

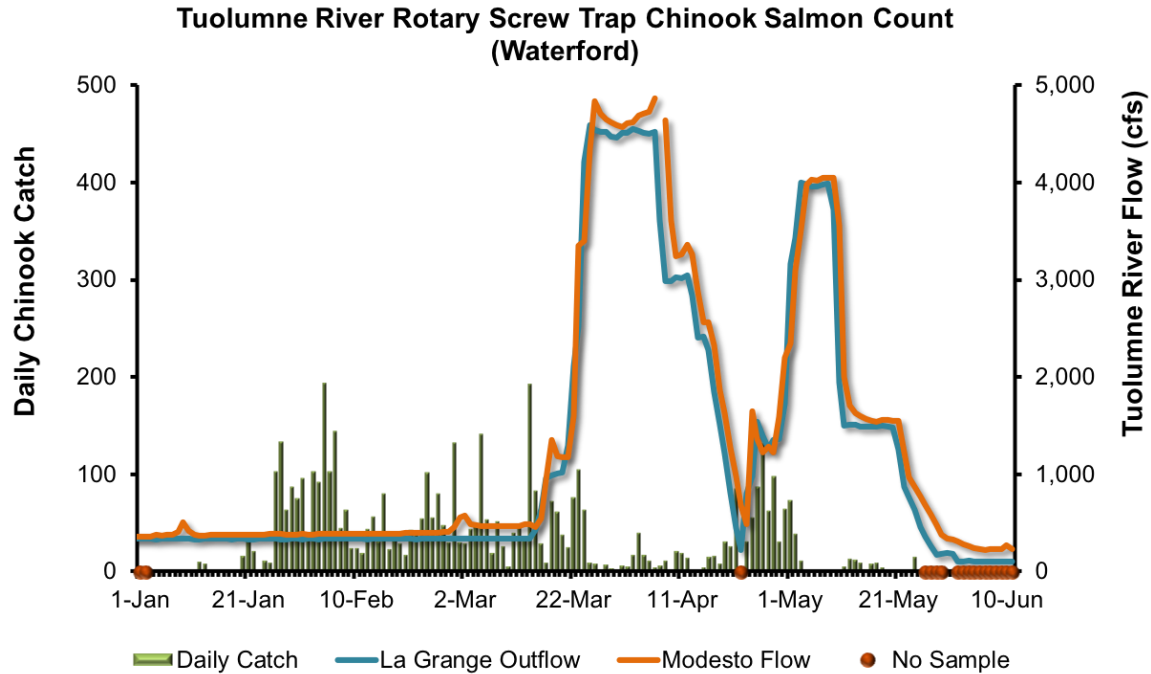


Figure 1. Daily Chinook salmon catch at Waterford and Tuolumne River flow at La Grange and Modesto. Note: Sampling ended for season on June 1 due to no catch. Season total catch = 5,018.

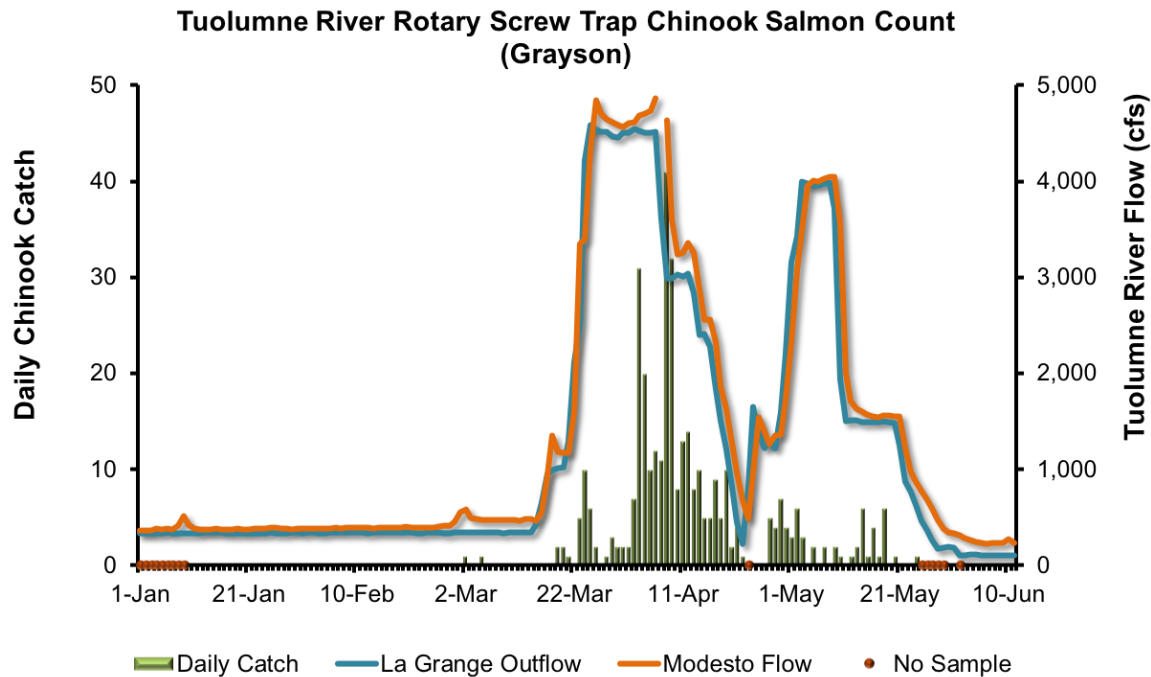


Figure 2. Daily Chinook salmon catch at Grayson and Tuolumne River flow at La Grange and Modesto. Note: Sampling ended for season on June 1 due to no catch. Season total catch = 360.

