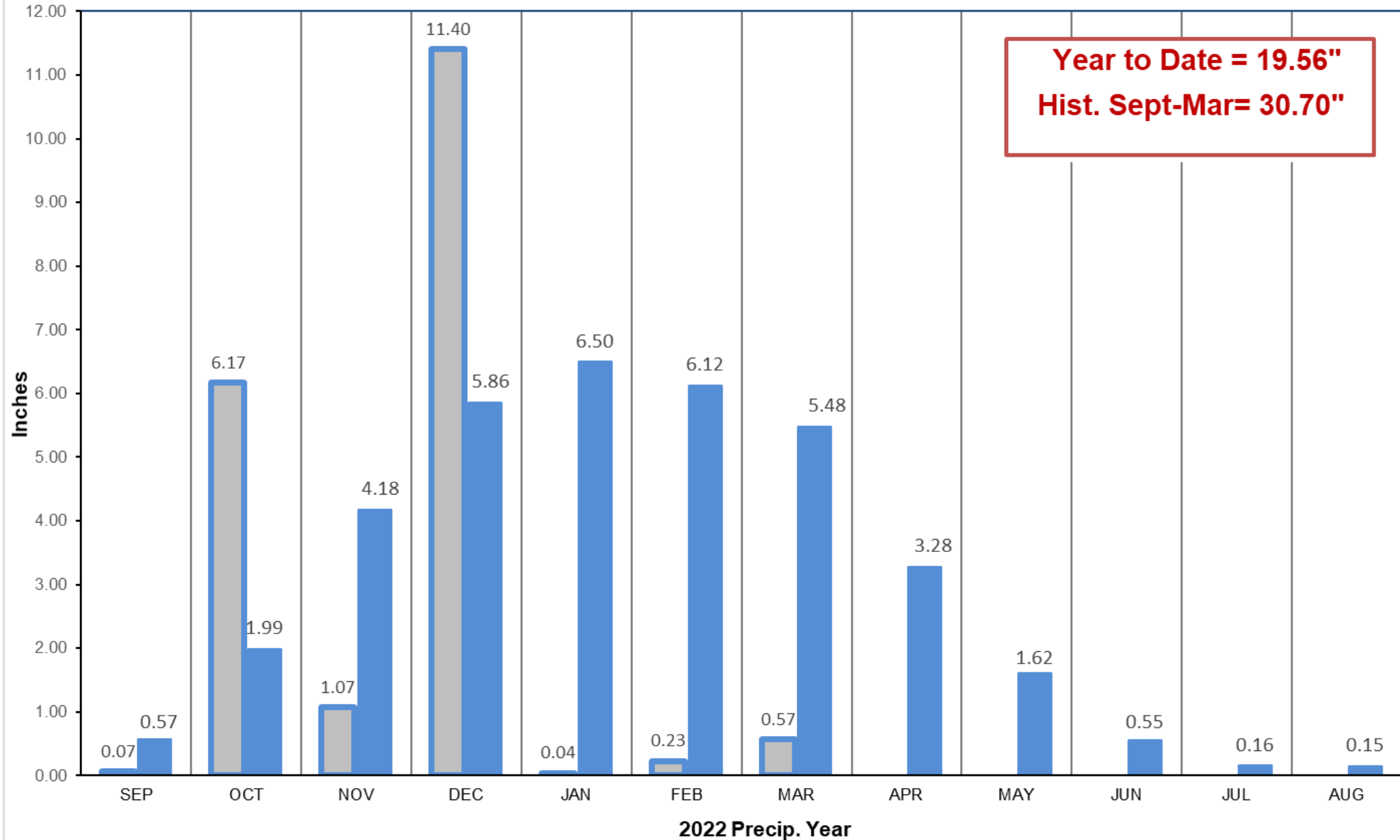


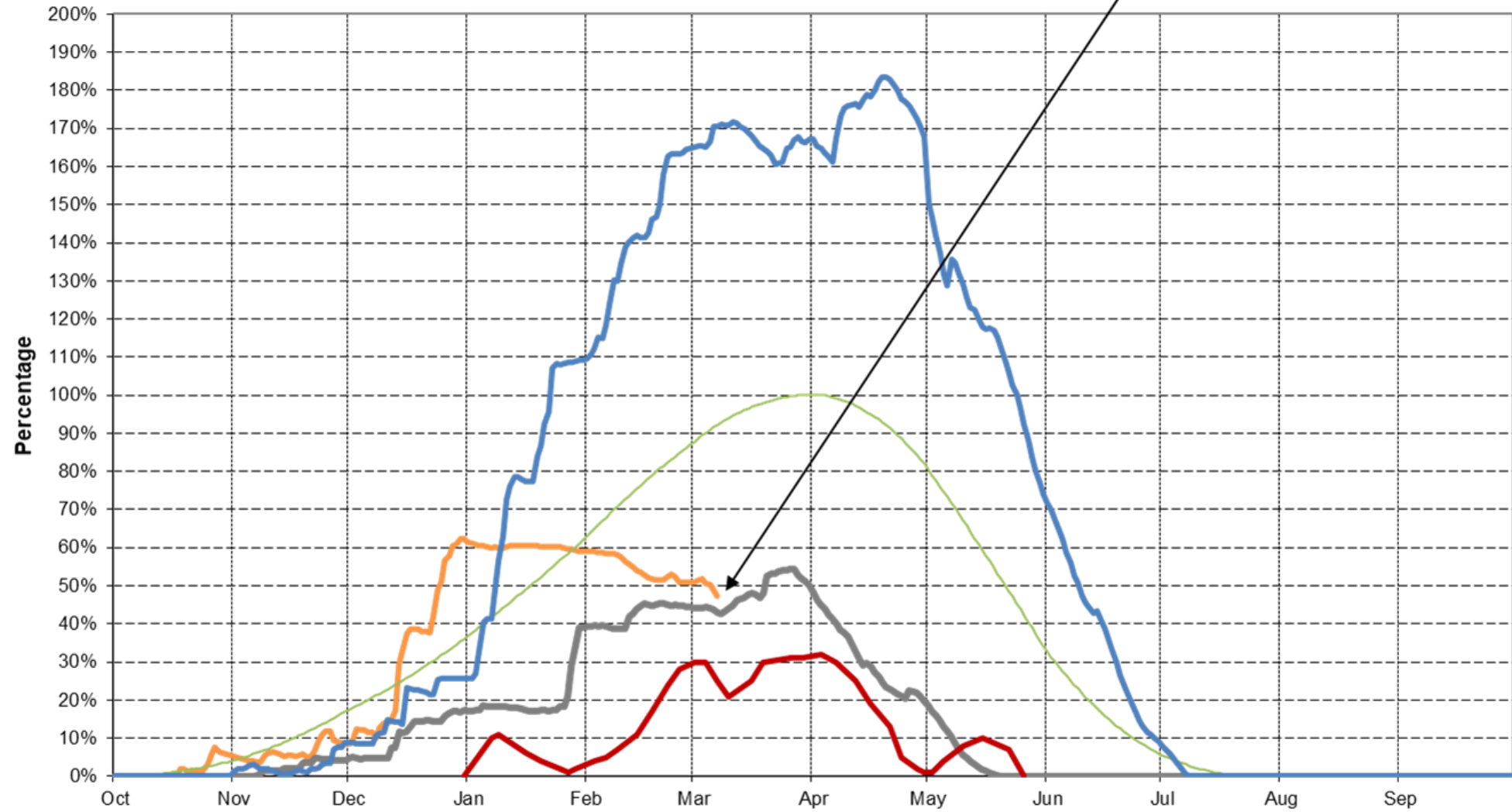
# Tuolumne River Watershed Monthly Accumulation