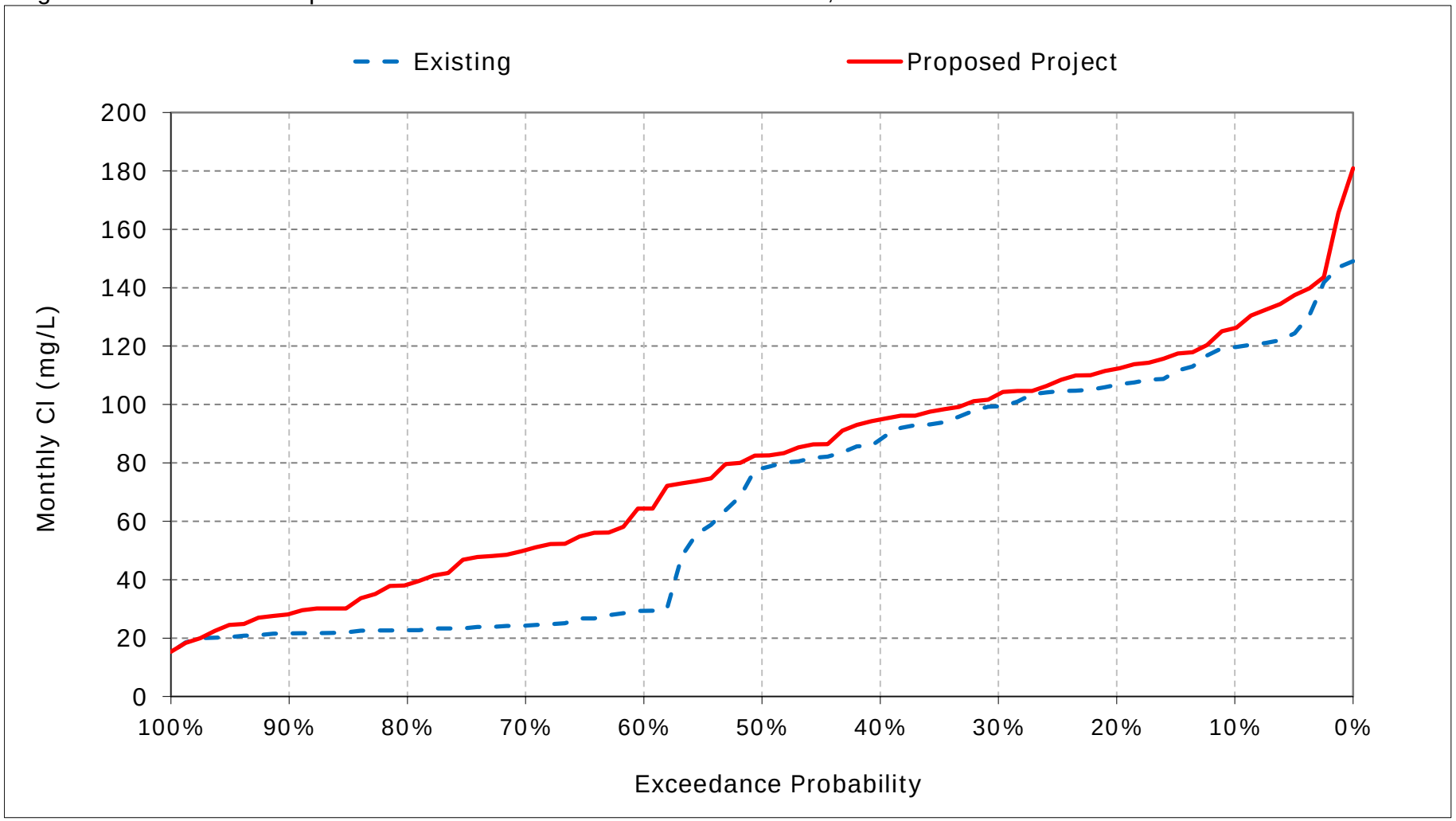


Figure 6-18. San Joaquin River at Prisoners Point Chloride, December Cl

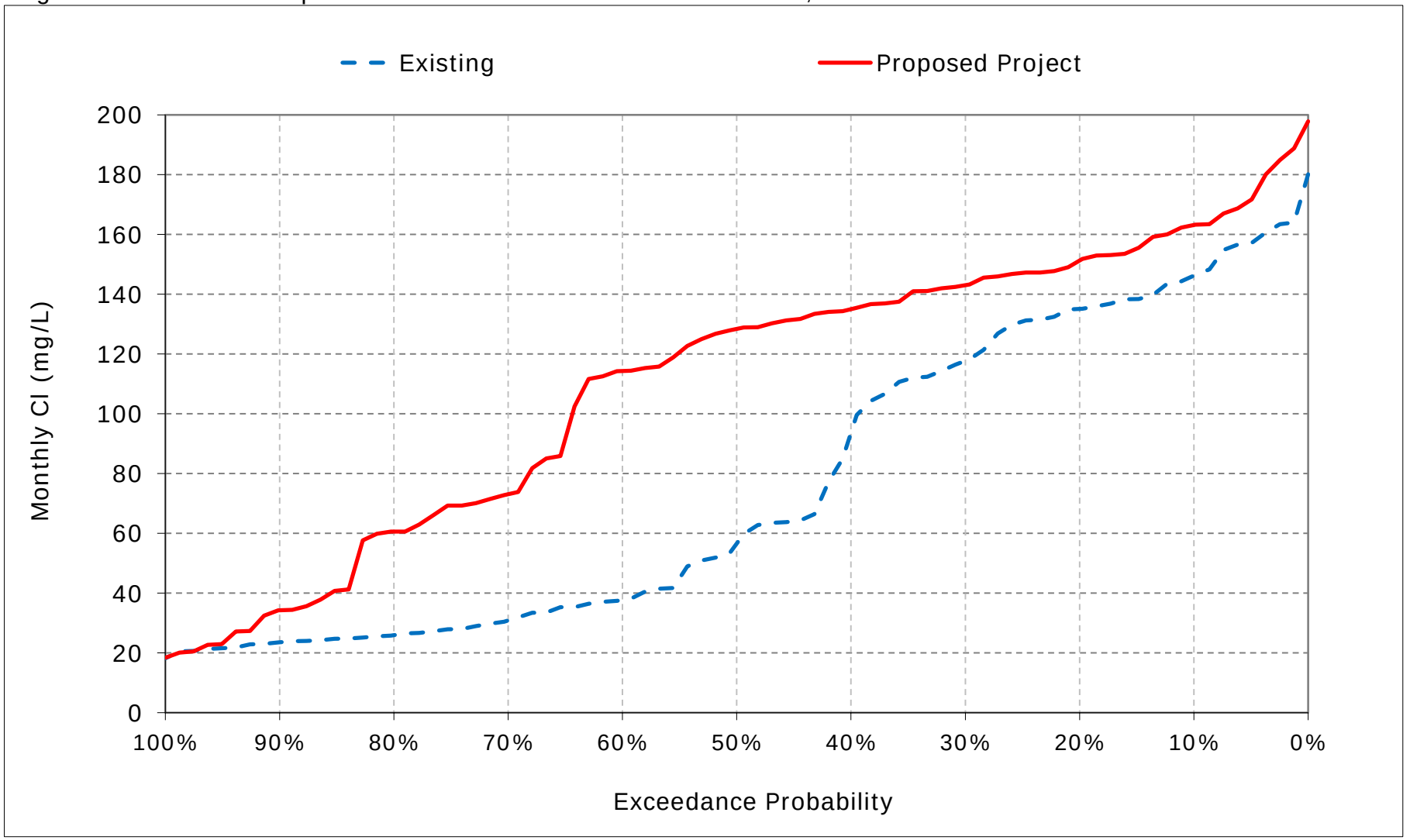


Table 7-1. Old River at Highway 4 Chloride, Monthly Cl

Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	165	161	180	173	109	74	69	69	53	71	112	146
20%	157	143	169	155	96	66	64	65	43	50	87	138
30%	152	135	156	124	89	55	58	61	40	45	76	128
40%	143	127	125	110	81	52	56	60	38	40	71	118
50%	131	115	71	97	70	49	53	58	38	33	60	109
60%	41	42	55	84	60	46	50	55	36	29	54	97
70%	36	31	39	72	54	42	46	51	35	28	44	91
80%	33	29	31	56	49	39	35	44	31	27	41	78
90%	30	28	30	50	43	32	25	21	29	26	38	69
Long Term												
Full Simulation Period[a]	98	91	98	107	74	52	51	53	40	43	67	106
Water Year Types[b]												
Wet (32%)	78	68	63	69	61	45	36	38	32	28	41	83
Above Normal (15%)	111	97	97	104	78	51	50	54	37	28	45	73
Below Normal (17%)	102	96	113	124	70	49	54	58	37	36	70	137
Dry (22%)	98	100	114	115	76	52	61	62	40	53	90	120
Critical (15%)	121	115	135	161	99	69	67	66	66	80	104	133

Proposed Project

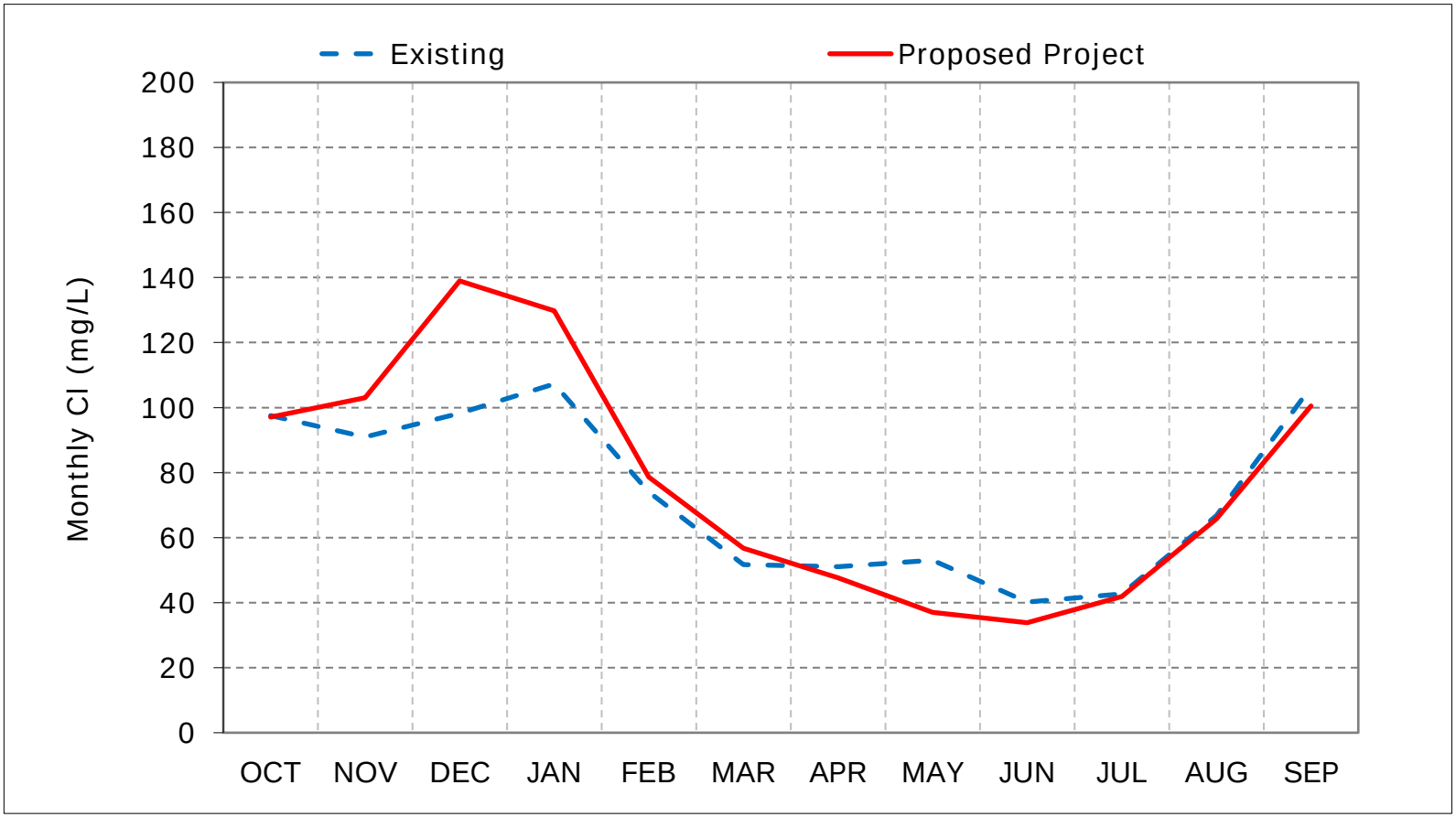
Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	171	159	187	222	124	86	66	51	48	73	115	158
20%	163	146	181	199	106	68	59	45	36	47	83	145
30%	154	135	171	171	89	62	55	41	31	42	76	132
40%	144	130	167	151	80	57	49	37	30	37	69	116
50%	134	117	161	116	72	55	46	33	29	30	59	99
60%	31	79	143	95	67	49	44	31	29	29	52	76
70%	28	64	117	78	59	46	41	30	28	27	44	68
80%	27	52	96	65	51	42	37	29	27	27	40	63
90%	27	40	44	52	43	36	30	27	25	26	34	55
Long Term												
Full Simulation Period[a]	97	103	139	130	79	57	48	37	34	42	66	101
Water Year Types[b]												
Wet (32%)	77	84	98	79	61	48	36	28	28	28	39	56
Above Normal (15%)	111	117	155	142	83	58	44	30	28	27	45	70
Below Normal (17%)	101	107	152	149	72	54	51	35	28	32	69	150
Dry (22%)	97	107	157	150	85	59	55	42	32	51	87	121
Critical (15%)	123	120	170	176	112	72	63	58	61	83	108	138

Proposed Project minus Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	6	-3	7	50	15	12	-3	-18	-4	2	2	12
20%	7	3	13	44	10	2	-5	-19	-7	-3	-4	7
30%	2	0	16	46	0	7	-4	-20	-8	-3	0	5
40%	0	3	42	41	0	5	-7	-22	-8	-3	-2	-2
50%	4	2	90	18	2	6	-7	-24	-8	-2	-1	-10
60%	-10	38	88	10	7	3	-6	-24	-8	0	-2	-21
70%	-8	32	78	6	5	4	-5	-21	-7	-1	0	-23
80%	-6	23	64	9	1	3	2	-16	-5	0	-1	-14
90%	-3	12	14	2	0	4	6	6	-4	0	-4	-14
Long Term												
Full Simulation Period[a]	0	12	41	23	5	5	-3	-16	-6	-1	-1	-6
Water Year Types[b]												
Wet (32%)	-1	16	35	9	0	3	0	-10	-4	0	-2	-27
Above Normal (15%)	0	20	58	39	5	7	-6	-23	-8	-1	0	-3
Below Normal (17%)	-1	11	39	24	2	6	-3	-23	-8	-4	-1	13
Dry (22%)	-1	8	43	34	9	7	-6	-20	-8	-2	-3	1
Critical (15%)	2	5	35	15	13	3	-4	-8	-5	3	4	5

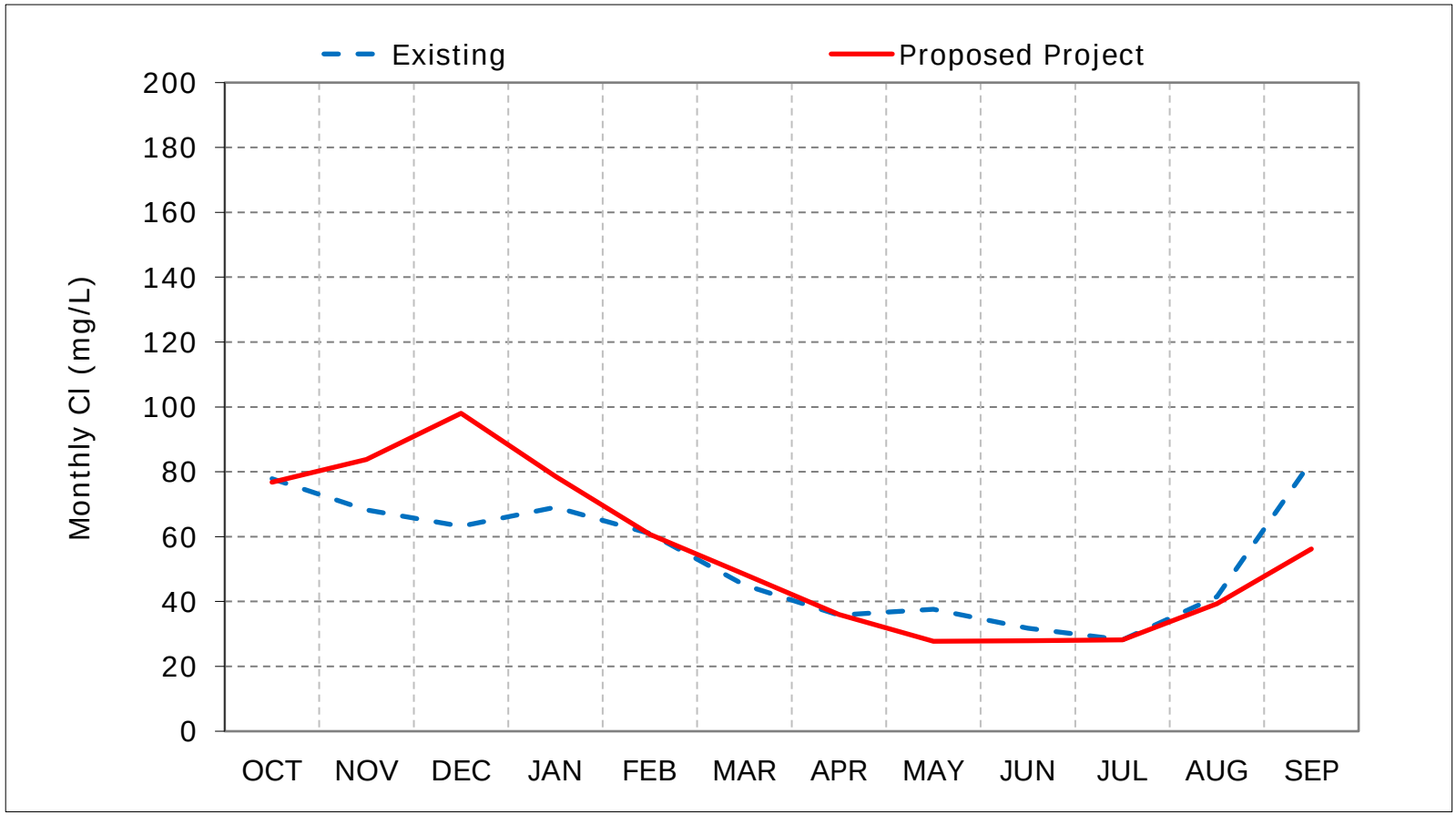
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 7-1. Old River at Highway 4 Chloride, Long-Term Average Cl



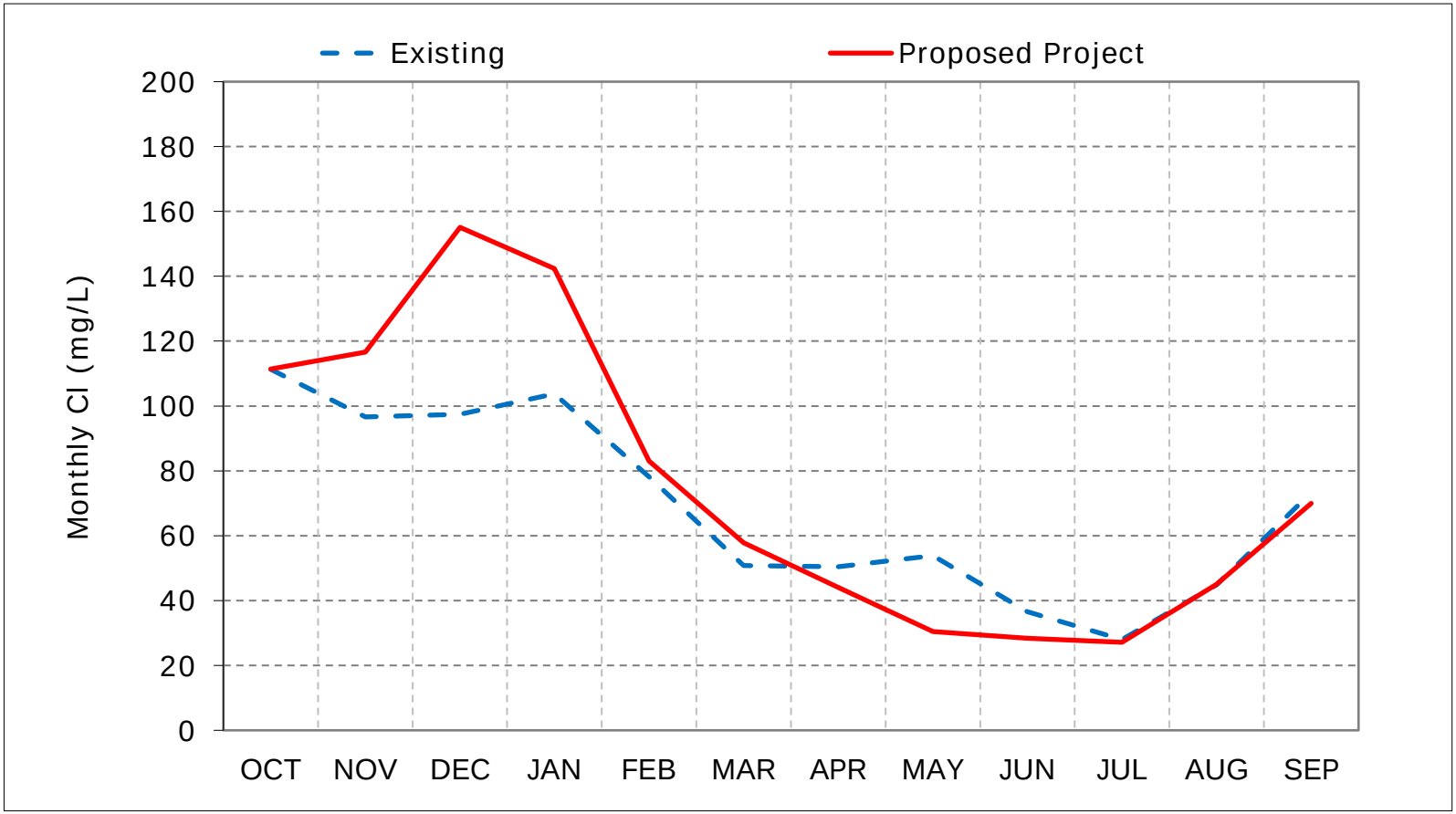
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-2. Old River at Highway 4 Chloride, Wet Year Average Cl



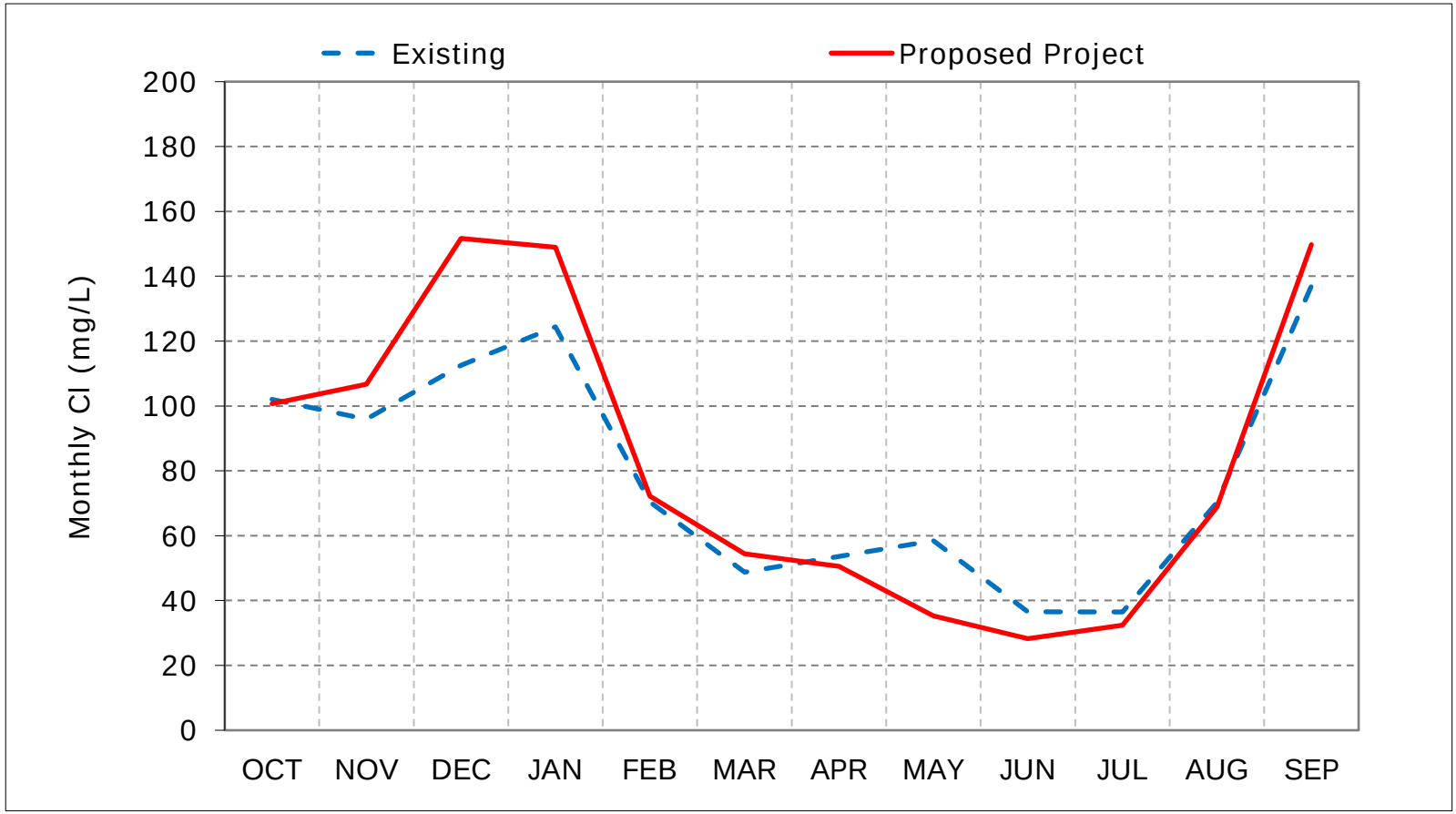
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-3. Old River at Highway 4 Chloride, Above Normal Year Average Cl



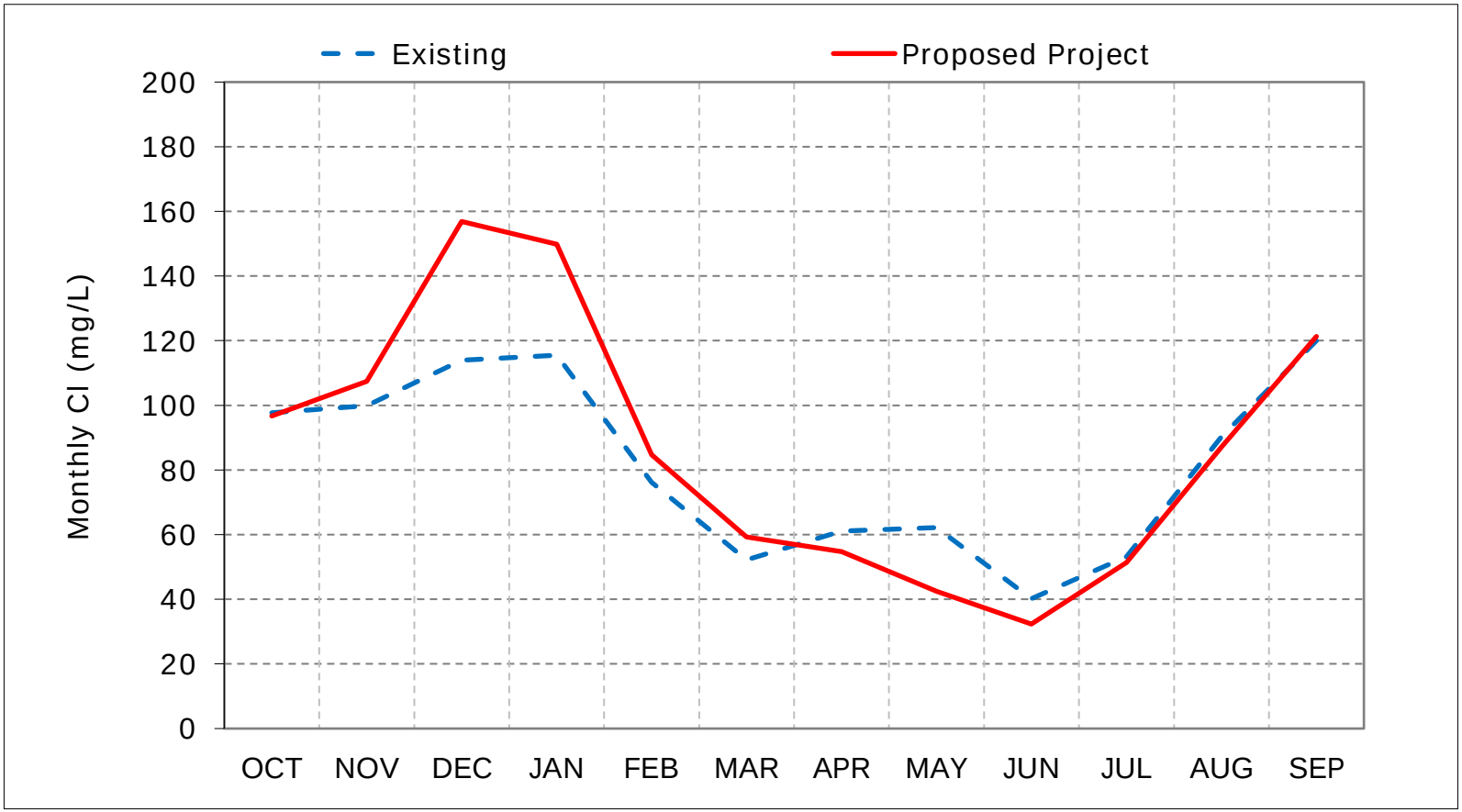
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-4. Old River at Highway 4 Chloride, Below Normal Year Average Cl



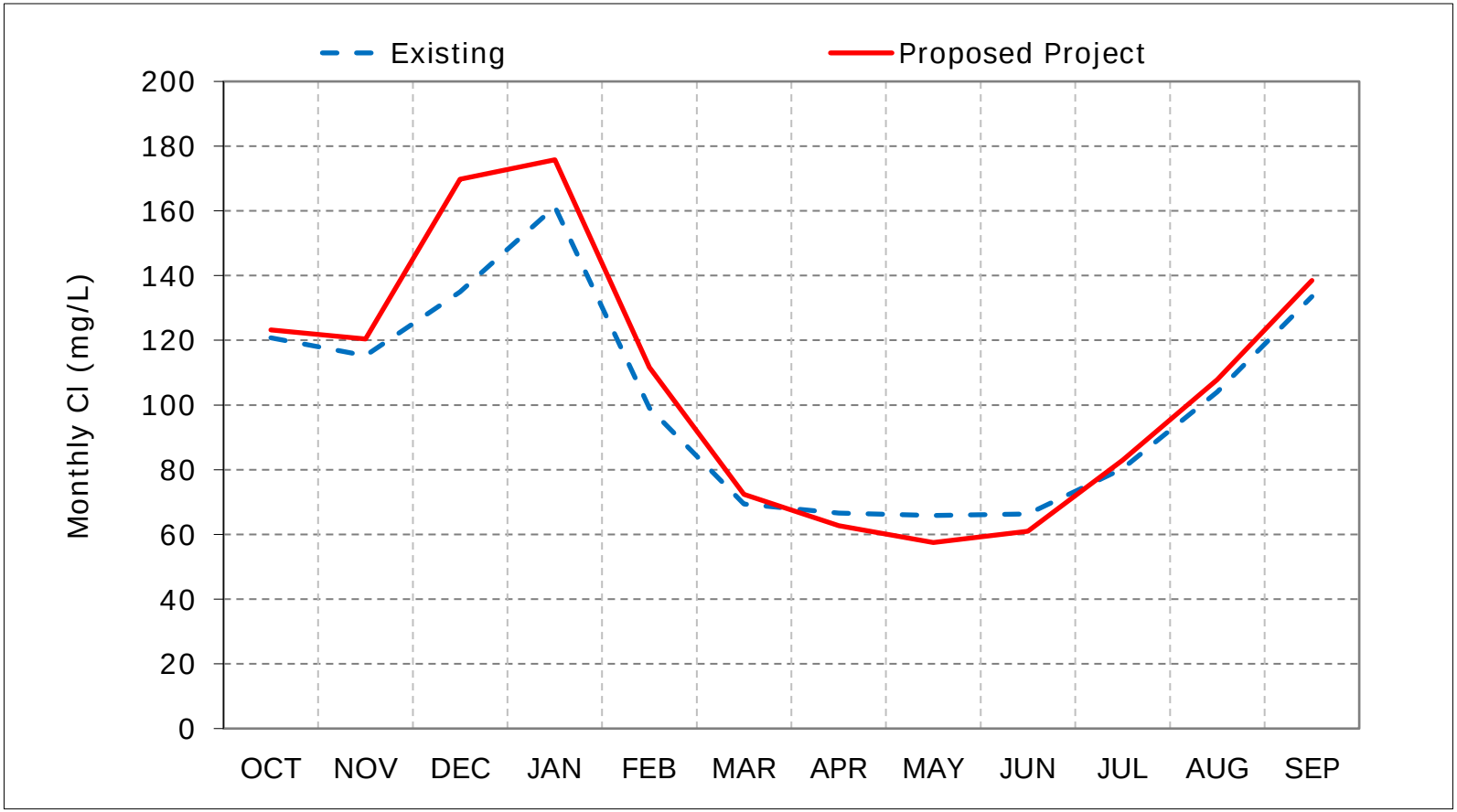
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 7-5. Old River at Highway 4 Chloride, Dry Year Average Cl



*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.

Figure 7-6. Old River at Highway 4 Chloride, Critical Year Average Cl



*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.

Figure 7-7. Old River at Highway 4 Chloride, January Cl

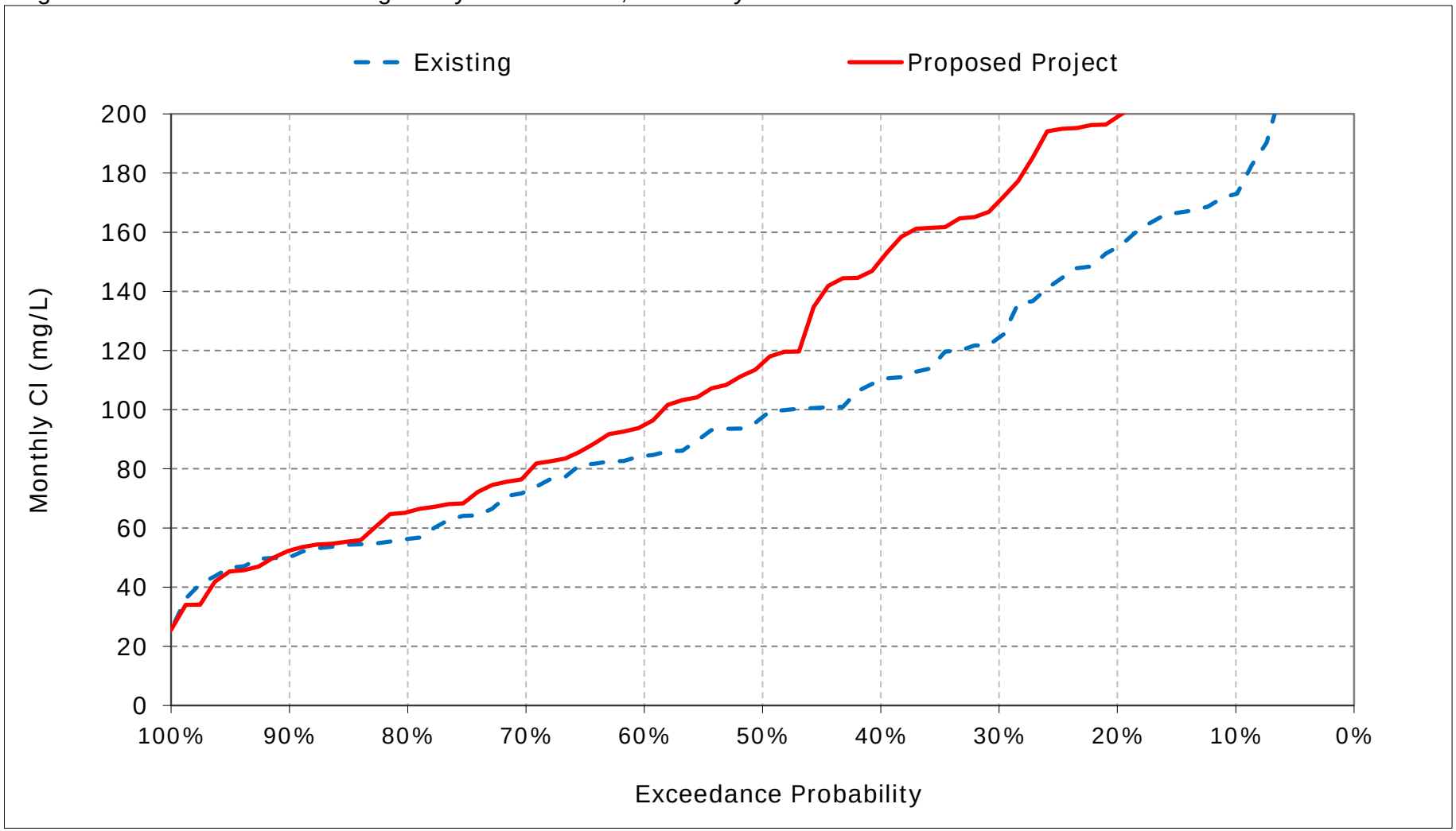


Figure 7-8. Old River at Highway 4 Chloride, February Cl

Figure 7-9. Old River at Highway 4 Chloride, March Cl

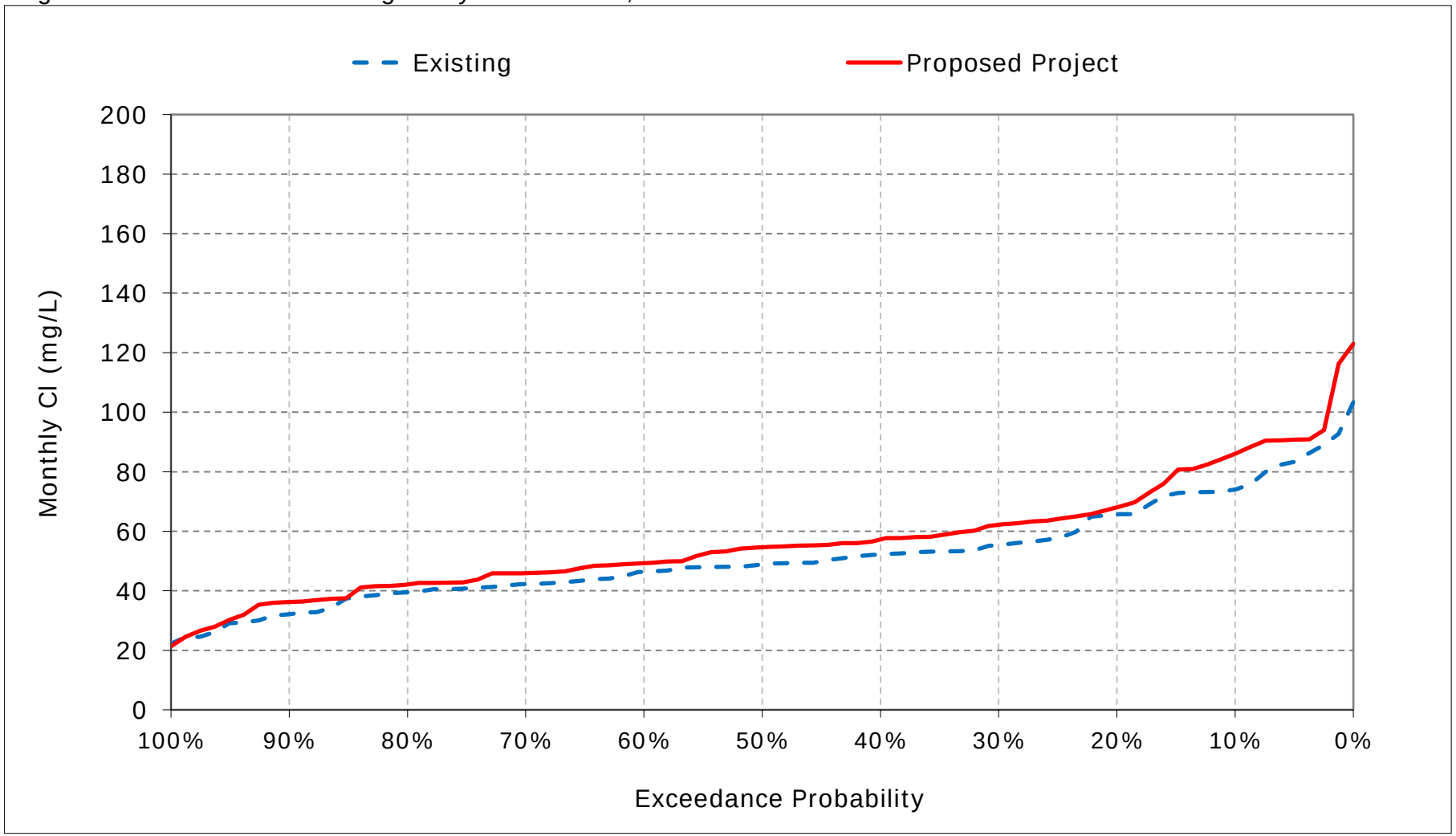


Figure 7-10. Old River at Highway 4 Chloride, April Cl

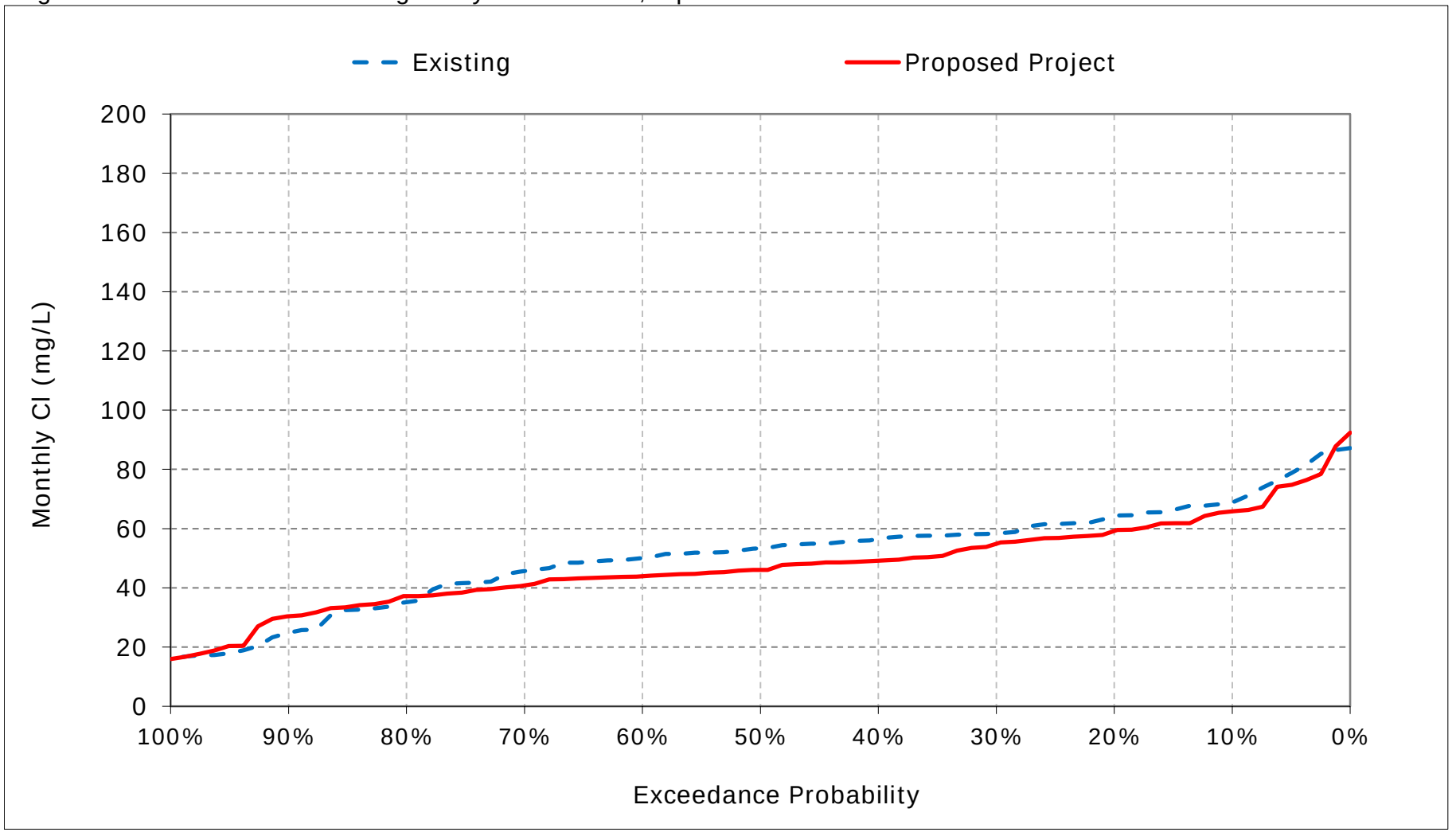


Figure 7-11. Old River at Highway 4 Chloride, May Cl

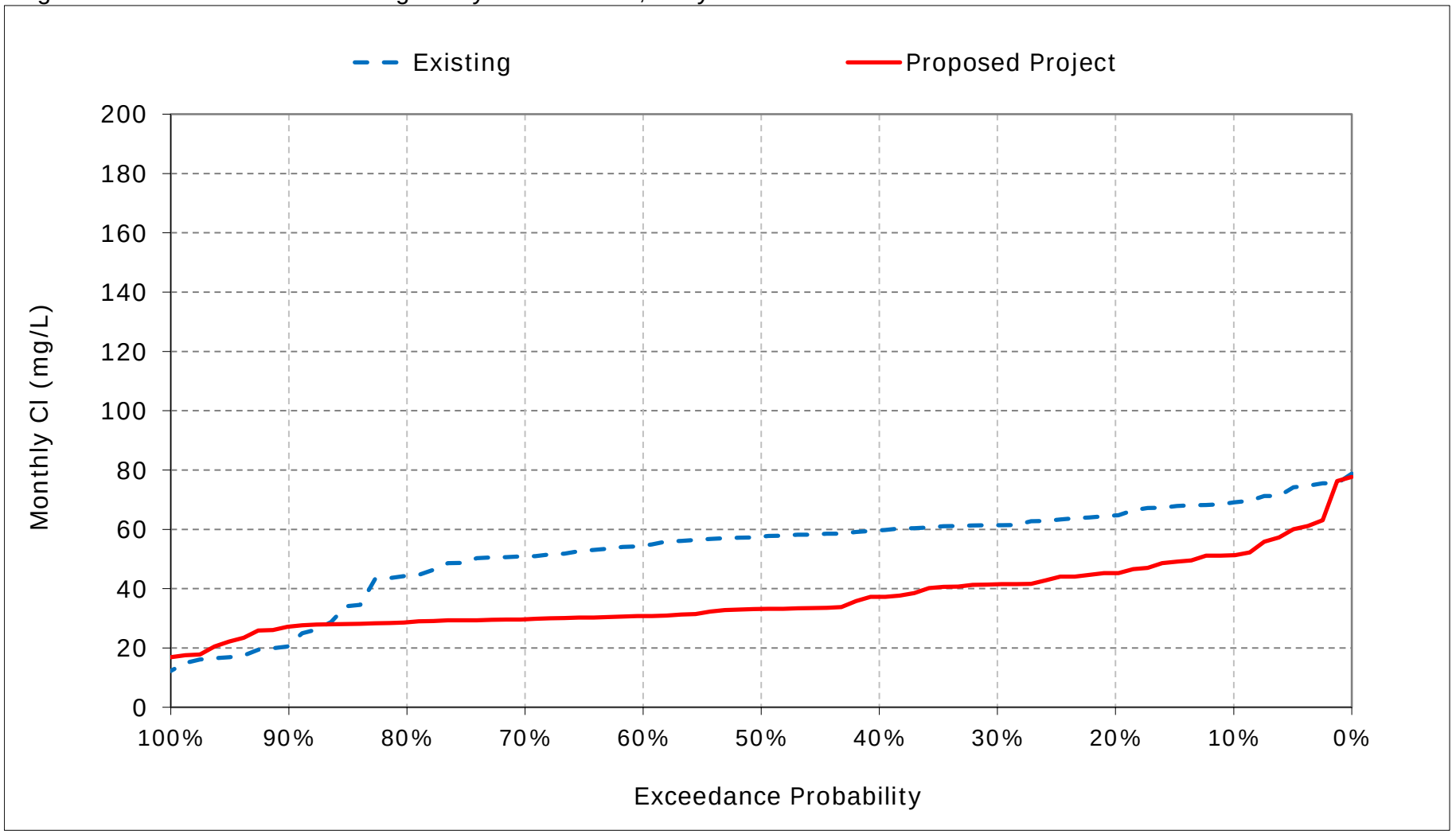


Figure 7-12. Old River at Highway 4 Chloride, June Cl

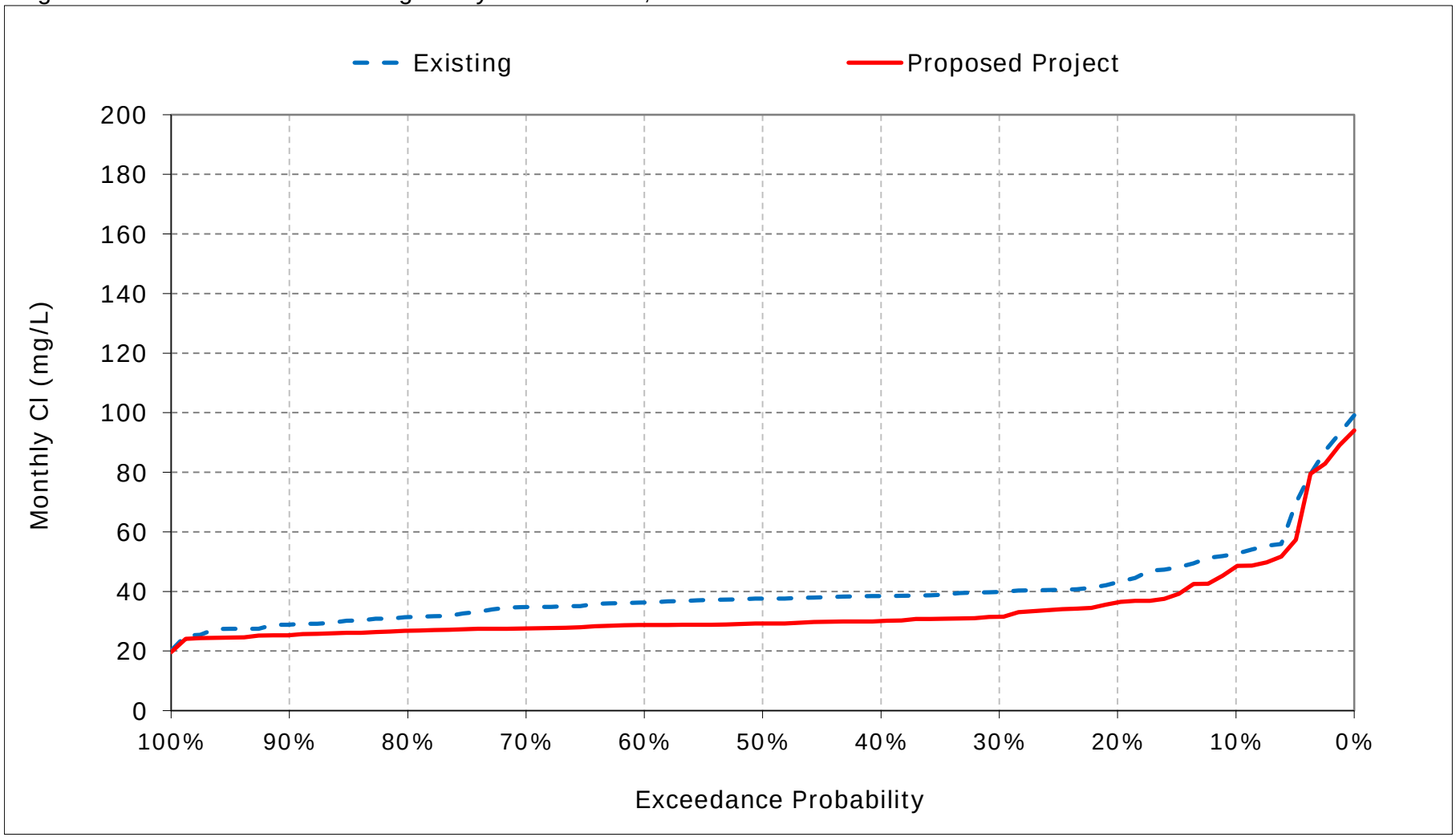


Figure 7-13. Old River at Highway 4 Chloride, July Cl

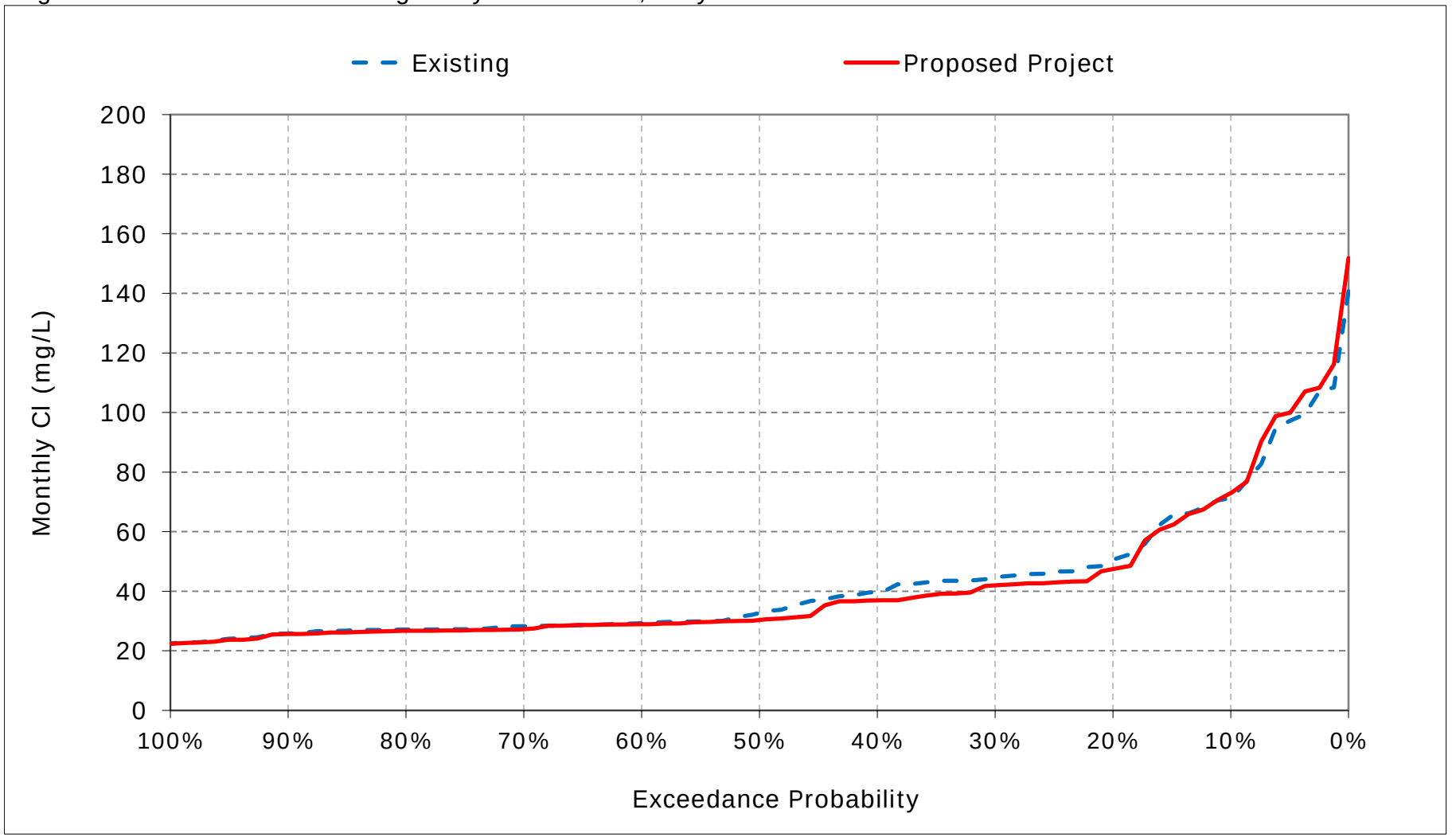


Figure 7-14. Old River at Highway 4 Chloride, August Cl

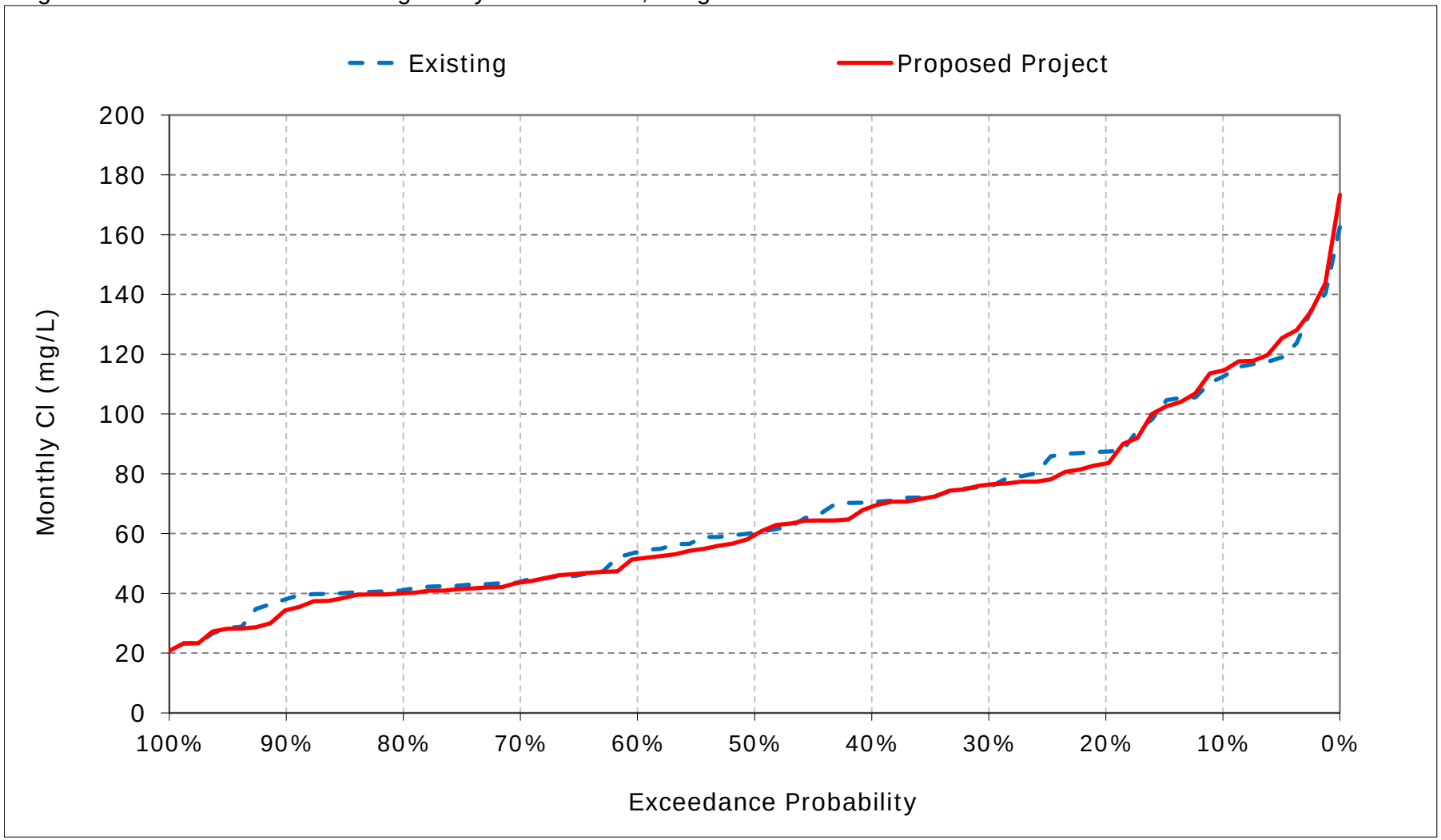


Figure 7-15. Old River at Highway 4 Chloride, September Cl

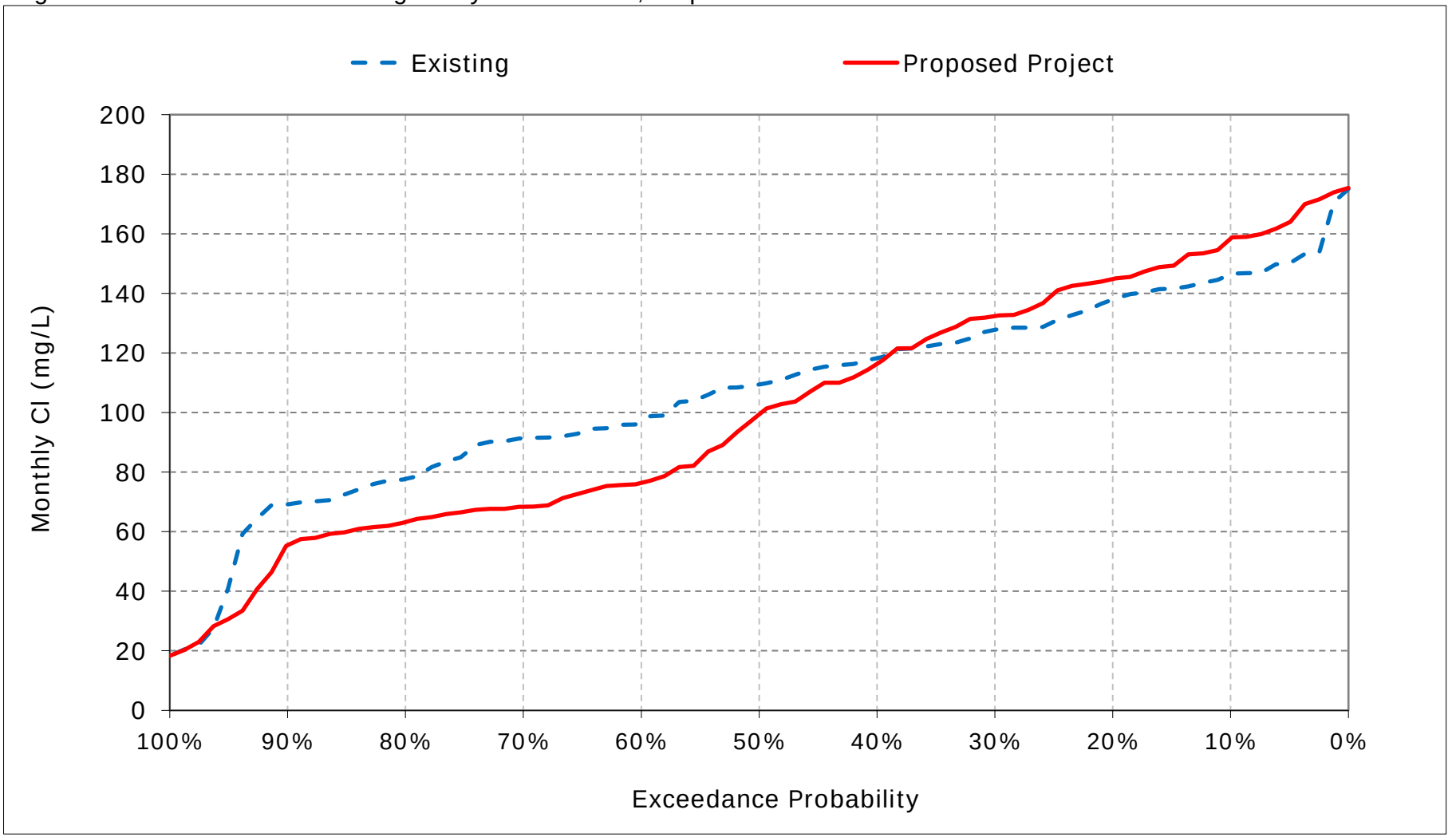


Figure 7-16. Old River at Highway 4 Chloride, October Cl

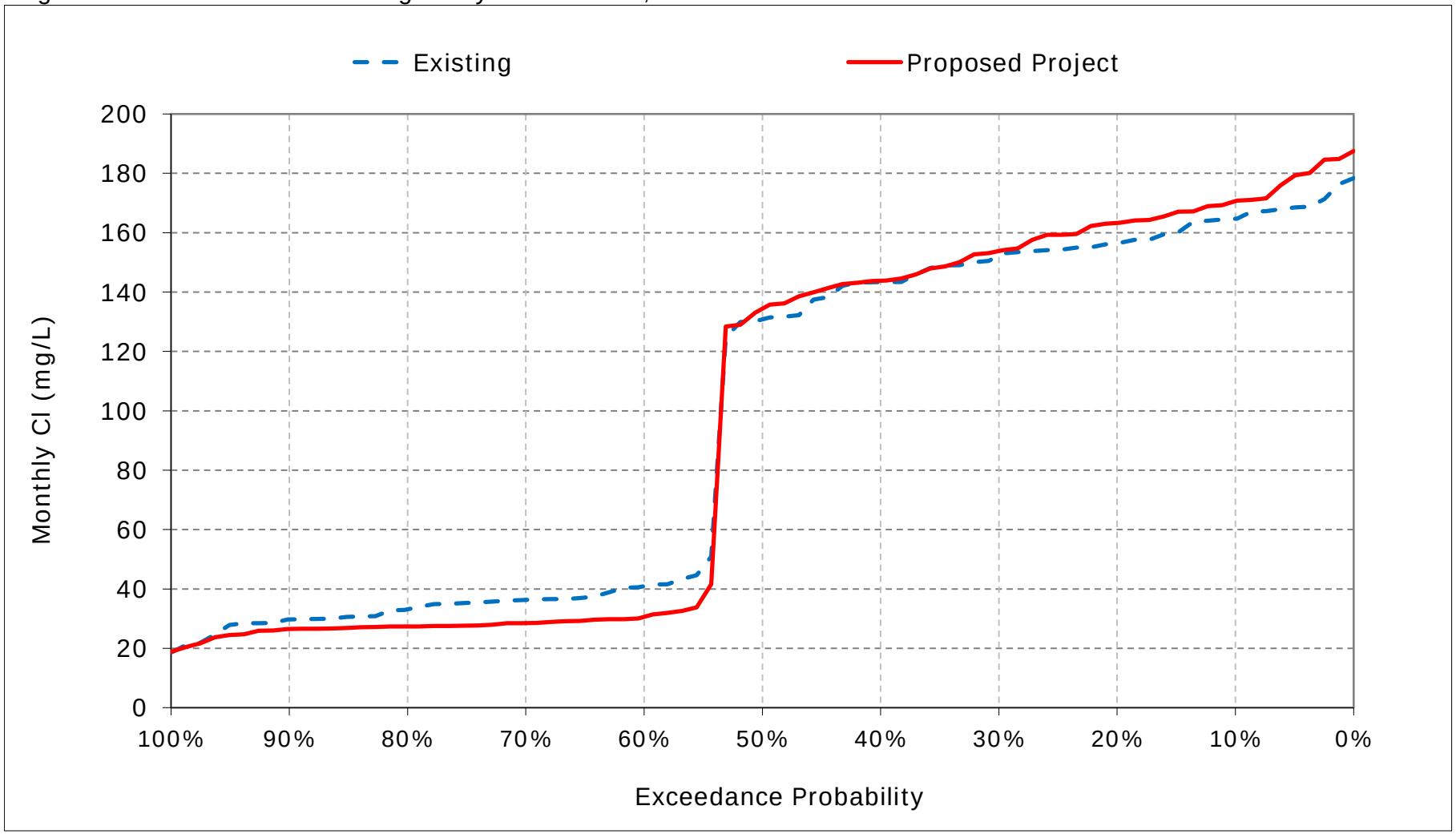


Figure 7-17. Old River at Highway 4 Chloride, November Cl

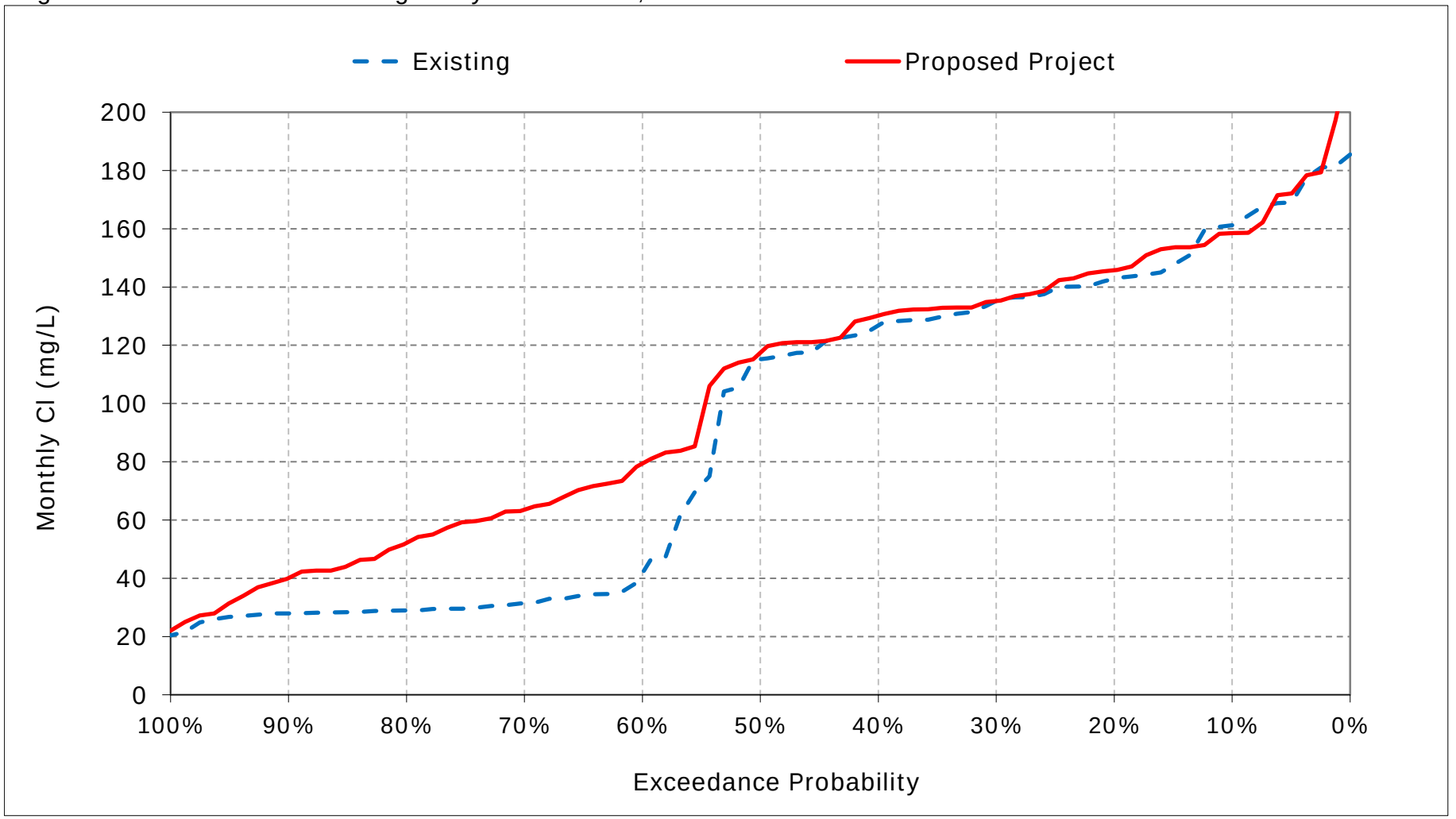


Figure 7-18. Old River at Highway 4 Chloride, December Cl

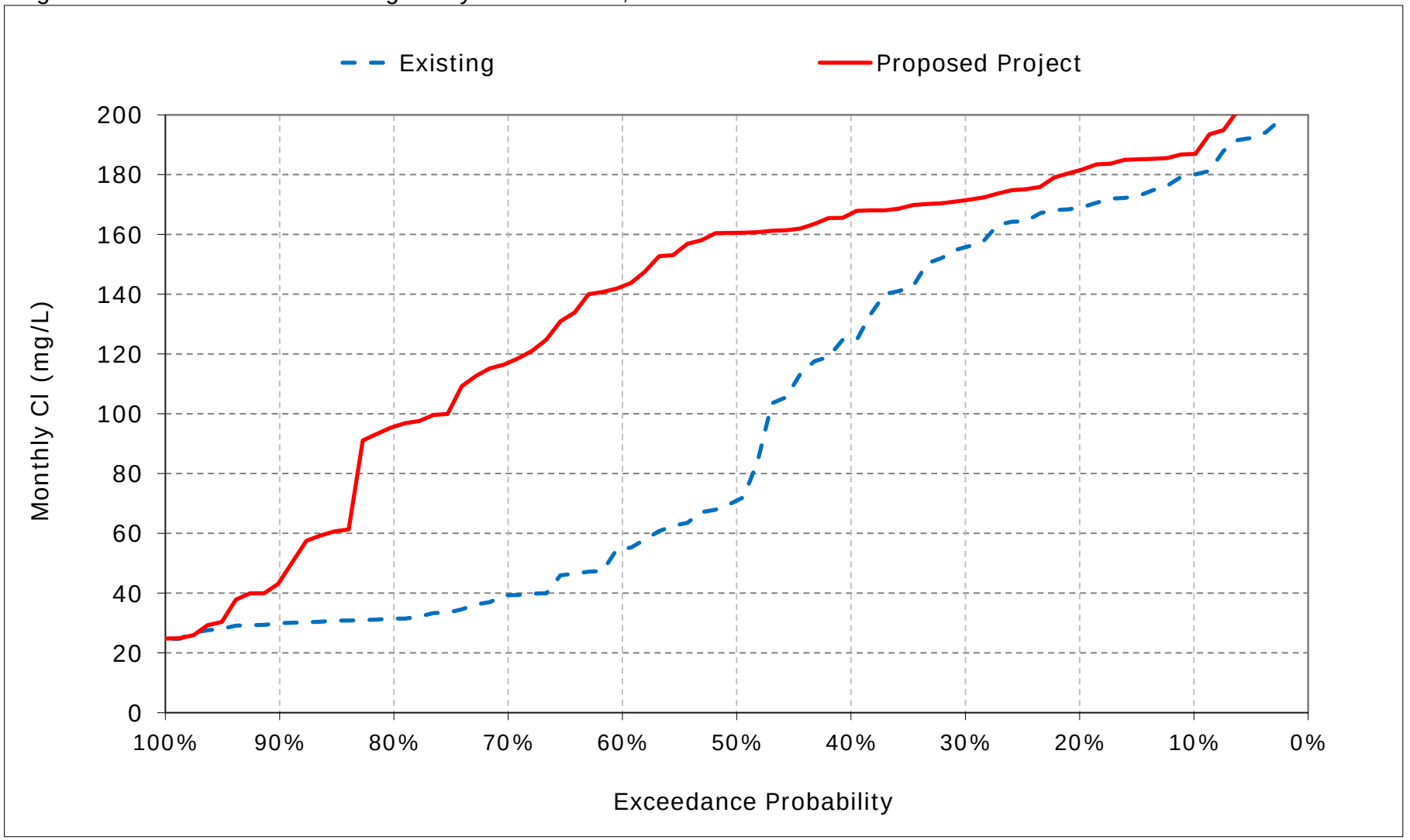


Table 8-1. Victoria Canal Chloride, Monthly Cl

Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	96	100	117	141	127	102	91	84	71	55	72	80
20%	90	88	108	134	114	92	84	79	60	51	58	77
30%	86	83	103	116	107	87	78	75	57	43	50	75
40%	83	79	96	108	103	82	72	70	55	38	44	72
50%	77	73	74	100	93	76	67	61	53	35	38	67
60%	55	52	57	93	87	70	55	57	52	32	36	62
70%	51	49	46	87	84	63	45	52	49	30	33	60
80%	45	47	41	78	73	49	36	43	46	29	31	51
90%	41	44	34	72	55	42	25	20	42	27	28	46
Long Term												
Full Simulation Period[a]	69	68	76	104	93	74	61	60	54	39	45	65
Water Year Types[b]												
Wet (32%)	61	58	64	86	72	54	37	38	45	38	32	57
Above Normal (15%)	76	73	75	105	101	72	57	56	53	36	31	48
Below Normal (17%)	70	68	80	113	96	77	65	63	53	31	41	71
Dry (22%)	70	71	82	106	102	89	82	75	57	36	58	69
Critical (15%)	78	82	92	129	112	90	84	83	73	61	68	82

