

**RECLAMATION DISTRICT NO. 1601
TWITCHELL ISLAND
BOARD OF TRUSTEES MEETING
TUESDAY, JUNE 20, 2023
9:00 AM
ENGINEER'S REPORT**

I. PROJECT FUNDING AGREEMENT TW – 21 - 1.0 TIMES PROJECT

- A. Review design details for levee setback along Sevenmile Slough with the District's ultimate levee standard Slough together with a twenty-foot (20') levee setback from toe for DWR's proposed mitigation area.

EXHIBIT A: RD 1601 Levee Design Standard for Sevenmile Slough post ENGEO's Geotechnical Analysis.

**II. DELTA LEVEE SUBVENTIONS PROJECT -SPECIAL PROJECTS
MULTI-BENEFIT PSP**

- A. Review status of Full Proposal Application due 6/23/23.
- B. Seek a letter of commitment from DWR, the landowner whose land the project will be built on agreeing to establishment of the project, (**KSN will need assistance of the DWR Trustees on the Board to acquire this letter of commitment ASAP**).

III. DELTA LEVEE SUBVENTIONS PROGRAM 2023 HIGH WATER EVENT

- A. Review current hydrology conditions in the South Delta for ongoing high winter run-off into August.

EXHIBIT B: Report dated 6/12/23 from DWR Weekly Flood Operation Center & USACE of coordinated reservoir operations on the San Joaquin River.

IV. 2023-2024 ASSESSMENT BY LANDOWNER SUMMARIES

- A. Review the Districts Draft Assessment summaries calculated for 100%, 90%, and 80%, of the **\$700,000** approved assessment.

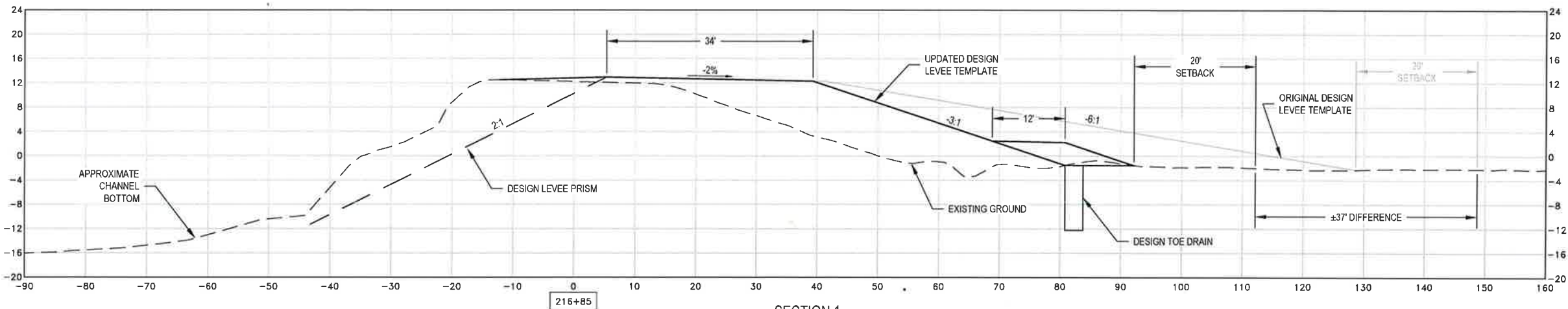
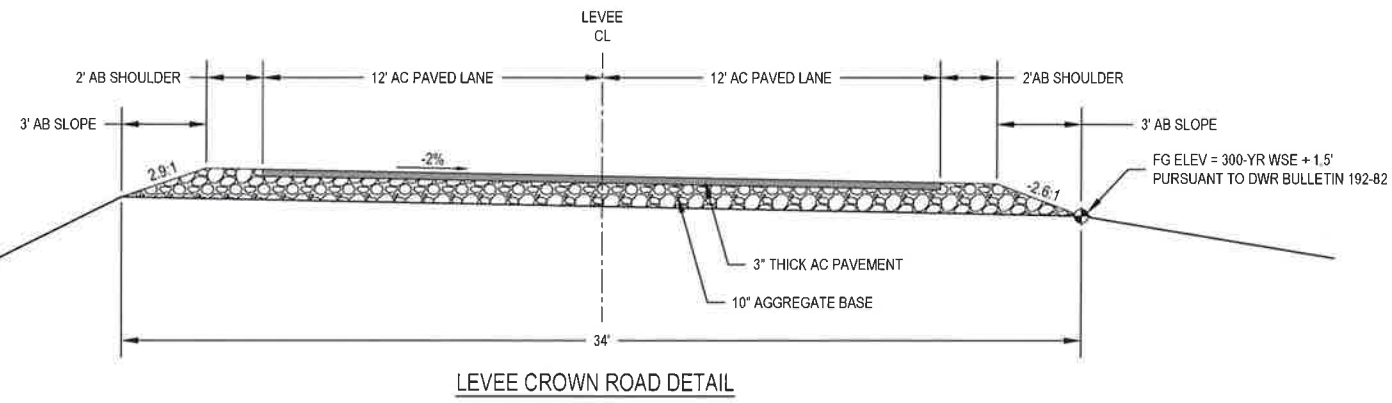
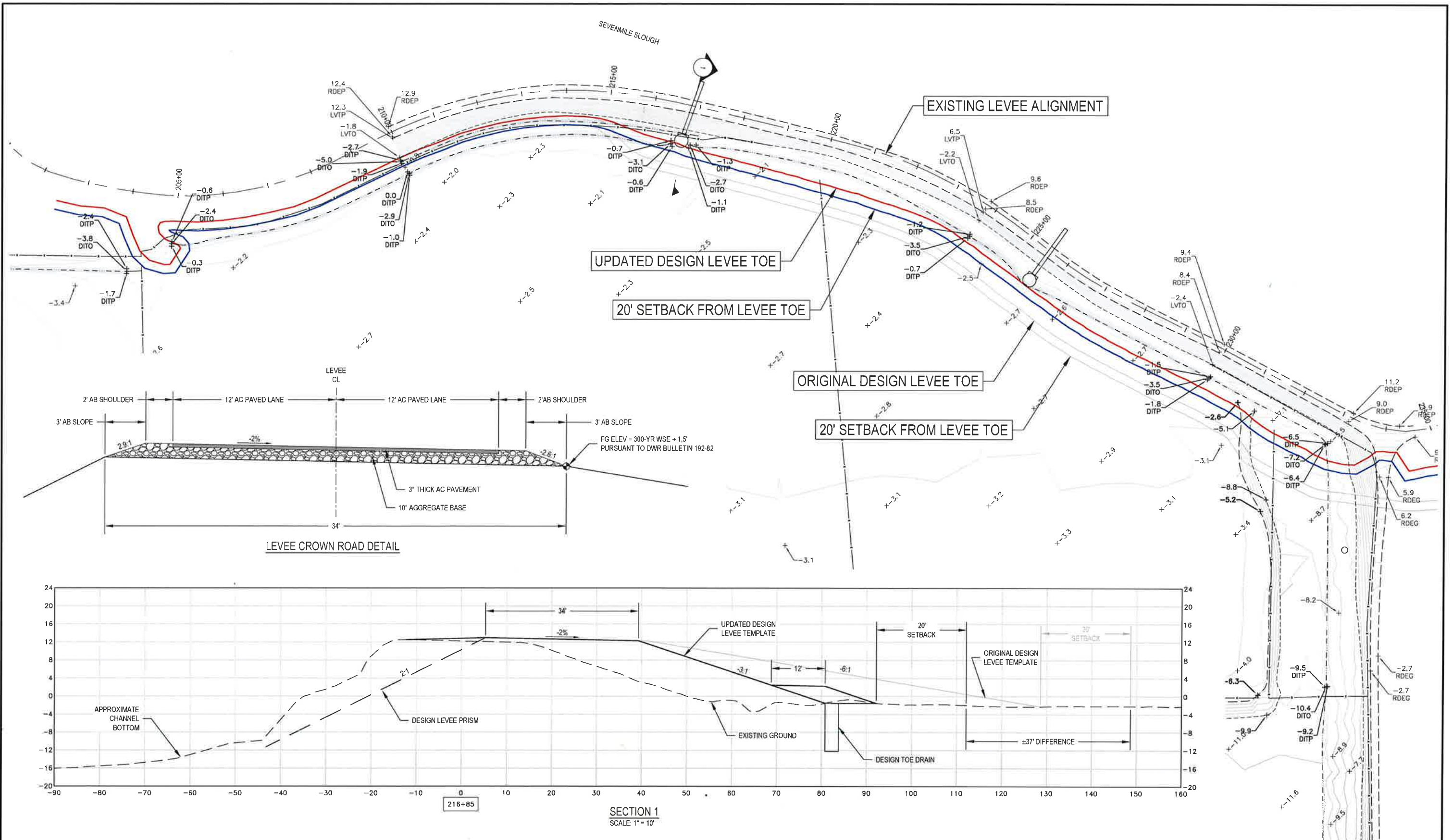
EXHIBIT C: Assessment summaries 100% (UNDER SEPARATE COVER)

EXHIBIT D: Assessment summaries 90% (UNDER SEPARATE COVER)

EXHIBIT E: Assessment summaries 80% (UNDER SEPARATE COVER)

Exhibit A

FILE SPEC: P:\1110_Twitchell_Island\1010_Mitigation_&_Enhancement_Site (TIMES)\2022\08_Civil\400_Plans\020_CAD\Exhibits\Exh_Sevenmile Slough_TIMES_Toe Drain.dwg
 PLOT DATE: Jun 14, 2023 - 8:10am



SECTION 1
 SCALE: 1" = 10'

 NORTH ORIENTATION	 KJELDSEN SINNOCK NEUDECK CIVIL ENGINEERS & LAND SURVEYORS www.ksninc.com	711 N. Pershing Avenue Stockton, CA 95203 209-946-0268 1550 Harbor Blvd., Suite 212 West Sacramento, CA 95691 916-403-5900	RECLAMATION DISTRICT NO. 1601 SEVENMILE SLOUGH LEVEE DESIGN ADJACENT TO TIMES PROJECT UPDATED ENGINEERED LEVEL SECTION		DRAWING SCALE 1" = 100' ORIGINAL DRAWING SCALE 0 1/4" 1"	EXHIBIT NO. 1 PAGE NO. 1

Exhibit B

SJ Basin Forecasted Spring Flows (based on June 11-12 data)

Vernalis Flow (cfs)	April	May	June	July
Low scenario	29000-30000	26000-27000	21000-23000	10000-15000
Most Likely scenario	29000-30000	27000-28000	23000-25000	15000-20000
High scenario	29000-30000	28000-29000	25000-27000	20000-25000

New Melones (cfs)	April	May	June	July
90% scenario	1500	2500	1000	1000
50% scenario	1500	2500	1500	1500
10% scenario	1500	2500	2000	2000

Don Pedro Releases (cfs)	April	May	June	July
90% scenario	10500	10500	5000-8500	0-2500
50% scenario	10500	10500	7000-8500	0-3000
10% scenario	10500	10500	8500	0-5000

Exchequer Releases (cfs)	April	May	June	July
90% scenario	7000	5000	2000-4000	0-2000
50% scenario	7000	5000	3000-5000	0-2000
10% scenario	7000	5000	5000	0-2000

Eastside Bypass El Nido (cfs)	April	May	June	July
90% scenario	11000	10500	6000	0
50% scenario	11000	10500	7000	1000
10% scenario	11000	10500	8000	4000

Friant Releases (cfs)	April	May	June	July
90% scenario	8500	10000	4000-7500	0-2500
50% scenario	8500	10000	6000-7500	0-2500
10% scenario	8500	10000	7500	2000-6000

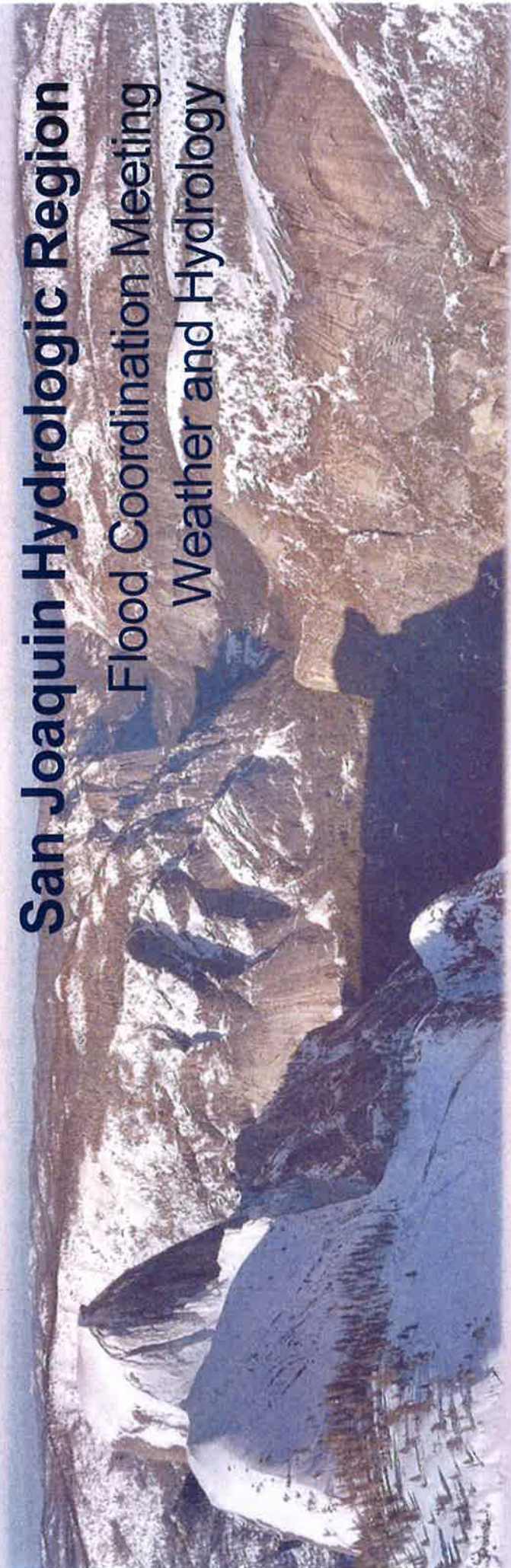
Pine Flat Releases (cfs)	April	May	June	July
90% scenario	4750	4750	3000-4750	0-1000
50% scenario	4750	4750	4000-4750	0-2500
10% scenario	4750	4750	4750	0-4750