of Precipitation

2021-2022 AVERAGE



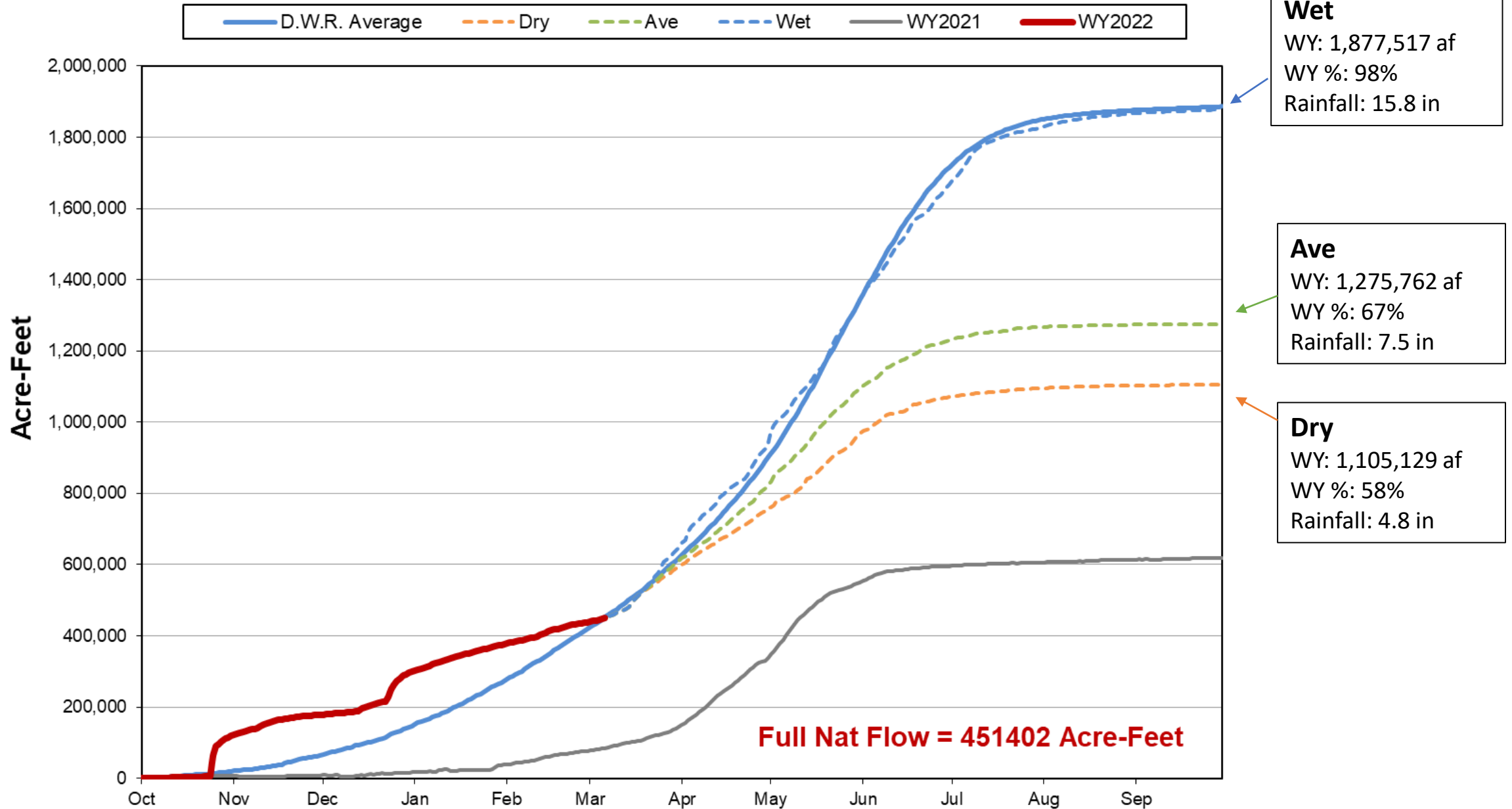
# Snow Sensors Used in Tuolumne River Forecast