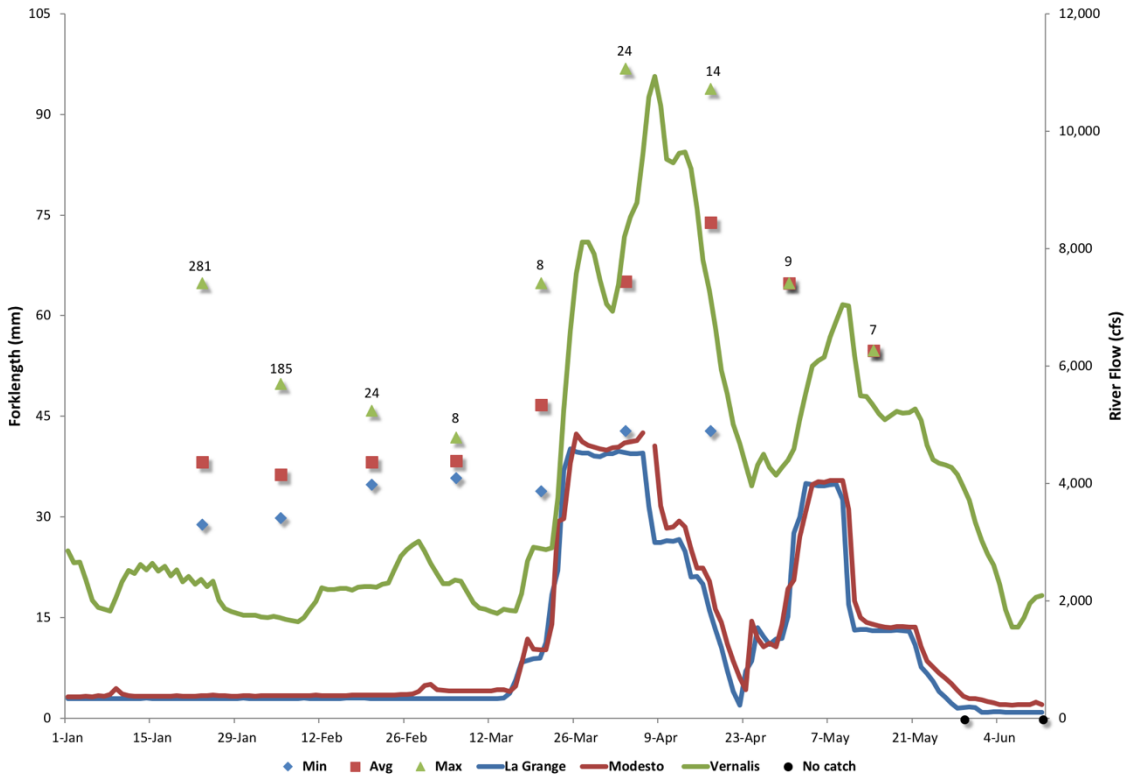


Figure 3. Minimum, average and maximum length of Chinook salmon captured in the Tuolumne and San Joaquin river seine surveys. Total daily catch is noted above the maximum length of each sampling event.

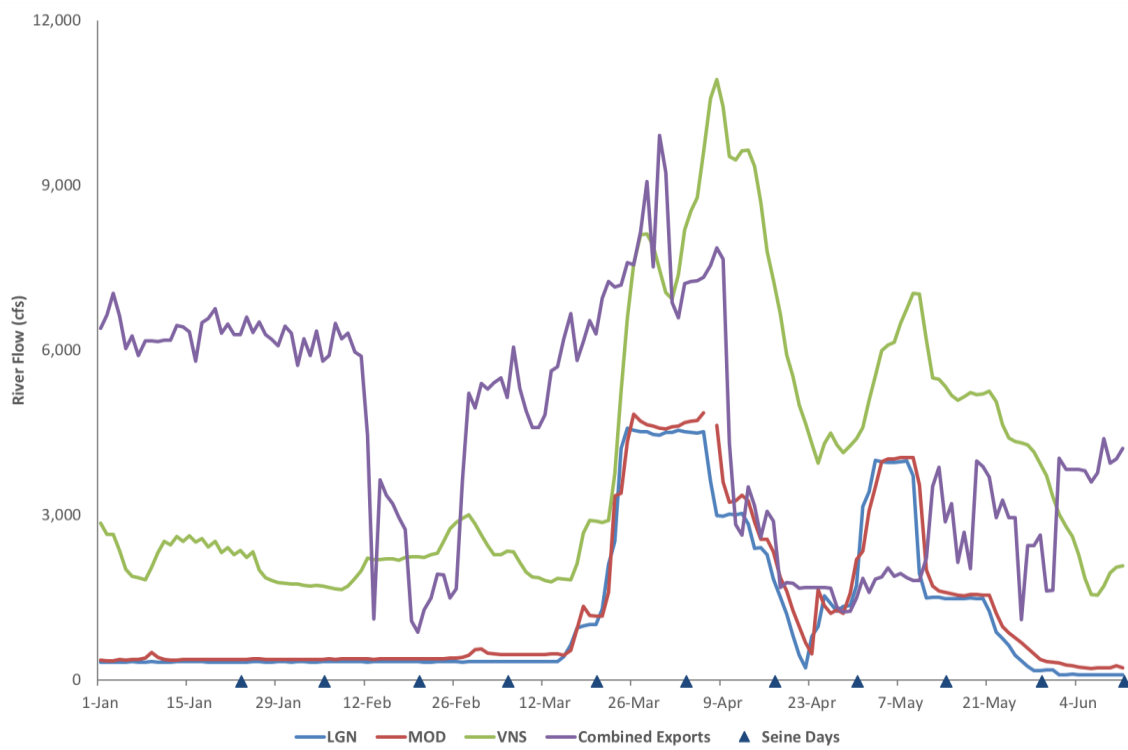


Figure 4. River flows and exports during Tuolumne River seining events in 2018.

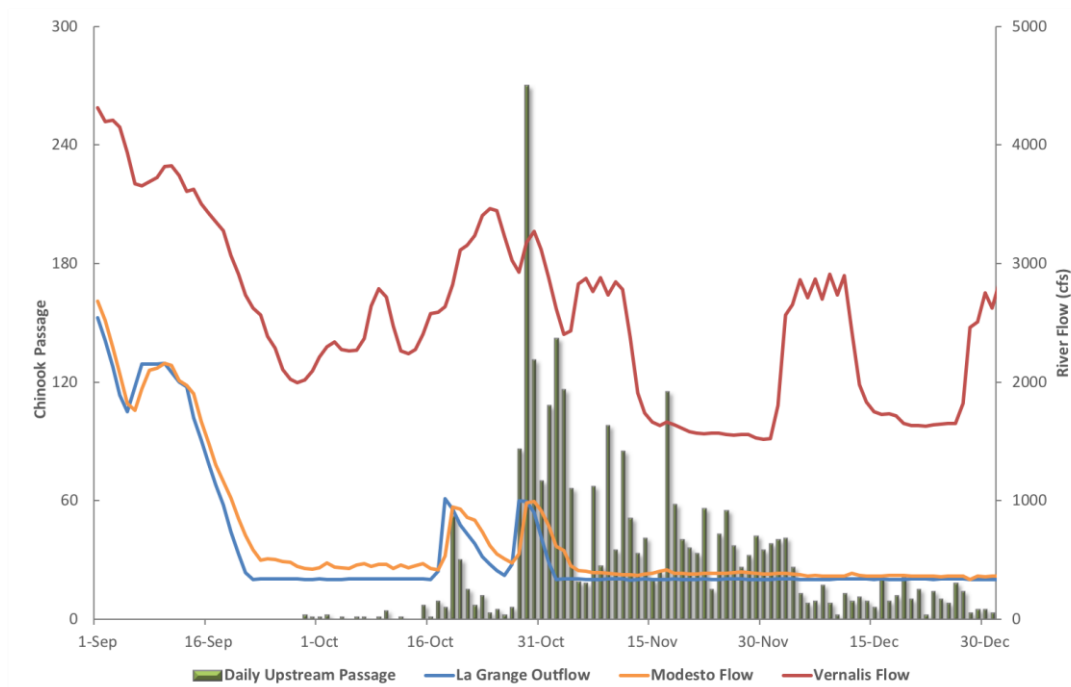


Figure 5. Tuolumne River weir passage and Tuolumne and San Joaquin river flow.