Note: Reservoir releases are reported after removal of irrigation demands
 Don Pedro releases are for Tuolumne R @ Modesto
 Exchequer releases are for Merced R @ Stevinson
 Friant releases are for the SJ R @ the bifurcation structure
 Pine Flat releases are for the flow @ Crescent Weir (towards Mendota Pool)

CALIFORNIA DEPARTMENT OF WATER RESOURCES

San Joaquin Hydrologic Region

Flood Coordination Meeting Weather and Hydrology

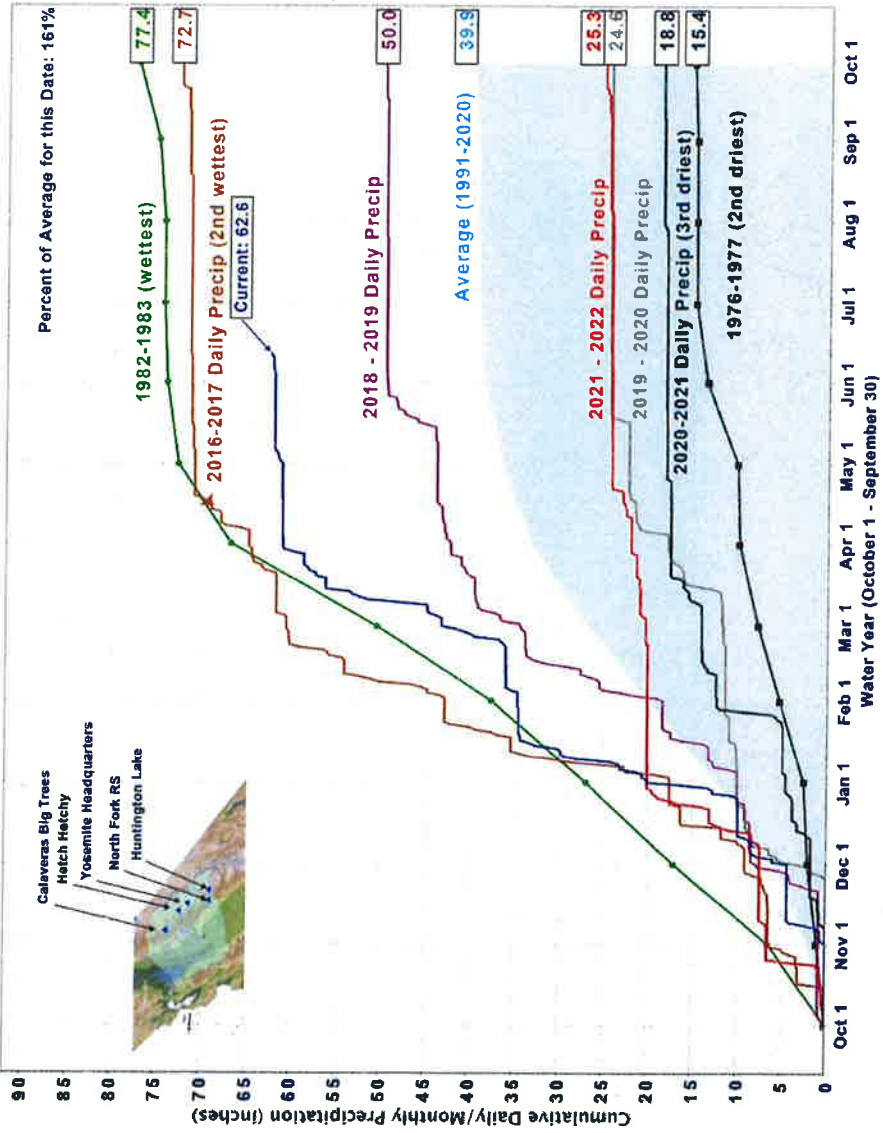


DWR FOC Intel Unit

June 12, 2023



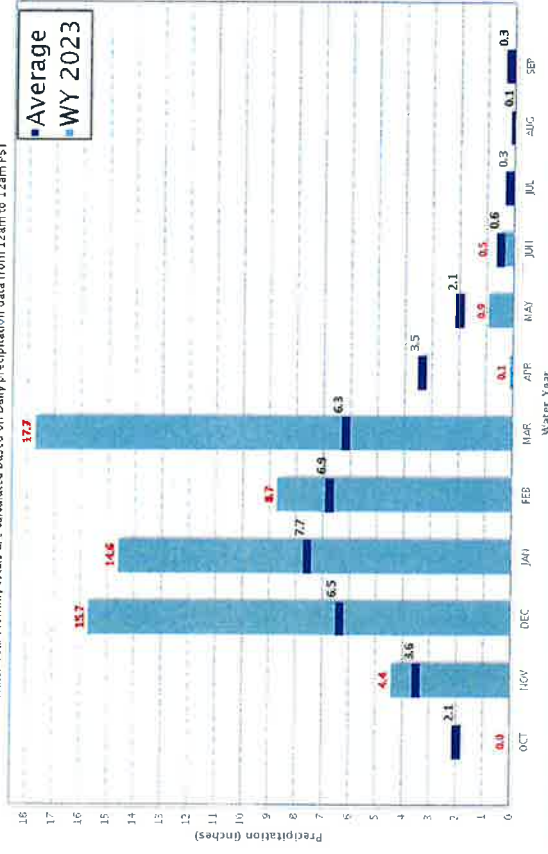
San Joaquin Precipitation: 5-Station Index, June 12, 2023



San Joaquin 5-Station

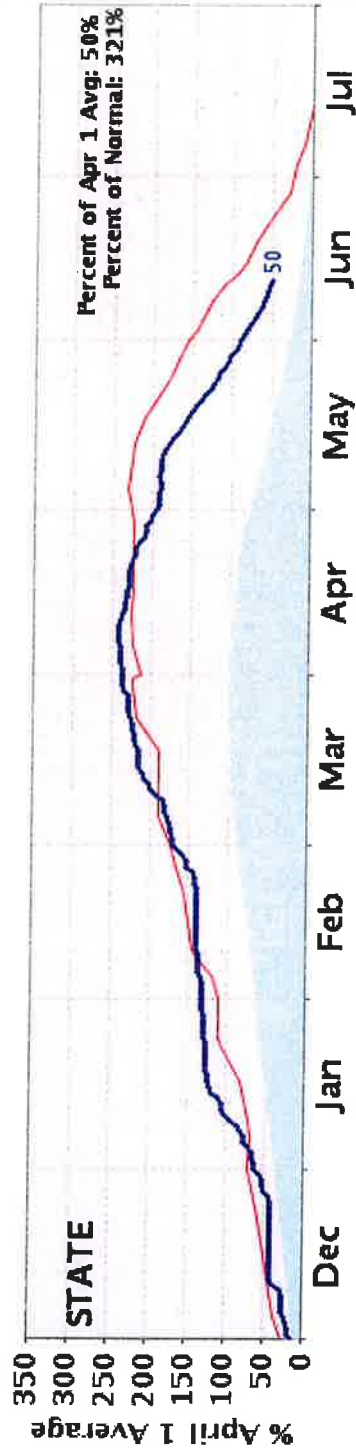
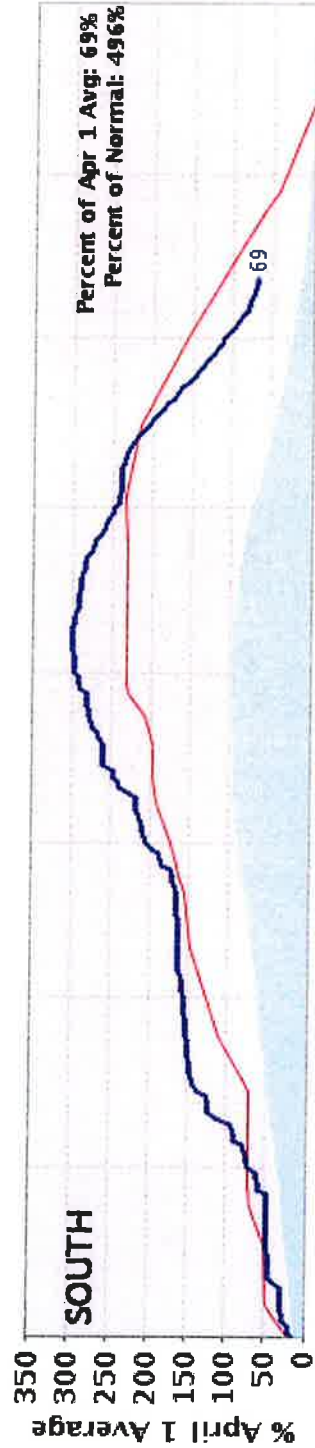
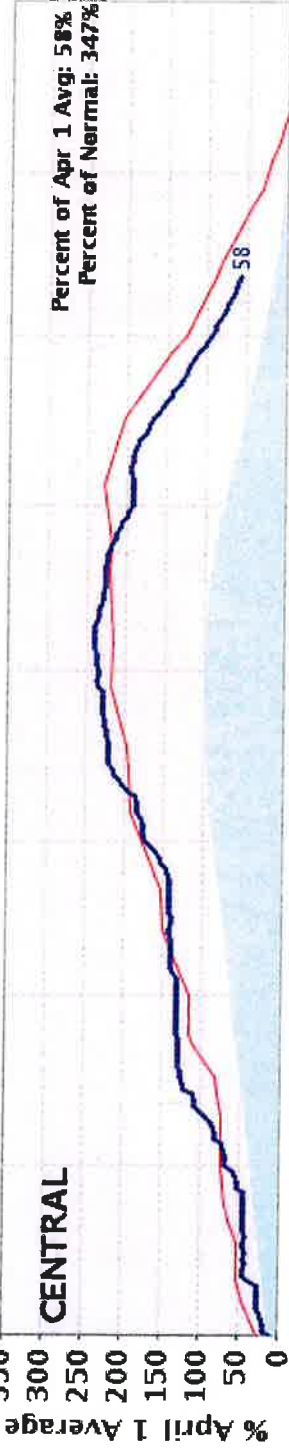
Precipitation Index for Water Year 2023 - Updated on June 12, 2023 09:48 AM

Note: Monthly totals may not add up to seasonal total because of rounding
Water Year Monthly totals are calculated based on Daily precipitation data from 12am to 12am PST

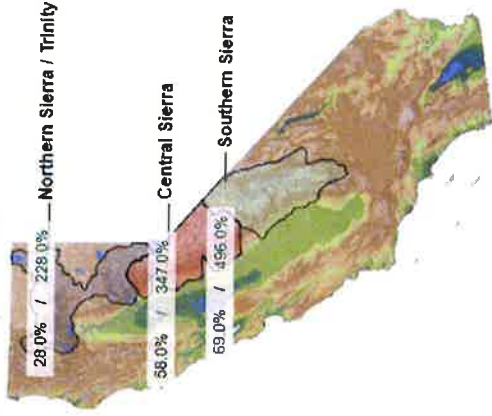


CA Snow Water Content - Percent of April 1 Average For: 12 - Jun - 2023

Data For: 12-Jun-2023
 % Apr 1 Avg. / % Normal for this Date



Average — 1982-1983 (max) — 2022-2023 (current)



CENTRAL

Data For: 12-Jun-2023
 Number of Stations Reporting 40
 Average snow water equivalent 14.2"
 Percent of April 1 Average 58%
 Percent of normal for this date 347%

SOUTH

Data For: 12-Jun-2023
 Number of Stations Reporting 23
 Average snow water equivalent 13.3"
 Percent of April 1 Average 69%
 Percent of normal for this date 496%

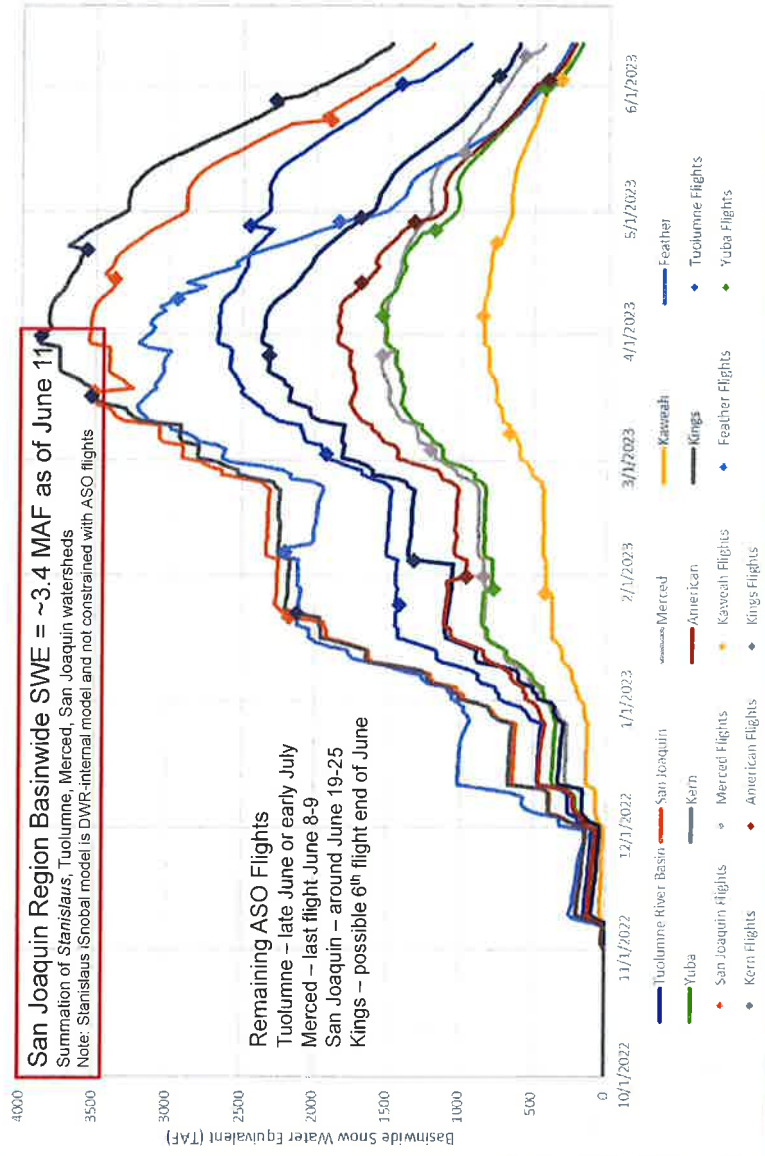
STATEWIDE SUMMARY

Data For: 12-Jun-2023
 Number of Stations Reporting 87
 Average snow water equivalent 12.4"
 Percent of April 1 Average 50%
 Percent of normal for this date 321%