47.3% Average of Apr. 1 or  
51.3% Average for Date



— 2022 — 2021 — 1977 — D.W.R. Average — 2017

# Accumulated Full Natural Flow w/ Forecast



# Precipitation Forecasts

Precipitation (in)  
during the period:

Wed, 09 MAR 2022 at 12Z

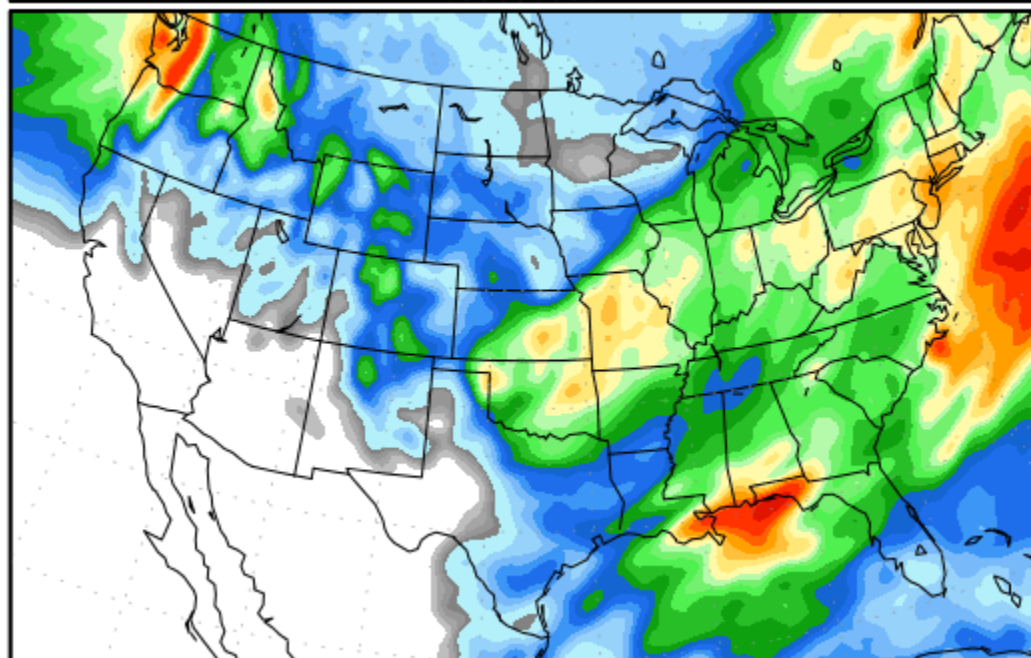
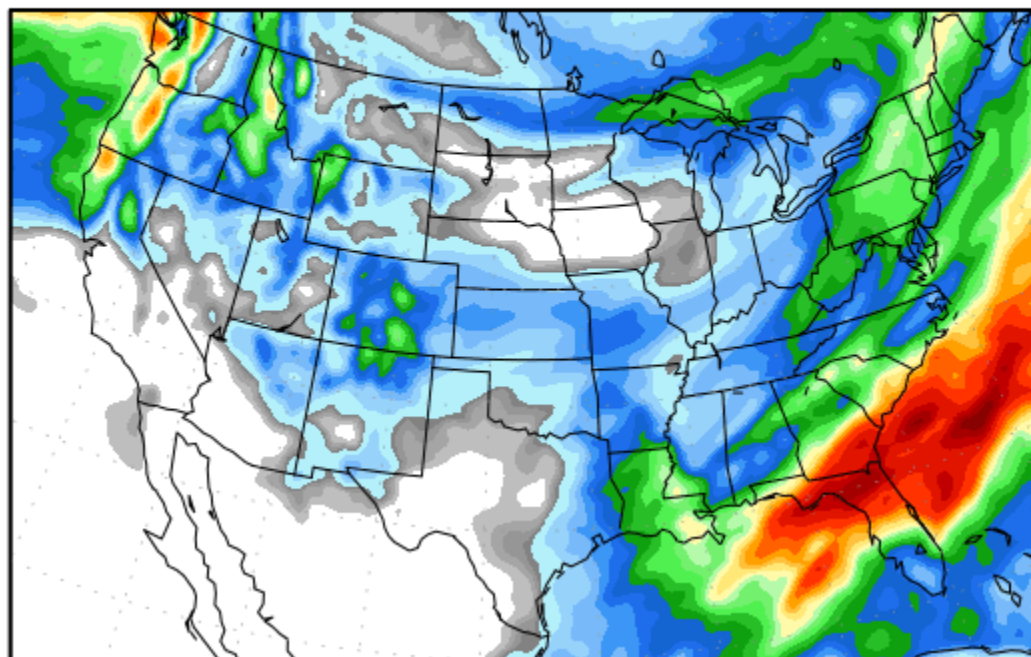
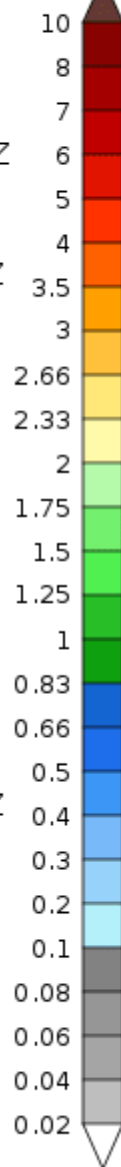
-to-