Table 1
Final Tuolumne River Flow Schedule
Based on DWR Values, 60-20-20 Index for 2018, Hydrologic Conditions
Schedule For 2018-2019 Fish Flow Year

DATE		Number of DAYS	BASE FLOW ¹			PULSE FLOW ²			INTERPOLATION FLOW			Other Adjusted Flow			TOTAL FERC FLOW		Agreed Upon
From:	To:		CFS	AF	ACCUM. A.F.	CFS	AF	ACCUM. A.F.	CFS	AF	ACCUM. A.F.	CFS	AF	ACCUM. A.F.	CFS	ACCUM. A.F.	
15-Apr-2018	15-Apr-2018	1	175	347	347	0	0	0	0	0	0	0	0	0	175	347	
16-Apr-2018	16-Apr-2018	1	175	347	694	0	0	0	0	0	0	0	0	0	175	694	
17-Apr-2018	17-Apr-2018	1	175	347	1,041	0	0	0	0	0	0	0	0	0	175	1,041	
18-Apr-2018	18-Apr-2018	1	175	347	1,388	716	1,419	1,419	0	0	0	0	0	0	891	2,808	
19-Apr-2018	19-Apr-2018	1	175	347	1,736	1,113	2,208	3,627	0	0	0	0	0	0	1,288	5,363	
20-Apr-2018	20-Apr-2018	1	175	347	2,083	596	1,183	4,810	0	0	0	0	0	0	771	6,893	
21-Apr-2018	21-Apr-2018	1	175	347	2,430	199	394	5,205	0	0	0	0	0	0	374	7,634	
22-Apr-2018	22-Apr-2018	1	175	347	2,777	0	0	5,205	0	0	0	0	0	0	175	7,982	
23-Apr-2018	23-Apr-2018	1	175	347	3,124	636	1,262	6,466	0	0	0	0	0	0	811	9,590	
24-Apr-2018	24-Apr-2018	1	175	347	3,471	1,551	3,075	9,542	0	0	0	0	0	0	1,726	13,013	
25-Apr-2018	25-Apr-2018	1	175	347	3,818	1,193	2,366	11,908	0	0	0	0	0	0	1,368	15,726	
26-Apr-2018	26-Apr-2018	1	175	347	4,165	954	1,893	13,800	0	0	0	0	0	0	1,129	17,966	
27-Apr-2018	27-Apr-2018	1	175	347	4,512	795	1,577	15,377	0	0	0	0	0	0	970	19,890	
28-Apr-2018	28-Apr-2018	1	175	347	4,860	557	1,104	16,481	0	0	0	0	0	0	732	21,341	
29-Apr-2018	29-Apr-2018	1	175	347	5,207	954	1,893	18,374	0	0	0	0	0	0	1,129	23,581	
30-Apr-2018	30-Apr-2018	1	175	347	5,554	1,590	3,154	21,528	0	0	0	0	0	0	1,765	27,082	
01-May-2018	01-May-2018	1	175	347	5,901	2,465	4,889	26,418	0	0	0	0	0	0	2,640	32,318	
02-May-2018	02-May-2018	1	175	347	6,248	2,067	4,101	30,518	0	0	0	0	0	0	2,242	36,766	
03-May-2018	03-May-2018	1	175	347	6,595	1,710	3,391	33,909	0	0	0	0	0	0	1,885	40,504	
04-May-2018	04-May-2018	1	175	347	6,942	1,431	2,839	36,748	0	0	0	0	0	0	1,606	43,690	
05-May-2018	05-May-2018	1	175	347	7,289	1,232	2,445	39,193	0	0	0	0	0	0	1,407	46,482	
06-May-2018	06-May-2018	1	175	347	7,636	954	1,893	41,085	0	0	0	0	0	0	1,129	48,722	
07-May-2018	07-May-2018	1	175	347	7,983	1,749	3,470	44,555	0	0	0	0	0	0	1,924	52,538	
08-May-2018	08-May-2018	1	175	347	8,331	1,352	2,681	47,236	0	0	0	0	0	0	1,527	55,567	
09-May-2018	09-May-2018	1	175	347	8,678	1,153	2,287	49,523	0	0	0	0	0	0	1,328	58,201	
10-May-2018	10-May-2018	1	175	347	9,025	954	1,893	51,416	0	0	0	0	0	0	1,129	60,440	
11-May-2018	11-May-2018	1	175	347	9,372	795	1,577	52,993	0	0	0	0	0	0	970	62,365	
12-May-2018	12-May-2018	1	175	347	9,719	676	1,341	54,333	0	0	0	0	0	0	851	64,052	
13-May-2018	13-May-2018	1	175	347	10,066	557	1,104	55,437	0	0	0	0	0	0	732	65,504	
14-May-2018	14-May-2018	1	175	347	10,413	477	946	56,384	0	0	0	0	0	0	652	66,797	
15-May-2018	15-May-2018	1	175	347	10,760	406	804	57,188	0	0	0	0	0	0	581	67,948	
16-May-2018	16-May-2018	1	175	347	11,107	318	631	57,819	0	0	0	0	0	0	493	68,926	
17-May-2018	17-May-2018	1	175	347	11,455	278	552	58,371	0	0	0	0	0	0	453	69,826	
18-May-2018	18-May-2018	1	175	347	11,802	239	473	58,844	0	0	0	0	0	0	414	70,646	
19-May-2018	19-May-2018	1	175	347	12,149	199	394	59,238	0	0	0	0	0	0	374	71,387	
20-May-2018	20-May-2018	1	175	347	12,496	159	315	59,554	0	0	0	0	0	0	334	72,050	
21-May-2018	21-May-2018	1	175	347	12,843	119	237	59,790	0	0	0	0	0	0	294	72,633	
22-May-2018	22-May-2018	1	175	347	13,190	80	158	59,948	0	0	0	0	0	0	255	73,138	
23-May-2018	23-May-2018	1	175	347	13,537	40	79	60,027	0	0	0	0	0	0	215	73,564	
24-May-2018	24-May-2018	1	175	347	13,884	0	0	60,027	0	0	0	0	0	0	175	73,911	
25-May-2018	25-May-2018	1	175	347	14,231	0	0	60,027	0	0	0	0	0	0	175	74,258	
26-May-2018	26-May-2018	1	175	347	14,579	0	0	60,027	0	0	0	0	0	0	175	74,606	
27-May-2018	27-May-2018	1	175	347	14,926	0	0	60,027	0	0	0	0	0	0	175	74,953	
28-May-2018	28-May-2018	1	175	347	15,273	0	0	60,027	0	0	0	0	0	0	175	75,300	
29-May-2018	29-May-2018	1	175	347	15,620	0	0	60,027	0	0	0	0	0	0	175	75,647	
30-May-2018	30-May-2018	1	175	347	15,967	0	0	60,027	0	0	0	0	0	0	175	75,994	
31-May-2018	31-May-2018	1	175	347	16,314	0	0	60,027	0	0	0	0	0	0	175	76,341	
01-Jun-2018	01-Jun-2018	1	75	149	16,463	0	0	60,027	0	0	0	0	0	0	75	76,490	
02-Jun-2018	02-Jun-2018	1	75	149	16,612	0	0	60,027	0	0	0	0	0	0	75	76,639	
03-Jun-2018	03-Jun-2018	1	75	149	16,760	0	0	60,027	0	0	0	0	0	0	75	76,787	
04-Jun-2018	04-Jun-2018	1	75	149	16,909	0	0	60,027	0	0	0	0	0	0	75	76,936	
05-Jun-2018	05-Jun-2018	1	75	149	17,058	0	0	60,027	0	0	0	0	0	0	75	77,085	
06-Jun-2018	06-Jun-2018	1	75	149	17,207	0	0	60,027	0	0	0	0	0	0	75	77,234	
07-Jun-2018	07-Jun-2018	1	75	149	17,355	0	0	60,027	0	0	0	0	0	0	75	77,382	
08-Jun-2018	30-Jun-2018	23	75	3,421	20,777	0	0	60,027	0	0	0	0	0	0	75	80,804	
01-Jul-2018	31-Jul-2018	31	75	4,612	25,388	0	0	60,027	0	0	0	0	0	0	75	85,415	
01-Aug-2018	31-Aug-2018	31	75	4,612	30,000	0	0	60,027	0	0	0	0	0	0	75	90,027	
01-Sep-2018	30-Sep-2018	30	75	4,463	34,463	0	0	60,027	0	0	0	0	0	0	75	94,490	
01-Oct-2018	01-Oct-2018	1	200	397	34,860	0	0	60,027	500	992	992	0	0	0	700	95,878	
02-Oct-2018	02-Oct-2018	1	200	397	35,256	0	0	60,027	500	992	1,983	0	0	0	700	97,267	
03-Oct-2018	03-Oct-2018	1	200	397	35,653	0	0	60,027	500	992	2,975	0	0	0	700	98,655	
04-Oct-2018	04-Oct-2018	1	200	397	36,050	0	0	60,027	500	992	3,967	0	0	0	700	100,044	
05-Oct-2018	05-Oct-2018	1	200	397	36,446	0	0	60,027	500	992	4,959	0	0	0	700	101,432	
06-Oct-2018	06-Oct-2018	1	200	397	36,843	0	0	60,027	500	992	5,950	0	0	0	700	102,820	
07-Oct-2018	07-Oct-2018	1	200	397	37,240	0	0	60,027	500	992	6,942	0	0	0	700	104,209	
08-Oct-2018	08-Oct-2018	1	200	397	37,636	0	0	60,027	500	992	7,934	0	0	0	700	105,597	
09-Oct-2018	09-Oct-2018	1	200	397	38,033	0	0	60,027	500	992	8,926	0	0	0	700	106,986	
10-Oct-2018	10-Oct-2018	1	200	397	38,430	175	347	60,374	500	992	9,917	0	0	0	875	108,721	
11-Oct-2018	11-Oct-2018	1	200	397	38,826	175	347	60,721	500	992	10,909	0	0	0	875	110,457	
12-Oct-2018	12-Oct																

