



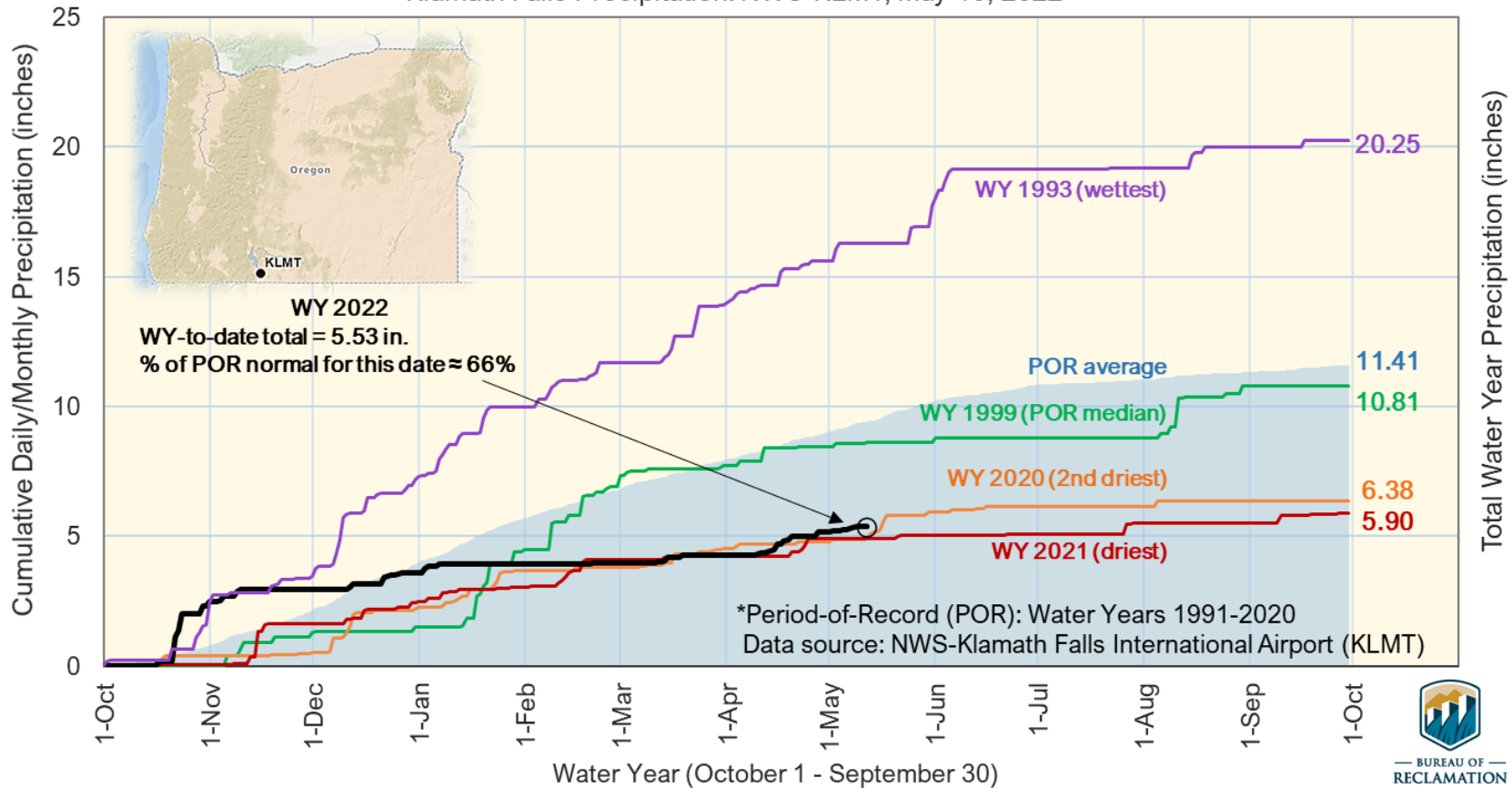
— BUREAU OF —
RECLAMATION

Klamath River Basin Hydrologic Update

May 13, 2022

Klamath Falls Airport Met Station - NWS

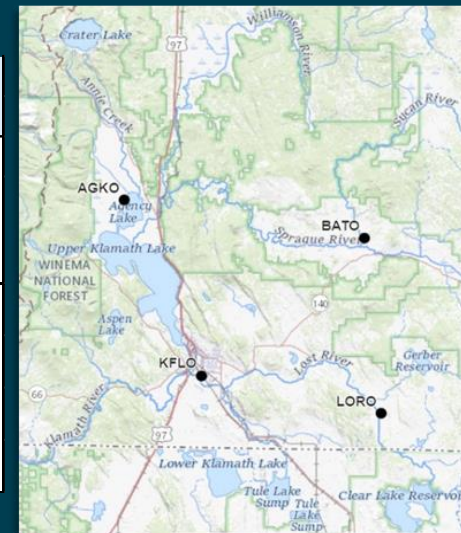
Klamath Falls Precipitation: NWS-KLMT, May 13, 2022



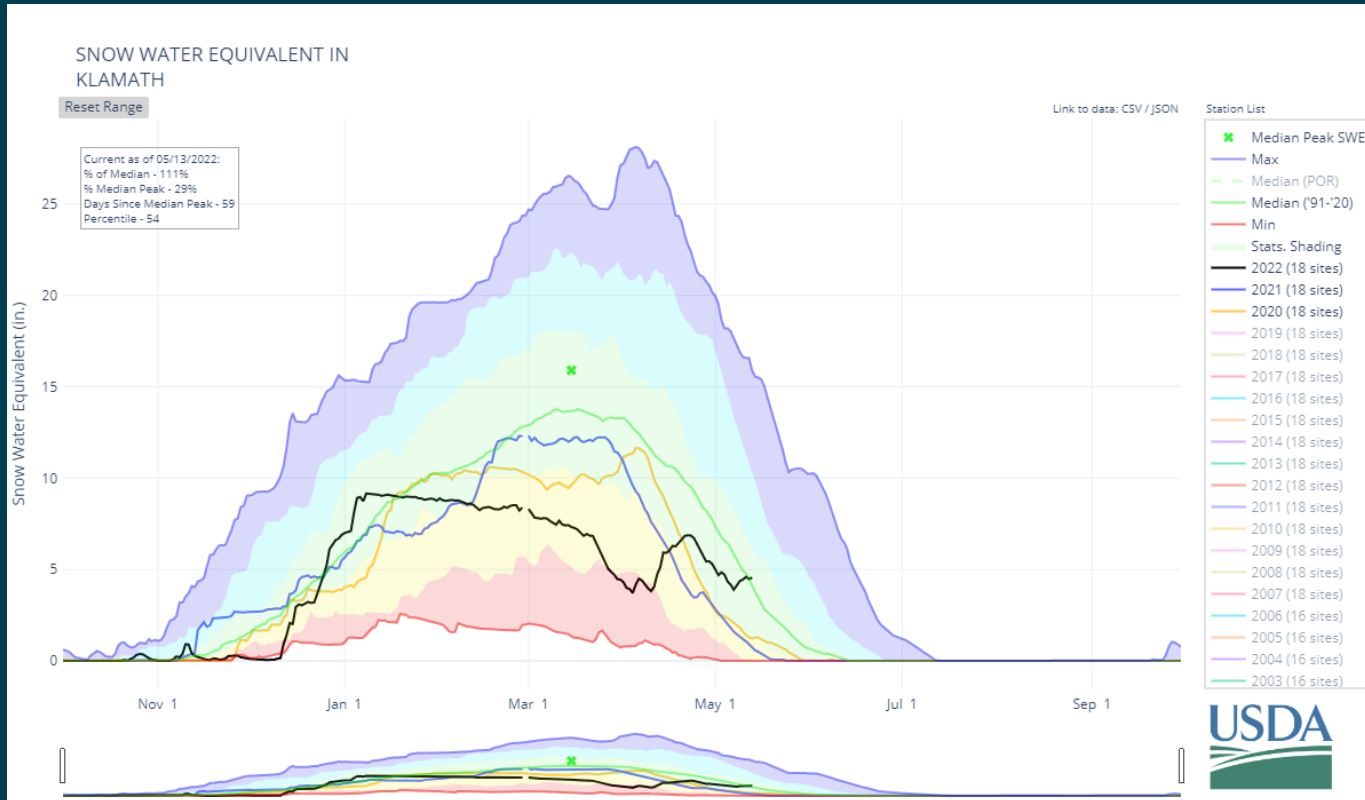
Klamath Basin AgriMet – USBR Water Year (WY) 2022

**Klamath Basin AgriMet Stations - Water Year-to-date Precipitation (through below date)
Thursday, May 12, 2022**

Station (POR)	WY2022 Total PREC (in.)	POR Median PREC (in.)	Percent POR Median	CBTT	PCODE	SDI	ELEV (ft.)
Lorella (2002-2021)	5.41	8.45	64%	LORO	PU	200586	4159
Beatty (2005-2021)	6.40	7.62	84%	BATO	PU	200522	4319
Agency (2001-2021)	10.53	11.66	90%	AGKO	PU	200542	4149
KFalls (1999-2021)	6.94	9.47	73%	KFLO	PU	200553	4099



Upper Klamath Basin Snow Water Equivalent - NRCS WY 2022



Statistical shading breaks at 10th, 30th, 50th, and 90th Percentiles

WY2022 displayed as black trace
 WY2021 displayed as blue trace
 WY2020 displayed as yellow trace