Thu, 17 MAR 2022 at 12Z

Thu, 17 MAR 2022 at 12Z

-to-

Fri, 25 MAR 2022 at 12Z



# UNIMPAIRED FLOW FOR - MARCH 2022

(Provisional data, subject to change)

Report generated: March 08, 2022 15:03

APRIL-JULY FORECAST SUMMARY (IN THOUSANDS OF ACRE-FEET)				
HYDROLOGIC REGION WATERSHED	APRIL-JULY FORECAST	PERCENT OF AVERAGE	80% PROBABILITY RANGE 90%   10%	
<b>NORTH COAST</b>				
Trinity River at Lewiston Lake	270	42	95	650
Scott River near Fort Jones	48			
<b>SACRAMENTO RIVER</b>				
Sacramento River above Shasta Lake	145	47		
McCloud River above Shasta Lake	230	60		
Pit River above Shasta Lake	630	63		
Total Inflow to Shasta Lake	1,050	59	740	2,070
Sacramento River above Bend Bridge	1,500	61	1,010	3,160
Feather River at Oroville	890	52	480	2,110
Yuba River near Smartville	650	65	350	1,320
American River below Folsom Lake	770	62	340	1,500
<b>SAN JOAQUIN RIVER</b>				
Cosumnes River at Michigan Bar	52	39	15	180
Mokelumne River Inflow to Pardee	290	62	125	520
Stanislaus River below Goodwin Res	440	63	220	820
Tuolumne River below La Grange	730	60	430	1,310
Merced River below Merced Falls	350	56	185	680
San Joaquin River inflow to Millerton Lk	850	69	470	1,370
<b>TULARE LAKE</b>				
Kings River below Pine Flat Res	750	62	410	1,310
Kaweah River below Terminus Res	140	51	65	320
Tule River below Lake Success	17	30	8	65
Kern River inflow to Lake Isabella	170	40	110	430
<b>NORTH LAHONTAN</b>				
Truckee River, Lake Tahoe to Farad accretions	160	64		
Lake Tahoe Rise, in feet	0.8	60		
West Carson River at Woodfords	31	59		
East Carson River near Gardnerville	115	61		
West Walker River below Little Walker	115	70		
East Walker River near Bridgeport	30	51		

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
2021 (WY)	212,207	448,885	207,022	360,017	1,228,131	120,983	145,294	67,807	152,032	486,116	1,304,685	94,000	Critical	CRITICAL WATER YEAR AND BELOW
2022 (WY)	440,000	730,000	350,000	850,000	2,370,000	361,000	523,000	230,000	478,000	1,592,000	2,001,337	119,039	Critical	INTERMEDIATE C-D WATER YEAR
Feb 1 Forecast														
Dry	340,000	640,000	300,000	670,000	1,950,000	324,000	505,000	221,000	397,000	1,447,000	1,720,337	110,494	Critical	MEDIAN CRITICAL WATER YEAR
Average	640,000	1,060,000	540,000	1,170,000	3,410,000	439,000	640,000	306,000	522,000	1,907,000	2,688,337	179,697	Below Normal	MEDIAN BELOW NORMAL
Wet	1,140,000	1,830,000	940,000	1,890,000	5,800,000	629,000	880,000	441,000	697,000	2,647,000	4,270,337	300,923	Wet	INTERMEDIATE AN-W
Feb 08 Update														
Dry	310,000	580,000	270,000	630,000	1,790,000	324,000	505,000	221,000	397,000	1,447,000	1,624,337	107,921	Critical	MEDIAN CRITICAL WATER YEAR
Average	590,000	980,000	490,000	1,090,000	3,150,000	439,000	640,000	306,000	522,000	1,907,000	2,532,337	156,484	Below Normal	INTERMEDIATE D-BN
Wet	1,060,000	1,720,000	870,000	1,770,000	5,420,000	629,000	880,000	441,000	697,000	2,647,000	4,042,337	300,923	Wet	INTERMEDIATE AN-W
Feb 15 Update														
Dry	290,000	510,000	230,000	560,000	1,590,000	324,000	505,000	221,000	397,000	1,447,000	1,504,337	104,705	Critical	MEDIAN CRITICAL WATER YEAR
Average	540,000	890,000	430,000	950,000	2,810,000	439,000	640,000	306,000	522,000	1,907,000	2,328,337	140,602	Dry	MEDIAN DRY
Wet	980,000	1,550,000	790,000	1,580,000	4,900,000	629,000	880,000	441,000	697,000	2,647,000	3,730,337	300,923	Above Normal	MEDIAN ABOVE NORMAL
Feb 22 Update														
Dry	270,000	480,000	200,000	510,000	1,460,000	324,000	505,000	221,000	397,000	1,447,000	1,426,337	94,000	Critical	CRITICAL WATER YEAR AND BELOW
Average	500,000	810,000	390,000	900,000	2,600,000	439,000	640,000	306,000	522,000	1,907,000	2,202,337	130,863	Dry	MEDIAN DRY
Wet	900,000	1,400,000	730,000	1,440,000	4,470,000	629,000	880,000	441,000	697,000	2,647,000	3,472,337	300,923	Above Normal	INTERMEDIATE BN-AN
Mar 1 Forecast														
Dry	220,000	430,000	185,000	470,000	1,305,000	306,000	463,000	195,000	408,000	1,372,000	1,318,337	94,000	Critical	CRITICAL WATER YEAR AND BELOW
Average	440,000	730,000	350,000	850,000	2,370,000	361,000	523,000	230,000	478,000	1,592,000	2,001,337	119,039	Critical	INTERMEDIATE C-D WATER YEAR
Wet	820,000	1,310,000	680,000	1,370,000	4,180,000	451,000	638,000	295,000	573,000	1,957,000	3,160,337	300,923	Above Normal	INTERMEDIATE BN-AN