Table 2

SAN JOAQUIN VALLEY WATER YEAR HYDROLOGIC CLASSIFICATION

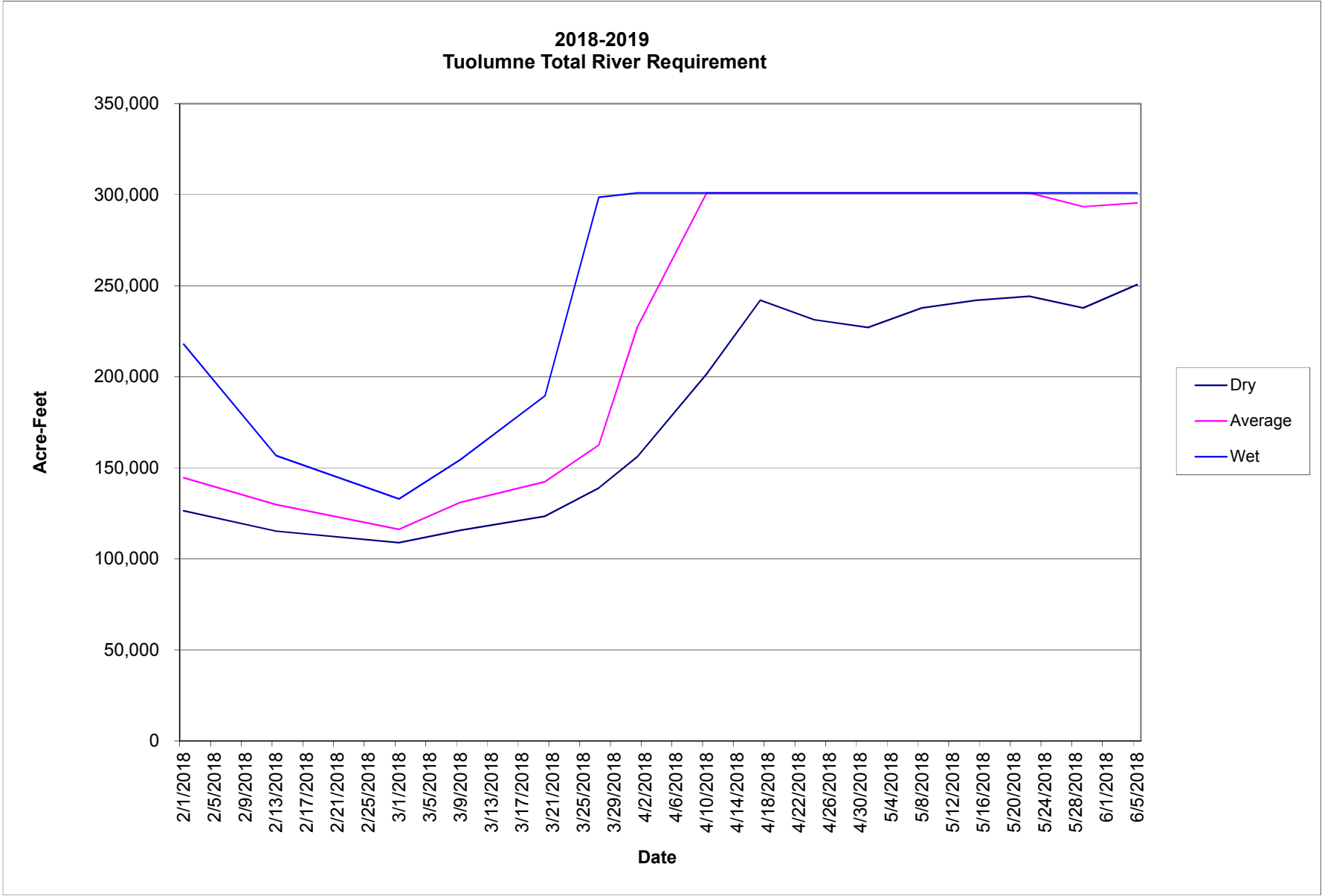
602020 INDEX

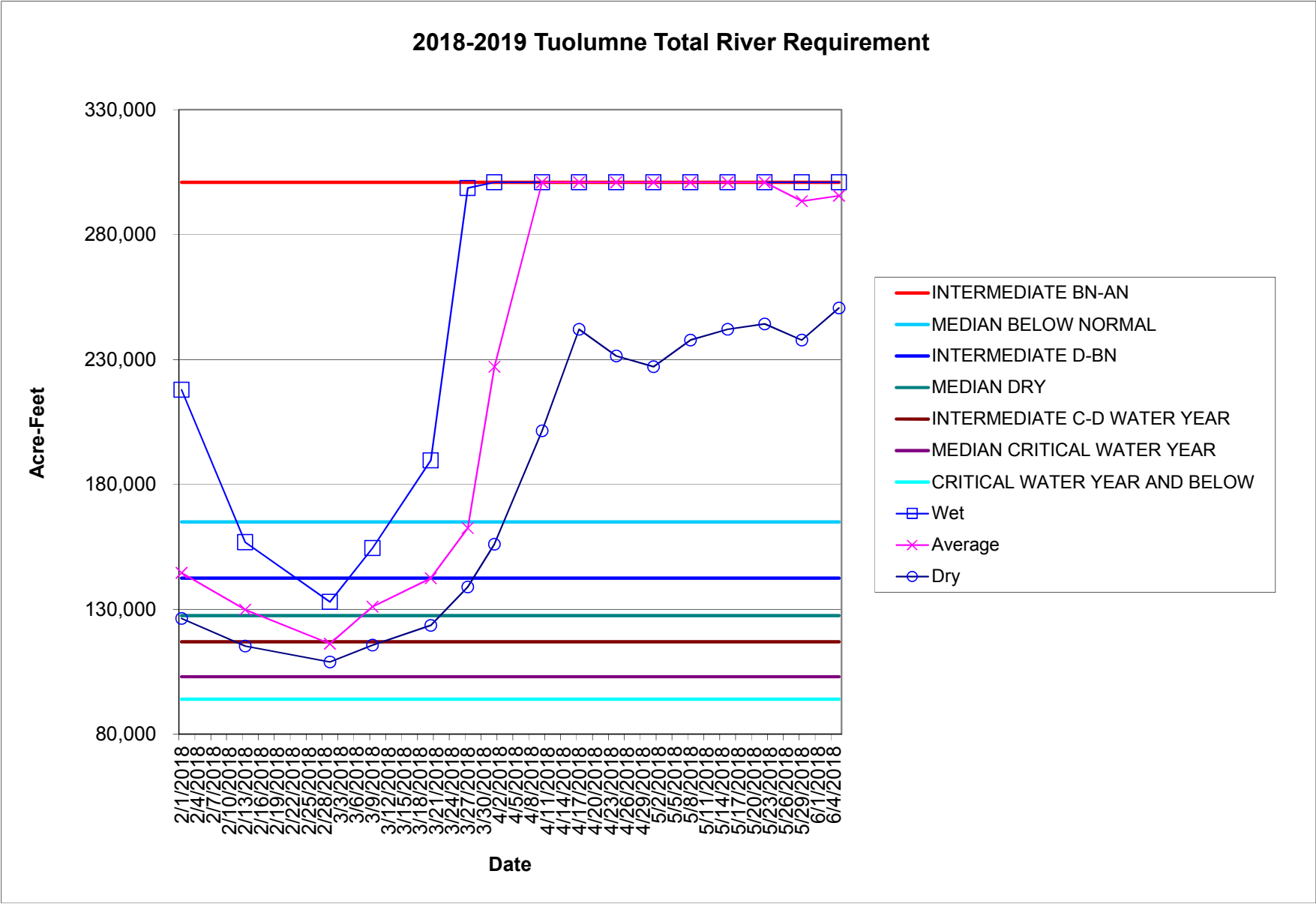
60-20-20 YEAR	APRIL-JULY RUNOFF (AF)					OCTOBER-MARCH RUNOFF (AF)					602020 INDEX	TUOLUMNE RIVER MINIMUM FLOW REQUIREMENT	San Joaquin Index (not the FERC Index)	FERC Index	
	STANISLAUS	TUOLUMNE	MERCED	PIRIANT	TOTAL	STANISLAUS	TUOLUMNE	MERCED	PIRIANT	TOTAL				RANKING	
17	1,440,796	2,454,169	1,232,846	2,641,089	7,768,900	1,570,518	2,276,847	1,222,014	1,585,049	6,654,428	6,462,633	300,923	Wet	MEDIAN WET/	MAXIMUM
18	580,000	1,060,000	450,000	970,000	3,060,000	379,583	620,658	273,637	368,411	1,642,289	3,064,458	295,557	Below Normal	MEDIAN BELOW	NORMAL
Feb 1 Forecast															
Dry	300,000	590,000	270,000	520,000	1,680,000	293,000	437,000	165,000	258,000	1,153,000	2,138,600	126,361	Dry	INTERMEDIATE C-D	WATER YEAR
Average	370,000	720,000	330,000	680,000	2,100,000	333,000	487,000	195,000	308,000	1,323,000	2,424,600	144,604	Dry	INTERMEDIATE D-BN	
Wet	490,000	940,000	430,000	860,000	2,720,000	393,000	577,000	235,000	368,000	1,573,000	2,846,600	217,900	Below Normal	MEDIAN BELOW	NORMAL
Feb 13 Update															
Dry	230,000	470,000	210,000	390,000	1,300,000	293,000	437,000	165,000	258,000	1,153,000	1,910,600	115,257	Critical	MEDIAN CRITICAL	WATER YEAR
Average	300,000	600,000	270,000	550,000	1,720,000	333,000	487,000	195,000	308,000	1,323,000	2,196,600	129,886	Dry	MEDIAN DRY	
Wet	410,000	800,000	360,000	720,000	2,290,000	393,000	577,000	235,000	368,000	1,573,000	2,588,600	156,831	Below Normal	INTERMEDIATE D-BN	
Mar 01 Update															
Dry	180,000	350,000	140,000	320,000	990,000	244,000	361,000	135,000	221,000	961,000	1,686,200	108,926	Critical	MEDIAN CRITICAL	WATER YEAR
Average	240,000	490,000	200,000	450,000	1,380,000	270,000	405,000	156,000	255,000	1,086,000	1,945,200	116,233	Critical	MEDIAN CRITICAL	WATER YEAR
Wet	360,000	640,000	260,000	570,000	1,830,000	314,000	451,000	180,000	291,000	1,236,000	2,245,200	132,955	Dry	MEDIAN DRY	
Mar 09 Update															
Dry	230,000	490,000	210,000	460,000	1,390,000	244,000	361,000	135,000	221,000	961,000	1,926,200	115,697	Critical	MEDIAN CRITICAL	WATER YEAR
Average	300,000	650,000	280,000	600,000	1,830,000	270,000	405,000	156,000	255,000	1,086,000	2,215,200	131,061	Dry	MEDIAN DRY	