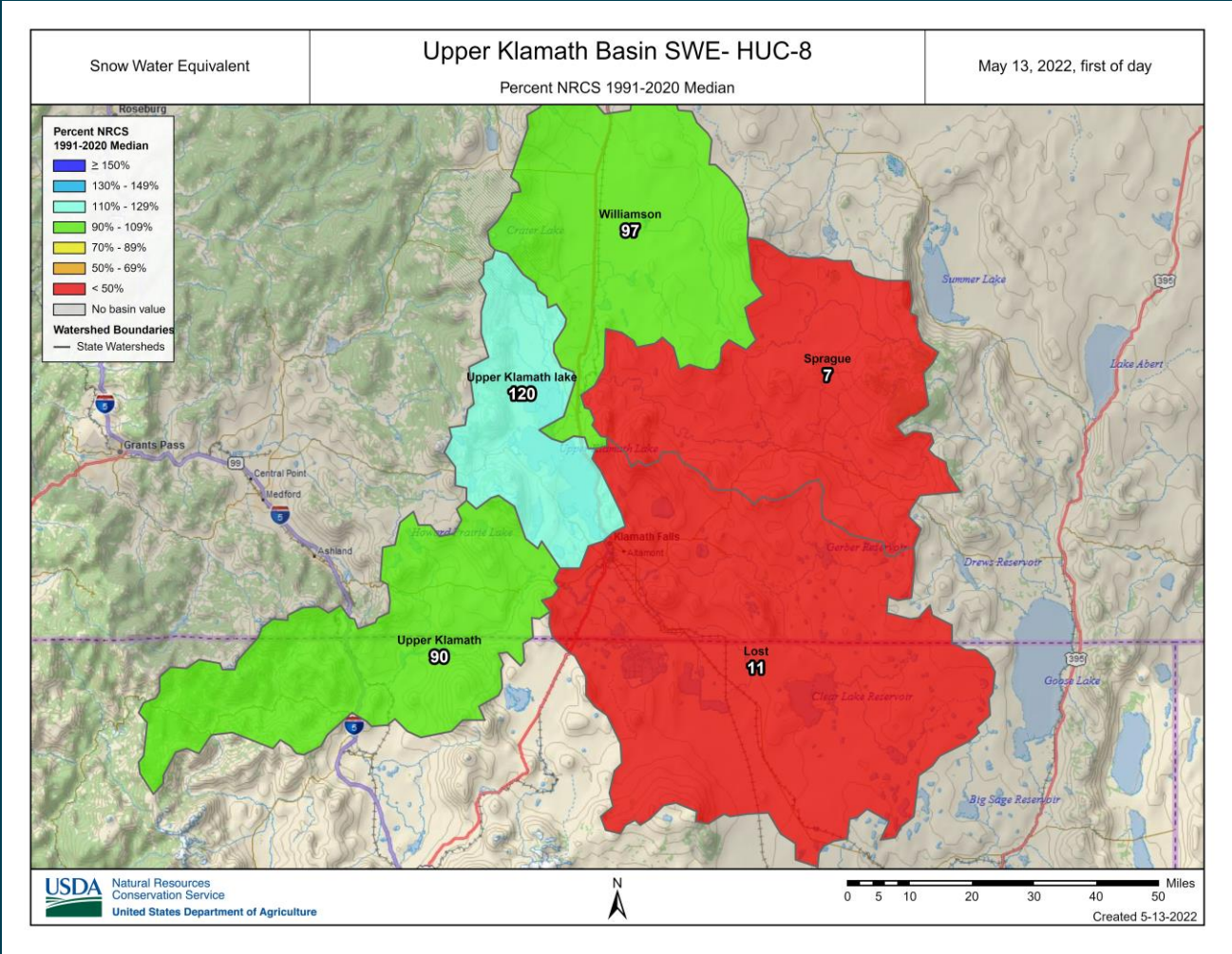


Upper Klamath Basin Snow/Precipitation Report - NRCS WY 2022

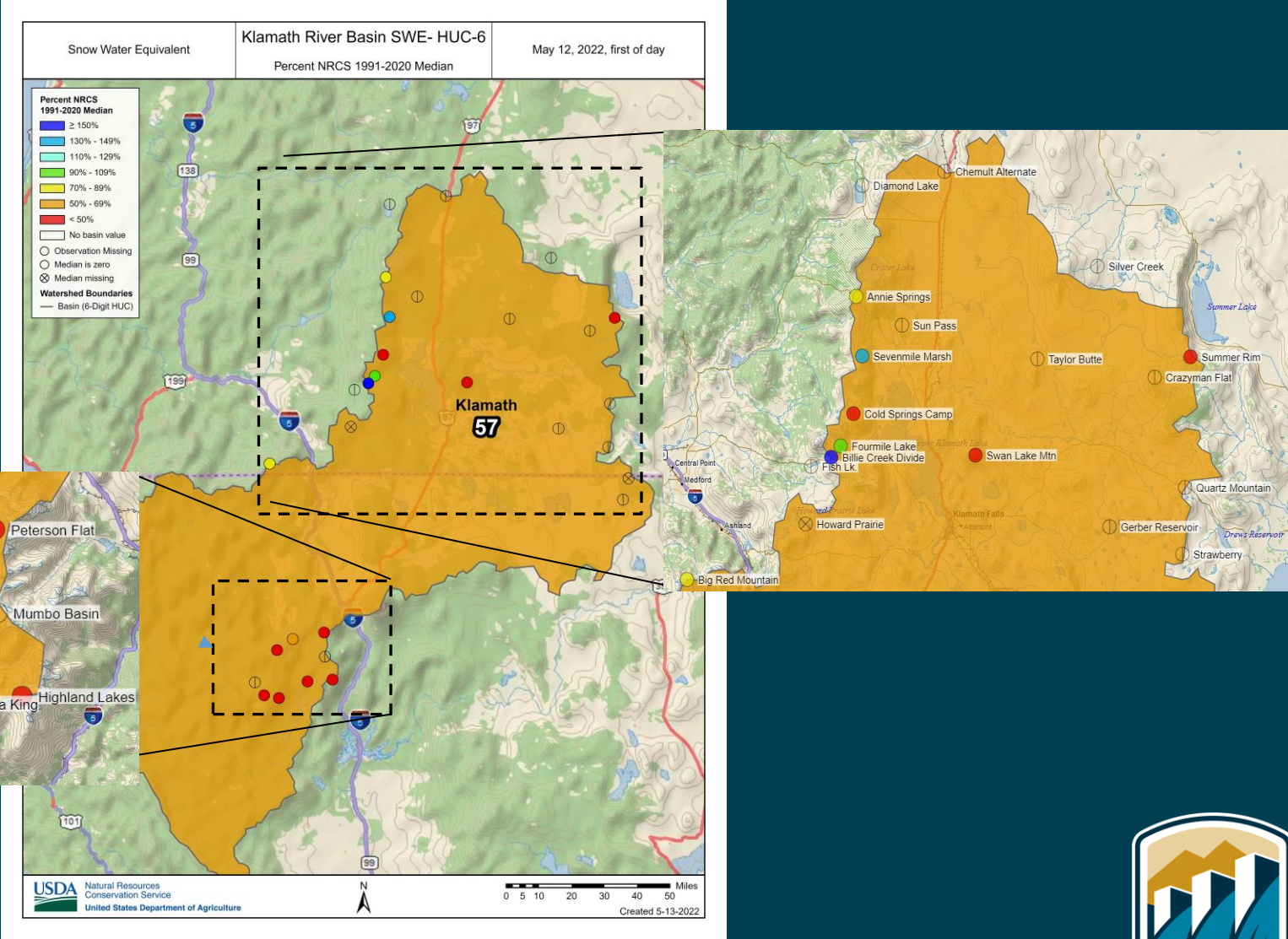
Upper Klamath Basin SNOTEL Snow/Precipitation Update Report							
Based on Mountain Data from NRCS SNOTEL Sites							
Provisional data, subject to revision							
Data based on the first reading of the day (typically 00:00) for Friday, May 13, 2022							
Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Median (in)	Pct of Median
KLAMATH							
Fish Lk.	4660	1.7	0.0	*	34.2	37.8	90
Chemult Alternate	4850	0.0	0.0	*	18.9	22.6	84
Gerber Reservoir	4890	0.2	0.0 ₍₂₂₎	*	10.0	12.4 ₍₂₂₎	81
Taylor Butte	5030	0.1	0.0	*	15.1	16.8	90
Crowder Flat	5170	0.1	0.0 ₍₂₁₎	*	11.9	14.4 ₍₂₁₎	83
Billie Creek Divide	5280	10.1	0.8	1262*	40.8	44.0	93
Diamond Lake	5280	1.0	0.0	*	36.5	42.2	86
Sun Pass	5400	0.2	0.0 ₍₁₄₎	*	30.7	35.0 ₍₁₄₎	88
Sevenmile Marsh	5700	20.3	14.0	145	47.7	53.8	89
Quartz Mountain	5720	0.0	0.0 ₍₂₇₎	*	-M	13.9 ₍₁₇₎	*
Silver Creek	5740	0.2	0.0	*	18.1	20.9	87
Strawberry	5770	0.3	0.0	*	-M	18.0	*
Cold Springs Camp	5940	5.2	9.8	53	29.5	48.8	60
Fourmile Lake	5970	15.3	12.8	120	38.8	47.0	83
Annie Springs	6010	27.2	29.4 ₍₂₀₎	93	48.7	58.3 ₍₂₀₎	84
Crazyman Flat	6180	0.1	0.0 ₍₁₉₎	*	25.4	28.5 ₍₁₉₎	89
Swan Lake Mtn	6830	0.0	5.7 ₍₁₄₎	0	-M	29.6 ₍₁₄₎	*
Summer Rim	7080	0.1	1.4	7*	15.2	22.8	67
Basin Index (%)		111*			83		



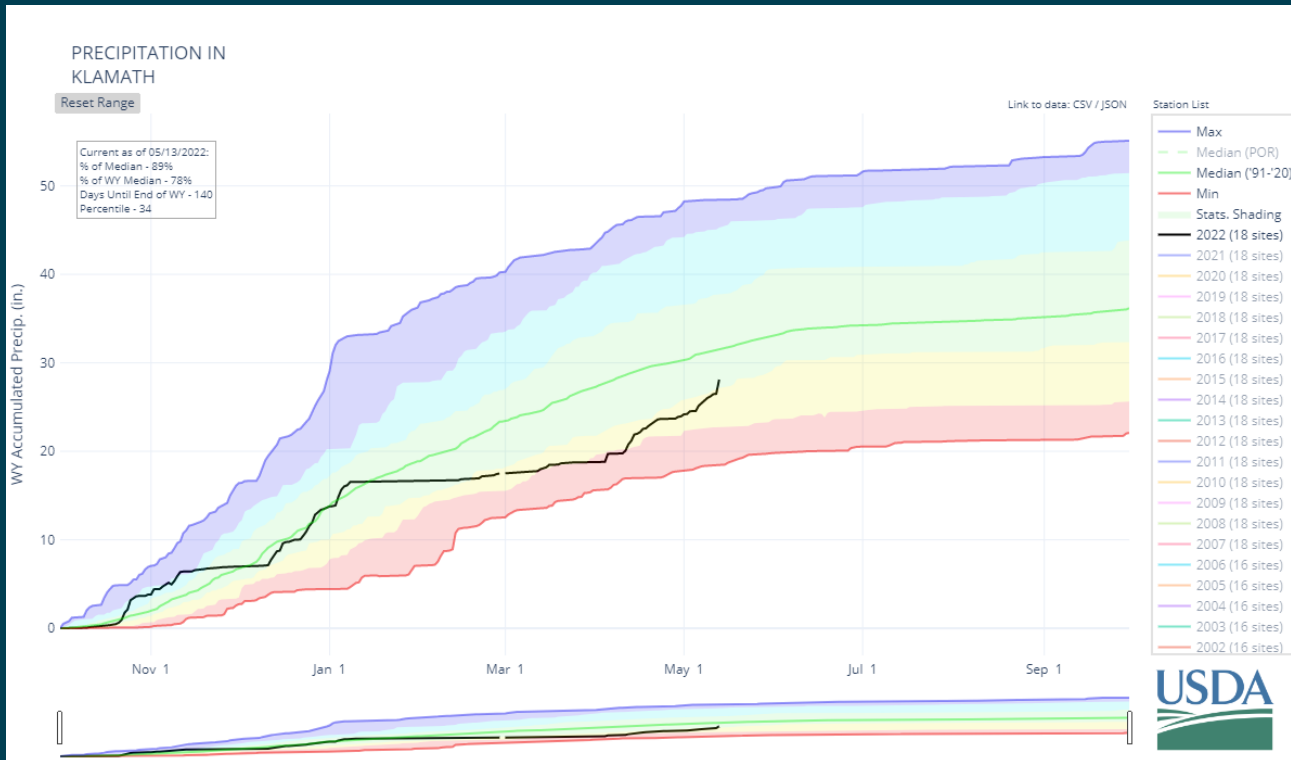
Upper Klamath Basin SWE - NRCS WY 2022



Klamath River Basin SWE - NRCS WY 2022



Upper Klamath Basin Precipitation - NRCS WY 2022



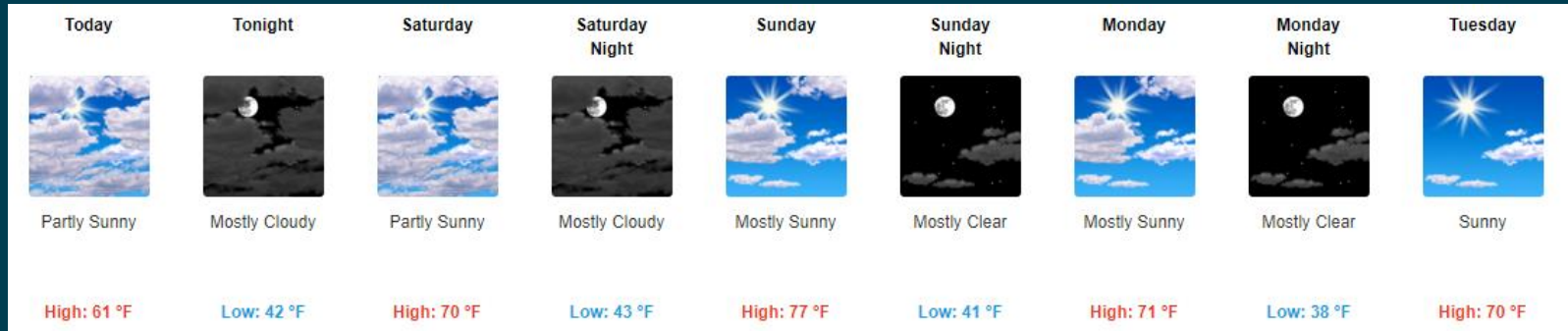
Statistical shading breaks at 10th, 30th, 50th, and 90th Percentiles

WY2022 displayed as black trace



Klamath Falls Weather Forecast - NWS

13 May 2022



Klamath Falls Weather Forecast - NWS

13 May 2022

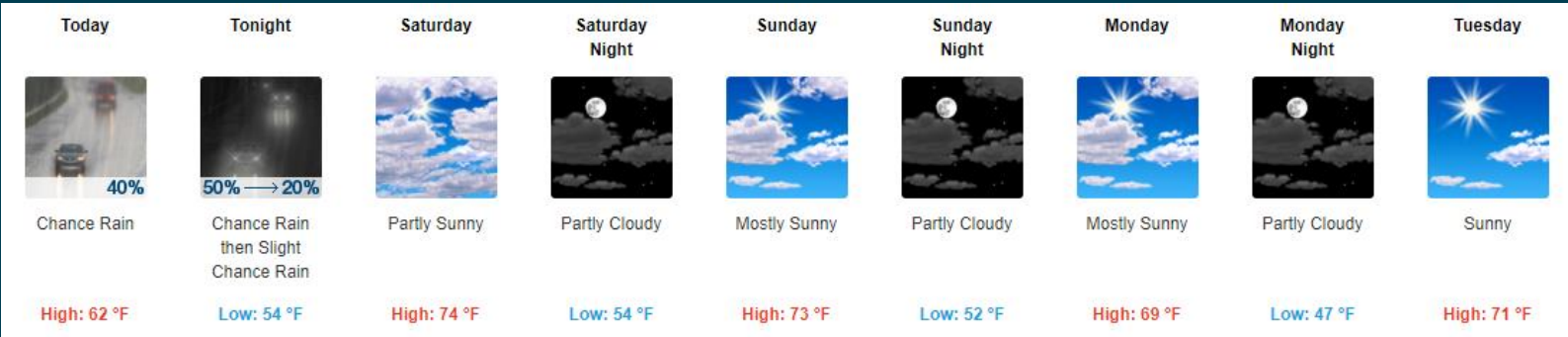
Detailed Forecast

Today	Partly sunny, with a high near 61. West southwest wind 5 to 13 mph, with gusts as high as 20 mph.
Tonight	Mostly cloudy, with a low around 42. West wind 10 to 15 mph becoming light after midnight. Winds could gust as high as 23 mph.
Saturday	Partly sunny, with a high near 70. South wind 5 to 9 mph becoming west in the afternoon.
Saturday Night	Mostly cloudy, with a low around 43. West northwest wind 5 to 10 mph becoming light and variable after midnight.
Sunday	Mostly sunny, with a high near 77. East northeast wind 5 to 15 mph becoming west southwest in the afternoon. Winds could gust as high as 23 mph.
Sunday Night	Mostly clear, with a low around 41.
Monday	Mostly sunny, with a high near 71.
Monday Night	Mostly clear, with a low around 38.
Tuesday	Sunny, with a high near 70.
Tuesday Night	Partly cloudy, with a low around 39.
Wednesday	Partly sunny, with a high near 66.
Wednesday Night	A chance of showers. Snow level 7200 feet lowering to 5600 feet after midnight . Mostly cloudy, with a low around 38.
Thursday	A chance of showers. Snow level 4800 feet rising to 5600 feet in the afternoon. Partly sunny, with a high near 58.