**TUOLUMNE RIVER MINIMUM FLOW REQUIREMENT (Figure 4)**  
**Interpolation Volume**

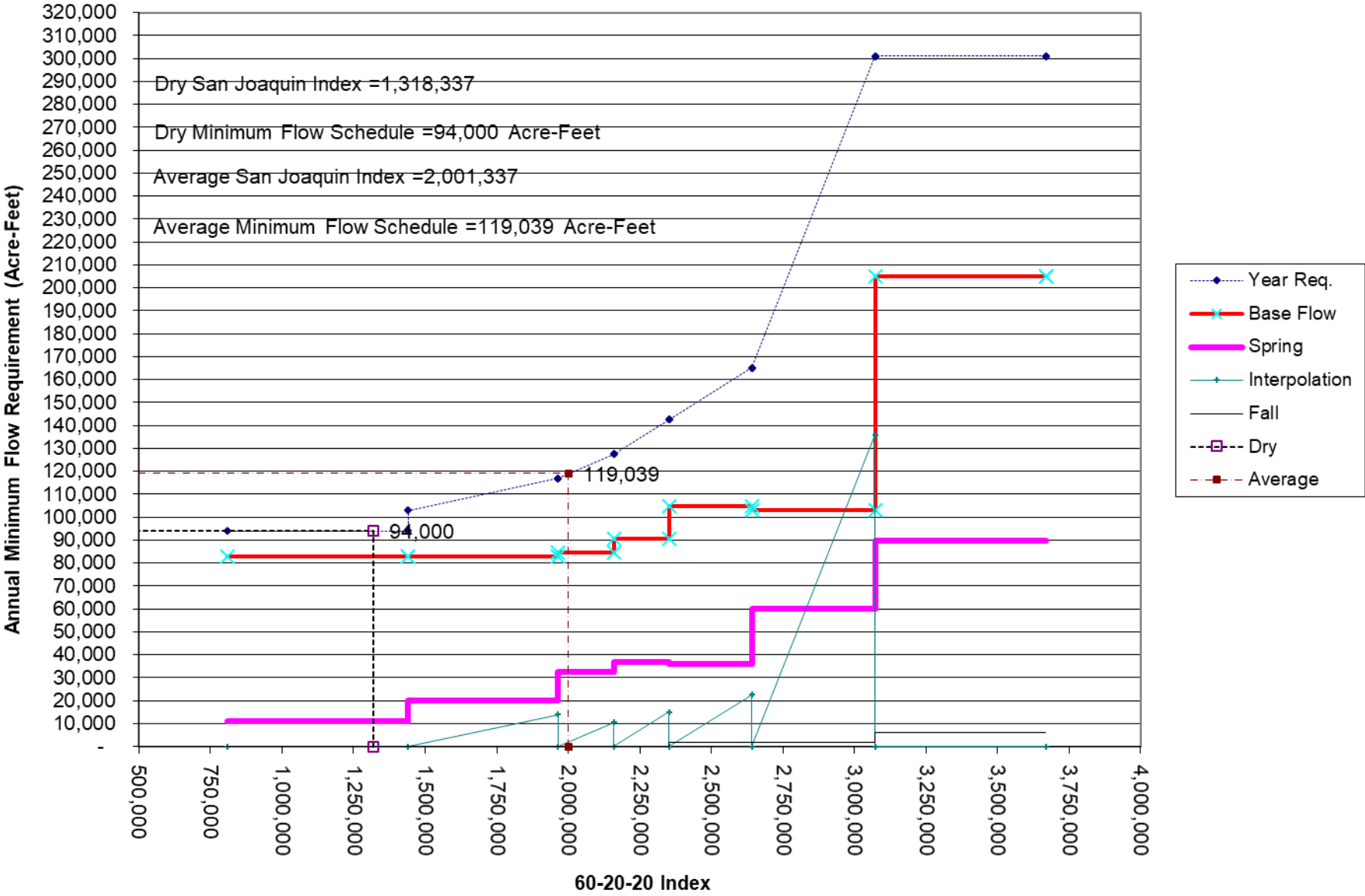




Table 2  
Tuolumne River Flow Schedule  
Based on DWR Values, 60-20-20 Index for 2021, Hydrologic Conditions  
Schedule For 2021-2022 Fish Flow Year

[illegible]



## Weir Monitoring

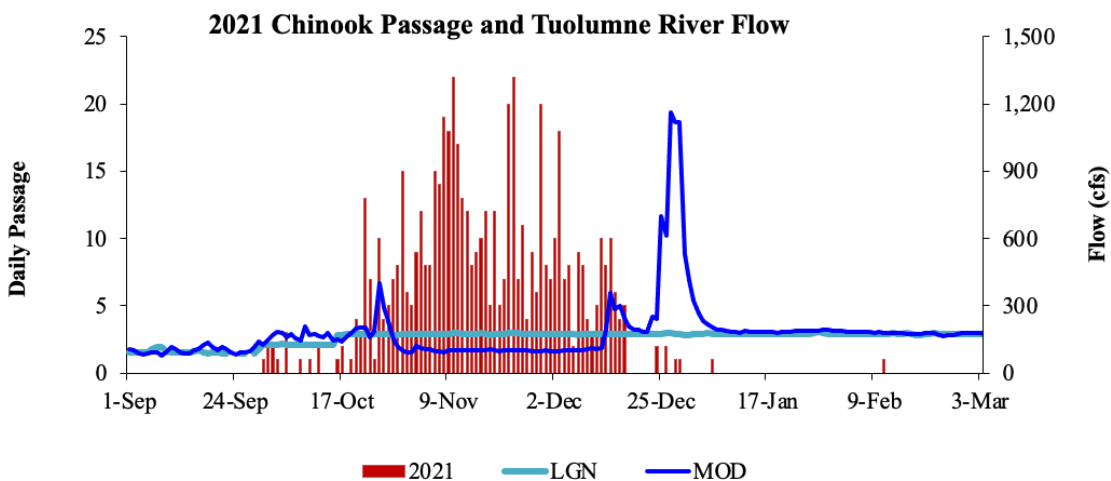


Figure 1. Daily adult Chinook salmon passage at the Tuolumne River Weir and Tuolumne River flow at La Grange (LGN) and Modesto (MOD).