Wet	430,000	820,000	350,000	750,000	2,350,000	314,000	451,000	180,000	291,000	1,236,000	2,557,200	154,490	Below Normal	INTERMEDIATE D-BN	
Mar 20 Update															
Dry	280,000	590,000	250,000	540,000	1,660,000	244,000	361,000	135,000	221,000	961,000	2,088,200	123,518	Critical	INTERMEDIATE C-D	WATER YEAR
Average	360,000	760,000	330,000	680,000	2,130,000	270,000	405,000	156,000	255,000	1,086,000	2,395,200	142,426	Dry	MEDIAN DRY	
Wet	500,000	950,000	410,000	840,000	2,700,000	314,000	451,000	180,000	291,000	1,236,000	2,767,200	189,597	Below Normal	MEDIAN BELOW	NORMAL
Mar 27 Update															
Dry	340,000	730,000	310,000	700,000	2,080,000	244,000	361,000	135,000	221,000	961,000	2,340,200	138,953	Dry	MEDIAN DRY	
Average	430,000	910,000	400,000	840,000	2,580,000	270,000	405,000	156,000	255,000	1,086,000	2,665,200	162,542	Below Normal	INTERMEDIATE D-BN	
Wet	580,000	1,110,000	490,000	1,030,000	3,210,000	314,000	451,000	180,000	291,000	1,236,000	3,073,200	298,673	Below Normal	MEDIAN BELOW	NORMAL
Apr 01 Update															
Dry	510,000	930,000	440,000	860,000	2,740,000	379,583	620,658	273,637	368,411	1,642,289	2,872,458	227,117	Below Normal	MEDIAN BELOW	NORMAL
Average	580,000	1,050,000	500,000	1,000,000	3,130,000	379,583	620,658	273,637	368,411	1,642,289	3,106,458	300,923	Above Normal	INTERMEDIATE BN-AN	
Wet	680,000	1,220,000	570,000	1,140,000	3,610,000	379,583	620,658	273,637	368,411	1,642,289	3,394,458	300,923	Above Normal	INTERMEDIATE BN-AN	
Apr 10 Update															
Dry	480,000	890,000	420,000	830,000	2,620,000	379,583	620,658	273,637	368,411	1,642,289	2,800,458	201,452	Below Normal	MEDIAN BELOW	NORMAL
Average	590,000	1,060,000	510,000	980,000	3,140,000	379,583	620,658	273,637	368,411	1,642,289	3,112,458	300,923	Above Normal	INTERMEDIATE BN-AN	
Wet	730,000	1,250,000	600,000	1,160,000	3,740,000	379,583	620,658	273,637	368,411	1,642,289	3,472,458	300,923	Above Normal	INTERMEDIATE BN-AN	
Apr 17 Update															
Dry	520,000	950,000	450,000	890,000	2,810,000	379,583	620,658	273,637	368,411	1,642,289	2,914,458	242,088	Below Normal	MEDIAN BELOW	NORMAL
Average	620,000	1,120,000	540,000	1,040,000	3,320,000	379,583	620,658	273,637	368,411	1,642,289	3,220,458	300,923	Above Normal	INTERMEDIATE BN-AN	
Wet	760,000	1,310,000	630,000	1,210,000	3,910,000	379,583	620,658	273,637	368,411	1,642,289	3,574,458	300,923	Above Normal	INTERMEDIATE BN-AN	