Current Basinwide Snow Water Equivalent Volumes as of June 11, 2023



Aerial Remote Sensing of Snow Program
 Basinwide Snow Water Equivalent WY2023 through June 11, 2023



Data courtesy of M3Works' SNOBAL models with ASO ingested flight data

B-120 WATER SUPPLY FORECAST UPDATE SUMMARY

UNIMPAIRED FLOW FOR - June 2023 (Provisional data, subject to change)

Report generated: June 08, 2023 14:58

DAYS OF MONTH	JUNE 06		AJ VOL	% AVG	AJ VOL	% AVG	AJ VOL	% AVG	AJ VOL	% AVG
	AJ VOL	% AVG								
APRIL - JULY FORECAST UPDATE SUMMARY (IN THOUSANDS OF ACRE-FEET)										
WATERSHED PERCENTILES										
Stanislaus River below Goodwin Res (blw New Melones)	1,570	219								Average = 699
90% Exceedance	1,640	235								
50% Exceedance	1,760	252								
10% Exceedance										
Tuolumne River below La Grange Res (blw Don Pedro)	2,650	217								Average = 1,222
90% Exceedance	2,760	226								
50% Exceedance	2,880	236								
10% Exceedance										
Merced River below Merced Falls (blw Lake McClure)	1,460	233								Average = 627
90% Exceedance	1,520	242								
50% Exceedance	1,620	258								
10% Exceedance										
San Joaquin River below Millerton Lake	2,950	240								Average = 1,229
90% Exceedance	3,070	250								
50% Exceedance	3,250	264								
10% Exceedance										
Kings River below Pine Flat Reservoir	3,080	256								Average = 1,204
90% Exceedance	3,180	264								
50% Exceedance	3,360	279								
10% Exceedance										

<https://cdec.water.ca.gov/reportapp/javareports?name=B120UP>

B-120 WATER SUPPLY FORECAST SUMMARY

UNIMPAIRED FLOW FOR - June 6, 2023

(Provisional data, subject to change)

Report generated: June 08, 2023 15:01

WATER YEAR FORECAST SUMMARY AND MONTHLY DISTRIBUTION (IN THOUSANDS OF ACRE-FEET)

WATERSHED	OCT THRU JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR TOTAL	80% PROBABILITY RANGE			WY % AVERAGE
											90%	10%	10%	
Stanislaus, Goodwin	494	96	373	326	560	498	256	41	20	2,665	2,550	2,790	2,790	226
Tuolumne, La Grange	767	119	602	454	845	880	581	120	41	4,410	4,255	4,540	4,540	226
Merced, McClure	487	87	464	290	530	471	229	50	22	2,630	2,560	2,735	2,735	261
San Joaquin, Millerton	588	142	544	530	951	965	624	158	68	4,570	4,415	4,810	4,810	257
Kings, Pine Flat	406	100	495	423	952	1,080	725	170	69	4,420	4,280	4,660	4,660	264

Insert Web Page

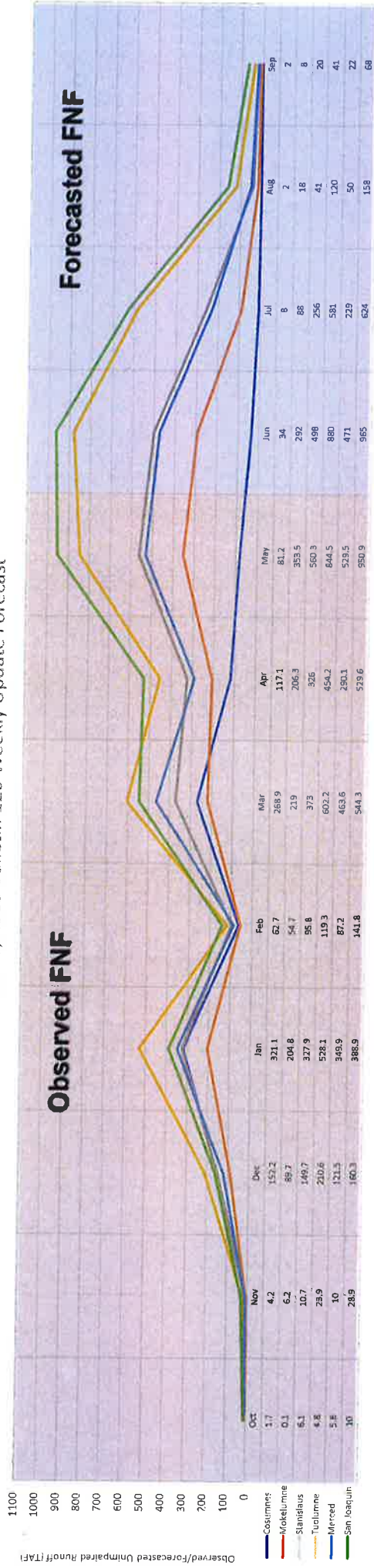
This app allows you to insert secure web pages starting with https:// into the slide deck. Non-secure web pages are not supported for security reasons.

Please enter the URL below.

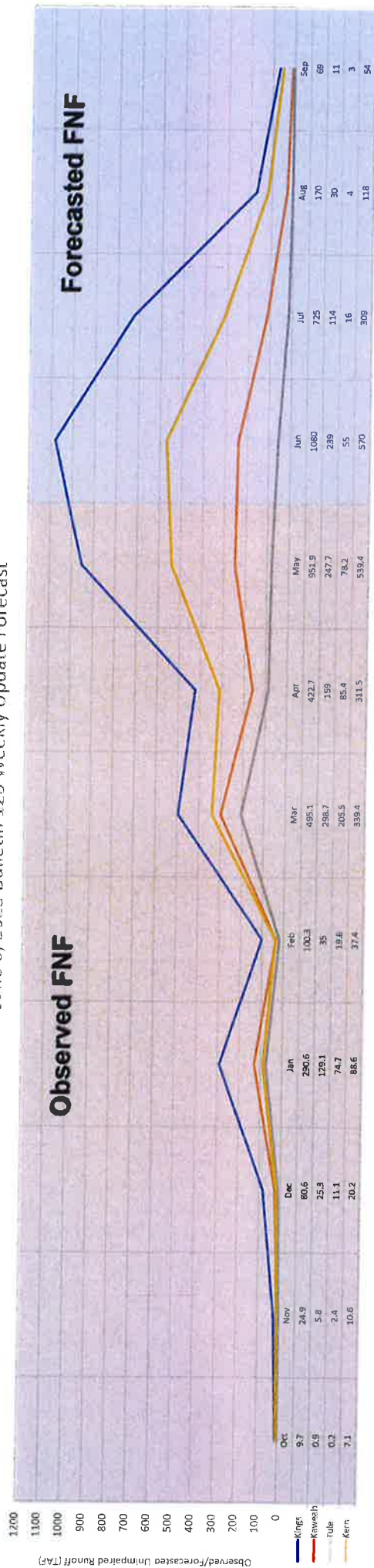
https://tableau.cmr.ca.gov/DWR_Show_WS/Forecast/Views/ShowProductComparisons_VQ/Dashboard?iframeSizeToWindow=true&embedBy=&33&showAppFrame=

Note: Many popular websites allow secure access. Please click on the preview button to ensure the web page is accessible.

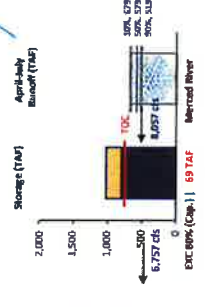
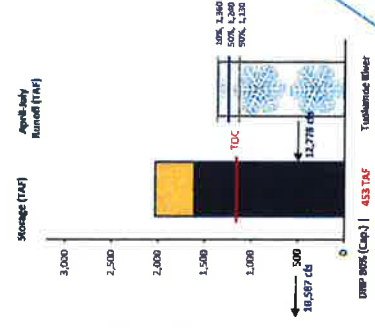
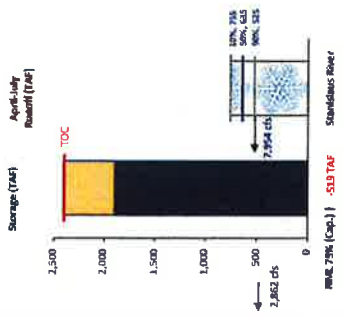
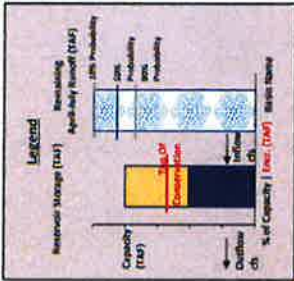
San Joaquin Hydro Region
 Median (50% Exceedance) Water Year Forecast Distribution
 June 6, 2023 Bulletin 120 Weekly Update Forecast



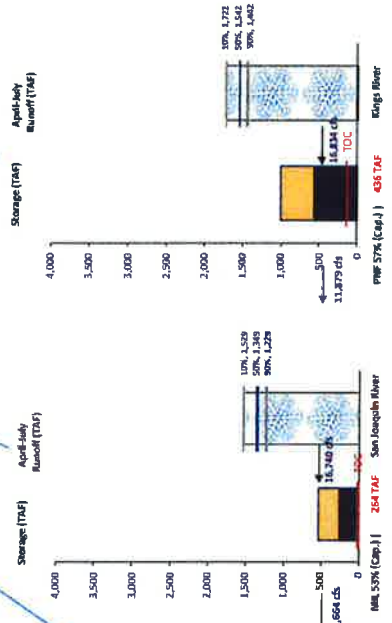
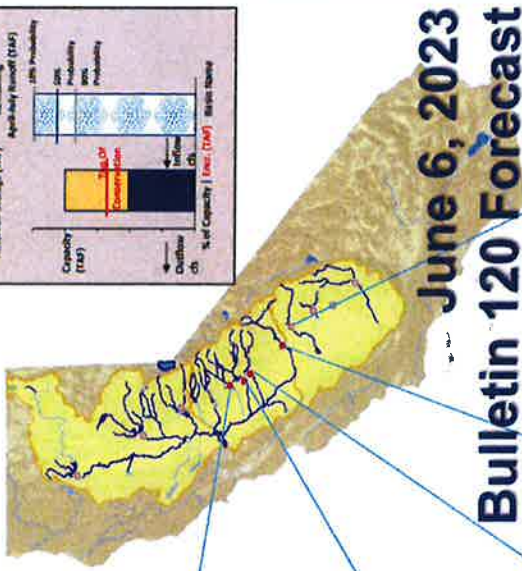
Tulare Lake Hydro Region
 Median (50% Exceedance) Water Year Forecast Distribution
 June 6, 2023 Bulletin 120 Weekly Update Forecast



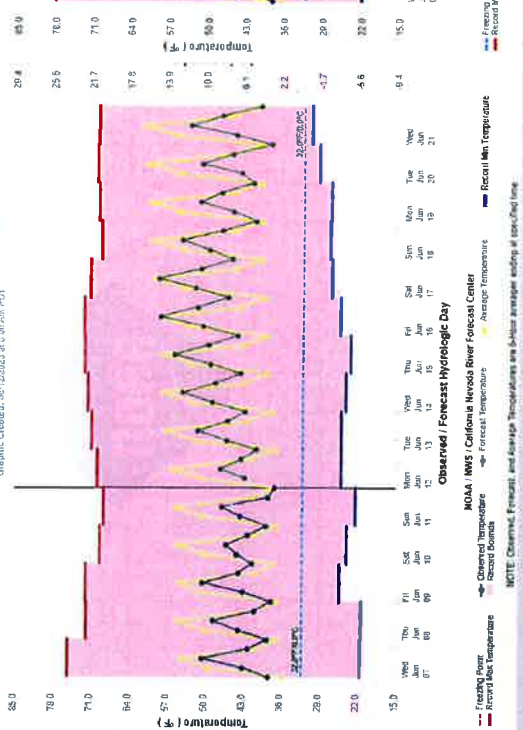
Reservoir Conditions and A-J Runoff as of June 8th, 2023



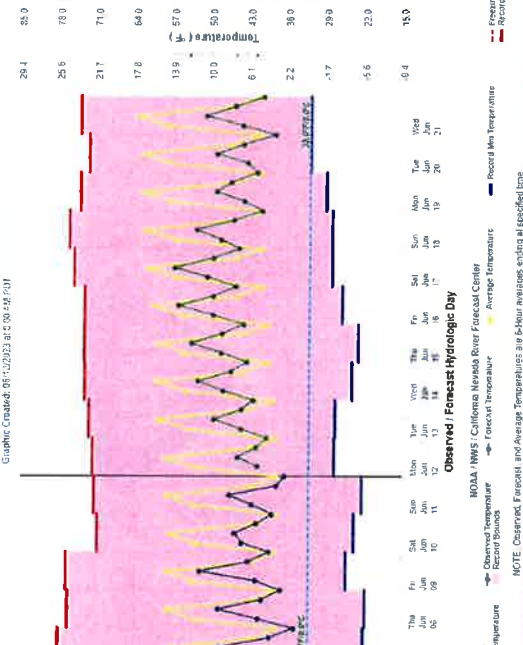
Daily reservoir data as of 6/7/2023 (CDEC)
 Snowmelt runoff forecast as of 6/6/2023 (R-120)