Proposed Project

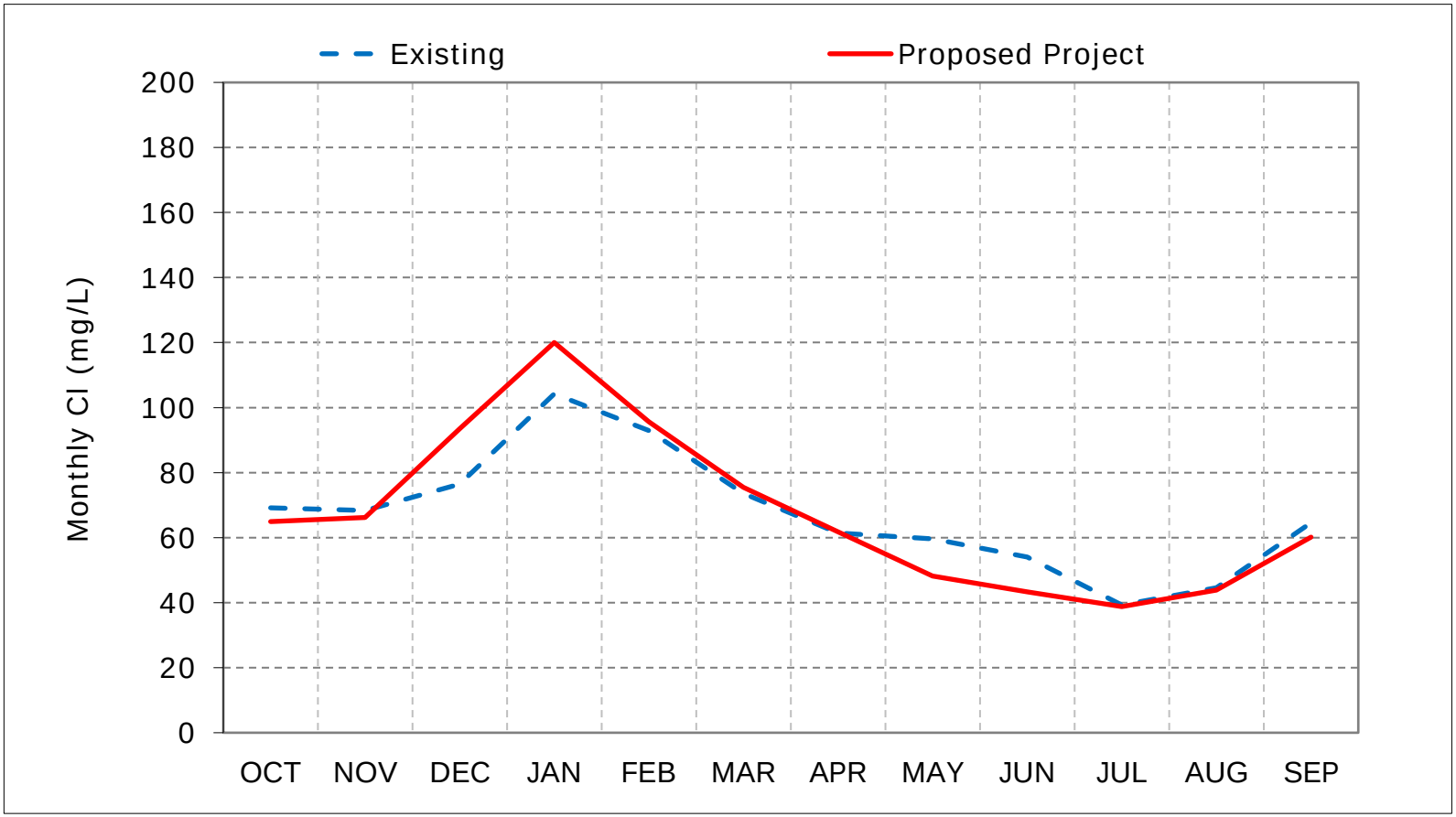
Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	100	99	126	170	137	106	88	67	54	56	71	82
20%	92	93	113	155	124	95	82	61	50	51	53	79
30%	88	84	107	142	111	89	76	57	46	43	48	74
40%	84	78	105	134	102	84	71	51	44	38	43	69
50%	80	74	98	116	96	77	66	48	42	34	37	62
60%	38	46	93	108	88	71	58	46	40	31	35	50
70%	36	43	84	97	83	59	49	43	38	29	33	46
80%	34	39	71	87	76	52	41	40	36	27	31	44
90%	32	37	52	74	56	43	32	26	33	26	29	39
Long Term												
Full Simulation Period[a]	65	66	93	120	96	75	62	48	43	39	44	60
Water Year Types[b]												
Wet (32%)	55	56	78	91	72	55	41	34	40	37	31	40
Above Normal (15%)	71	75	103	135	106	74	56	44	42	34	31	47
Below Normal (17%)	65	64	94	130	97	79	69	49	40	30	40	76
Dry (22%)	66	69	99	130	107	93	82	59	42	35	56	69
Critical (15%)	79	78	108	142	118	91	75	67	59	61	69	84

Proposed Project minus Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	5	-2	10	28	10	4	-4	-17	-17	1	0	2
20%	2	5	5	21	10	3	-2	-18	-10	0	-4	2
30%	2	1	4	26	5	2	-2	-18	-11	0	-2	-2
40%	1	-1	8	26	-1	2	-1	-19	-11	-1	-2	-2
50%	3	1	24	16	2	1	-1	-13	-12	-1	-1	-6
60%	-17	-6	35	15	1	1	3	-11	-12	-1	0	-12
70%	-15	-6	38	10	-1	-3	4	-9	-11	-1	-1	-14
80%	-11	-8	31	9	3	3	5	-3	-10	-2	0	-7
90%	-9	-7	18	2	0	1	8	6	-9	-1	0	-7
Long Term												
Full Simulation Period[a]	-4	-2	17	16	3	2	0	-11	-11	0	-1	-4
Water Year Types[b]												
Wet (32%)	-6	-3	14	5	0	1	3	-4	-5	0	-1	-17
Above Normal (15%)	-4	2	27	30	5	2	-1	-12	-11	-1	0	-1
Below Normal (17%)	-5	-4	14	17	0	2	4	-14	-13	-1	-1	5
Dry (22%)	-4	-2	17	24	5	3	0	-16	-15	0	-2	0
Critical (15%)	1	-4	16	13	6	1	-9	-16	-14	0	1	2

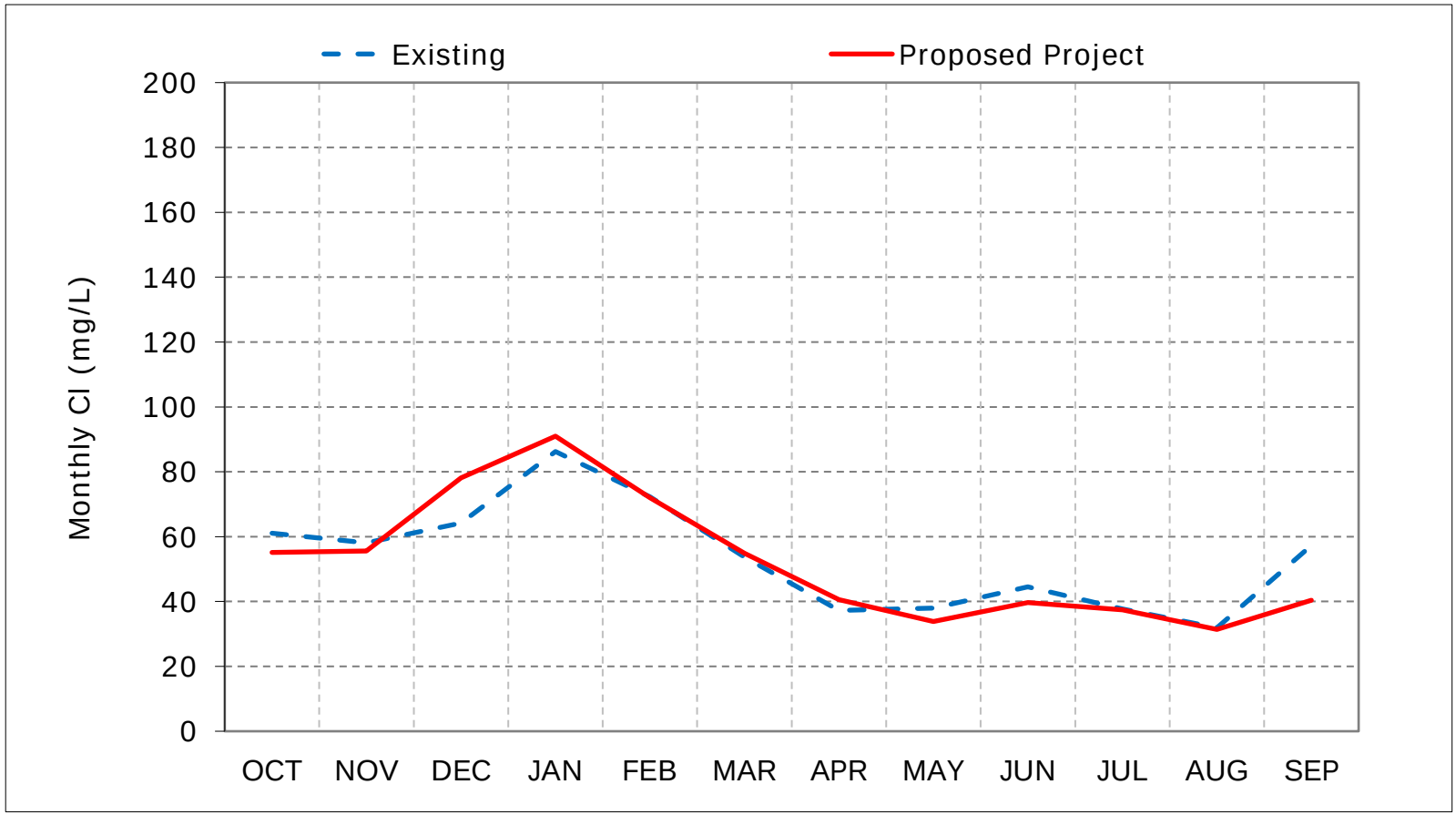
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 8-1. Victoria Canal Chloride, Long-Term Average Cl



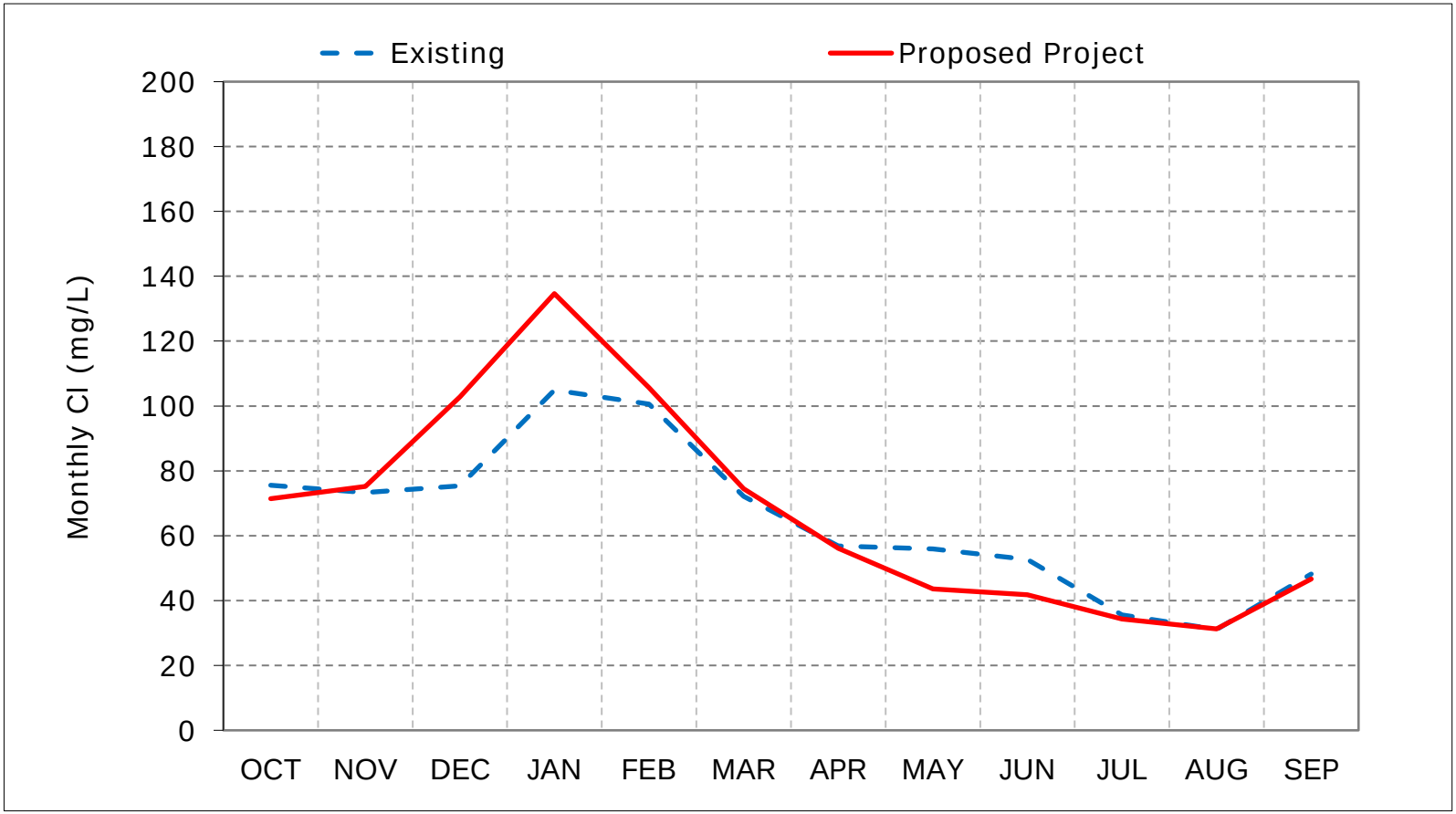
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-2. Victoria Canal Chloride, Wet Year Average Cl



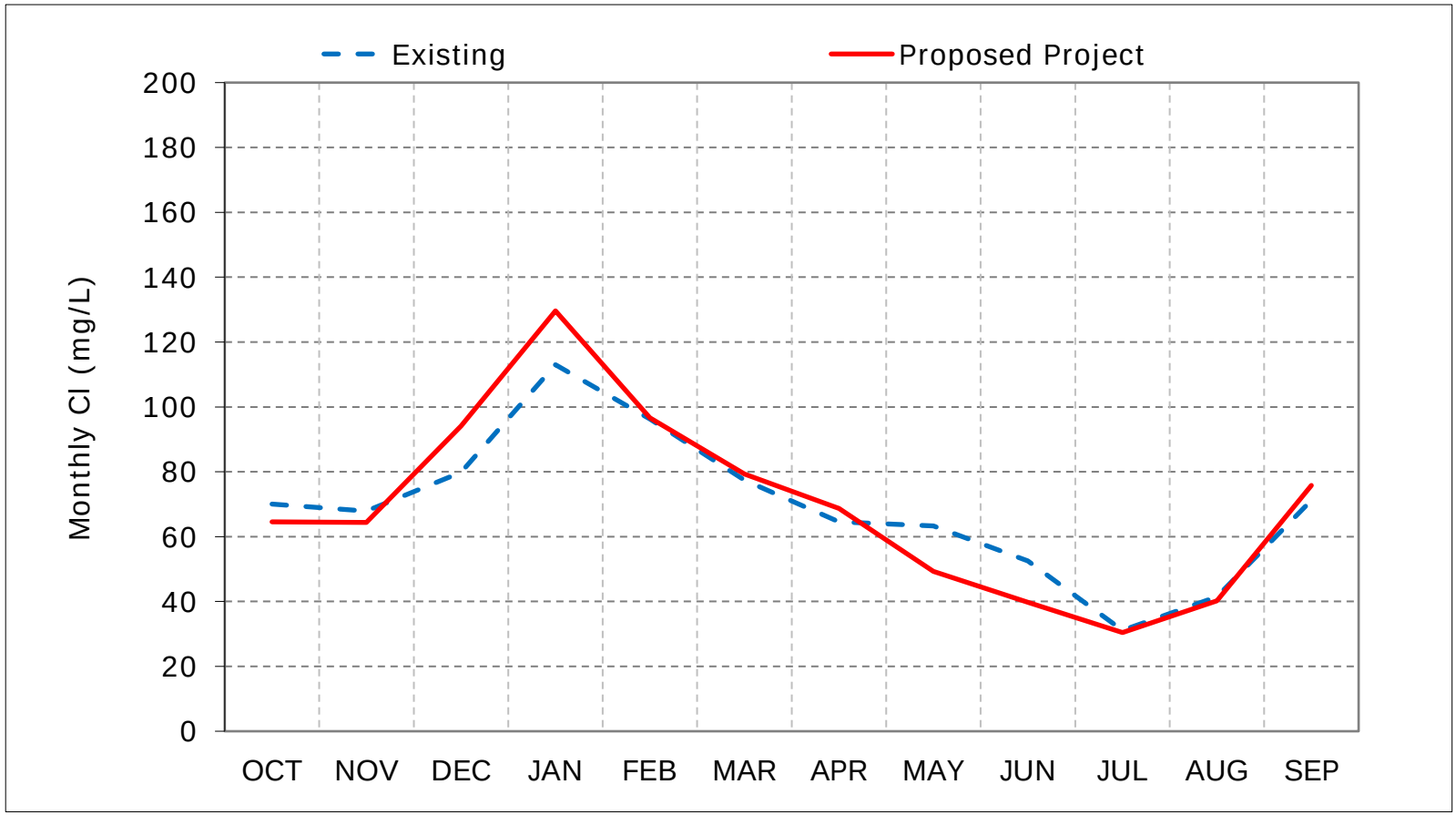
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-3. Victoria Canal Chloride, Above Normal Year Average Cl



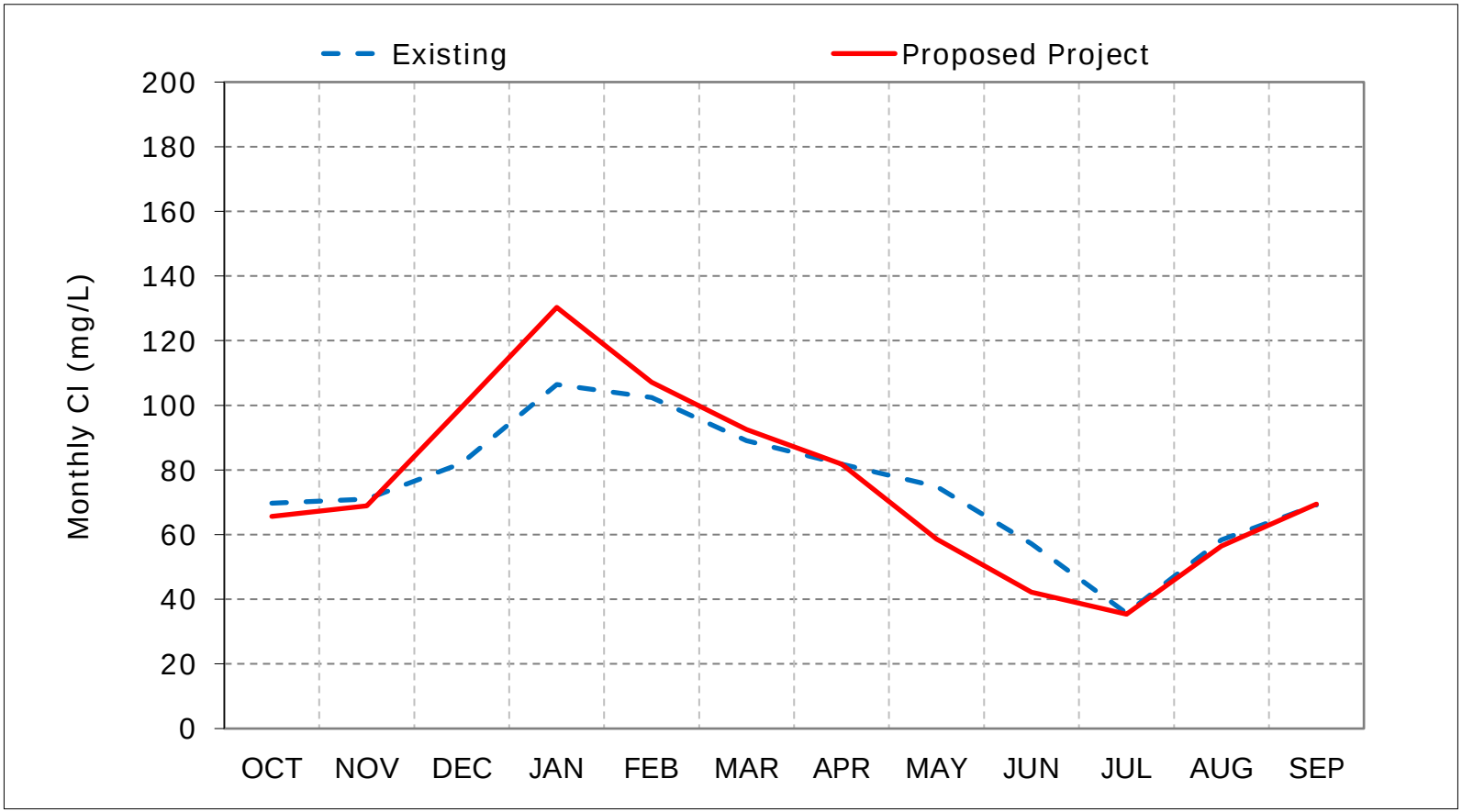
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-4. Victoria Canal Chloride, Below Normal Year Average Cl



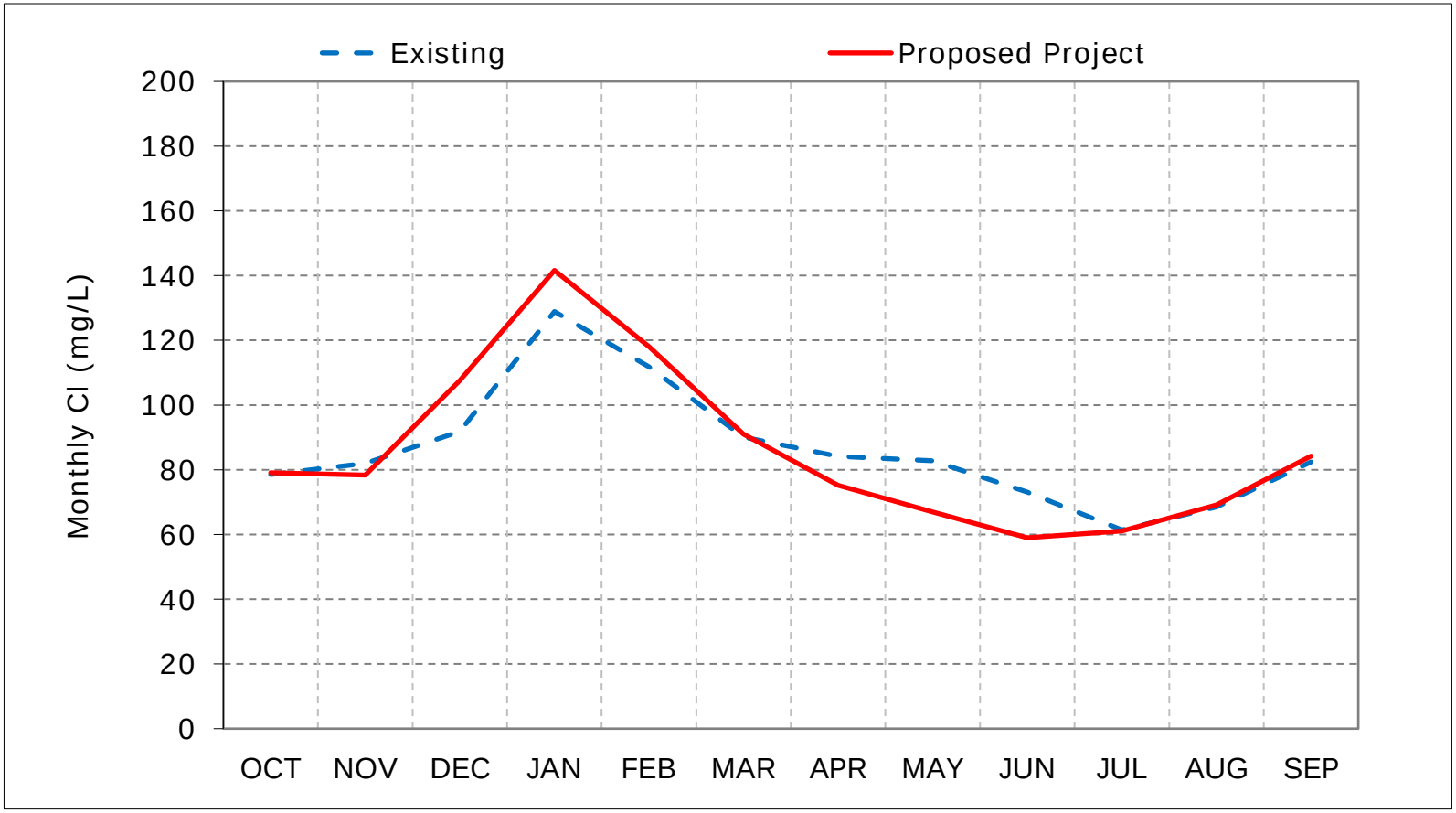
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 8-5. Victoria Canal Chloride, Dry Year Average Cl



*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.

Figure 8-6. Victoria Canal Chloride, Critical Year Average Cl



*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.

Figure 8-7. Victoria Canal Chloride, January Cl

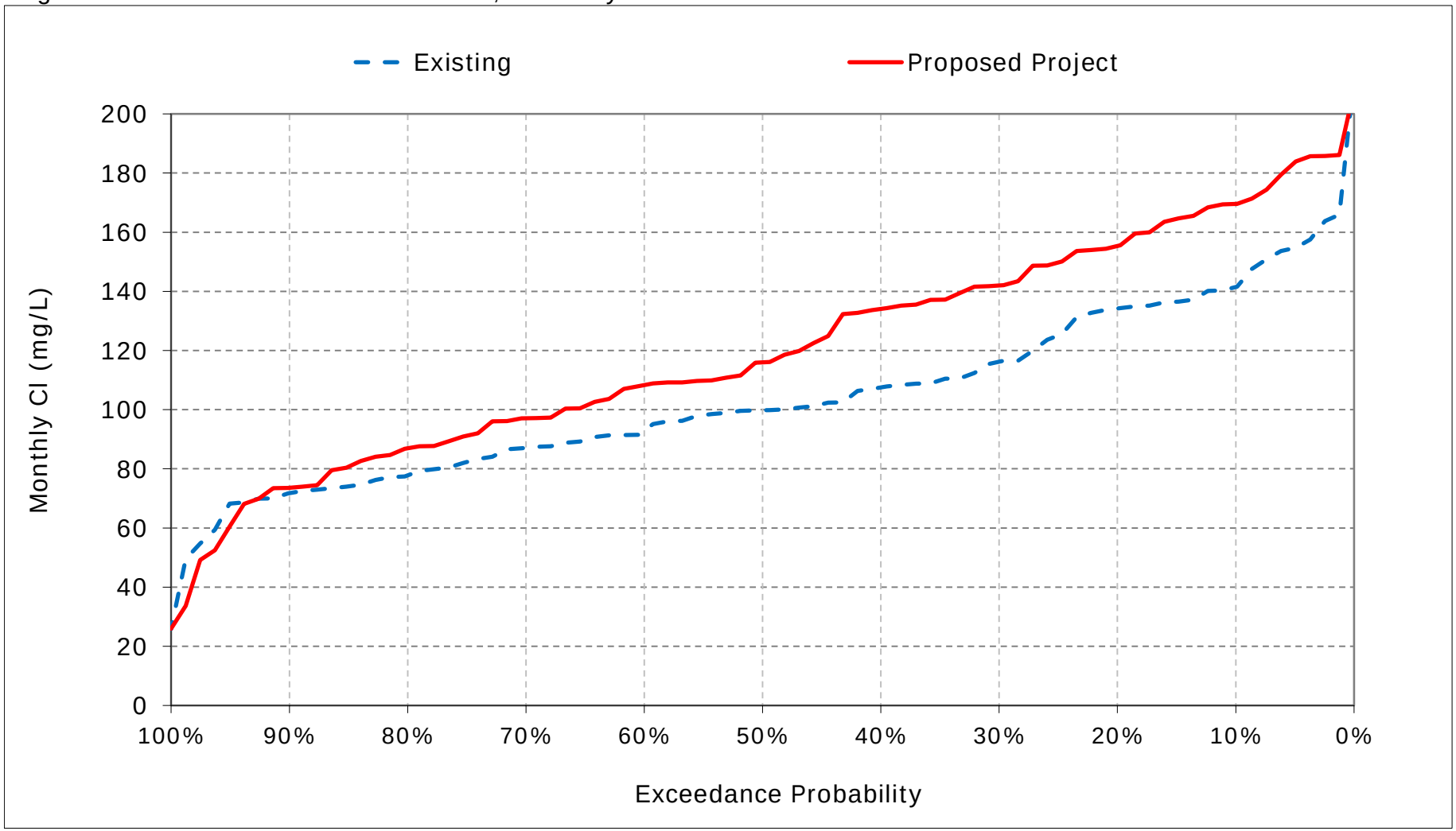


Figure 8-8. Victoria Canal Chloride, February Cl

Figure 8-9. Victoria Canal Chloride, March Cl

Figure 8-10. Victoria Canal Chloride, April Cl

Figure 8-11. Victoria Canal Chloride, May Cl

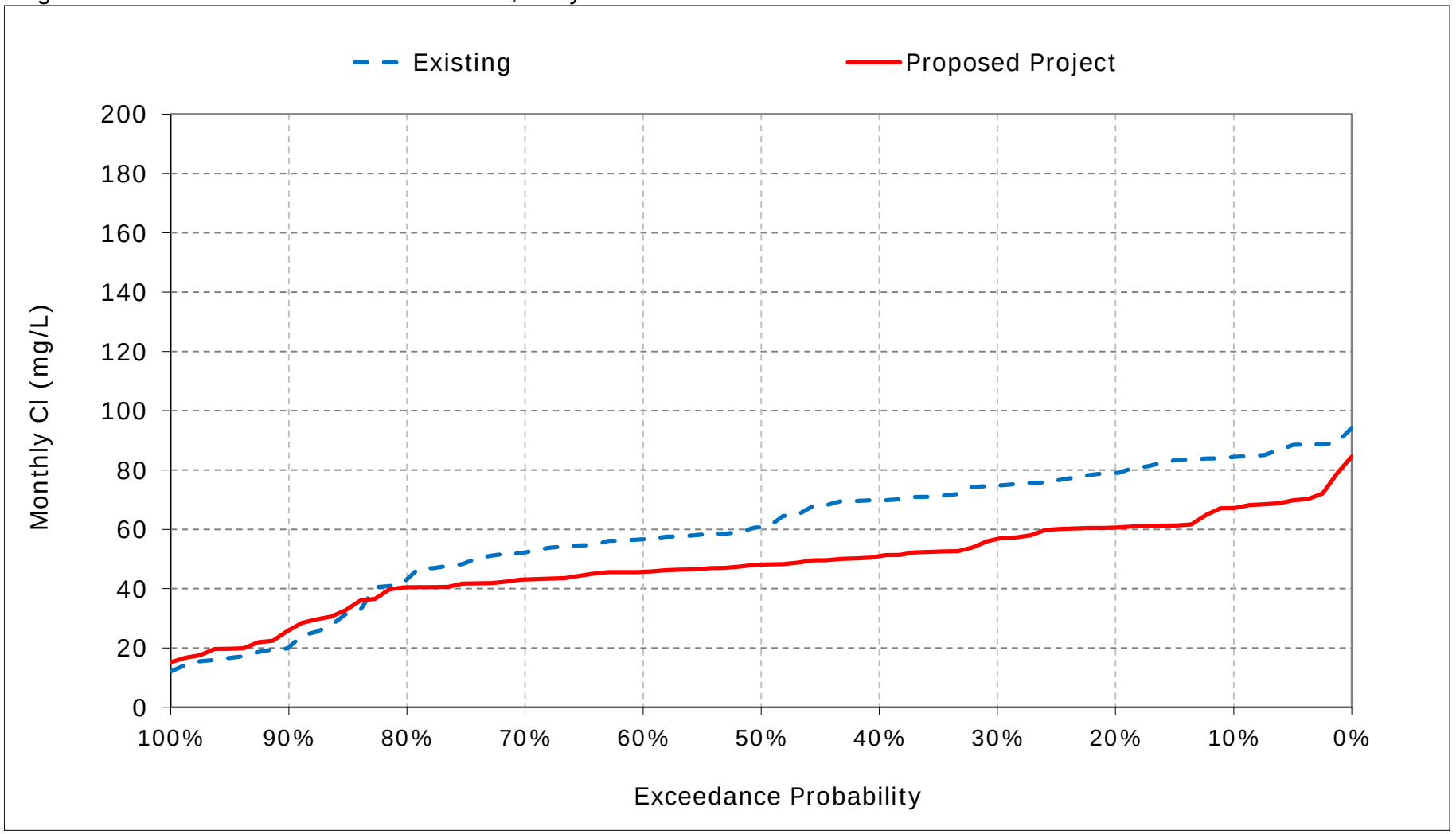


Figure 8-12. Victoria Canal Chloride, June Cl

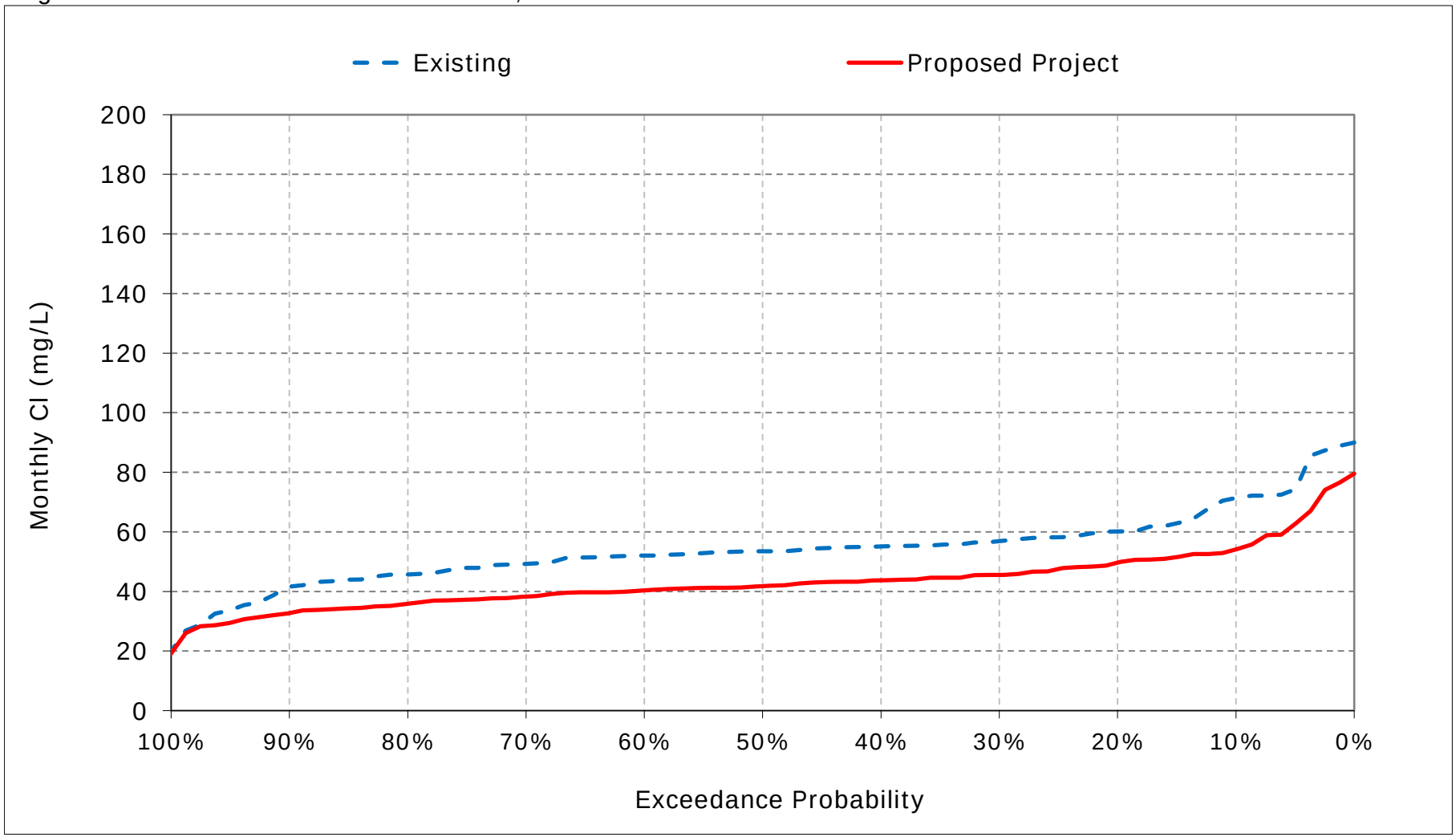


Figure 8-13. Victoria Canal Chloride, July Cl

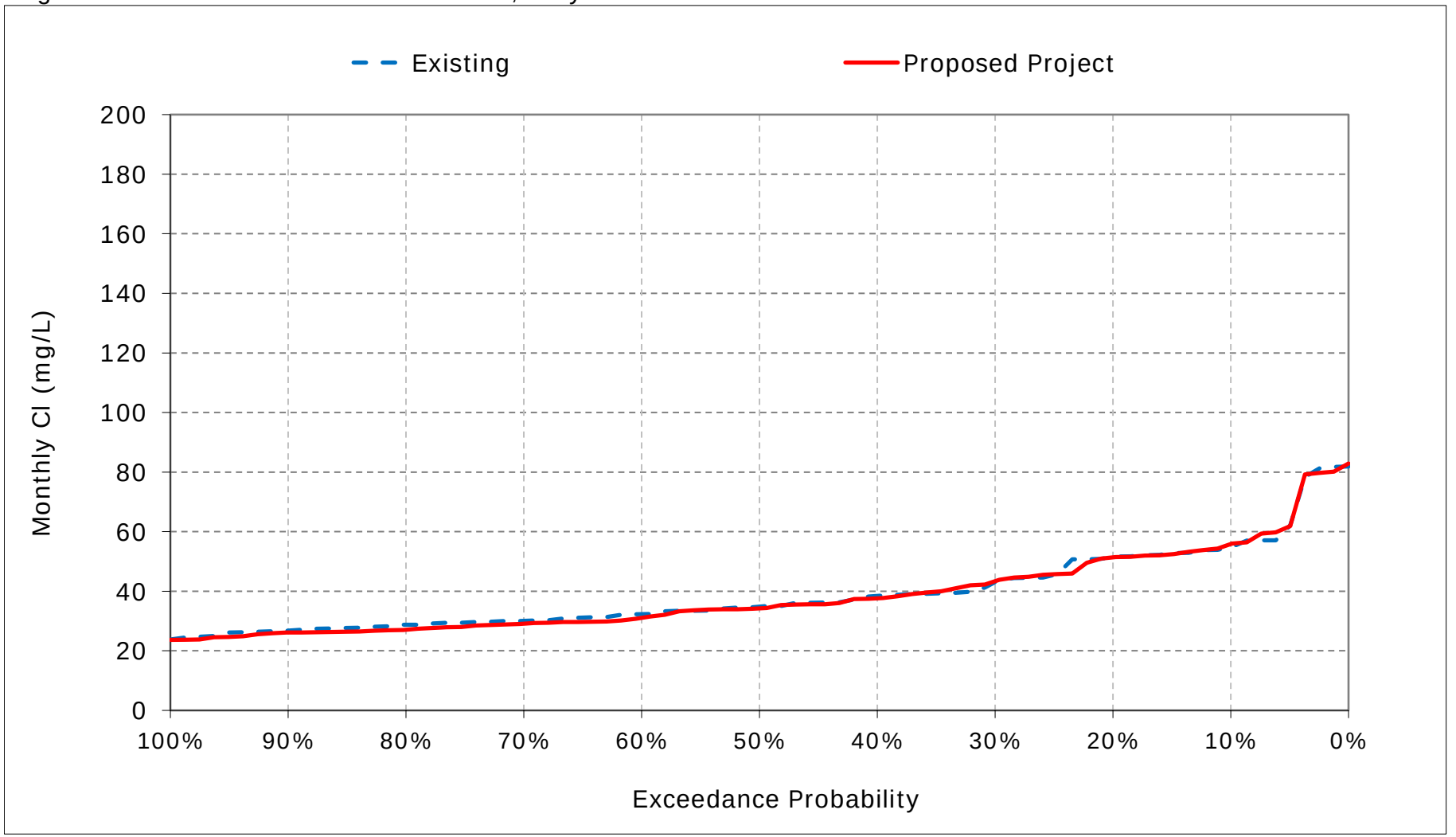


Figure 8-14. Victoria Canal Chloride, August Cl

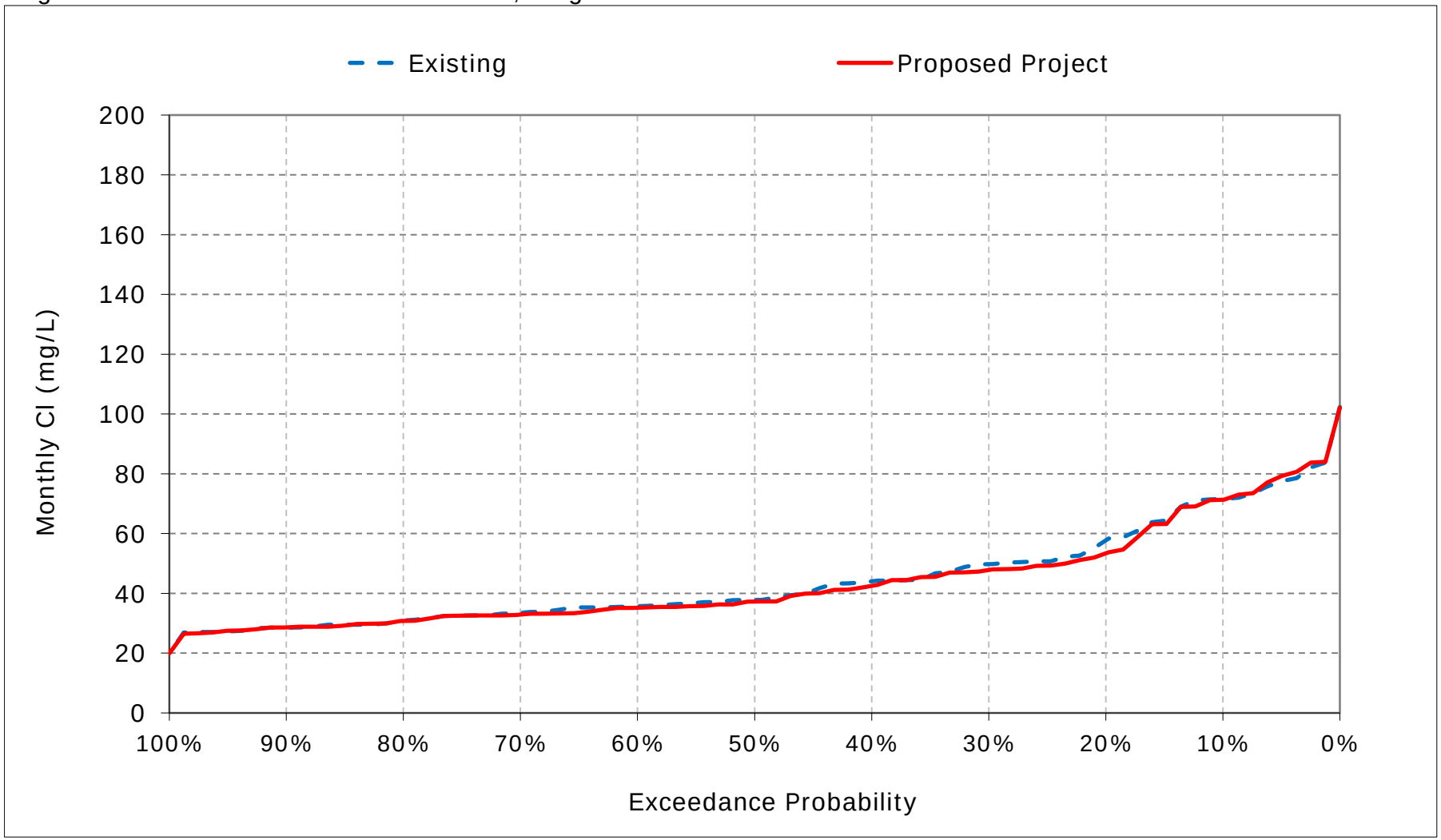


Figure 8-15. Victoria Canal Chloride, September Cl

Figure 8-16. Victoria Canal Chloride, October Cl

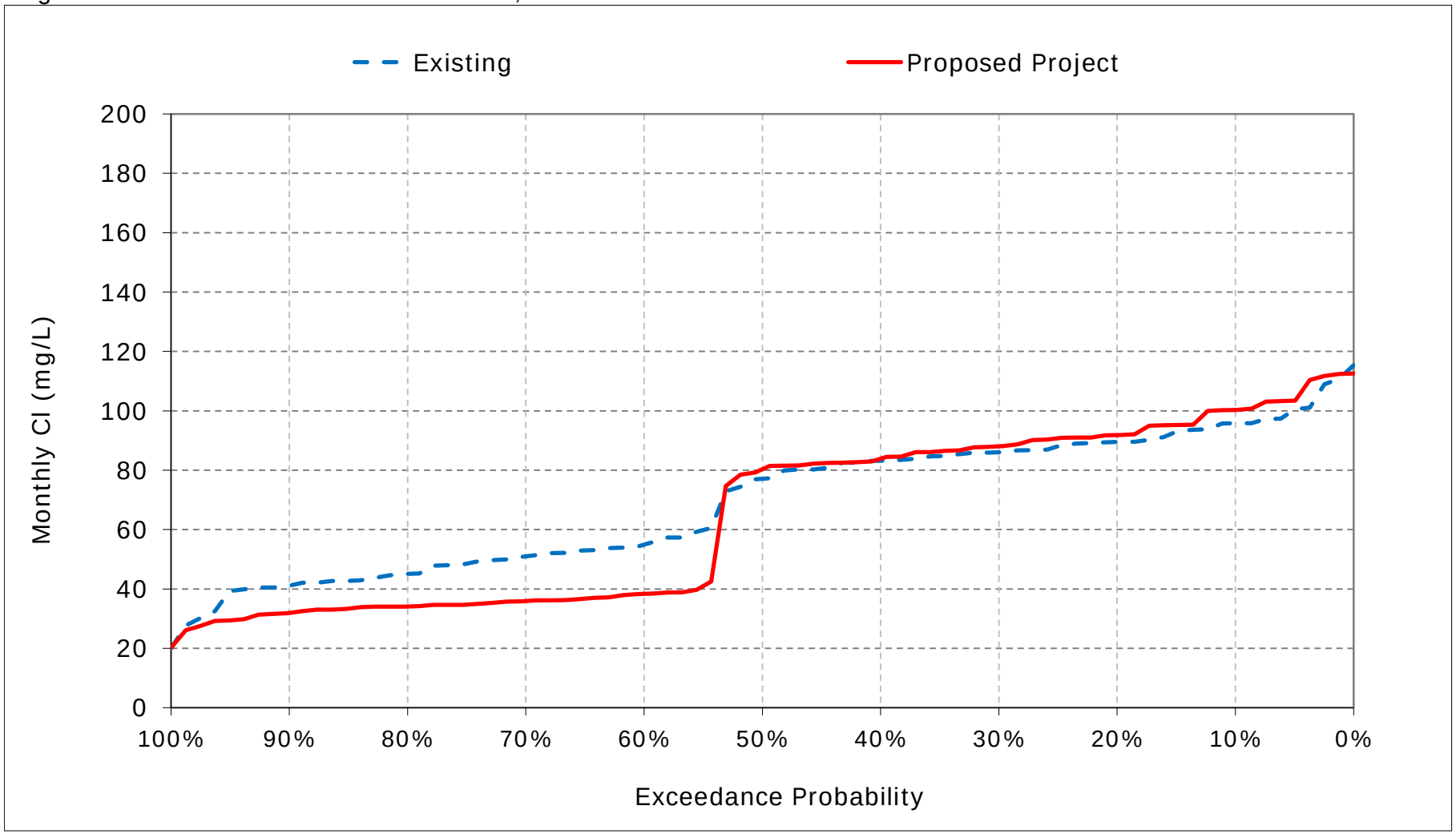


Figure 8-17. Victoria Canal Chloride, November Cl

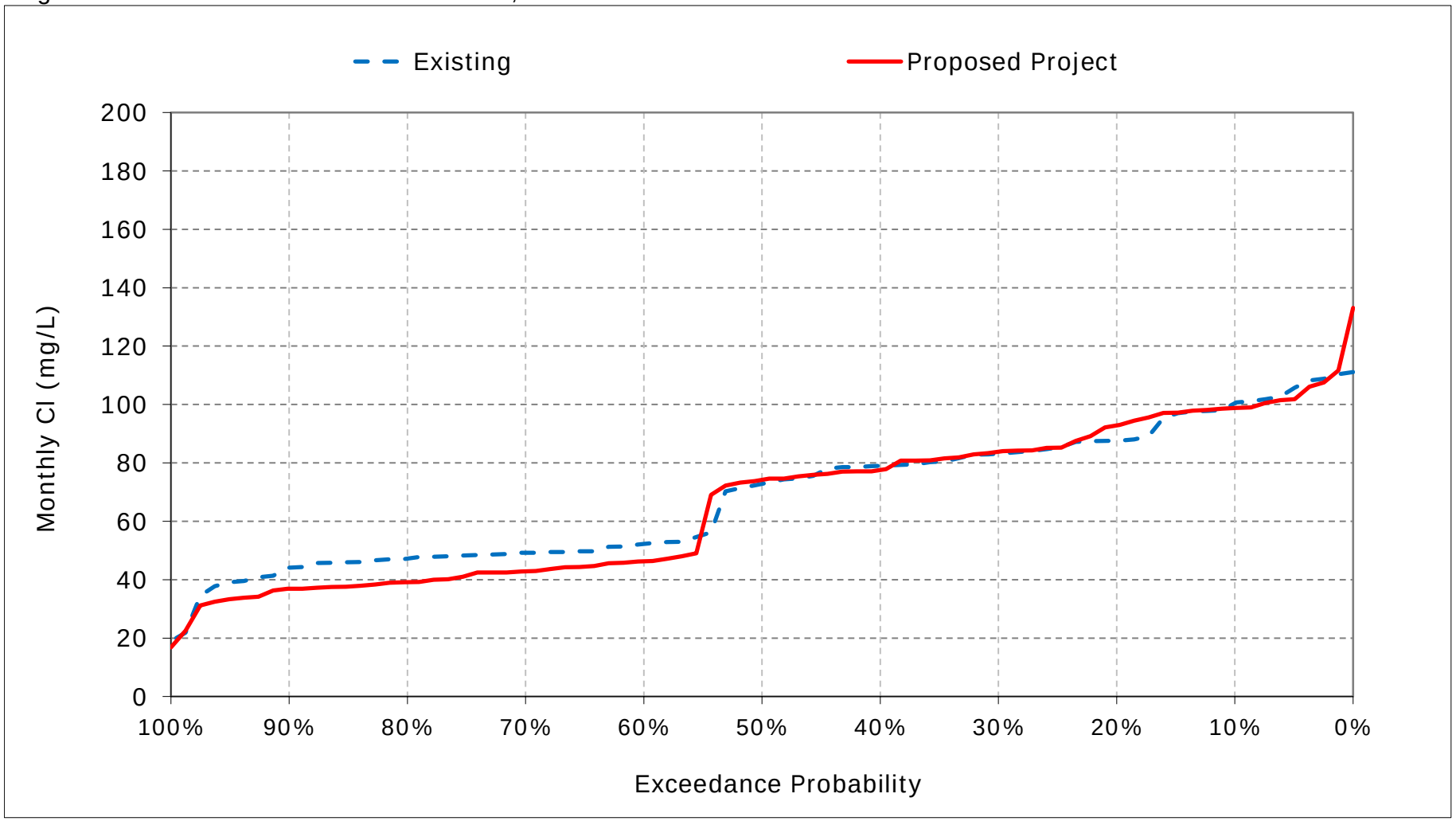


Figure 8-18. Victoria Canal Chloride, December Cl

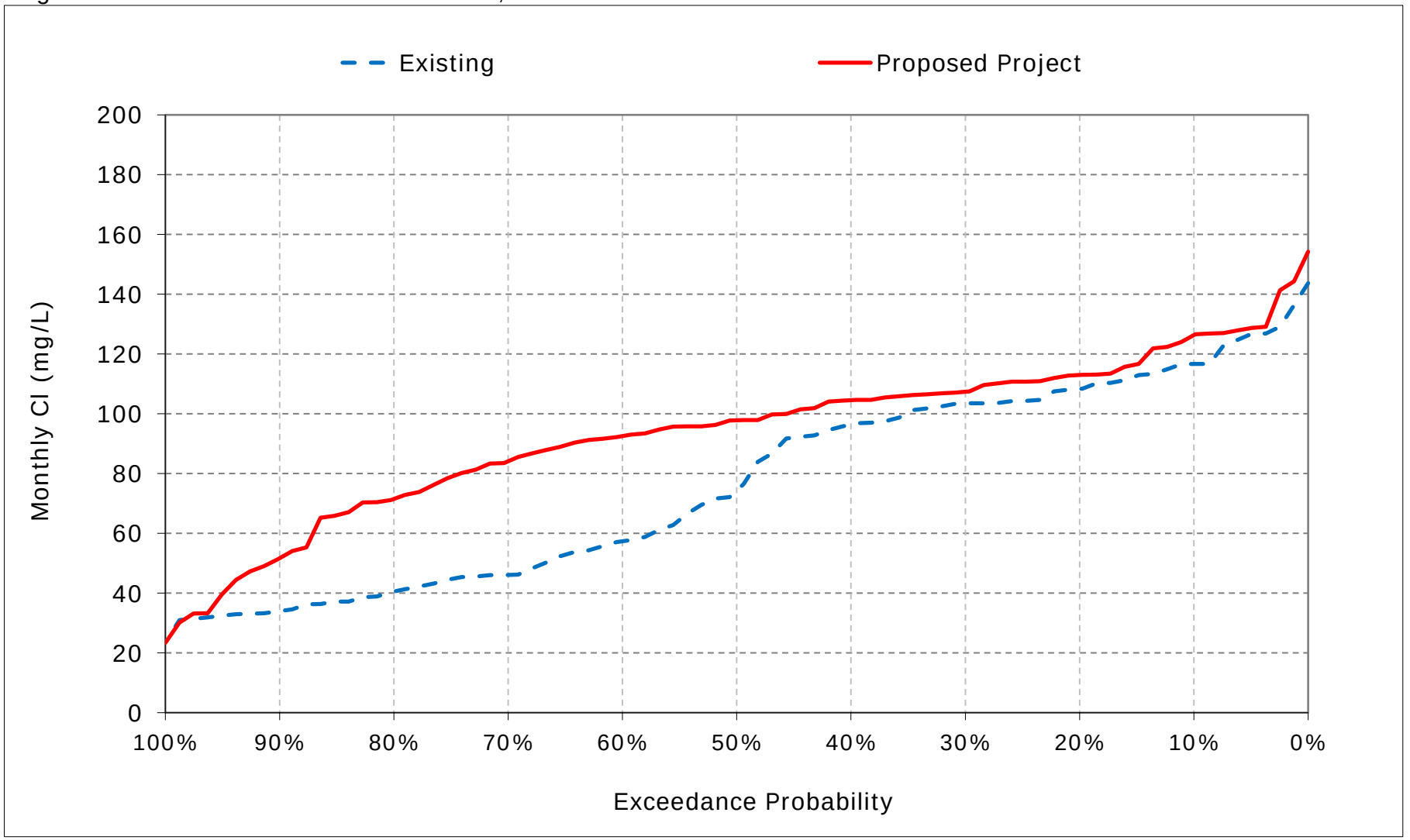


Table 9-1. Contra Costa Pumping Plant #1 Chloride, Monthly Cl

Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	198	189	210	187	95	53	52	57	36	88	134	178
20%	187	169	198	149	69	40	47	50	29	56	105	171
30%	180	158	174	124	62	34	42	43	28	46	91	156
40%	171	142	129	99	53	32	38	39	27	36	84	139
50%	153	117	77	81	47	29	36	38	26	29	73	127
60%	29	38	47	70	37	28	32	35	26	26	63	113
70%	27	26	35	47	32	26	31	33	25	25	52	102
80%	27	23	29	39	29	24	28	30	24	23	48	86
90%	25	21	25	29	27	23	25	25	23	21	42	74
Long Term												
Full Simulation Period[a]	110	101	106	98	53	34	37	39	30	44	78	125
Water Year Types[b]												
Wet (32%)	84	72	58	49	45	34	35	33	25	23	47	92
Above Normal (15%)	127	106	104	89	49	33	42	44	26	25	53	79
Below Normal (17%)	115	109	126	118	47	30	40	45	26	38	84	167
Dry (22%)	111	114	126	111	53	29	36	38	28	61	105	146
Critical (15%)	141	131	158	169	81	44	36	40	56	89	125	165

Proposed Project

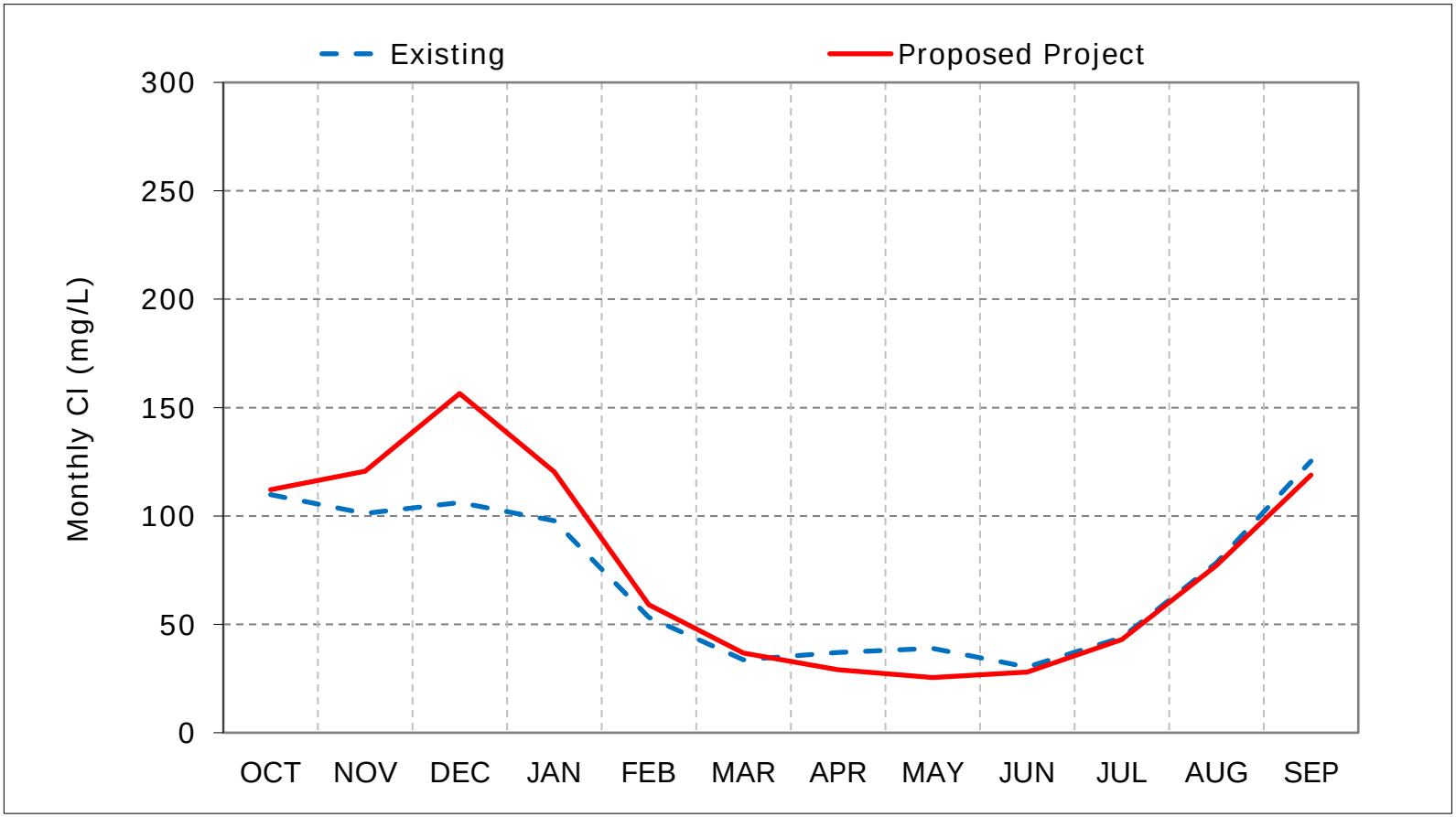
Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	203	190	228	241	101	60	35	30	31	89	134	196
20%	194	177	213	202	89	46	30	27	28	48	100	179
30%	185	158	204	181	66	36	29	26	26	41	92	167
40%	174	150	194	148	58	34	29	24	24	35	82	143
50%	158	129	185	99	50	31	28	24	23	28	73	117
60%	28	101	167	78	41	29	27	23	22	25	61	83
70%	26	77	109	50	36	27	26	22	21	24	50	73
80%	24	62	91	42	31	26	25	22	21	22	46	67
90%	23	42	37	31	28	25	24	21	20	21	35	58
Long Term												
Full Simulation Period[a]	112	121	156	120	59	37	29	25	28	43	77	119
Water Year Types[b]												
Wet (32%)	86	96	99	57	45	36	27	22	22	23	44	59
Above Normal (15%)	130	135	176	126	57	37	29	23	22	24	53	75
Below Normal (17%)	116	127	176	143	49	32	29	24	22	33	83	184
Dry (22%)	112	127	181	148	63	33	28	26	26	59	102	148
Critical (15%)	145	142	200	184	97	49	35	36	57	93	129	172

Proposed Project minus Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	5	1	18	53	7	7	-17	-27	-5	2	0	18
20%	7	8	16	53	20	6	-16	-23	-1	-8	-5	9
30%	5	1	30	57	4	2	-13	-16	-2	-5	1	11
40%	3	9	66	49	5	2	-9	-15	-3	-2	-2	4
50%	5	11	108	18	3	2	-8	-14	-3	0	0	-10
60%	-1	62	120	8	4	1	-5	-12	-3	-1	-2	-29
70%	-2	52	73	2	3	1	-5	-11	-4	-1	-1	-29
80%	-3	39	62	4	1	1	-4	-8	-3	0	-2	-19
90%	-3	20	12	2	0	2	-1	-4	-3	0	-7	-16
Long Term												
Full Simulation Period[a]	2	19	50	23	6	3	-8	-13	-2	-1	-1	-6
Water Year Types[b]												
Wet (32%)	2	24	41	8	0	2	-8	-11	-2	0	-3	-32
Above Normal (15%)	3	29	71	37	7	4	-13	-21	-4	-1	0	-4
Below Normal (17%)	1	18	50	25	2	2	-11	-21	-4	-6	-1	17
Dry (22%)	1	13	55	37	10	3	-7	-13	-2	-3	-4	2
Critical (15%)	4	11	43	15	16	5	-1	-4	1	4	4	7