Orleans Weather Forecast - NWS

13 May 2022



Orleans Weather Forecast - NWS

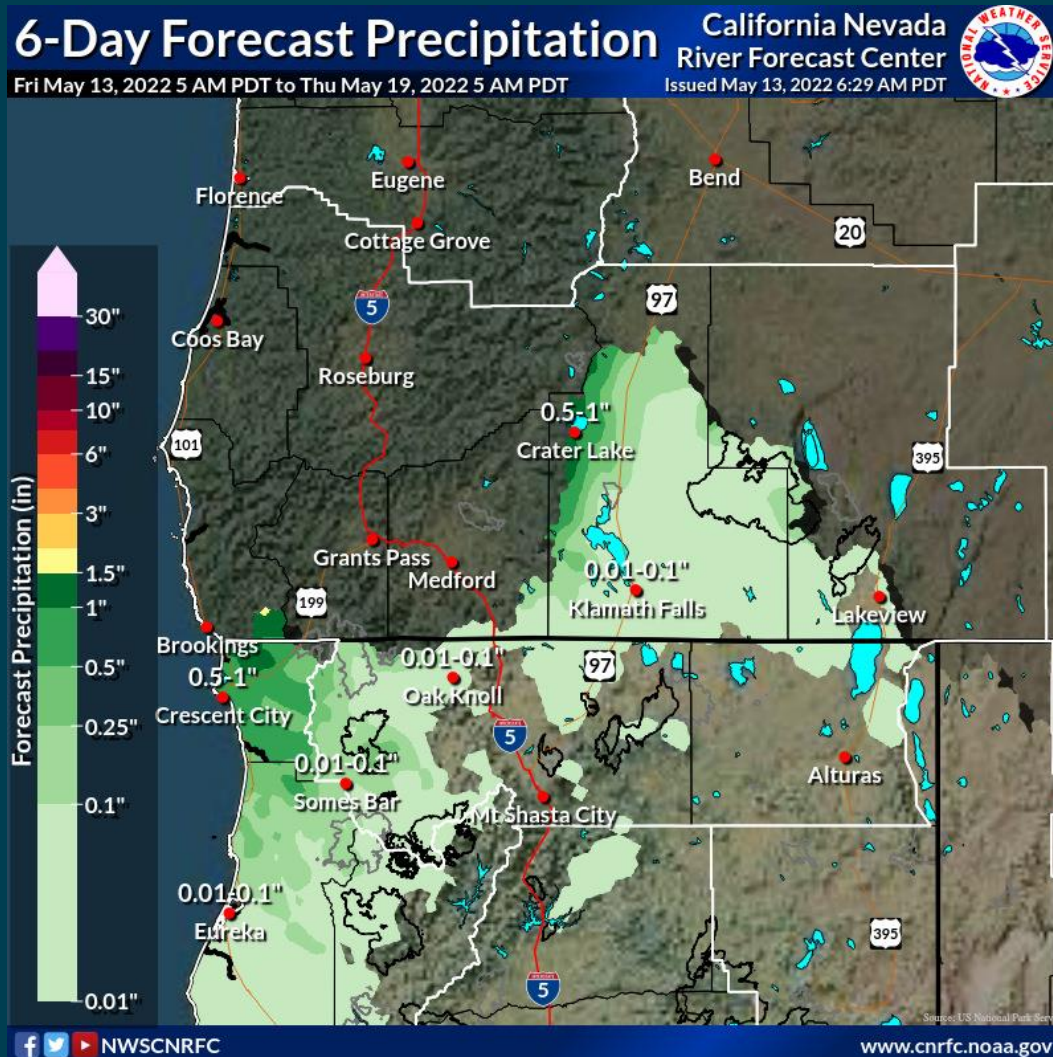
13 May 2022

Detailed Forecast

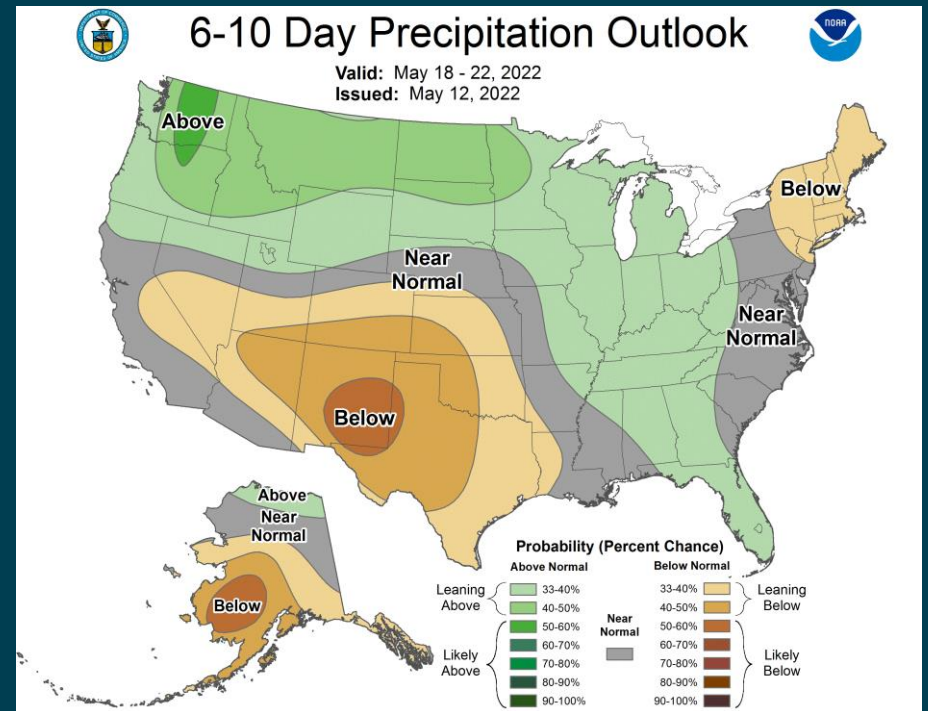
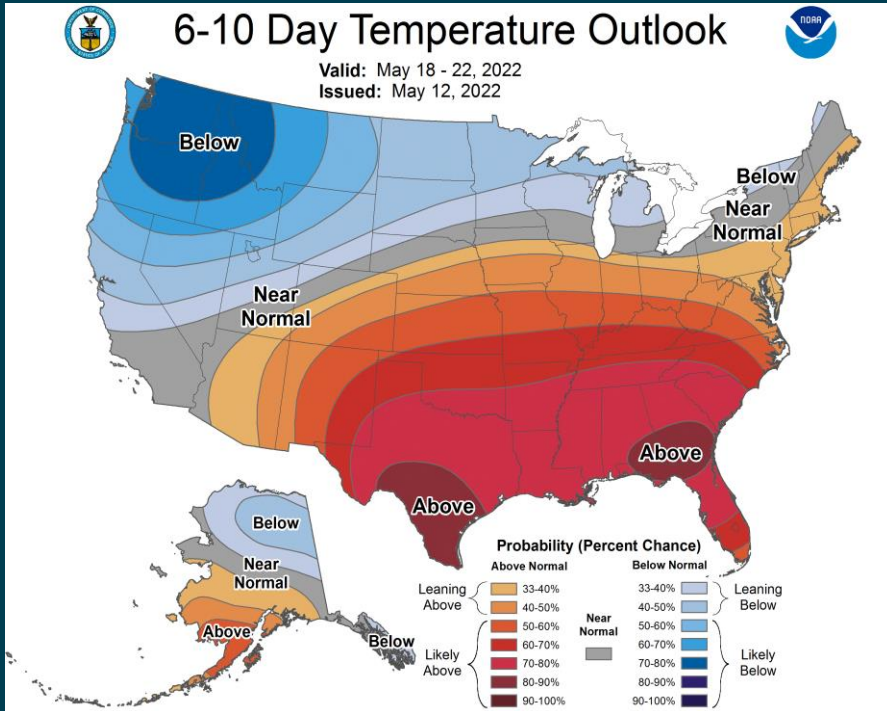
Today	A 40 percent chance of rain. Mostly cloudy, with a high near 62. Calm wind becoming south southwest around 6 mph in the afternoon. New precipitation amounts of less than a tenth of an inch possible.
Tonight	A 50 percent chance of rain, mainly before 11pm. Mostly cloudy, with a low around 54. South southwest wind 3 to 6 mph.
Saturday	Partly sunny, with a high near 74. Calm wind becoming west southwest around 6 mph in the afternoon.
Saturday Night	Partly cloudy, with a low around 54. West wind 5 to 7 mph becoming calm in the evening.
Sunday	Mostly sunny, with a high near 73. Light and variable wind becoming west southwest 5 to 8 mph in the afternoon.
Sunday Night	Partly cloudy, with a low around 52. West southwest wind 5 to 8 mph becoming calm in the evening.
Monday	Mostly sunny, with a high near 69.
Monday Night	Partly cloudy, with a low around 47.
Tuesday	Sunny, with a high near 71.
Tuesday Night	Partly cloudy, with a low around 47.
Wednesday	A chance of showers. Partly sunny, with a high near 68.
Wednesday Night	A chance of showers. Mostly cloudy, with a low around 49.
Thursday	A chance of showers. Partly sunny, with a high near 60.



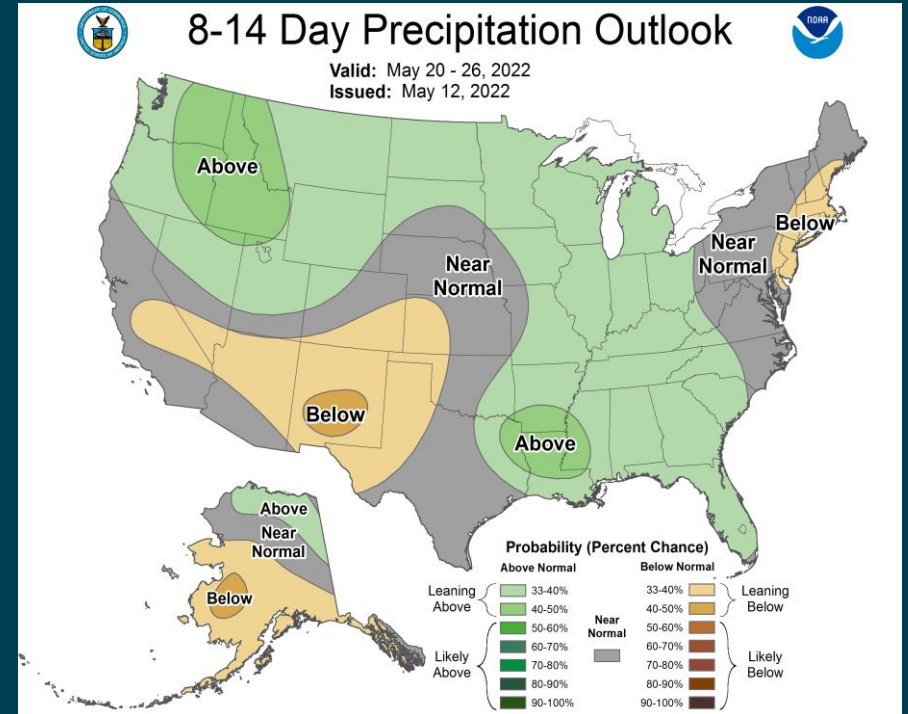
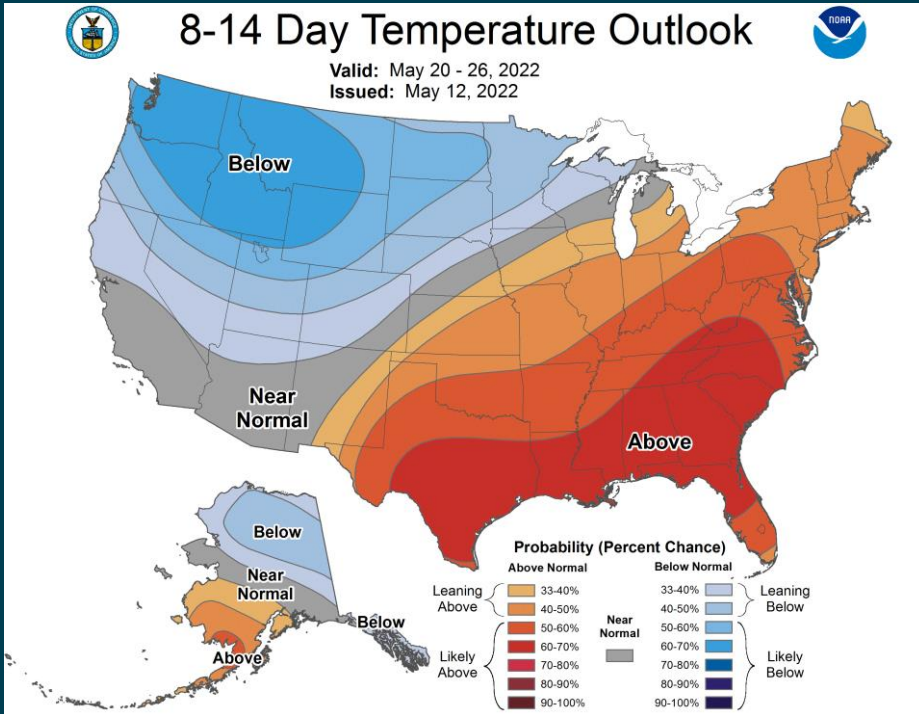
6-Day Precipitation Forecast – CNRFC Accumulated Total



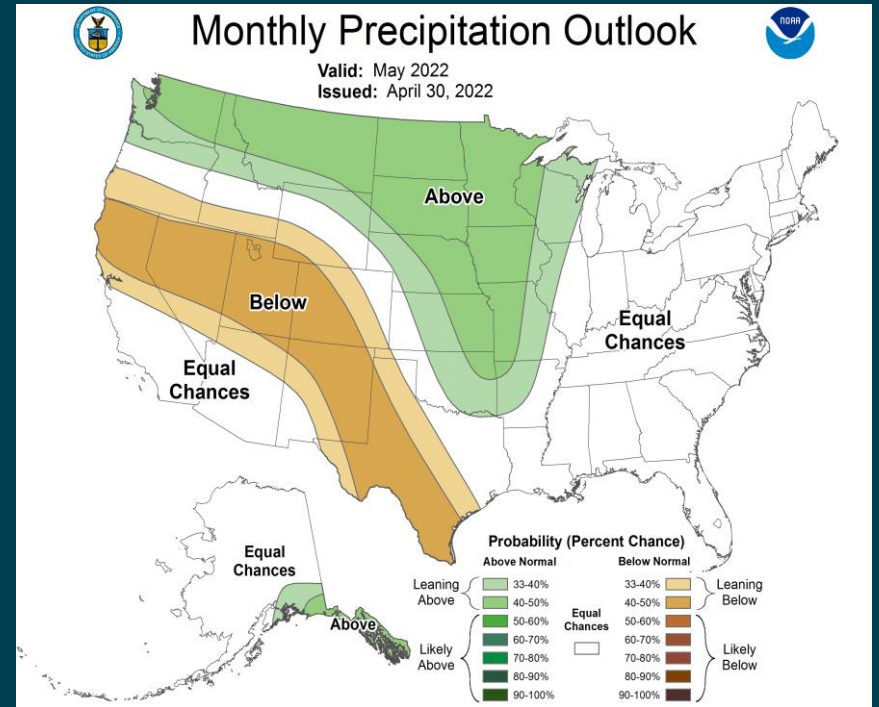
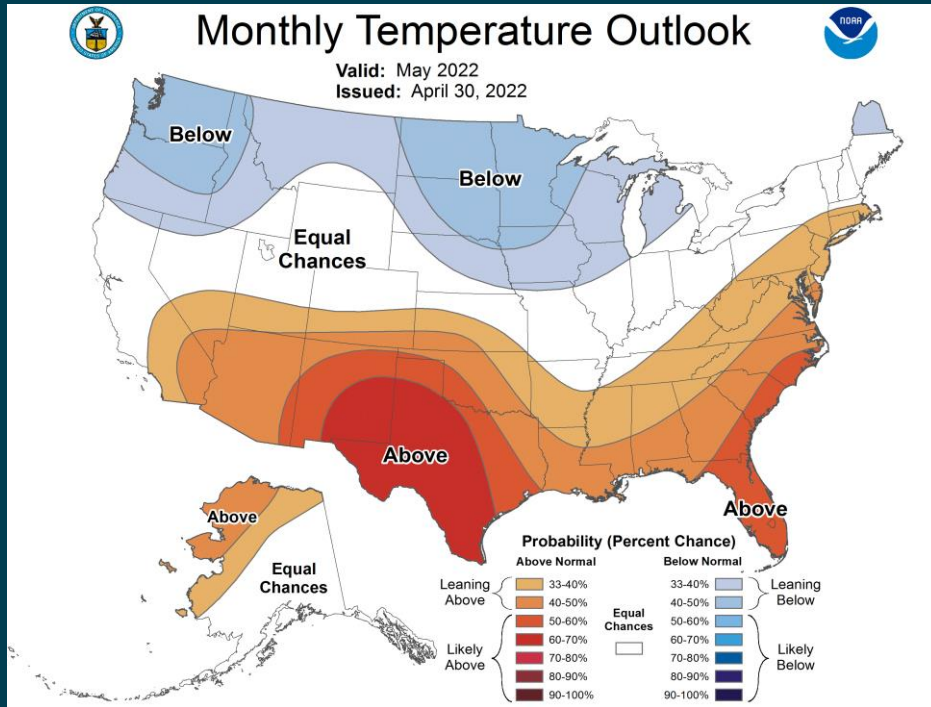
6-10 Day Weather Outlook