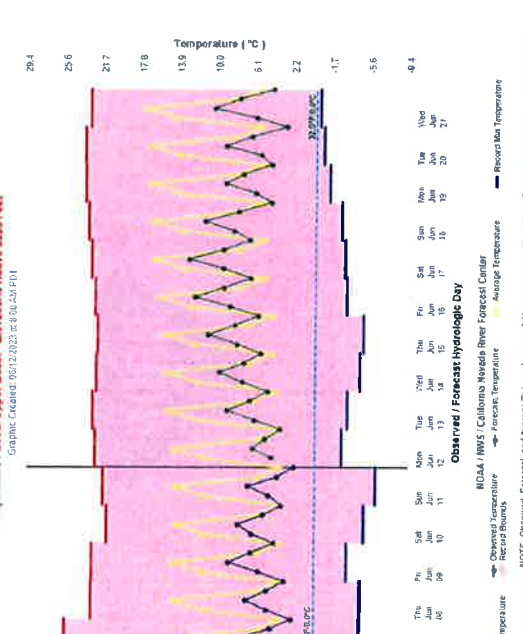
Stanislaus River - New Melones Lake (NMSCTLUF)
 Temperature : Local Upper Basin - Elevations Above 8000 Feet
 Graphic Created: 08/12/2023 at 8:00 AM PDT



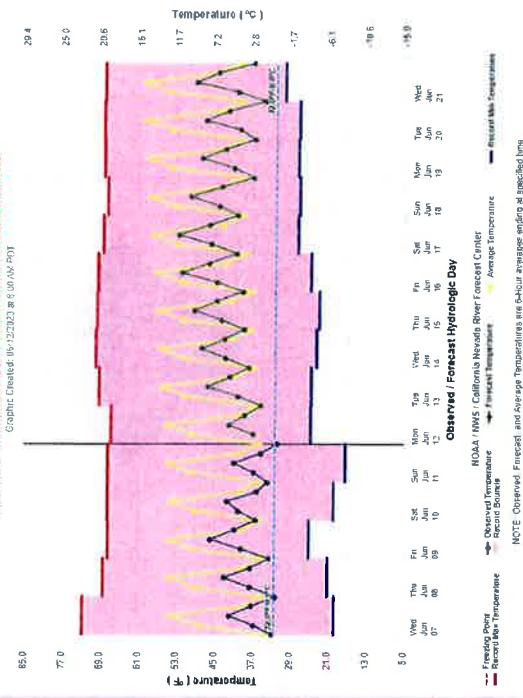
Tuolumne River - Don Pedro Lake (NDPCLLUF)
 Temperature : Local Upper Basin - Elevations Above 8000 Feet
 Graphic Created: 05/17/2023 at 8:00 AM PDT



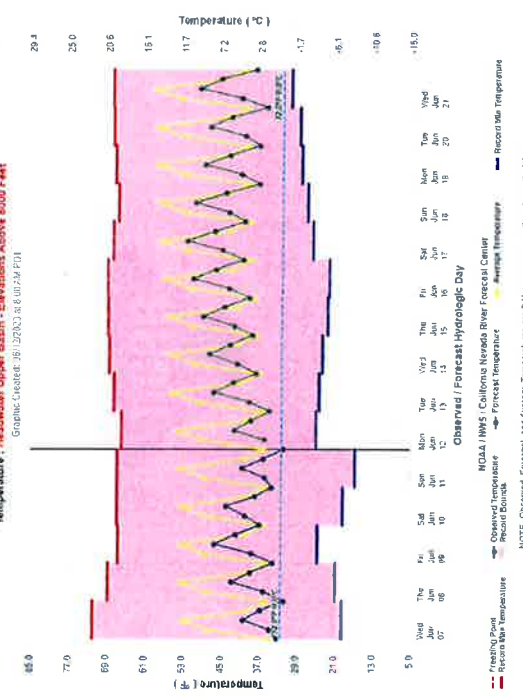
Merced River - Exchequer Reservoir (EXOC1LUF)
 Temperature : Local Upper Basin - Elevations Above 8000 Feet
 Graphic Created: 06/12/2023 at 8:00 AM PDT



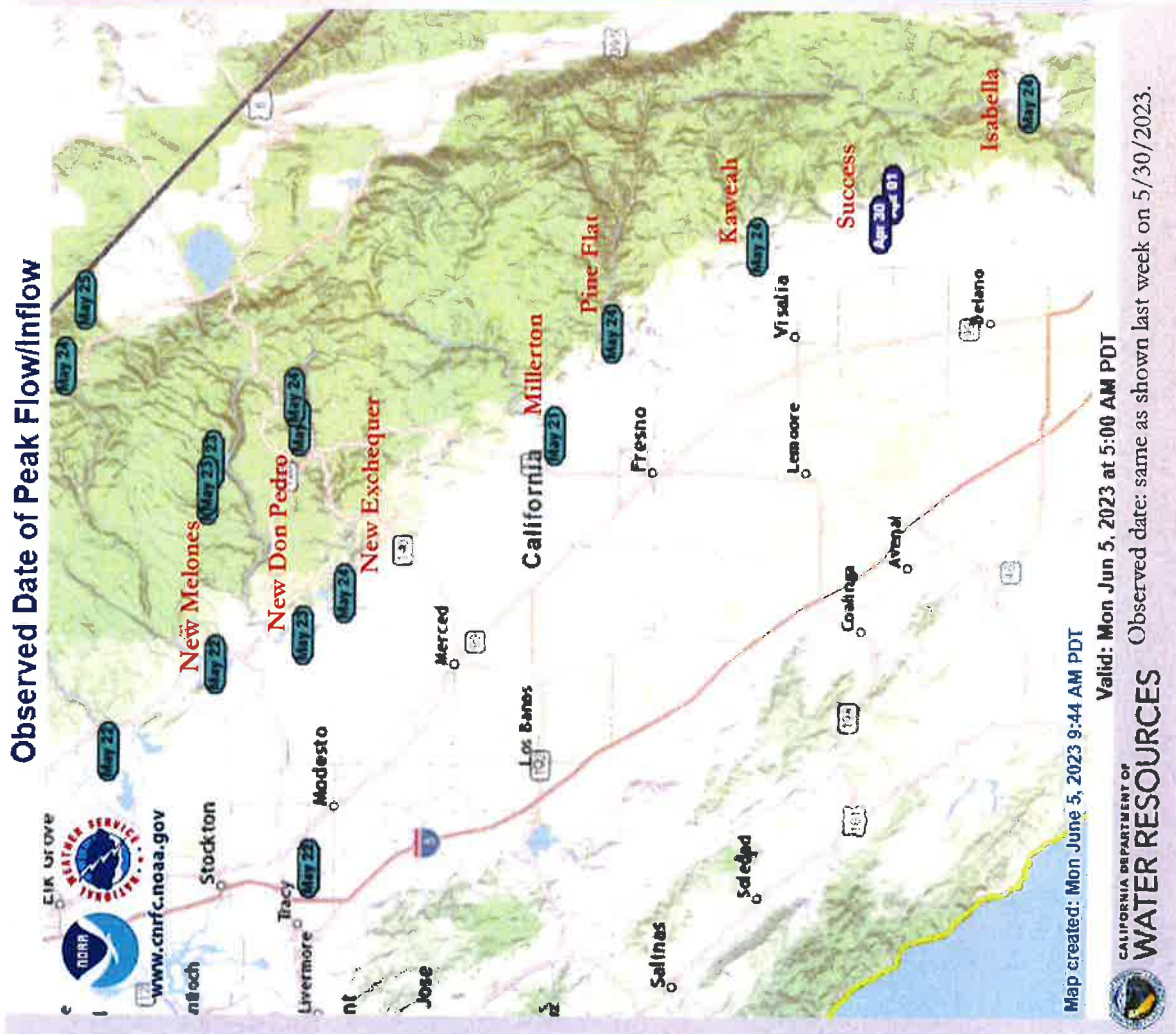
San Joaquin River - Millerton Lake (FRACHUF)
 Temperature : Local Upper Basin - Elevations Above 8000 Feet
 Graphic Created: 05/12/2023 at 8:00 AM PDT



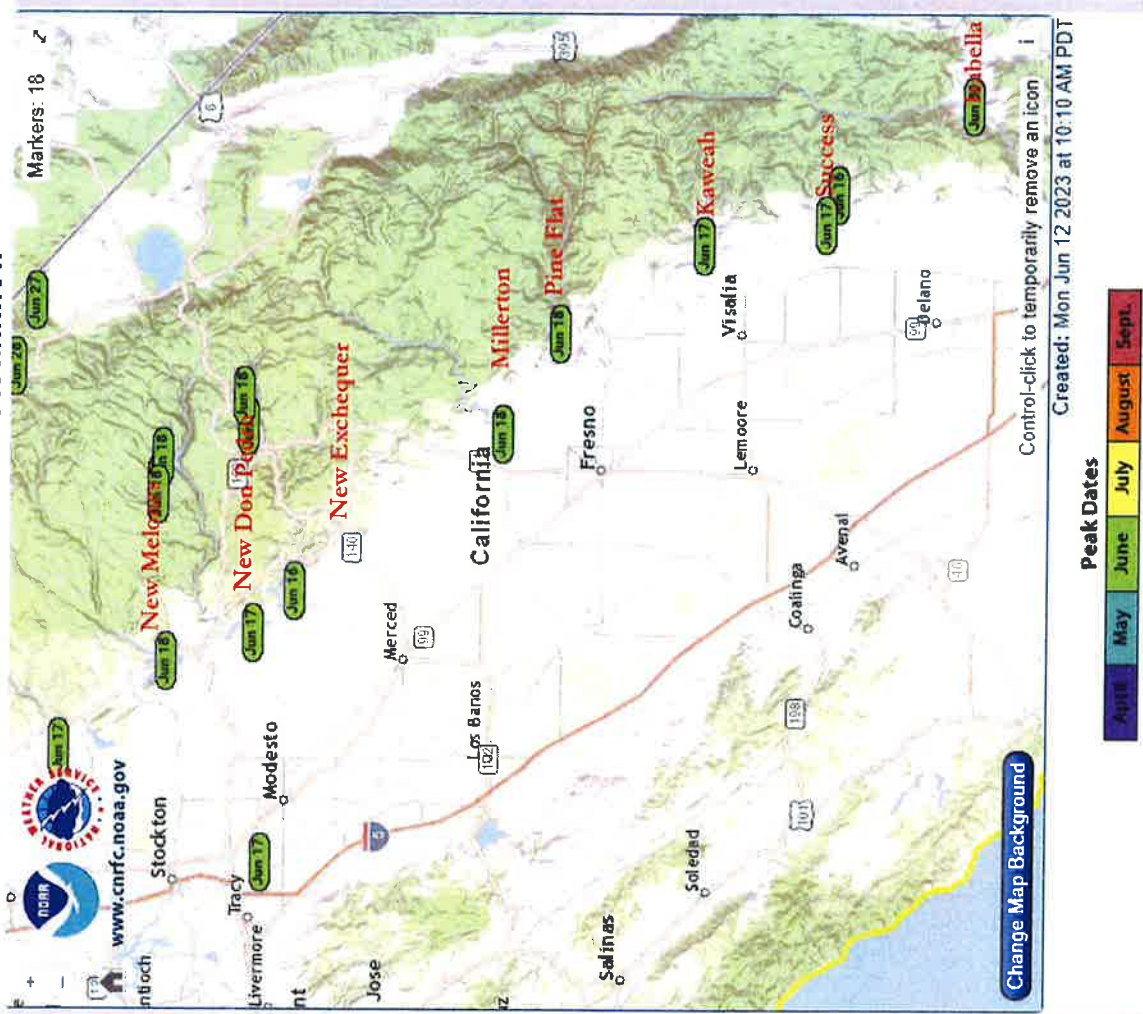
Kings River - Pine Flat Lake (PFTCHUF)
 Temperature : Local Upper Basin - Elevations Above 8000 Feet
 Graphic Created: 05/26/2023 at 8:00 AM PDT



Observed Date of Peak Flow/Inflow

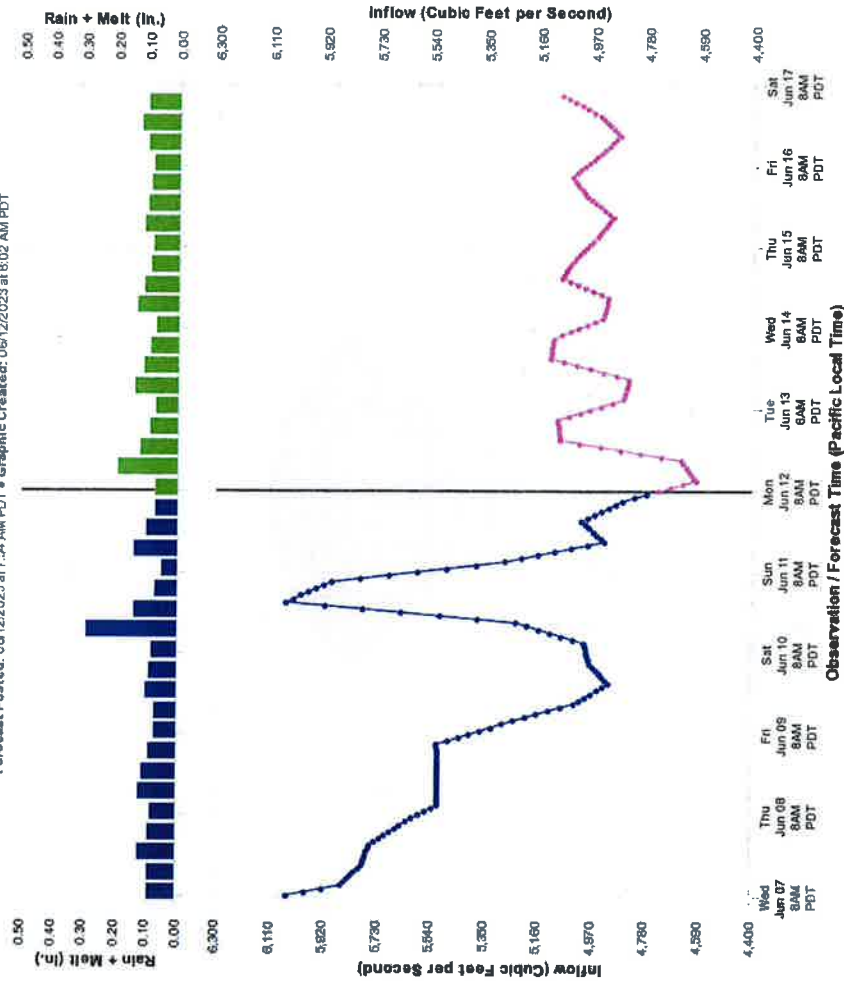


Forecast Date of Peak Flow/Inflow



Mokelumne River - Pardee Reservoir (CMPC)
Reservoir Inflow Plot

Forecast Posted: 06/12/2023 at 7:54 AM PDT • Graphic Created: 06/12/2023 at 8:02 AM PDT