- As of March 3, 577 Chinook salmon net upstream passages since sampling began on September 29, 2021.
- Only two passages since January 1. Last upstream passage observed on February 11, salmon was not ad-clipped.
- 21% of the salmon passages have been ad-clipped.

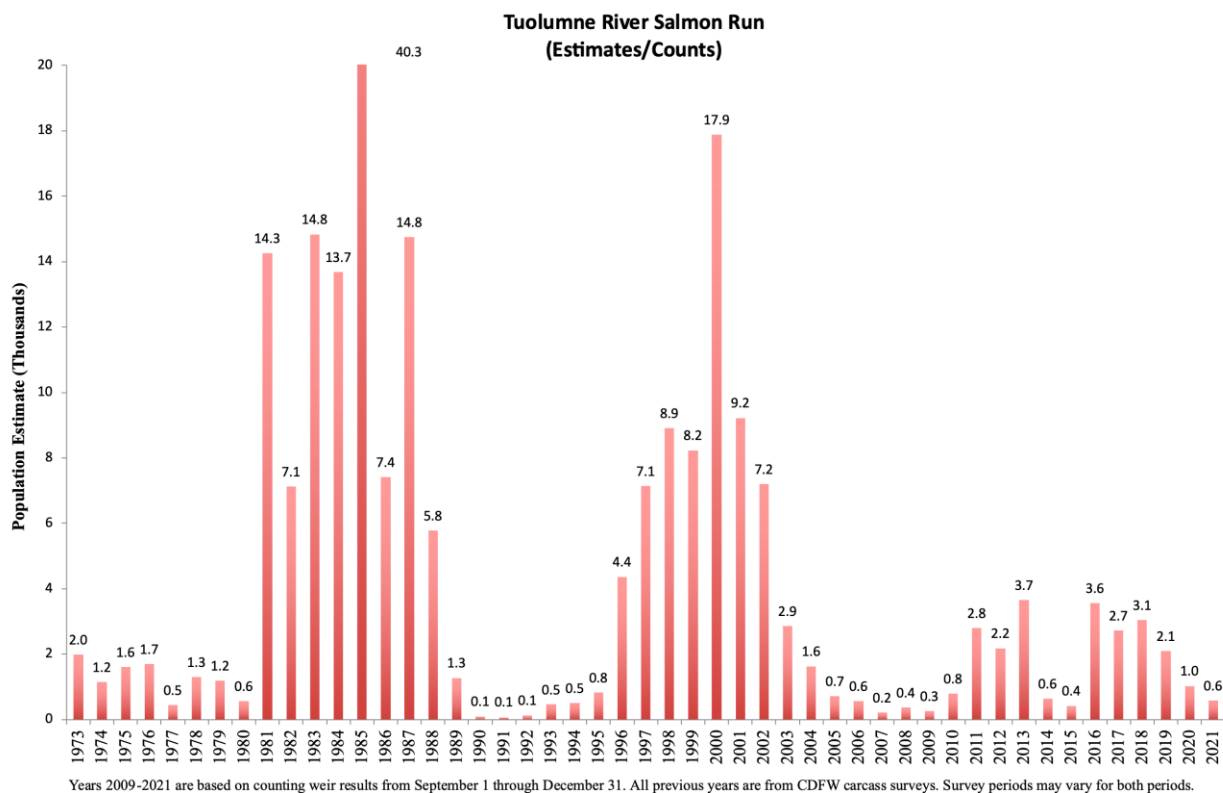


Figure 2. Total Chinook passage at the Tuolumne River Weir, 1973-2021.



- One larger *O. mykiss* (418 mm) passage on February 10. The fish was not ad-clipped.
- Only one *O. mykiss* observed this season. Same timing (February 11) as the single *O. mykiss* passage observed in 2021.
- Weir monitoring to continue through the spring, as conditions allow.