8-14 Day Weather Outlook



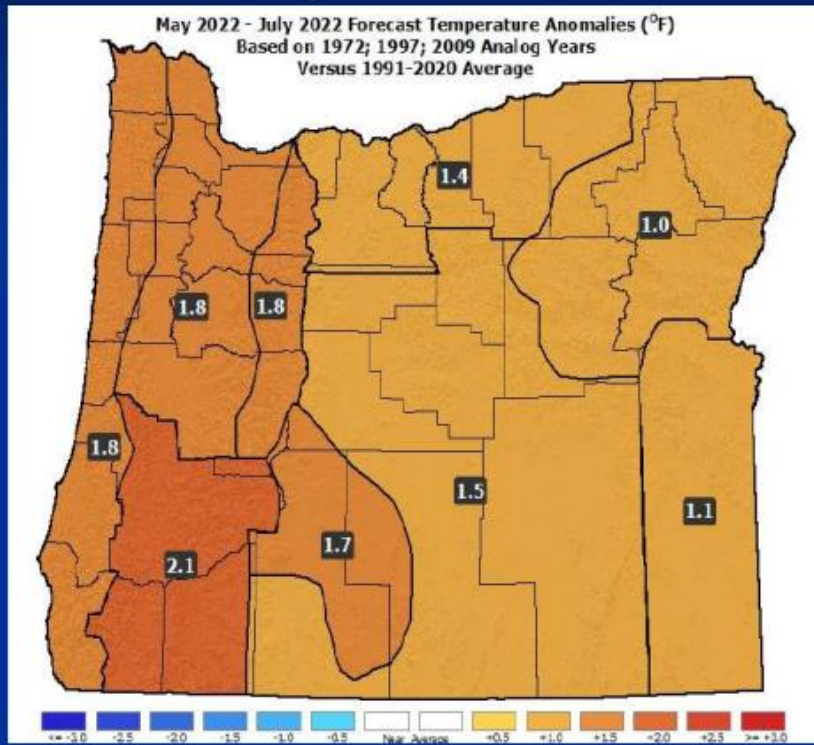
May Weather Outlook



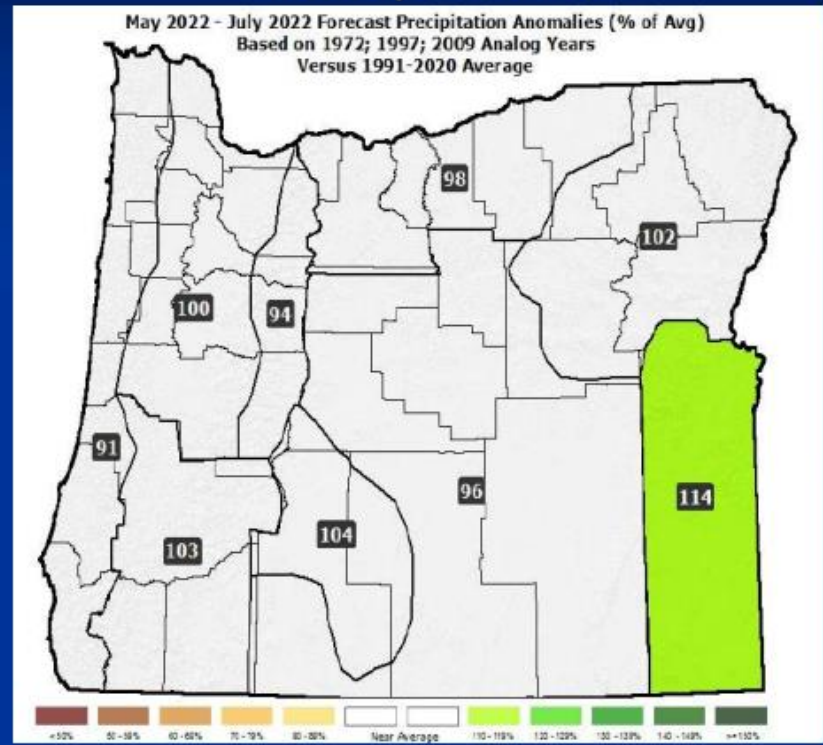
Seasonal Climate Forecast - ODA

May – July 2022

Temperatures



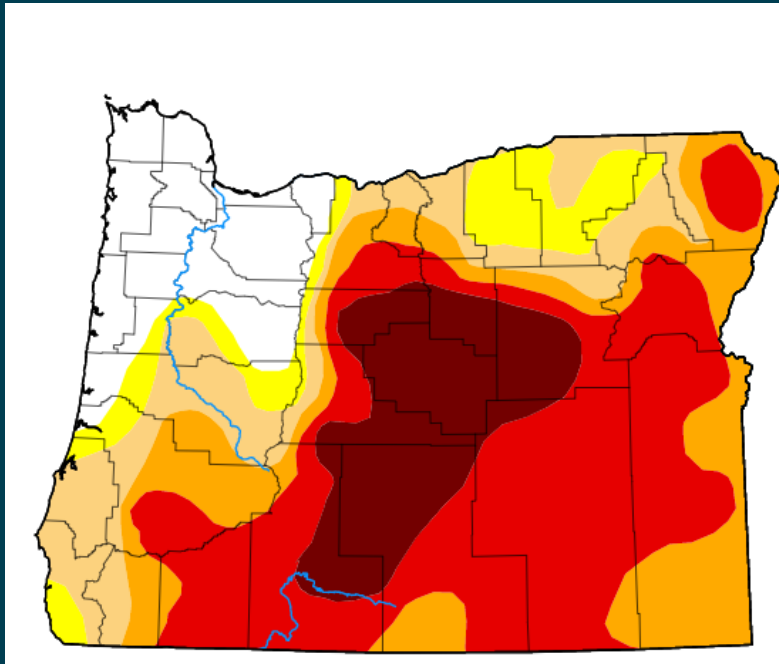
Precipitation



A strong reversal from a very cool April to a relatively warm May starts the 3-month period, with warm conditions continuing through July.



United States Drought Monitor - Oregon



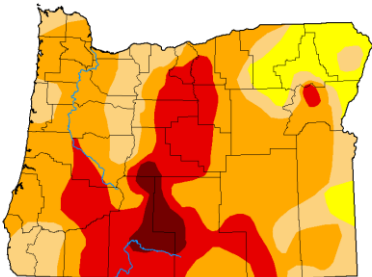
Map released: Thurs. May 12, 2022

Data valid: May 10, 2022 at 8 a.m. EDT

Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

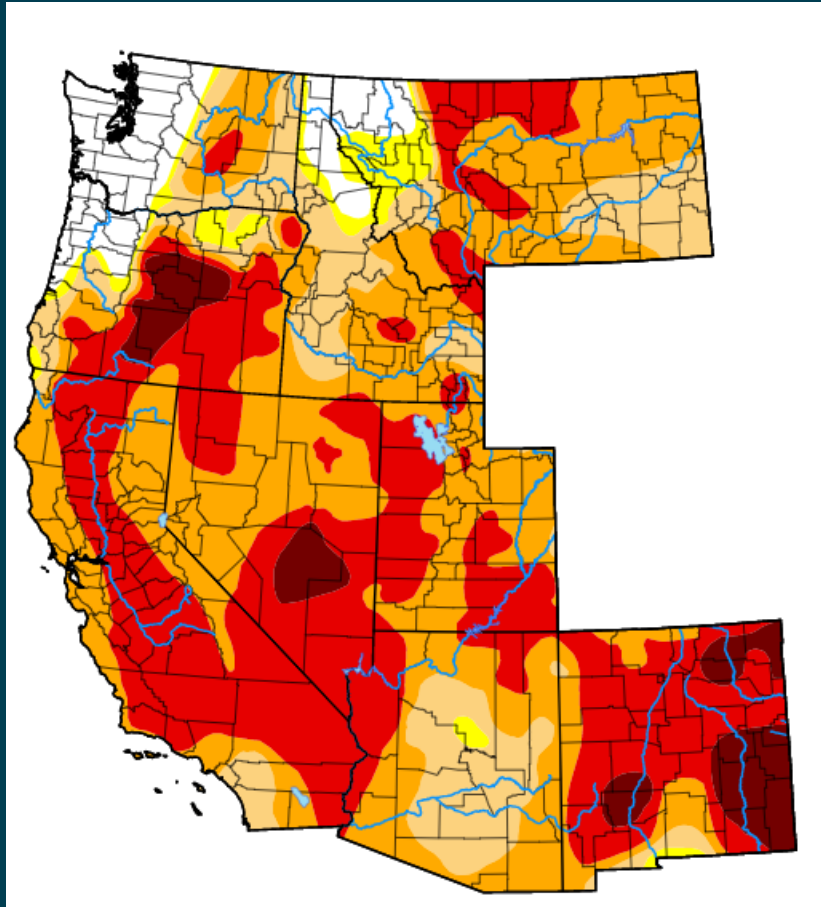
May 11, 2021



May 11, 2021



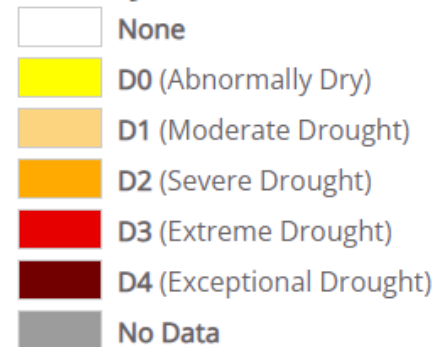
United States Drought Monitor – West Region