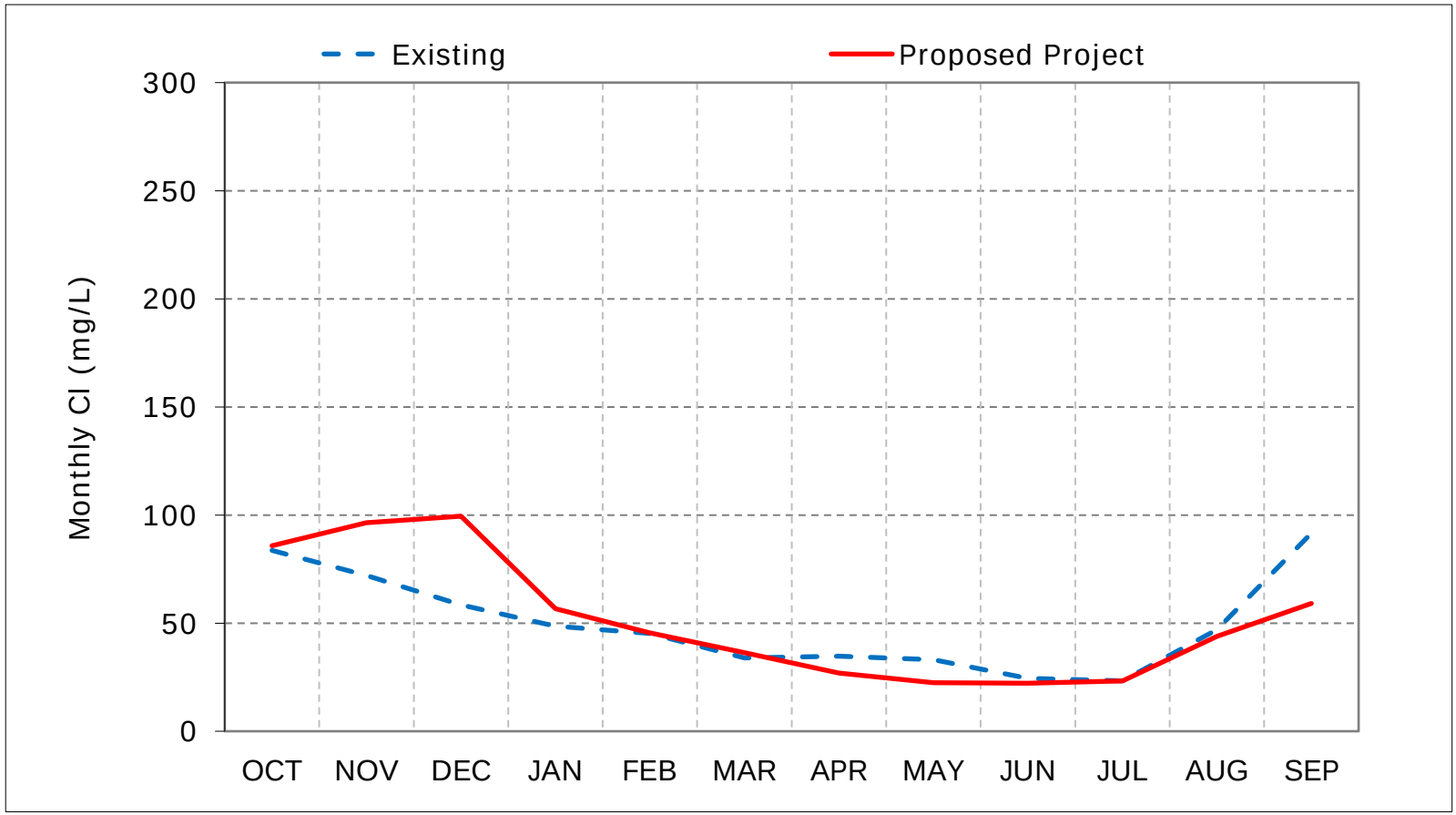
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 9-1. Contra Costa Pumping Plant #1 Chloride, Long-Term Average Cl



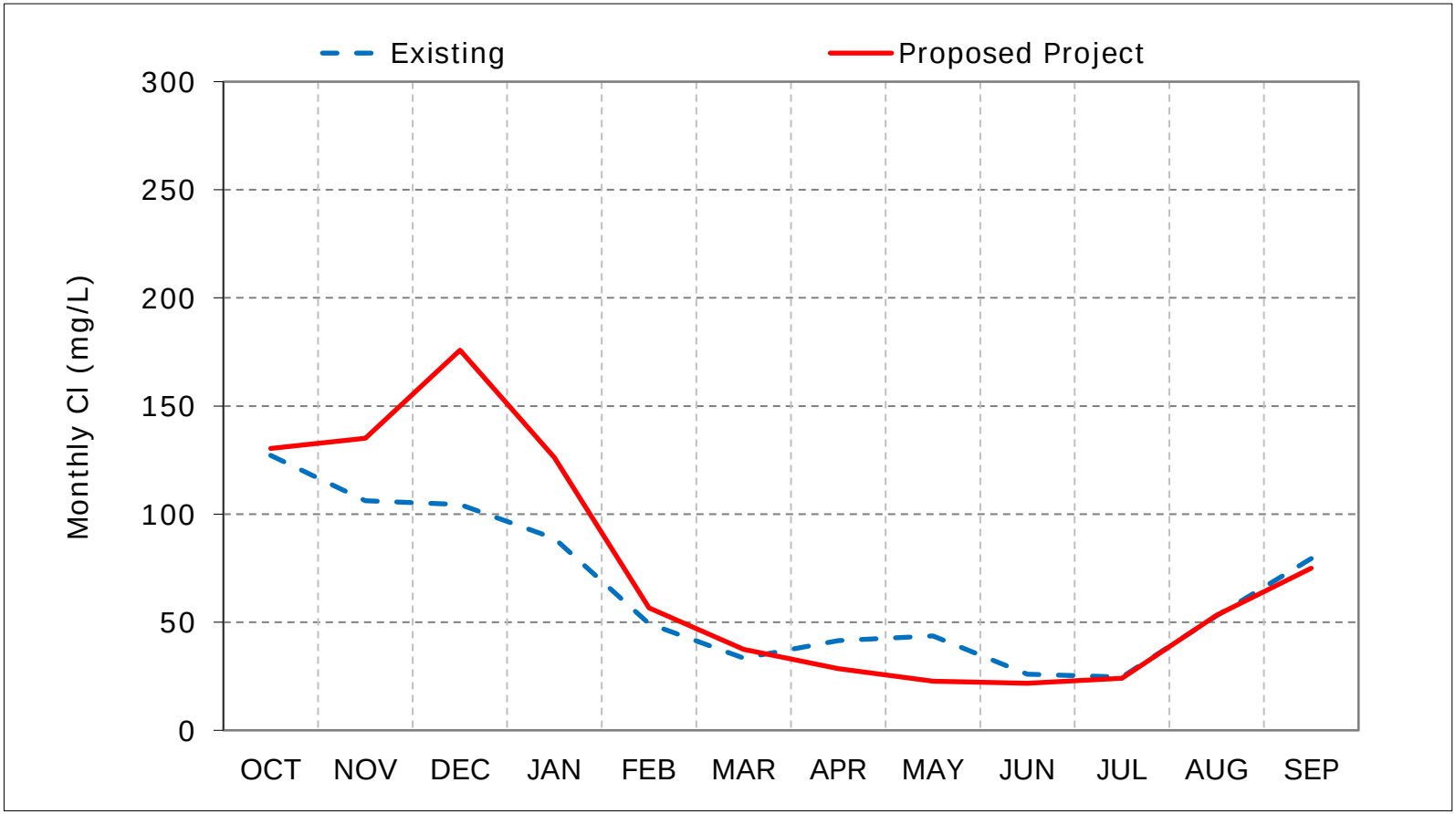
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-2. Contra Costa Pumping Plant #1 Chloride, Wet Year Average Cl



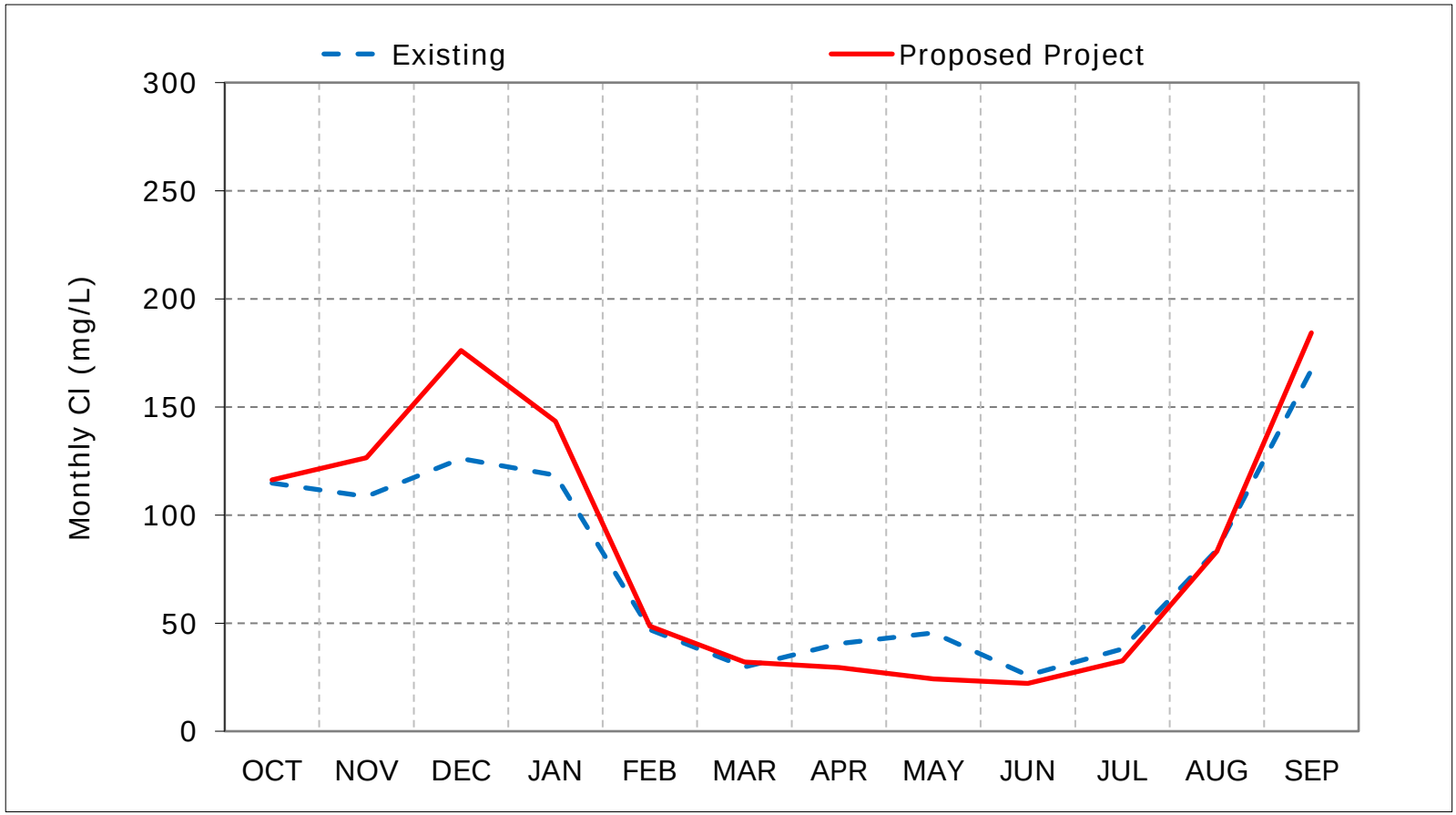
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-3. Contra Costa Pumping Plant #1 Chloride, Above Normal Year Average



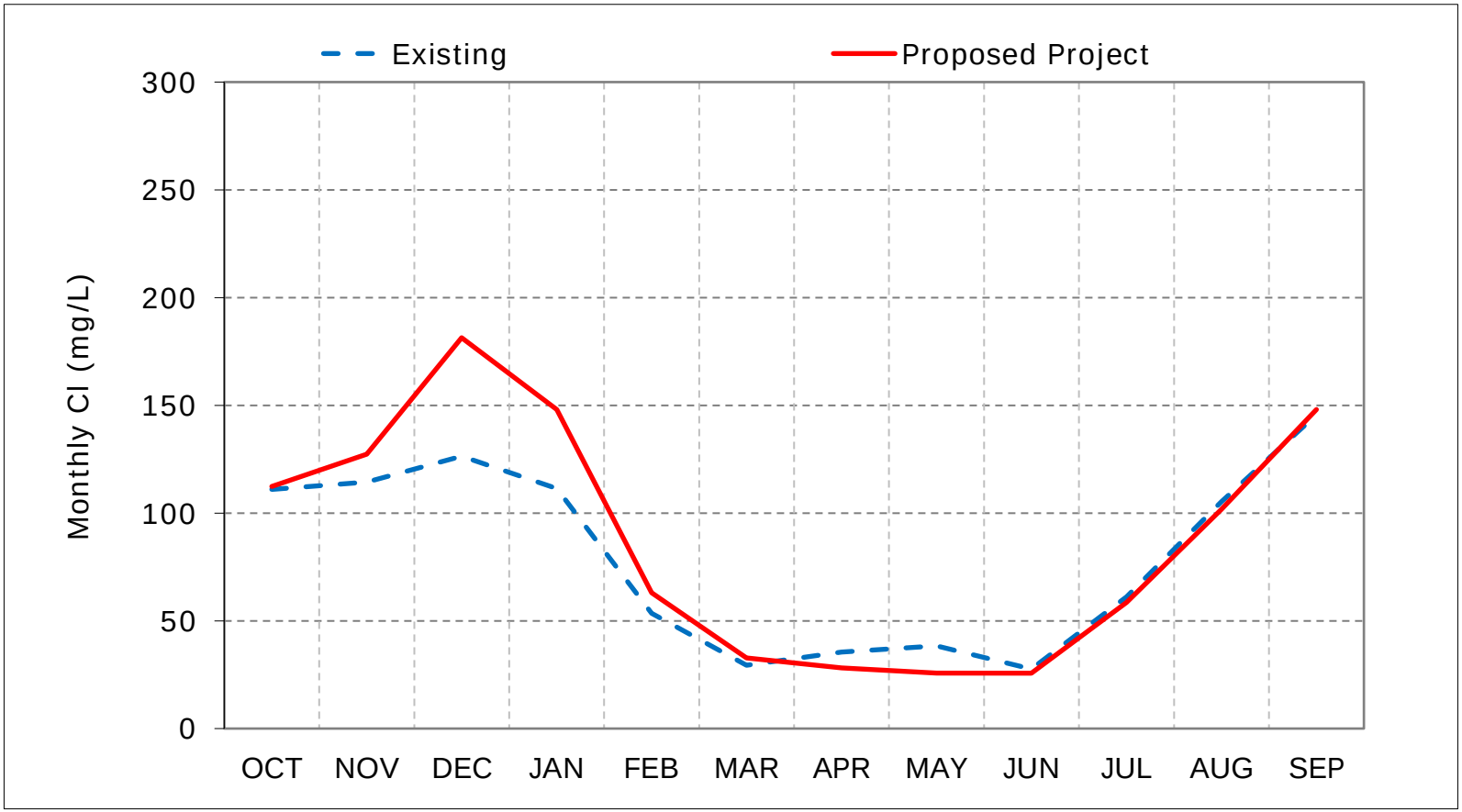
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-4. Contra Costa Pumping Plant #1 Chloride, Below Normal Year Average



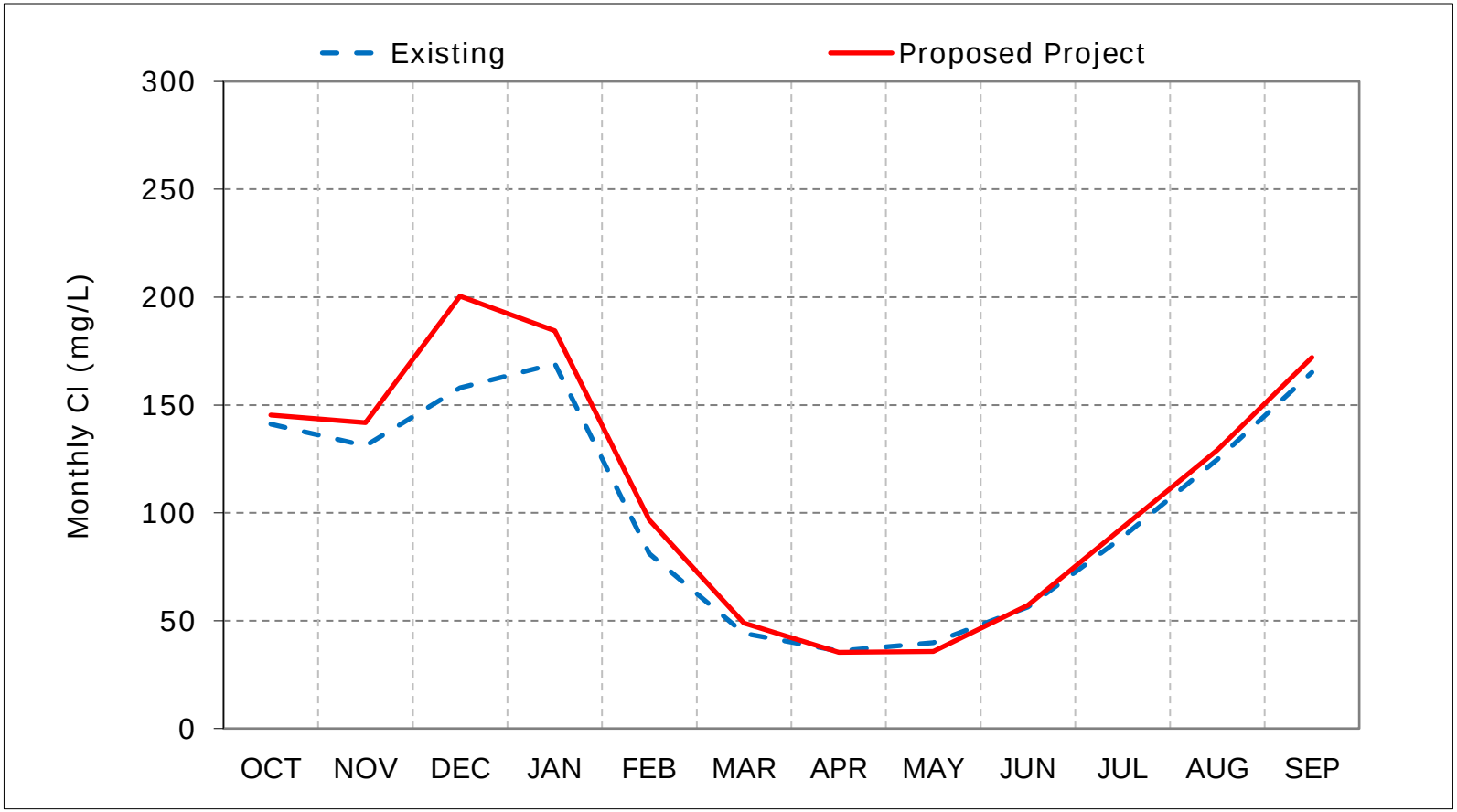
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 9-5. Contra Costa Pumping Plant #1 Chloride, Dry Year Average Cl



*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.

Figure 9-6. Contra Costa Pumping Plant #1 Chloride, Critical Year Average Cl



*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.

Figure 9-7. Contra Costa Pumping Plant #1 Chloride, January Cl

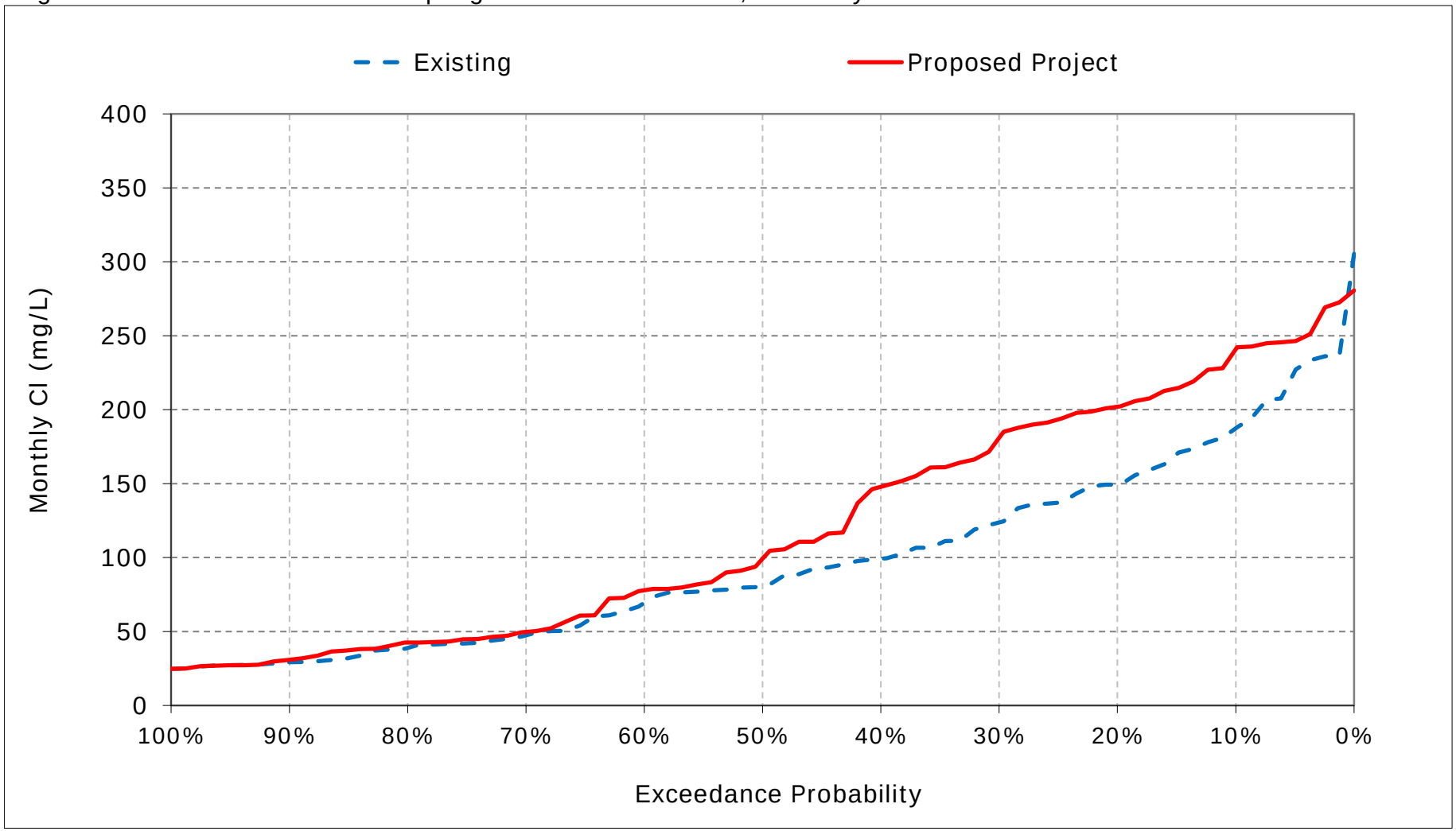


Figure 9-8. Contra Costa Pumping Plant #1 Chloride, February Cl

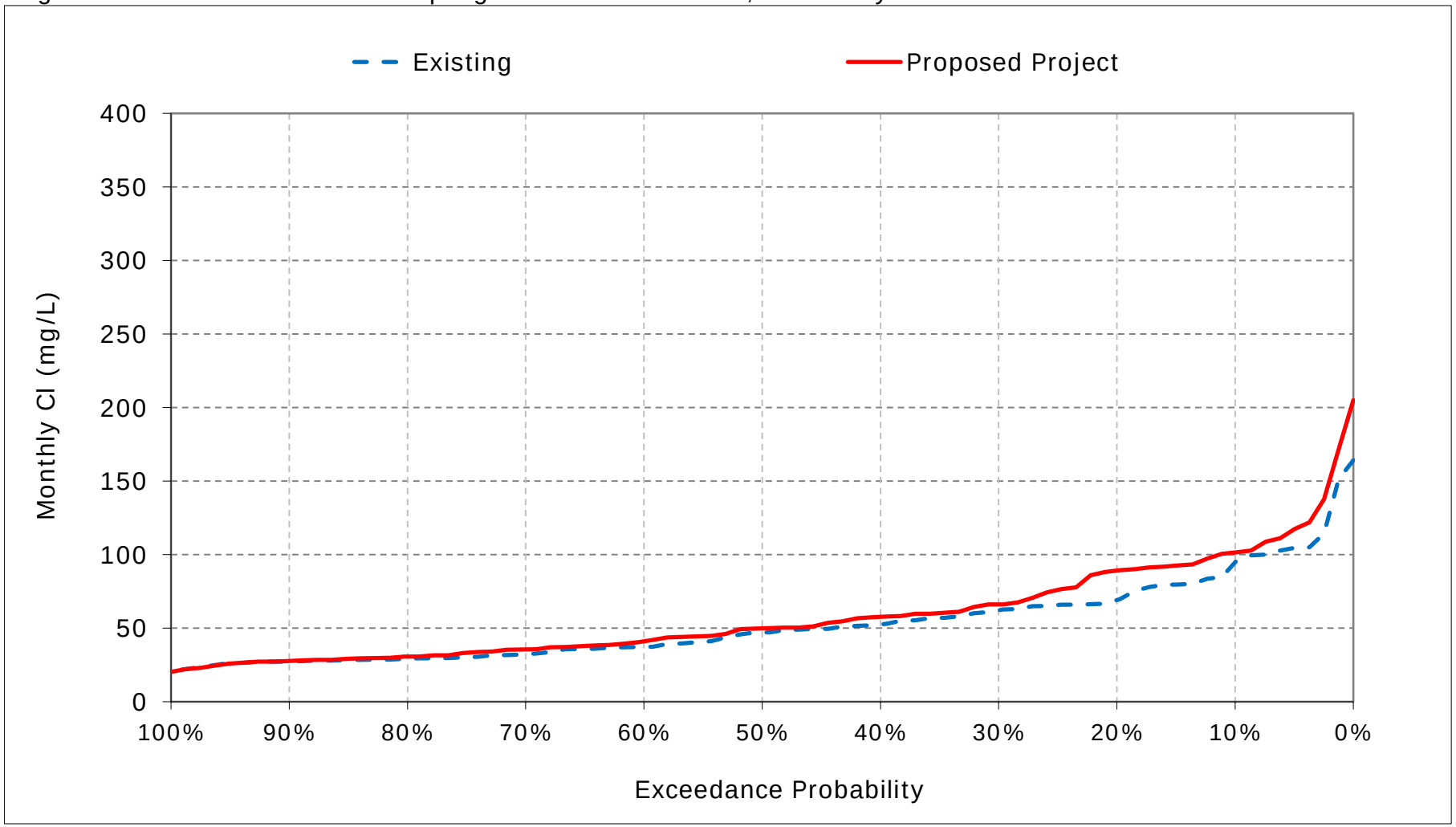


Figure 9-9. Contra Costa Pumping Plant #1 Chloride, March Cl

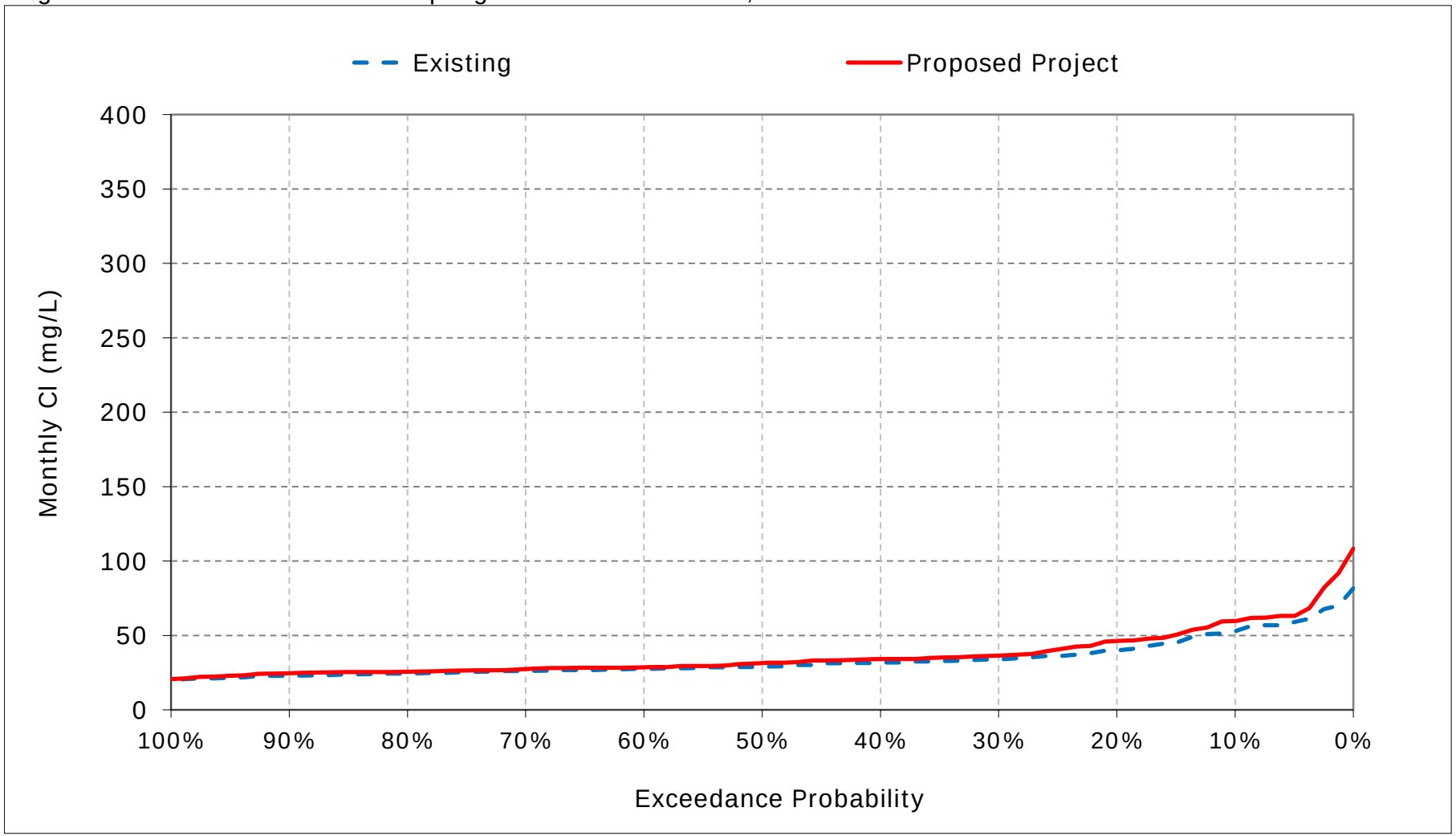


Figure 9-10. Contra Costa Pumping Plant #1 Chloride, April Cl

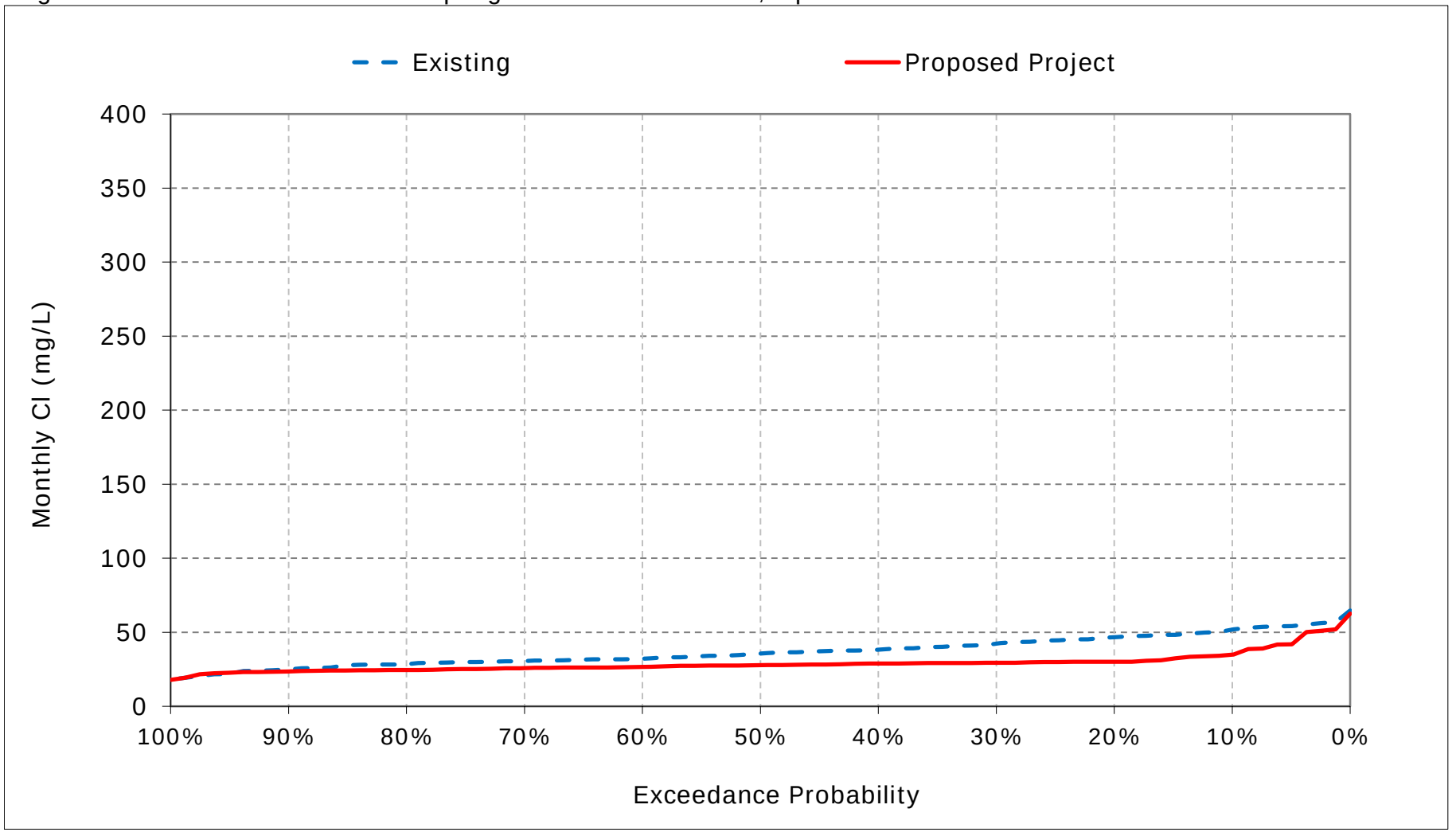


Figure 9-11. Contra Costa Pumping Plant #1 Chloride, May Cl

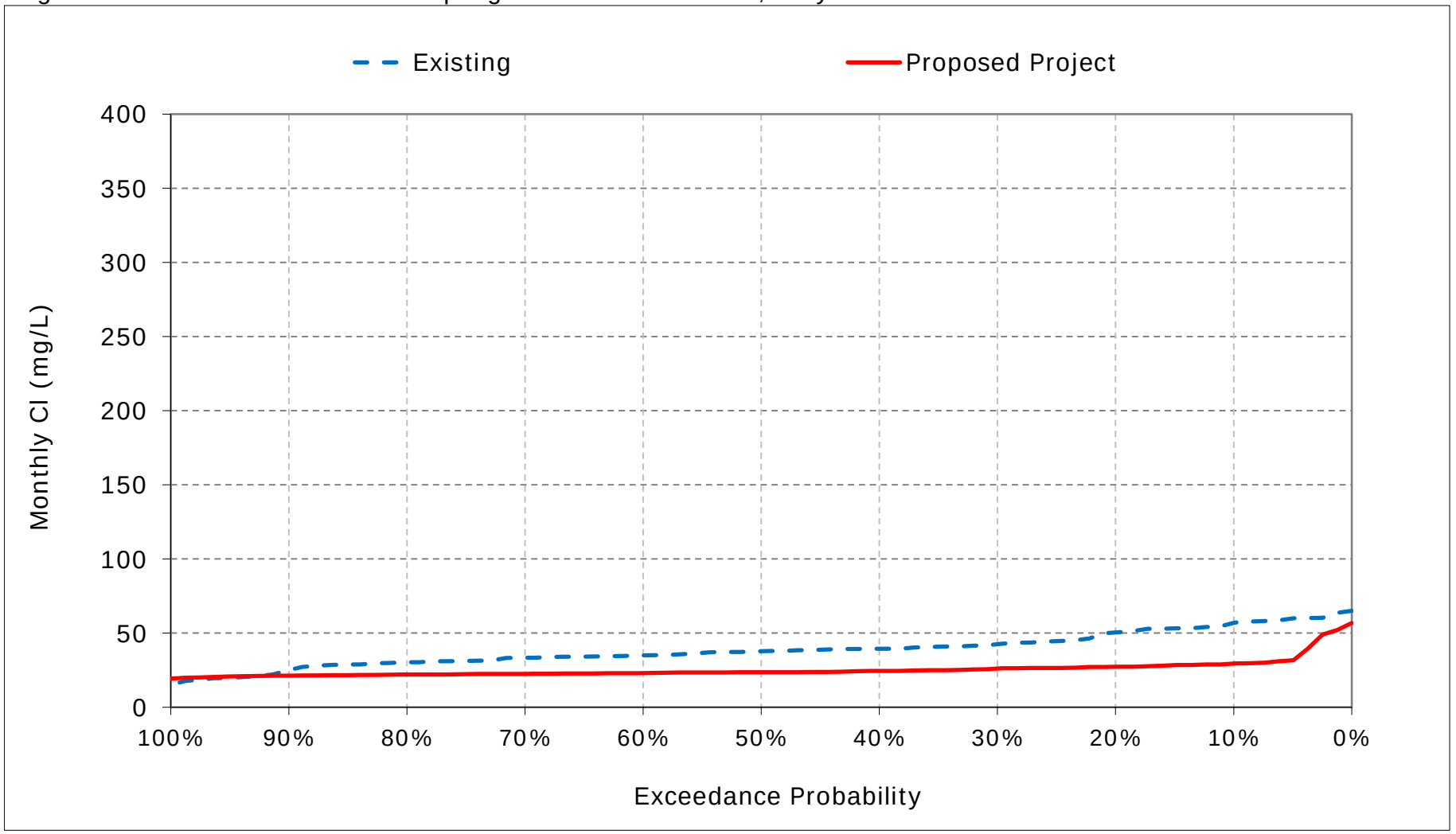


Figure 9-12. Contra Costa Pumping Plant #1 Chloride, June Cl

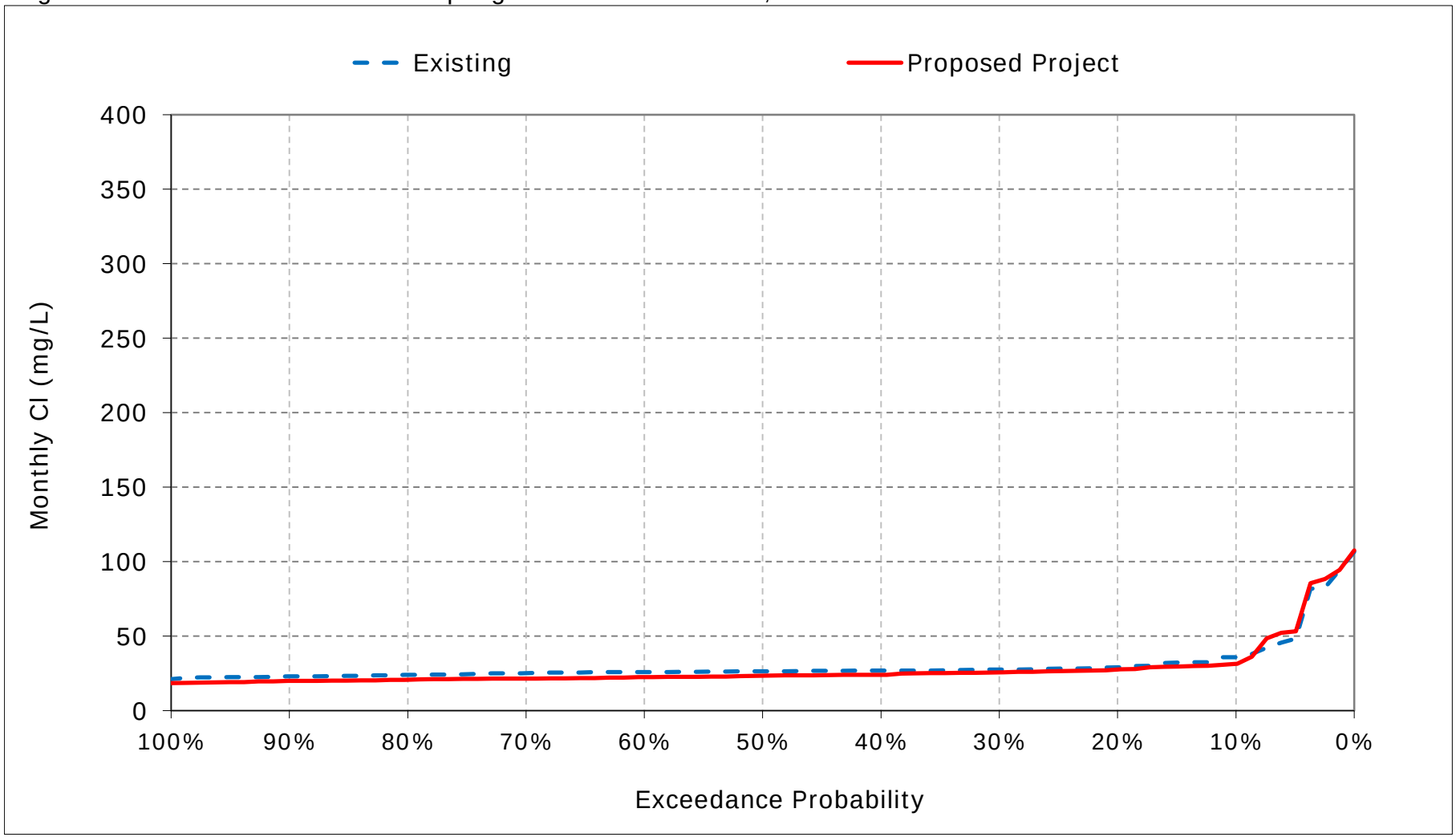


Figure 9-13. Contra Costa Pumping Plant #1 Chloride, July Cl

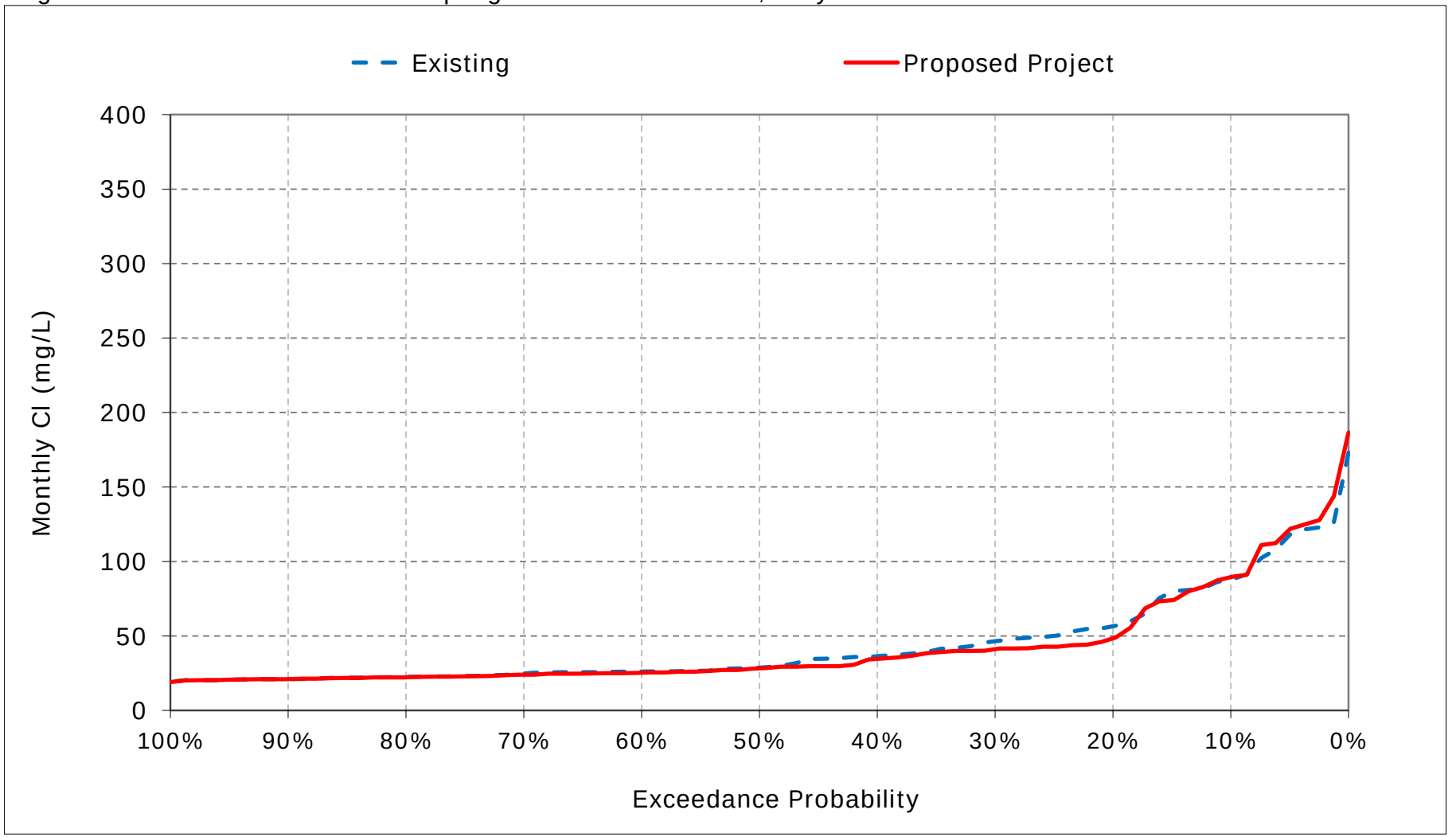


Figure 9-14. Contra Costa Pumping Plant #1 Chloride, August Cl

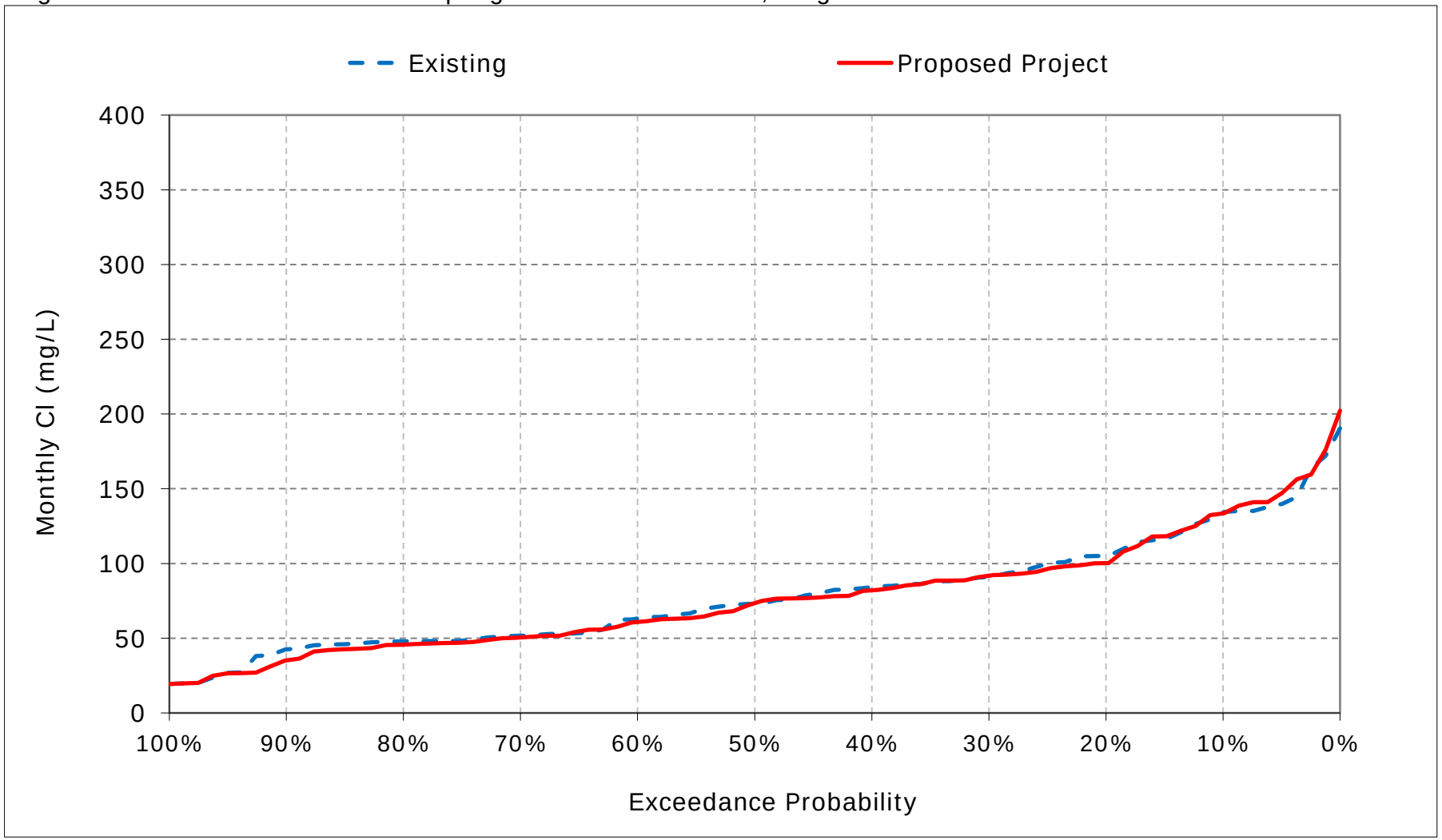


Figure 9-15. Contra Costa Pumping Plant #1 Chloride, September Cl

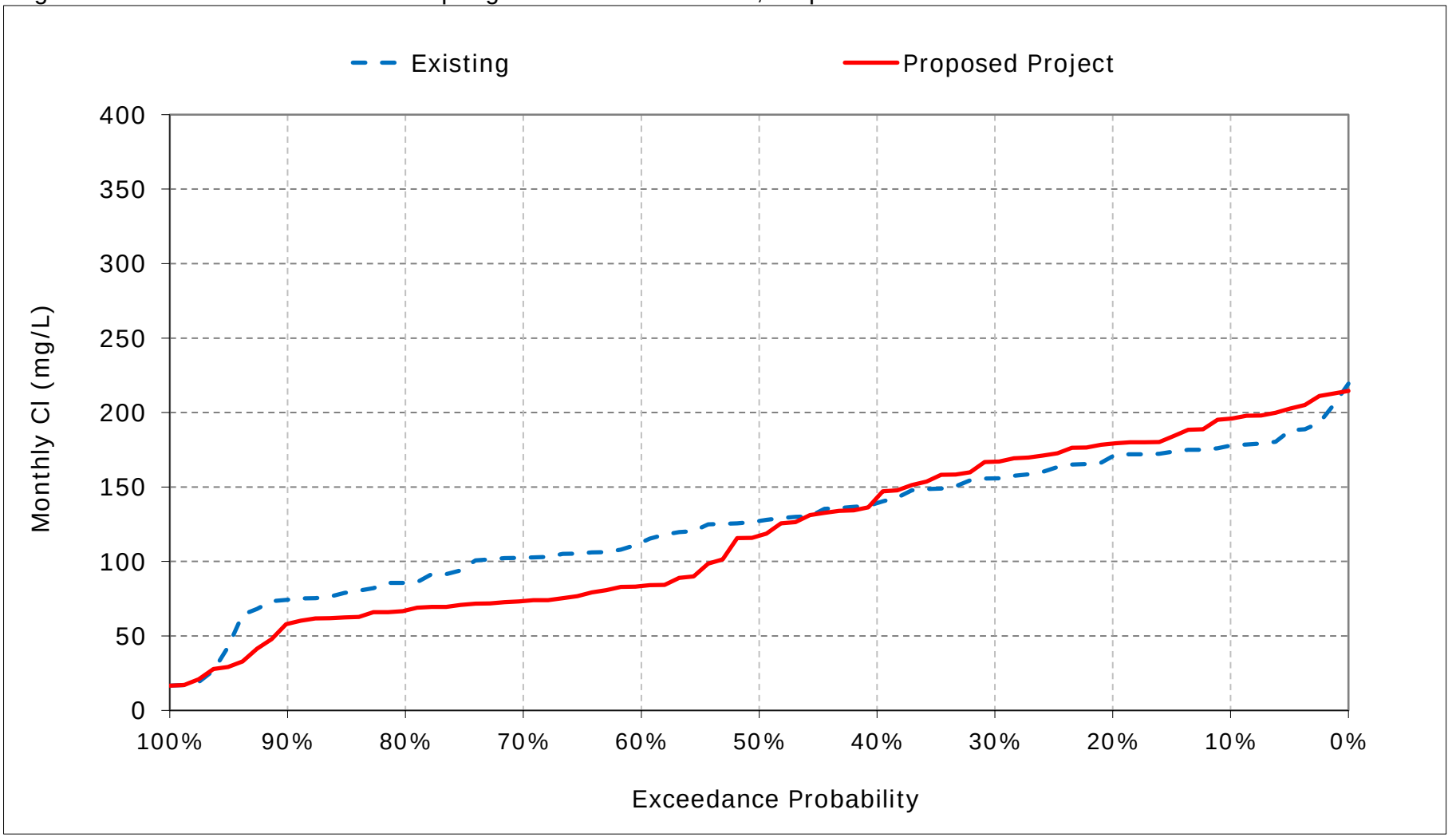


Figure 9-16. Contra Costa Pumping Plant #1 Chloride, October Cl

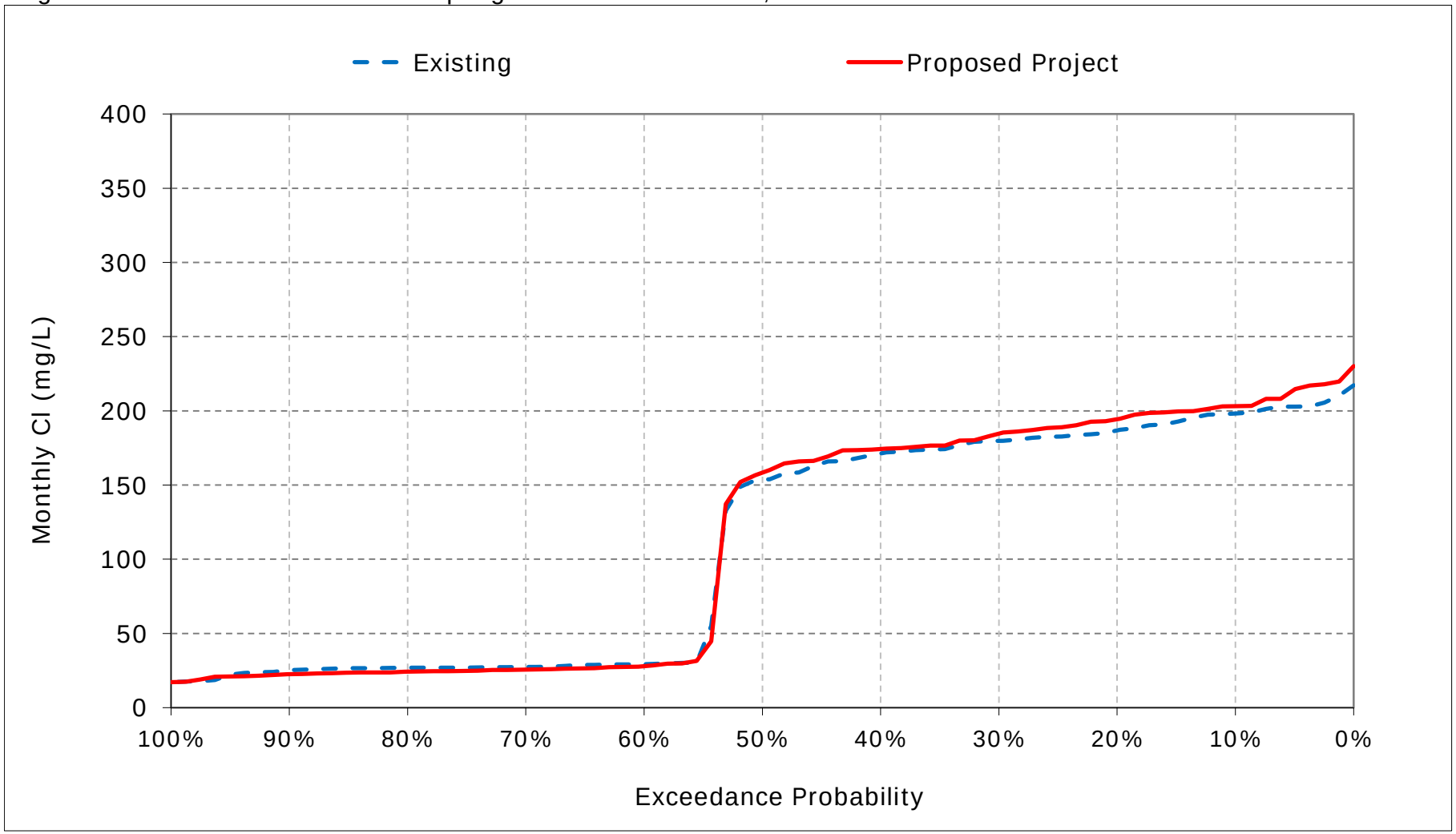


Figure 9-17. Contra Costa Pumping Plant #1 Chloride, November Cl

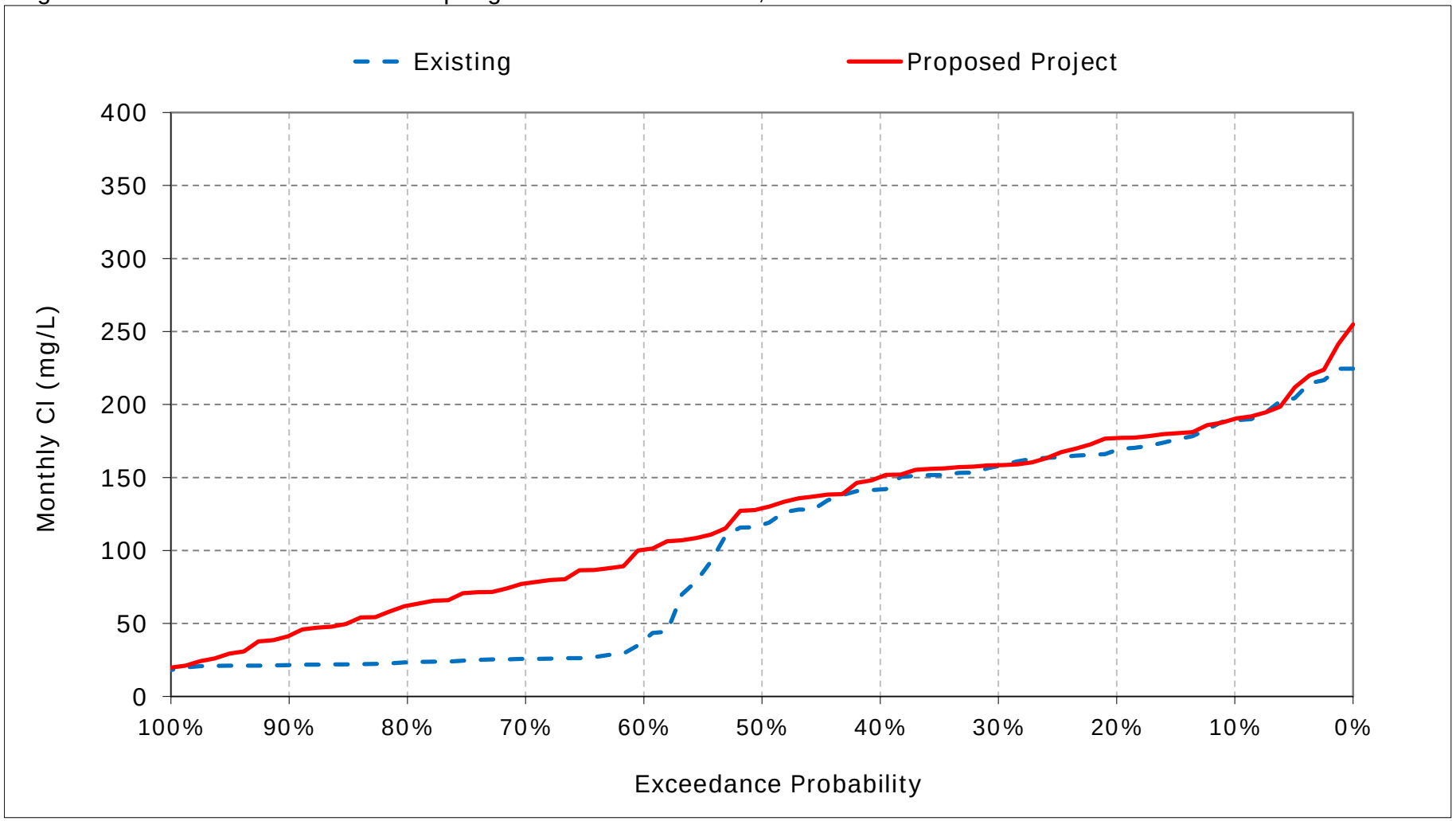


Figure 9-18. Contra Costa Pumping Plant #1 Chloride, December Cl

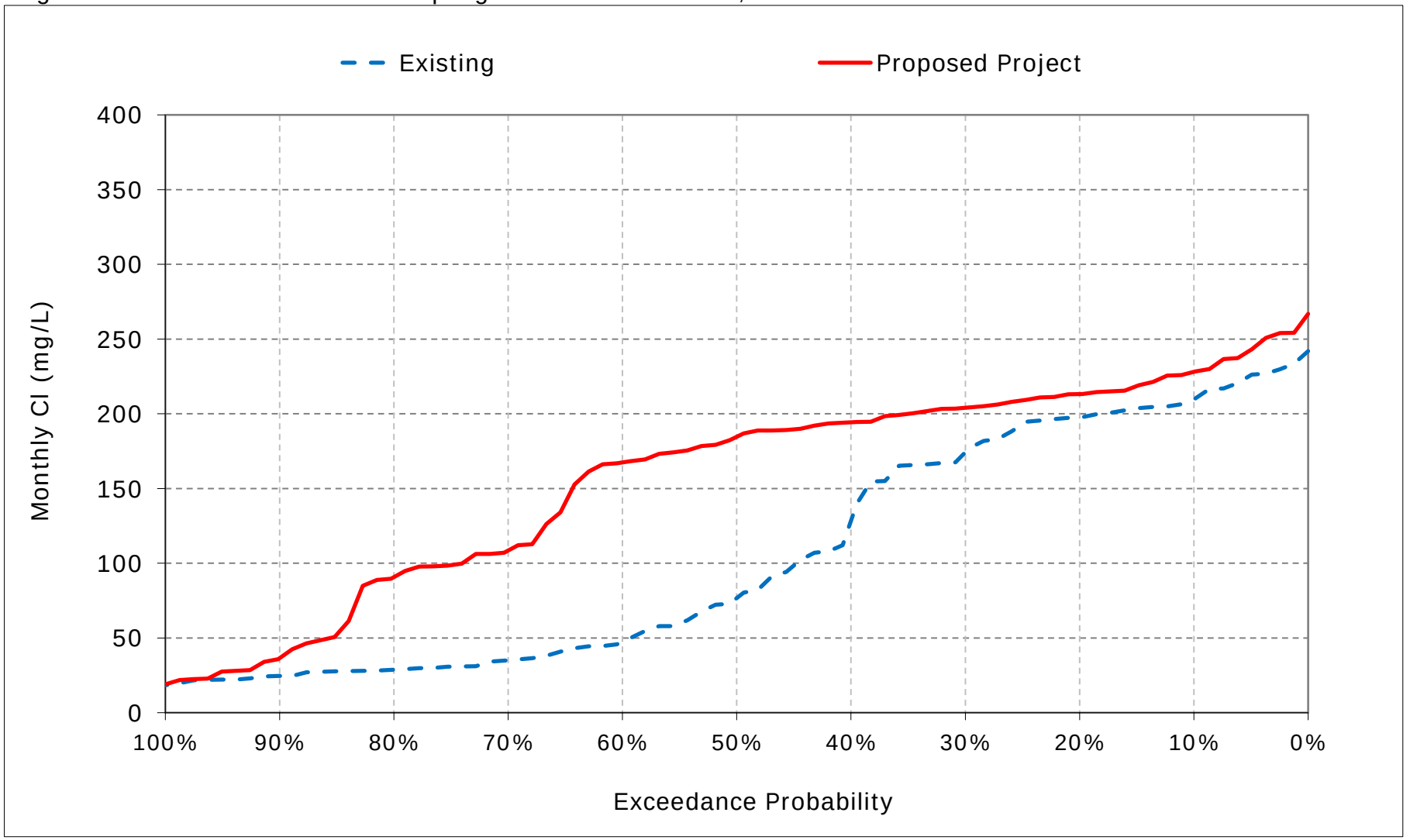


Table 10-1. San Joaquin River at Antioch Chloride, Monthly Cl

Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	2,016	1,853	1,774	907	298	245	224	408	608	1,018	1,523	1,915
20%	1,886	1,807	1,422	756	166	92	94	241	472	851	1,328	1,797
30%	1,857	1,714	898	542	98	34	35	155	437	801	1,240	1,735
40%	1,741	1,651	744	313	55	27	27	70	321	524	1,007	1,603
50%	1,595	652	568	235	31	24	25	33	260	467	892	1,354
60%	534	443	483	90	26	22	22	26	146	301	862	529
70%	271	210	164	27	24	21	21	23	100	278	804	327
80%	221	178	89	23	22	20	20	20	29	222	742	292
90%	191	158	22	21	20	18	19	19	19	138	681	276
Long Term												
Full Simulation Period[a]	1,128	986	722	359	123	71	74	144	319	553	1,004	1,076
Water Year Types[b]												
Wet (32%)	824	571	194	56	25	21	21	26	72	187	682	258
Above Normal (15%)	1,199	987	687	211	45	22	22	27	167	271	762	521
Below Normal (17%)	1,191	1,084	956	389	66	39	37	73	254	487	939	1,471
Dry (22%)	1,210	1,179	886	543	181	84	81	174	430	827	1,280	1,768
Critical (15%)	1,522	1,477	1,382	849	391	246	270	556	913	1,291	1,602	1,906

Proposed Project

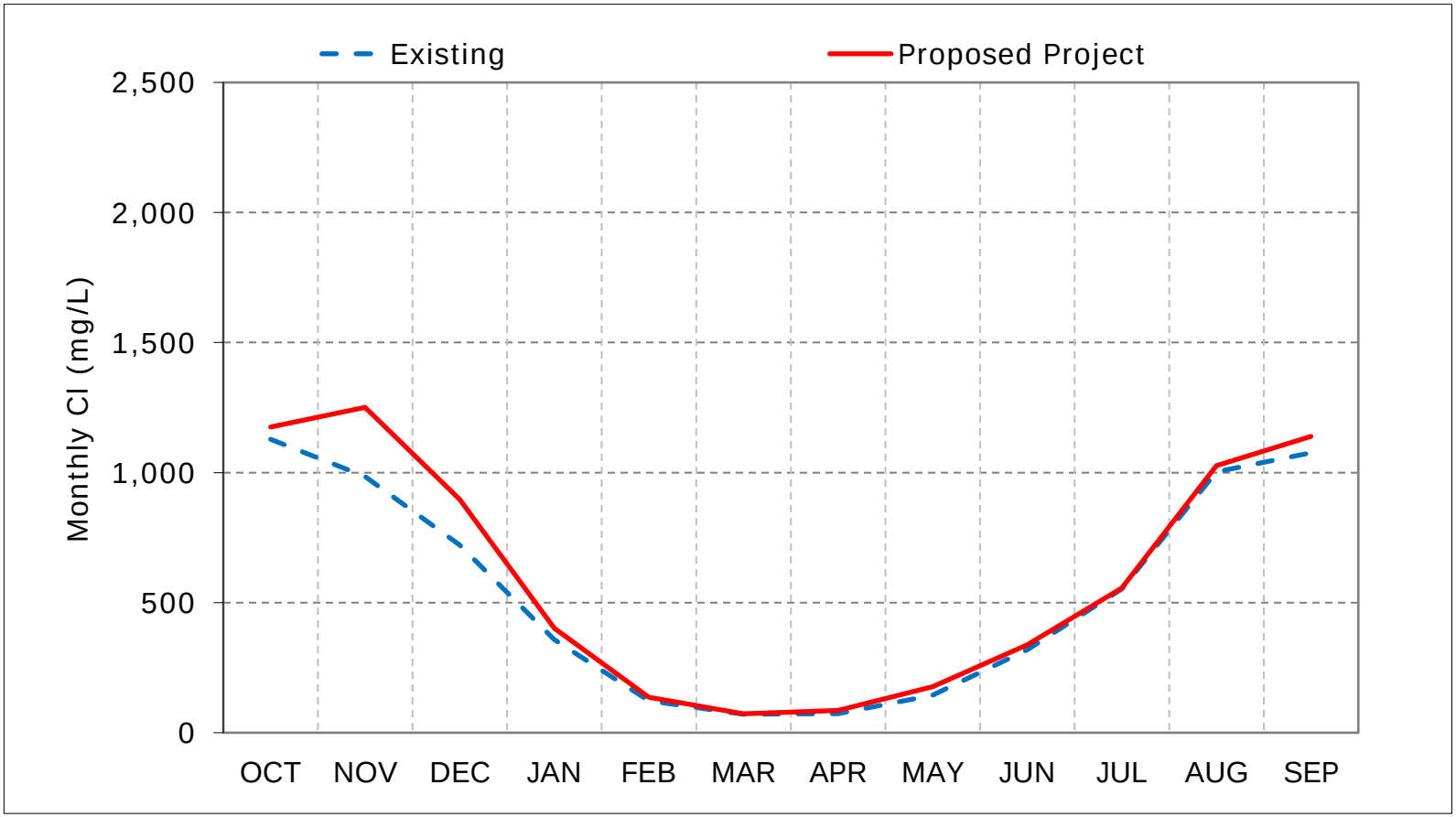
Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	1,996	1,844	1,726	1,107	306	248	266	450	625	1,033	1,526	1,937
20%	1,892	1,802	1,439	865	183	93	127	337	518	879	1,331	1,800
30%	1,837	1,699	1,378	587	103	31	57	267	459	799	1,267	1,736
40%	1,741	1,589	1,249	368	57	26	35	108	369	548	1,128	1,663
50%	1,556	1,094	980	242	34	24	25	56	254	463	998	1,417
60%	507	1,036	678	95	27	22	21	37	179	301	850	501
70%	463	1,013	275	29	24	21	20	22	119	270	792	477
80%	450	893	166	24	22	20	19	17	28	226	728	462
90%	412	348	54	21	20	18	18	17	18	138	663	398
Long Term												
Full Simulation Period[a]	1,176	1,251	897	402	137	73	85	177	338	556	1,026	1,139
Water Year Types[b]												
Wet (32%)	899	906	307	59	25	21	22	36	86	187	660	404
Above Normal (15%)	1,247	1,265	941	254	41	22	23	39	169	262	767	473
Below Normal (17%)	1,246	1,335	1,167	416	65	37	49	114	264	505	1,079	1,578
Dry (22%)	1,261	1,417	1,103	631	210	84	104	241	468	831	1,293	1,779
Critical (15%)	1,493	1,635	1,506	930	450	260	298	600	947	1,297	1,616	1,924