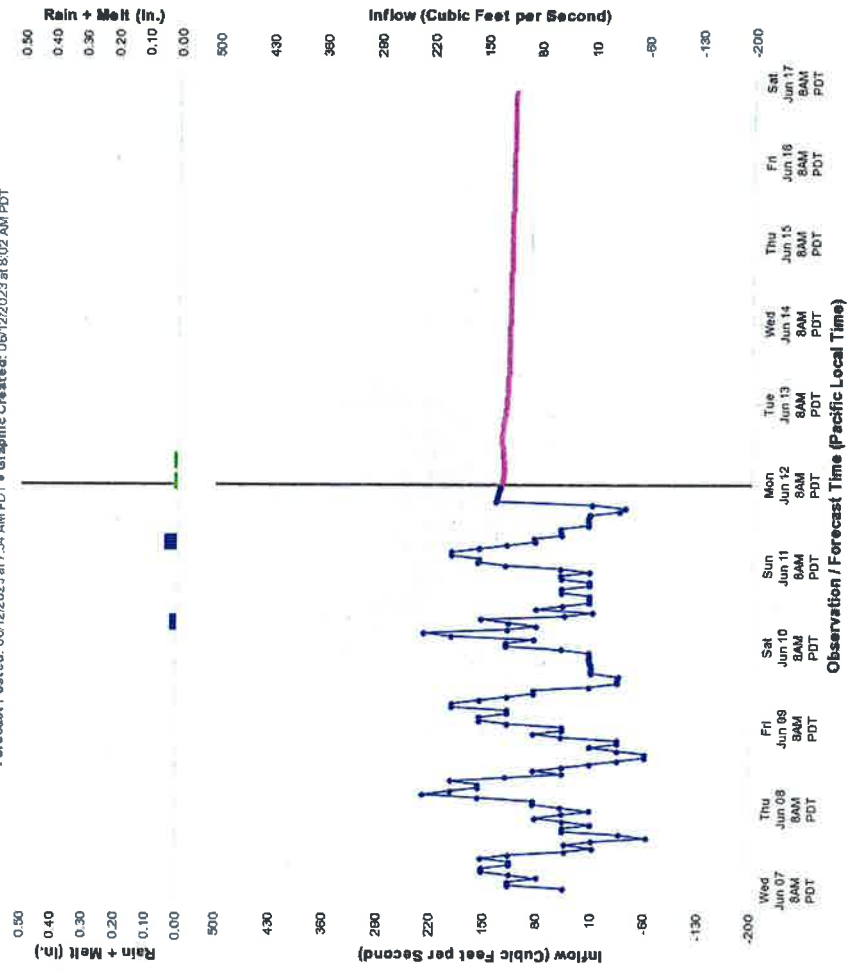


NOAA / NWS / California Nevada River Forecast Center • California Department of Water Resources

Observed Forecast Guidance

Calaveras River - New Hogan Lake (NHGC)
Reservoir Inflow Plot

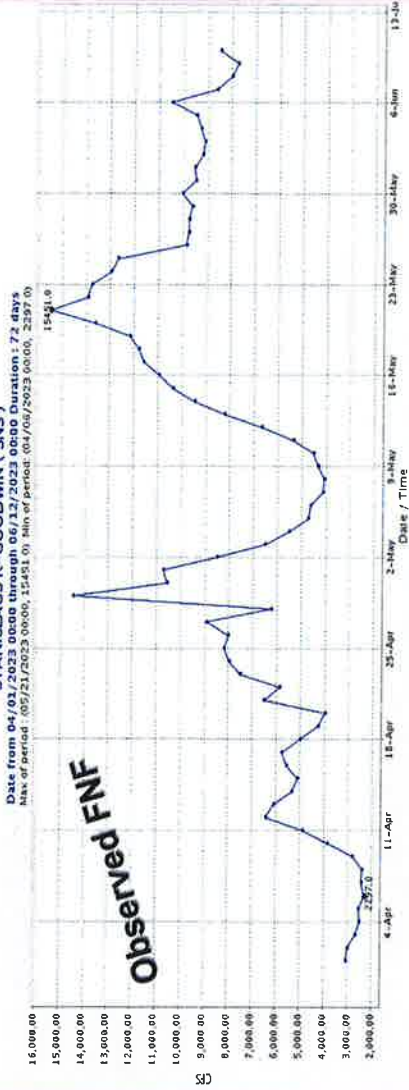
Forecast Posted: 06/12/2023 at 7:54 AM PDT • Graphic Created: 06/12/2023 at 8:02 AM PDT



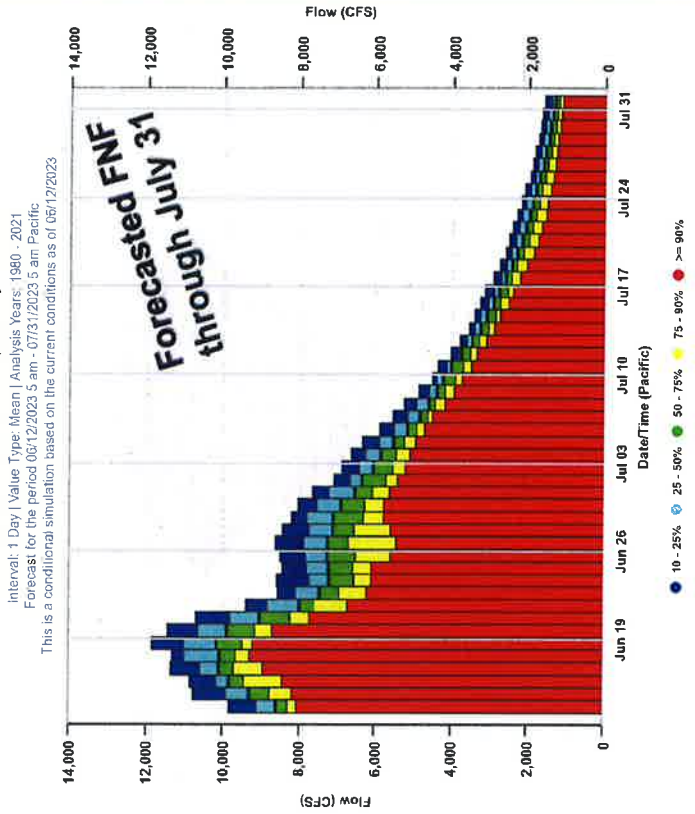
NOAA / NWS / California Nevada River Forecast Center • California Department of Water Resources

Observed Forecast Guidance

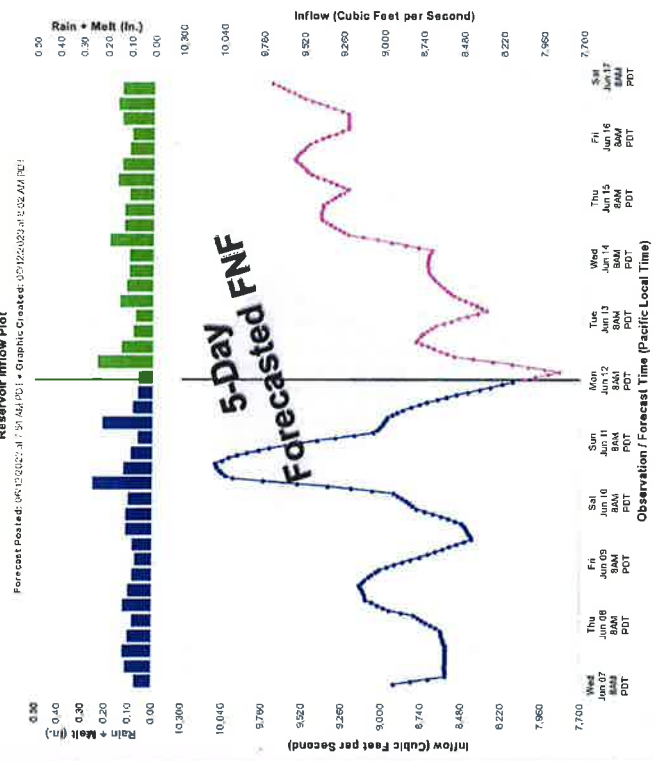
STANISLAUS R-GOODWIN (SNS)



STANISLAUS RIVER - NEW MELONES RESERVOIR (NMSC1) - Chance of Flow Exceedance

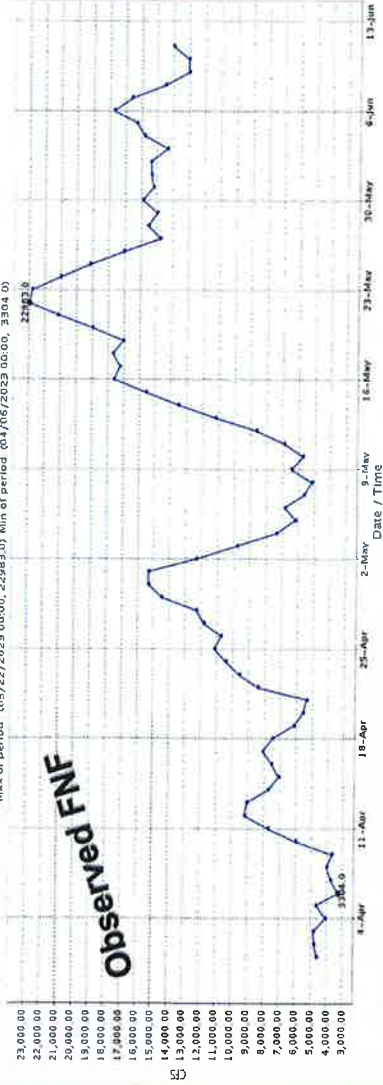


Stanislaus River - New Melones Lake (NMSC1)



TUOLUMNE R-LA GRANGE DAM (TLG)

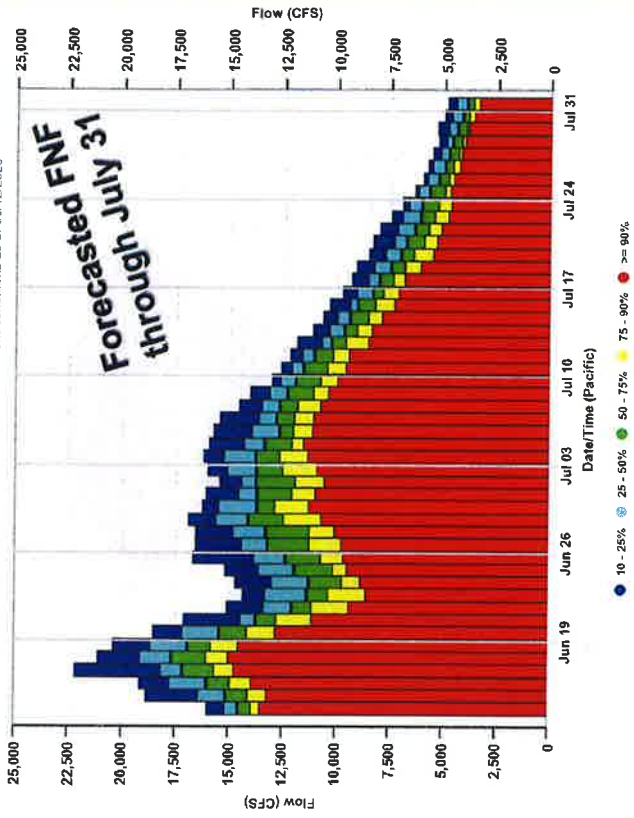
Date from 04/03/2023 00:00 through 06/12/2023 00:00 Duration : 72 days
 Max of period : 22,102.0 Min of period : 3,304.0



→ FULL NATURAL FLOW - CFS (39.1B)

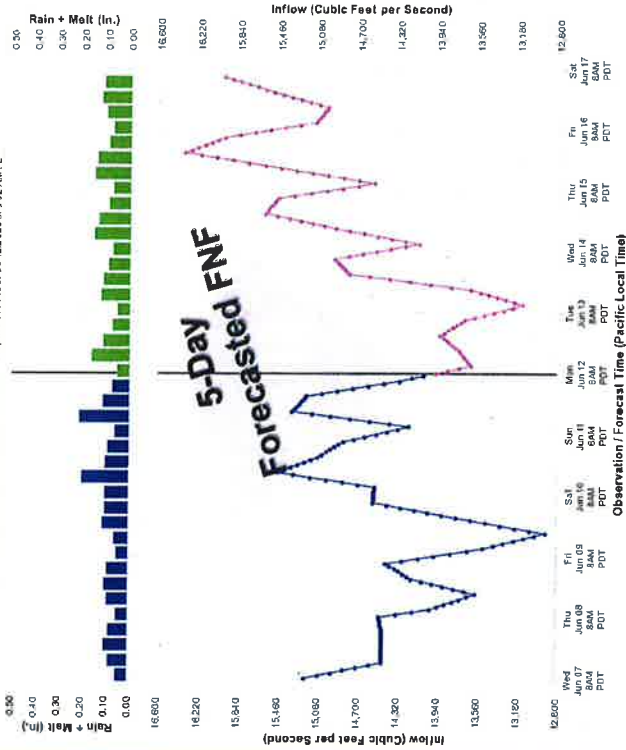
TUOLUMNE RIVER - NEW DON PEDRO RESERVOIR (NDPC1) - Chance of Flow Exceedance