Map released: Thurs. May 12, 2022

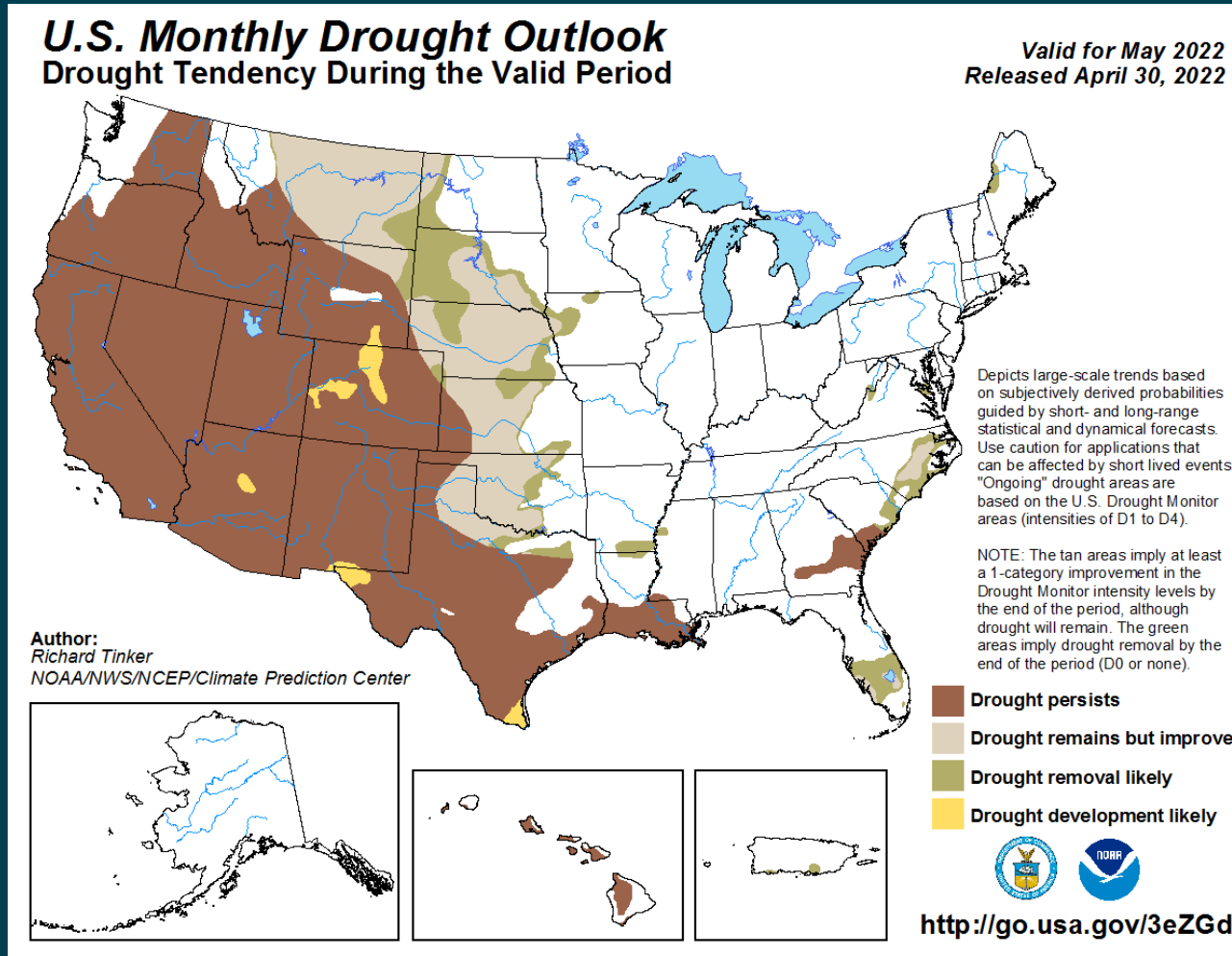
Data valid: May 10, 2022 at 8 a.m. EDT

Intensity



U.S. Monthly Drought Outlook

May 2022

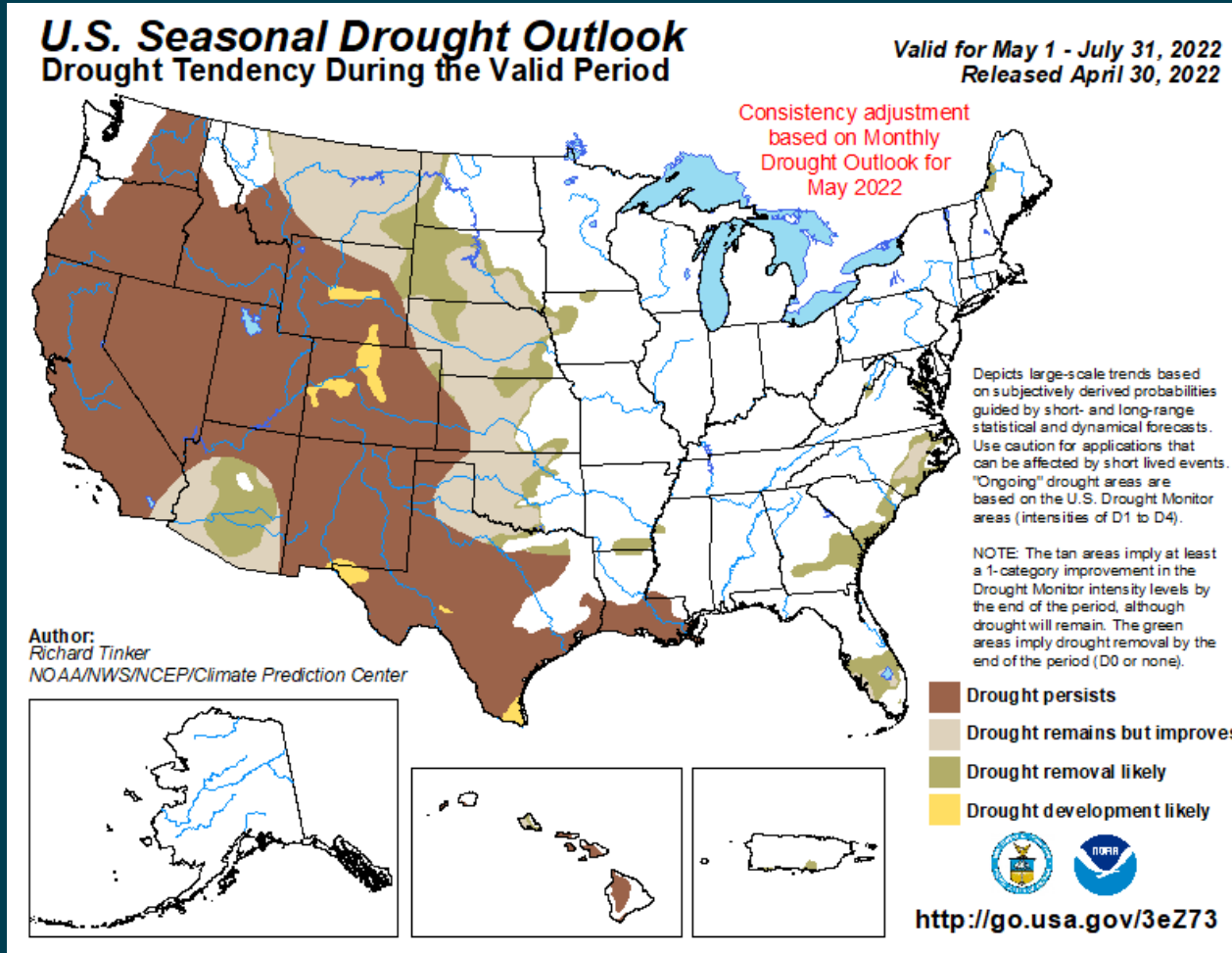


Next Seasonal Outlook issuance date: May 31, 2022 at 3:00pm EDT



U.S. Seasonal Drought Outlook

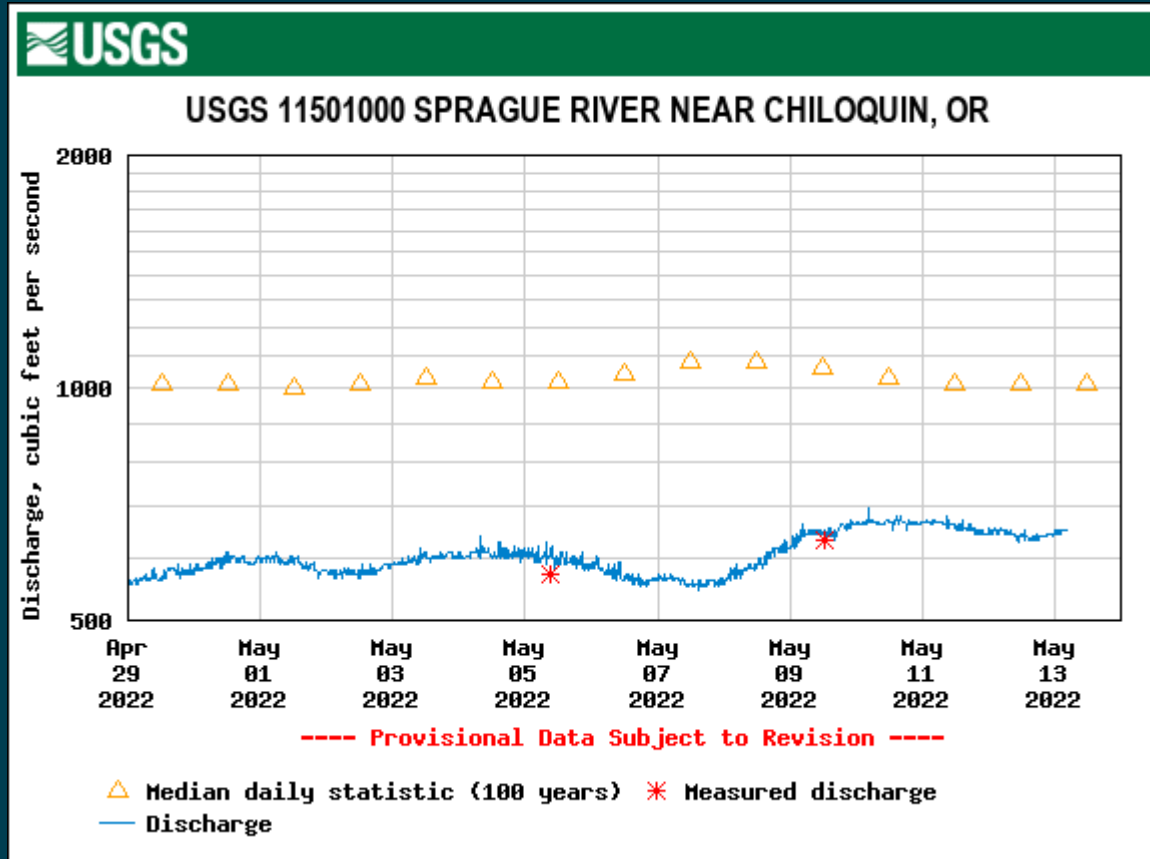
May 1– July 31, 2022



Next Seasonal Outlook issuance date: May 19, 2022 at 8:30am EDT



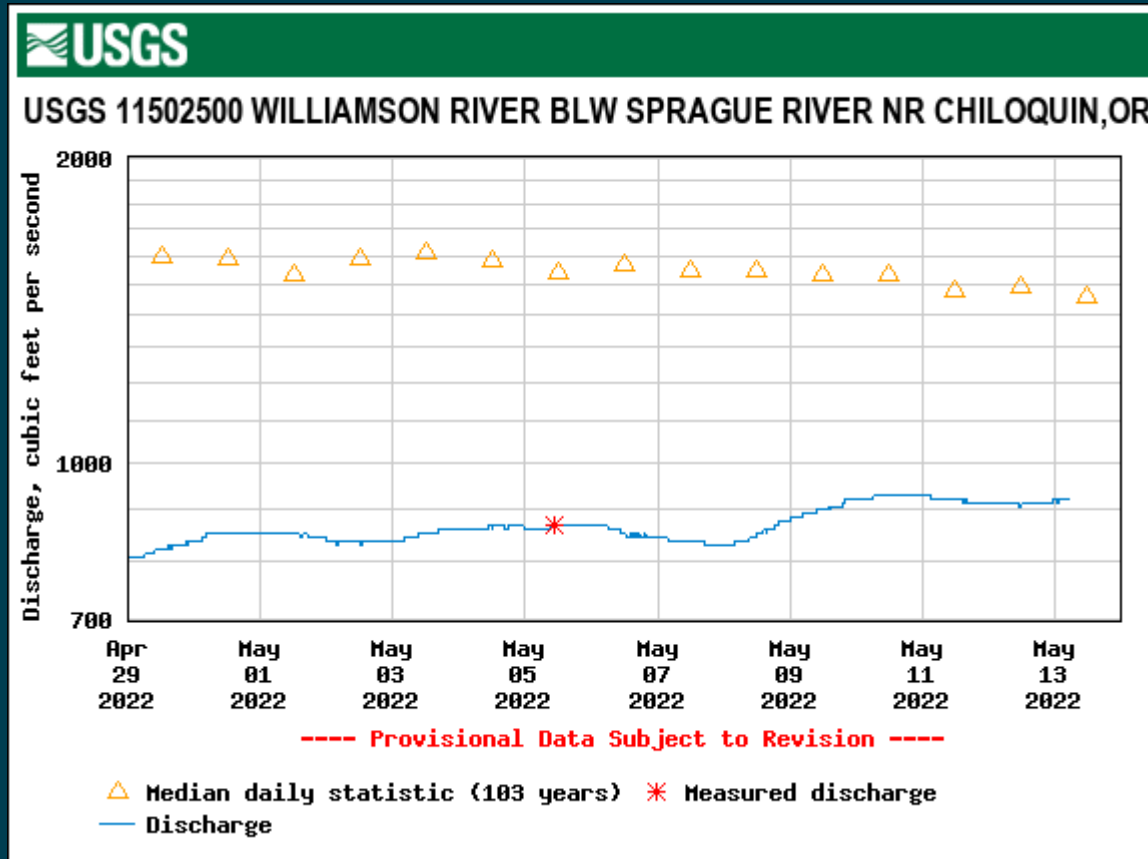
Sprague River - USGS 11501000



Min (1992)	25th percentile	Most Recent Instantaneous Value May 13	Median	Mean	75th percentile	Max (1956)
110	526	652	1010	1160	1680	3420



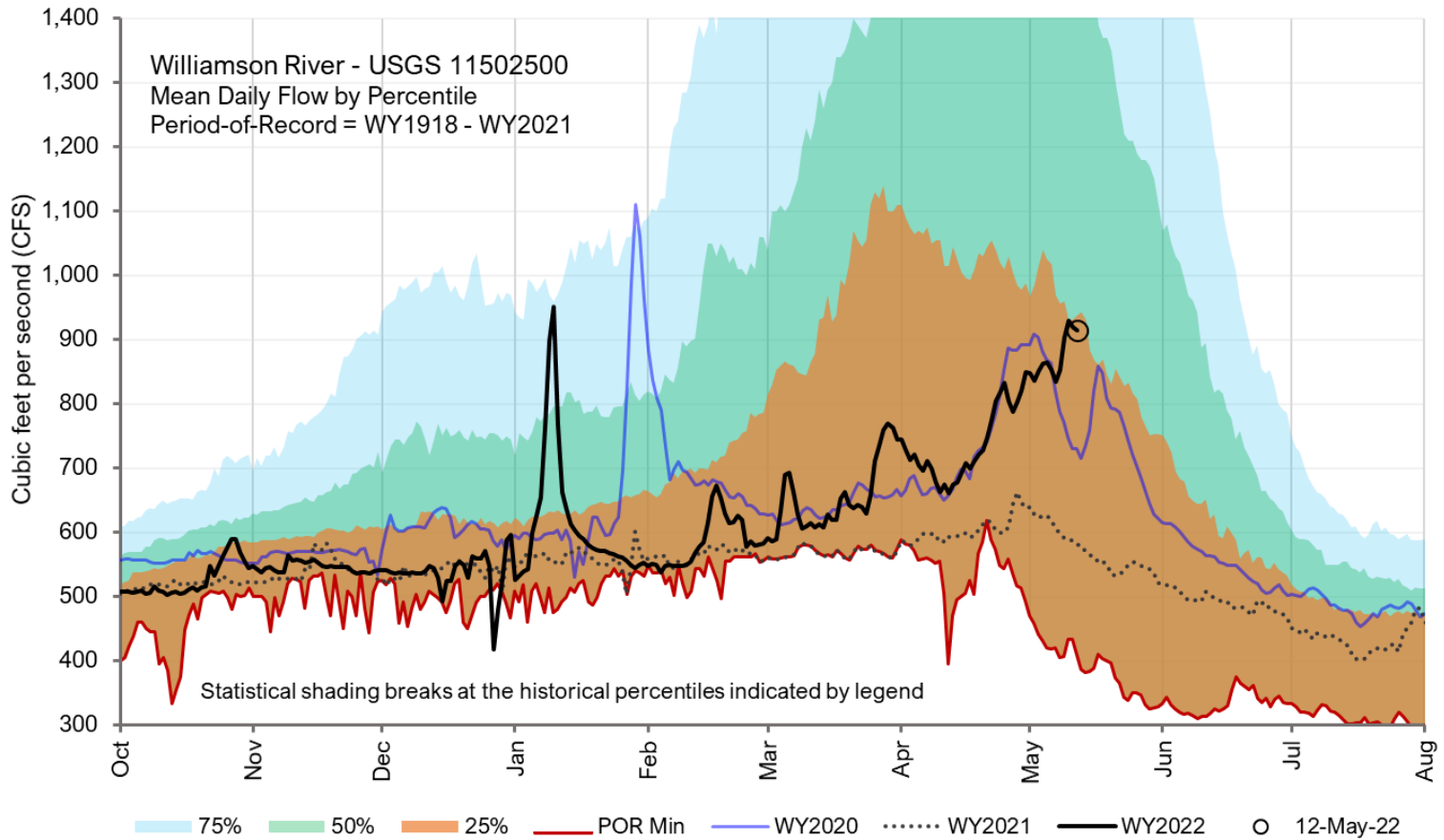
Williamson River - USGS 11502500



Min (1992)	Most Recent Instantaneous Value May 13	25th percentile	Median	Mean	75th percentile	Max (1956)
387	922	938	1460	1670	2260	4700