Proposed Project minus Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	-21	-9	-48	199	8	3	42	42	17	14	3	22
20%	6	-6	17	108	17	1	33	96	46	29	3	3
30%	-20	-15	480	44	5	-3	23	112	22	-2	27	1
40%	0	-62	505	55	1	-1	7	38	48	24	121	60
50%	-39	442	412	6	4	0	0	23	-6	-4	106	64
60%	-27	593	194	5	1	0	-1	11	33	0	-12	-28
70%	192	803	111	2	0	0	-1	-1	19	-8	-12	151
80%	228	715	77	1	0	0	-1	-3	0	4	-14	171
90%	221	189	32	0	0	0	-1	-2	-1	0	-18	121
Long Term												
Full Simulation Period[a]	47	265	175	43	14	2	12	33	20	3	23	62
Water Year Types[b]												
Wet (32%)	75	335	113	3	0	0	1	11	14	0	-22	145
Above Normal (15%)	48	279	254	44	-4	0	1	12	2	-9	5	-49
Below Normal (17%)	55	251	210	27	-1	-1	12	41	10	18	141	107
Dry (22%)	52	238	217	88	29	0	23	68	37	4	13	11
Critical (15%)	-29	158	124	80	59	14	28	43	34	6	14	18

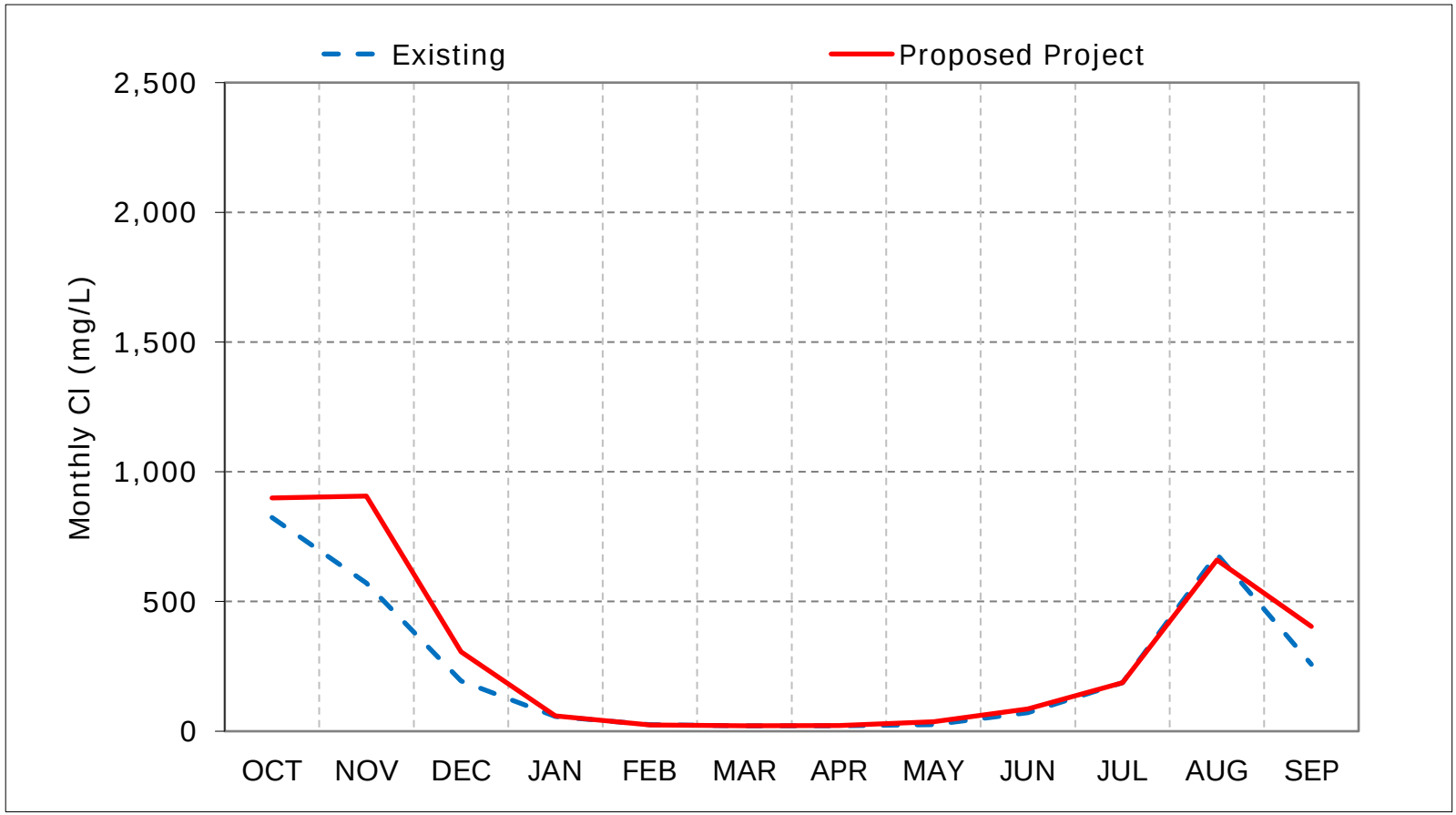
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 10-1. San Joaquin River at Antioch Chloride, Long-Term Average Cl



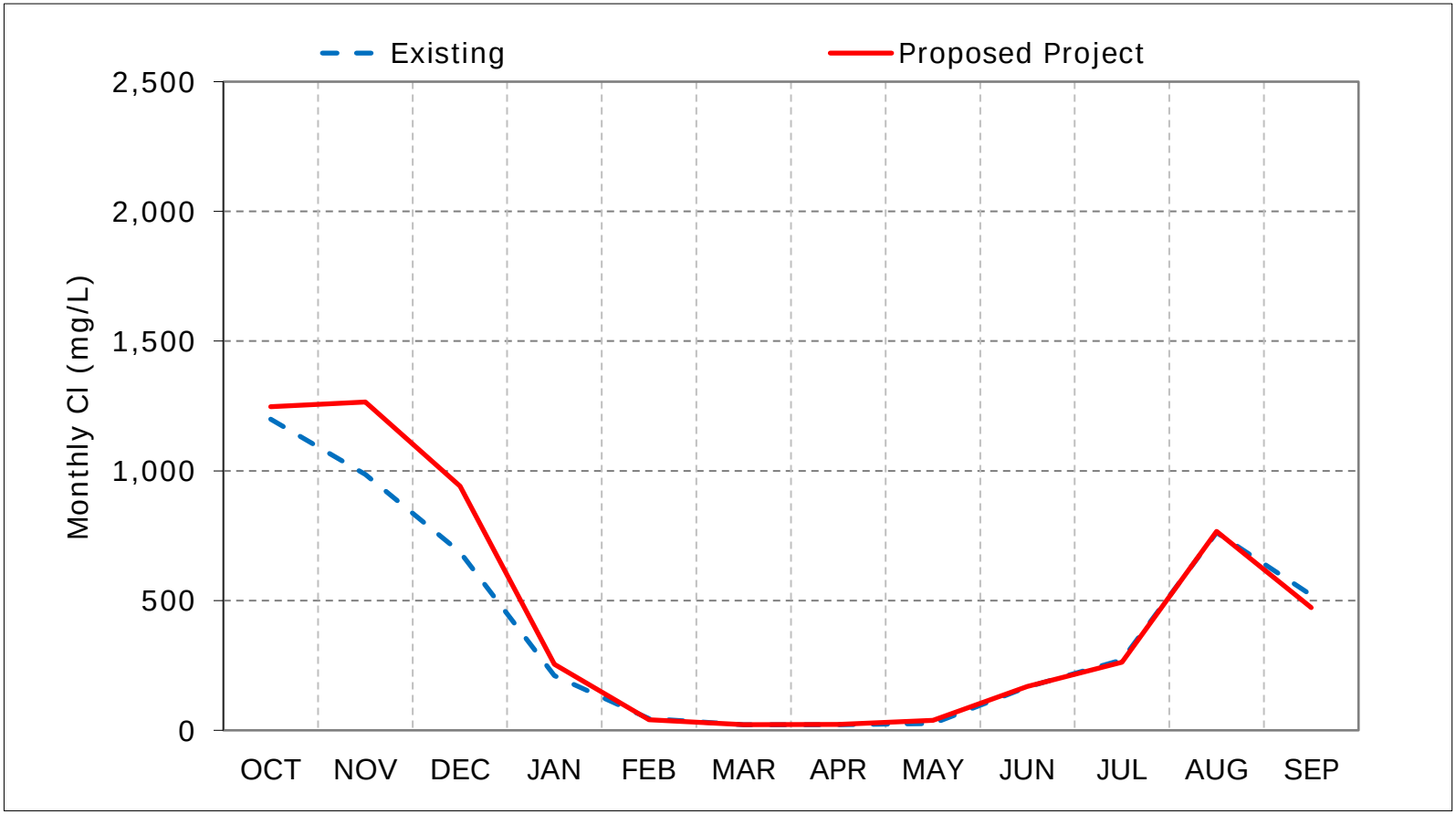
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 10-2. San Joaquin River at Antioch Chloride, Wet Year Average Cl



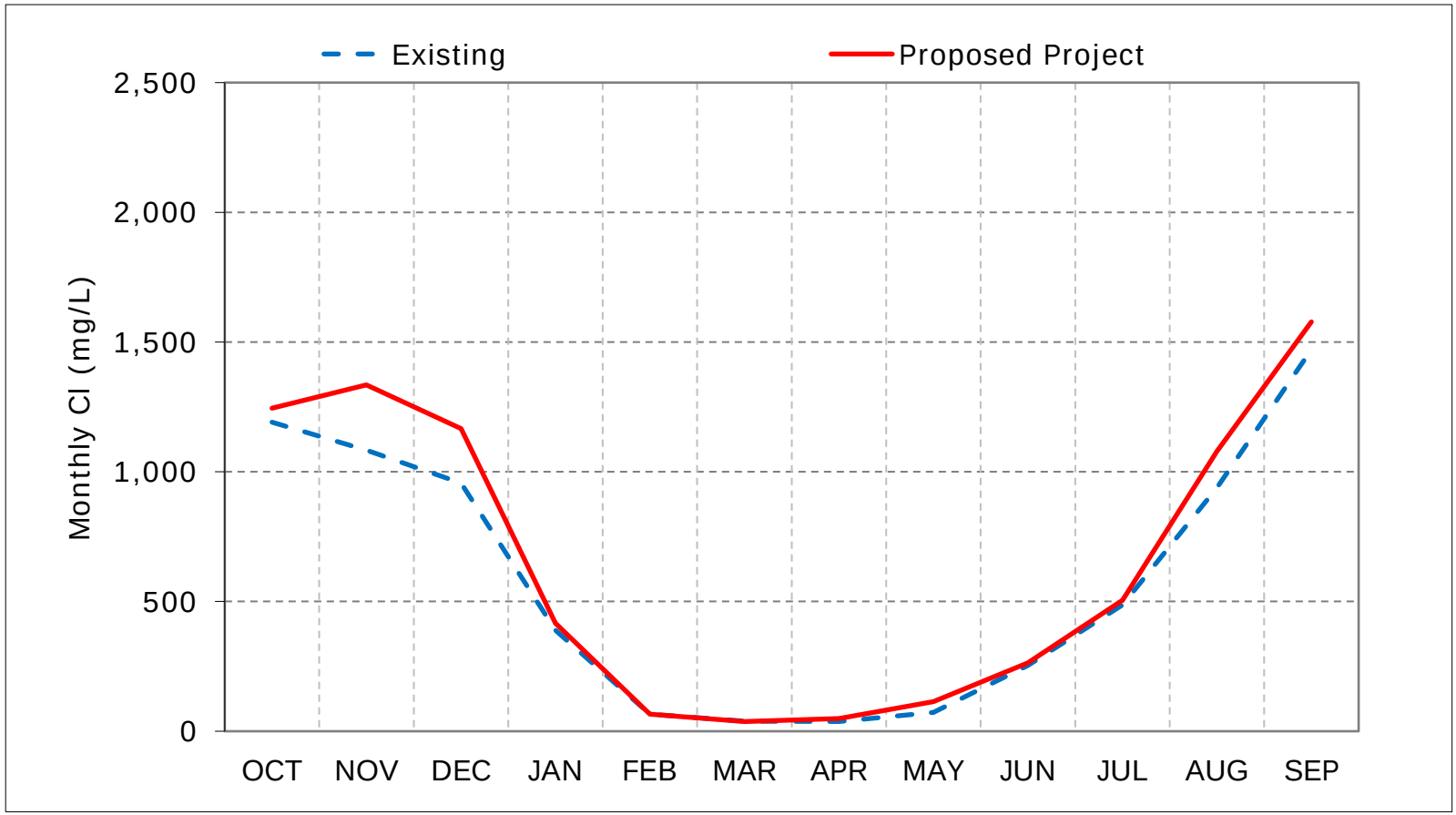
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 10-3. San Joaquin River at Antioch Chloride, Above Normal Year Average C



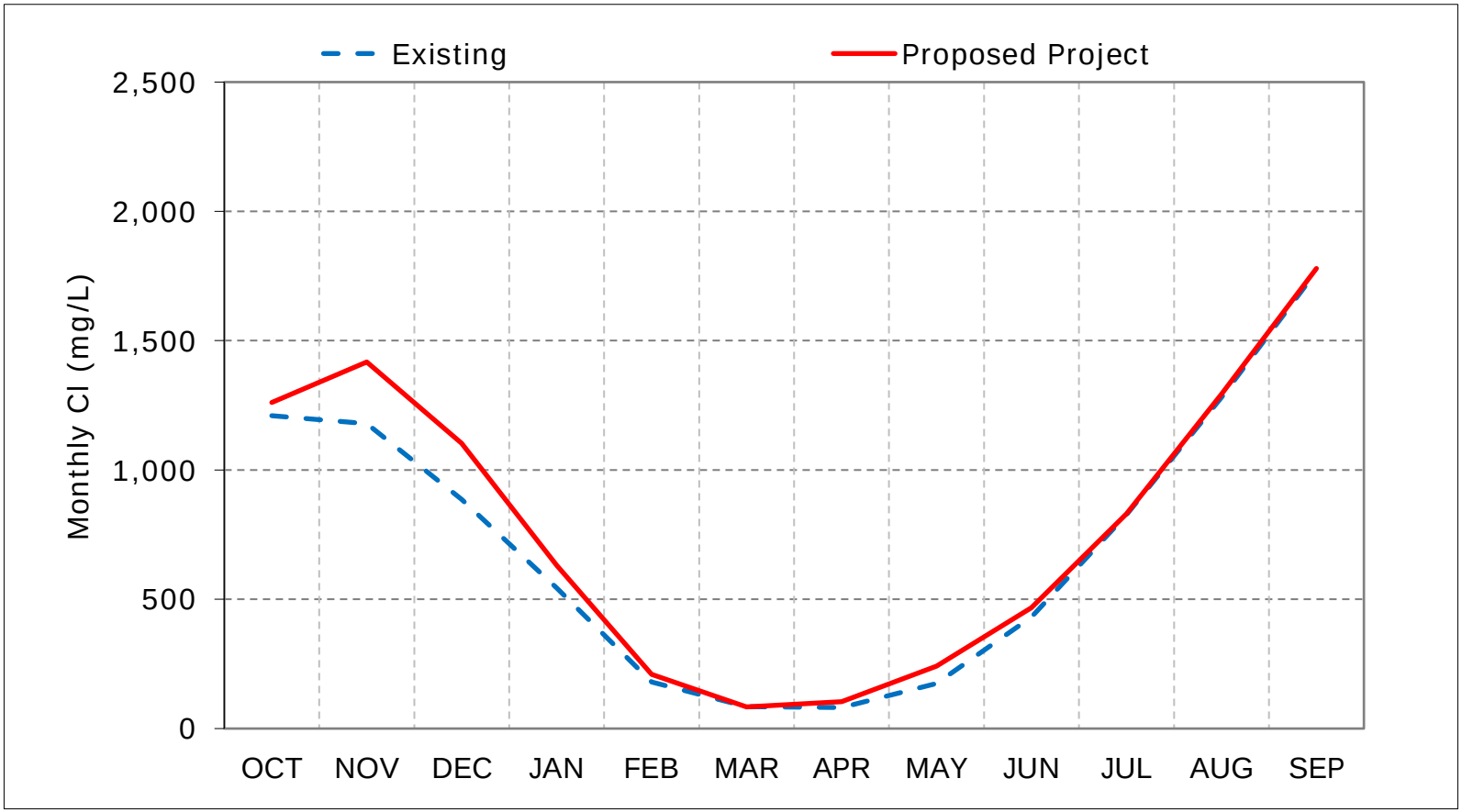
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 10-4. San Joaquin River at Antioch Chloride, Below Normal Year Average Cl



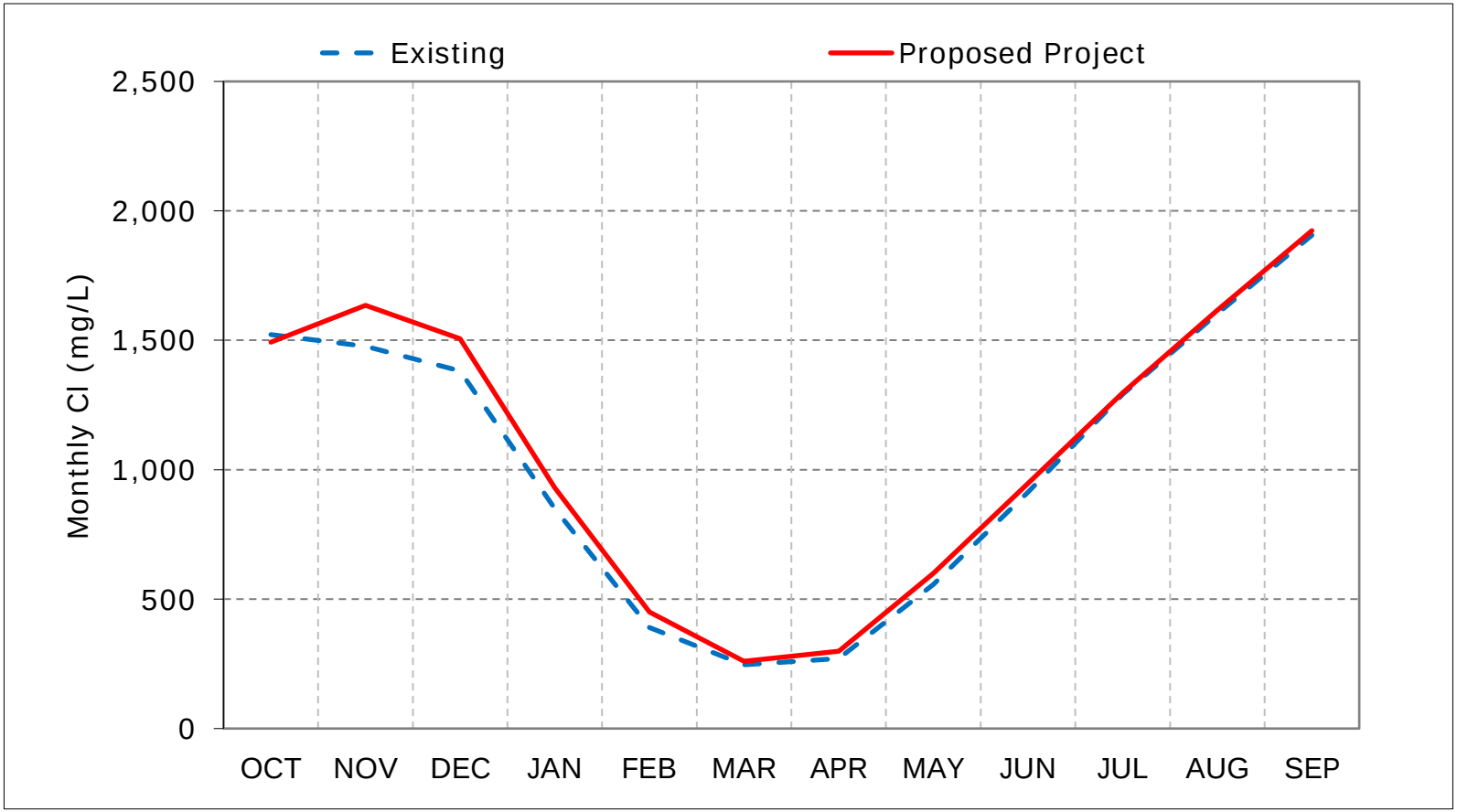
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 10-5. San Joaquin River at Antioch Chloride, Dry Year Average Cl



*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.

Figure 10-6. San Joaquin River at Antioch Chloride, Critical Year Average Cl



*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.

Figure 10-7. San Joaquin River at Antioch Chloride, January Cl

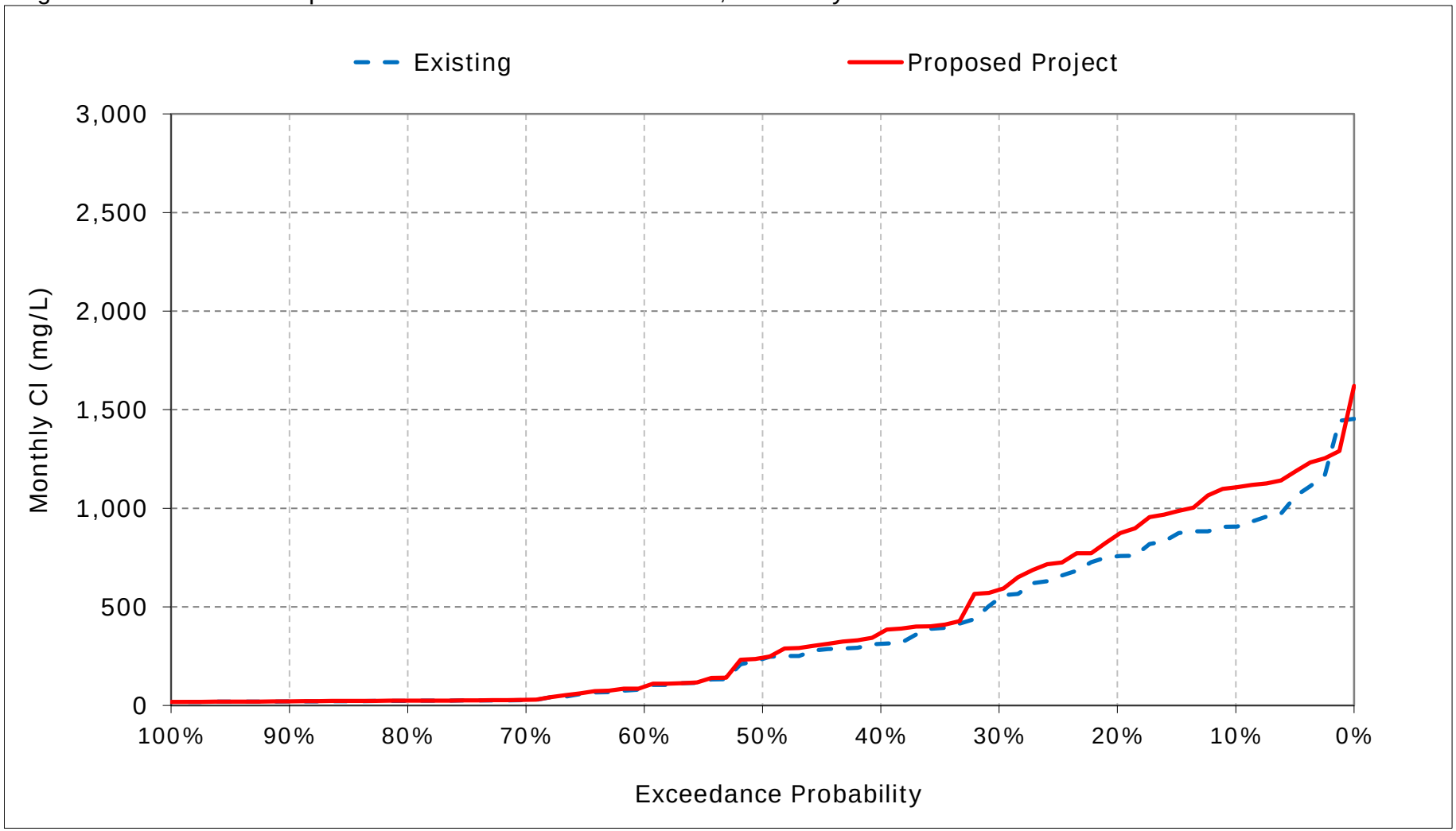


Figure 10-8. San Joaquin River at Antioch Chloride, February Cl

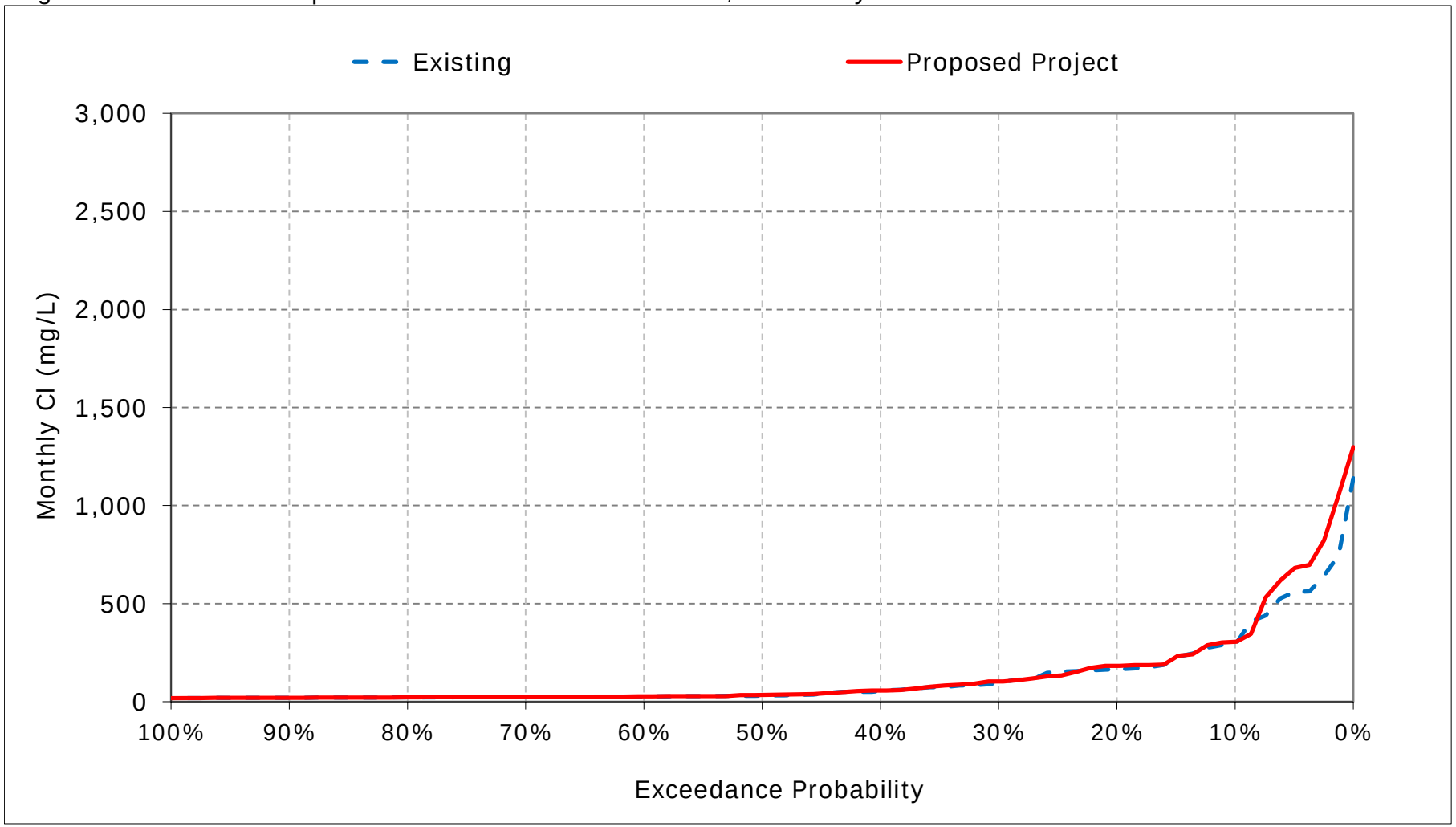


Figure 10-9. San Joaquin River at Antioch Chloride, March Cl

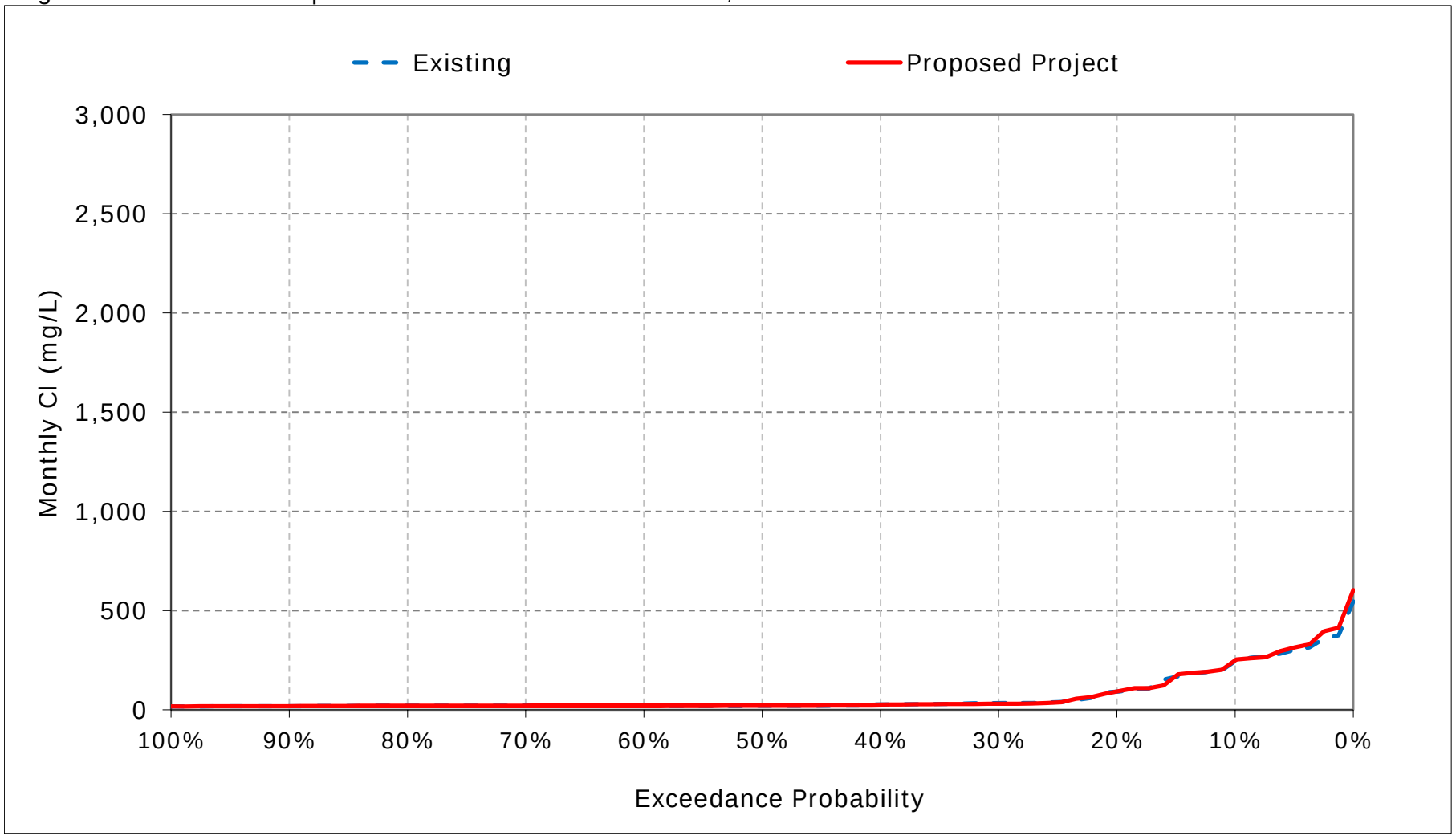


Figure 10-10. San Joaquin River at Antioch Chloride, April Cl

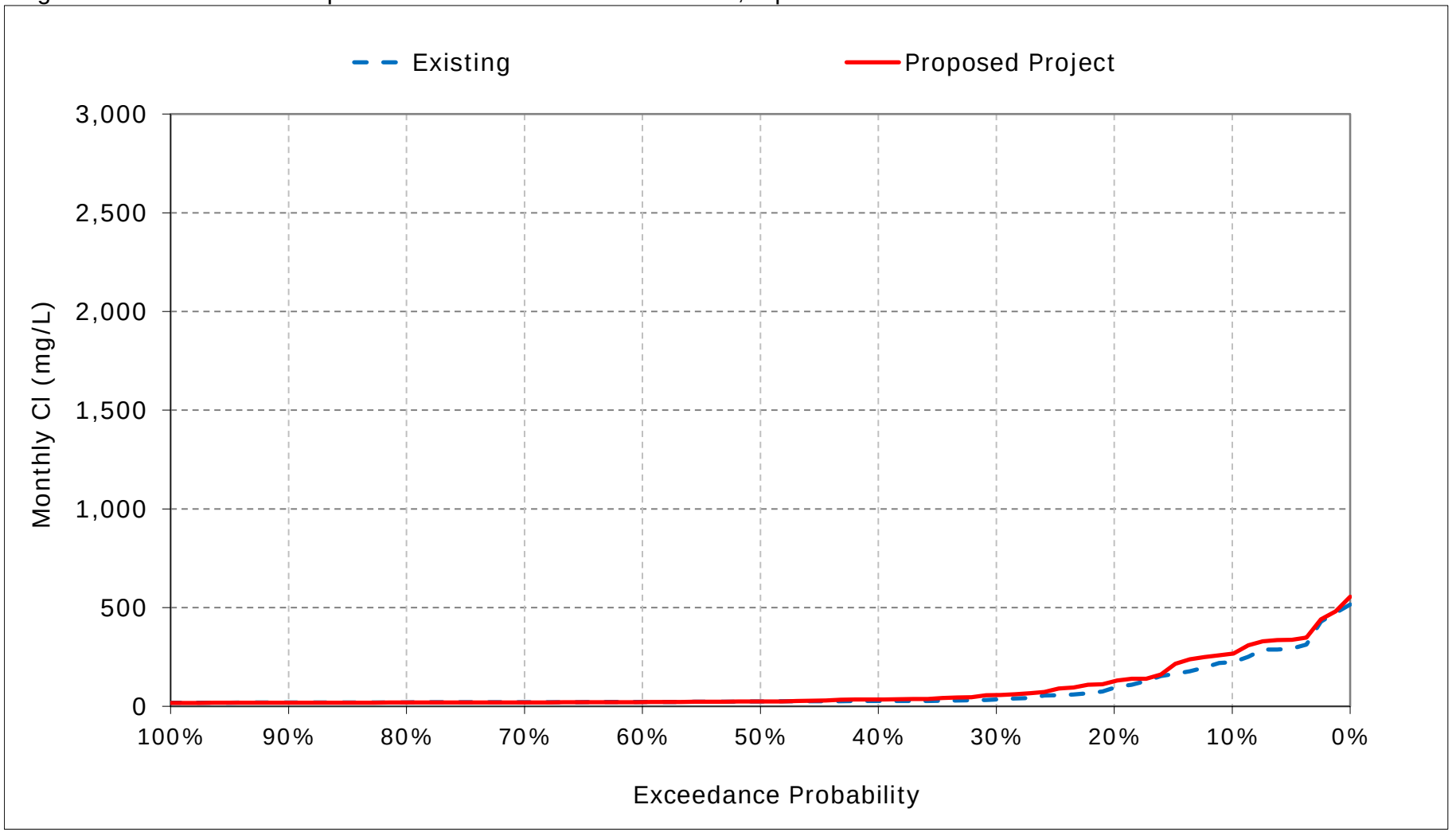


Figure 10-11. San Joaquin River at Antioch Chloride, May Cl

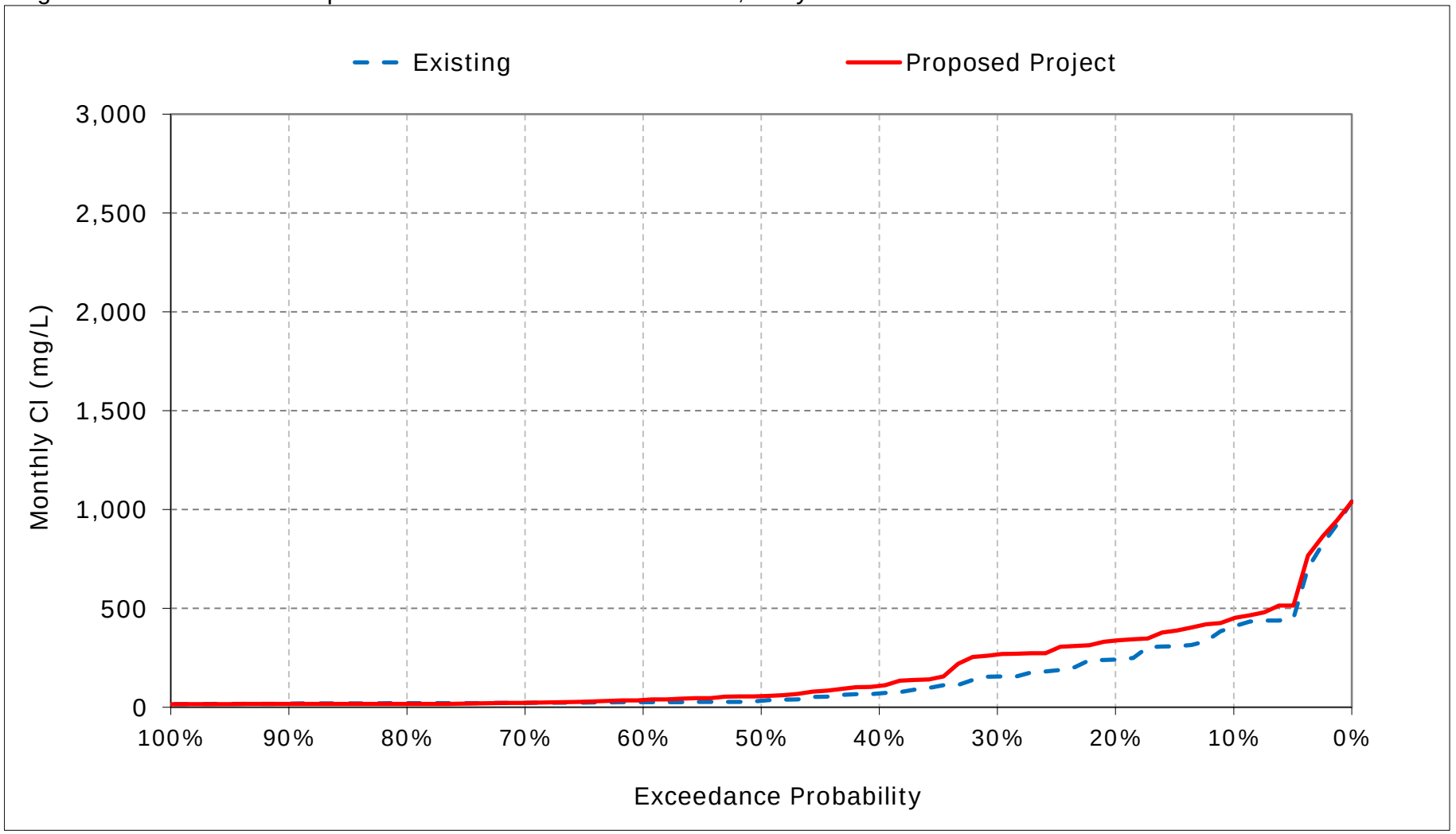


Figure 10-12. San Joaquin River at Antioch Chloride, June Cl

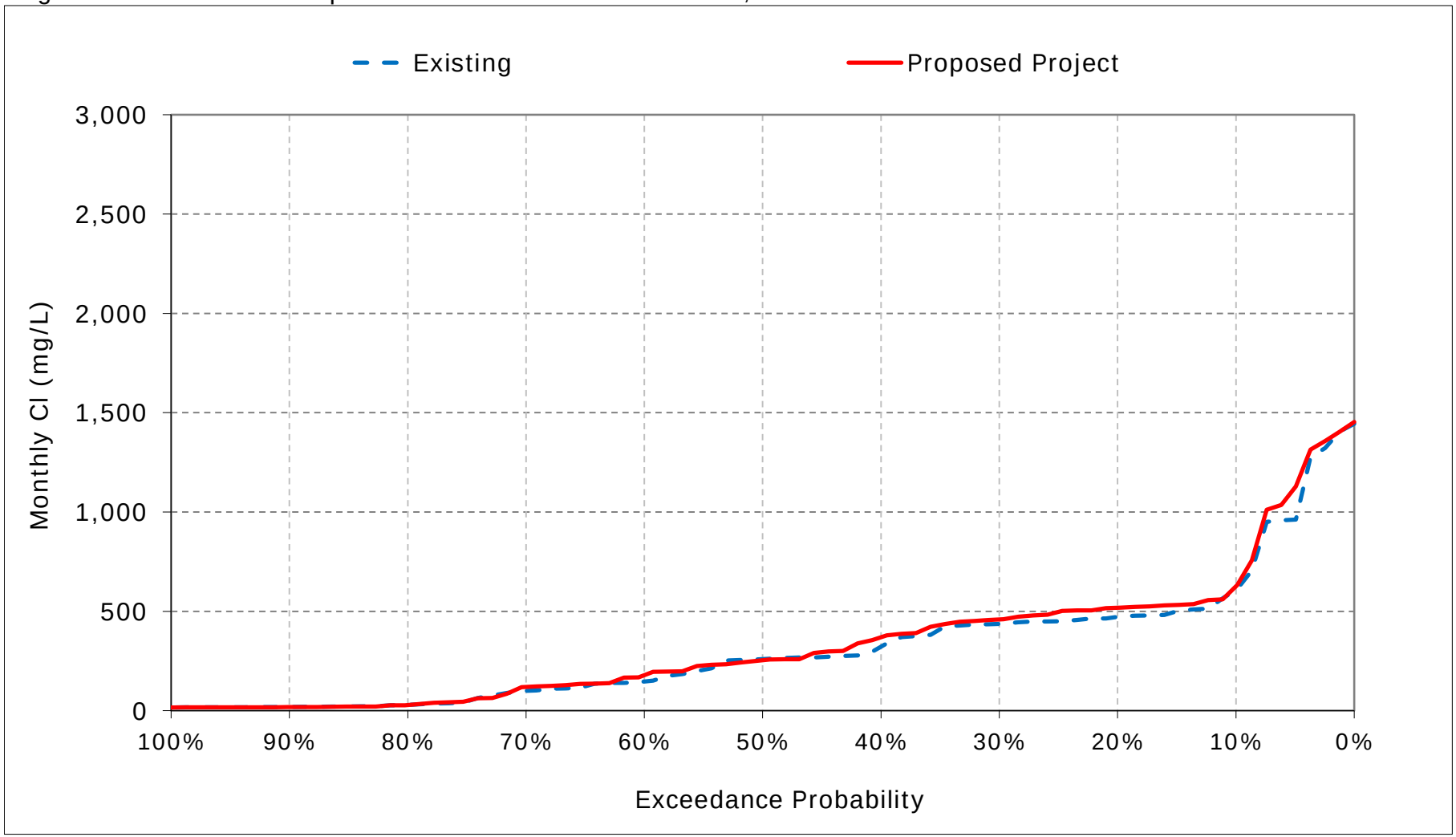


Figure 10-13. San Joaquin River at Antioch Chloride, July Cl

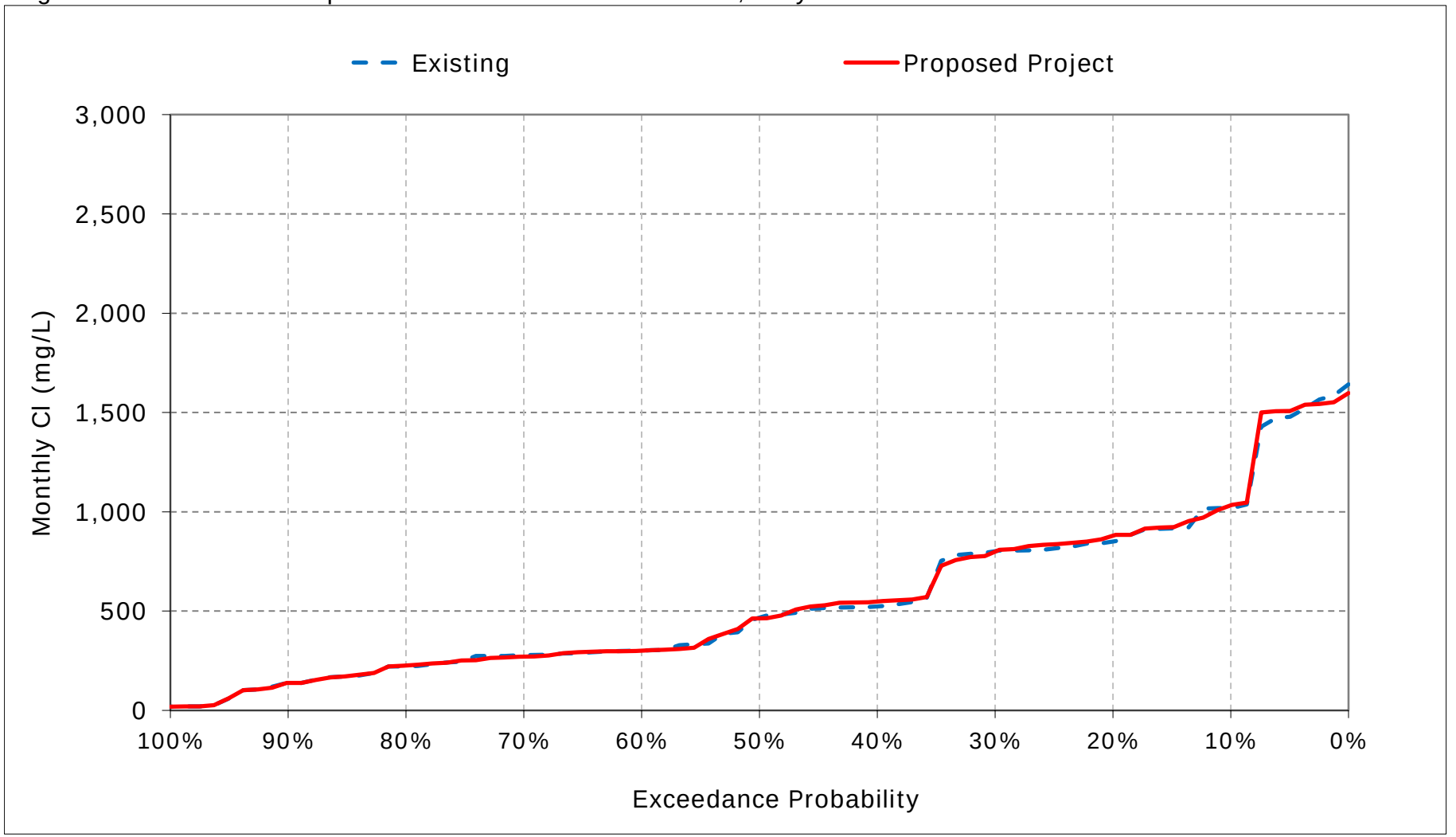


Figure 10-14. San Joaquin River at Antioch Chloride, August Cl

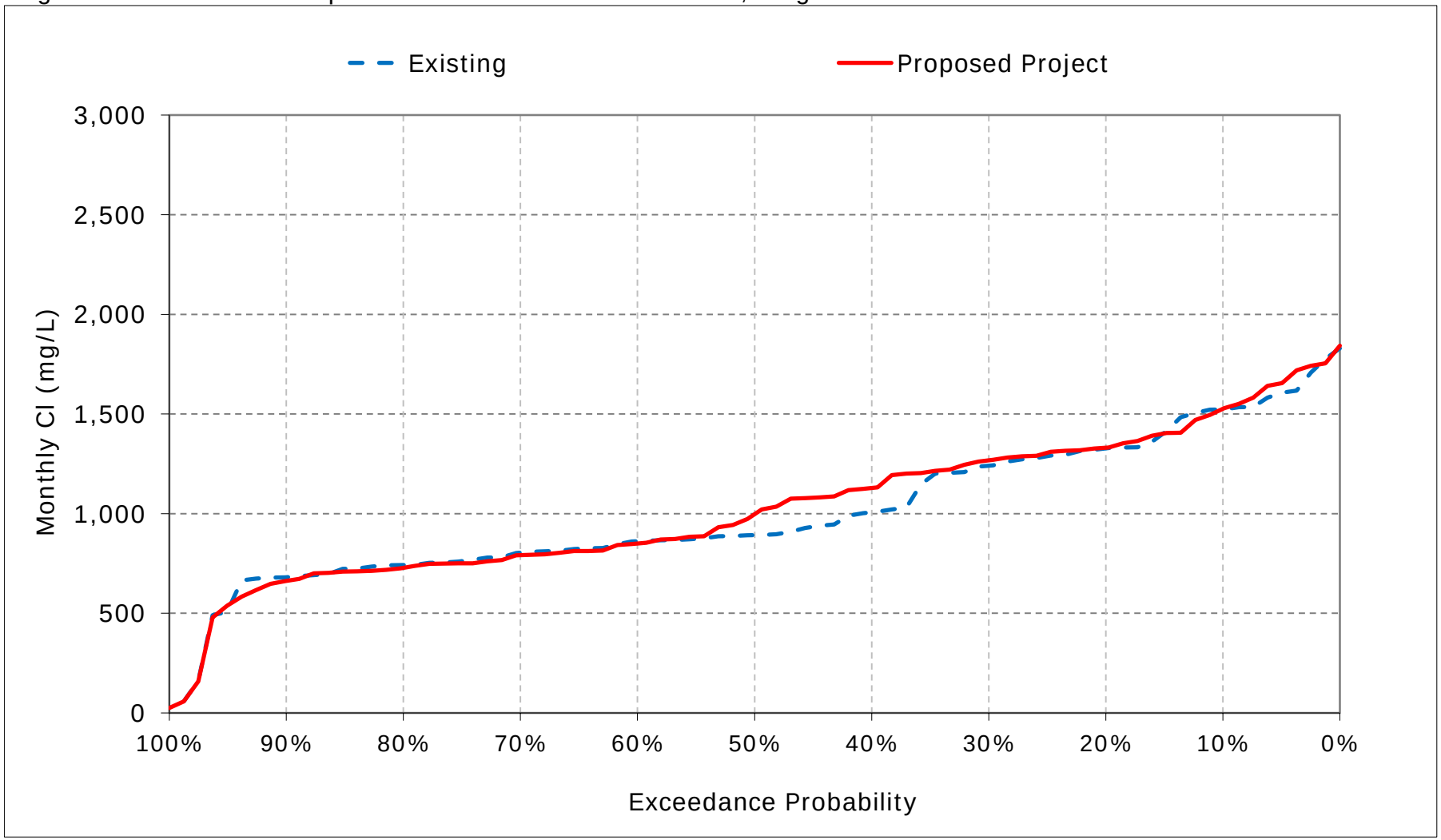


Figure 10-15. San Joaquin River at Antioch Chloride, September Cl

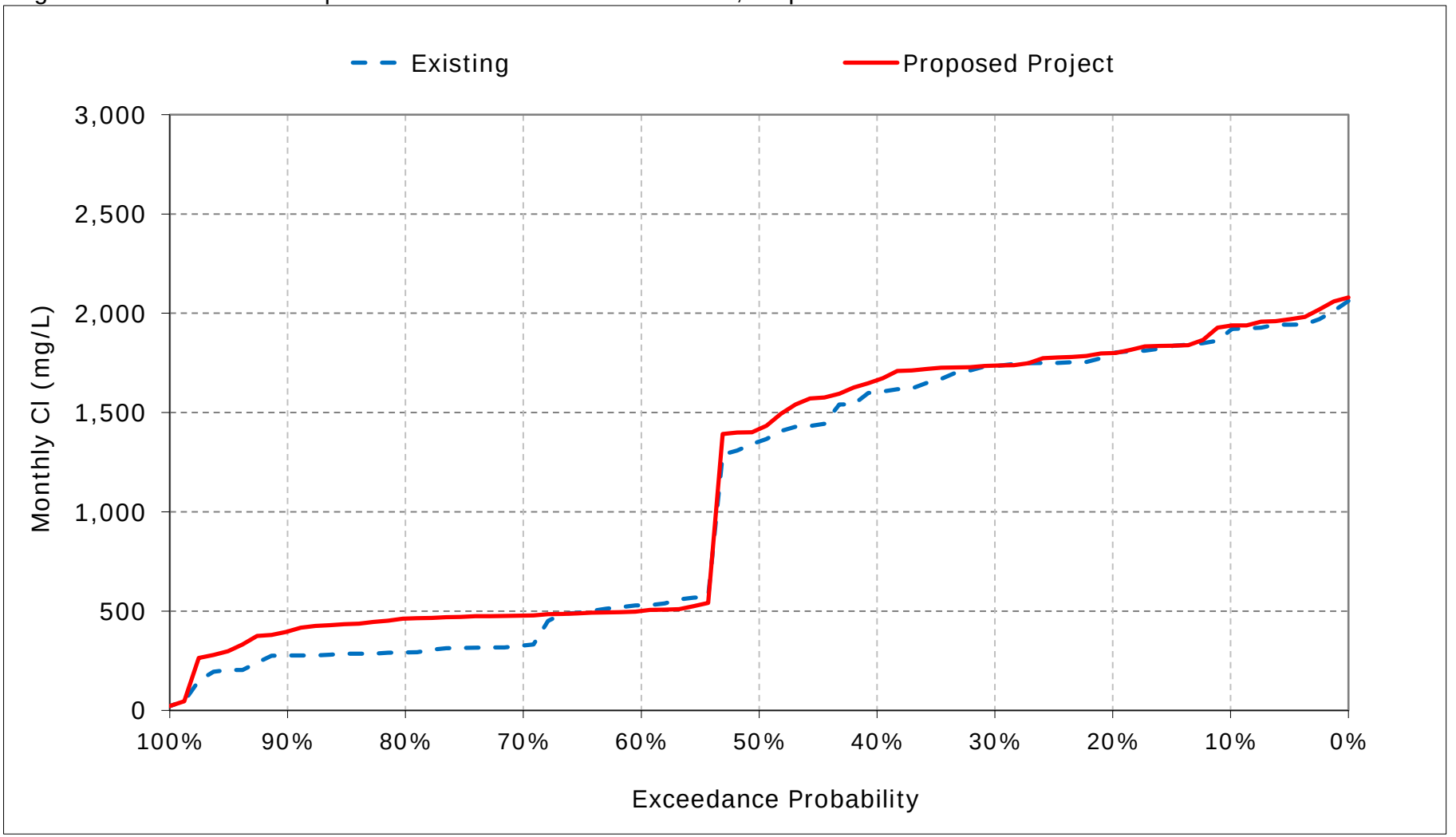


Figure 10-16. San Joaquin River at Antioch Chloride, October Cl

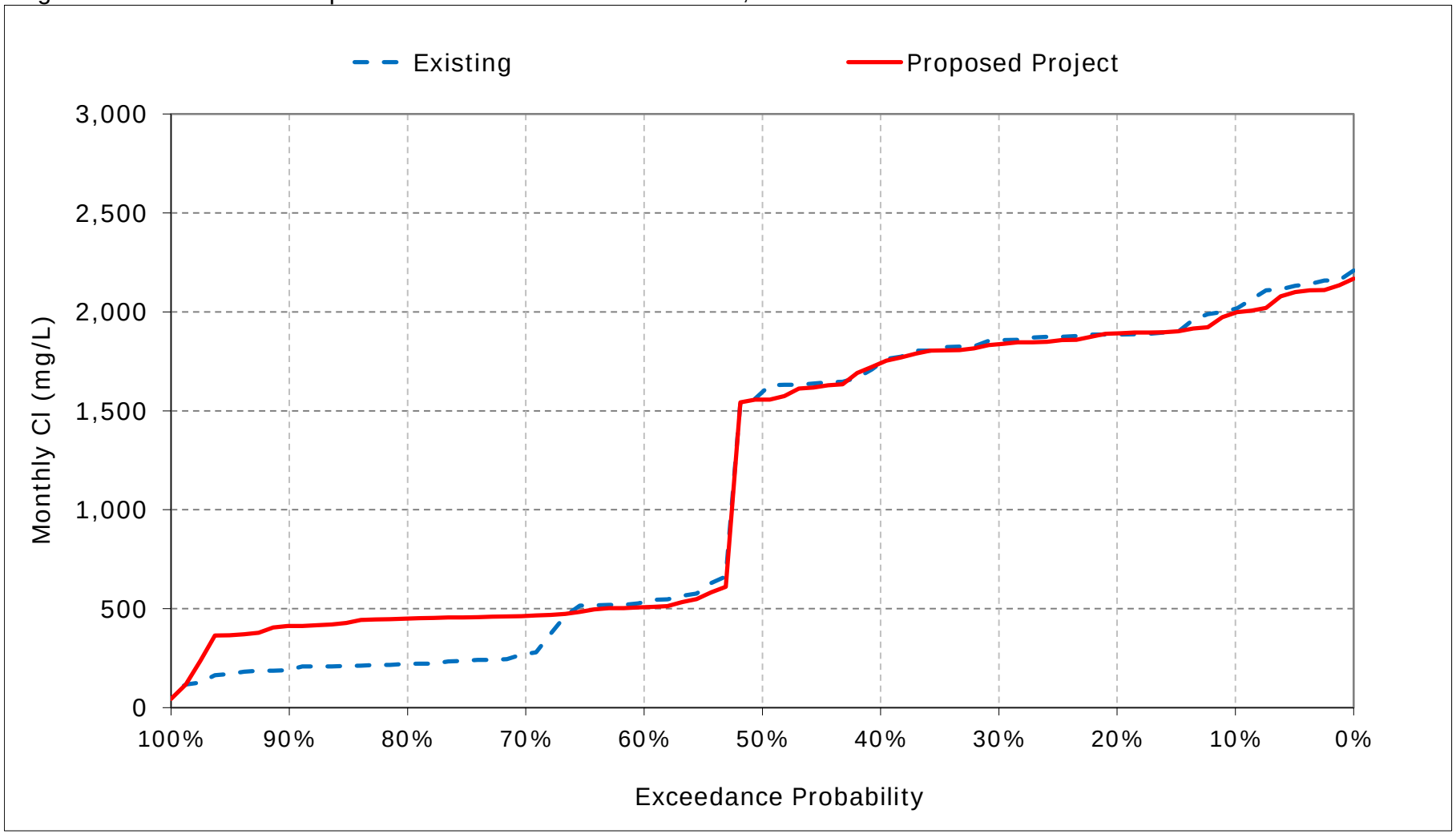


Figure 10-17. San Joaquin River at Antioch Chloride, November Cl

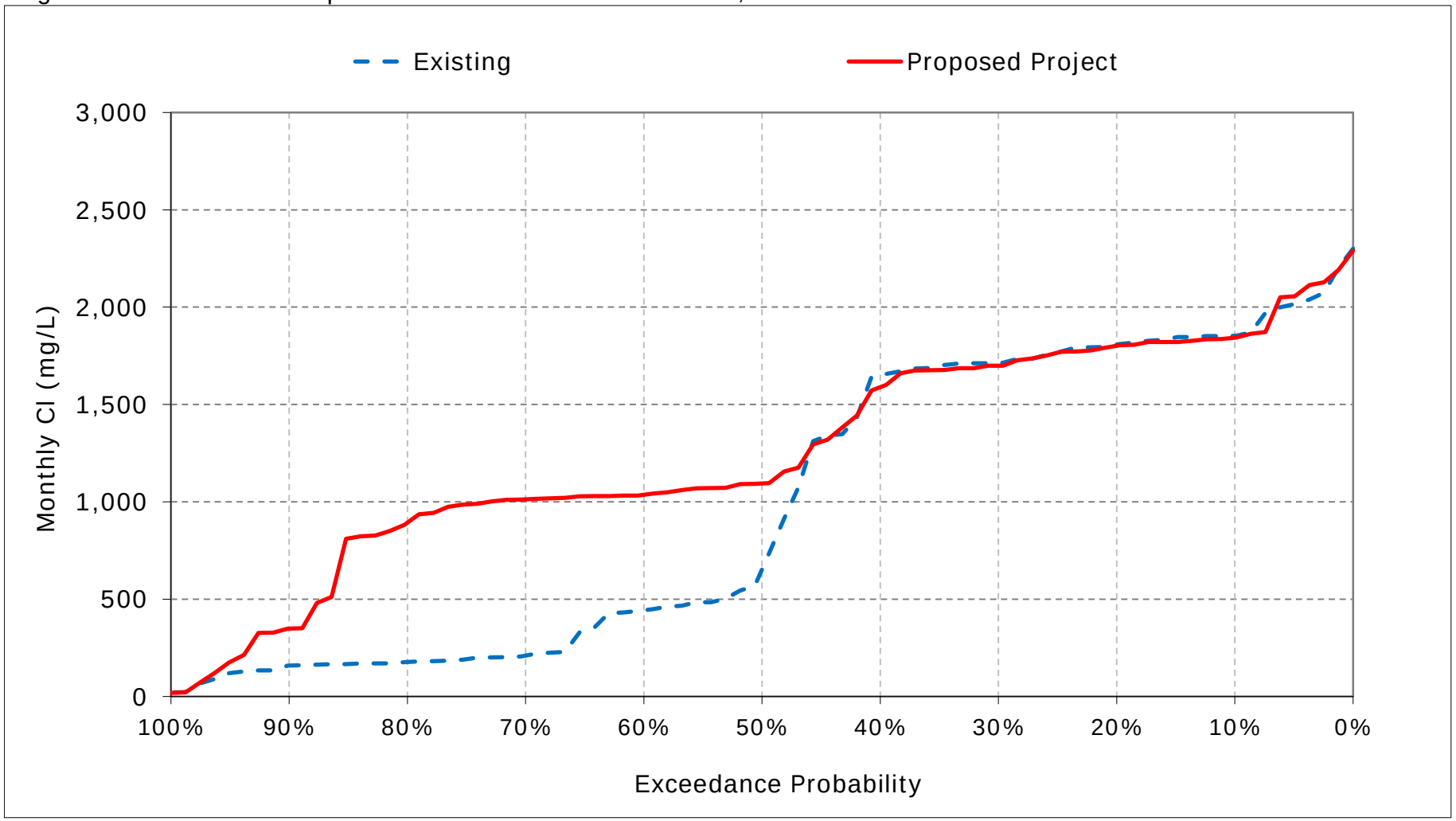


Figure 10-18. San Joaquin River at Antioch Chloride, December Cl

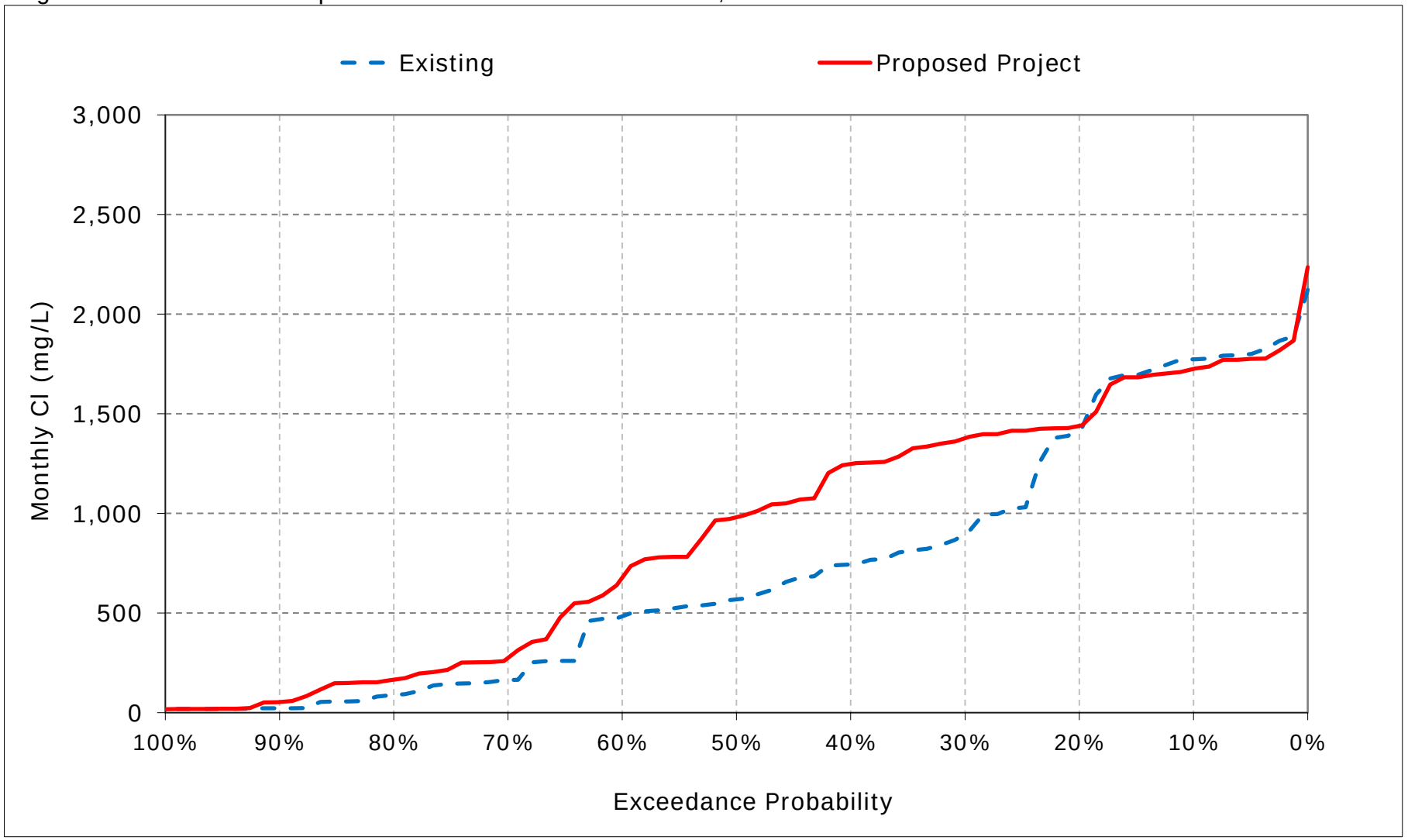


Table 11-1. Banks Pumping Plant South Delta Exports Chloride, Monthly Cl

Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	140	141	157	169	127	98	83	84	73	64	102	119
20%	133	122	145	157	112	79	73	76	59	55	74	111
30%	128	119	138	122	98	73	66	72	55	42	62	105
40%	121	113	122	110	93	67	61	68	54	40	58	101
50%	113	107	76	97	81	62	58	63	51	38	50	91
60%	52	46	56	90	76	58	52	60	49	35	43	84
70%	46	39	44	80	69	53	49	53	47	30	39	80
80%	39	36	37	69	64	46	38	45	43	29	37	72
90%	34	34	34	60	49	39	28	23	34	28	34	64
Long Term												
Full Simulation Period[a]	89	84	92	108	86	64	57	60	52	43	57	90
Water Year Types[b]												
Wet (32%)	74	66	67	74	63	47	38	40	40	32	37	75
Above Normal (15%)	101	92	93	108	91	63	53	57	49	32	38	68
Below Normal (17%)	92	86	102	126	88	65	59	64	51	35	59	111
Dry (22%)	88	89	104	116	95	74	70	74	57	47	77	98
Critical (15%)	106	105	118	151	117	89	80	82	77	78	89	108

Proposed Project

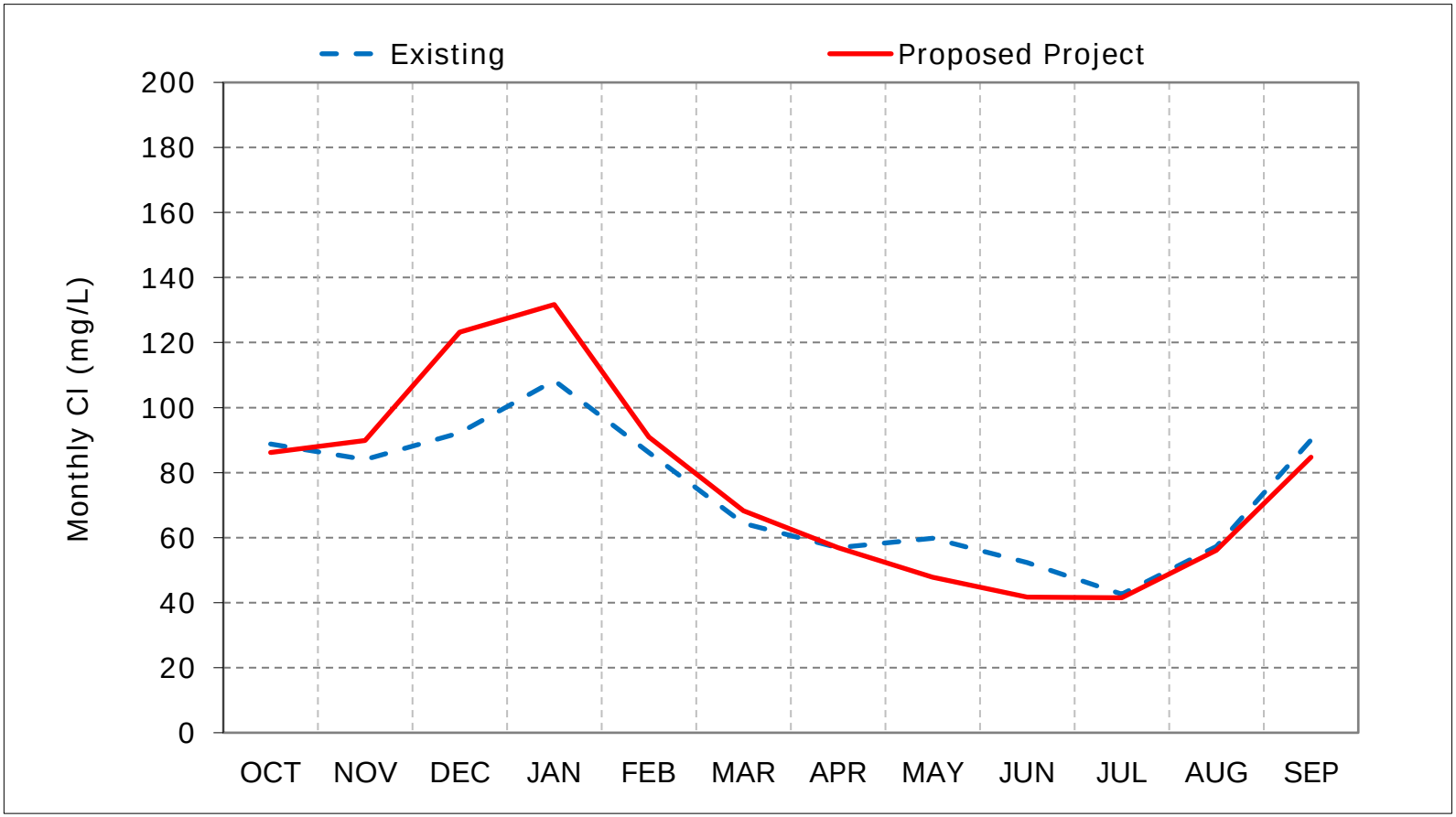
Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	149	136	164	210	145	99	79	70	58	64	102	123
20%	138	130	152	192	125	88	74	61	46	52	69	117
30%	131	118	148	168	109	81	67	57	42	41	61	107
40%	120	115	140	156	97	72	63	49	39	39	56	92
50%	118	109	133	121	93	65	59	45	38	36	49	80
60%	34	63	128	101	77	62	50	41	37	34	44	71
70%	32	53	115	91	69	55	45	39	34	30	38	64
80%	30	44	92	73	60	46	39	36	32	28	36	60
90%	29	38	49	64	46	42	31	27	30	27	31	53
Long Term												
Full Simulation Period[a]	86	90	123	132	91	68	57	48	42	42	56	85
Water Year Types[b]												
Wet (32%)	70	73	95	84	62	48	37	31	33	32	36	54
Above Normal (15%)	98	105	137	149	98	69	51	40	36	31	38	65
Below Normal (17%)	88	91	130	151	91	69	59	47	36	33	57	120
Dry (22%)	85	92	135	150	105	80	72	59	43	46	74	98
Critical (15%)	108	106	145	168	126	93	80	76	70	78	91	111