Apr 24 Update															
Dry	510,000	940,000	440,000	870,000	2,760,000	379,583	620,658	273,637	368,411	1,642,289	2,884,458	231,395	Below Normal	MEDIAN BELOW	NORMAL
Average	600,000	1,080,000	520,000	1,020,000	3,220,000	379,583	620,658	273,637	368,411	1,642,289	3,160,458	300,923	Above Normal	INTERMEDIATE BN-AN	
Wet	730,000	1,260,000	600,000	1,170,000	3,760,000	379,583	620,658	273,637	368,411	1,642,289	3,484,458	300,923	Above Normal	INTERMEDIATE BN-AN	
May 1 Forecast															
Dry	510,000	930,000	440,000	860,000	2,740,000	380,000	620,000	274,000	368,000	1,642,000	2,872,400	227,096	Below Normal	MEDIAN BELOW	NORMAL
Average	580,000	1,050,000	500,000	1,000,000	3,130,000	380,000	620,000	274,000	368,000	1,642,000	3,106,400	300,923	Above Normal	INTERMEDIATE BN-AN	
Wet	680,000	1,220,000	570,000	1,140,000	3,610,000	380,000	620,000	274,000	368,000	1,642,000	3,394,400	300,923	Above Normal	INTERMEDIATE BN-AN	
May 08 Update															
Dry	520,000	950,000	440,000	880,000	2,790,000	380,000	620,000	274,000	368,000	1,642,000	2,902,400	237,790	Below Normal	MEDIAN BELOW	NORMAL
Average	580,000	1,070,000	500,000	1,020,000	3,170,000	380,000	620,000	274,000	368,000	1,642,000	3,130,400	300,923	Above Normal	INTERMEDIATE BN-AN	
Wet	670,000	1,220,000	560,000	1,140,000	3,590,000	380,000	620,000	274,000	368,000	1,642,000	3,382,400	300,923	Above Normal	INTERMEDIATE BN-AN	
May 15 Update															
Dry	520,000	960,000	440,000	890,000	2,810,000	380,000	620,000	274,000	368,000	1,642,000	2,914,400	242,068	Below Normal	MEDIAN BELOW	NORMAL
Average	570,000	1,070,000	490,000	1,010,000	3,140,000	380,000	620,000	274,000	368,000	1,642,000	3,112,400	300,923	Above Normal	INTERMEDIATE BN-AN	
Wet	650,000	1,210,000	540,000	1,110,000	3,510,000	380,000	620,000	274,000	368,000	1,642,000	3,334,400	300,923	Above Normal	INTERMEDIATE BN-AN	
May 22 Update															
Dry	520,000	980,000	430,000	890,000	2,820,000	380,000	620,000	274,000	368,000	1,642,000	2,920,400	244,206	Below Normal	MEDIAN BELOW	NORMAL
Average	570,000	1,070,000	480,000	1,000,000	3,120,000	380,000	620,000	274,000	368,000	1,642,000	3,100,400	300,923	Above Normal	INTERMEDIATE BN-AN	
Wet	640,000	1,200,000	530,000	1,090,000	3,460,000	380,000	620,000	274,000	368,000	1,642,000	3,304,400	300,923	Above Normal	INTERMEDIATE BN-AN	
May 29 Update															