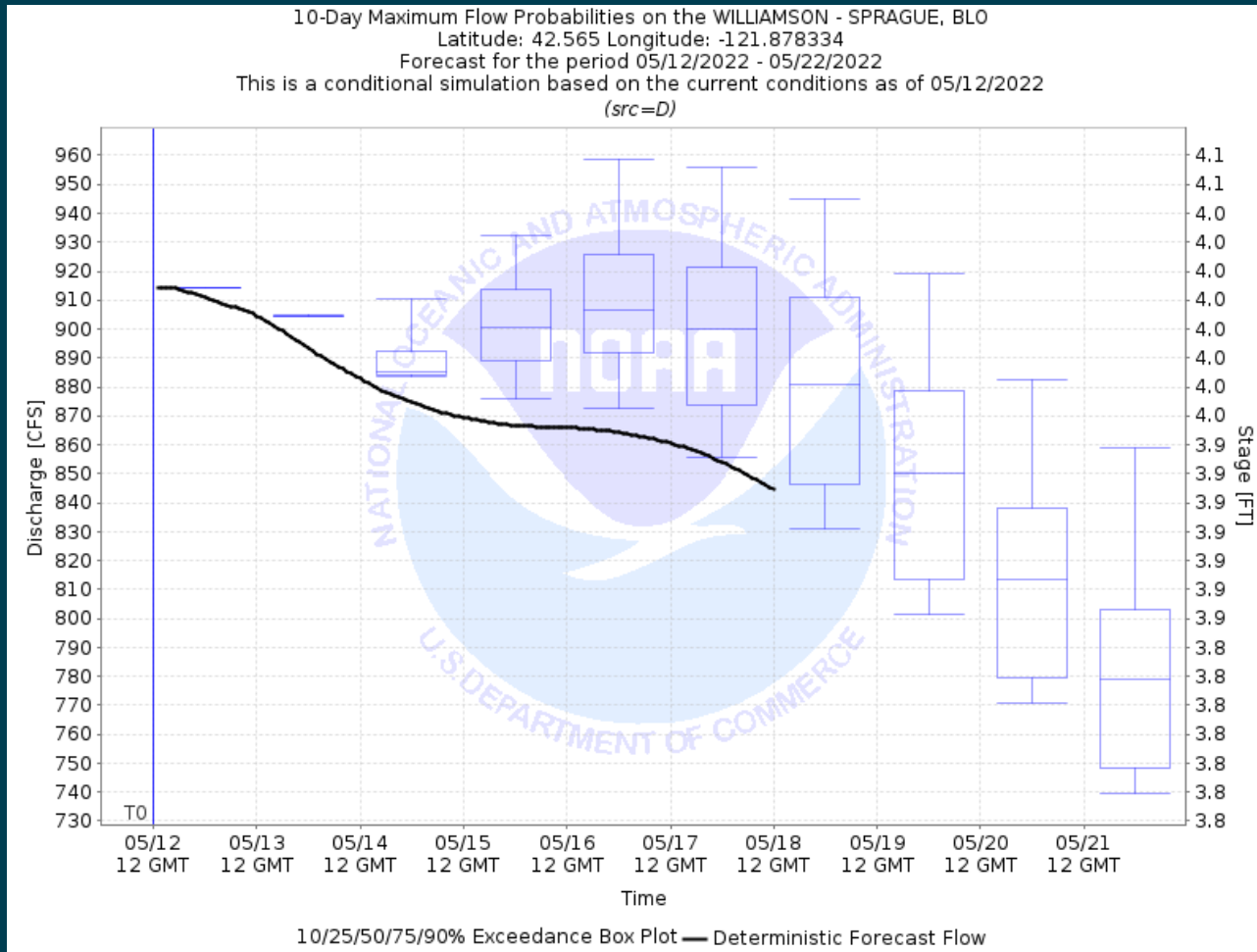


Williamson River - USGS 11502500

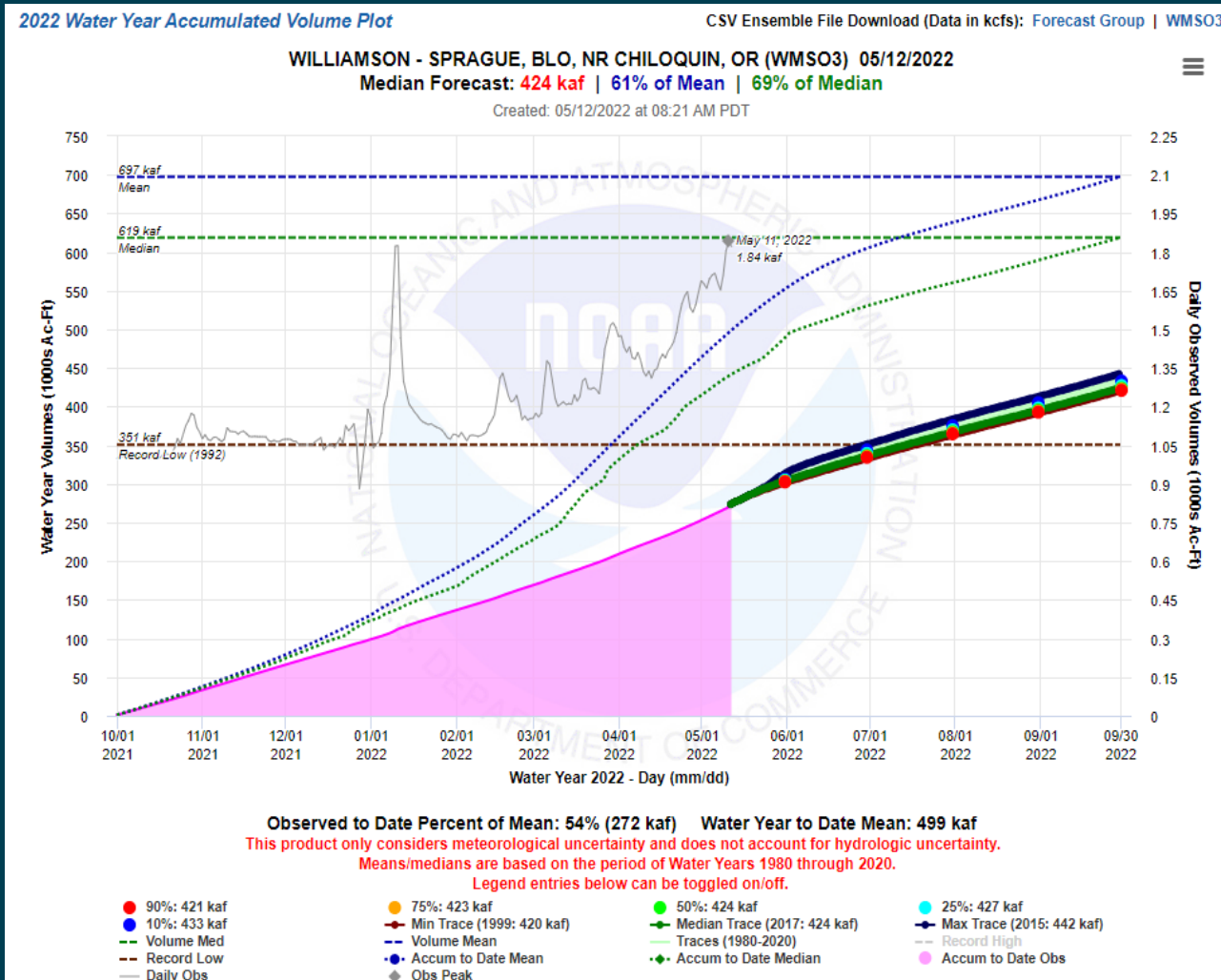


Williamson River Forecast – CNRFC

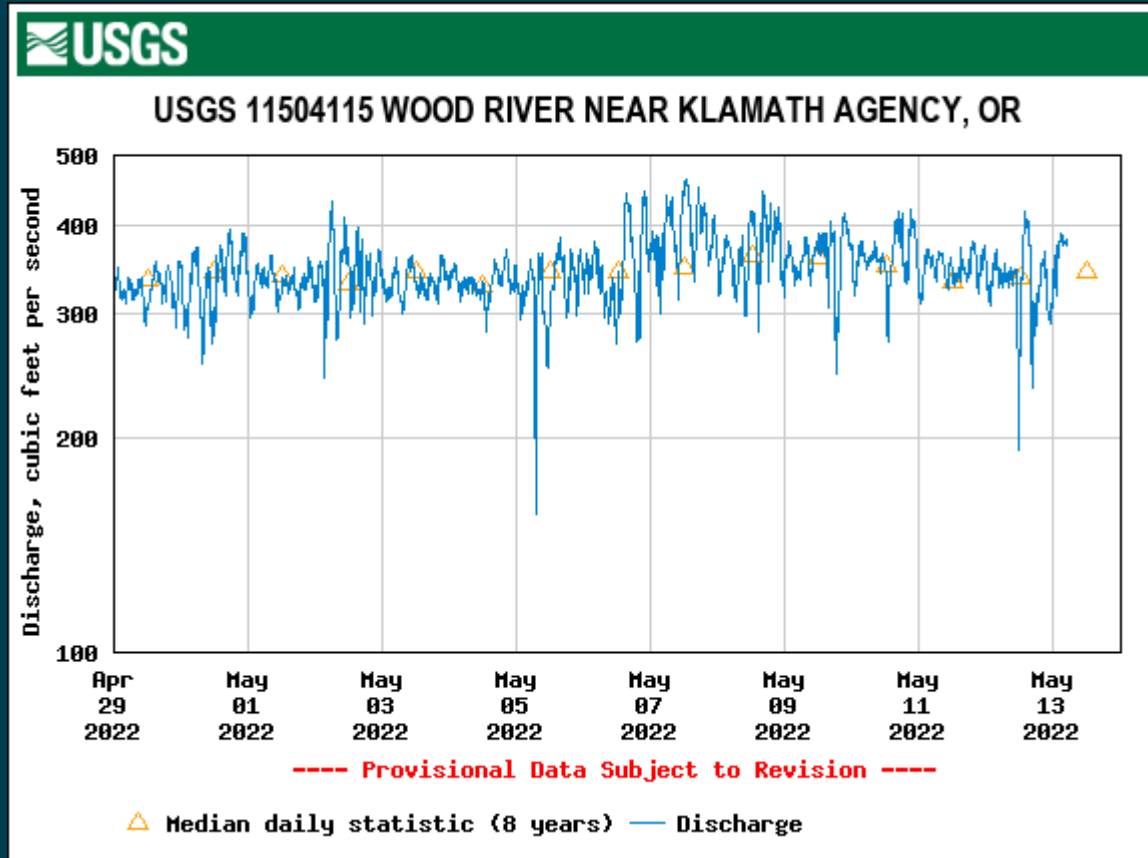
10-Day



Williamson River Forecast – CNRFC WY 2022



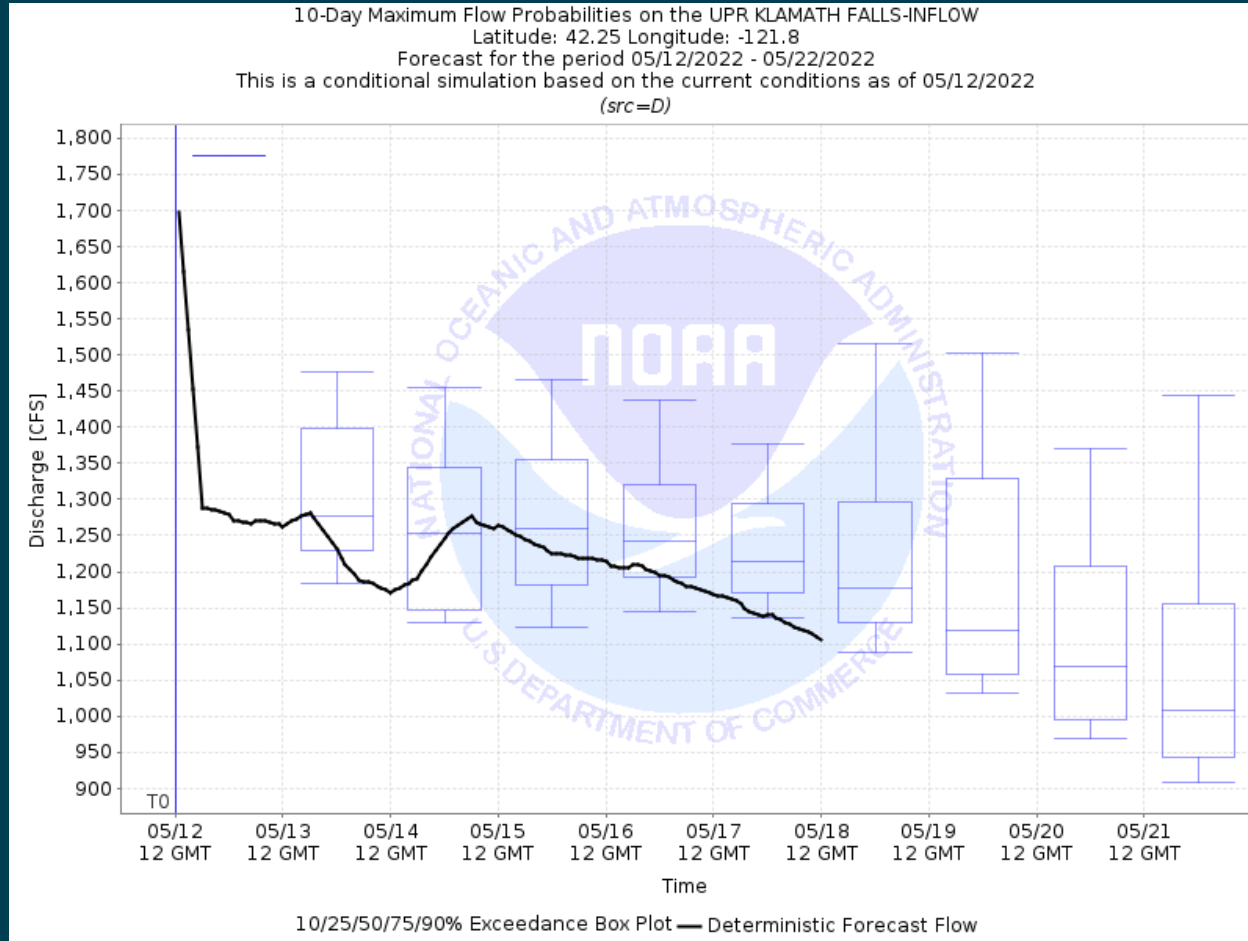
Wood River – USGS 11504115



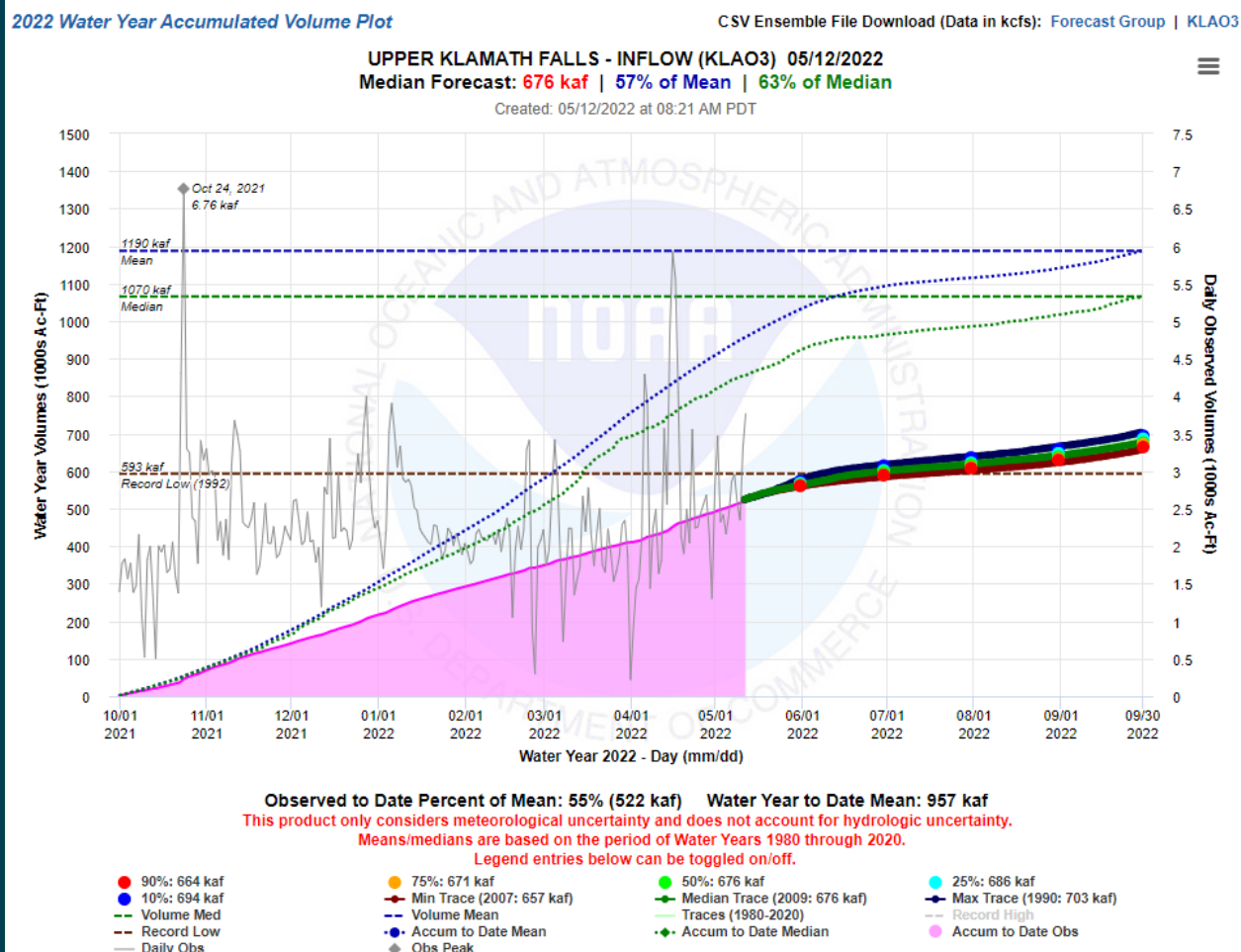
Min (2014)	25th percentile	Median	Mean	Most Recent Instantaneous Value May 13	75th percentile	Max (2017)
243	279	343	346	375	396	489