Proposed Project minus Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	9	-4	7	41	18	2	-4	-13	-15	-1	0	4
20%	5	7	6	35	14	9	0	-15	-13	-3	-5	5
30%	3	0	10	46	11	8	1	-15	-13	-1	-1	1
40%	0	3	18	46	4	6	2	-19	-15	-1	-2	-9
50%	4	2	58	24	12	3	2	-18	-13	-2	-1	-11
60%	-18	17	73	11	0	3	-3	-18	-12	-1	0	-14
70%	-14	15	71	11	0	2	-4	-14	-13	0	0	-16
80%	-10	9	55	4	-3	0	0	-9	-11	-1	0	-12
90%	-5	4	15	4	-3	3	3	4	-4	-1	-3	-12
Long Term												
Full Simulation Period[a]	-3	6	31	23	5	4	0	-12	-11	-1	-1	-5
Water Year Types[b]												
Wet (32%)	-4	7	28	10	-1	1	0	-9	-7	0	-1	-22
Above Normal (15%)	-2	12	45	41	7	6	-2	-17	-13	-1	0	-2
Below Normal (17%)	-4	5	28	25	3	3	-1	-17	-15	-3	-2	9
Dry (22%)	-3	3	31	34	9	6	2	-14	-14	-1	-3	0
Critical (15%)	2	1	27	17	10	5	0	-6	-7	-1	2	3

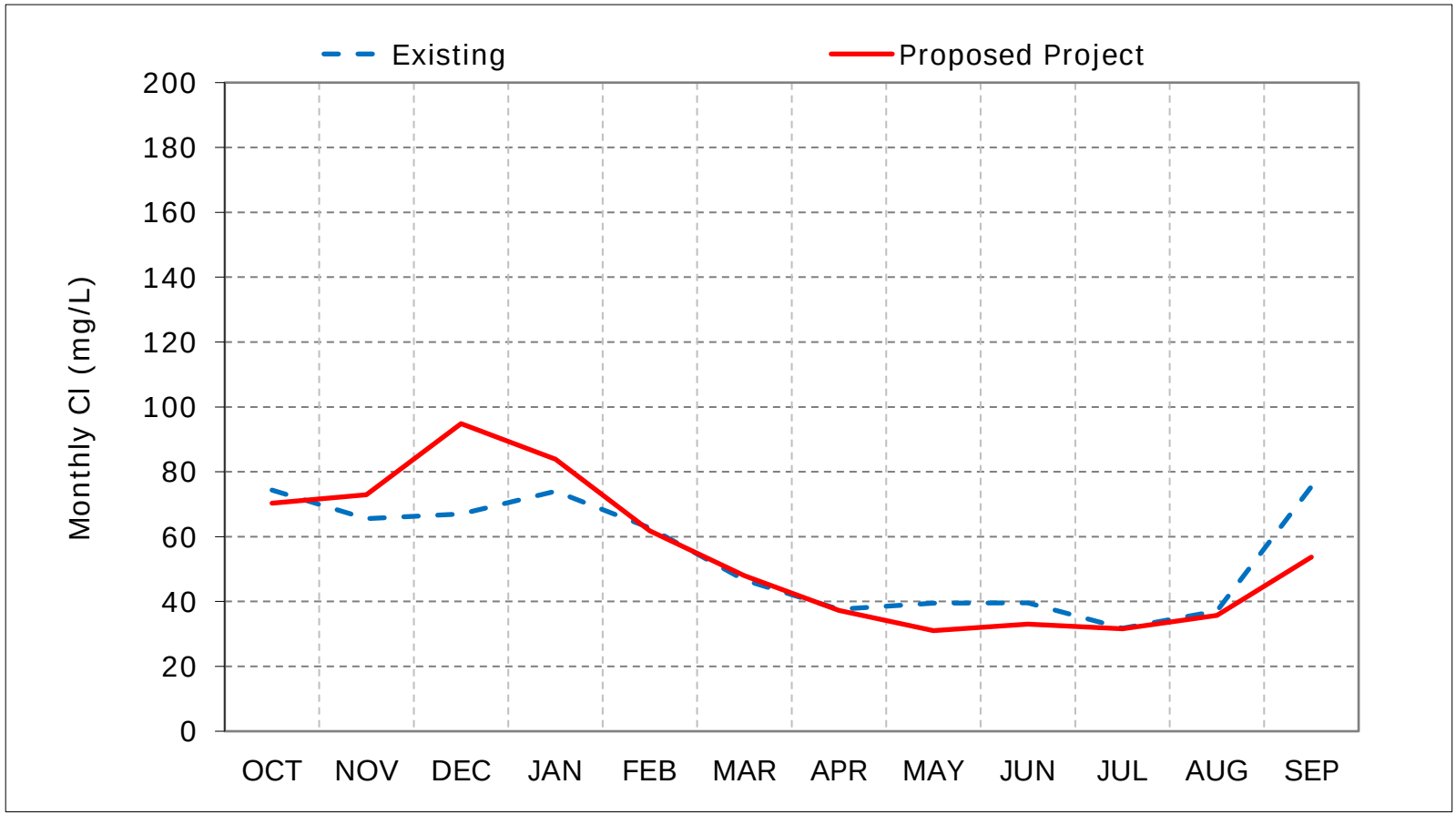
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 11-1. Banks Pumping Plant South Delta Exports Chloride, Long-Term Avera



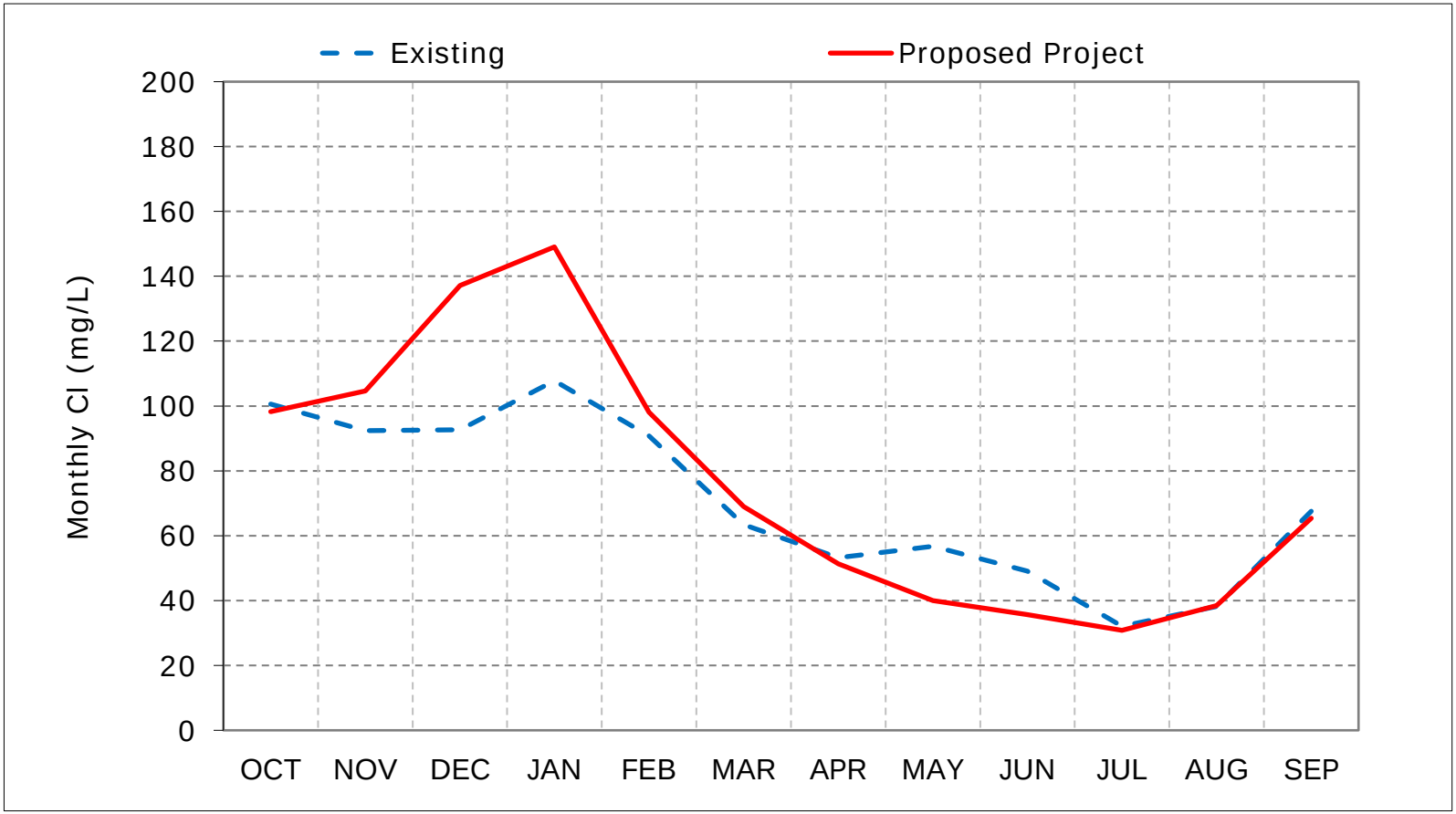
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 11-2. Banks Pumping Plant South Delta Exports Chloride, Wet Year Averag



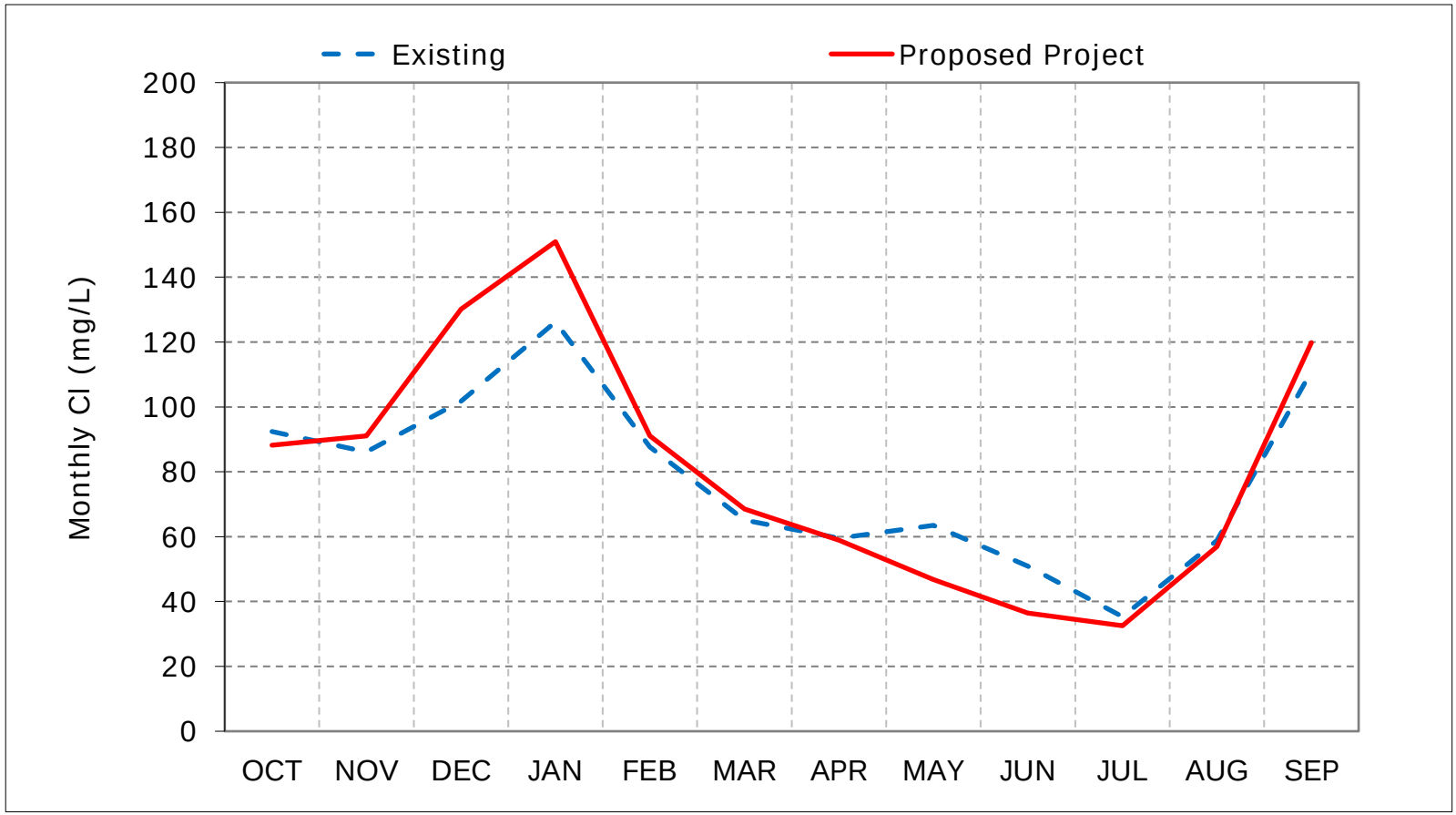
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 11-3. Banks Pumping Plant South Delta Exports Chloride, Above Normal Ye



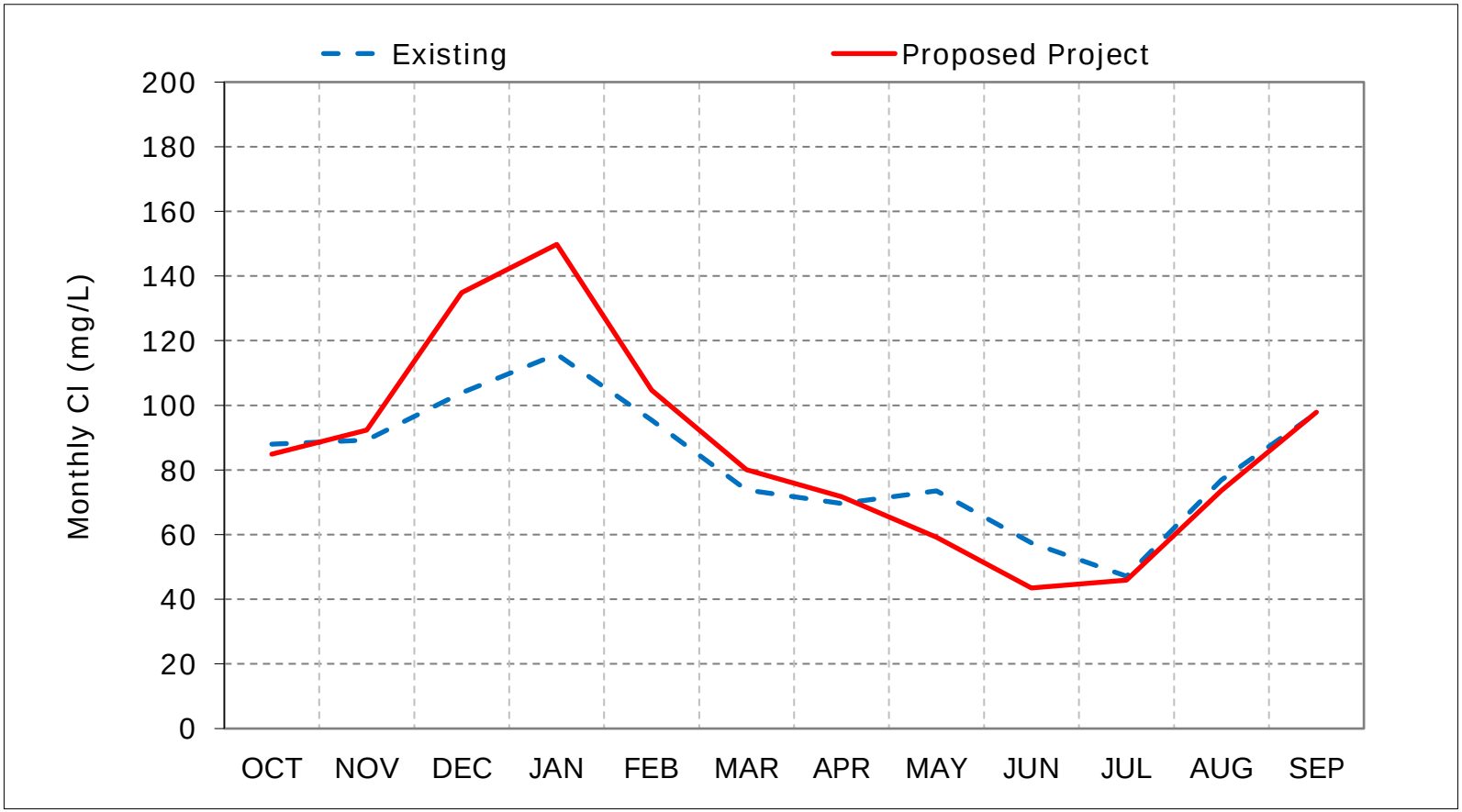
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 11-4. Banks Pumping Plant South Delta Exports Chloride, Below Normal Ye



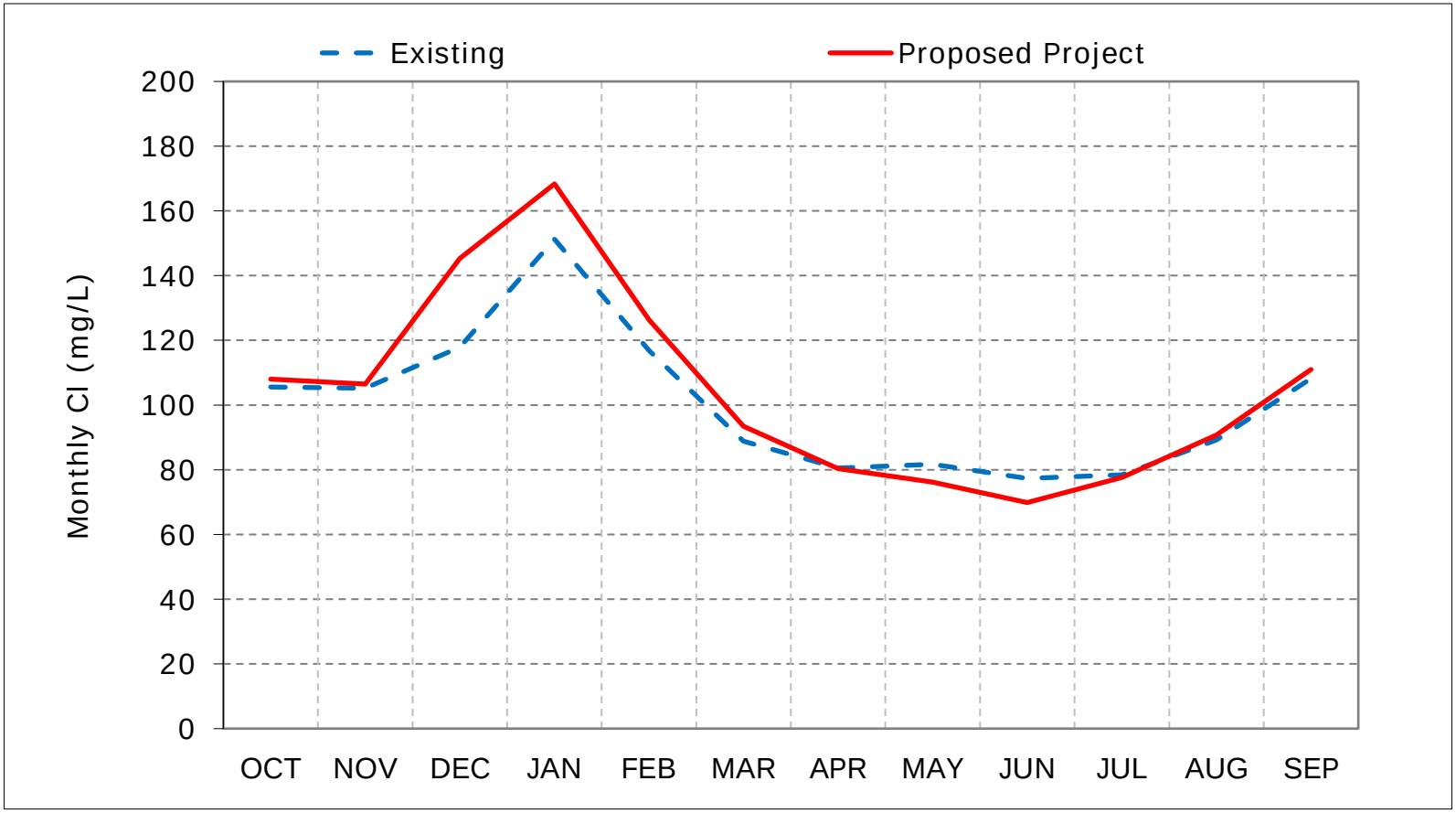
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 11-5. Banks Pumping Plant South Delta Exports Chloride, Dry Year Average



*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.

Figure 11-6. Banks Pumping Plant South Delta Exports Chloride, Critical Year Aver



*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.

Figure 11-7. Banks Pumping Plant South Delta Exports Chloride, January Cl

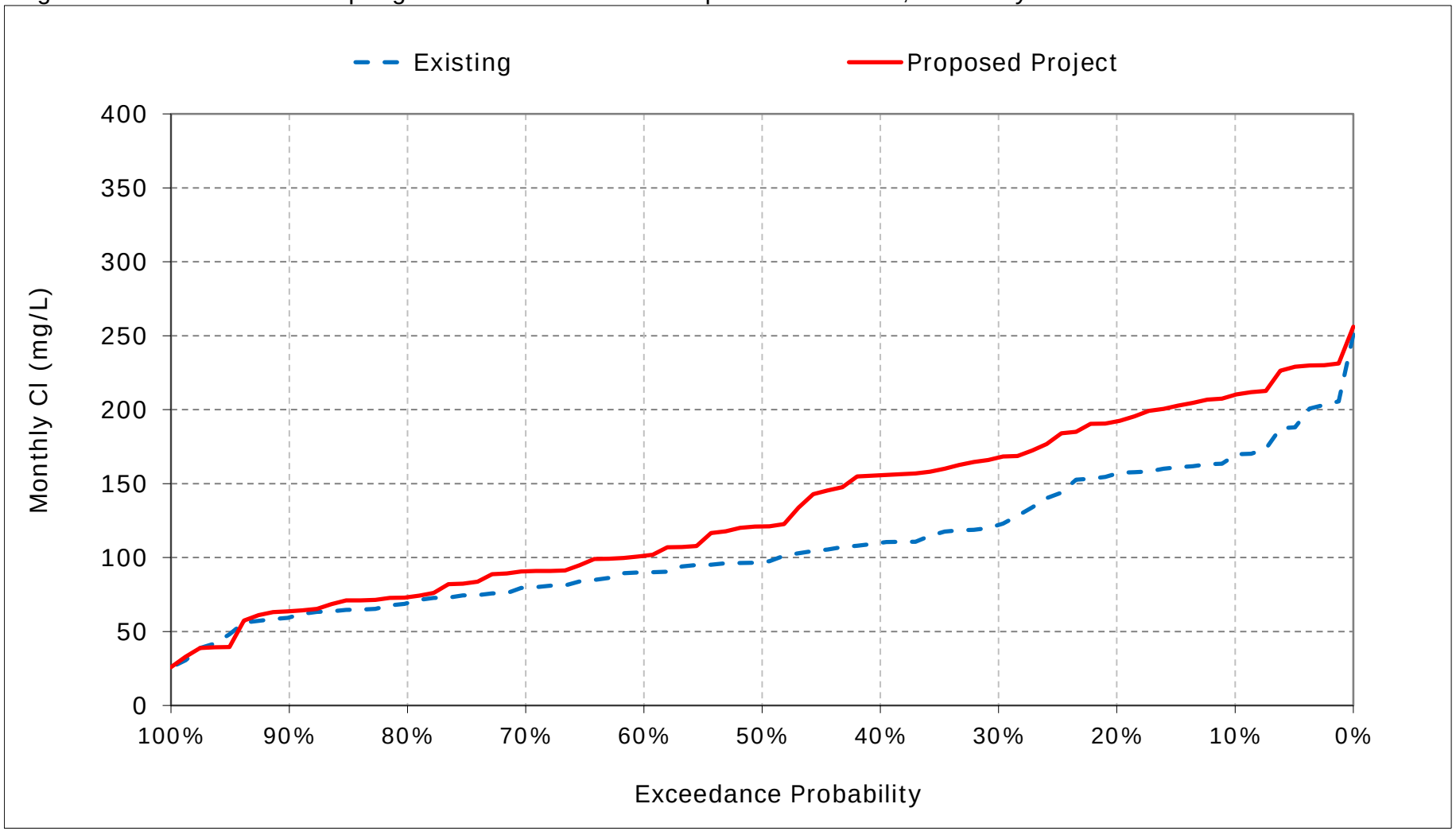


Figure 11-8. Banks Pumping Plant South Delta Exports Chloride, February Cl

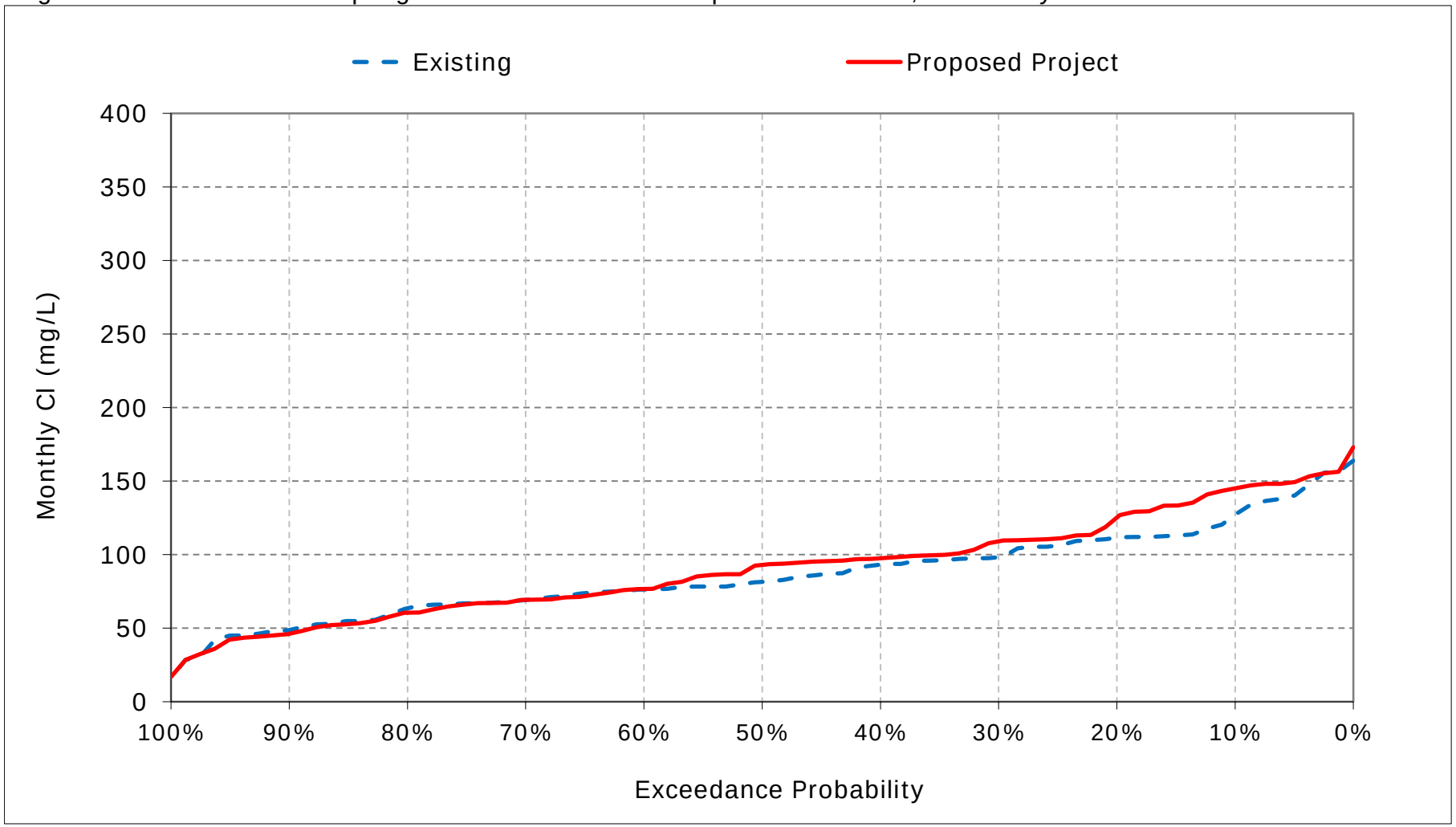


Figure 11-9. Banks Pumping Plant South Delta Exports Chloride, March Cl

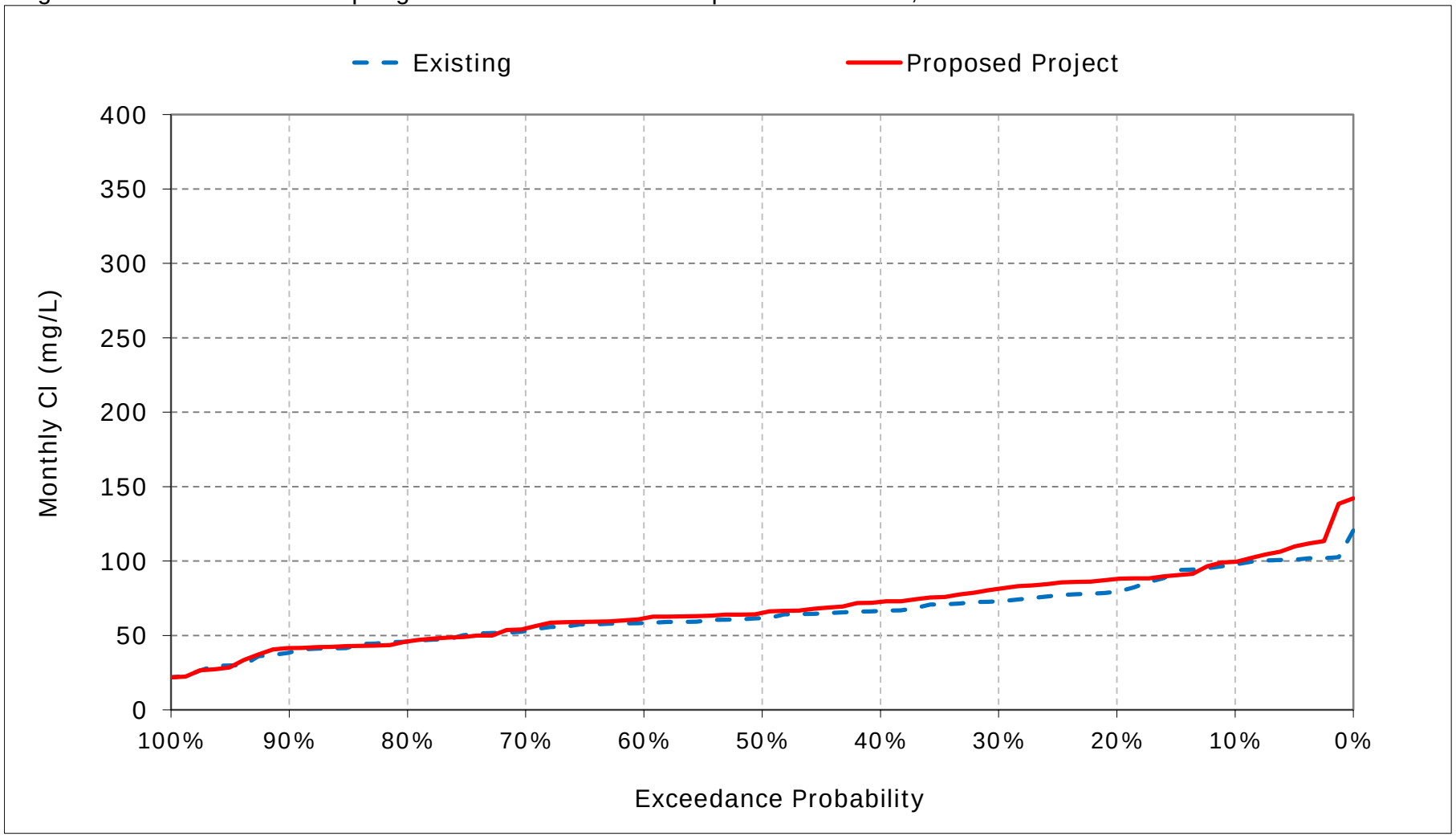


Figure 11-10. Banks Pumping Plant South Delta Exports Chloride, April Cl

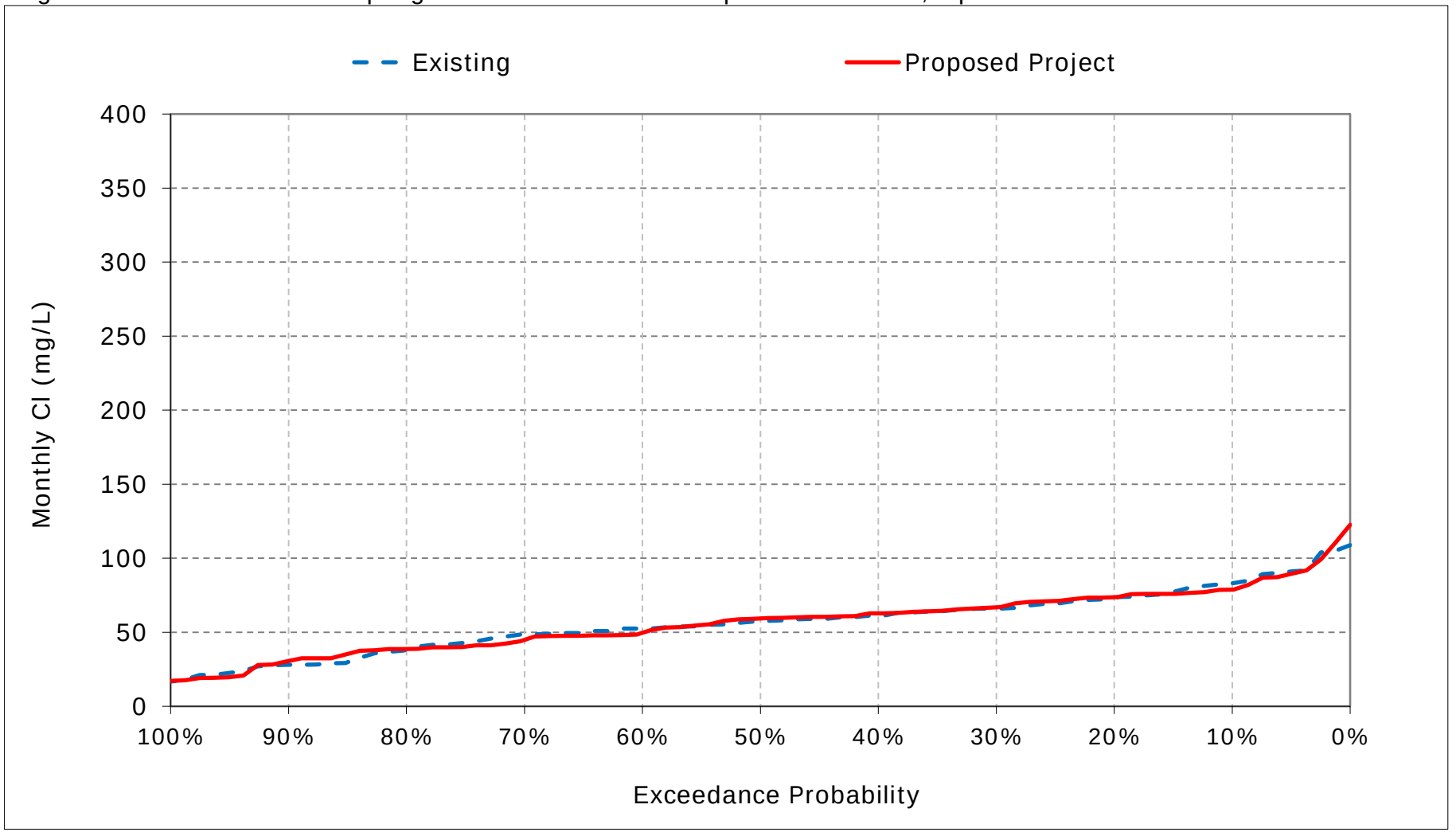


Figure 11-11. Banks Pumping Plant South Delta Exports Chloride, May Cl

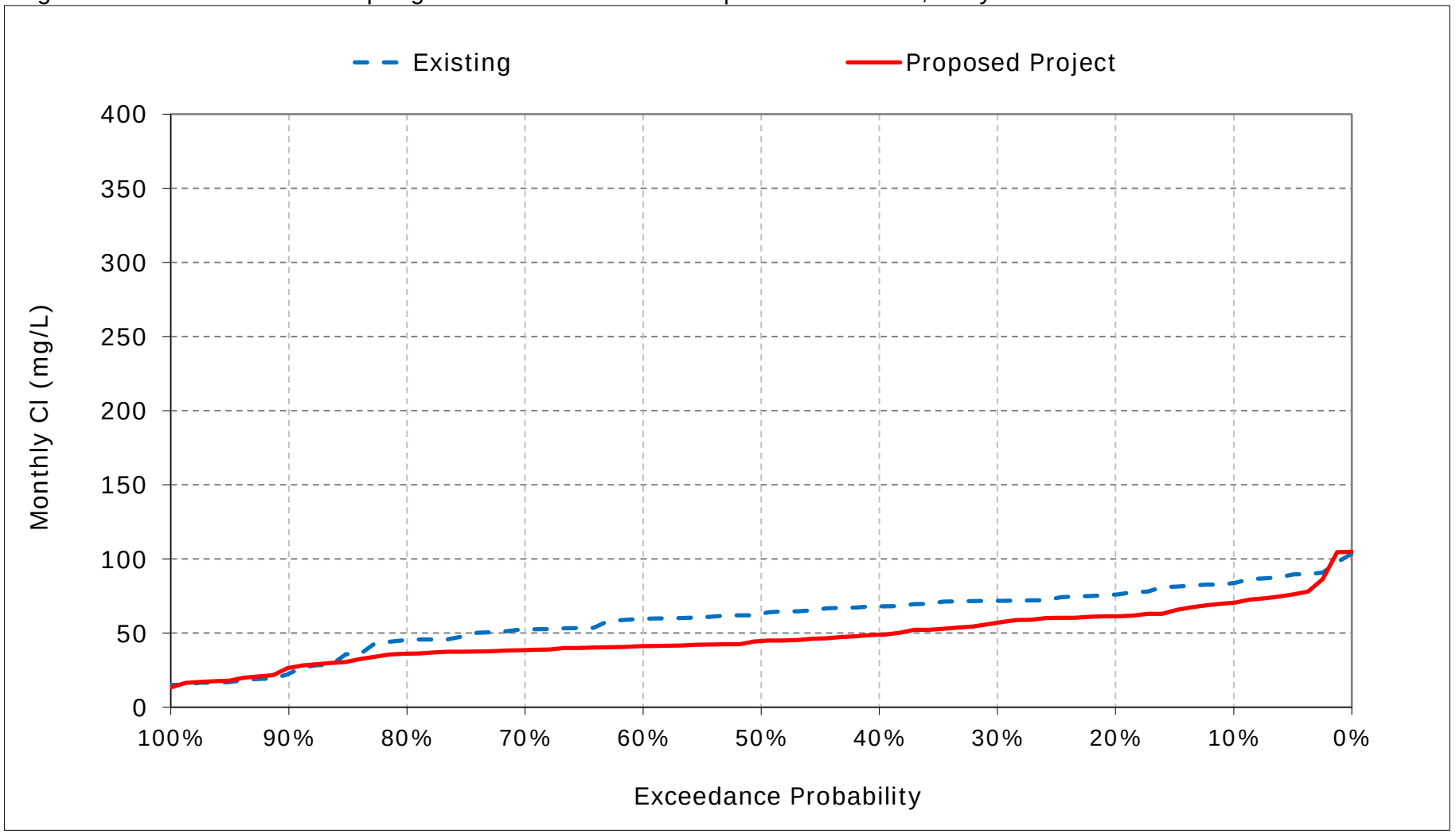


Figure 11-12. Banks Pumping Plant South Delta Exports Chloride, June Cl

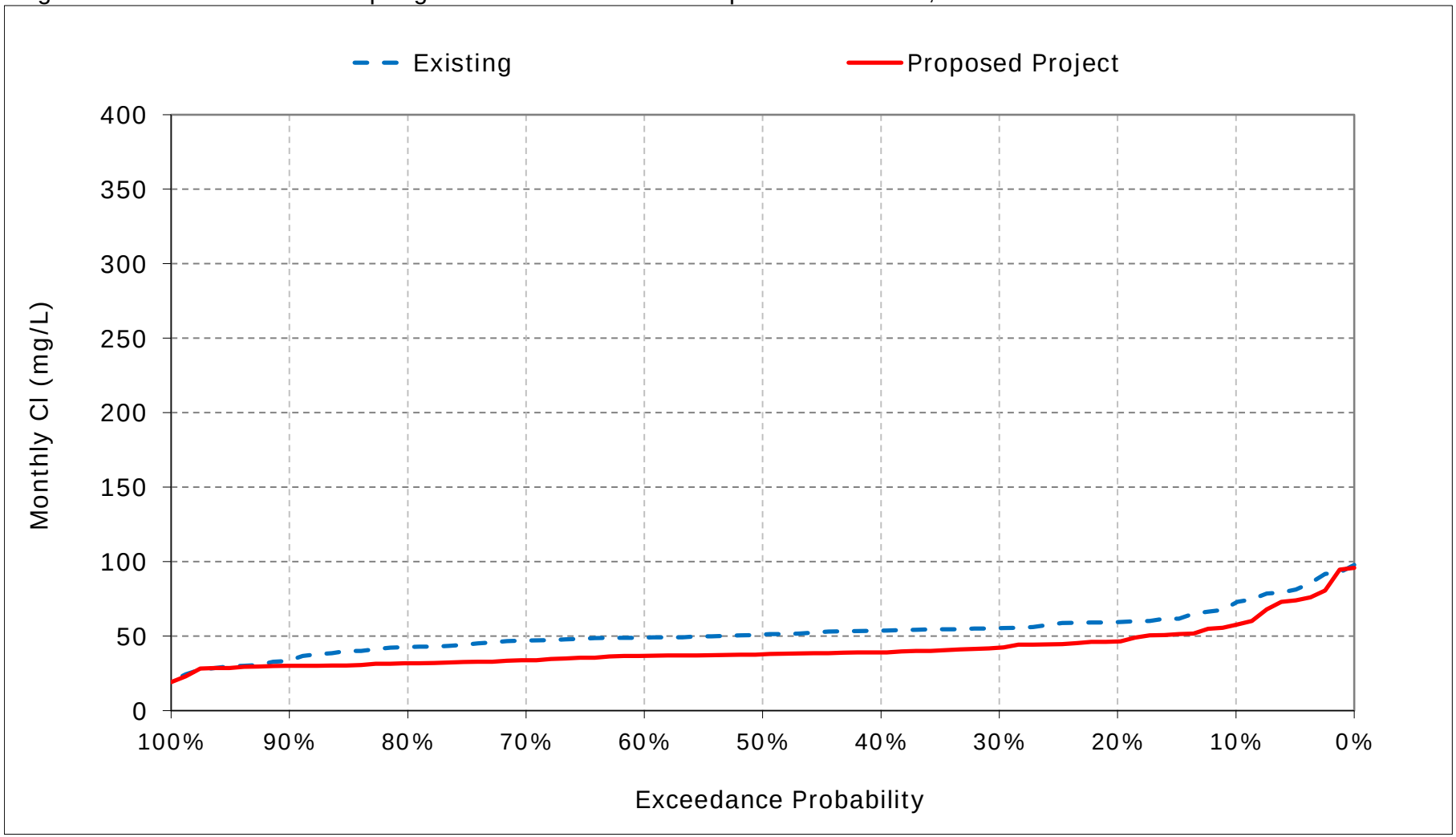


Figure 11-13. Banks Pumping Plant South Delta Exports Chloride, July Cl

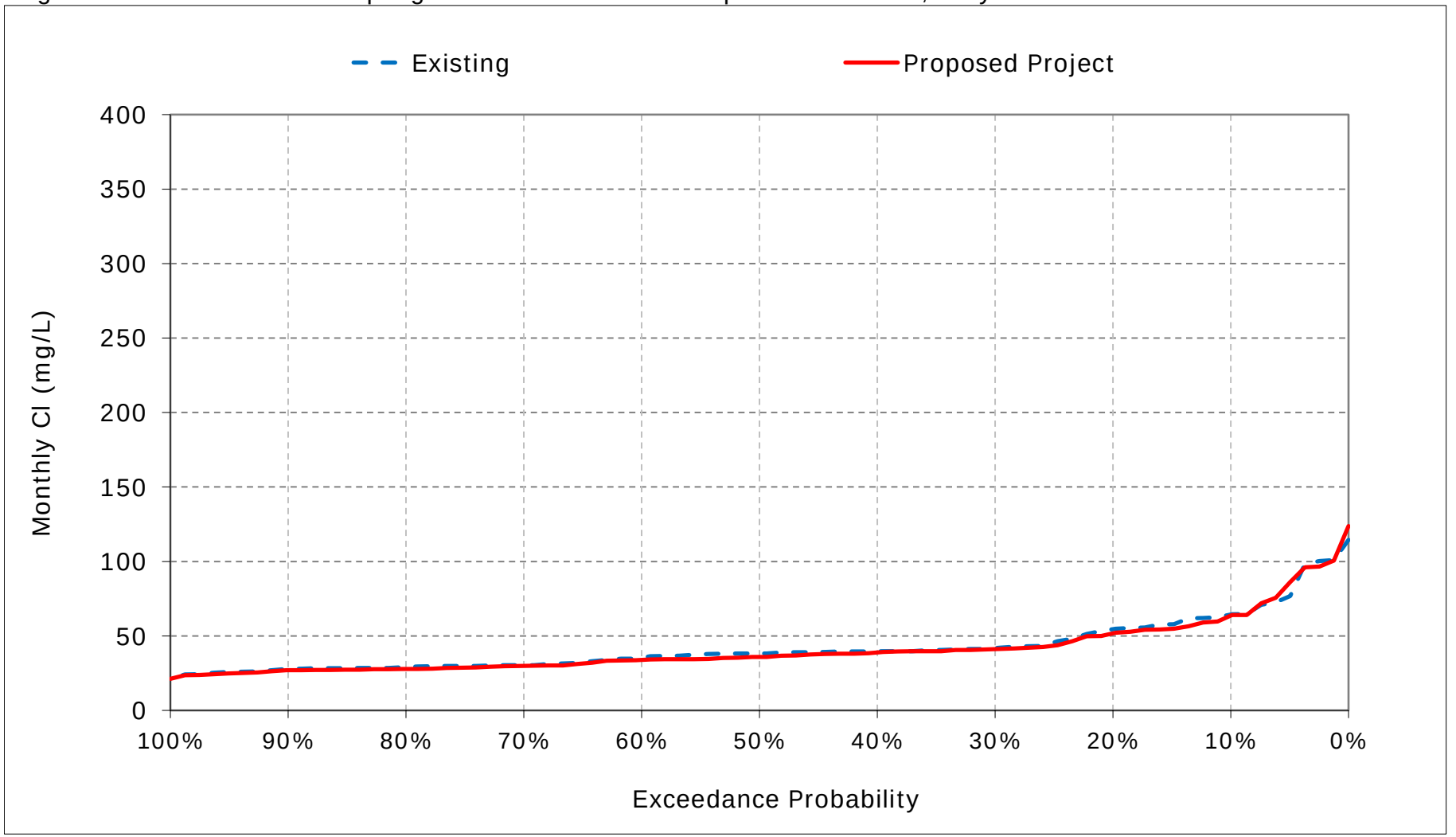


Figure 11-14. Banks Pumping Plant South Delta Exports Chloride, August Cl

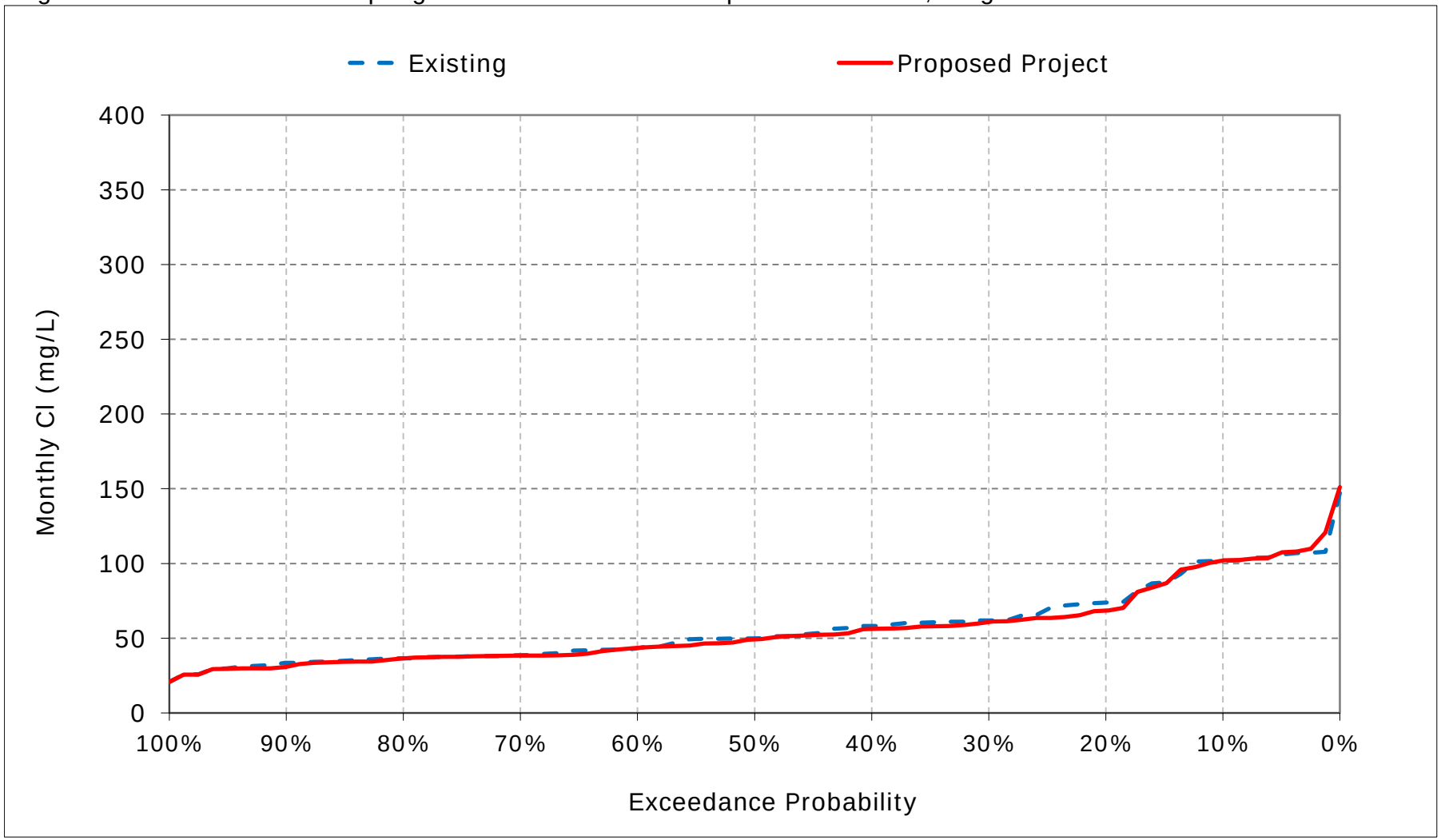


Figure 11-15. Banks Pumping Plant South Delta Exports Chloride, September Cl

Figure 11-16. Banks Pumping Plant South Delta Exports Chloride, October Cl

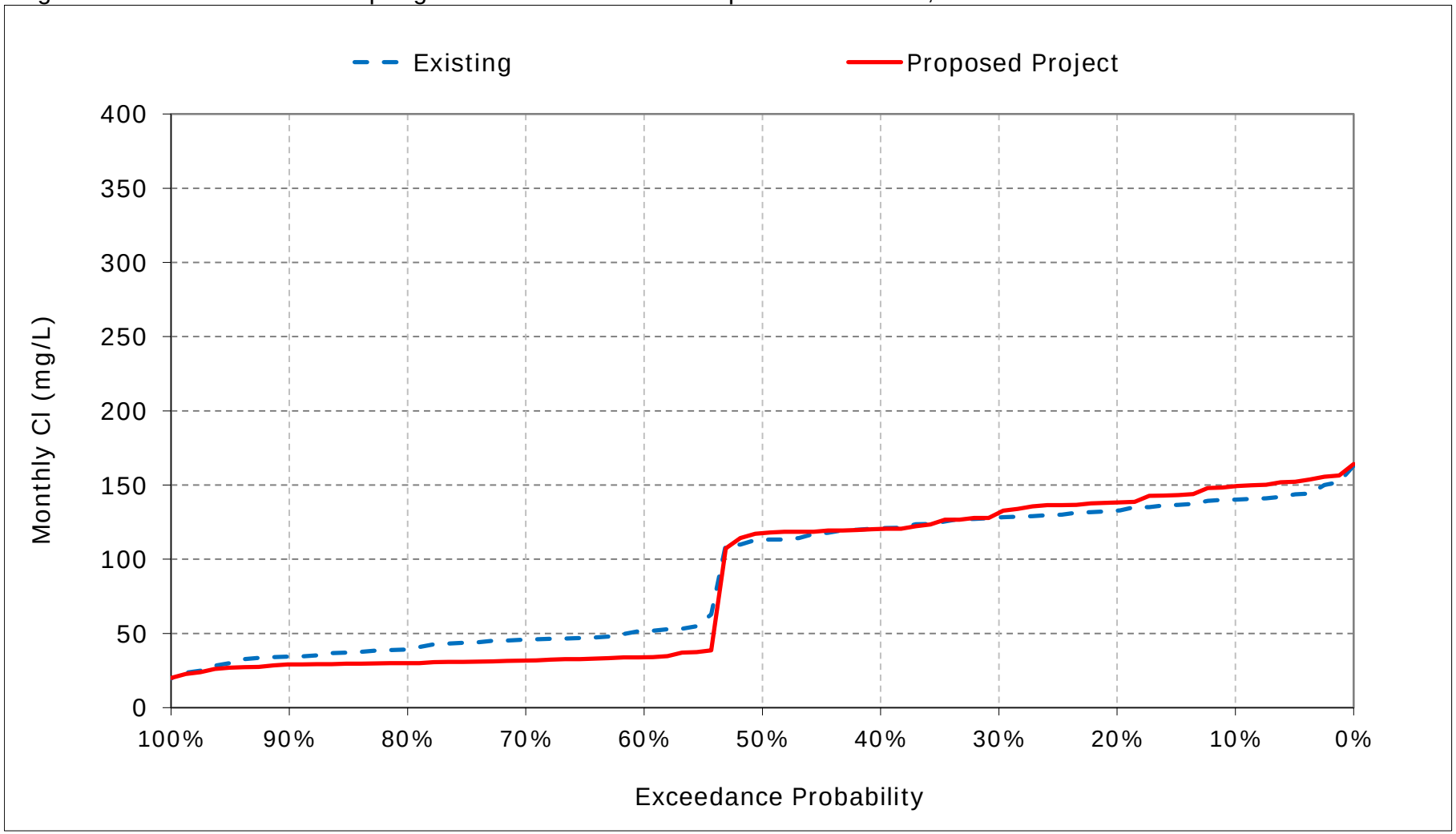


Figure 11-17. Banks Pumping Plant South Delta Exports Chloride, November Cl

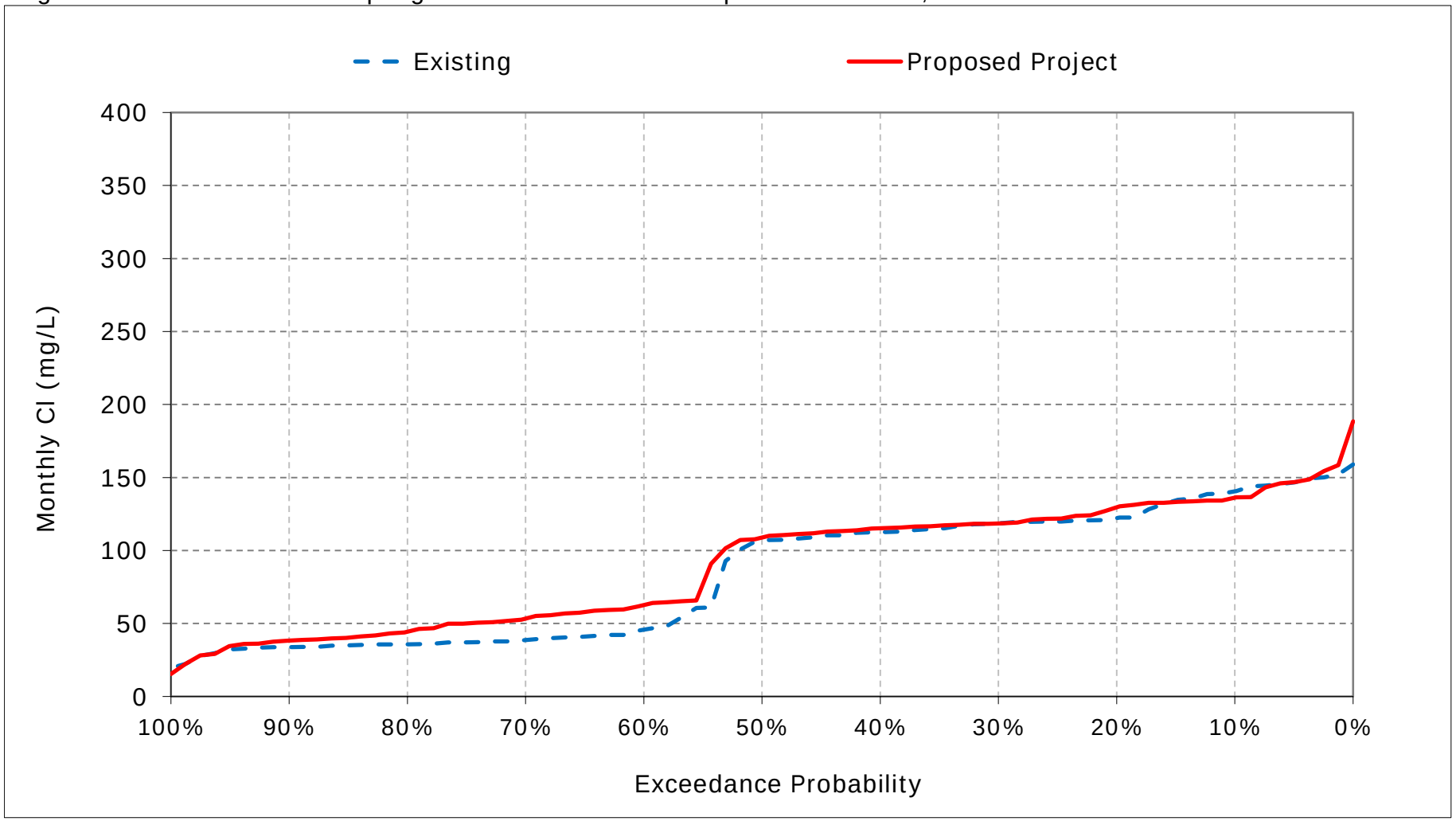


Figure 11-18. Banks Pumping Plant South Delta Exports Chloride, December Cl

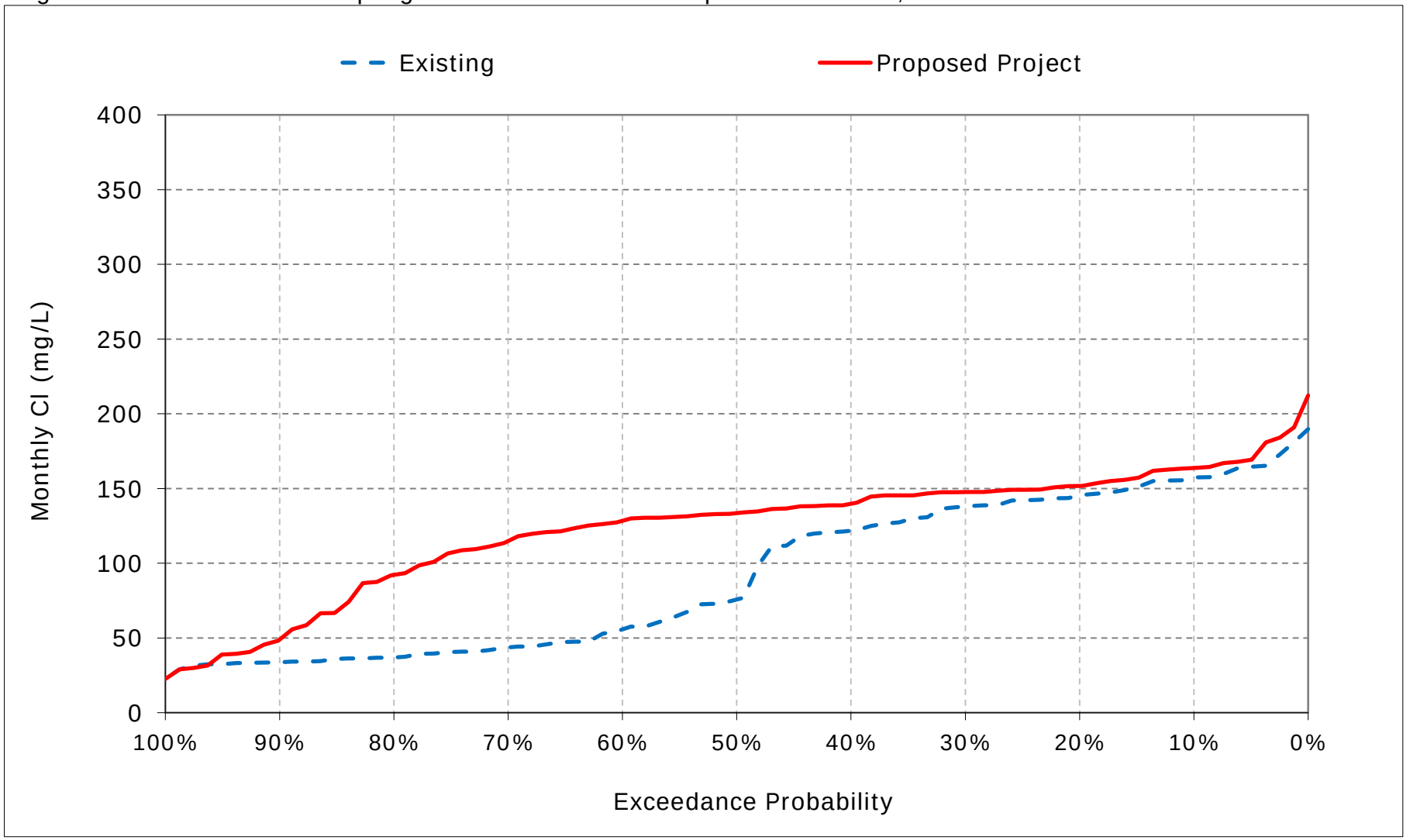


Table 12-1. Jones Pumping Plant South Delta Exports Chloride, Monthly Cl

Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	136	138	168	171	144	126	96	82	67	68	103	120
20%	131	122	157	164	138	118	89	77	59	60	82	115
30%	126	119	149	142	126	107	81	73	57	57	71	108
40%	120	113	137	133	119	101	74	70	55	54	68	106
50%	111	106	105	125	112	90	65	62	54	48	62	97
60%	56	65	92	115	99	68	57	57	52	46	55	88
70%	52	52	79	106	84	53	47	53	51	42	49	80
80%	48	47	73	99	64	42	37	45	48	38	46	74
90%	44	44	71	72	44	35	26	22	44	33	44	65
Long Term												
Full Simulation Period[a]	90	90	114	125	103	85	63	60	55	52	65	93
Water Year Types[b]												
Wet (32%)	76	73	93	93	67	48	38	39	48	43	45	75
Above Normal (15%)	101	95	114	125	105	69	57	57	54	44	49	70
Below Normal (17%)	93	93	121	136	99	82	67	64	53	47	69	113
Dry (22%)	91	95	124	136	129	111	81	73	54	55	84	103
Critical (15%)	106	108	139	164	143	144	94	81	73	77	94	117

Proposed Project

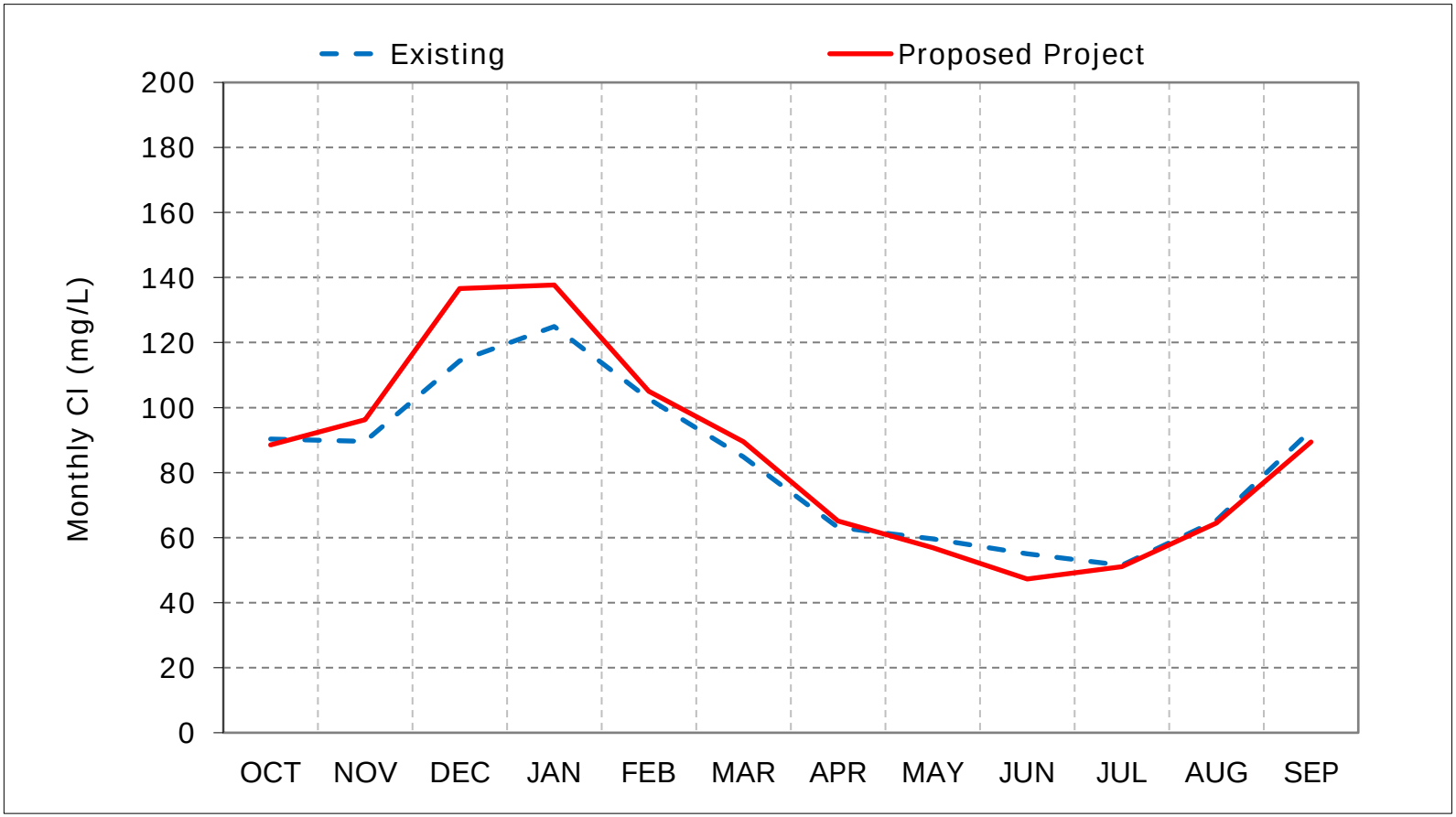
Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	139	136	171	193	159	142	113	92	60	68	105	127
20%	129	127	161	184	144	125	97	82	54	62	77	118
30%	124	120	157	169	131	115	84	72	50	58	71	111
40%	118	116	153	159	123	104	68	57	47	52	66	104
50%	112	111	148	139	110	95	58	51	45	46	60	89
60%	51	76	143	124	98	76	50	47	43	43	54	76
70%	47	68	130	108	81	54	45	45	41	40	49	70
80%	45	62	106	99	64	43	37	39	39	37	46	64
90%	43	52	83	72	46	34	25	21	34	32	40	58
Long Term												
Full Simulation Period[a]	88	96	137	138	105	90	65	57	47	51	64	89
Water Year Types[b]												
Wet (32%)	74	82	111	98	66	50	35	34	44	43	43	58
Above Normal (15%)	99	108	148	148	107	69	49	46	45	43	49	71
Below Normal (17%)	89	97	142	150	99	89	62	53	43	46	67	120
Dry (22%)	90	99	147	156	133	121	87	75	44	54	82	104
Critical (15%)	106	110	159	172	153	149	118	95	66	79	96	120