Interval: 1 Day | Value Type: Mean | Analysis Years: 1960 - 2021
 Forecast for the period 06/12/2023 5 am - 07/31/2023 5 am Pacific
 This is a conditional simulation based on the current conditions as of 06/12/2023



Tuolumne River - Don Pedro Lake (NDPC1) Reservoir Inflow Plot

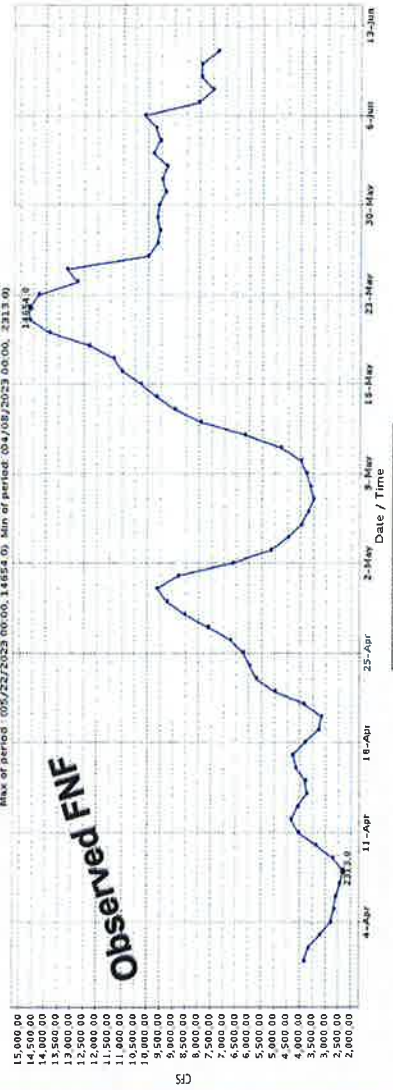
Forecast Period: 06/12/2023 01:53 AM PDT • Graph Created: 06/12/2023 01:52 AM PDT



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 → Observed → Forecast → Guidance

NEW EXCHEQUER-LK MCCLURE (EXC)

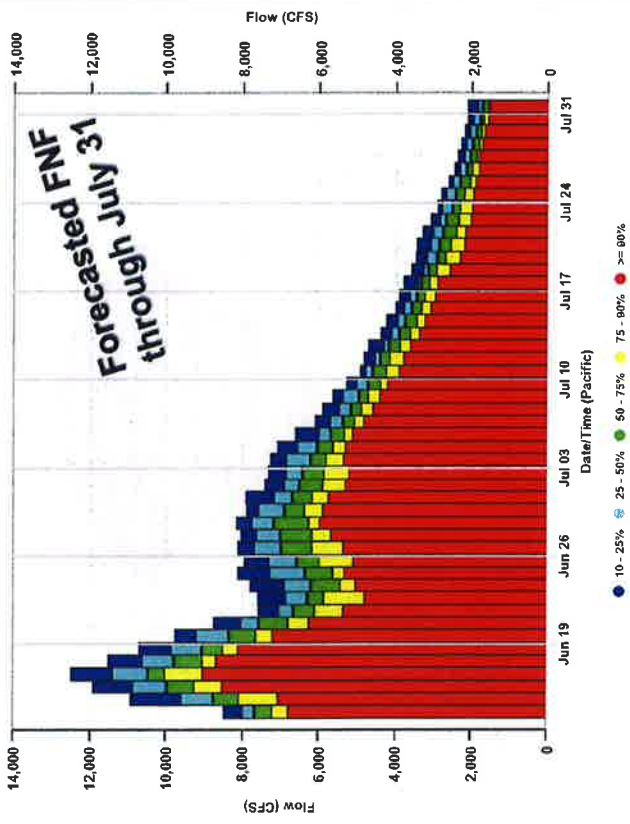
Date from 04/01/2023 06:00 through 06/12/2023 06:00 Duration: 72 days
 Max of period: 14524.0 Min of period: 304.082023 06:00 2313.0



→ FULL NATURAL FLOW - CFS (3212)

MERCED RIVER - EXCHEQUER RESERVOIR (EXQC1) - Chance of Flow Exceedance

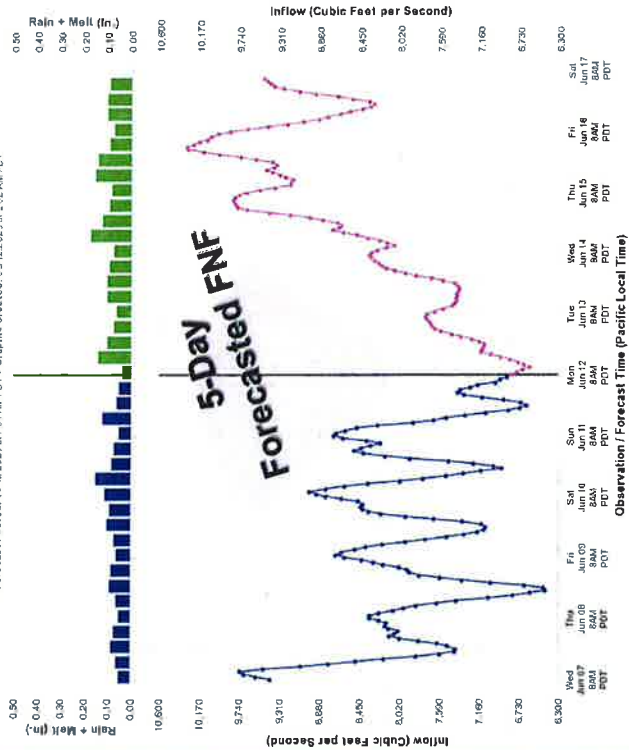
Interval: 1 Day | Value Type: Mean | Analysis Years: 1960 - 2021
 Forecast for the period 06/12/2023 9 am - 07/31/2023 5 am Pacific
 This is a conditional simulation based on the current conditions as of 06/12/2023



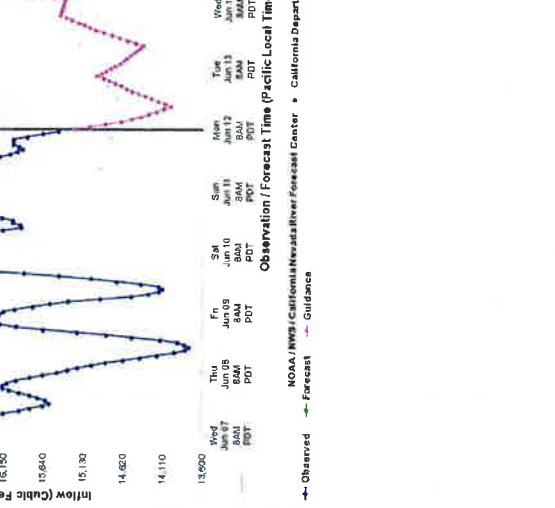
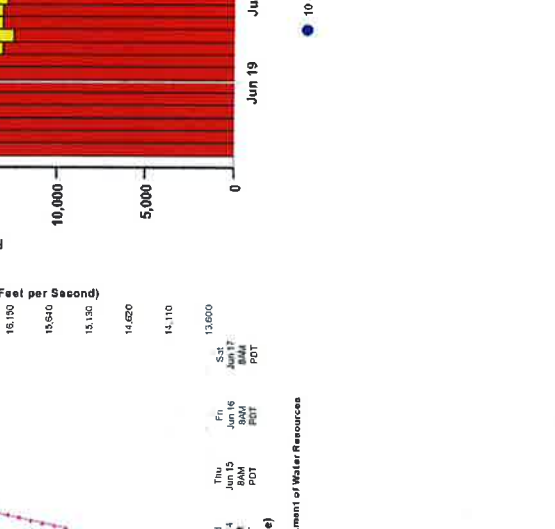
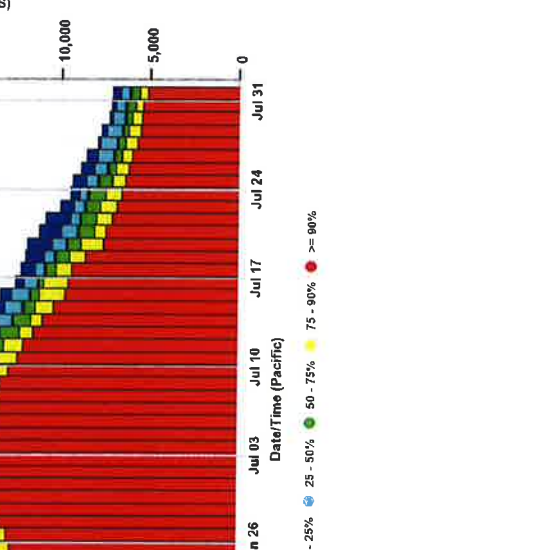
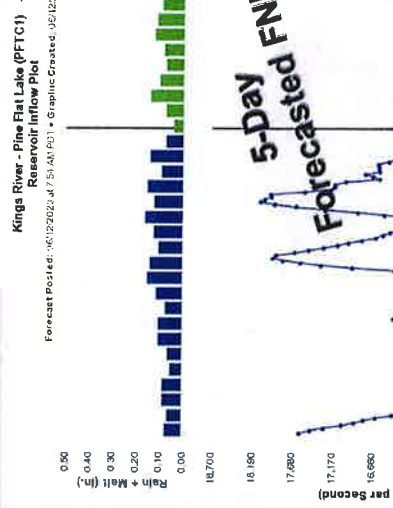
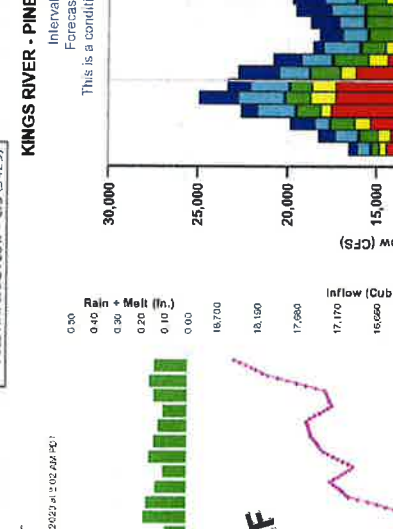
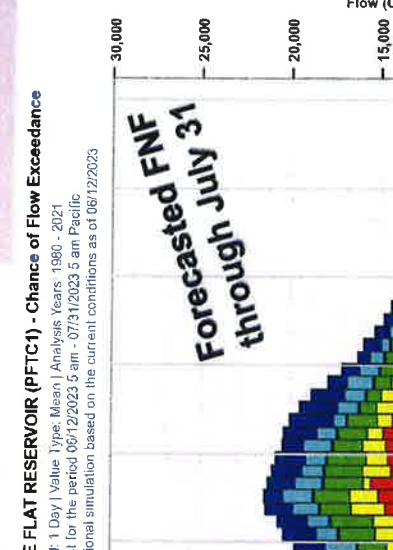
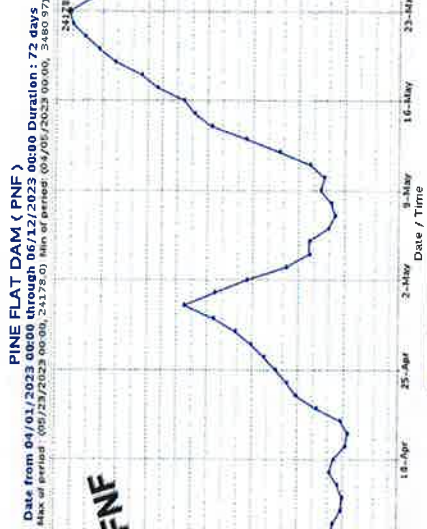
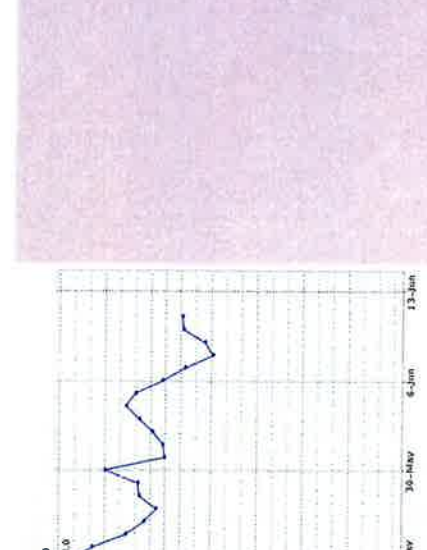
● 10 - 25% ● 25 - 50% ● 50 - 75% ● 75 - 90% ● >= 90%

Merced River - Exchequer Reservoir (EXQC1)

Reservoir Inflow Plot
 Forecast Period: 06/12/2023 07:30 AM PDT - Graphic Created: 06/12/2023 05:02 AM PDT



→ Observed → Forecast → Guidance
 NOAA/NWS/California/Nevada/River/Forecast Center • California Department of Water Resources



Bulletin 120 and Water Supply Index Webpage

Bulletin 120 Forecast

<https://cdec.water.ca.gov/reportapp/javareports?name=B120>

Bulletin 120 Weekly Update Forecast

<https://cdec.water.ca.gov/reportapp/javareports?name=B120UP>

Bulletin 120 WY Forecast Summary and Monthly Distribution

<https://cdec.water.ca.gov/reportapp/javareports?name=B120DIST>

Water Supply Index Forecast

<https://cdec.water.ca.gov/reportapp/javareports?name=WSI>

San Joaquin River Water Year Forecast Breakdown from Water Supply Index Forecast

<https://cdec.water.ca.gov/reportapp/javareports?name=SJWSI.pdf>

Forecast Discussion

<https://cdec.water.ca.gov/reportapp/javareports?name=WSFCastDiscussion.pdf>

Snow Product Comparison Dashboard

https://tableau.cnra.ca.gov/t/DWR_Snow_WSFCast/views/SnowProductComparisons_V2/Dashboard1?iframeSizedToWindow=true&%3Aembed=y&%3AshowAppBarBanner=false&%3Adisplay_count=no&%3AshowVizHome=no