Upper Klamath Lake (UKL) Net Inflow Forecast – CNRFC 10-Day



Upper Klamath Lake (UKL) Net Inflow Forecast – CNRFC WY 2022



UKL Cumulative Net Inflow

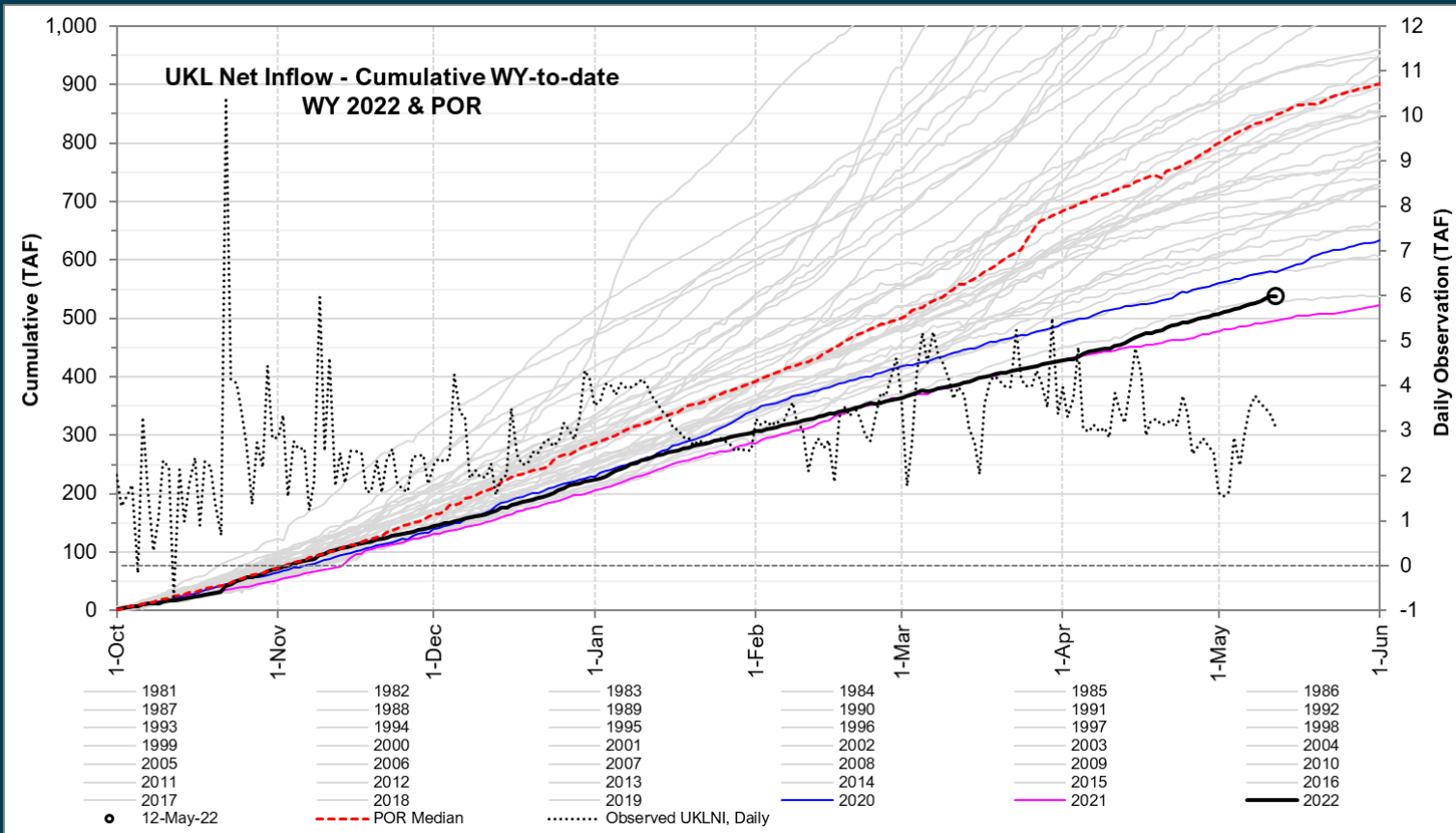
WY 2022 & Period-of-Record (POR)-to-Date

	WY	Cumulative UKL Net Inflow (TAF)	WY	Cumulative UKL Net Inflow (TAF)	
	2021	496.515	2008	848.82	← POR median
	1992	529.844	2002	852.58	
	2022	537.973	2016	855.686	
	2020	579.768	2007	917.912	
	1994	581.518	1987	918.897	
	1991	607.173	1995	956.27	
	2014	632.036	2011	996.807	
	2005	665.295	1993	1075.073	
	2010	667.618	1989	1123.967	
	2018	678.466	2000	1149.647	
	2015	681.573	1998	1186.642	
	2001	703.936	1985	1200.033	
	2013	737.353	2017	1225.07	
	1990	742.243	1996	1335.745	
	1981	752.738	1999	1338.627	
	2009	774.865	2006	1365.024	
	2004	801.473	1986	1382.842	
	2003	805.581	1983	1436.002	
	1988	815.964	1997	1451.2	
	2012	829.576	1984	1477.6	
	2019	840.856	1982	1535.086	

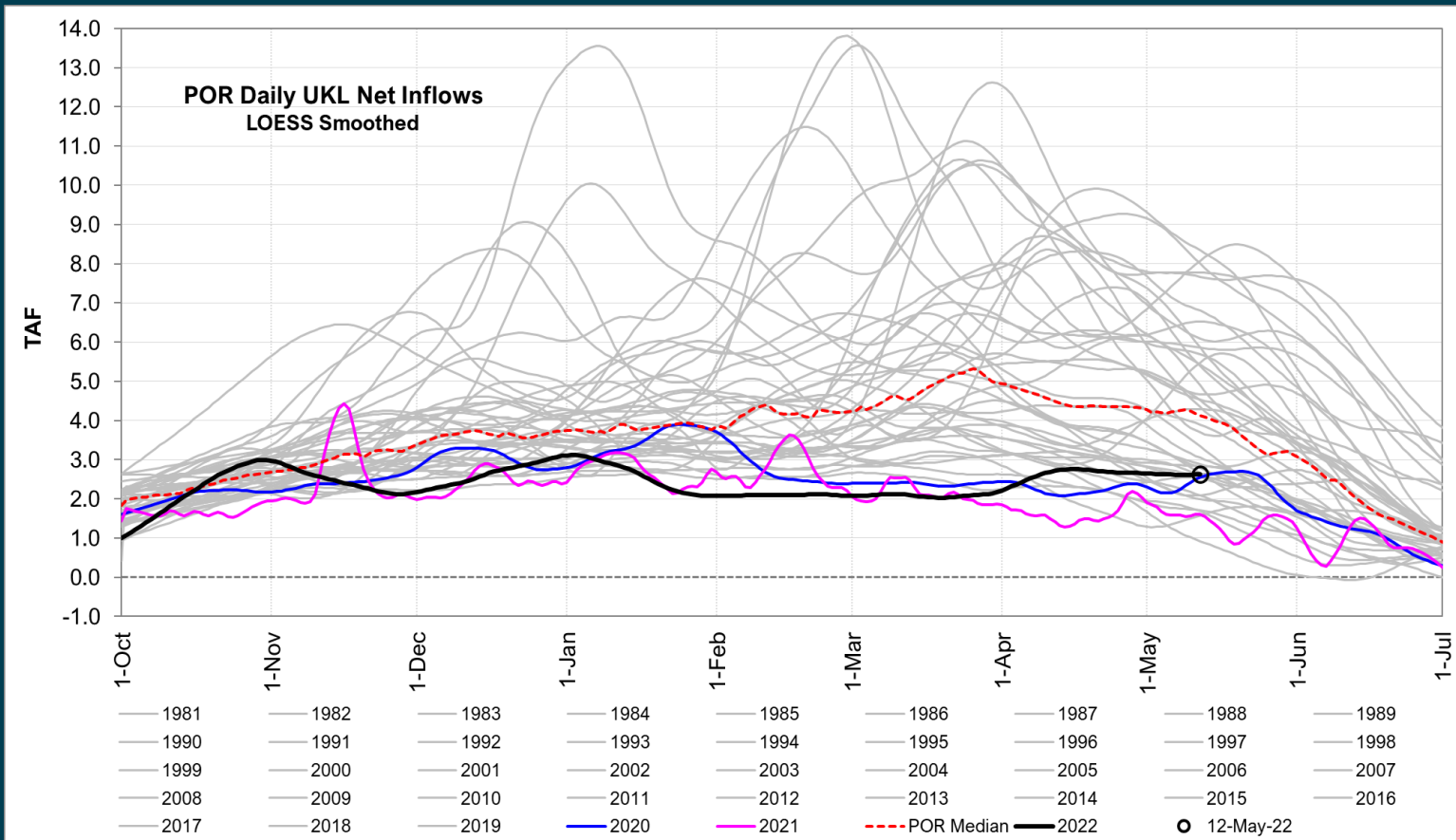
→
 % of POR median = 63%
 % of POR average = 57%



UKL Cumulative Net Inflow WY 2022 and POR-to-date



UKL LOESS Smoothed Net Inflow WY 2022 and POR-to-date



Observed UKL Net Inflow

06 May – 12 May

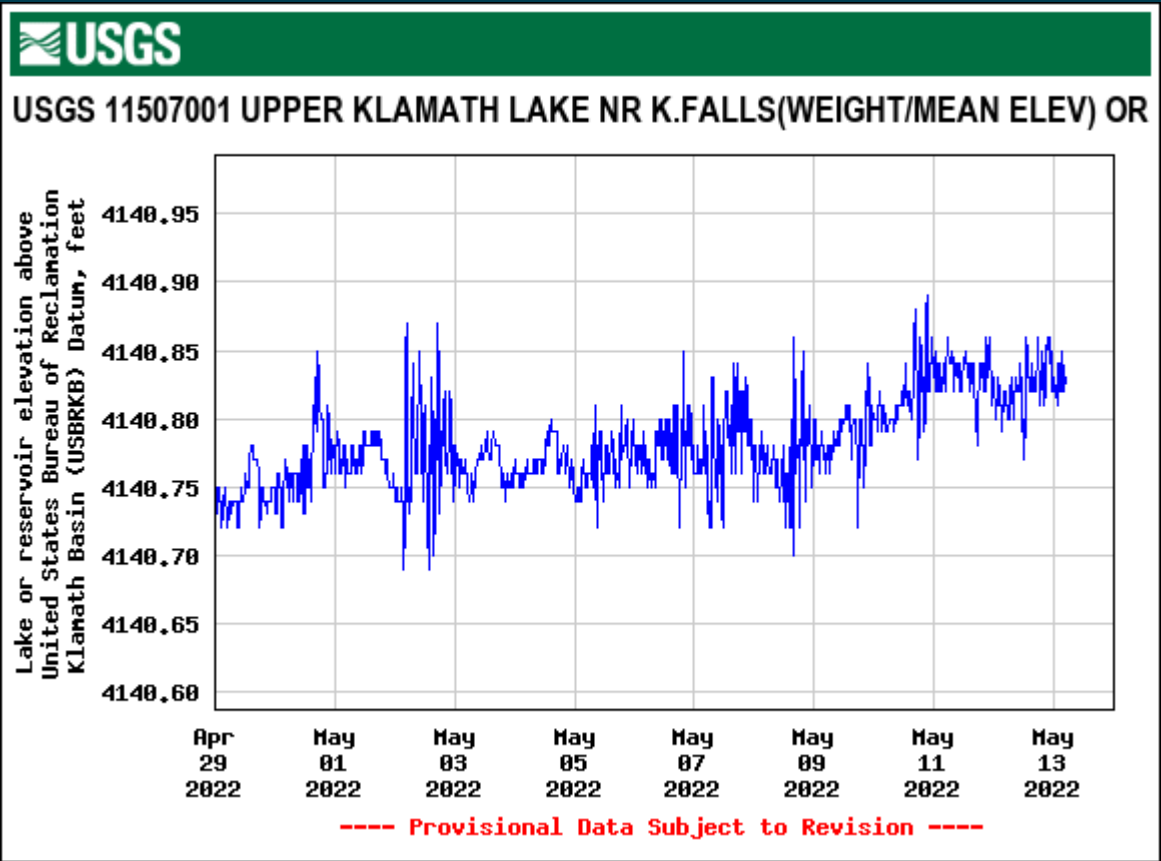
Date	Observed UKL Net Inflow (CFS)	Observed Percentile**
5/06/2022	1763	30%
5/07/2022	1353	25%
5/08/2022	793	9%
5/09/2022	1872	35%
5/10/2022	2280	50%
5/11/2022	1443	25%
5/12/2022	594	3%
Average	1443*	

*Above date range: 30th historical percentile (70% exceedance) daily average = 1536 CFS

**POR: WYs 1981-2021



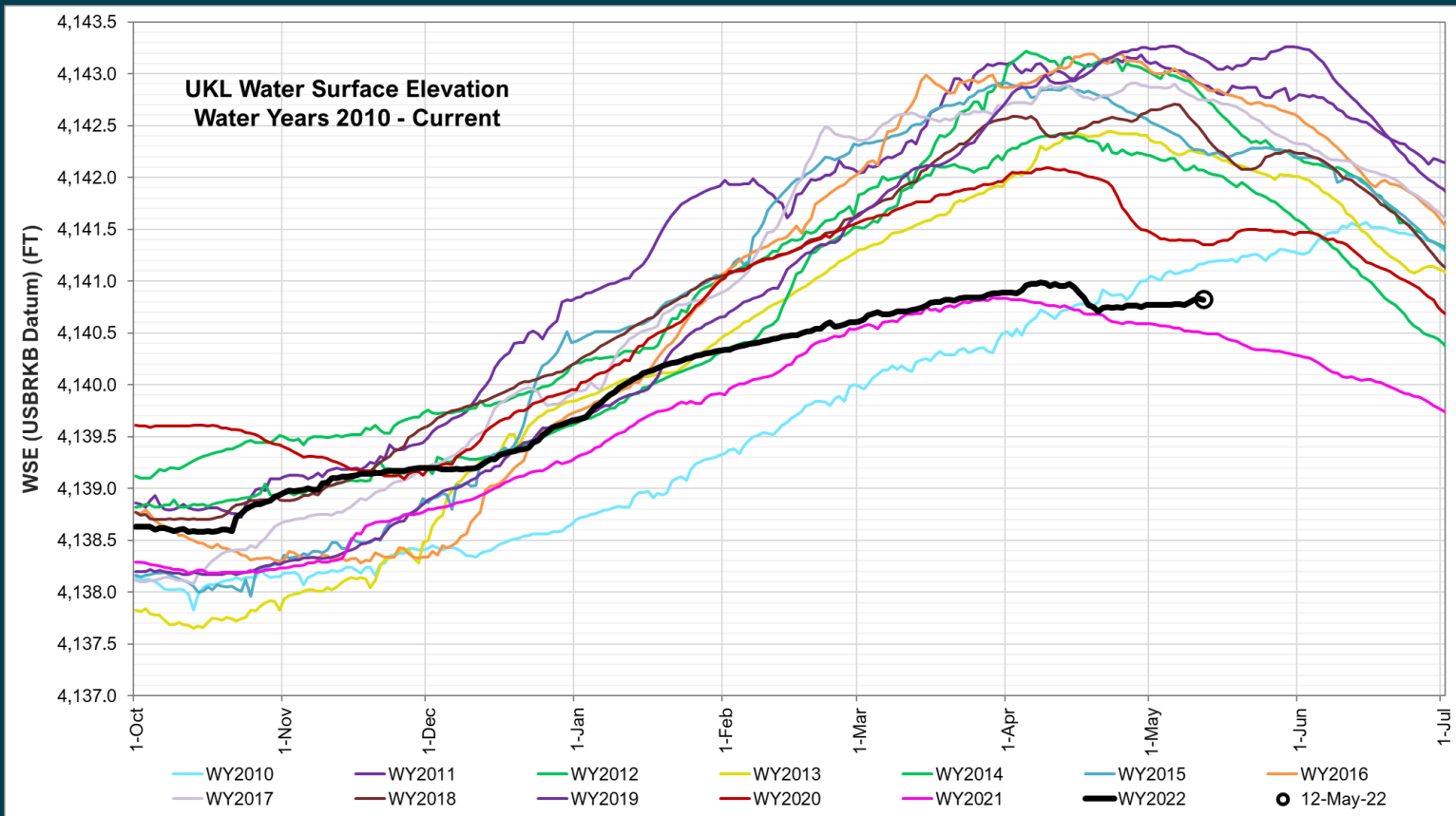
UKL Water Surface Elevation April 29– Present Day