Proposed Project minus Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	3	-2	3	21	16	16	18	10	-7	0	2	6
20%	-2	5	4	20	6	7	8	5	-5	2	-5	3
30%	-2	1	7	26	5	8	3	-1	-7	0	0	3
40%	-2	3	16	26	4	3	-6	-12	-9	-2	-1	-2
50%	0	5	43	15	-2	5	-7	-11	-9	-2	-2	-8
60%	-5	11	51	9	-2	8	-7	-10	-9	-3	-1	-12
70%	-5	16	51	2	-3	1	-3	-8	-10	-2	0	-10
80%	-2	15	33	0	0	1	0	-6	-9	-1	0	-9
90%	-1	9	12	0	1	-1	-1	-1	-9	-1	-4	-7
Long Term												
Full Simulation Period[a]	-2	7	22	13	2	5	2	-3	-8	0	-1	-4
Water Year Types[b]												
Wet (32%)	-2	9	18	4	-1	2	-3	-5	-4	0	-1	-17
Above Normal (15%)	-3	13	34	23	2	1	-8	-11	-10	-2	0	0
Below Normal (17%)	-4	5	21	14	0	7	-5	-10	-10	-1	-1	7
Dry (22%)	-1	4	23	20	4	9	6	1	-10	-1	-2	1
Critical (15%)	0	2	20	9	10	5	24	14	-7	1	3	3

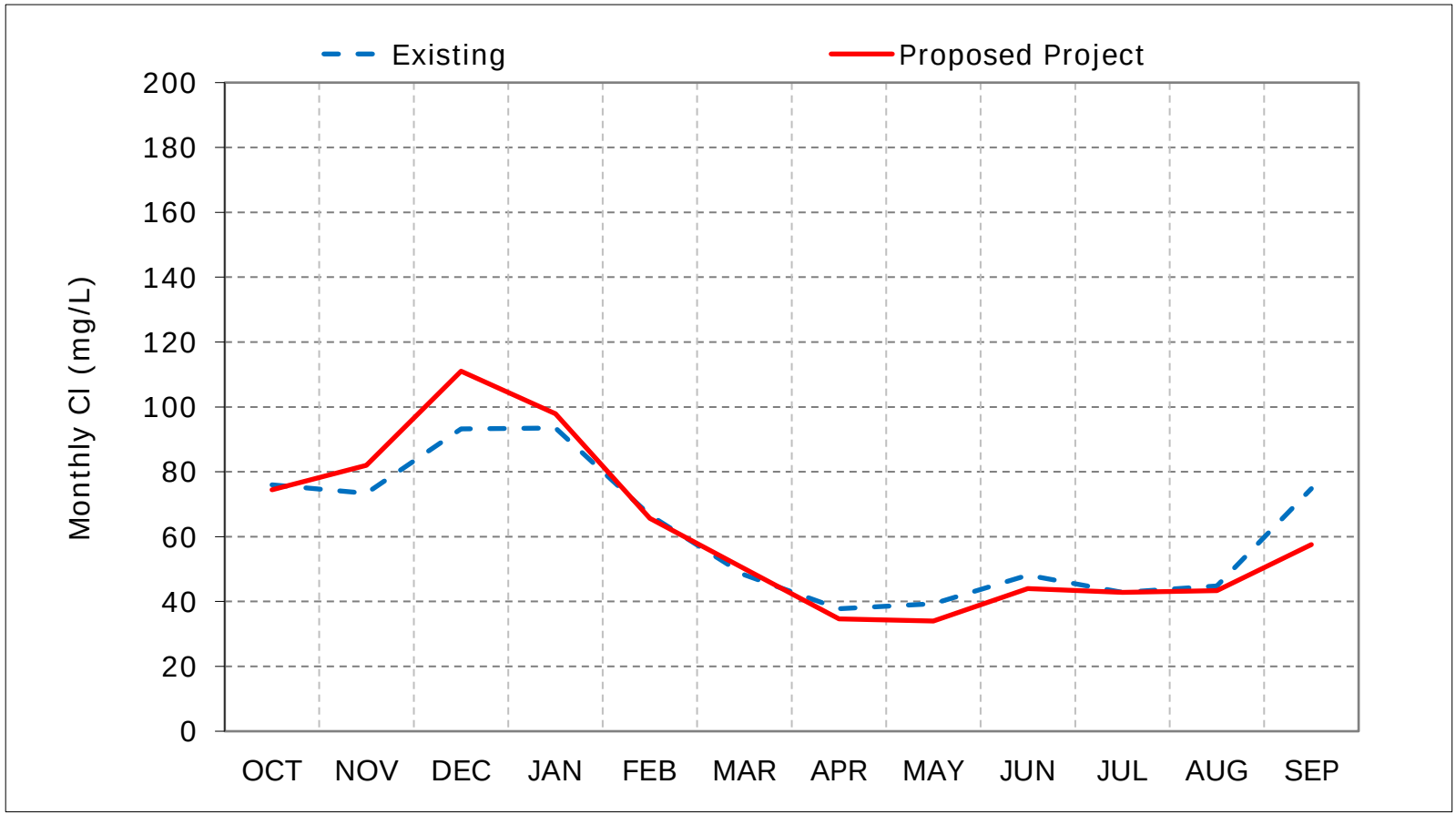
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 12-1. Jones Pumping Plant South Delta Exports Chloride, Long-Term Avera



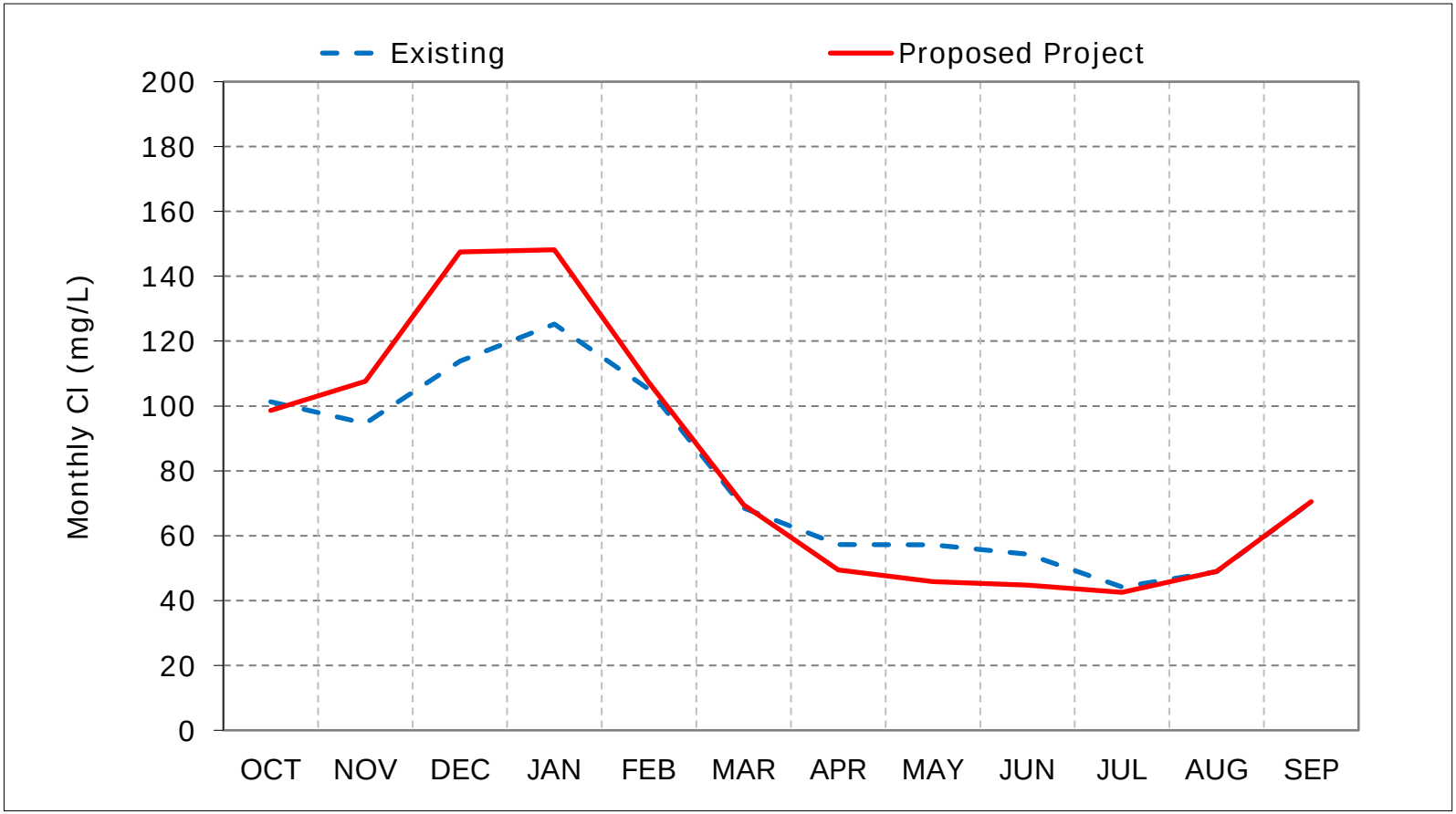
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 12-2. Jones Pumping Plant South Delta Exports Chloride, Wet Year Average



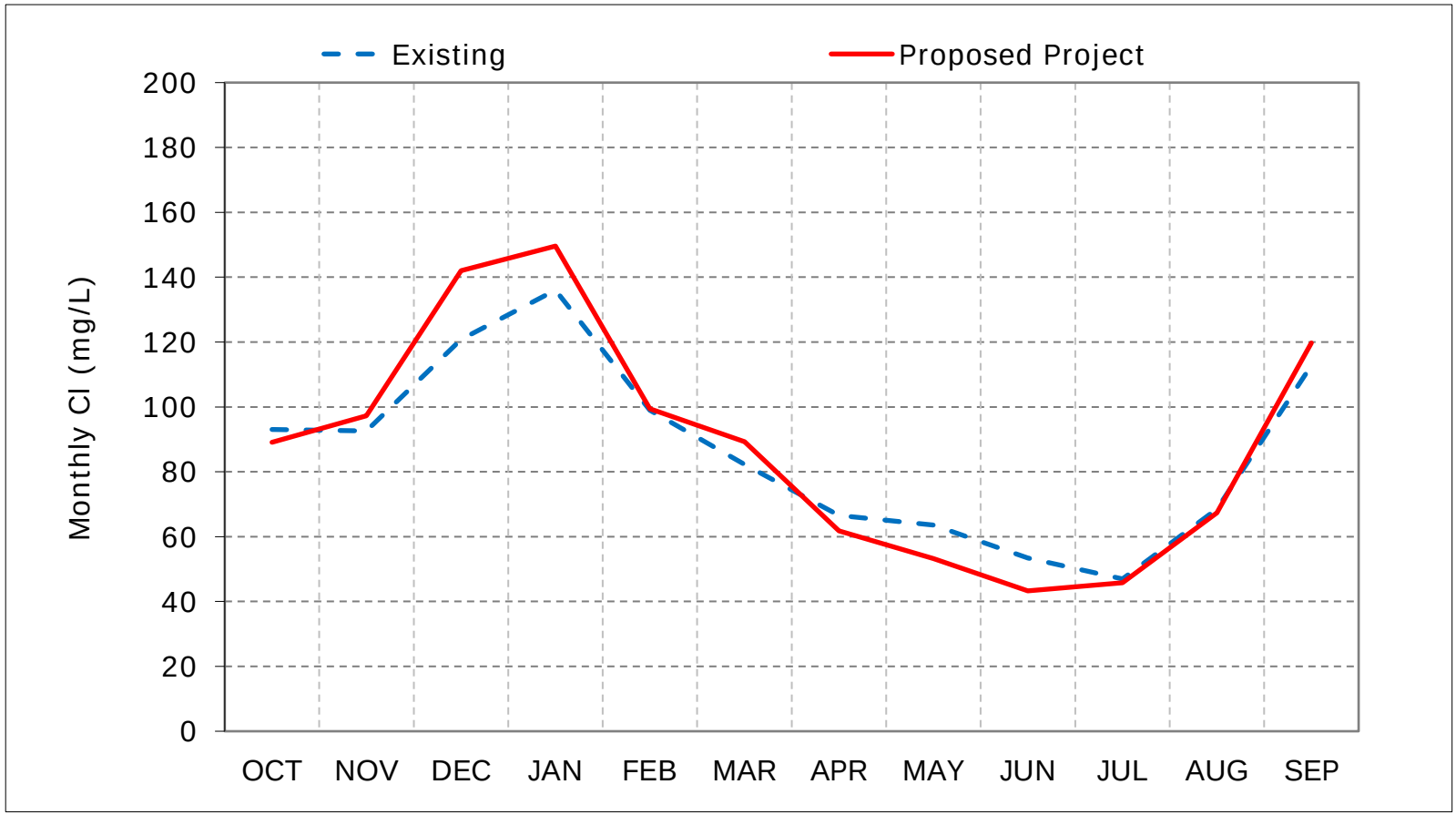
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 12-3. Jones Pumping Plant South Delta Exports Chloride, Above Normal Ye



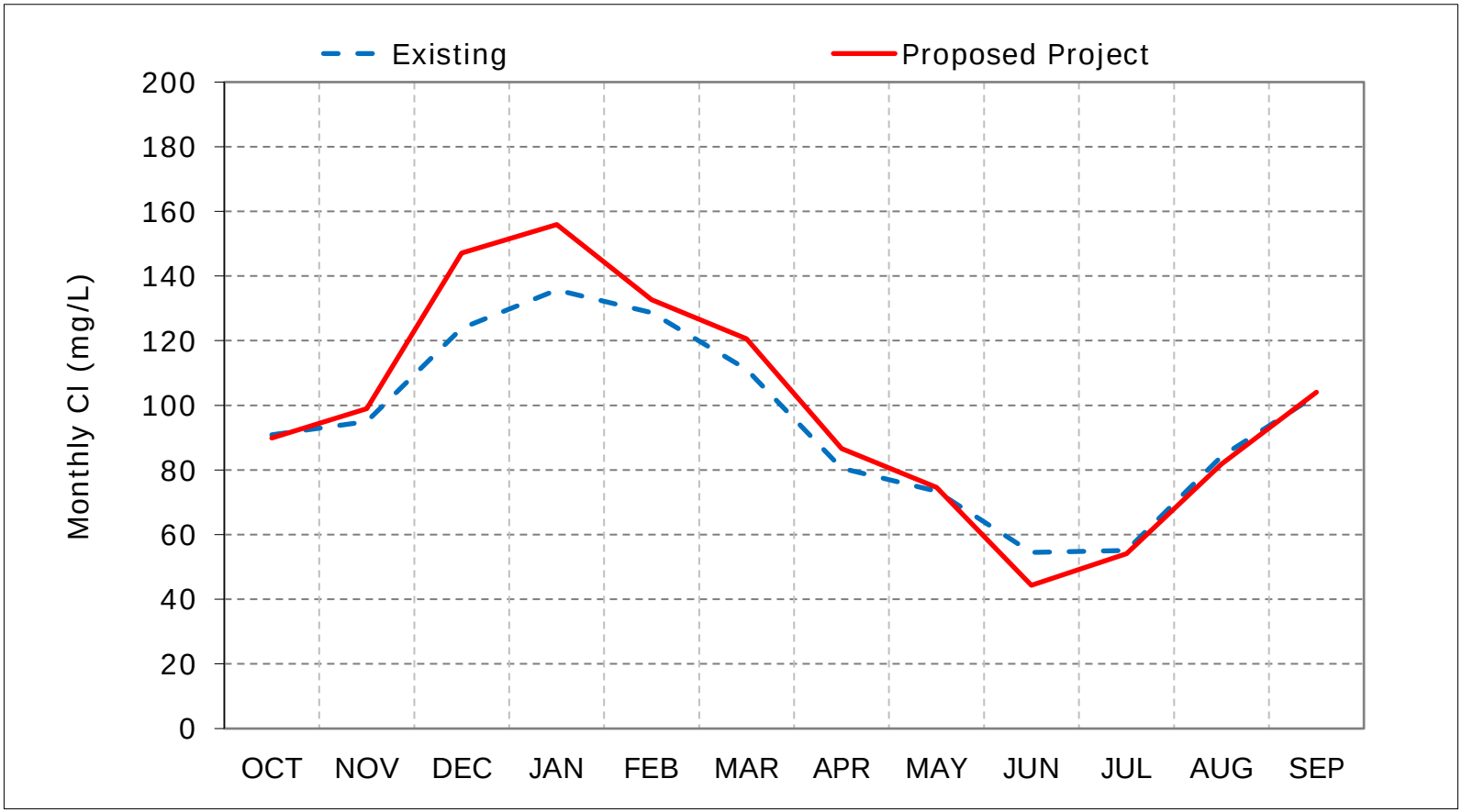
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 12-4. Jones Pumping Plant South Delta Exports Chloride, Below Normal Yea



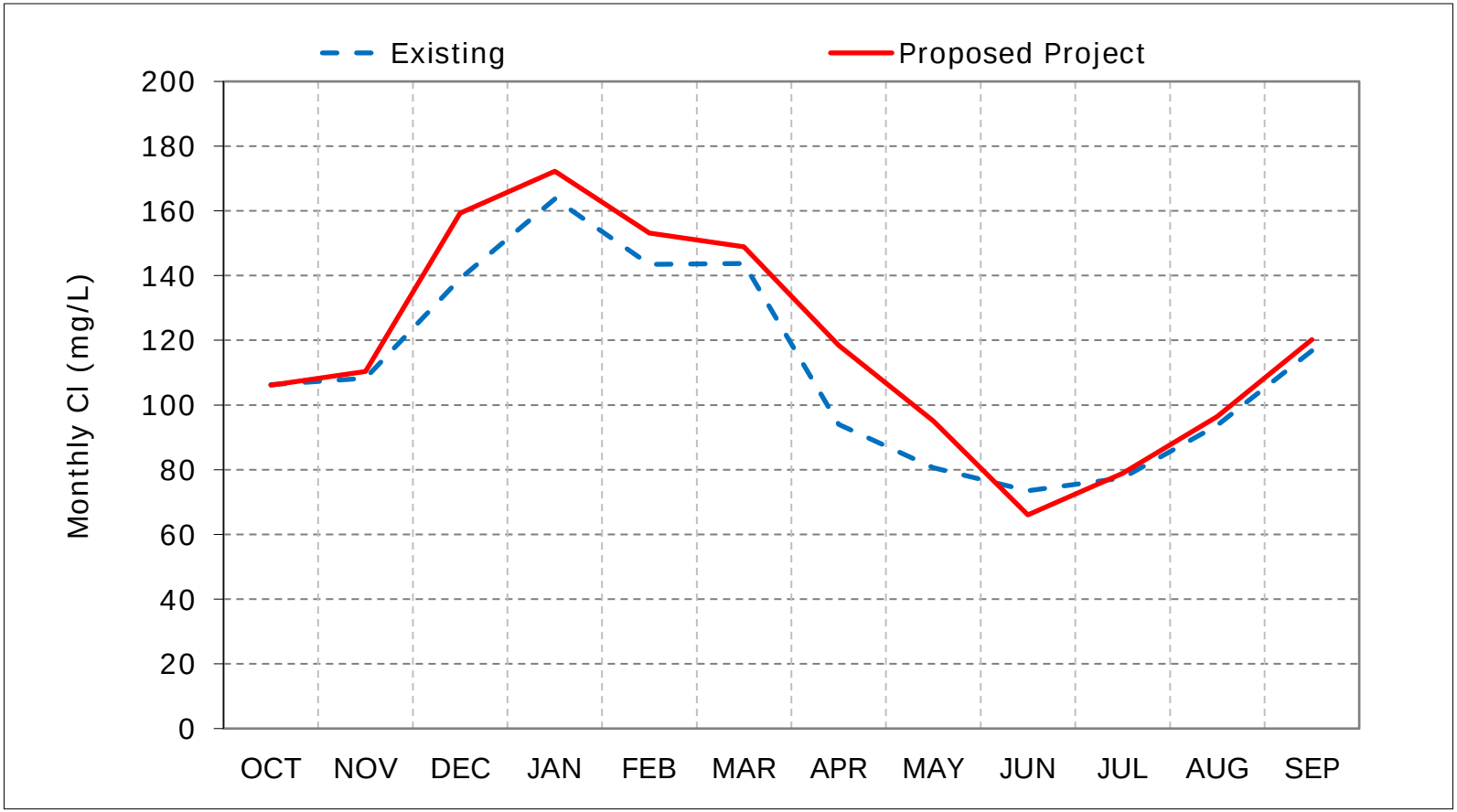
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 12-5. Jones Pumping Plant South Delta Exports Chloride, Dry Year Average



*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.

Figure 12-6. Jones Pumping Plant South Delta Exports Chloride, Critical Year Aver



*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.

Figure 12-7. Jones Pumping Plant South Delta Exports Chloride, January Cl

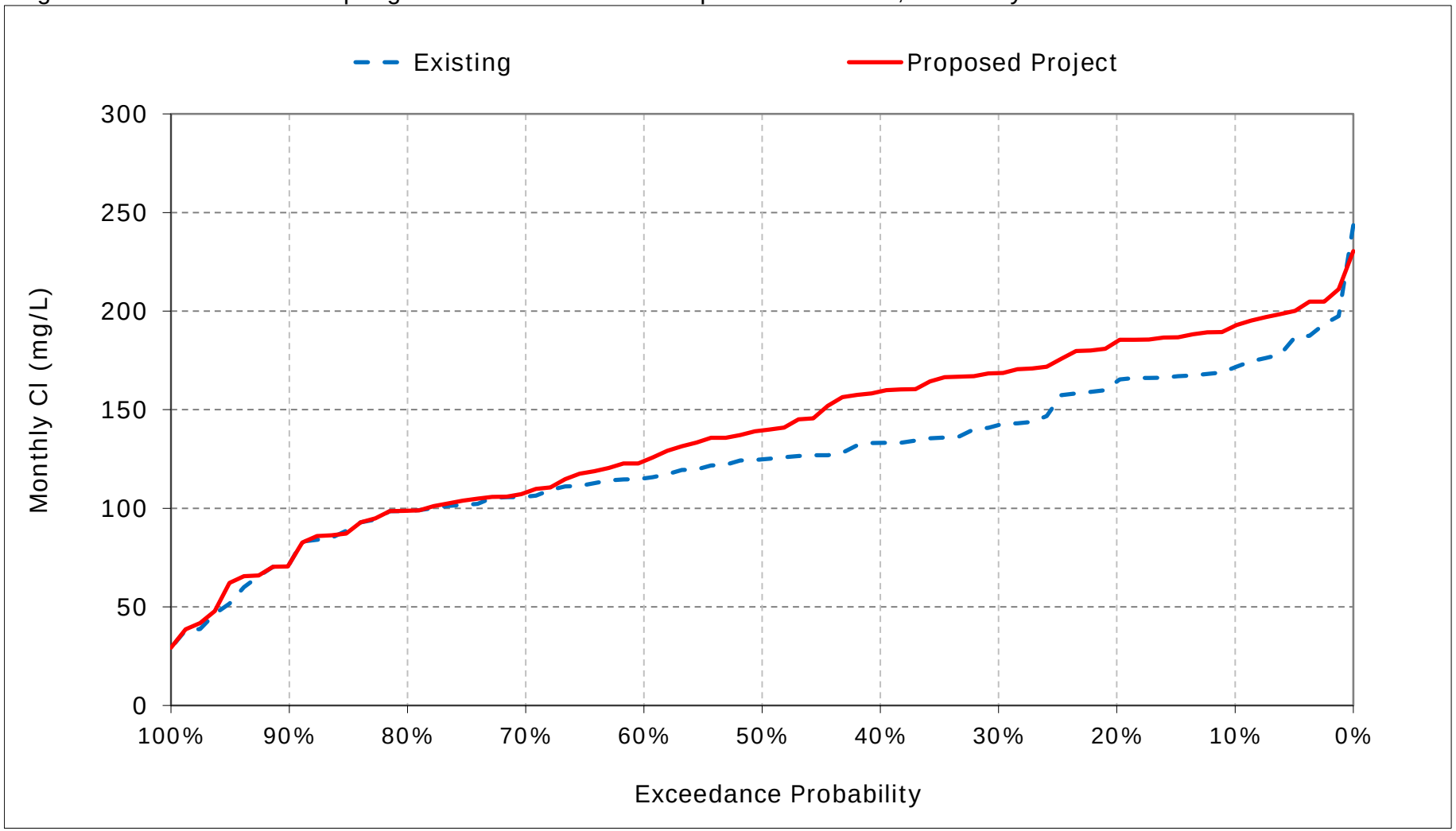


Figure 12-8. Jones Pumping Plant South Delta Exports Chloride, February Cl

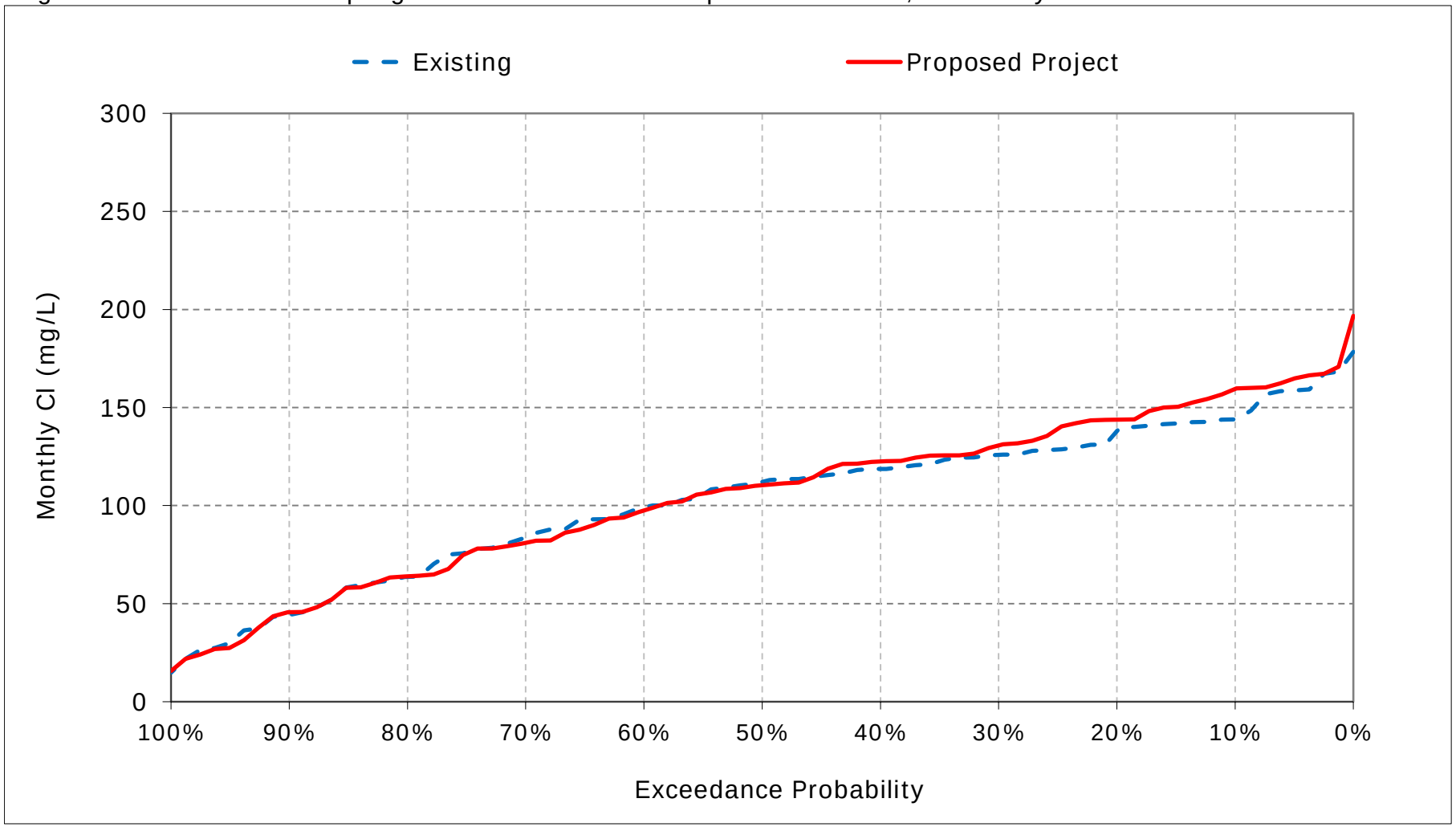


Figure 12-9. Jones Pumping Plant South Delta Exports Chloride, March Cl

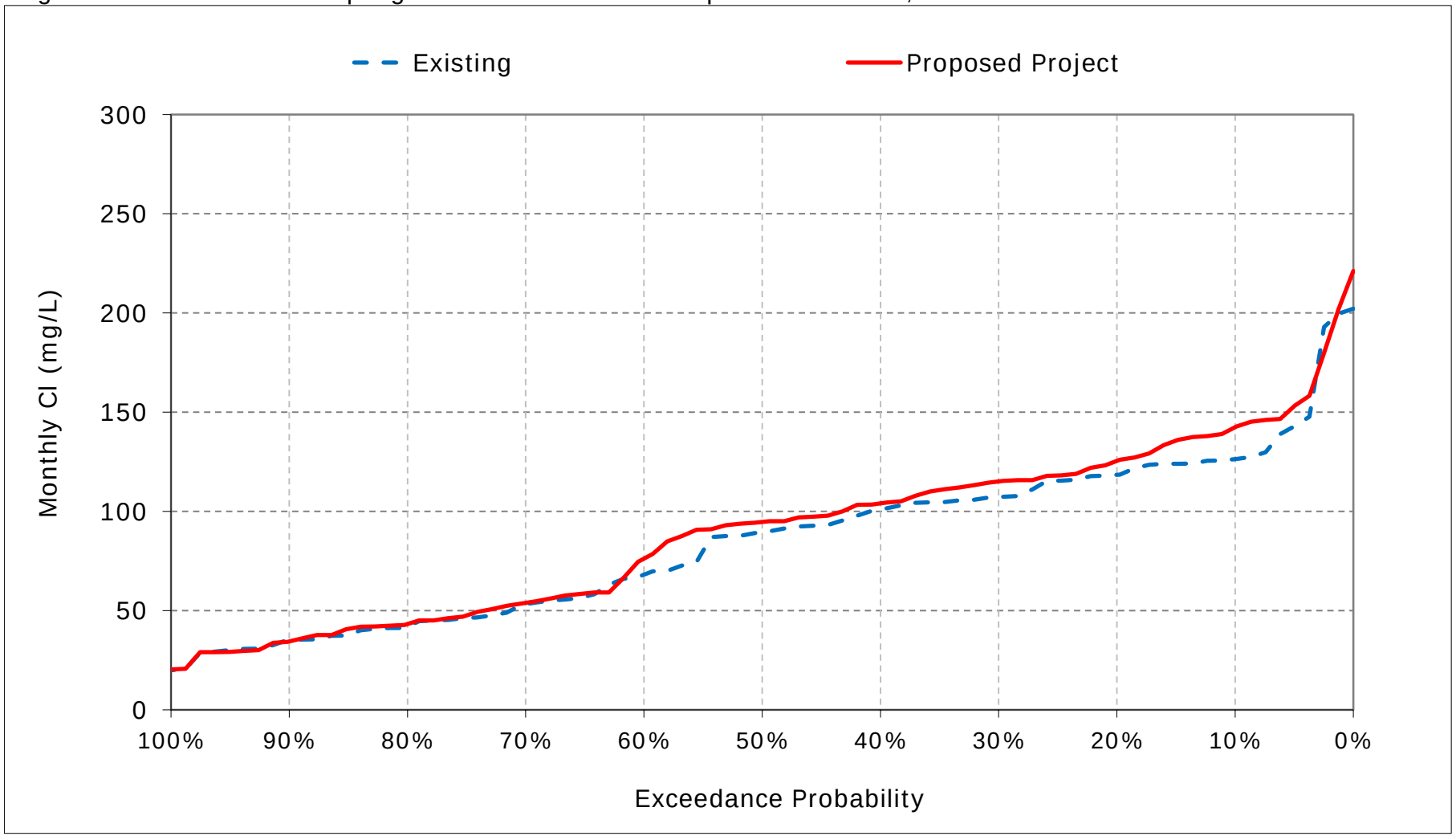


Figure 12-10. Jones Pumping Plant South Delta Exports Chloride, April Cl

Figure 12-11. Jones Pumping Plant South Delta Exports Chloride, May Cl

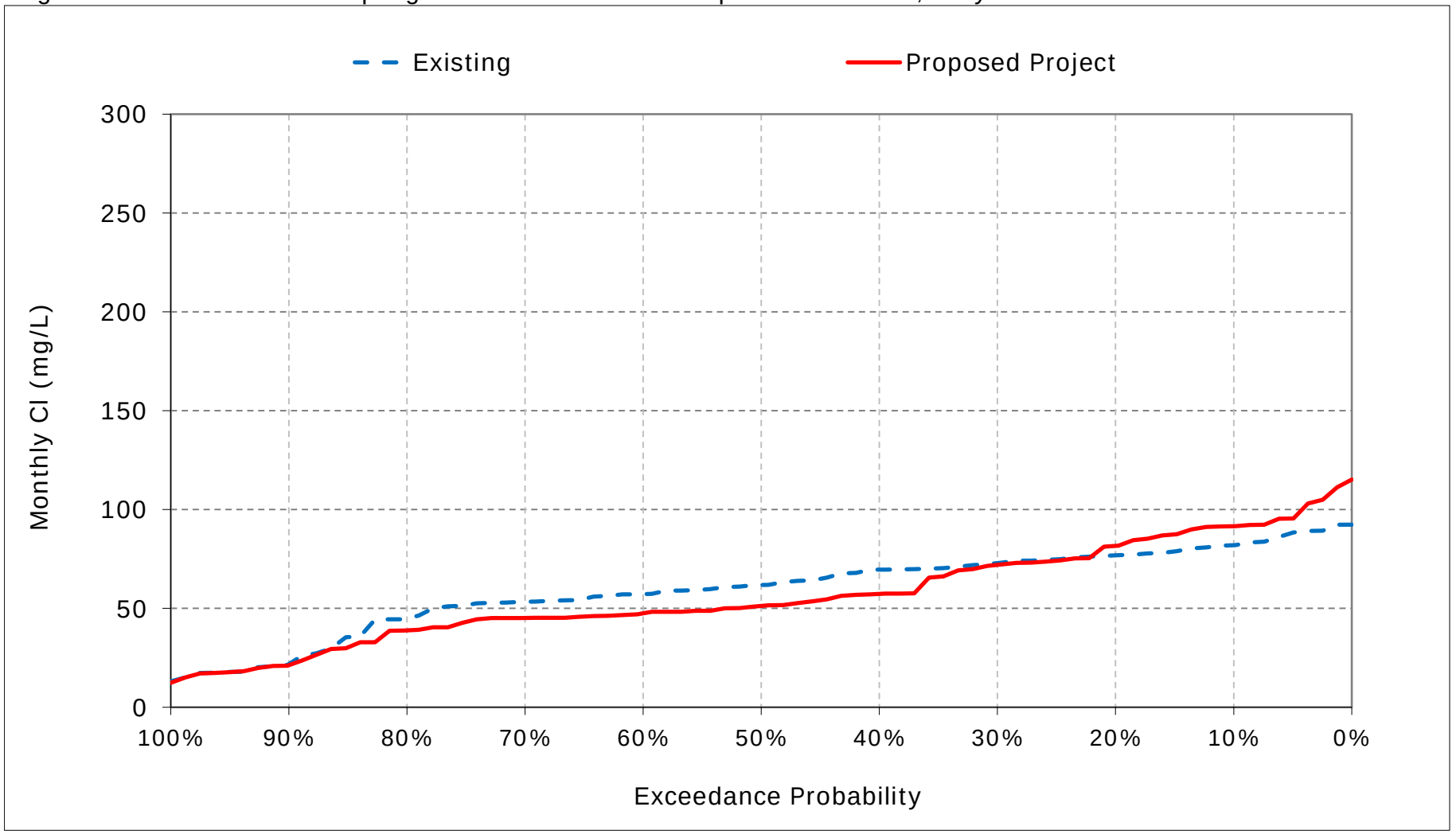


Figure 12-12. Jones Pumping Plant South Delta Exports Chloride, June Cl

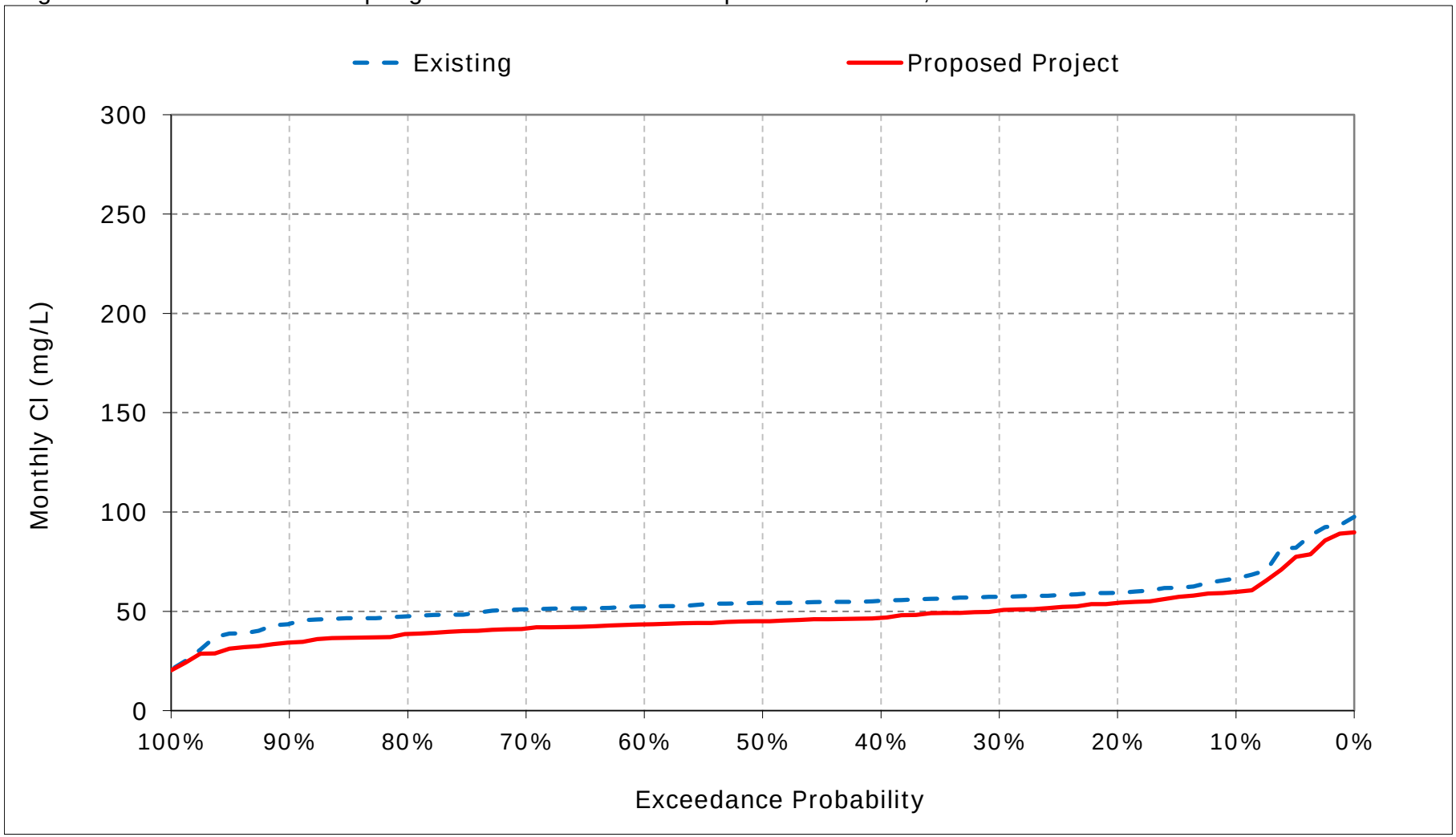


Figure 12-13. Jones Pumping Plant South Delta Exports Chloride, July Cl

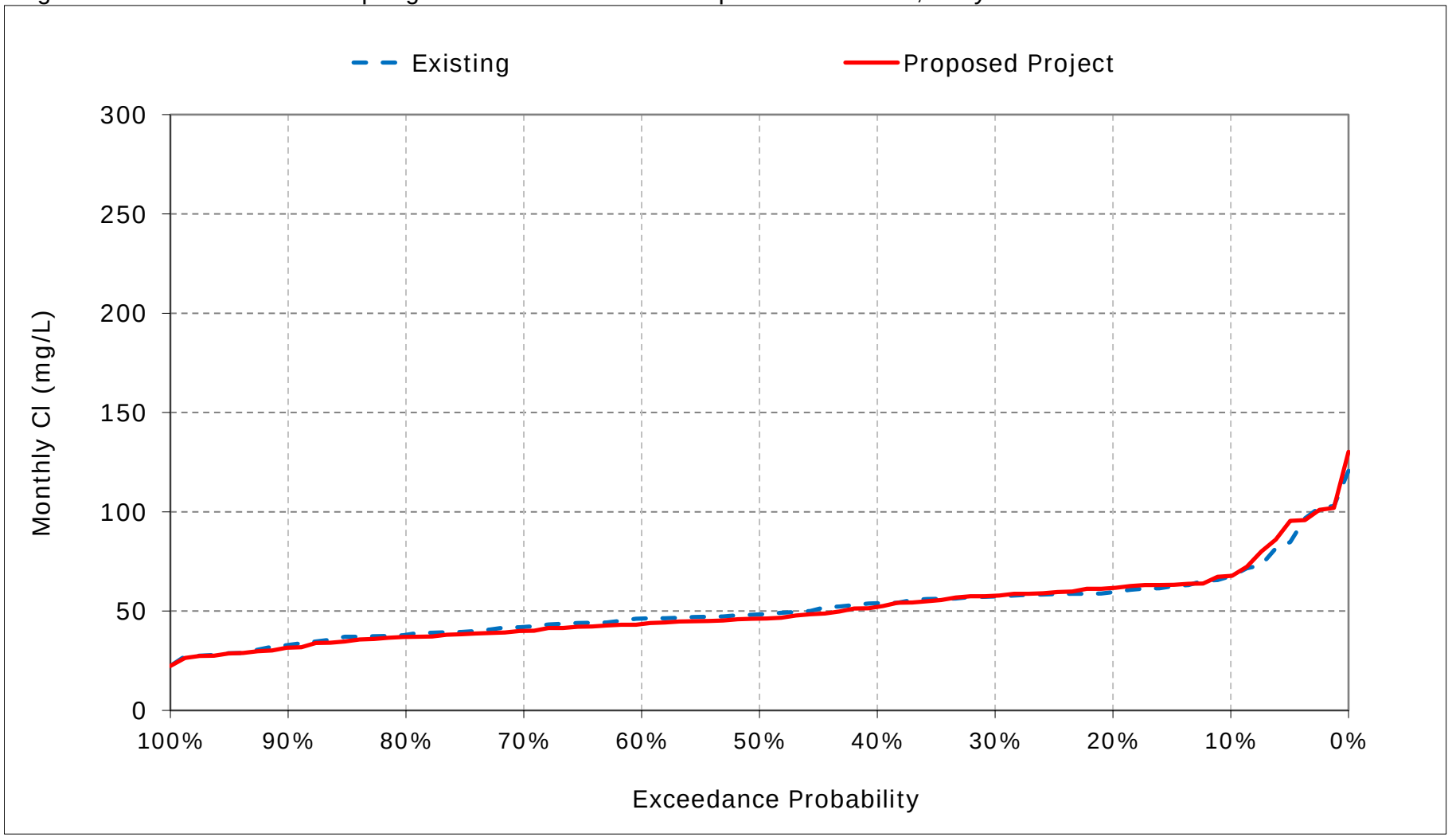


Figure 12-14. Jones Pumping Plant South Delta Exports Chloride, August Cl

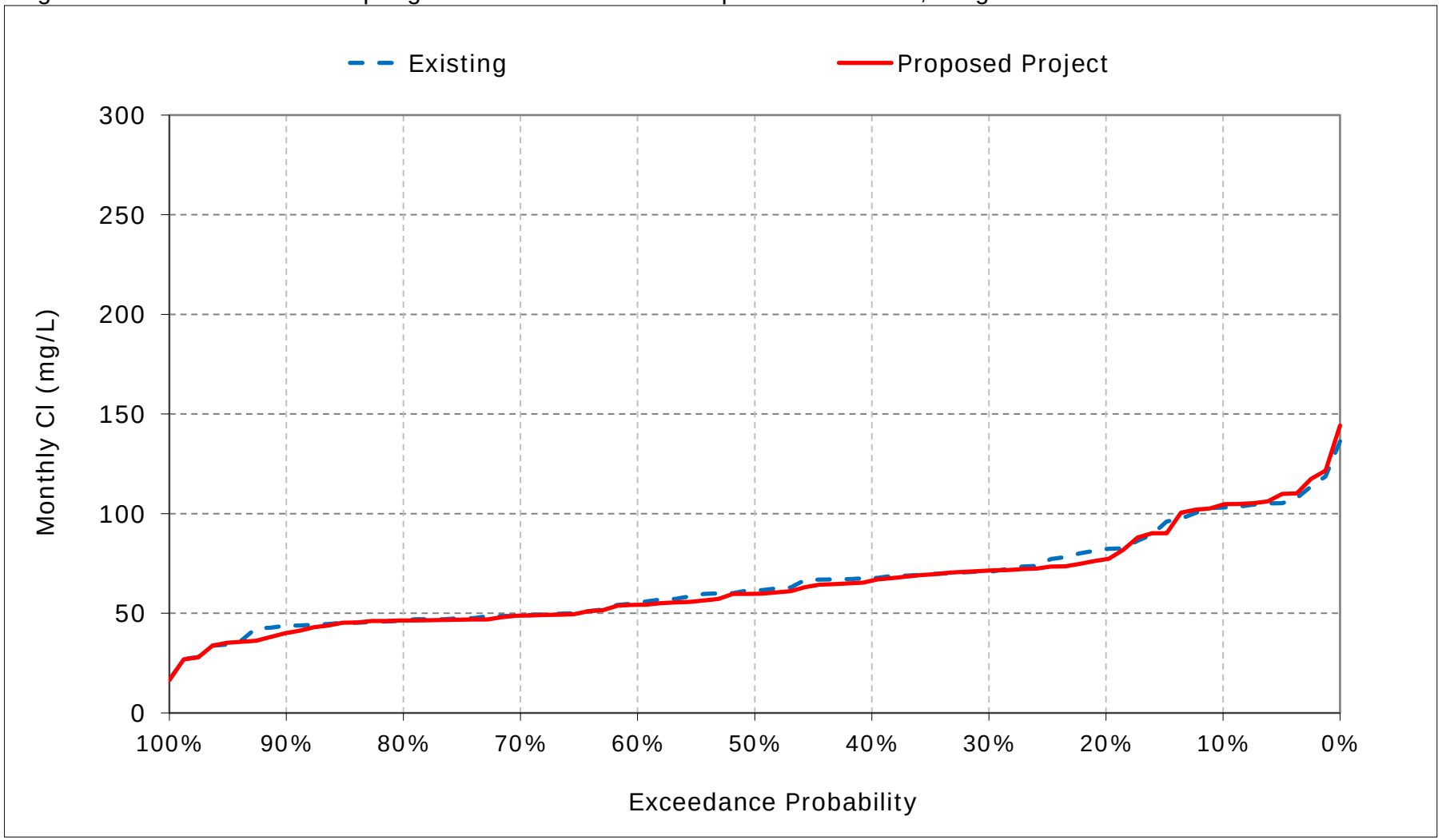


Figure 12-15. Jones Pumping Plant South Delta Exports Chloride, September Cl

Figure 12-16. Jones Pumping Plant South Delta Exports Chloride, October Cl

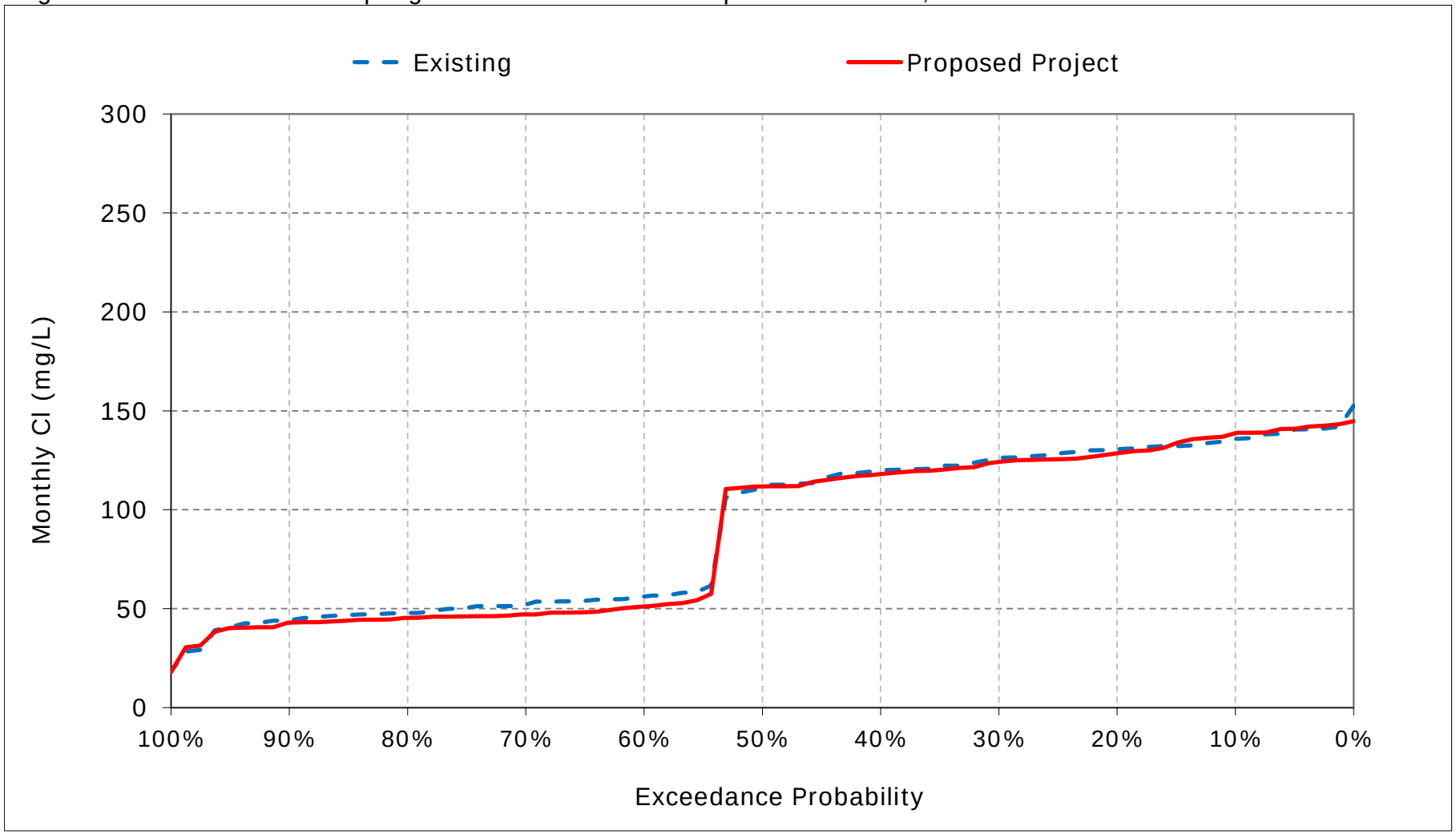


Figure 12-17. Jones Pumping Plant South Delta Exports Chloride, November Cl

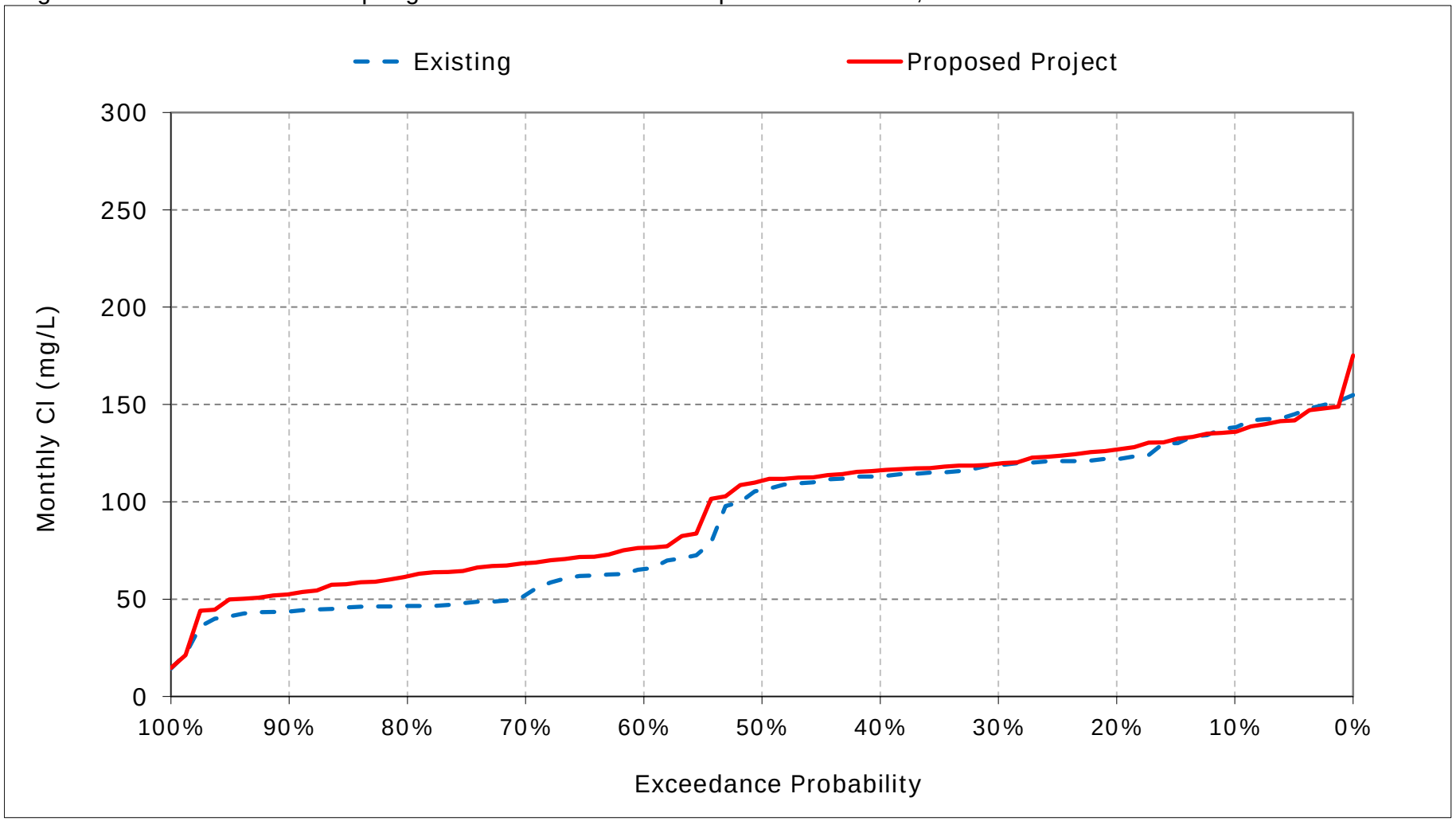


Figure 12-18. Jones Pumping Plant South Delta Exports Chloride, December Cl

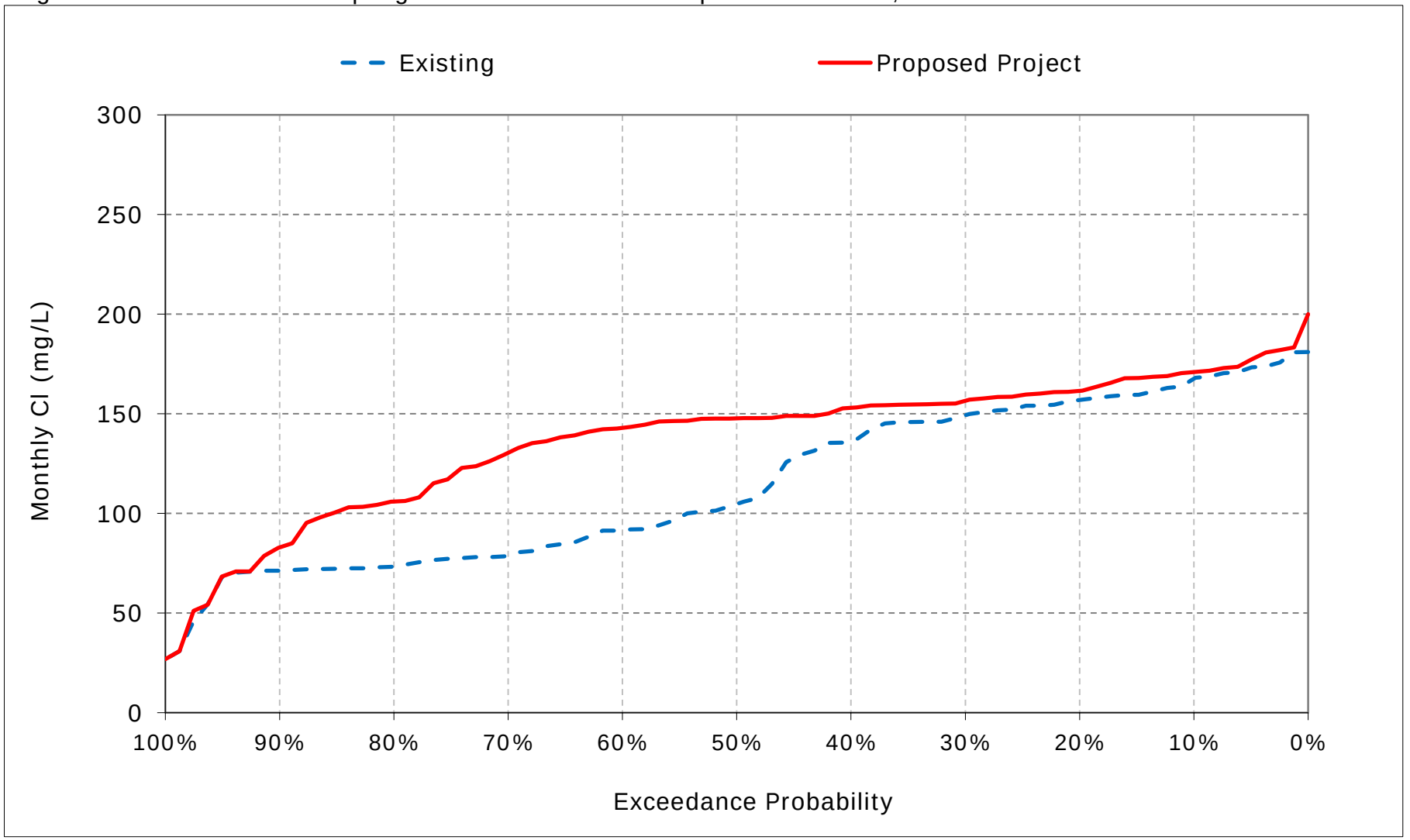


Table 13-1. Barker Slough at NBA Intake Chloride, Monthly Cl

Existing

Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	18	18	19	23	25	23	21	19	18	18	18	18
20%	17	18	18	22	24	22	20	18	17	17	17	17
30%	17	17	18	21	23	21	19	18	17	17	16	17
40%	17	17	18	20	22	21	19	18	17	16	16	16
50%	16	17	17	19	21	20	19	17	17	16	16	16
60%	16	17	17	19	20	19	18	17	17	16	16	16
70%	16	16	17	18	20	19	18	17	17	16	16	16
80%	16	16	17	18	19	18	17	17	16	16	16	16
90%	16	16	16	18	19	18	17	16	16	16	16	16
Long Term												
Full Simulation Period[a]	17	17	18	20	22	20	19	18	17	17	16	17
Water Year Types[b]												
Wet (32%)	16	17	18	21	22	20	18	17	16	16	16	16
Above Normal (15%)	17	17	18	21	22	20	18	17	17	16	16	16
Below Normal (17%)	17	17	18	20	22	21	19	17	17	16	16	16
Dry (22%)	17	17	18	20	22	21	20	18	17	17	16	17
Critical (15%)	17	17	17	19	21	21	21	21	20	18	18	18

Proposed Project

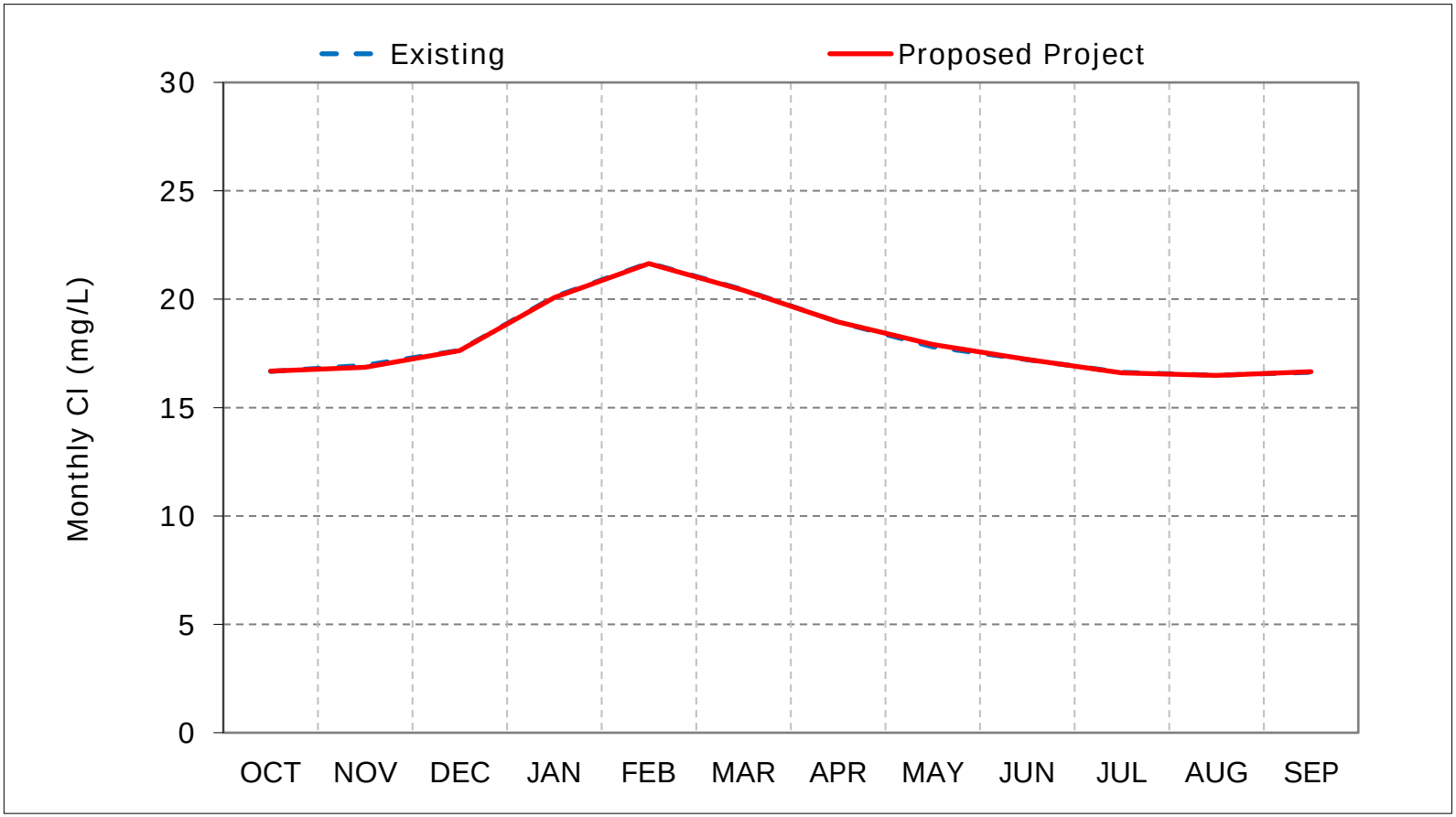
Statistic	Monthly Cl (mg/L)											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Probability of Exceedance												
10%	18	18	19	23	25	23	22	20	19	18	18	18
20%	17	18	18	22	24	23	20	19	17	17	17	17
30%	17	17	18	21	23	21	19	18	17	17	16	17
40%	17	17	18	20	22	20	19	17	17	16	16	16
50%	16	17	17	19	21	20	19	17	17	16	16	16
60%	16	16	17	19	20	19	18	17	17	16	16	16
70%	16	16	17	18	20	19	18	17	17	16	16	16
80%	16	16	16	18	19	18	17	17	16	16	16	16
90%	16	16	16	18	19	18	17	16	16	16	16	16
Long Term												
Full Simulation Period[a]	17	17	18	20	22	20	19	18	17	17	16	17
Water Year Types[b]												
Wet (32%)	16	17	18	20	22	20	18	17	16	16	16	16
Above Normal (15%)	16	17	18	21	22	20	18	17	17	16	16	16
Below Normal (17%)	17	17	18	20	22	20	19	17	17	16	16	16
Dry (22%)	17	17	18	20	22	21	20	18	17	17	16	17
Critical (15%)	17	17	17	19	21	21	21	21	20	18	18	18

Proposed Project minus Existing

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

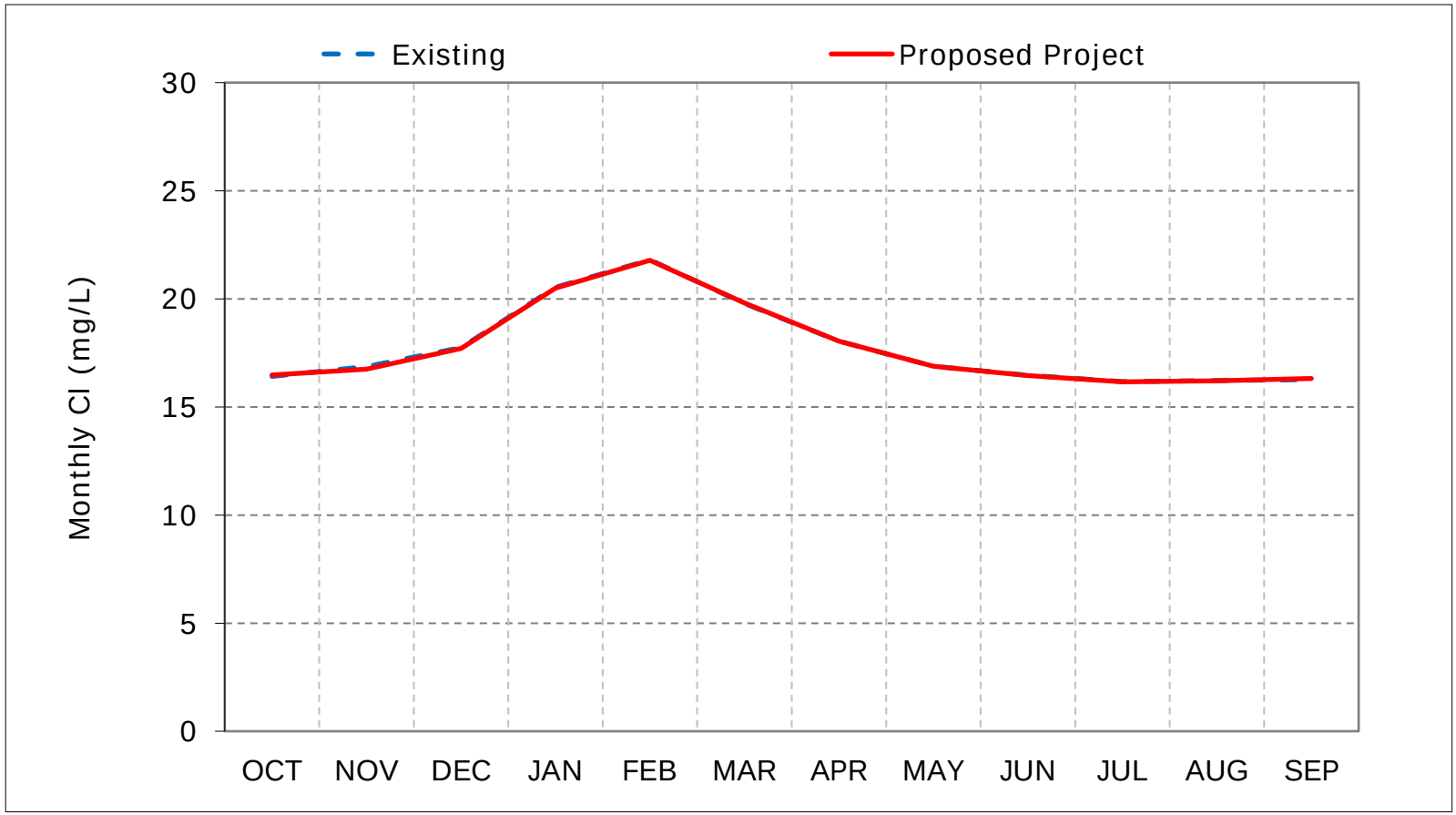
a Based on the 82-year simulation period.
b As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
c These results are displayed with water year - year type sorting.
d Positive differences are highted in red color which indicate increase in Salinity (EC).