CALIFORNIA DEPARTMENT OF
WATER RESOURCES

Bulletin 120 and Water Supply Index Forecast Schedule - Water Year 2023

Forecast Type	Forecast Date	Issue Date	Issue Day of Week	Notes
WSI	12/1/2022	12/8/2022	Thursday	
WSI	1/1/2023	1/10/2023	Tuesday	
Bul 120 & WSI	2/1/2023	2/8/2023	Wednesday	
Bul 120 update	2/14/2023	2/16/2023	Thursday	
Bul 120 update	2/21/2023	2/23/2023	Thursday	
Bul 120 update	2/27/2023	2/28/2023	Tuesday	
Bul 120 & WSI	3/1/2023	3/8/2023	Wednesday	
Bul 120 update	3/14/2023	3/16/2023	Thursday	
Bul 120 update	3/21/2023	3/23/2023	Thursday	
Bul 120 update	3/28/2023	3/30/2023	Thursday	
Bul 120 & WSI	4/1/2023	4/10/2023	Monday	
Bul 120 update	4/11/2023	4/13/2023	Thursday	
Bul 120 update	4/18/2023	4/20/2023	Thursday	
Bul 120 update	4/25/2023	4/27/2023	Thursday	
Bul 120 & WSI	5/1/2023	5/8/2023	Monday	
Bul 120 update	5/9/2023	5/11/2023	Thursday	
Bul 120 update	5/16/2023	5/18/2023	Thursday	
Bul 120 update	5/23/2023	5/25/2023	Thursday	
Bul 120 update	5/30/2023	6/1/2023	Thursday	
Bul 120 update	6/6/2023	6/8/2023	Thursday	
Bul 120 update	6/13/2023	6/15/2023	Thursday	Memorial Day 5/29
Bul 120 update	6/20/2023	6/22/2023	Thursday	
Bul 120 update	6/27/2023	6/29/2023	Thursday	

Notes:

B120 and WSI forecasts are issued six business days after the first of the month in February, March, April, and May

B120 Update forecasts are issued weekly after B120 forecasts

B120 Update forecasts are for conditions as of Tuesday morning and issued on the Thursday the same week unless there's a midweek holiday

Snow Surveys and Water Supply Forecasting Unit Contact Information

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Jordan Thoennes	jordan.thoennes@water.ca.gov	(916) 885-8992

President's Day 2/20
Unofficial forecast/Guidance due to short turnaround

Cesar Chavez Day observed 3/31

Memorial Day 5/29

Exhibit C

Reclamation District No. 1601

11-May-23

Assessment by Landowner - Fiscal Year 2023-2024

"AS IF" \$700,000 (100% of MAX ASSESSMENT)

DEPLETION VALUE CALCULATIONS

			2023-2024	2022-2023
A - 2022 RV Total Prod	(on line opi.consrv.ca.gov)	(MCF)	2,407,756	2,362,901
B - 2022 Twitchell Prod	(add all 1601 prod wells)	(MCF)	562,785	503,519
C - Net Present Value	(2021 base yr value NPV)		\$26,881,513	\$26,886,003
D - Total Reserves		(MCF)	13,950,000,000	13,950,000,000
E - Base Year Value per MCF	(C/D)	(\$/MCF)	\$0.0019	\$0.0019
F - 2022 Unit Depletion Value	(E x A)		\$4,575	\$4,490

CALCULATIONS (BASED ON DOG #S)

			2023-2024	2022-2023
G - 2022 Base Year Value of the Unit - C			\$26,881,513	\$26,886,003
H - less: 2022 Unit Depletion Value - F			\$4,575	\$4,490
I - 2023 Base Year Value of the Unit - C-F			\$26,876,938	\$26,881,513
J - 2022 RD 1601 Pro Rata Share of Unit	562,785/2,407,756 - B/A		23.373839%	21.309357%
K - 2023 RD 1601 Value - I*J			\$6,282,172	\$5,728,277
L - Benefit Factor - Given in Minutes			4.00%	4.00%
M - 2023 RD 1601 Taxable Unit Value (Mineral Rights) - K*L			\$251,287	\$229,131

ASSESSMENT FACTOR (Max Assessment Factor 47.6382) = X/W = 39.69045

Landowner	Acreage	Per Acre	Total Valuation	2023-24	
RD 1601	422.509	200	84,502	\$33,539.14	4.8%
Karlie & Noeme Silva	0.951	400	380	\$150.98	0.0%
Marjorie H. Sgarrella	1.480	400	592	\$234.97	0.0%
County of Sacramento	0.010	0	0	\$0.00	0.0%
RD 1601	121.400	200	24,280	\$9,636.84	1.4%
State of California	2244.497	200	448,899	\$178,170.19	25.5%
State of California	764.900	1200	917,880	\$364,310.64	52.0%
Fagundes Dairy	47.750	200	9,550	\$3,790.44	0.5%
Stkn Marina Properties LLC	20.000	1200	24,000	\$9,525.71	1.4%
Exxon Corporation ***	0.870	200	174	\$69.06	0.0%
Carter	10.520	200	2,104	\$835.09	0.1%
					0.0%
	3634.887				0.0%
California Resources Production (W)			251,287	\$99,736.94	14.2%
Total Assessment (X)			1,763,649	\$700,000.00	1

*** Bill Exxon Corp to State of CA \$700,000.00

Tract No.	Description Sacramento County Assessor Parcel No.	Acres	Habitat Restoration Acres	Revised Acres	Owner	Assessment Valuation per Acre	PROPOSED NEW ASSESSMENT (2023-24)			PRIOR ASSESSMENT (2022-23)		
							E New Total Assessment Valuation (B x D)	F Proposed New Rate per \$100 of Assessed Valuation	G Proposed Total Assessment (E/100) x F	H Prior Total Valuation (B x D)	I Prior Rate per \$100 of Assessed Valuation	J Prior Total Assessment (H/100) x I
1	157-0130-026	422.509		422.509	RD No 1601	200	84,502	39.69045	\$33,539.14	84,502	40.19540	\$33,965.84
2	157-0130-027	117.000		117.000	RD No 1601	200	23,400	39.69045	\$9,287.56	23,400	40.19540	\$9,405.72
3	157-0130-011	0.951		0.951	Karlie & Noeme Silva	400	380	39.69045	\$150.98	380	40.19540	\$152.90
4	157-0130-015	0.566		0.566	State of California	200	113	39.69045	\$44.93	113	40.19540	\$45.50
5	157-0130-019	0.410		0.410	Marjorie H. Sgarrella	400	164	39.69045	\$65.09	164	40.19540	\$65.92
6	157-0130-016	0.741		0.741	State of California	200	148	39.69045	\$58.82	148	40.19540	\$59.57
7	157-0130-018	1.070		1.070	Marjorie H. Sgarrella	400	428	39.69045	\$169.88	428	40.19540	\$172.04
8	157-0130-014	0.010		0.010	County of Sacramento	0	0	39.69045	\$0.00	0	40.19540	\$0.00
9	157-0130-017	102.450		102.450	State of California	200	20,490	39.69045	\$8,132.57	20,490	40.19540	\$8,236.04
10	157-0130-004	200.550		200.550	State of California	200	40,110	39.69045	\$15,919.84	40,110	40.19540	\$16,122.37
11	157-0130-024	302.960		302.960	State of California	200	60,592	39.69045	\$24,049.24	60,592	40.19540	\$24,355.20
12	157-0130-020	47.750		47.750	Fagundes Dairy	200	9,550	39.69045	\$3,790.44	9,550	40.19540	\$3,838.66
13	157-0130-022	40.000		40.000	State of California	200	8,000	39.69045	\$3,175.24	8,000	40.19540	\$3,215.63
14	157-0130-008	300.850		300.850	State of California	200	60,170	39.69045	\$23,881.74	60,170	40.19540	\$24,185.57
15	157-0130-006	357.980		357.980	State of California	200	71,596	39.69045	\$28,416.77	71,596	40.19540	\$28,778.30
16	157-0130-007	102.000		102.000	State of California	200	20,400	39.69045	\$8,096.85	20,400	40.19540	\$8,199.86
17	157-0140-004	1.000		1.000	State of California	200	200	39.69045	\$79.38	200	40.19540	\$80.39
18a	157-0140-020	578.470	209.400	369.070	State of California	200	73,814	39.69045	\$29,297.12	73,814	40.19540	\$29,669.84
18b	157-0140-020			209.400	State of California	1200	251,280	39.69045	\$99,734.10	251,280	40.19540	\$101,003.07
19a	157-0140-011	181.500	140.800	40.700	State of California	200	8,140	39.69045	\$3,230.80	8,140	40.19540	\$3,271.91
19b	157-0140-011			140.800	State of California	1200	168,960	39.69045	\$67,060.98	168,960	40.19540	\$67,914.15
20a	157-0140-009	186.000	121.100	64.900	State of California	200	12,980	39.69045	\$5,151.82	12,980	40.19540	\$5,217.36
20b	157-0140-009			121.100	State of California	1200	145,320	39.69045	\$57,678.16	145,320	40.19540	\$58,411.96
21a	157-0140-010	181.500	111.300	70.200	State of California	200	14,040	39.69045	\$5,572.54	14,040	40.19540	\$5,643.43
21b	157-0140-010			111.300	State of California	1200	133,560	39.69045	\$53,010.57	133,560	40.19540	\$53,684.98
22	157-0140-015	20.000		20.000	Stkn Marina Properties LLC	1200	24,000	39.69045	\$9,525.71	24,000	40.19540	\$9,646.90
23	157-0130-003	0.870		0.870	State of California (1/2)	200	174	39.69045	\$69.06	174	40.19540	\$69.94
	***	0.870		0.870	State of California (1/2)	200	174	39.69045	\$69.06	174	40.19540	\$69.94
24	157-0130-023	10.520		10.520	Ricky & Linda Carter	200	2,104	39.69045	\$835.09	2,104	40.19540	\$845.71
25	** 157-0130-023	0.360		0.360	RD No 1601	200	72	39.69045	\$28.58	72	40.19540	\$28.94
26	157-0130-025	4.040		4.040	RD No 1601	200	808	39.69045	\$320.70	808	40.19540	\$324.78
27a	157-0140-021	471.960	182.300	289.660	State of California	200	57,932	39.69045	\$22,993.47	57,932	40.19540	\$23,286.00
27b	157-0140-021			182.300	State of California	1200	218,760	39.69045	\$86,826.83	218,760	40.19540	\$87,931.46
		3,634.887	764.900	3,634.887								
					California Resources Production LESS RD1601		1,512,362 251,287	39.69045	\$99,736.94 (\$43,175.98)	1,512,362 229,131	40.19540	\$92,100.12 (\$43,725.28)
							1,763,649		\$656,824.02	1,741,493		\$656,274.72

** .36 purchased from Carter for exclusive levee easement
 *** Exxon Corp billed to State of CA

Exhibit D

Reclamation District No. 1601

11-May-23

Assessment by Landowner - Fiscal Year 2023-2024

"AS IF" \$630,000 (90% of MAX ASSESSMENT)

DEPLETION VALUE CALCULATIONS

			2023-2024	2022-2023
A - 2022 RV Total Prod	(on line opi.consrv.ca.gov)	(MCF)	2,407,756	2,362,901
B - 2022 Twitchell Prod	(add all 1601 prod wells)	(MCF)	562,785	503,519
C - Net Present Value	(2021 base yr value NPV)		\$26,881,513	\$26,886,003
D - Total Reserves		(MCF)	13,950,000,000	13,950,000,000
E - Base Year Value per MCF	(C/D)	(\$/MCF)	\$0.0019	\$0.0019
F - 2022 Unit Depletion Value	(E x A)		\$4,575	\$4,490

CALCULATIONS (BASED ON DOG #S)

			2023-2024	2022-2023
G - 2022 Base Year Value of the Unit - C			\$26,881,513	\$26,886,003
H - less: 2022 Unit Depletion Value - F			\$4,575	\$4,490
I - 2023 Base Year Value of the Unit - C-F			\$26,876,938	\$26,881,513
J - 2022 RD 1601 Pro Rata Share of Unit	562,785/2,407,756 - B/A		23.373839%	21.309357%
K - 2023 RD 1601 Value - I*J			\$6,282,172	\$5,728,277
L - Benefit Factor - Given in Minutes			4.00%	4.00%
M - 2023 RD 1601 Taxable Unit Value (Mineral Rights) - K*L			\$251,287	\$229,131

ASSESSMENT FACTOR (Max Assessment Factor 47.6382) = X/W = 35.72140

Landowner	Acreage	Per Acre	Total Valuation	2023-24	
RD 1601	422.509	200	84,502	\$30,185.23	4.8%
Karlie & Noeme Silva	0.951	400	380	\$135.88	0.0%
Marjorie H. Sgarrella	1.480	400	592	\$211.47	0.0%
County of Sacramento	0.010	0	0	\$0.00	0.0%
RD 1601	121.400	200	24,280	\$8,673.16	1.4%
State of California	2244.497	200	448,899	\$160,353.15	25.5%
State of California	764.900	1200	917,880	\$327,879.61	52.0%
Fagundes Dairy	47.750	200	9,550	\$3,411.39	0.5%
Stkn Marina Properties LLC	20.000	1200	24,000	\$8,573.14	1.4%
Exxon Corporation ***	0.870	200	174	\$62.16	0.0%
Carter	10.520	200	2,104	\$751.58	0.1%
					0.0%
	3634.887				0.0%
California Resources Production (W)			251,287	\$89,763.23	14.2%
Total Assessment (X)			1,763,649	\$630,000.00	1

*** Bill Exxon Corp to State of CA \$630,000.00

Reclamation District No. 1601, Twitchell Island
Revised Acreage Operation and Maintenance Assessment Roll

(Max Assessment Factor 47.6382)

Proposed New Assessment Factor (MAX)

35.72140

Prior Assessment Factor (2022-23)

36.17586

5/11/2023

\$630,000 (90% of MAX ASSESSMENT)