Table 2

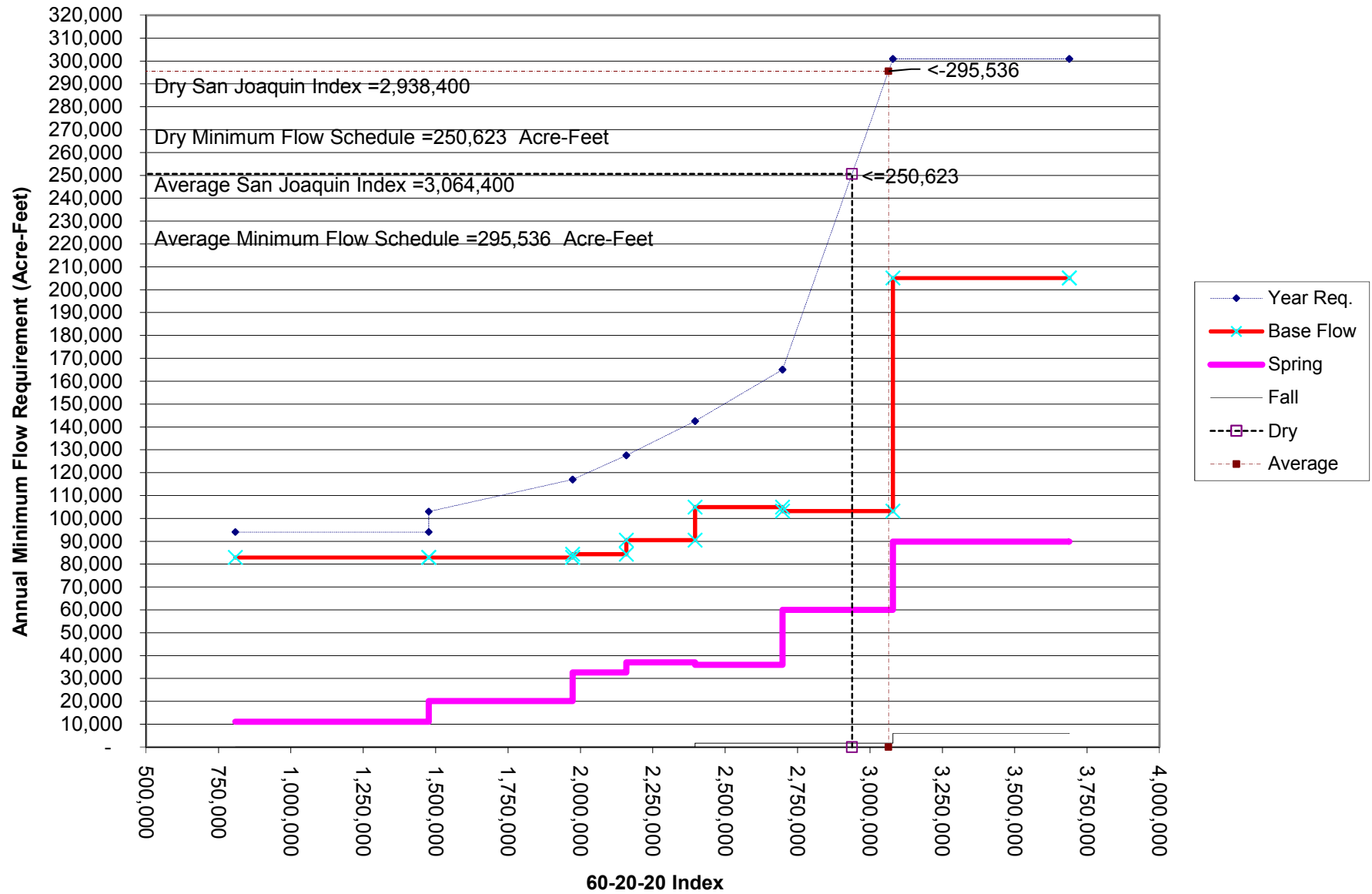
SAN JOAQUIN VALLEY WATER YEAR HYDROLOGIC CLASSIFICATION
602020 INDEX

60-20-20		APRIL-JULY RUNOFF (AF)					OCTOBER-MARCH RUNOFF (AF)					602020 INDEX	TUOLUMNE RIVER		San Joaquin Index (not the FERC Index)	FERC Index
YEAR		STANISLAUS	TUOLUMNE	MERCED	FRIANT	TOTAL	STANISLAUS	TUOLUMNE	MERCED	FRIANT	TOTAL		MINIMUM FLOW REQUIREMENT			RANKING
Dry		520,000	970,000	420,000	880,000	2,790,000	380,000	620,000	274,000	368,000	1,642,000	2,902,400	237,790	Below Normal		MEDIAN BELOW NORMAL
Average		570,000	1,050,000	460,000	970,000	3,050,000	380,000	620,000	274,000	368,000	1,642,000	3,058,400	293,397	Below Normal		MEDIAN BELOW NORMAL
Wet		630,000	1,170,000	500,000	1,050,000	3,350,000	380,000	620,000	274,000	368,000	1,642,000	3,238,400	300,923	Above Normal		INTERMEDIATE BN-AN
Jun 05 Update																
Dry		540,000	1,000,000	420,000	890,000	2,850,000	380,000	620,000	274,000	368,000	1,642,000	2,938,400	250,623	Below Normal		MEDIAN BELOW NORMAL
Average		580,000	1,060,000	450,000	970,000	3,060,000	380,000	620,000	274,000	368,000	1,642,000	3,064,400	295,536	Below Normal		MEDIAN BELOW NORMAL
Wet		630,000	1,160,000	490,000	1,040,000	3,320,000	380,000	620,000	274,000	368,000	1,642,000	3,220,400	300,923	Above Normal		INTERMEDIATE BN-AN