Figure 13-1. Barker Slough at NBA Intake Chloride, Long-Term Average Cl



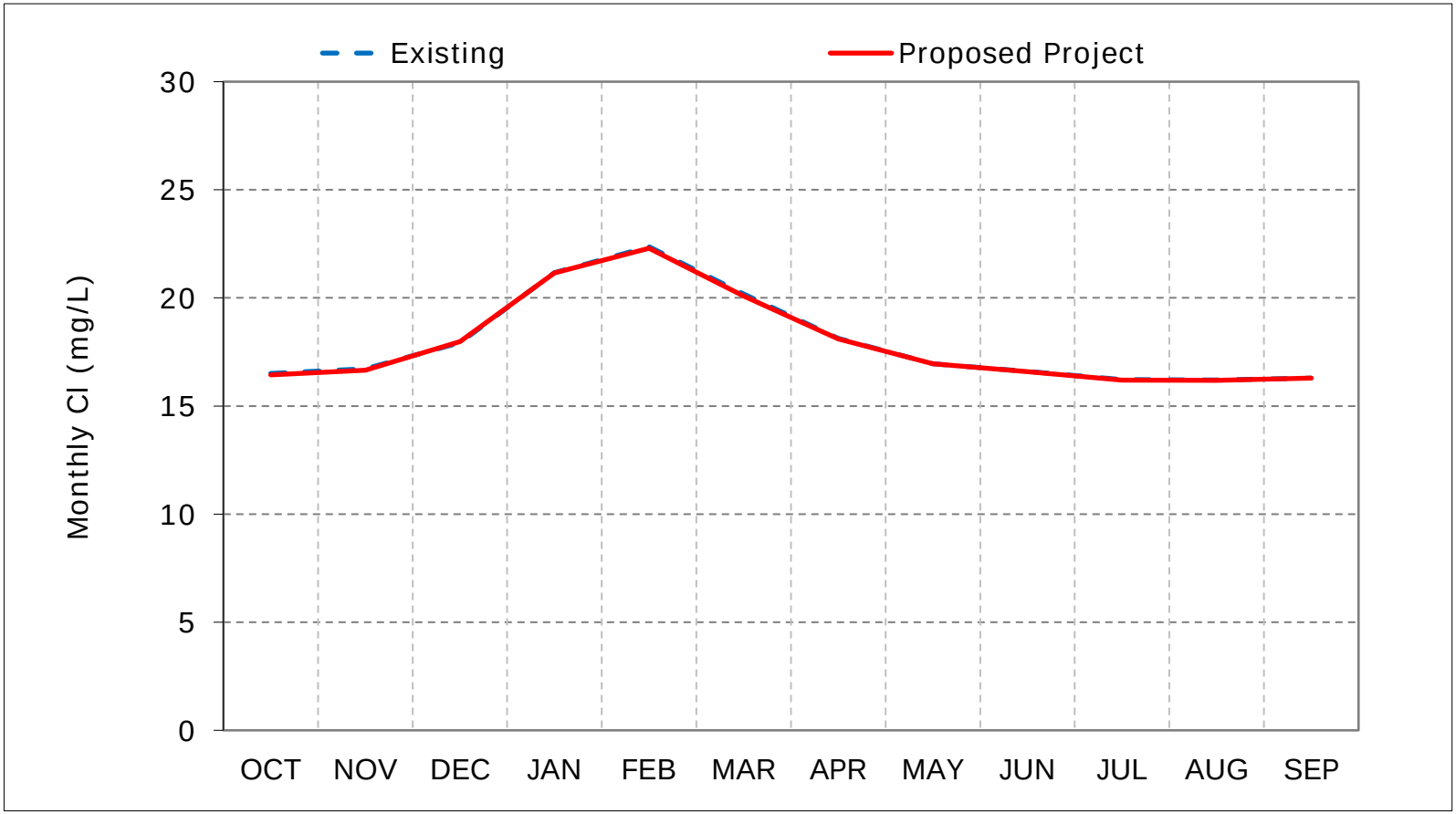
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 13-2. Barker Slough at NBA Intake Chloride, Wet Year Average Cl



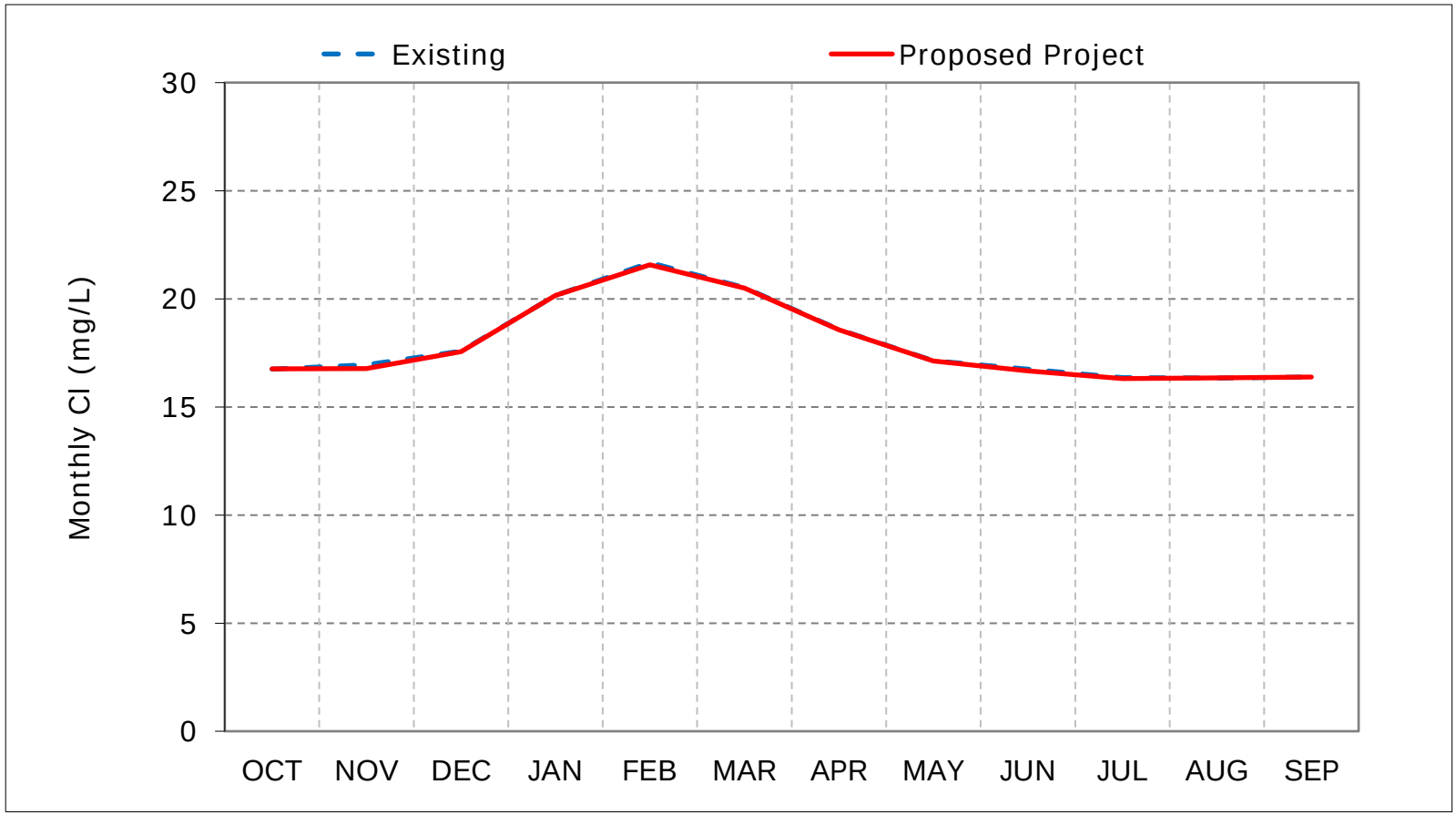
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 13-3. Barker Slough at NBA Intake Chloride, Above Normal Year Average C



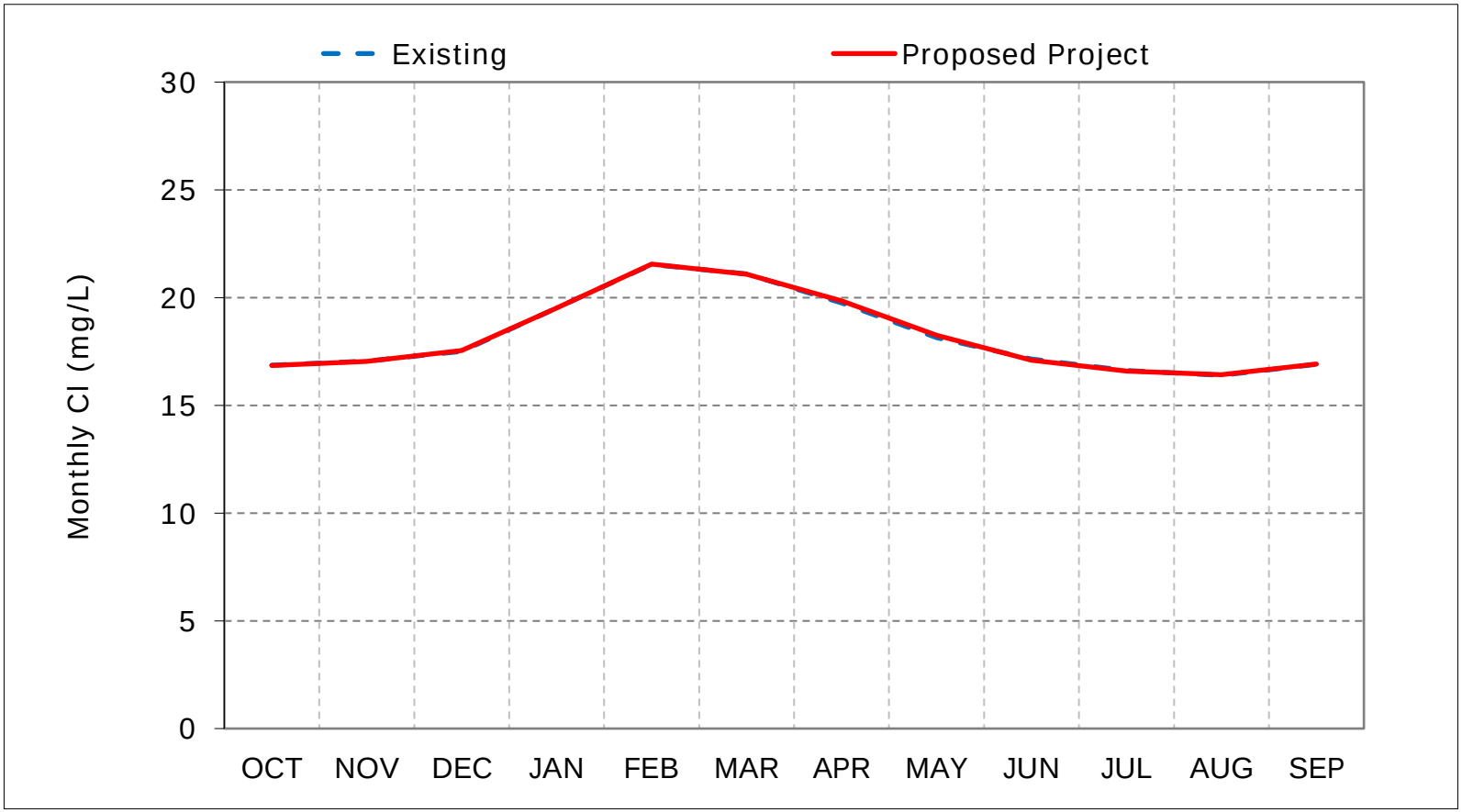
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 13-4. Barker Slough at NBA Intake Chloride, Below Normal Year Average C



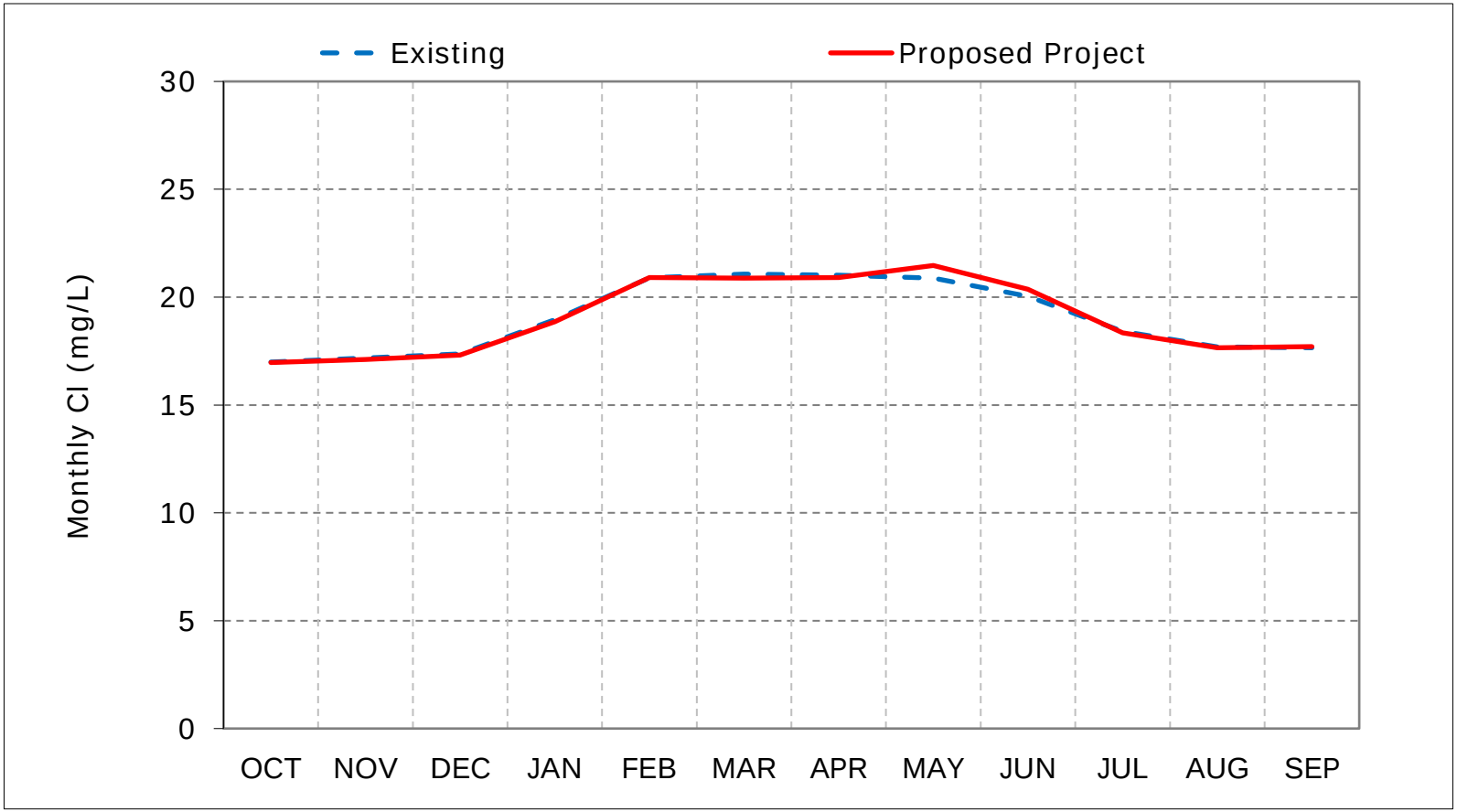
*As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB D-1641, 1999).
*These results are displayed with water year - year type sorting.

Figure 13-5. Barker Slough at NBA Intake Chloride, Dry Year Average Cl



*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.

Figure 13-6. Barker Slough at NBA Intake Chloride, Critical Year Average Cl



*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.

Figure 13-7. Barker Slough at NBA Intake Chloride, January Cl

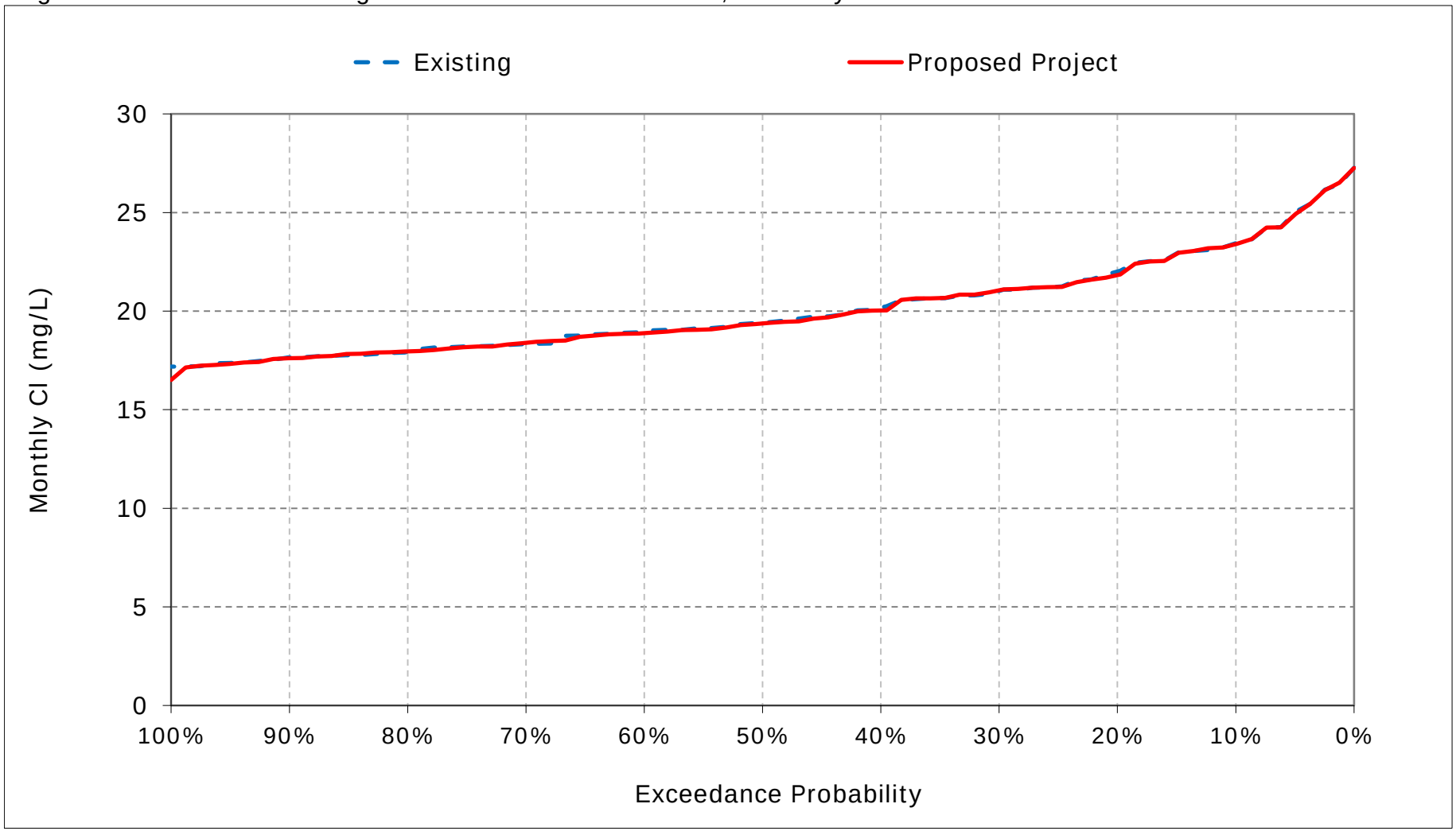


Figure 13-8. Barker Slough at NBA Intake Chloride, February Cl

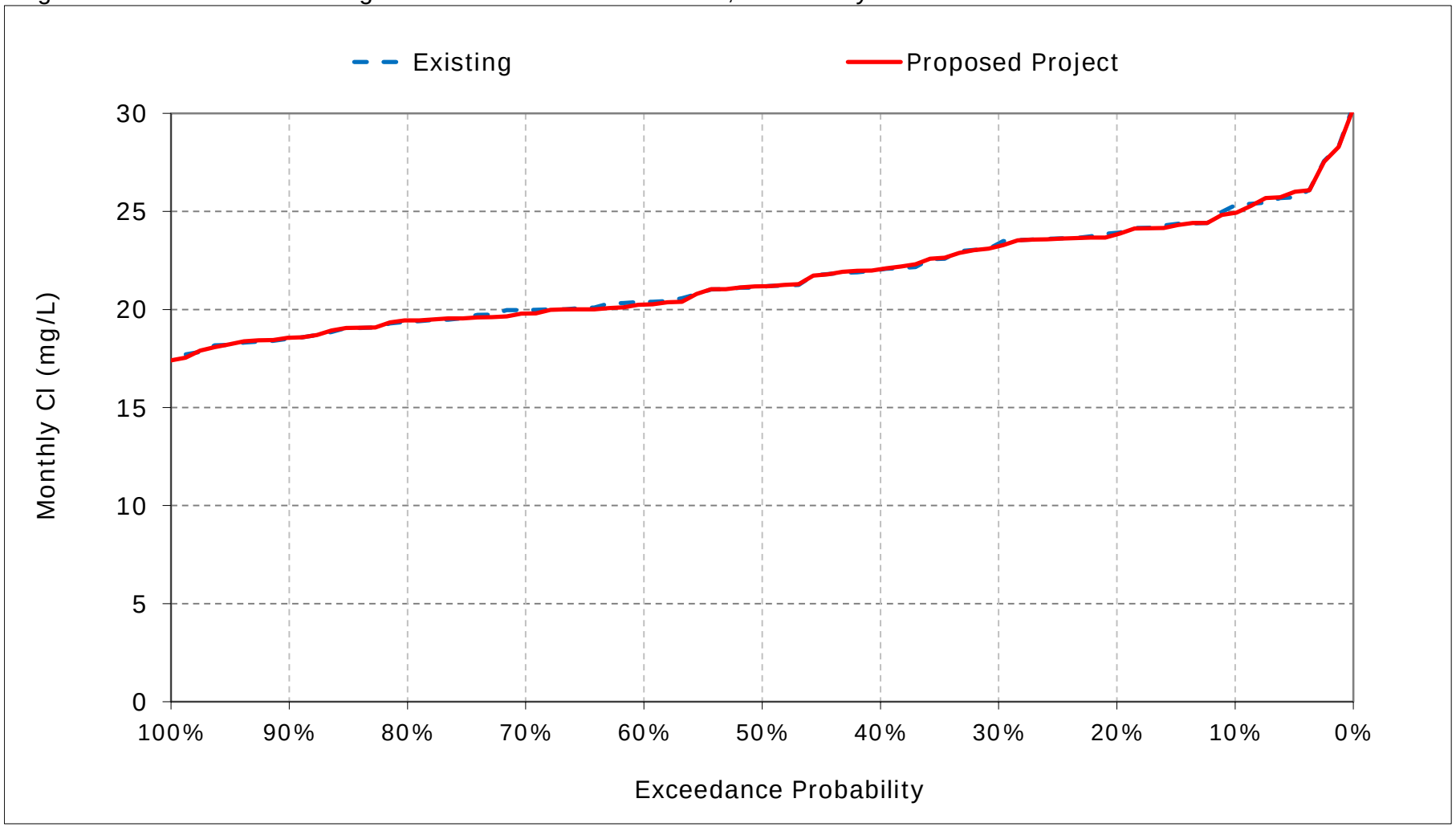


Figure 13-9. Barker Slough at NBA Intake Chloride, March Cl

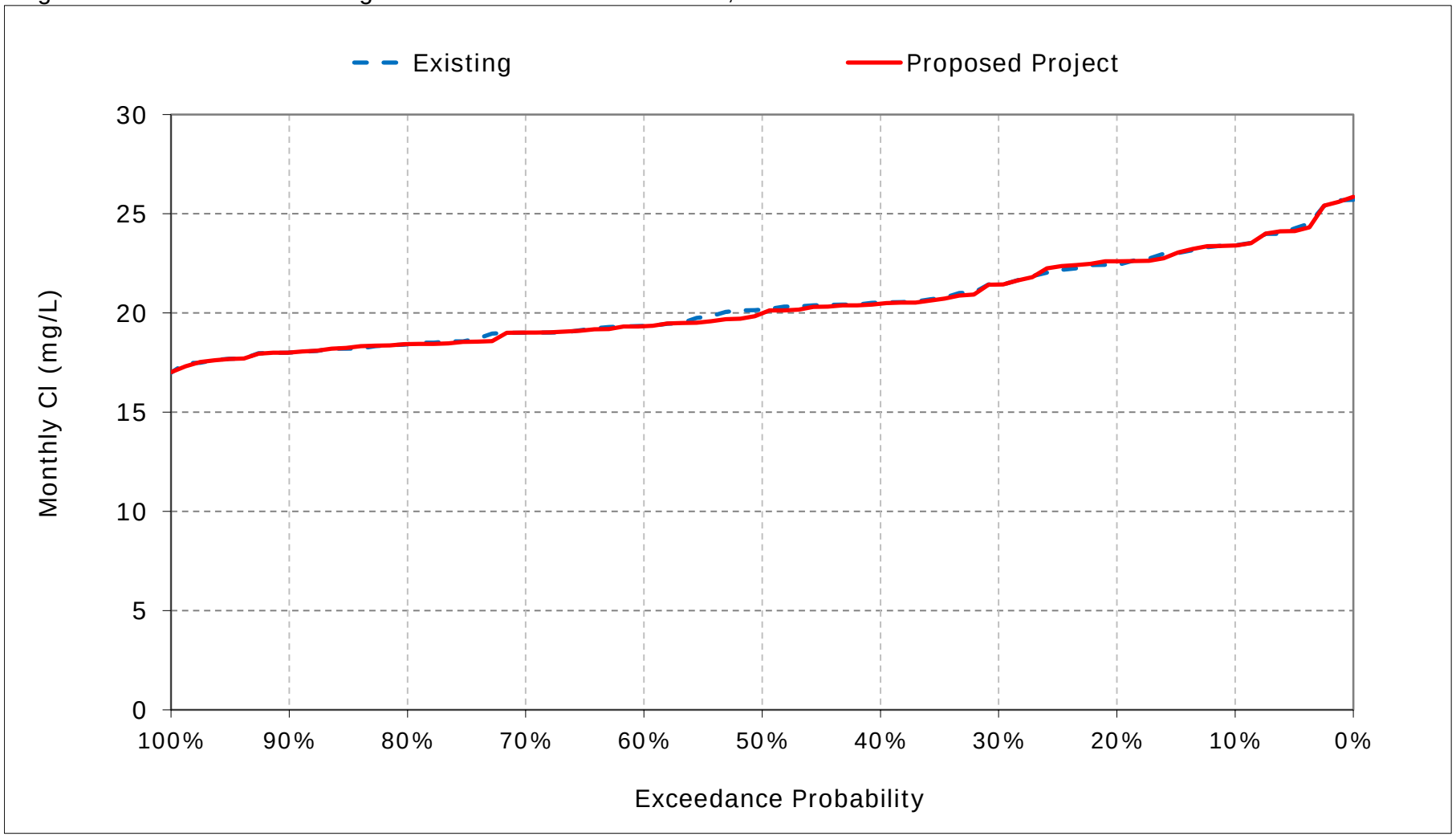


Figure 13-10. Barker Slough at NBA Intake Chloride, April Cl

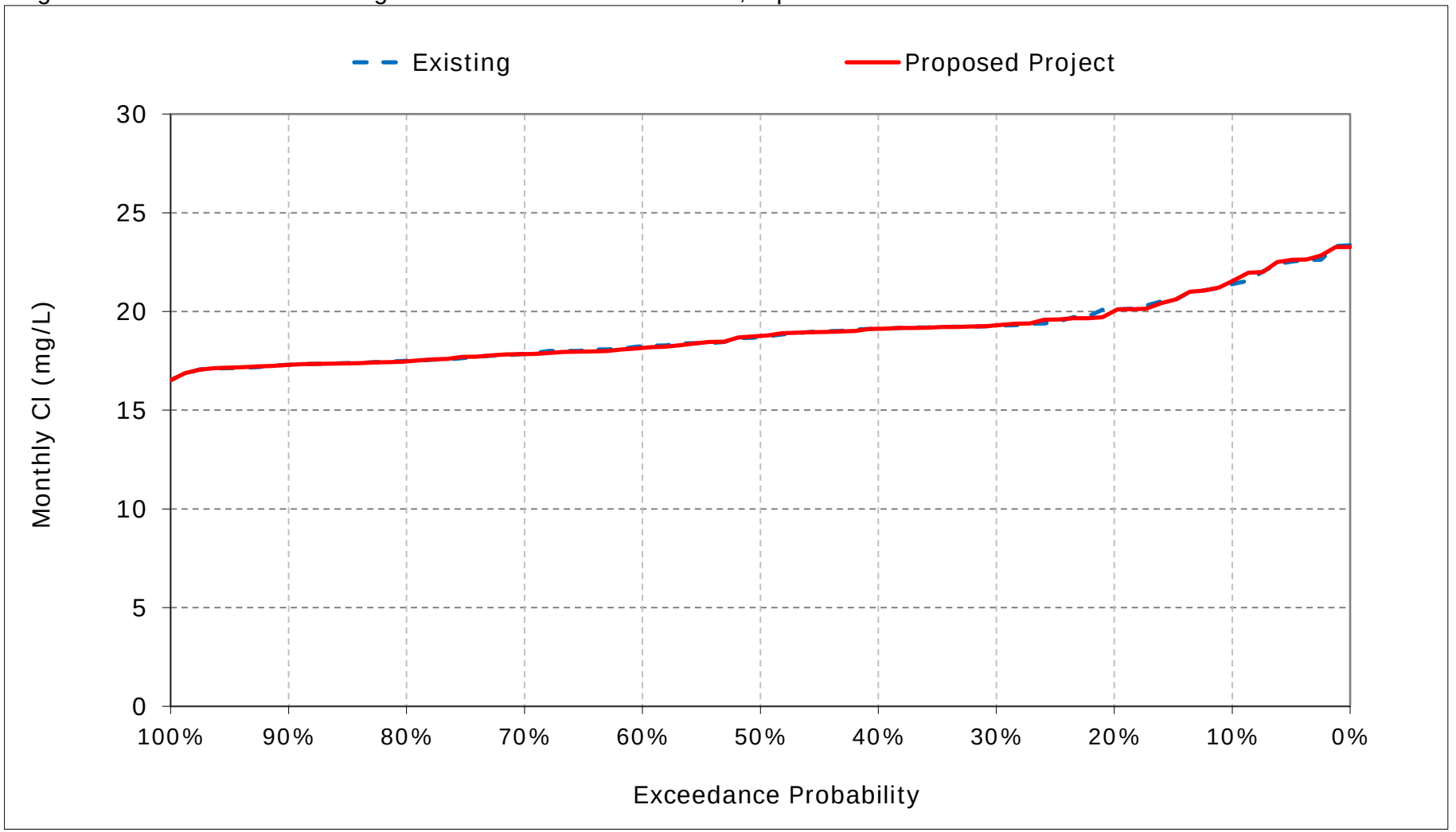


Figure 13-11. Barker Slough at NBA Intake Chloride, May Cl

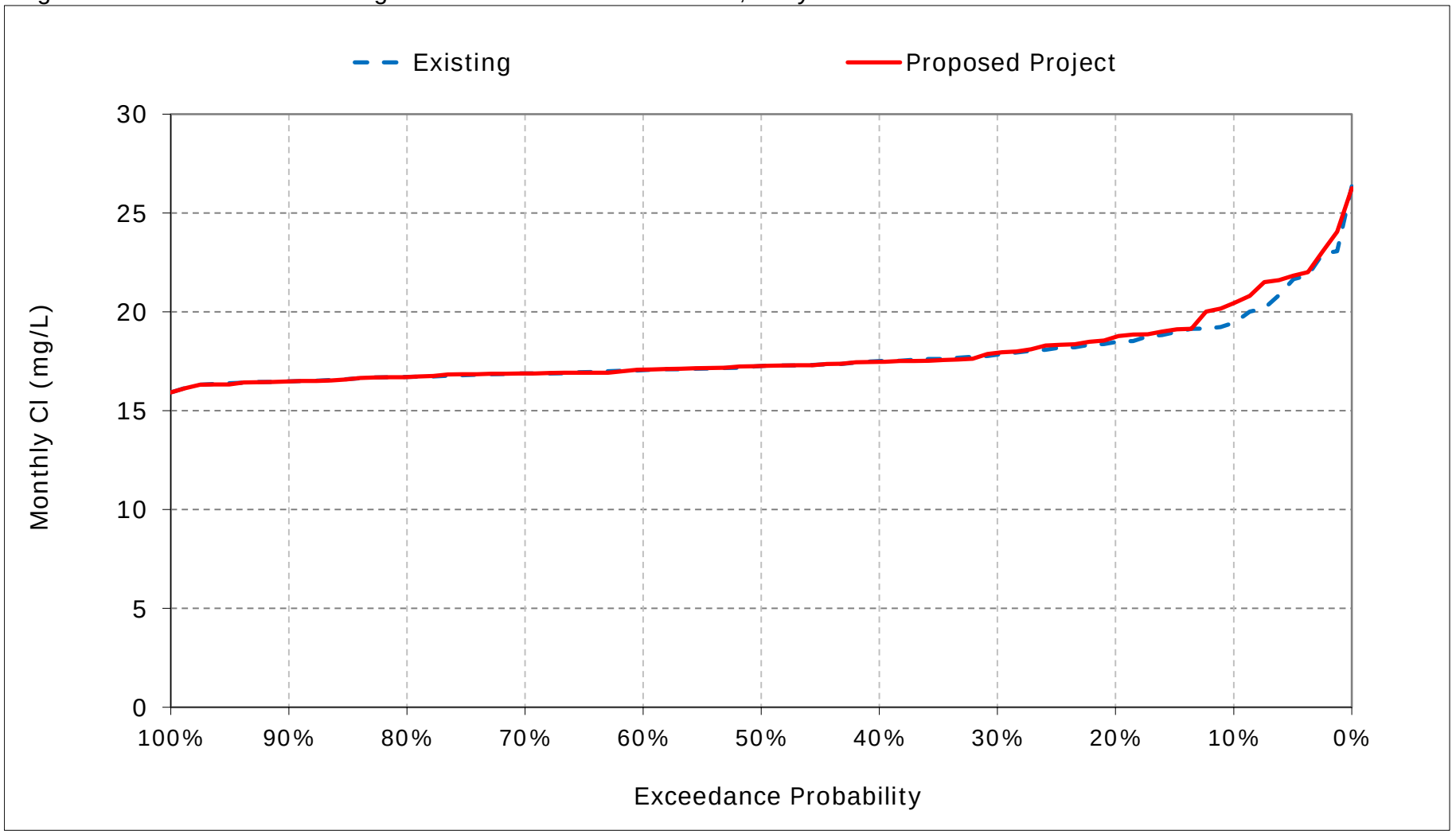


Figure 13-12. Barker Slough at NBA Intake Chloride, June Cl

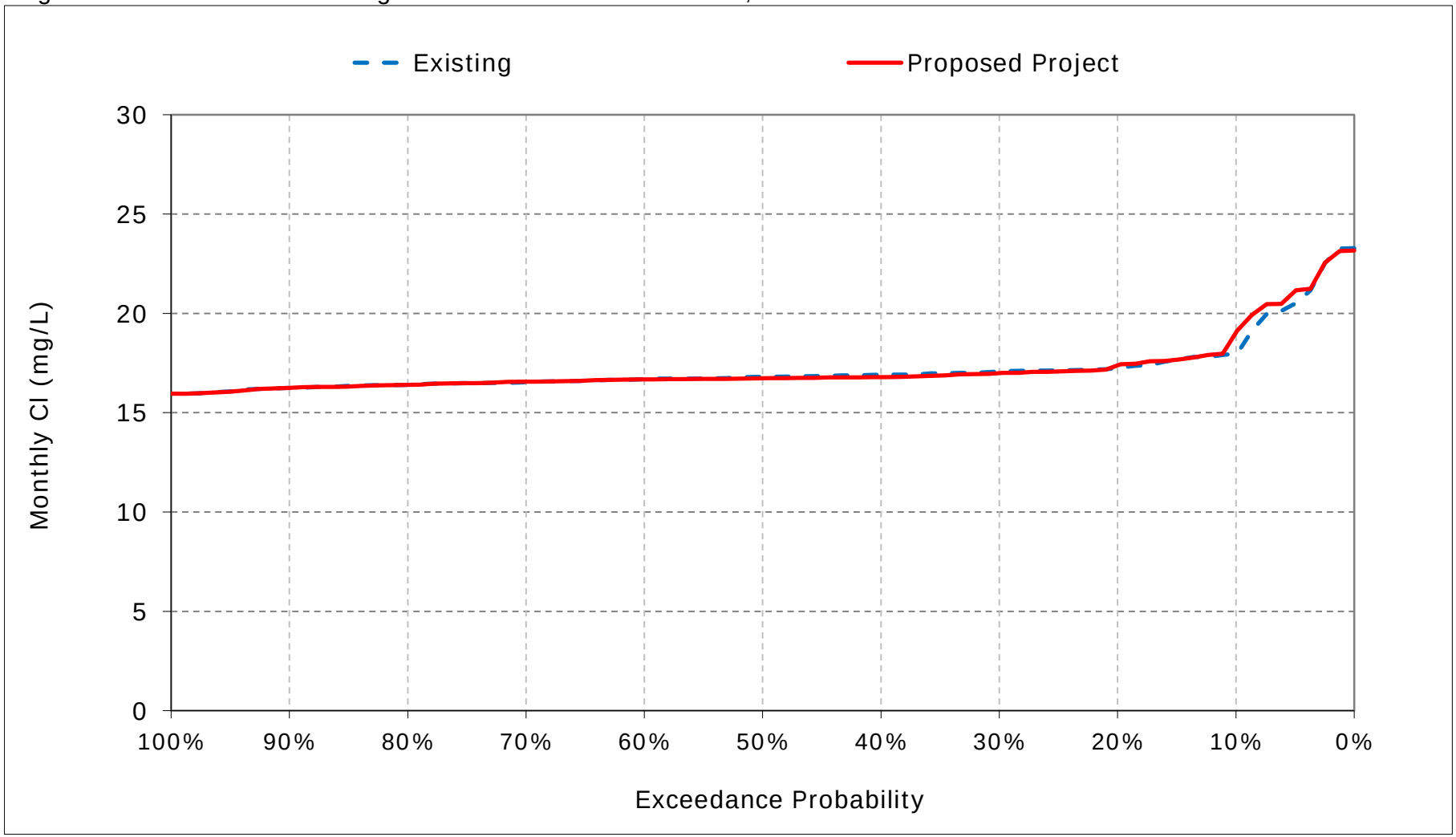


Figure 13-13. Barker Slough at NBA Intake Chloride, July Cl

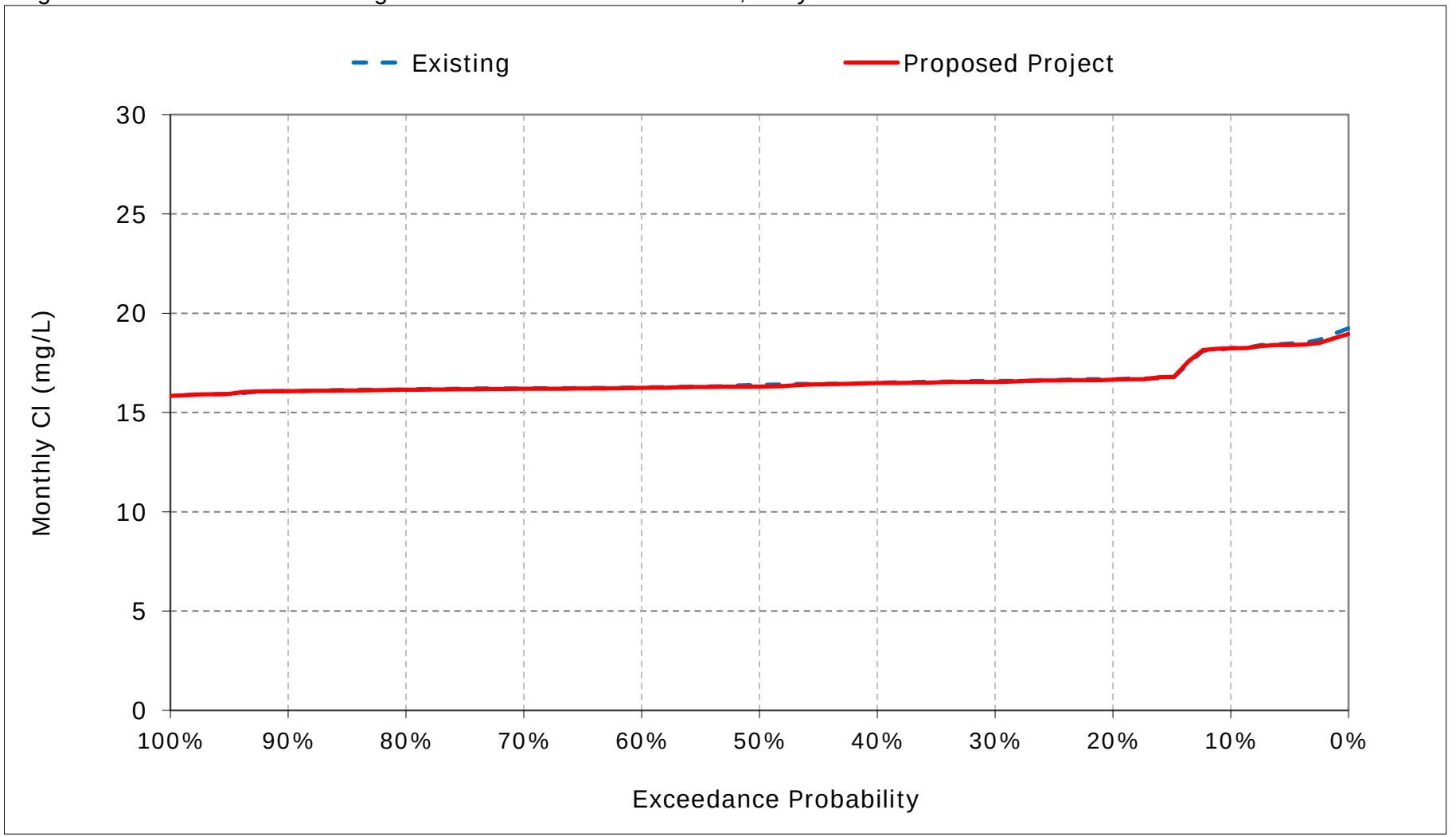


Figure 13-14. Barker Slough at NBA Intake Chloride, August Cl

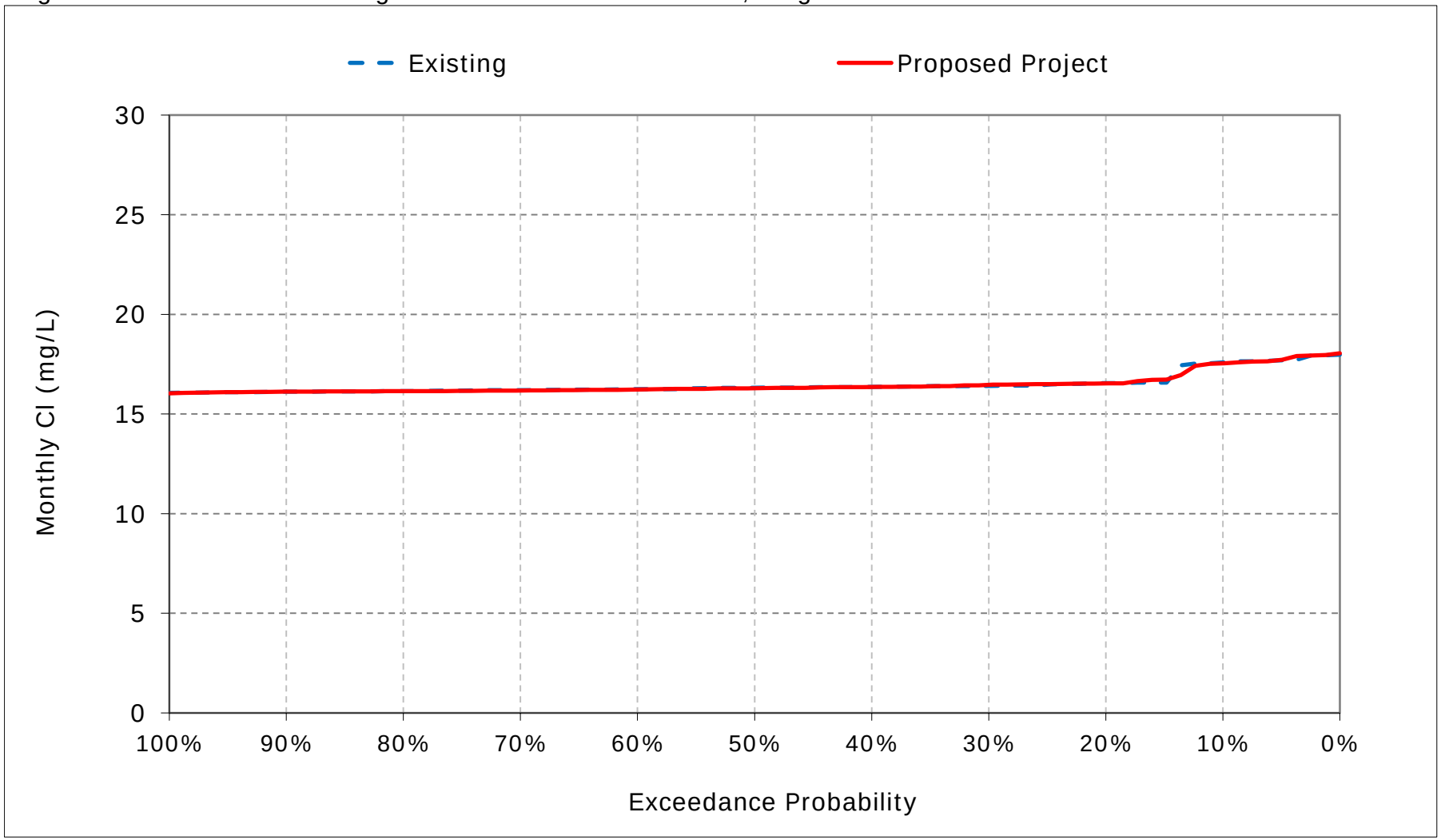


Figure 13-15. Barker Slough at NBA Intake Chloride, September Cl

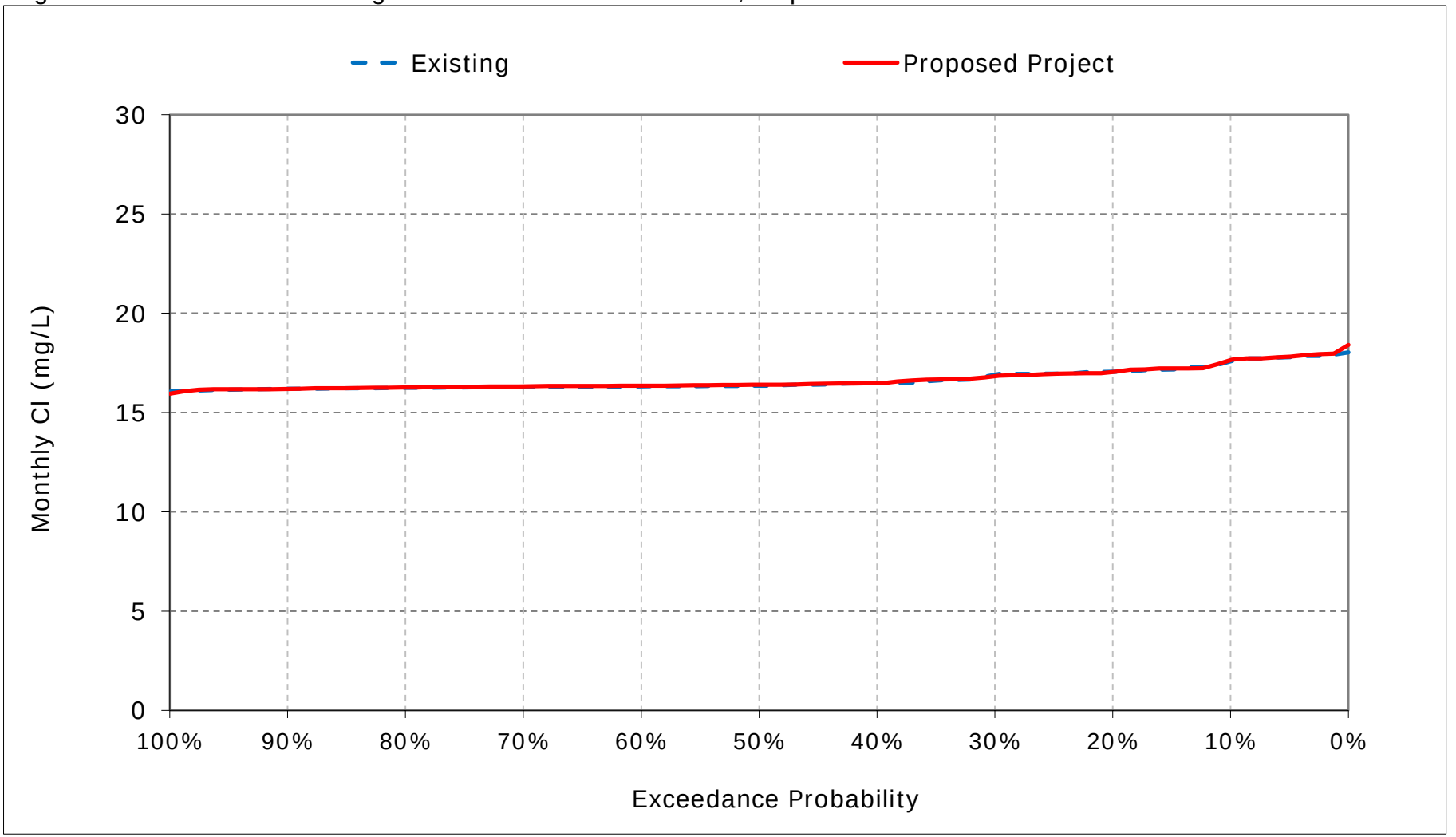


Figure 13-16. Barker Slough at NBA Intake Chloride, October Cl

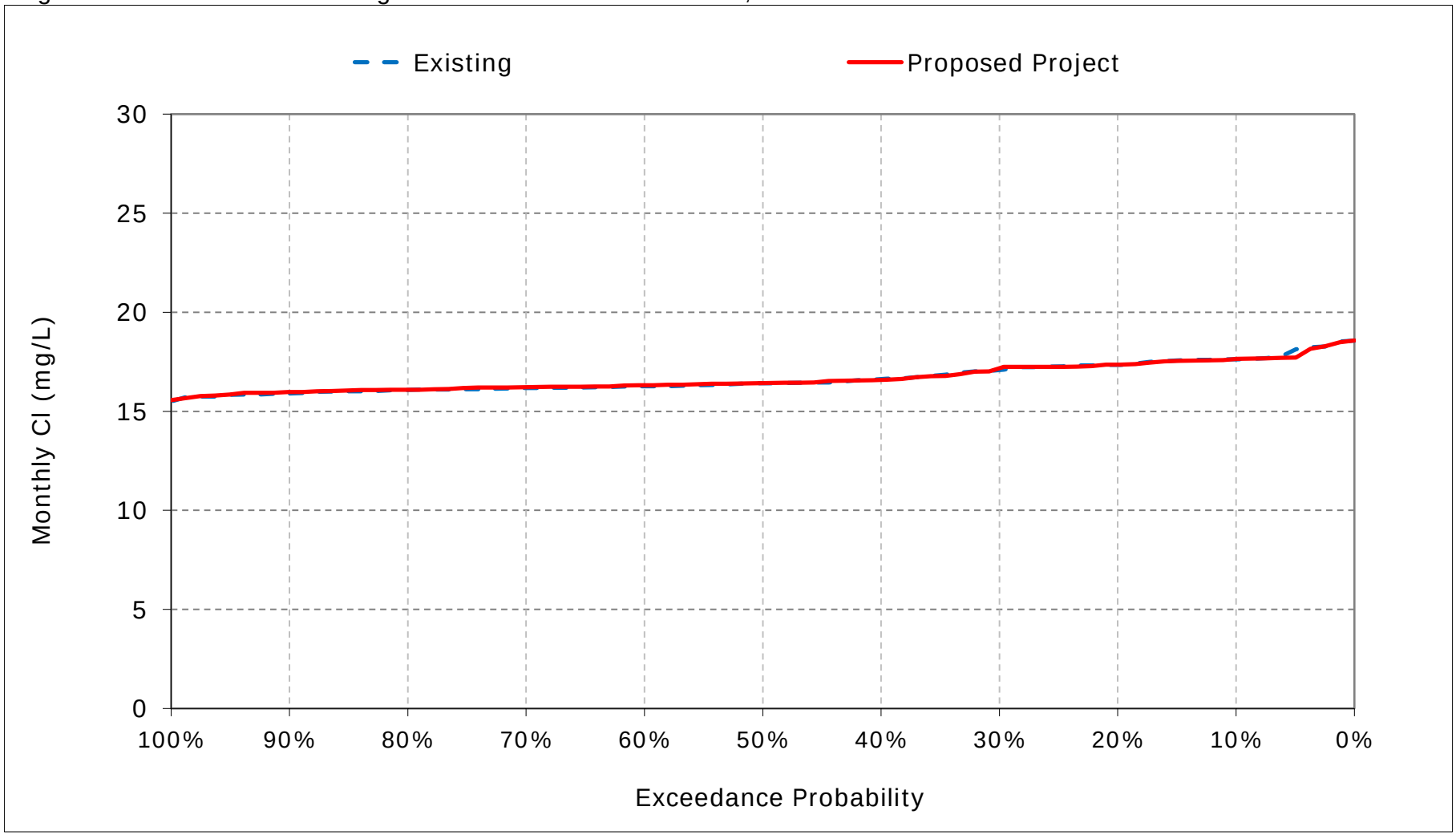


Figure 13-17. Barker Slough at NBA Intake Chloride, November Cl

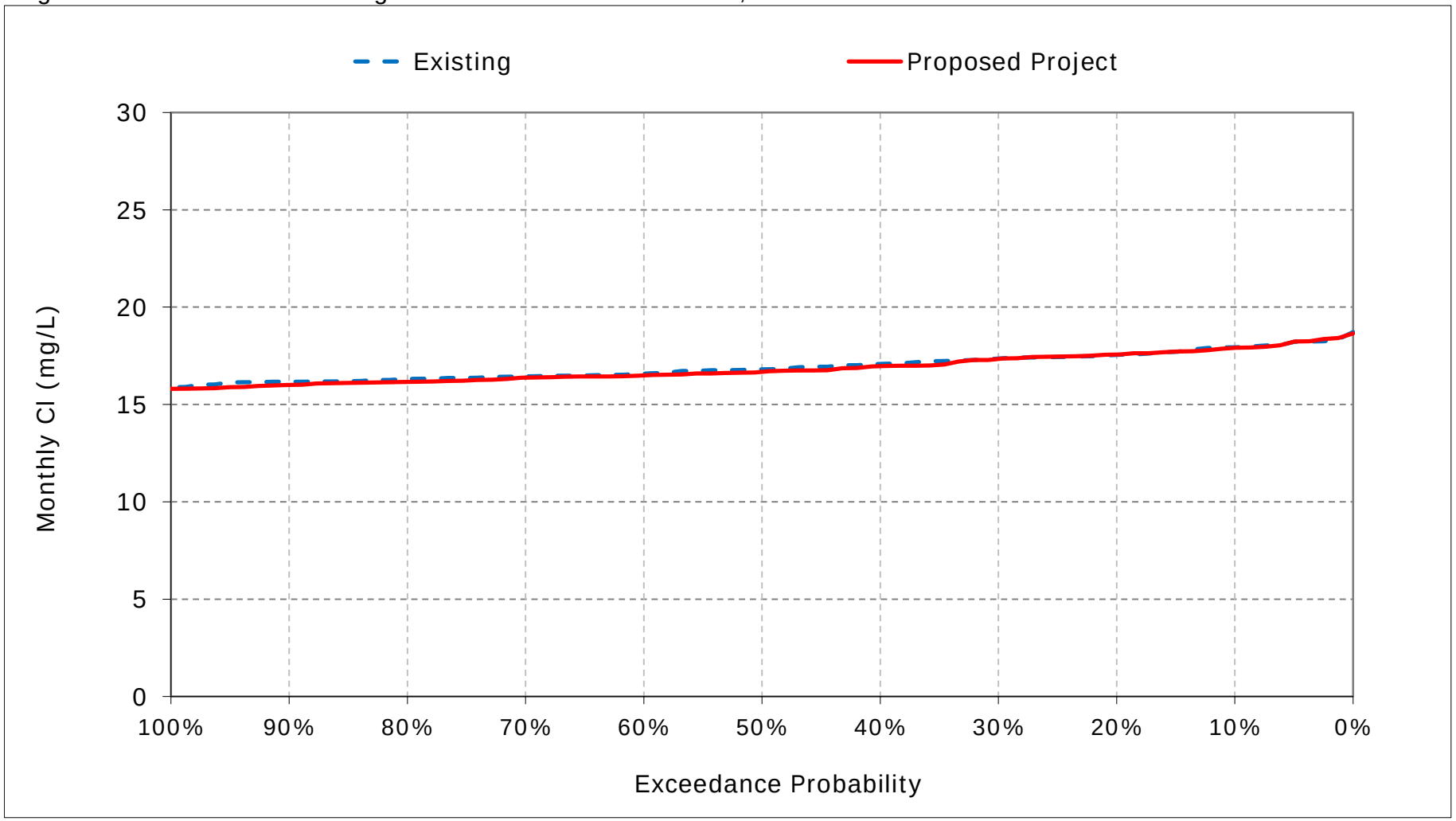
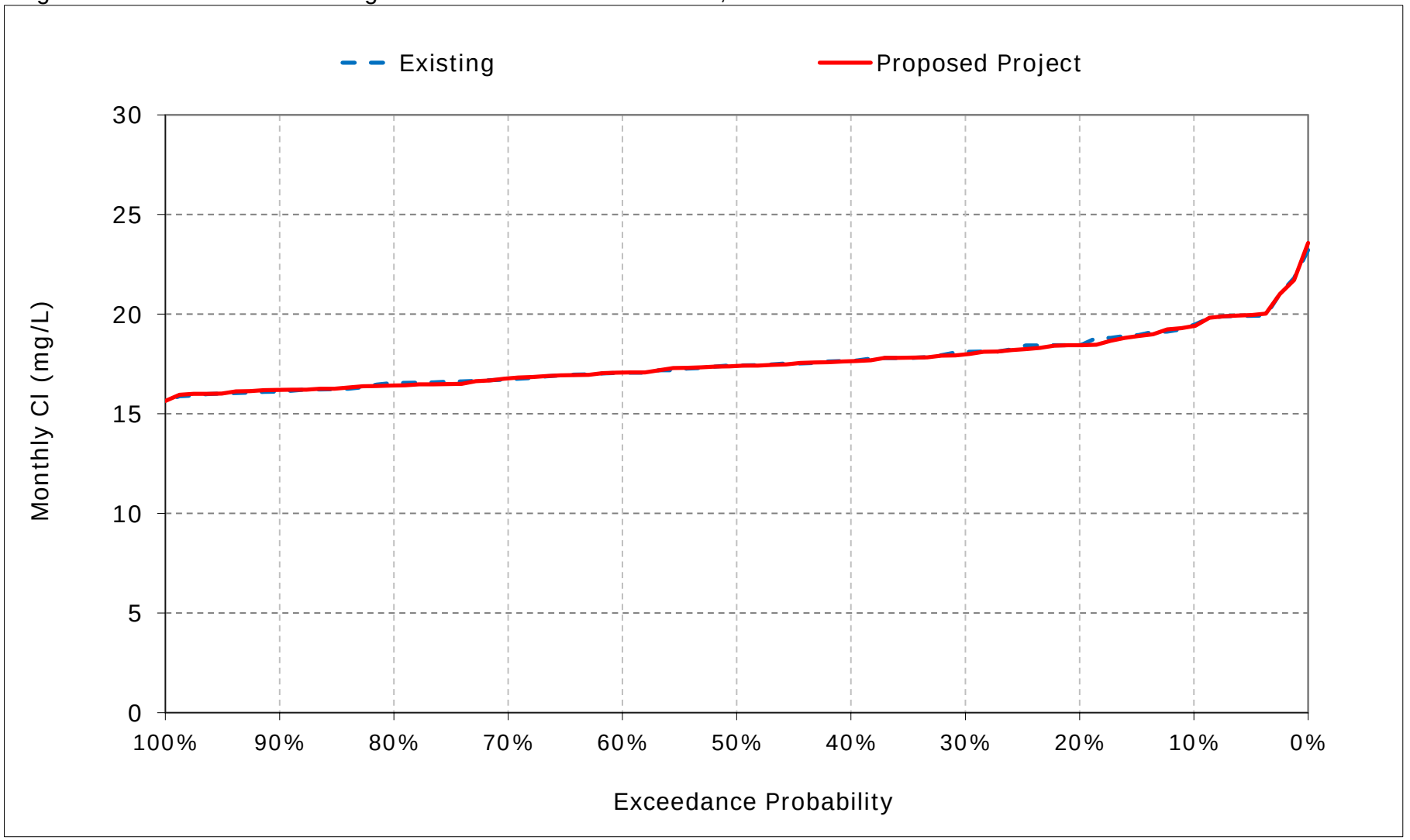


Figure 13-18. Barker Slough at NBA Intake Chloride, December Cl



Appendix C – Modeling

Attachment 2-9 – D1641 Compliance Results (DSM2-QUAL)

The following results of the DSM2-QUAL model are included for Delta compliance conditions for the following alternatives:

- Existing Conditions
- Proposed Project

Table 2-9.1. D1641 Compliance Results (DSM2-QUAL)

Title	Model Parameter	Table Numbers	Figure Numbers
D1641 AG West Canal at mouth of Clifton Court Forebay	CHWST000	NA	1-1
D1641 AG South Fork Mokelumne River at Terminus	RSMKL008	NA	2-1
D1641 AG Sacramento River at Emmaton	RSAC092	NA	3-1
D1641 AG San Joaquin River at Jersey Point	RSAN018	NA	4-1
D1641 AG San Joaquin River at San Andreas Landing	RSAN032	NA	5-1
D1641 AG Delta-Mendota Canal at Tracy Pumping Plant	CHDMC004	NA	6-1
D1641 FWS Chadbourne Slough at Sunrise Duck Club	SLCBN002	NA	7-1
D1641 FWS Montezuma Slough near Beldon Landing	SLMZU011	NA	8-1
D1641 FWS Montezuma Slough at National Steel	SLMZU025	NA	9-1
D1641 FWS Sacramento River at Collinsville	RSAC081	NA	10-1
D1641 FWS San Joaquin River at Jersey Point	RSAN018	NA	11-1
D1641 FWS San Joaquin River at Prisoners Point	RSAN037	NA	12-1
D1641 FWS Suisun Slough 300 ft south of Volanti Slough	SLSUS012	NA	13-1
D1641 MI Cache Slough at City of Vallejo Intake	SLCCH016	NA	14-1
D1641 MI West Canal at mouth of Clifton Court Forebay	CHWST000	NA	15-1
D1641 MI Contra Costa Canal at Pumping Plant #1	ROLD024	NA	16-1

Title	Model Parameter	Table Numbers	Figure Numbers
D1641 MI Delta-Mendota Canal at Tracy Pumping Plant	CHDMC004	NA	17-1
D1641 MI Barker Slough at North Bay Aqueduct Intake	SLBAR002	NA	18-1

Report formats

- Compliance exceedance charts including all scenarios

Figure 1 D1641 AG West Canal at mouth of Clifton Court Forebay Compliance Exceedance Plot

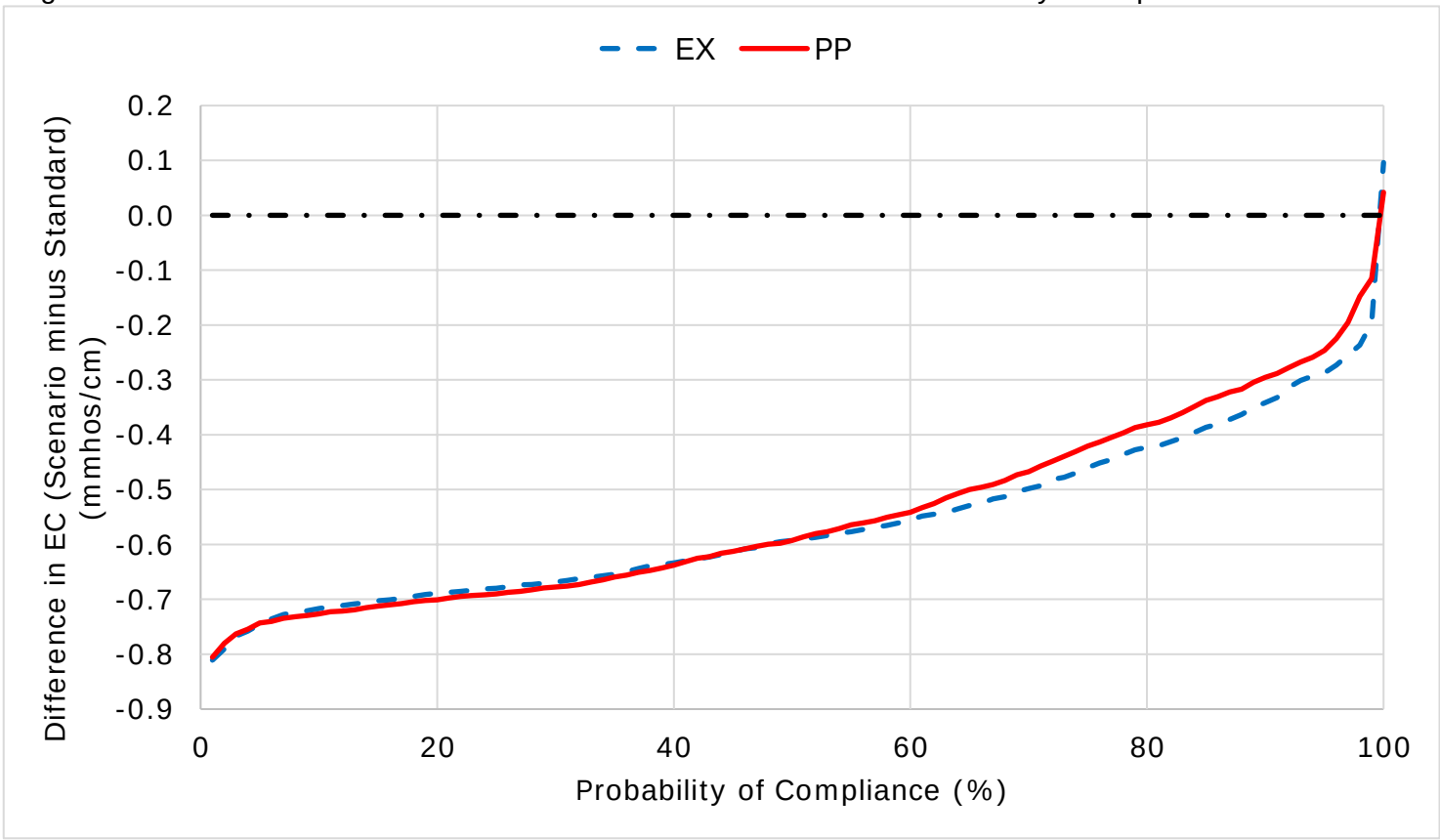


Figure 2 D1641 AG South Fork Mokelumne River at Terminus Compliance Exceedance Plot