Tract No.	A Description Sacramento County Assessor Parcel No.	Acres	Habitat Restoration Acres	B Revised Acres	C Owner	D Assessment Valuation per Acre	PROPOSED NEW ASSESSMENT (2023-24)			PRIOR ASSESSMENT (2022-23)		
							E New Total Assessment Valuation (B x D)	F Proposed New Rate per \$100 of Assessed Valuation	G Proposed Total Assessment (E/100) x F	H Prior Total Valuation (B x D)	I Prior Rate per \$100 of Assessed Valuation	J Prior Total Assessment (H/100) x I
1	157-0130-026	422.509		422.509	RD No 1601	200	84,502	35.72140	\$30,185.23	84,502	36.17586	\$30,569.25
2	157-0130-027	117.000		117.000	RD No 1601	200	23,400	35.72140	\$8,358.81	23,400	36.17586	\$8,465.15
3	157-0130-011	0.951		0.951	Karlie & Noeme Silva	400	380	35.72140	\$135.88	380	36.17586	\$137.61
4	157-0130-015	0.566		0.566	State of California	200	113	35.72140	\$40.44	113	36.17586	\$40.95
5	157-0130-019	0.410		0.410	Marjorie H. Sgarrella	400	164	35.72140	\$58.58	164	36.17586	\$59.33
6	157-0130-016	0.741		0.741	State of California	200	148	35.72140	\$52.94	148	36.17586	\$53.61
7	157-0130-018	1.070		1.070	Marjorie H. Sgarrella	400	428	35.72140	\$152.89	428	36.17586	\$154.83
8	157-0130-014	0.010		0.010	County of Sacramento	0	0	35.72140	\$0.00	0	36.17586	\$0.00
9	157-0130-017	102.450		102.450	State of California	200	20,490	35.72140	\$7,319.31	20,490	36.17586	\$7,412.43
10	157-0130-004	200.550		200.550	State of California	200	40,110	35.72140	\$14,327.85	40,110	36.17586	\$14,510.14
11	157-0130-024	302.960		302.960	State of California	200	60,592	35.72140	\$21,644.31	60,592	36.17586	\$21,919.68
12	157-0130-020	47.750		47.750	Fagundes Dairy	200	9,550	35.72140	\$3,411.39	9,550	36.17586	\$3,454.79
13	157-0130-022	40.000		40.000	State of California	200	8,000	35.72140	\$2,857.71	8,000	36.17586	\$2,894.07
14	157-0130-008	300.850		300.850	State of California	200	60,170	35.72140	\$21,493.57	60,170	36.17586	\$21,767.01
15	157-0130-006	357.980		357.980	State of California	200	71,596	35.72140	\$25,575.09	71,596	36.17586	\$25,900.47
16	157-0130-007	102.000		102.000	State of California	200	20,400	35.72140	\$7,287.17	20,400	36.17586	\$7,379.88
17	157-0140-004	1.000		1.000	State of California	200	200	35.72140	\$71.44	200	36.17586	\$72.35
18a	157-0140-020	578.470	209.400	369.070	State of California	200	73,814	35.72140	\$26,367.40	73,814	36.17586	\$26,702.84
18b	157-0140-020			209.400	State of California	1200	251,280	35.72140	\$89,760.76	251,280	36.17586	\$90,902.78
19a	157-0140-011	181.500	140.800	40.700	State of California	200	8,140	35.72140	\$2,907.72	8,140	36.17586	\$2,944.72
19b	157-0140-011			140.800	State of California	1200	168,960	35.72140	\$60,354.88	168,960	36.17586	\$61,122.73
20a	157-0140-009	186.000	121.100	64.900	State of California	200	12,980	35.72140	\$4,636.64	12,980	36.17586	\$4,695.63
20b	157-0140-009			121.100	State of California	1200	145,320	35.72140	\$51,910.34	145,320	36.17586	\$52,570.76
21a	157-0140-010	181.500	111.300	70.200	State of California	200	14,040	35.72140	\$5,015.28	14,040	36.17586	\$5,079.09
21b	157-0140-010			111.300	State of California	1200	133,560	35.72140	\$47,709.50	133,560	36.17586	\$48,316.48
22	157-0140-015	20.000		20.000	Stkn Marina Properties LLC	1200	24,000	35.72140	\$8,573.14	24,000	36.17586	\$8,682.21
23	157-0130-003	0.870		0.870	State of California (1/2)	200	174	35.72140	\$62.16	174	36.17586	\$62.95
	***	0.870		0.870	State of California (1/2)	200	174	35.72140	\$62.16	174	36.17586	\$62.95
24	157-0130-023	10.520		10.520	Ricky & Linda Carter	200	2,104	35.72140	\$751.58	2,104	36.17586	\$761.14
25	** 157-0130-023	0.360		0.360	RD No 1601	200	72	35.72140	\$25.72	72	36.17586	\$26.05
26	157-0130-025	4.040		4.040	RD No 1601	200	808	35.72140	\$288.63	808	36.17586	\$292.30
27a	157-0140-021	471.960	182.300	289.660	State of California	200	57,932	35.72140	\$20,694.12	57,932	36.17586	\$20,957.40
27b	157-0140-021			182.300	State of California	1200	218,760	35.72140	\$78,144.13	218,760	36.17586	\$79,138.31
		3,634.887	764.900	3,634.887								
					California Resources Production LESS RD1601		1,512,362 251,287	35.72140	\$89,763.23 (\$38,858.39)	1,512,362 229,131	36.17586	\$82,890.11 (\$39,352.75)
							1,763,649		\$591,141.61	1,741,493		\$590,647.25

** .36 purchased from Carter for exclusive levee easement

*** Exxon Corp billed to State of CA

Exhibit E

Reclamation District No. 1601

11-May-23

**Assessment by Landowner - Fiscal Year 2023-2024
\$560,000 (80% of MAX ASSESSMENT)**

DEPLETION VALUE CALCULATIONS

			2023-2024	2022-2023
A - 2022 RV Total Prod	(on line opi.consrv.ca.gov)	(MCF)	2,407,756	2,362,901
B - 2022 Twitchell Prod	(add all 1601 prod wells)	(MCF)	562,785	503,519
C - Net Present Value	(2021 base yr value NPV)		\$26,881,513	\$26,886,003
D - Total Reserves		(MCF)	13,950,000,000	13,950,000,000
E - Base Year Value per MCF	(C/D)	(\$/MCF)	\$0.0019	\$0.0019
F - 2022 Unit Depletion Value	(E x A)		\$4,575	\$4,490

CALCULATIONS (BASED ON DOG #S)

			2023-2024	2022-2023
G - 2022 Base Year Value of the Unit - C			\$26,881,513	\$26,886,003
H - less: 2022 Unit Depletion Value - F			\$4,575	\$4,490
I - 2023 Base Year Value of the Unit - C-F			\$26,876,938	\$26,881,513
J - 2022 RD 1601 Pro Rata Share of Unit	562,785/2,407,756 - B/A		23.373839%	21.309357%
K - 2023 RD 1601 Value - I*J			\$6,282,172	\$5,728,277
L - Benefit Factor - Given in Minutes			4.00%	4.00%
M - 2023 RD 1601 Taxable Unit Value (Mineral Rights) - K*L			\$251,287	\$229,131

ASSESSMENT FACTOR (Max Assessment Factor 47.6382) = X/W = 31.75236

Landowner	Acreage	Per Acre	Total Valuation	2023-24	
RD 1601	422.509	200	84,502	\$26,831.32	4.8%
Karlie & Noeme Silva	0.951	400	380	\$120.79	0.0%
Marjorie H. Sgarrella	1.480	400	592	\$187.97	0.0%
County of Sacramento	0.010	0	0	\$0.00	0.0%
RD 1601	121.400	200	24,280	\$7,709.47	1.4%
State of California	2244.497	200	448,899	\$142,536.15	25.5%
State of California	764.900	1200	917,880	\$291,448.51	52.0%
Fagundes Dairy	47.750	200	9,550	\$3,032.35	0.5%
Stkn Marina Properties LLC	20.000	1200	24,000	\$7,620.57	1.4%
Exxon Corporation ***	0.870	200	174	\$55.25	0.0%
Carter	10.520	200	2,104	\$668.07	0.1%
					0.0%
	3634.887				0.0%
California Resources Production (W)			251,287	\$79,789.55	14.2%
Total Assessment (X)			1,763,649	\$560,000.00	1

*** Bill Exxon Corp to State of CA \$560,000.00

Reclamation District No. 1601, Twitchell Island
Revised Acreage Operation and Maintenance Assessment Roll

(Max Assessment Factor 47.6382)

Proposed New Assessment Factor (MAX)

31.75236

Prior Assessment Factor (2022-23)

32.15632

5/11/2023

\$560,000 (80% of MAX ASSESSMENT)

Tract No.	A Description Sacramento County Assessor Parcel No.	Acres	Habitat Restoration Acres	B Revised Acres	C Owner	D Assessment Valuation per Acre	PROPOSED NEW ASSESSMENT (2023-24)			PRIOR ASSESSMENT (2022-23)		
							E New Total Assessment Valuation (B x D)	F Proposed New Rate per \$100 of Assessed Valuation	G Proposed Total Assessment (E/100) x F	H Prior Total Valuation (B x D)	I Prior Rate per \$100 of Assessed Valuation	J Prior Total Assessment (H/100) x I
1	157-0130-026	422.509		422.509	RD No 1601	200	84,502	31.75236	\$26,831.32	84,502	32.15632	\$27,172.67
2	157-0130-027	117.000		117.000	RD No 1601	200	23,400	31.75236	\$7,430.05	23,400	32.15632	\$7,524.58
3	157-0130-011	0.951		0.951	Karlie & Noeme Silva	400	380	31.75236	\$120.79	380	32.15632	\$122.32
4	157-0130-015	0.566		0.566	State of California	200	113	31.75236	\$35.94	113	32.15632	\$36.40
5	157-0130-019	0.410		0.410	Marjorie H. Sgarrella	400	164	31.75236	\$52.07	164	32.15632	\$52.74
6	157-0130-016	0.741		0.741	State of California	200	148	31.75236	\$47.06	148	32.15632	\$47.66
7	157-0130-018	1.070		1.070	Marjorie H. Sgarrella	400	428	31.75236	\$135.90	428	32.15632	\$137.63
8	157-0130-014	0.010		0.010	County of Sacramento	0	0	31.75236	\$0.00	0	32.15632	\$0.00
9	157-0130-017	102.450		102.450	State of California	200	20,490	31.75236	\$6,506.06	20,490	32.15632	\$6,588.83
10	157-0130-004	200.550		200.550	State of California	200	40,110	31.75236	\$12,735.87	40,110	32.15632	\$12,897.90
11	157-0130-024	302.960		302.960	State of California	200	60,592	31.75236	\$19,239.39	60,592	32.15632	\$19,484.16
12	157-0130-020	47.750		47.750	Fagundes Dairy	200	9,550	31.75236	\$3,032.35	9,550	32.15632	\$3,070.93
13	157-0130-022	40.000		40.000	State of California	200	8,000	31.75236	\$2,540.19	8,000	32.15632	\$2,572.51
14	157-0130-008	300.850		300.850	State of California	200	60,170	31.75236	\$19,105.40	60,170	32.15632	\$19,348.46
15	157-0130-006	357.980		357.980	State of California	200	71,596	31.75236	\$22,733.42	71,596	32.15632	\$23,022.64
16	157-0130-007	102.000		102.000	State of California	200	20,400	31.75236	\$6,477.48	20,400	32.15632	\$6,559.89
17	157-0140-004	1.000		1.000	State of California	200	200	31.75236	\$63.50	200	32.15632	\$64.31
18a	157-0140-020	578.470	209.400	369.070	State of California	200	73,814	31.75236	\$23,437.68	73,814	32.15632	\$23,735.86
18b	157-0140-020			209.400	State of California	1200	251,280	31.75236	\$79,787.28	251,280	32.15632	\$80,802.46
19a	157-0140-011	181.500	140.800	40.700	State of California	200	8,140	31.75236	\$2,584.64	8,140	32.15632	\$2,617.52
19b	157-0140-011			140.800	State of California	1200	168,960	31.75236	\$53,648.79	168,960	32.15632	\$54,331.32
20a	157-0140-009	186.000	121.100	64.900	State of California	200	12,980	31.75236	\$4,121.46	12,980	32.15632	\$4,173.89
20b	157-0140-009			121.100	State of California	1200	145,320	31.75236	\$46,142.53	145,320	32.15632	\$46,729.56
21a	157-0140-010	181.500	111.300	70.200	State of California	200	14,040	31.75236	\$4,458.03	14,040	32.15632	\$4,514.75
21b	157-0140-010			111.300	State of California	1200	133,560	31.75236	\$42,408.45	133,560	32.15632	\$42,947.98
22	157-0140-015	20.000		20.000	Stkn Marina Properties LLC	1200	24,000	31.75236	\$7,620.57	24,000	32.15632	\$7,717.52
23	157-0130-003	0.870		0.870	State of California (1/2)	200	174	31.75236	\$55.25	174	32.15632	\$55.95
	***	0.870		0.870	State of California (1/2)	200	174	31.75236	\$55.25	174	32.15632	\$55.95
24	157-0130-023	10.520		10.520	Ricky & Linda Carter	200	2,104	31.75236	\$668.07	2,104	32.15632	\$676.57
25	** 157-0130-023	0.360		0.360	RD No 1601	200	72	31.75236	\$22.86	72	32.15632	\$23.15
26	157-0130-025	4.040		4.040	RD No 1601	200	808	31.75236	\$256.56	808	32.15632	\$259.82
27a	157-0140-021	471.960	182.300	289.660	State of California	200	57,932	31.75236	\$18,394.78	57,932	32.15632	\$18,628.80
27b	157-0140-021			182.300	State of California	1200	218,760	31.75236	\$69,461.46	218,760	32.15632	\$70,345.17
		3,634.887	764.900	3,634.887								
					California Resources Production LESS RD1601		1,512,362 251,287	31.75236	\$79,789.55 (\$34,540.79)	1,512,362 229,131	32.15632	\$73,680.10 (\$34,980.22)
							1,763,649		\$525,459.21	1,741,493		\$525,019.78

** .36 purchased from Carter for exclusive levee easement

*** Exxon Corp billed to State of CA