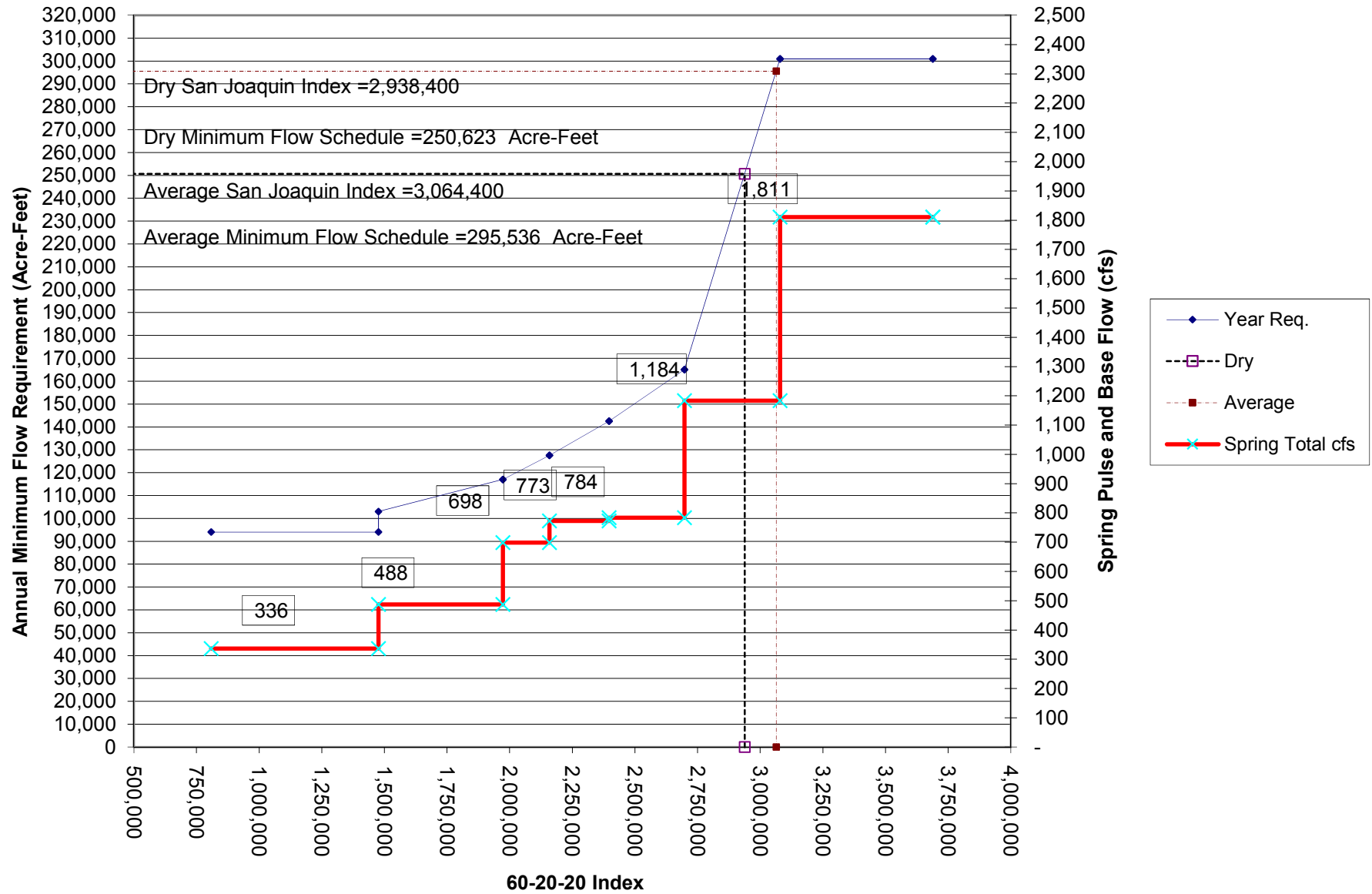




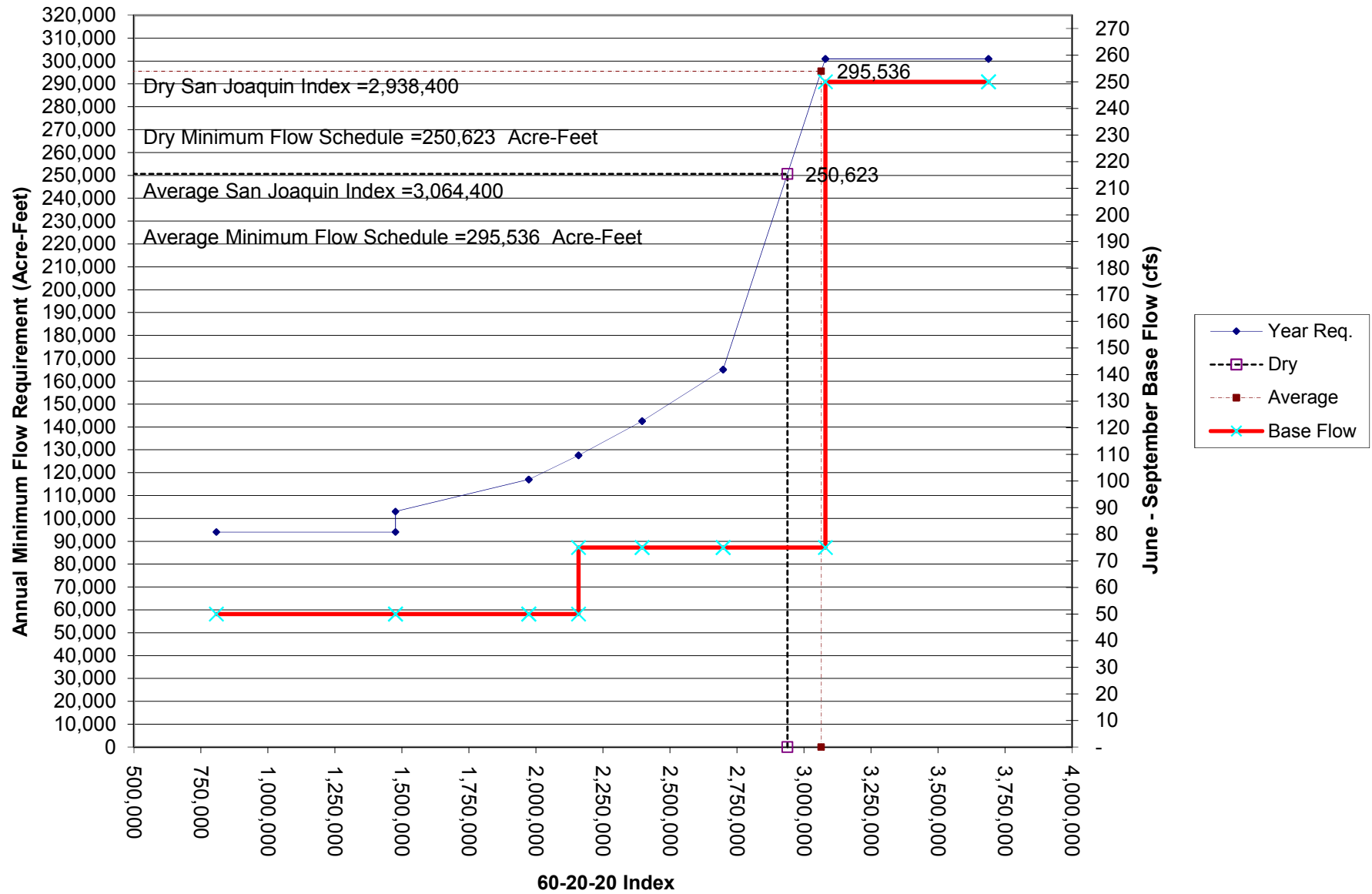
TUOLUMNE RIVER MINIMUM FLOW REQUIREMENT (Figure 1)
Annual Flow Requirement



TUOLUMNE RIVER MINIMUM FLOW REQUIREMENT (Figure 2)
(Spring Pulse Flow Plus Base Flow)



TUOLUMNE RIVER MINIMUM FLOW REQUIREMENT (Figure 3) (Summer Base Flow)



TUOLUMNE RIVER MINIMUM FLOW REQUIREMENT (Figure 4)
Interpolation Volume