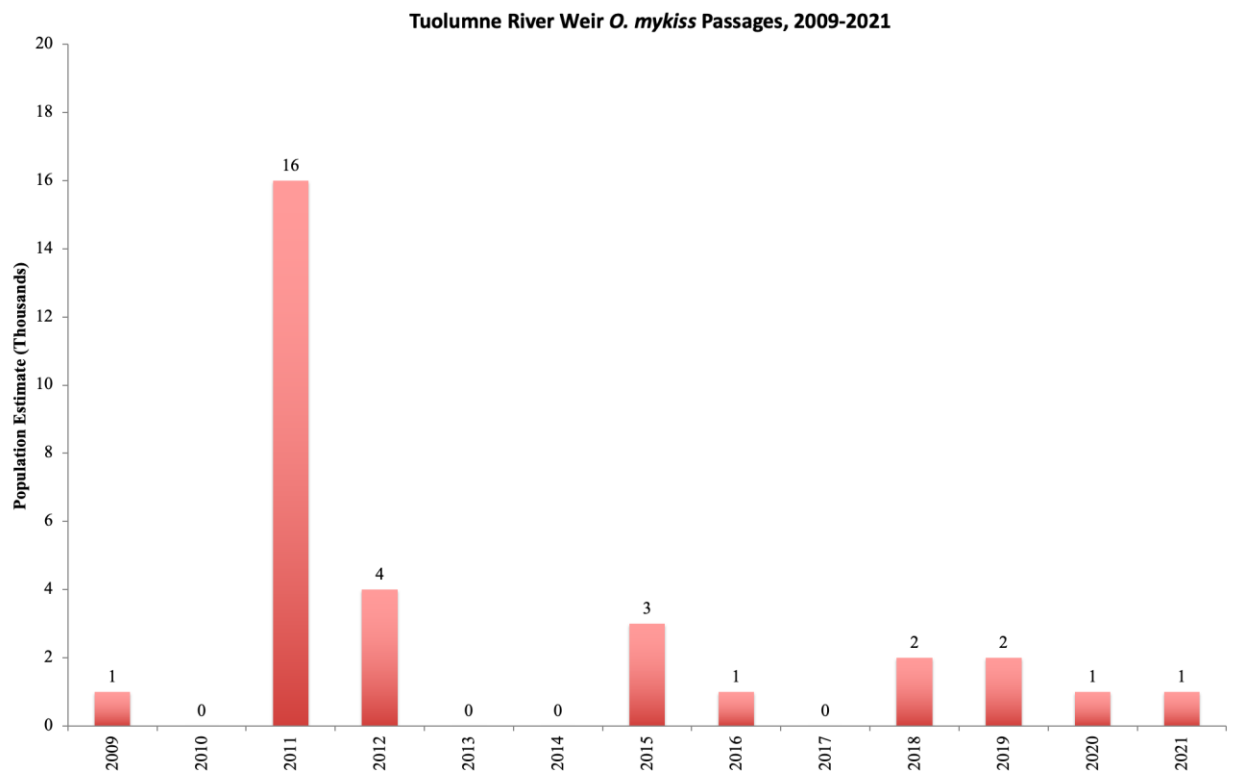
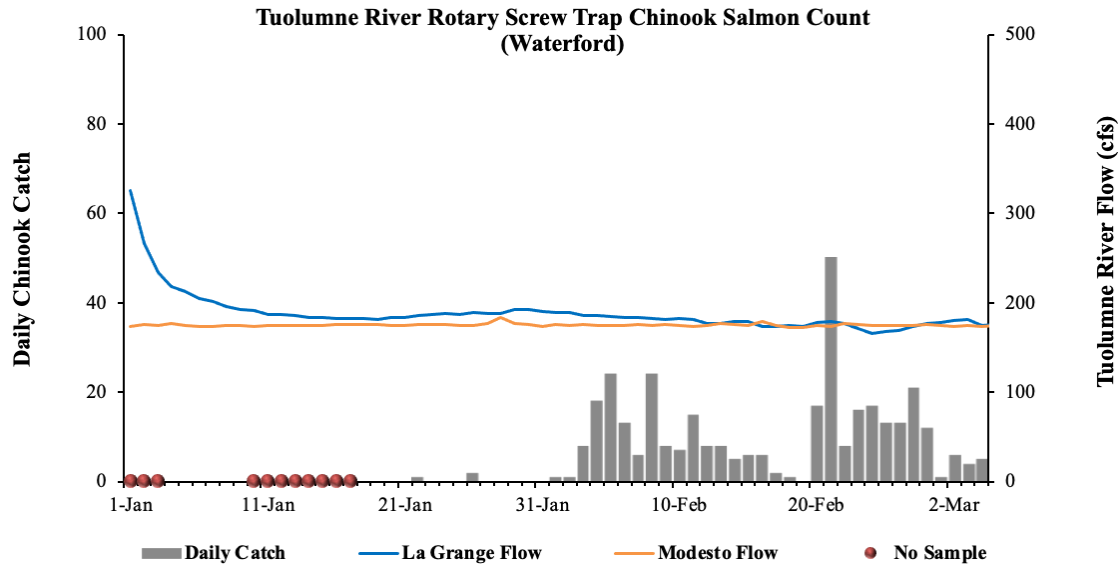


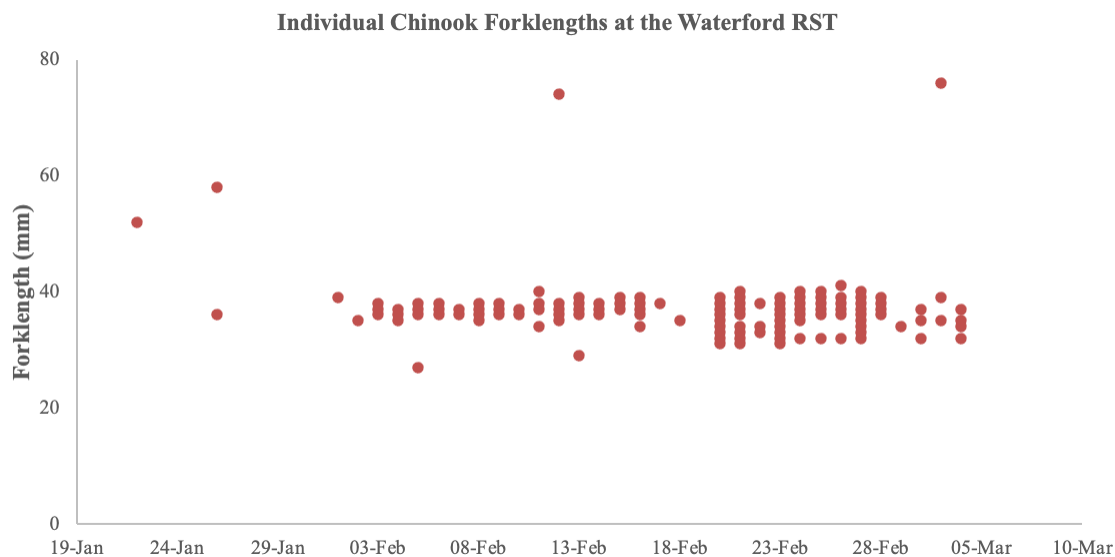
Figure 3. *O. mykiss* passages at the Tuolumne River weir during fall/winter monitoring, 2009-2021.