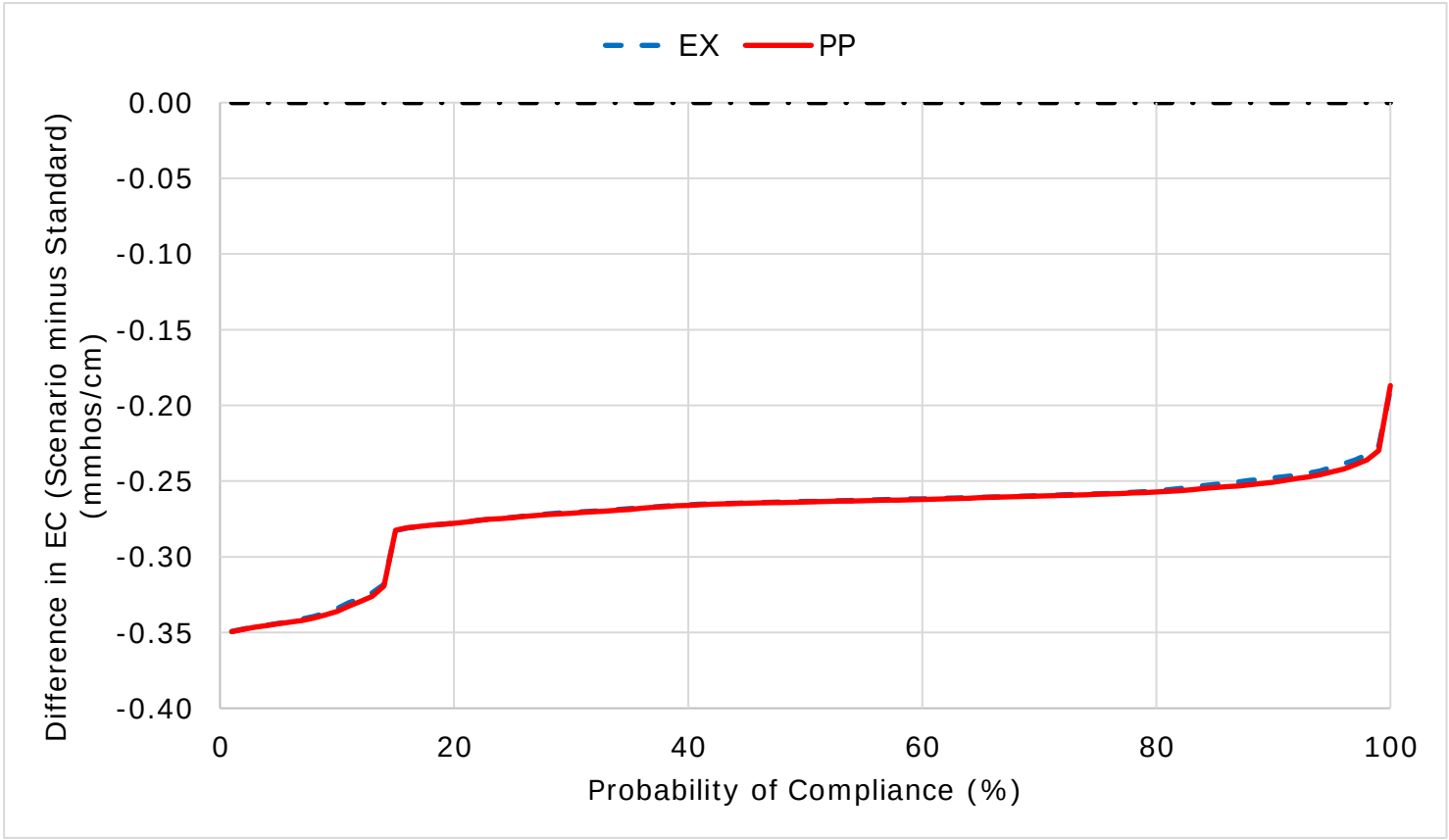


Figure 3 D1641 AG Sacramento River at Emmaton Compliance Exceedance Plot

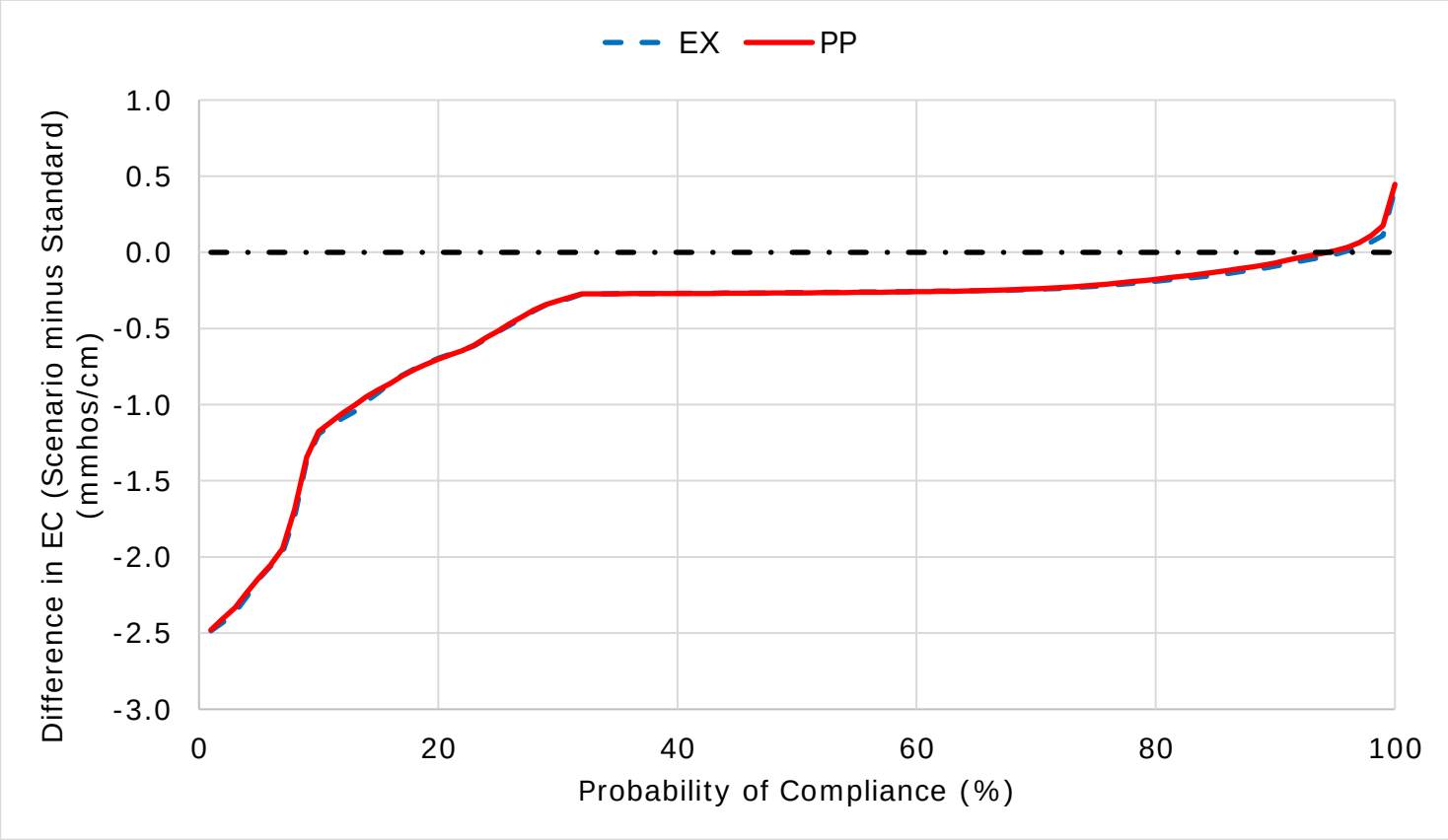


Figure 4 D1641 AG San Joaquin River at Jersey Point Compliance Exceedance Plot

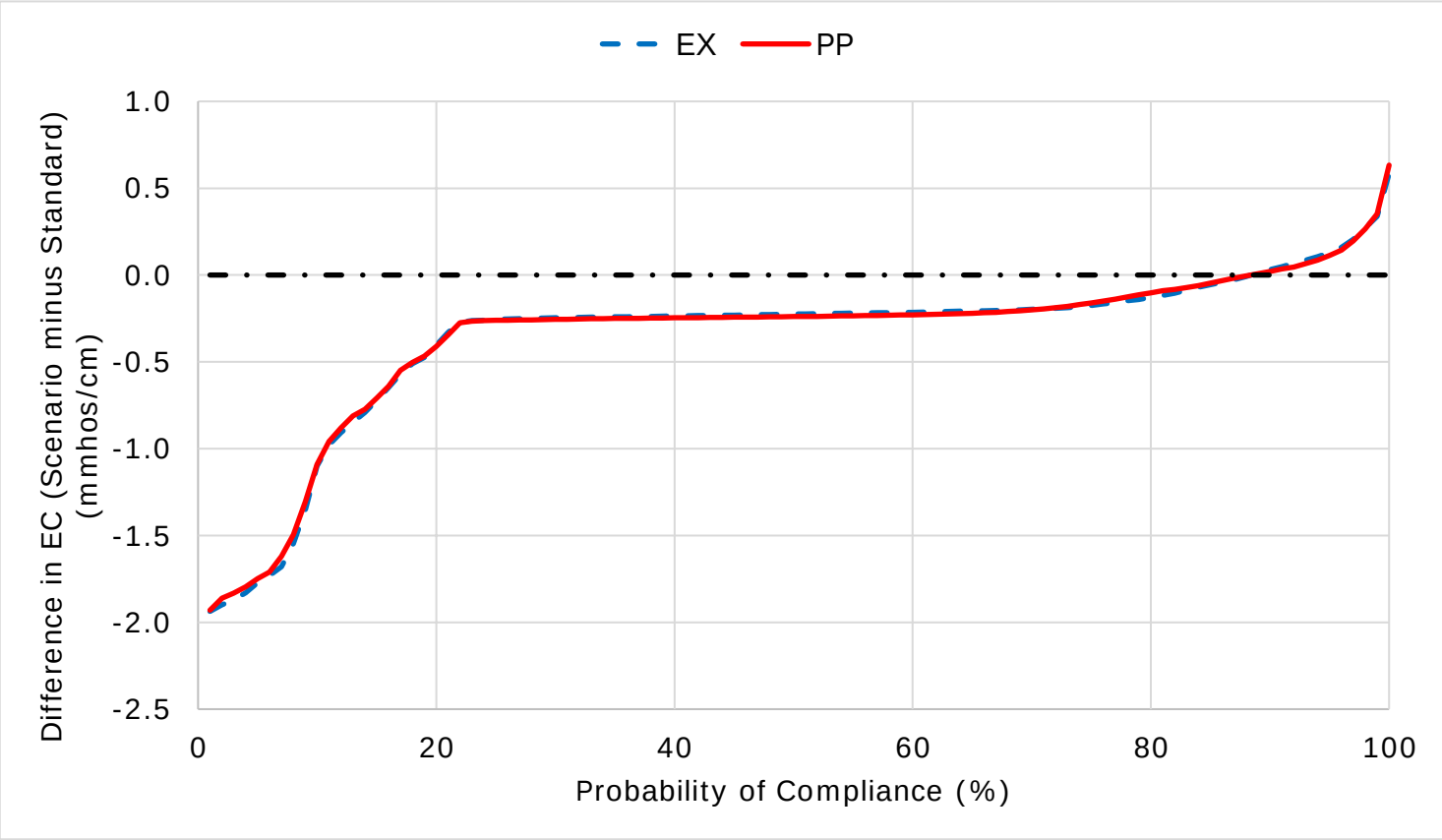


Figure 5 D1641 AG San Joaquin River at San Andreas Landing Compliance Exceedance Plot

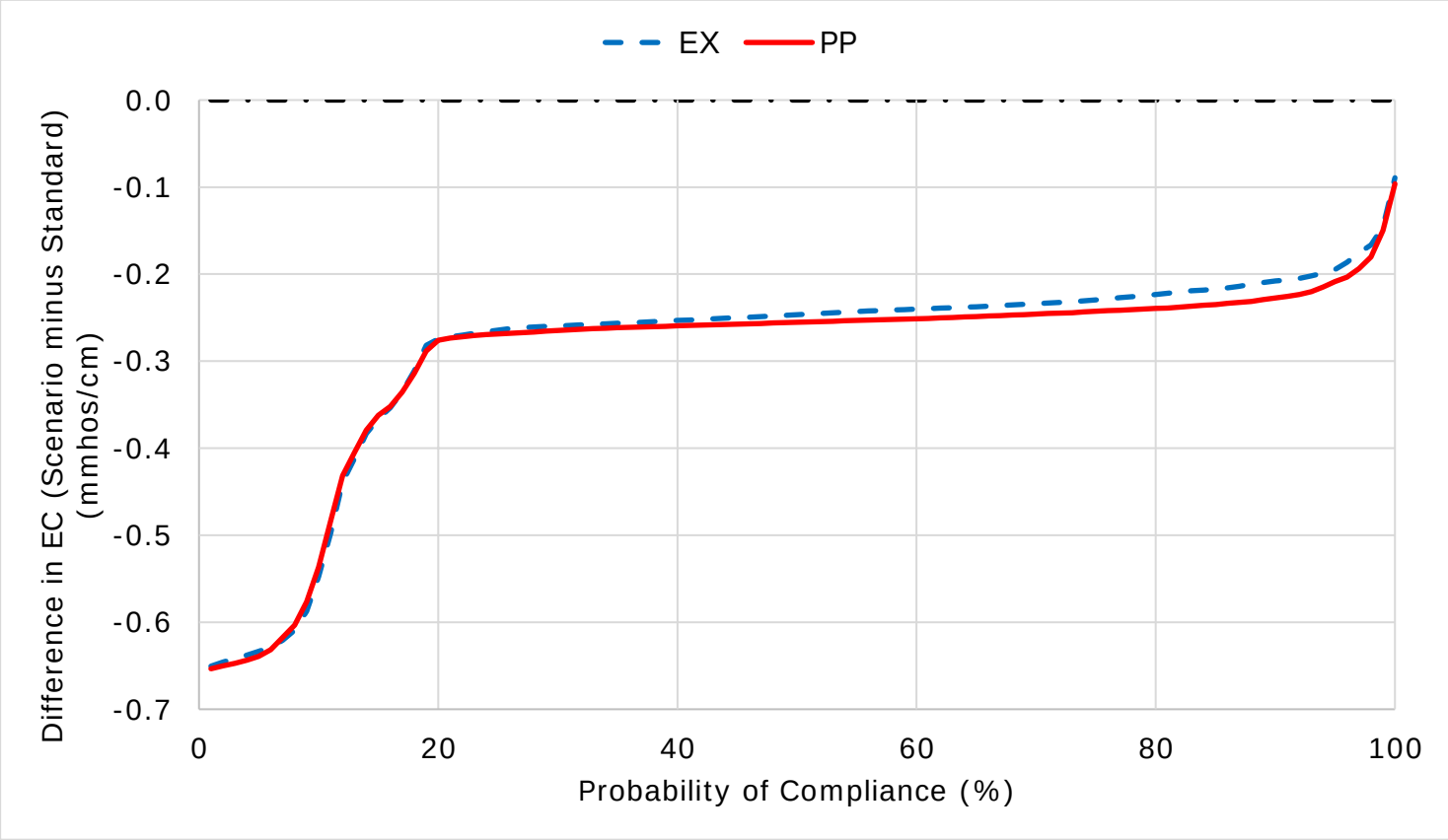


Figure 6 D1641 AG Delta-Mendota Canal at Tracy Pumping Plant Compliance Exceedance Plot

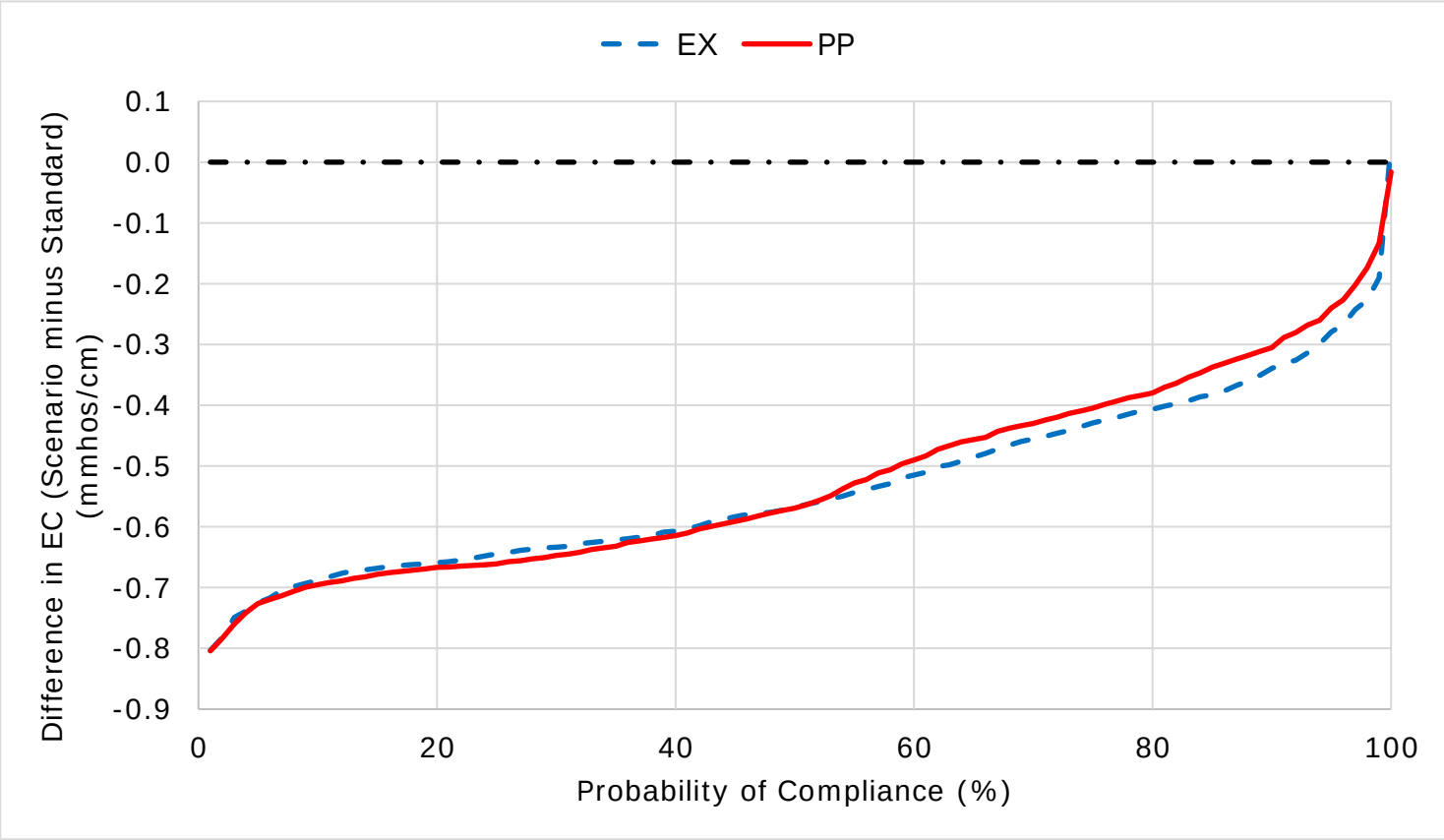


Figure 7 D1641 FWS Chadbourne Slough at Sunrise Duck Club Compliance Exceedance Plot

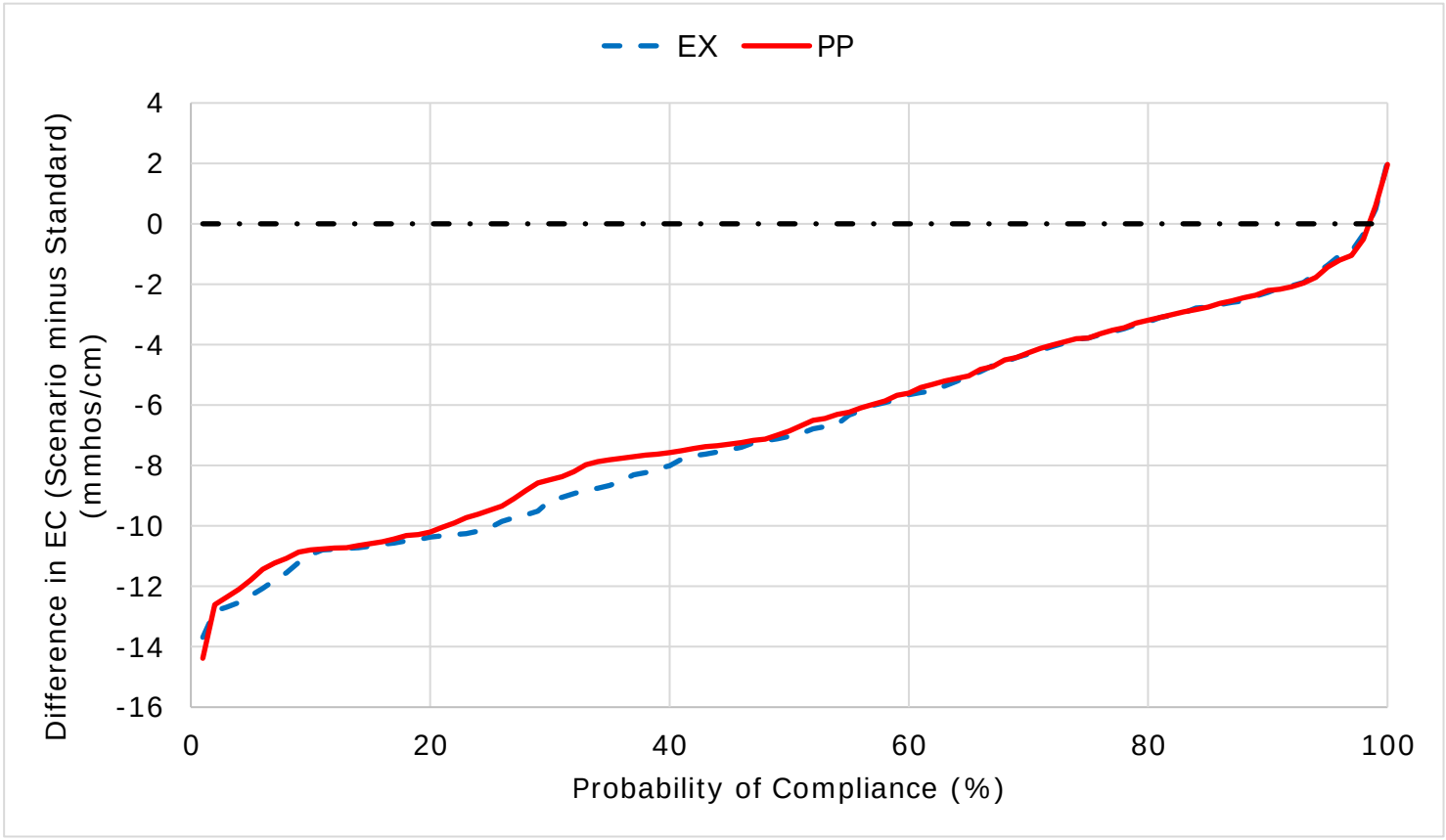


Figure 8 D1641 FWS Montezuma Slough near Beldons Landing Compliance Exceedance Plot

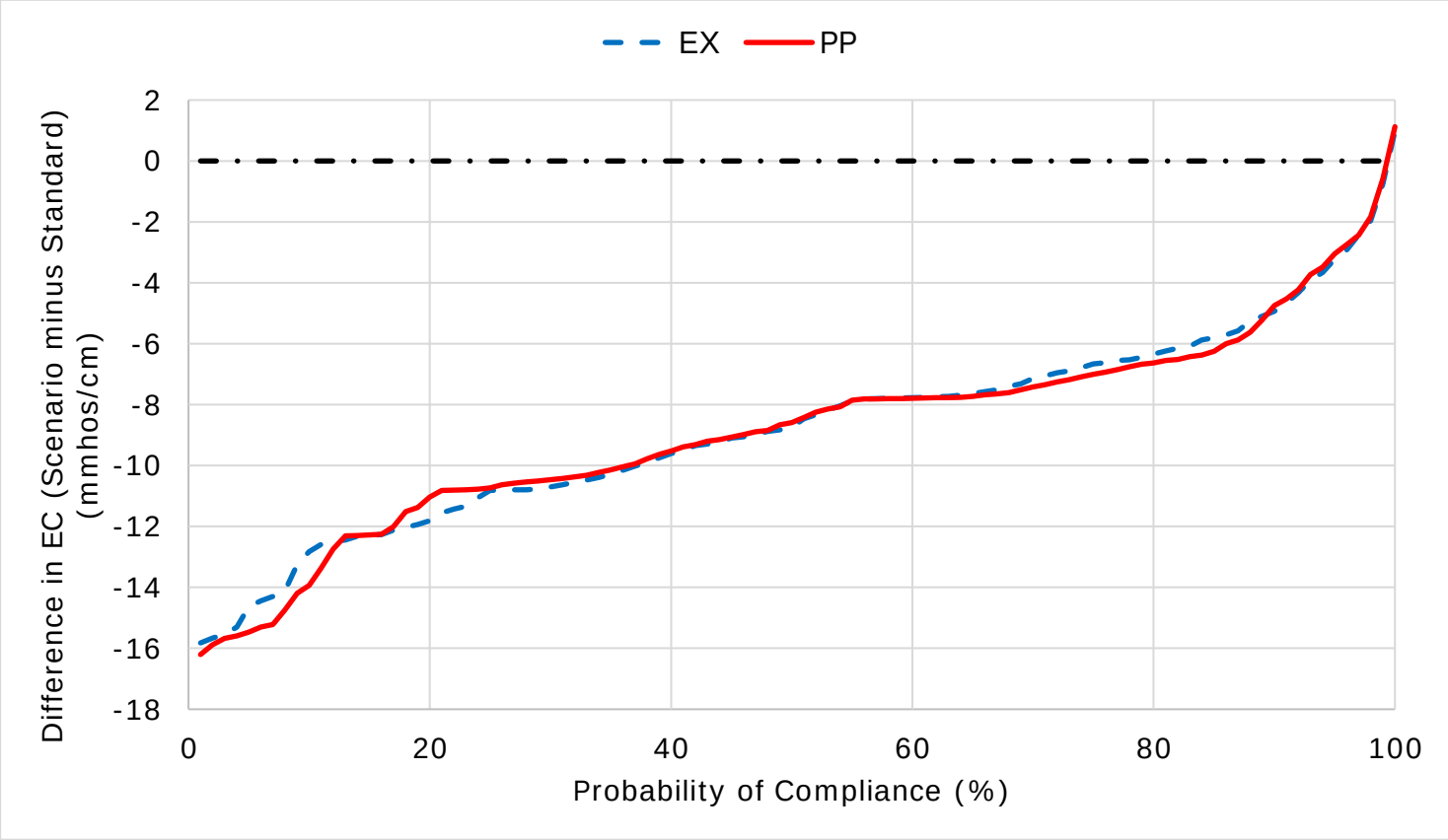


Figure 9 D1641 FWS Montezuma Slough at National Steel Compliance Exceedance Plot

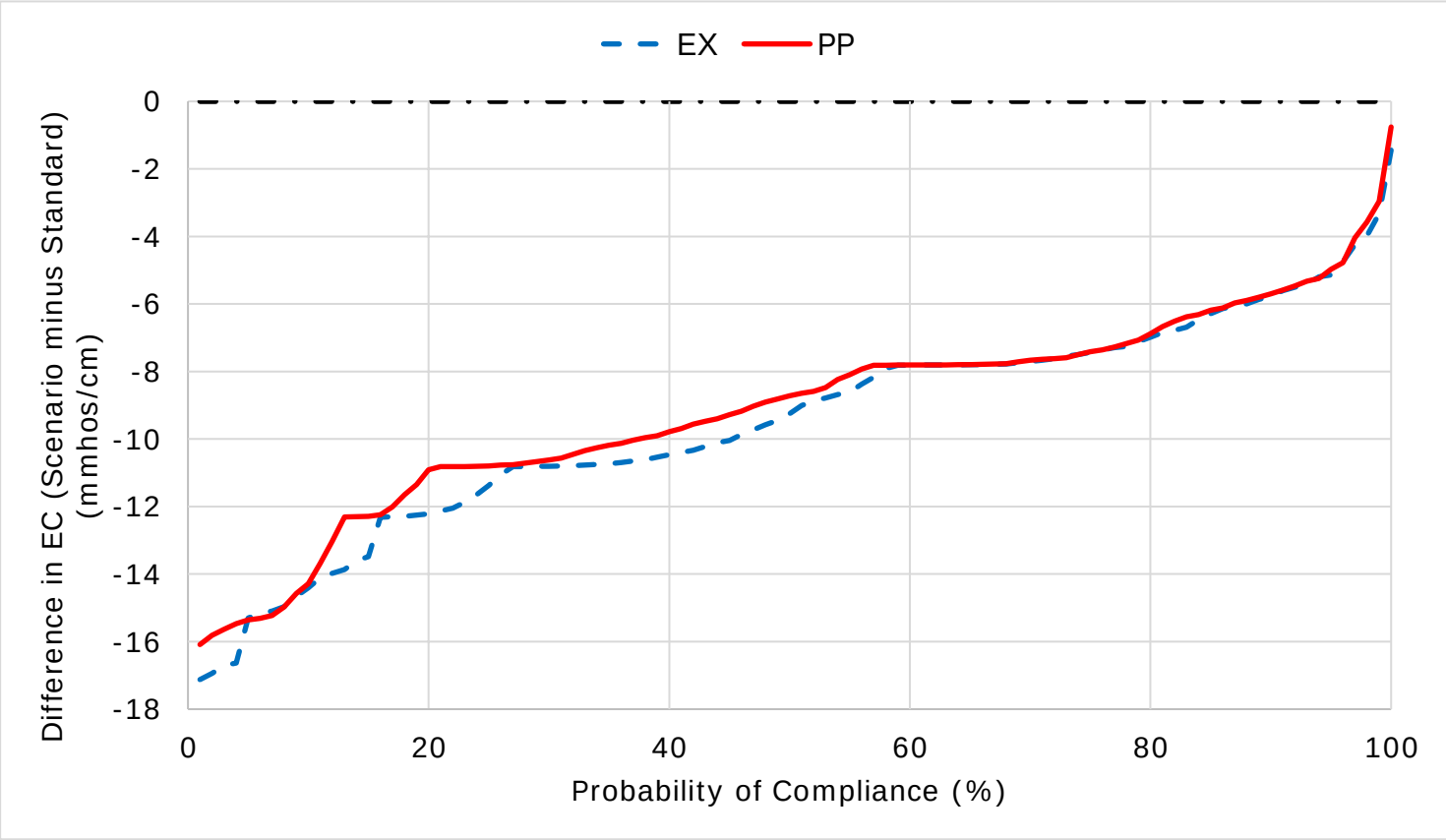


Figure 10 D1641 FWS Sacramento River at Collinsville Compliance Exceedance Plot

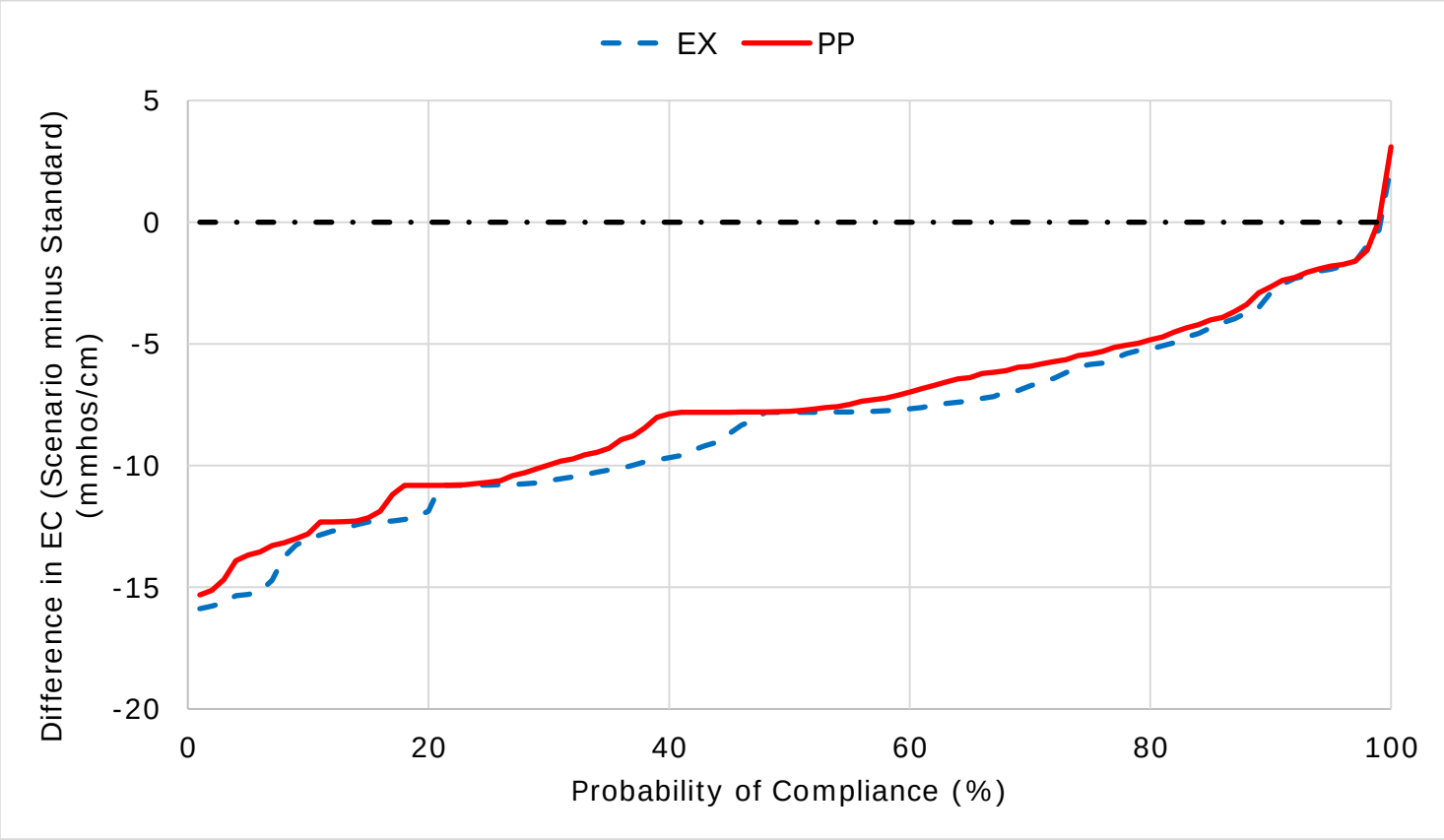


Figure 11 D1641 FWS San Joaquin River at Jersey Point Compliance Exceedance Plot

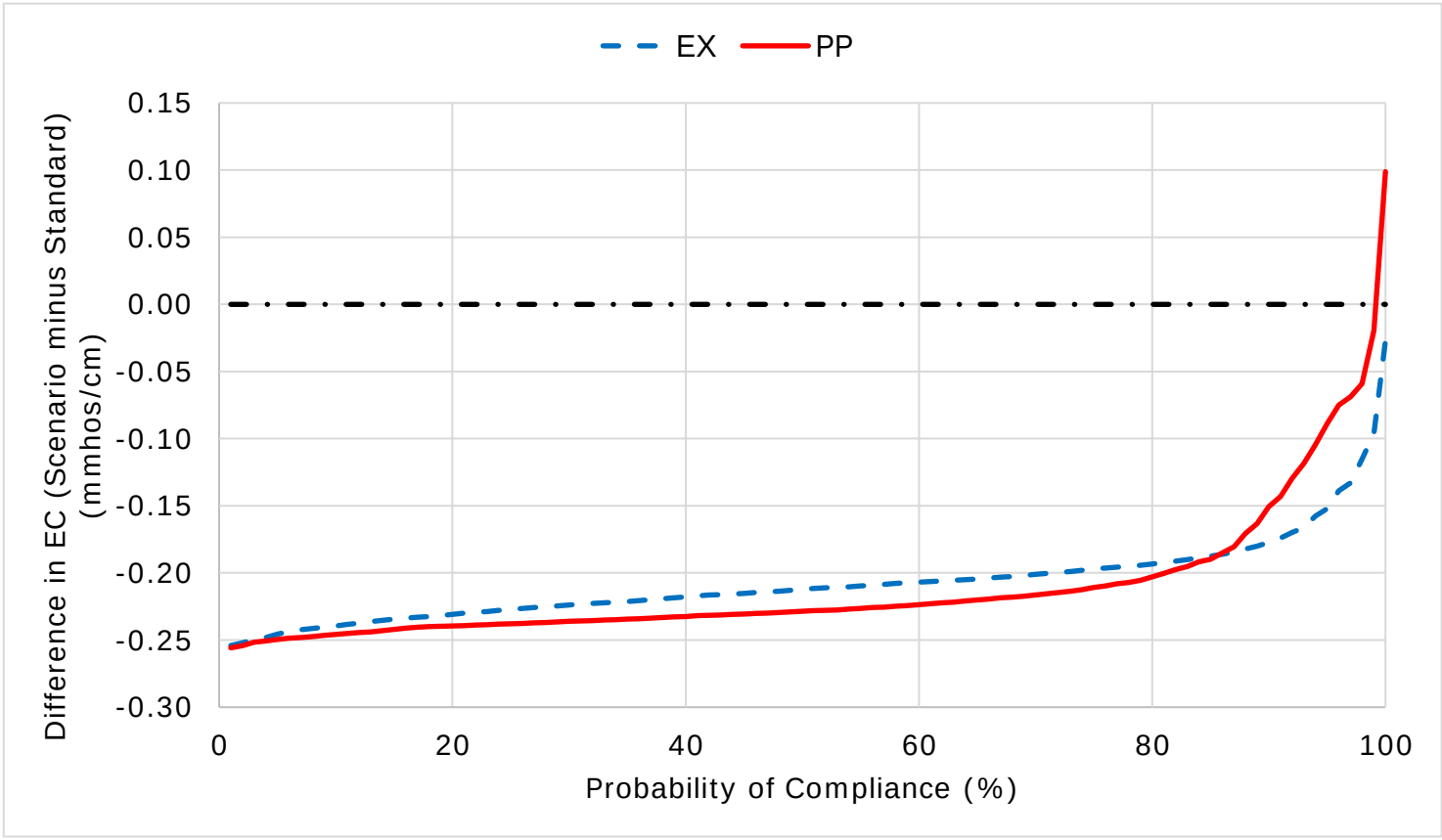


Figure 12 D1641 FWS San Joaquin River at Prisoners Point Compliance Exceedance Plot

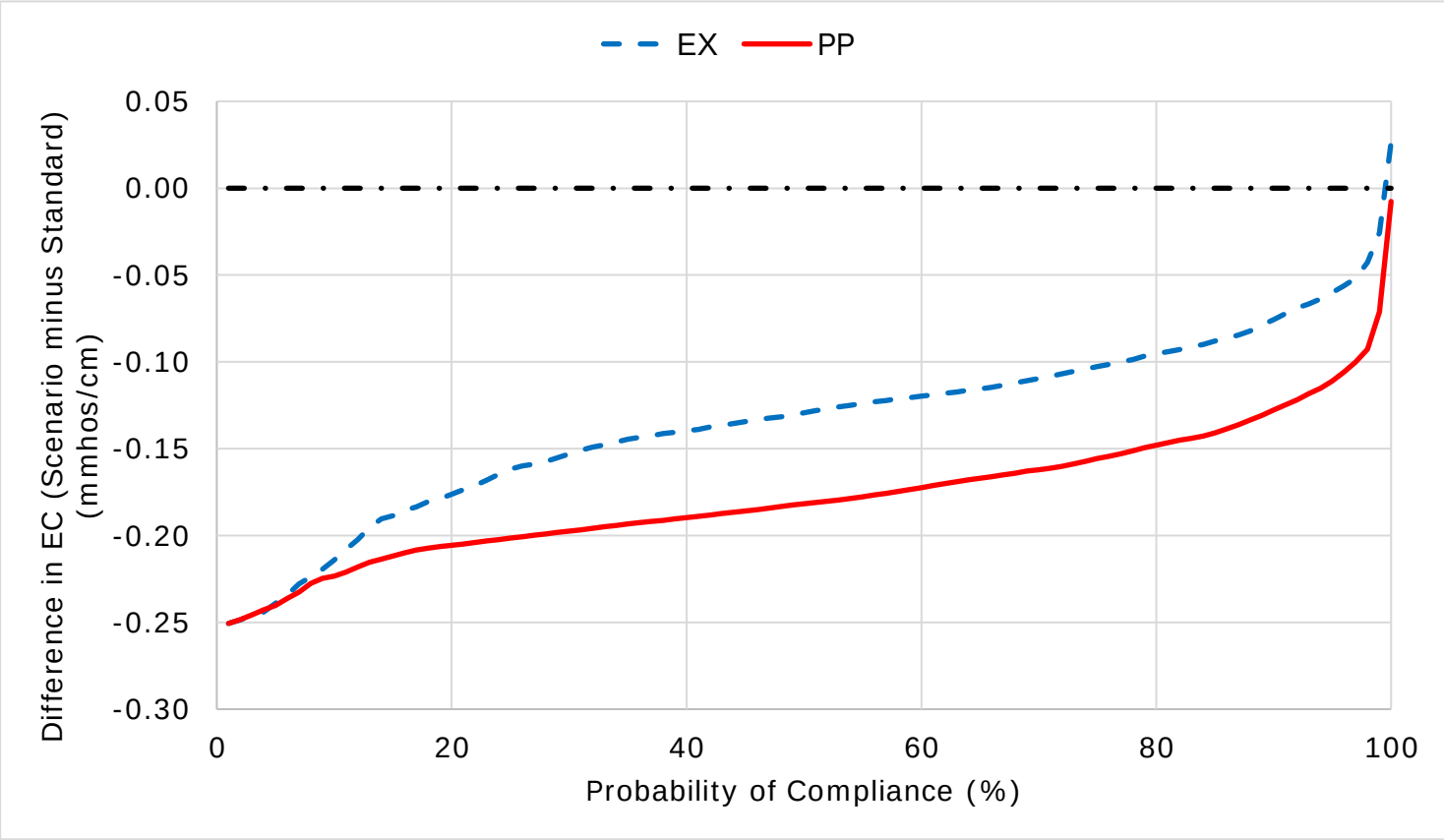


Figure 13 D1641 FWS Suisun Slough 300 ft south of Volanti Slough Compliance Exceedance Plot

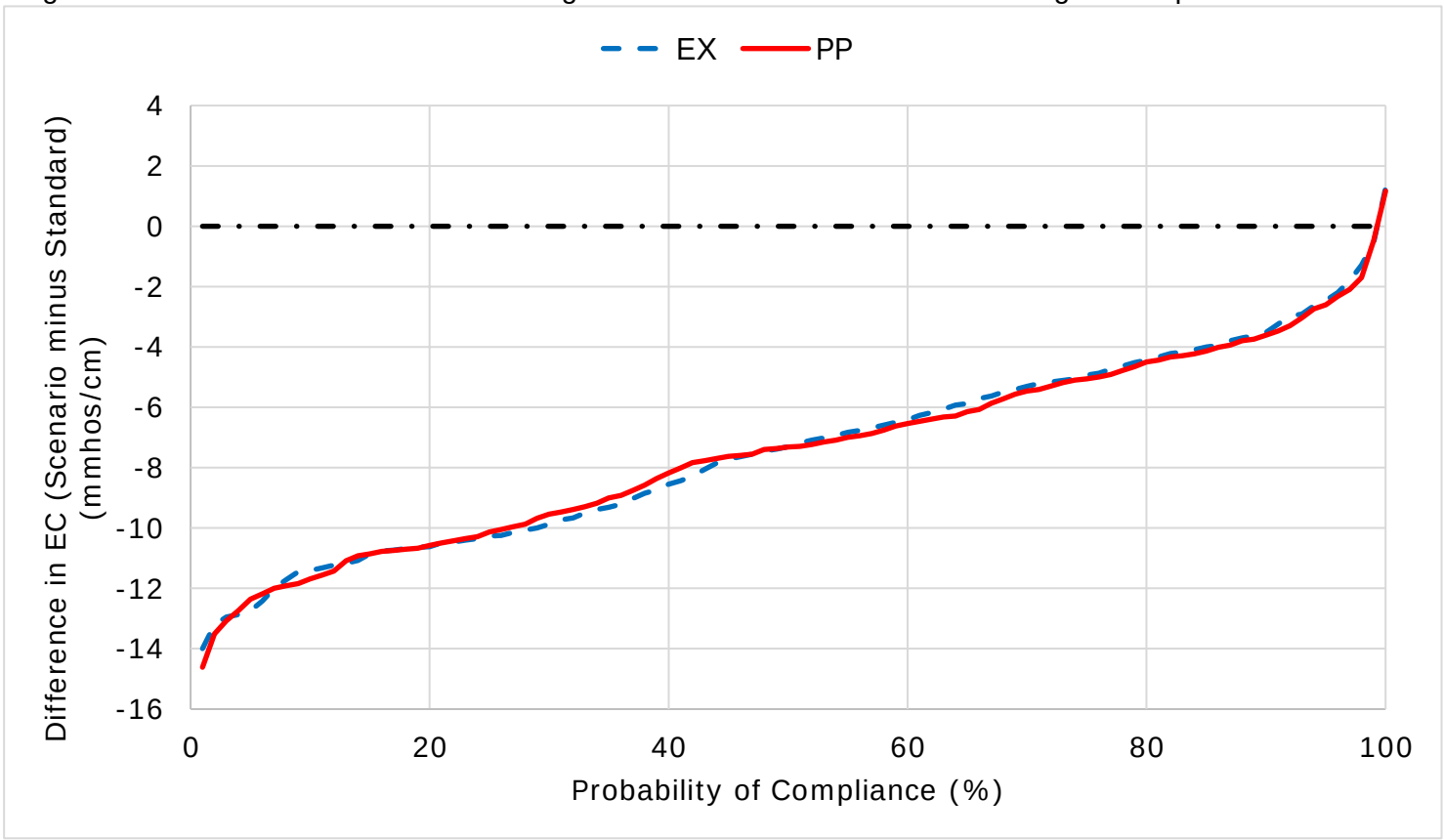


Figure 14 D1641 MI Cache Slough at City of Vallejo Intake Compliance Exceedance Plot

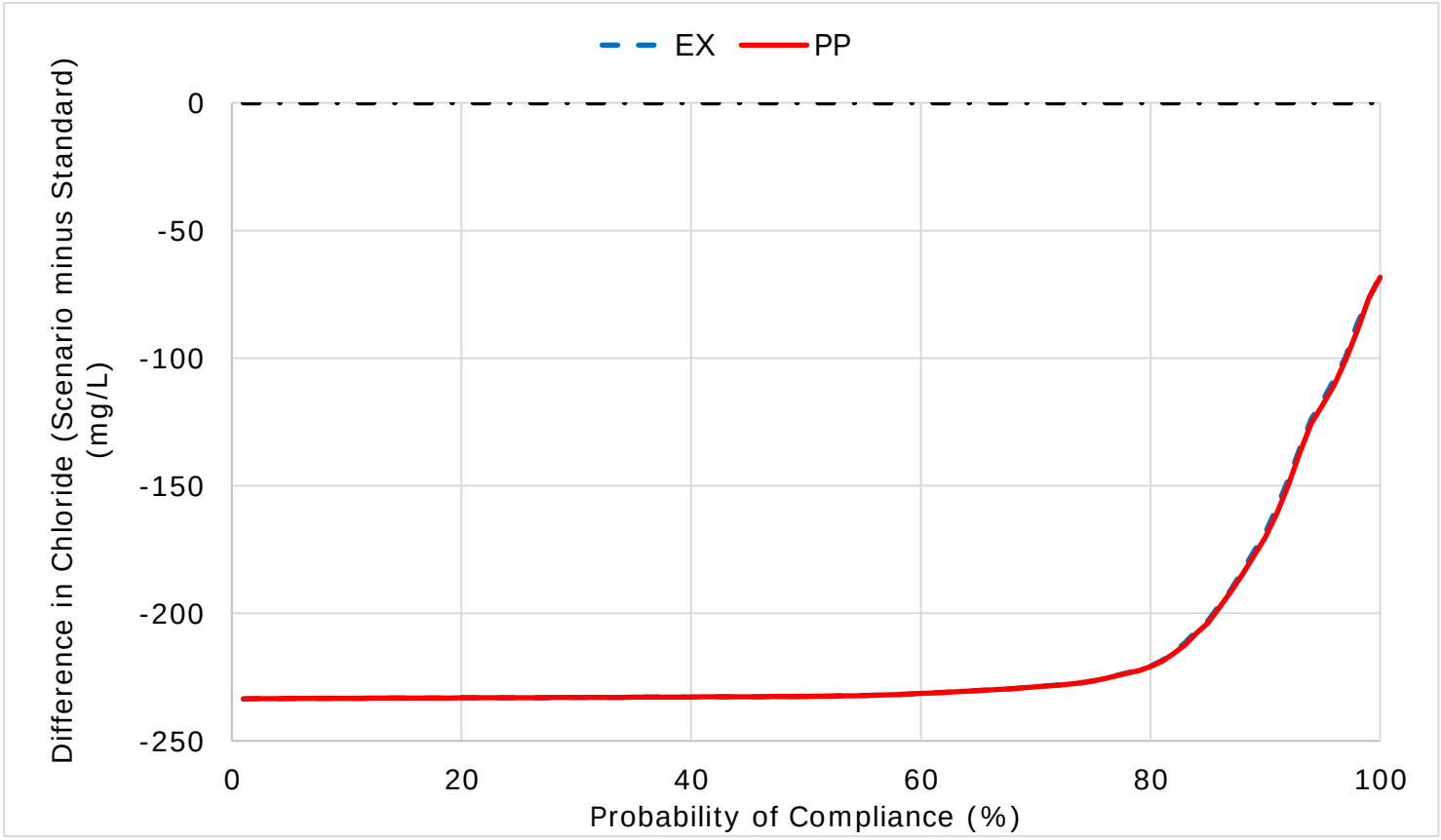


Figure 15 D1641 MI West Canal at mouth of Clifton Court Forebay Compliance Exceedance Plot

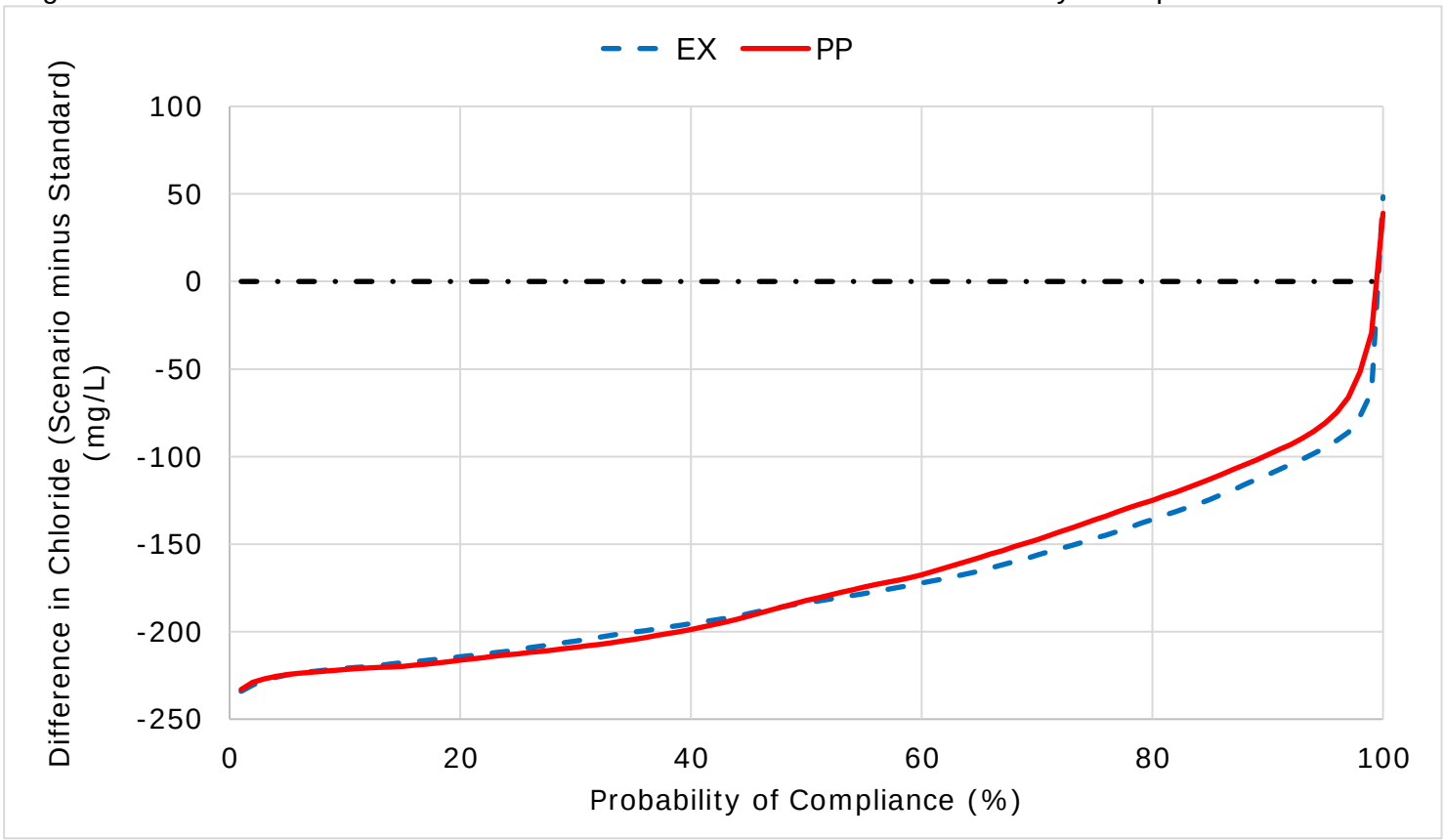


Figure 16 D1641 MI Contra Costa Canal at Pumping Plant #1 Compliance Exceedance Plot

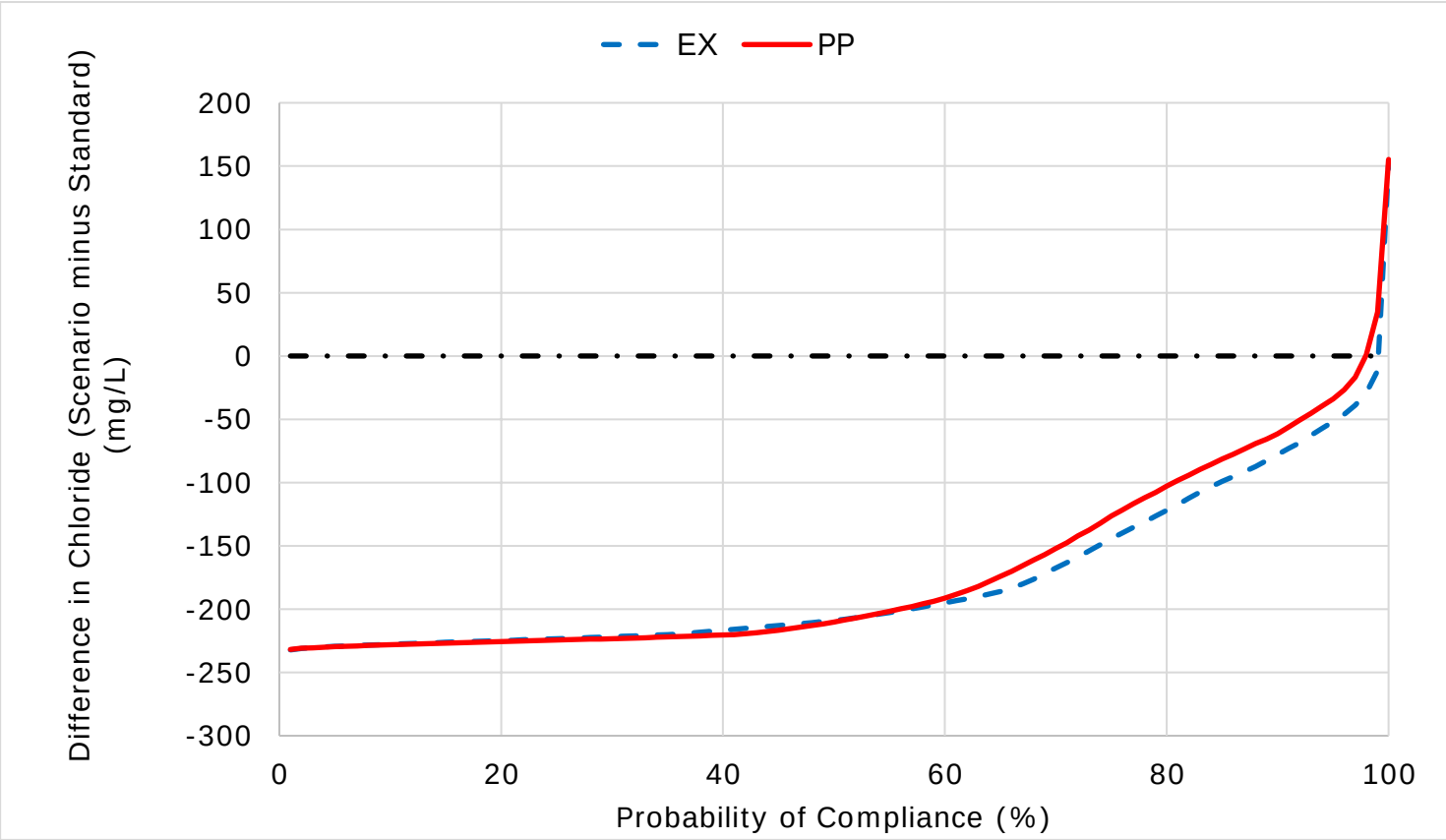


Figure 17 D1641 MI Delta-Mendota Canal at Tracy Pumping Plant Compliance Exceedance Plot

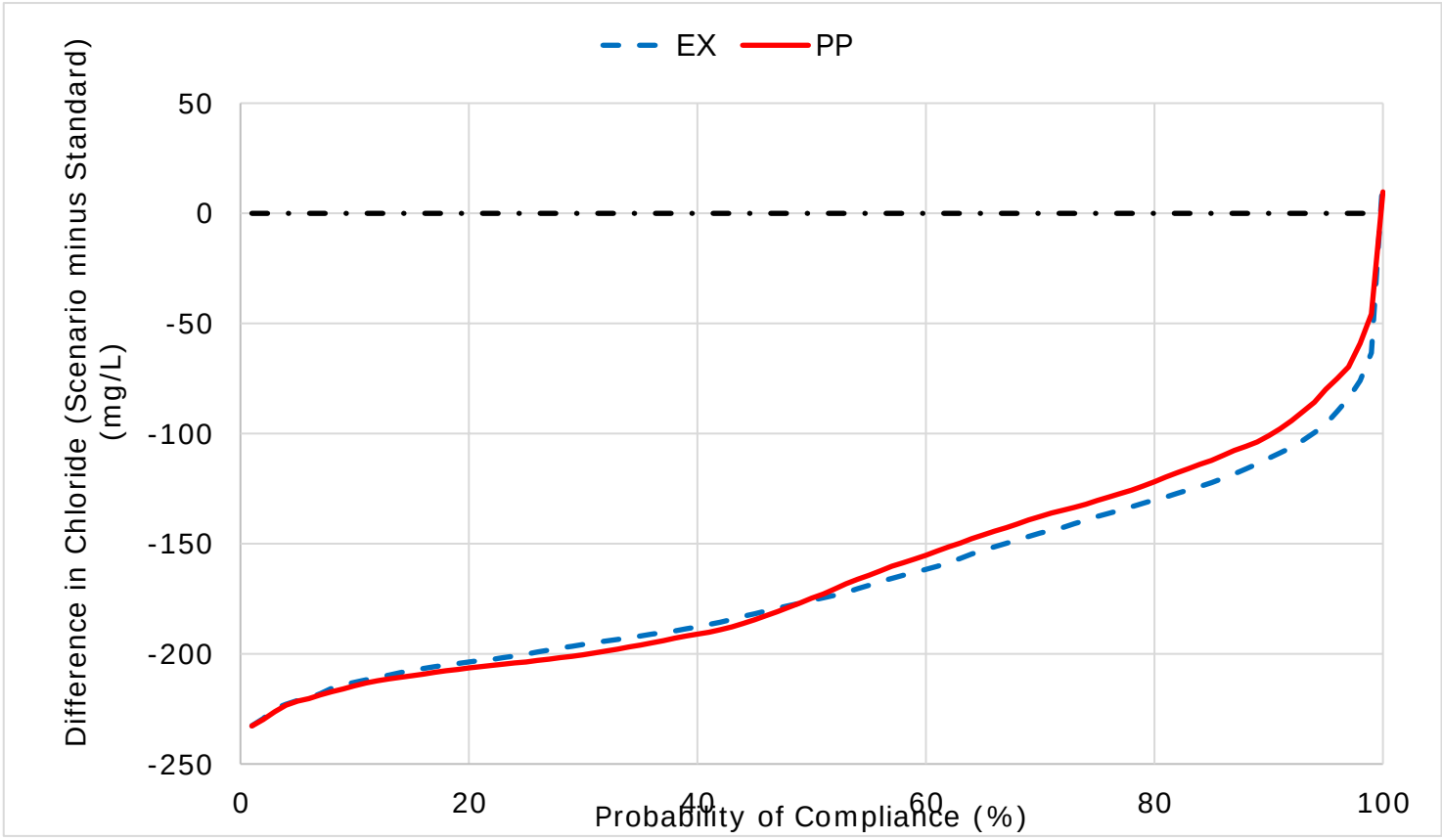
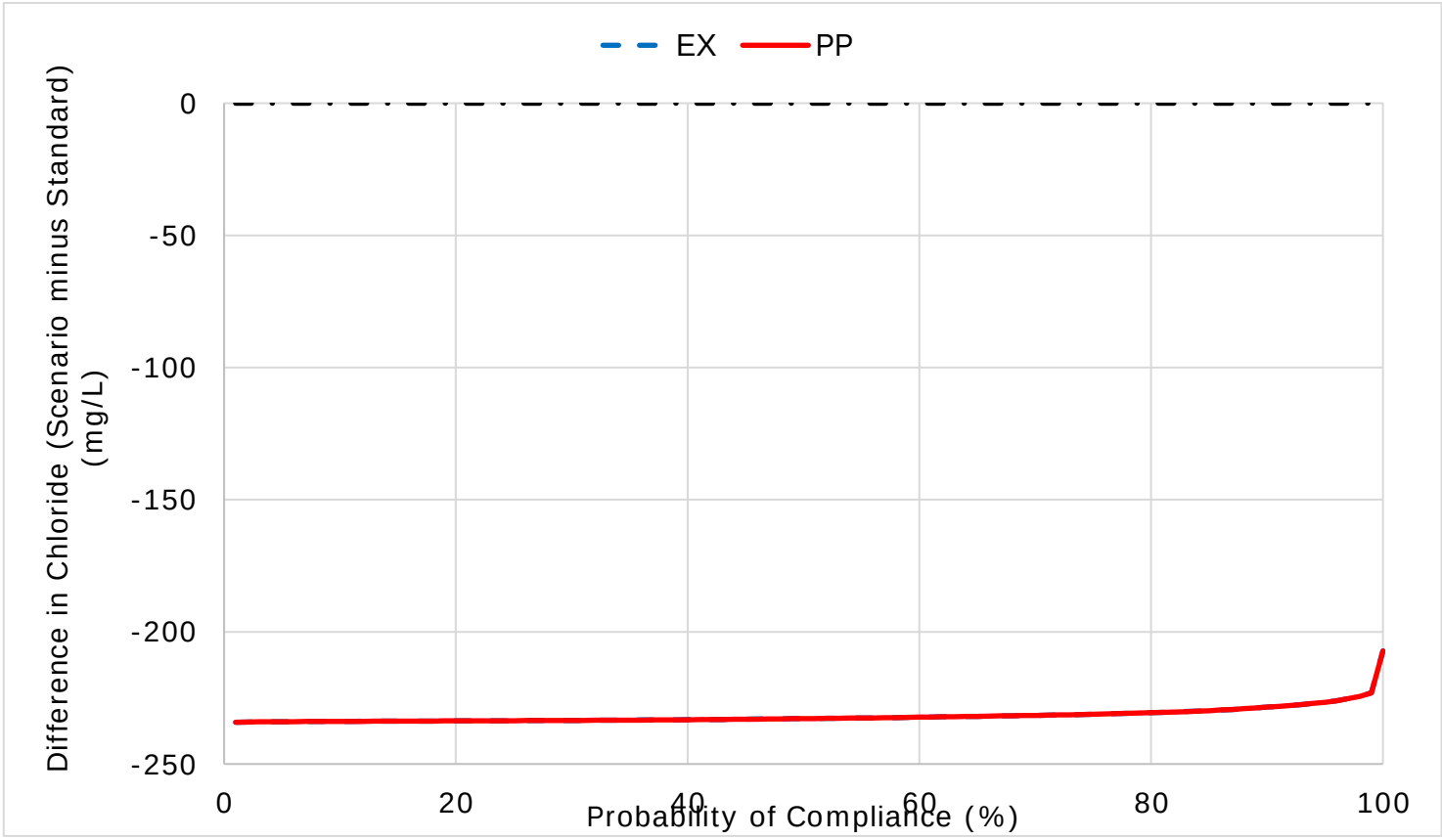


Figure 18 D1641 MI Barker Slough at North Bay Aqueduct Intake Compliance Exceedance Plot



Appendix C – Modeling

Attachment 2-10 – D1641 Compliance Results (CalSim II)

The following results of the CalSim II model are included for Delta compliance conditions for the following alternatives:

- Existing Conditions
- Proposed Project

Table 2-10.1. D1641 Compliance Results (CalSim II)

Title	Model Parameter	Table Numbers	Figure Numbers
D1641 MI Contra Costa Canal at Pumping Plant #1	NA	NA	1
D1641 AG San Joaquin River at Jersey Point	NA	NA	1
D1641 AG Sacramento River at Emmaton	NA	NA	1
D1641 FWS Spring X2	NA	NA	1

Report formats

- Compliance exceedance charts including all scenarios

Figure 1 D1641 MI Contra Costa Canal at Pumping Plant #1
Compliance Exceedance Plot

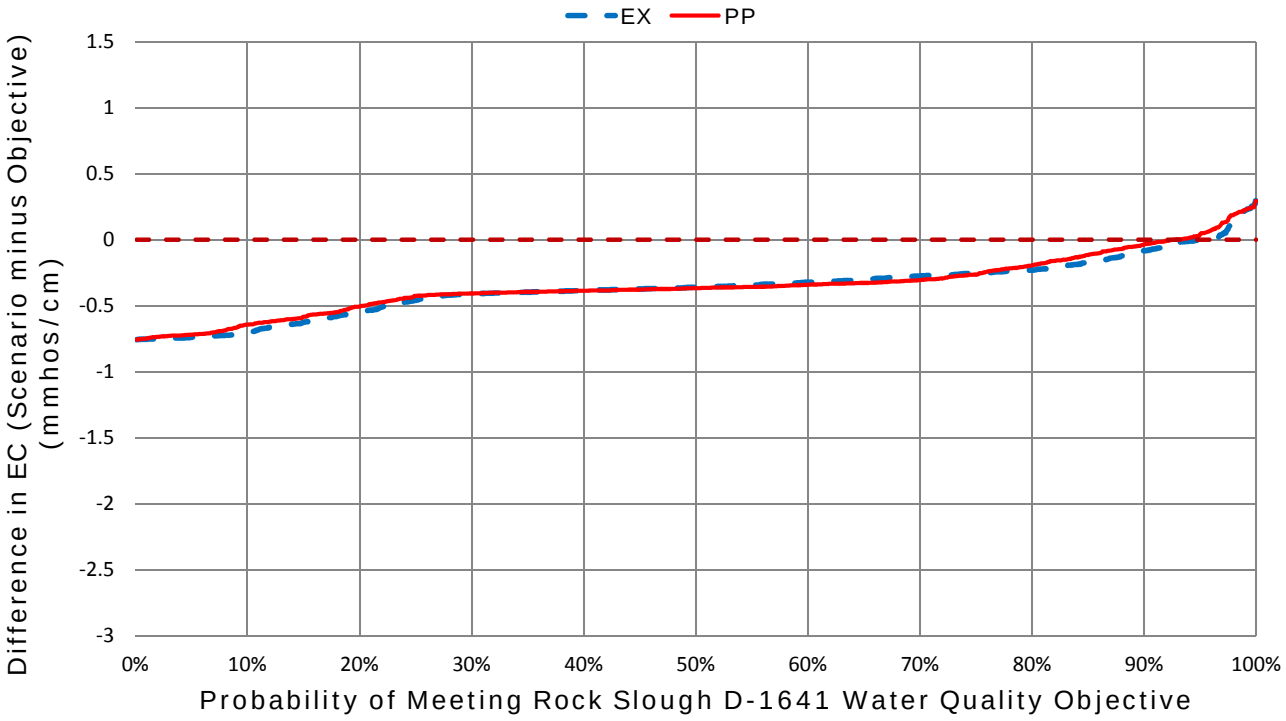
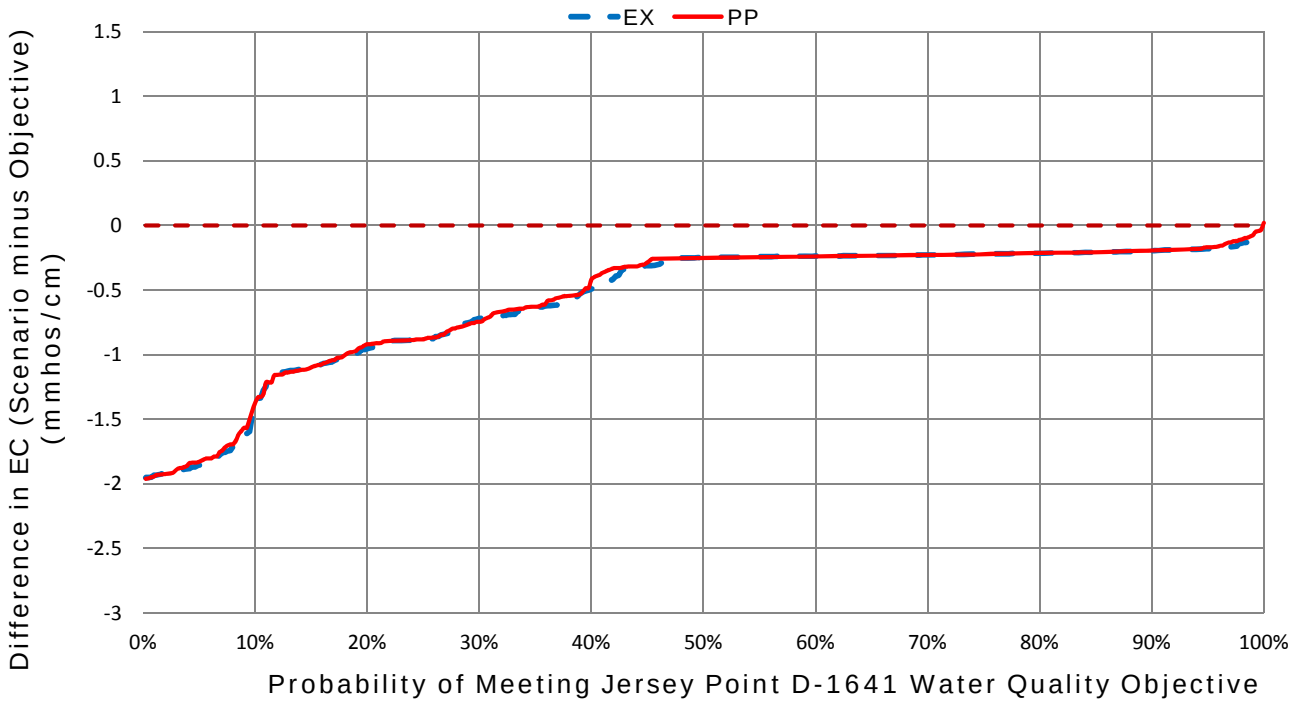


Figure 2 D1641 AG San Joaquin River at Jersey Point
Compliace Exceedance Plot



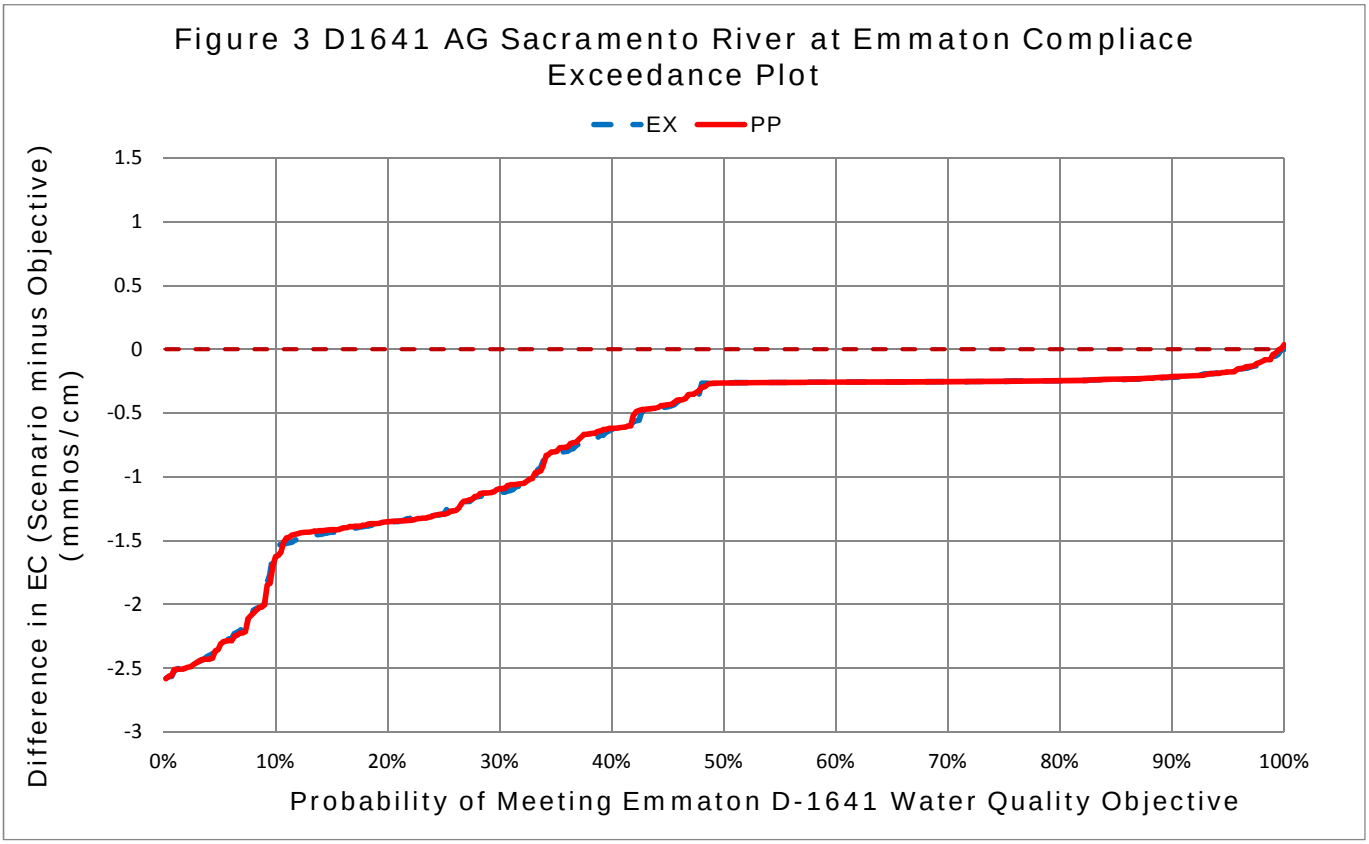


Figure 3 D1641 AG Sacramento River at Emmaton Compliace Exceedance Plot
EX
PP
Difference in EC (Scenario minus Objective) (mmhos/cm)
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-2.5
-3
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Probability of Meeting Emmaton D-1641 Water Quality Objective

Figure 4 D1641 FWS Spring X2 Compliace Exceedance Plot