## RST Monitoring



**Figure 4. Daily juvenile Chinook passage at the Waterford RST and Tuolumne River flow at La Grange (LGN) and Modesto (MOD).**

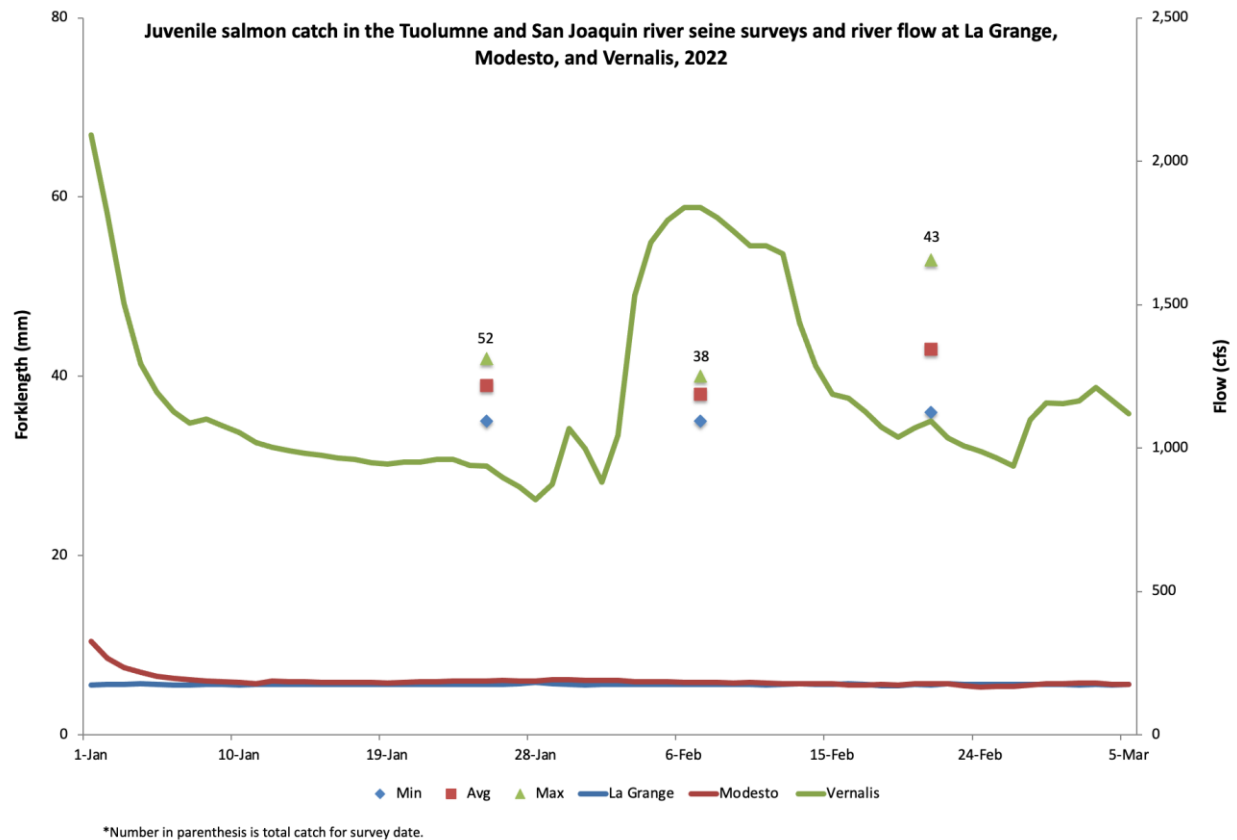
- As of March 4, a total of 347 juvenile Chinook have been captured.
- No efficiency tests have been conducted due to insufficient catch at the trap and the lack of Merced River Hatchery fish this season.
- Grayson RSTs are not sampling at this time due to excessive water hyacinth at the trapping location. We will continue to assess the conditions throughout the season and get the traps fishing if conditions improve.



**Figure 5. Individual forklengths of juvenile Chinook salmon captured at the Waterford RST, 2022.**

- We are collaborating with NMFS and began collecting fin clips from the larger (outlier) fish as part of their genetic analysis of salmon runs in the San Joaquin Basin tributaries.

## Seine Surveys



**Figure 6. Juvenile salmon captured during the seine surveys and Tuolumne and San Joaquin river flow, 2022.**

- After three surveys, a total of 72 juvenile salmon have been captured in the Tuolumne River between Old La Grange Bridge and Hickman. No salmon have been captured in the lower reach of the Tuolumne River or the San Joaquin River.
- The majority of the salmon (n=64) have been captured at Hickman, a known rearing area in the Tuolumne River. Salmon were captured at Charles Rd site during March 7 survey, but not included in above graph.

## Redd Surveys

- Redd surveys are ongoing for the 2021/2022 spawning period. Currently monitoring for *O. mykiss* spawning, with surveys continuing into April. No updates at this time, as data is still being collected and GIS data processed
- 2020 report recently finalized for the annual FERC report. Surveys were suspended in Dec. 2020 due to COVID.