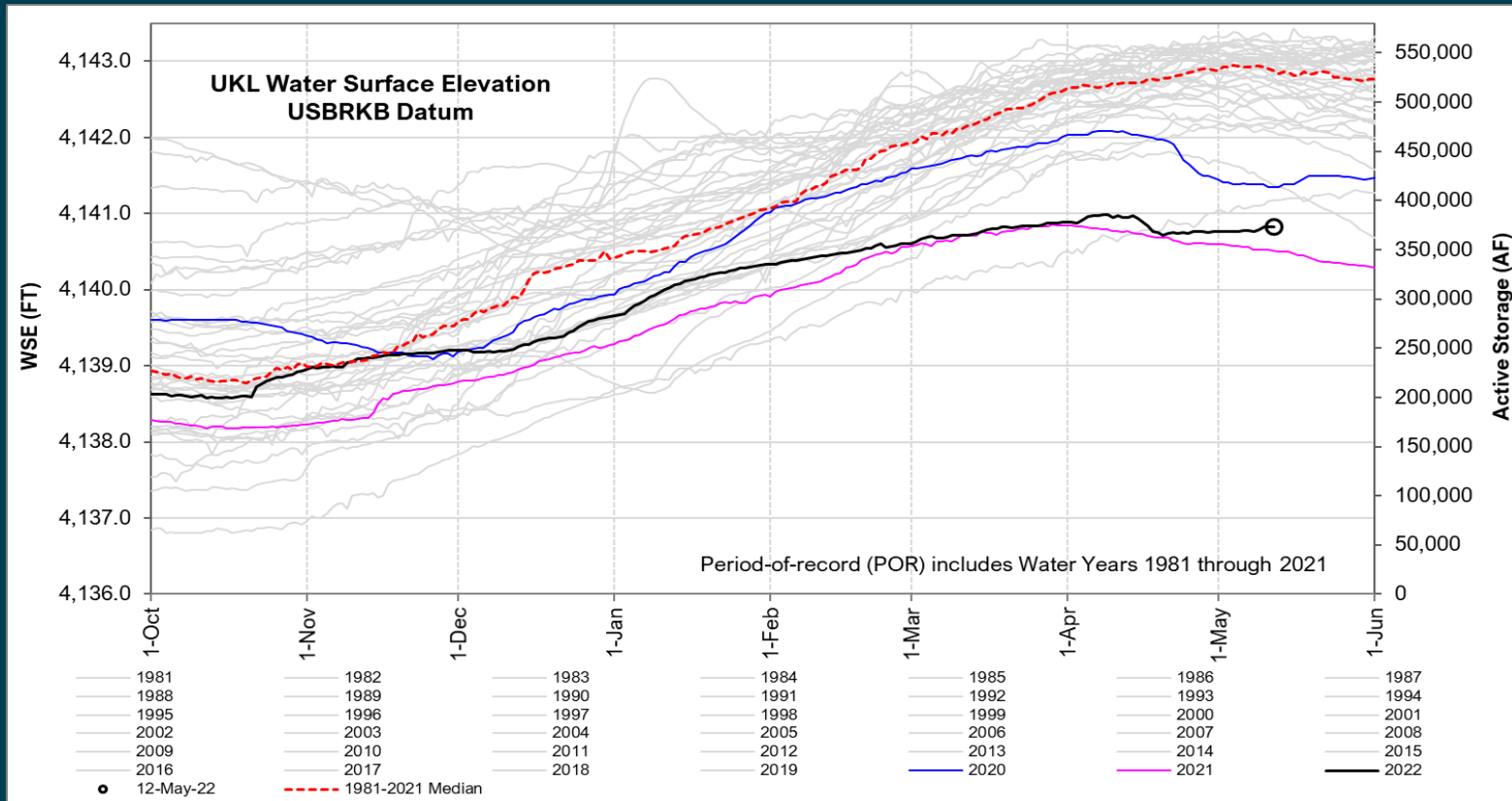
DATE	ELEVATION (FT)
4/29/2022	4140.75
4/30/2022	4140.77
5/01/2022	4140.77
5/02/2022	4140.77
5/03/2022	4140.77
5/04/2022	4140.77
5/05/2022	4140.77
5/06/2022	4140.78
5/07/2022	4140.78
5/08/2022	4140.77
5/09/2022	4140.79
5/10/2022	4140.82
5/11/2022	4140.83
5/12/2022	4140.82



UKL Water Surface Elevation WYs 2010 – 2022-to-Date



UKL Water Surface Elevation WY 2022 & POR-to-Date



WY 2022 Water Supply Forecast – NRCS May 01 Publication

- April precipitation across the Klamath basin was an improvement from previous months, with all SNOTEL stations reporting well above median values.
- Near-record to record amounts of precipitation were recorded at several sites. Many snow pillows that had started melting in late March reverted to accumulation mode, and several sites along the Cascade crest hit new water year peaks for SWE.
- Unfortunately, the April precipitation was not enough to change the trajectory of the water supply season in a significant way. Some modest volume increases were realized and the runoff from the snowpack that remains was delayed some due to the cooler and cloudier conditions in April.
- While streamflow did increase in April, observed volumes remained near 50% of the 30-year median value, and the outlook for the rest of runoff season remains well below median.

USDA NRCS National Water & Climate Center
 * - DATA CURRENT AS OF: May 02, 2022 01:20:56 PM
 - Based on May 01, 2022 forecast values

KLAMATH RIVER BASIN

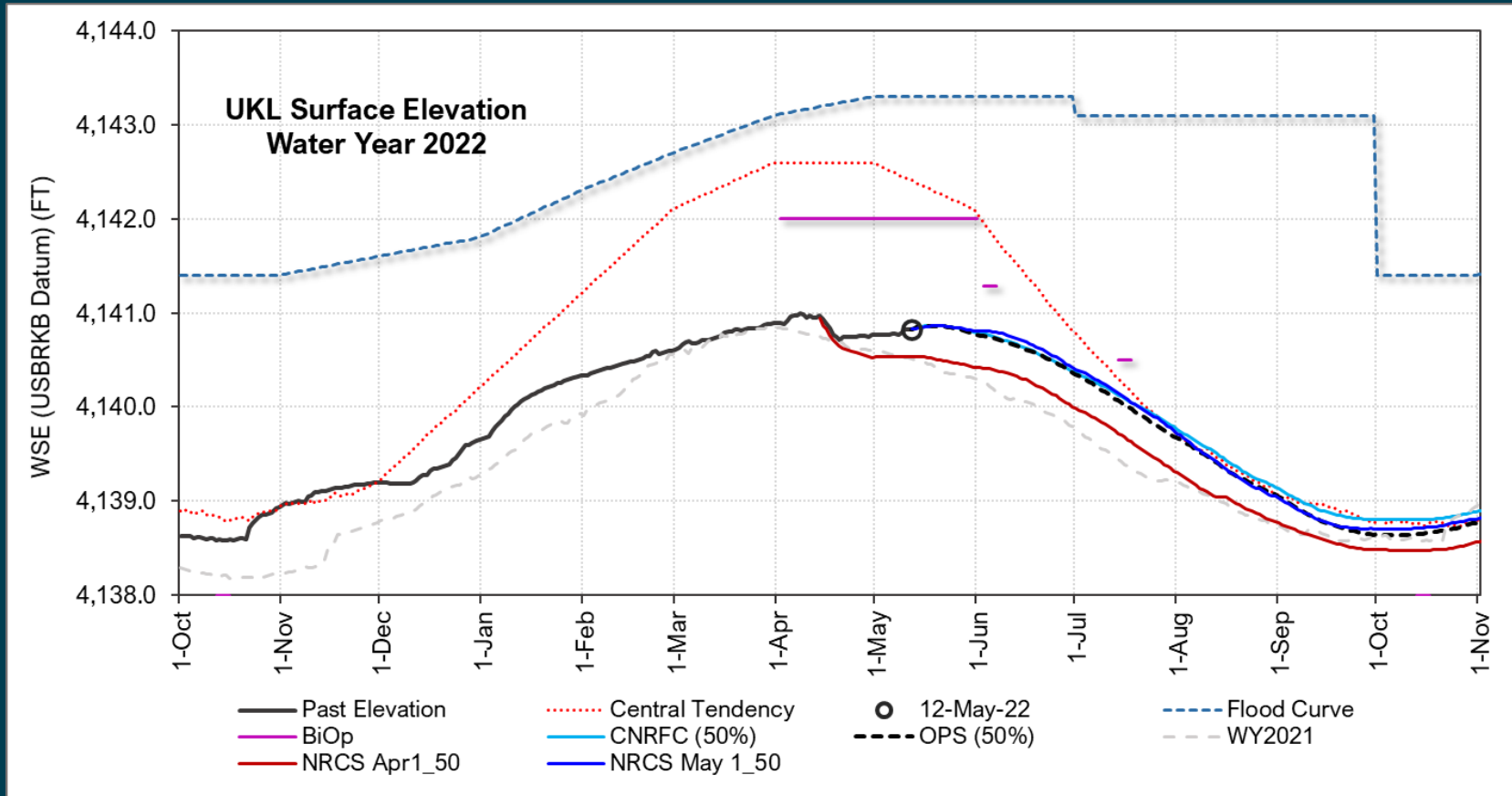
Forecast Point	period	50% (KAF)	% of med	max (KAF)	30% (KAF)	70% (KAF)	min (KAF)	30-yr med
Sprague R nr Chiloquin	MAY-SEP	71	66	105	84	59	44	108
Williamson R bl Sprague R nr Chiloquin	MAY-SEP	159	76	210	179	139	110	210
Upper Klamath Lake Inflow (2)	MAY-SEP	168	65	250	192	146	103	260

Max (10%), 30%, 50%, 70% and Min (90%) chance that actual volume will exceed forecast.
 Medians are for the 1991-2020 period.
 All volumes are in thousands of acre-feet.

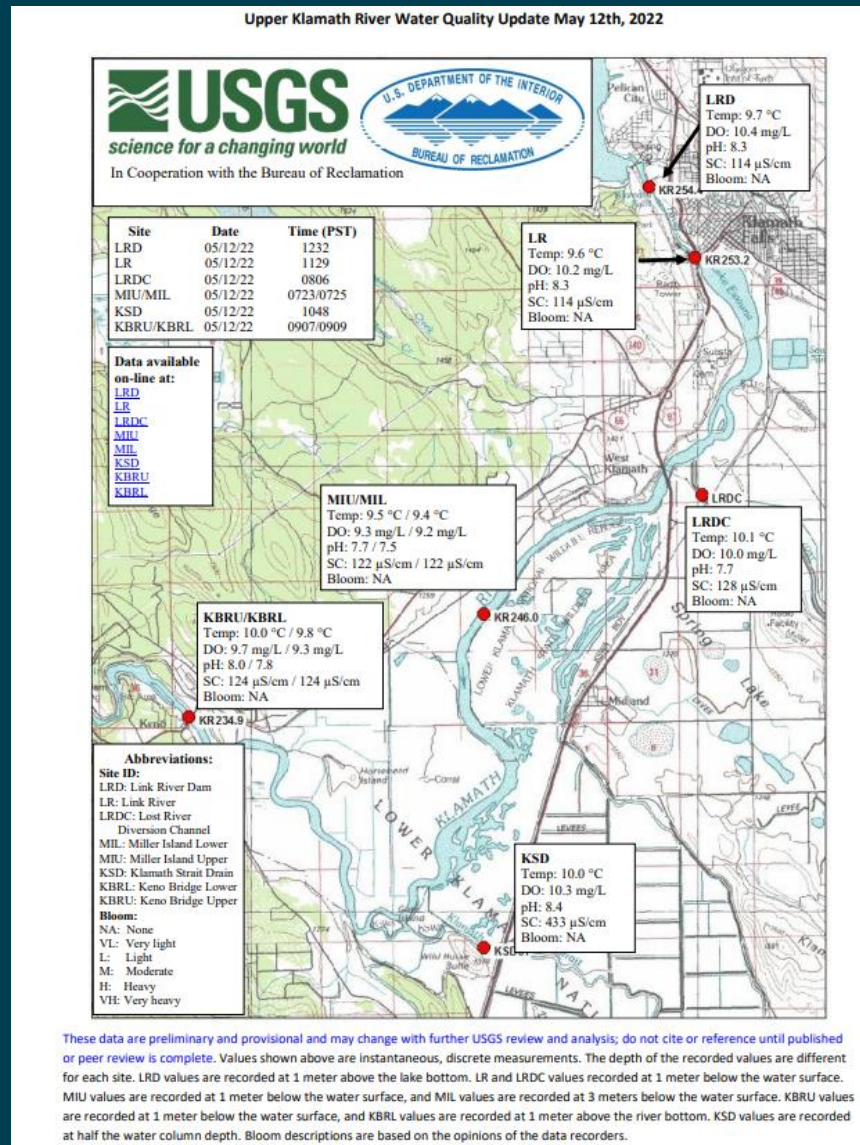
footnotes:
 1) Max and Min are 5% and 95% chance that actual volume will exceed forecast
 2) streamflow is adjusted for upstream storage



UKL Water Surface Elevation – May 1 Forecast NRCS



Upper Klamath River Water Quality – USGS



Upper Klamath Lake Water Quality-USGS



In Cooperation with the Bureau of Reclamation



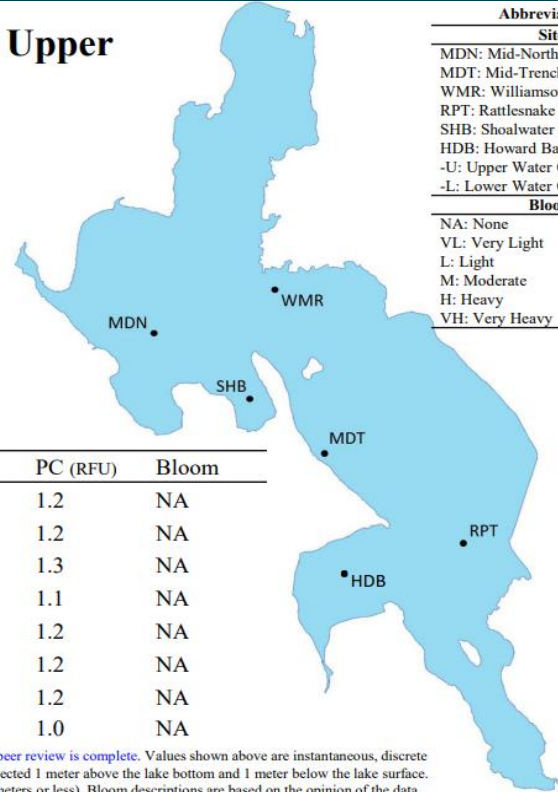
Water Quality Conditions for Upper Klamath Lake 05/11/2022

MDN is updated every half hour.
Follow the links for available data:

[MDN-U](#) [MDN-L](#)

MDT, SHB, WMR, and RPT are updated weekly. Follow the links for available data:

[WMR](#) [MDT-U](#) [RPT](#)
[SHB](#) [MDT-L](#) [HDB](#)



Abbreviations:

Site
MDN: Mid-North
MDT: Mid-Trench
WMR: Williamson River Outlet
RPT: Rattlesnake Point
SHB: Shoalwater Bay
HDB: Howard Bay
-U: Upper Water Column
-L: Lower Water Column

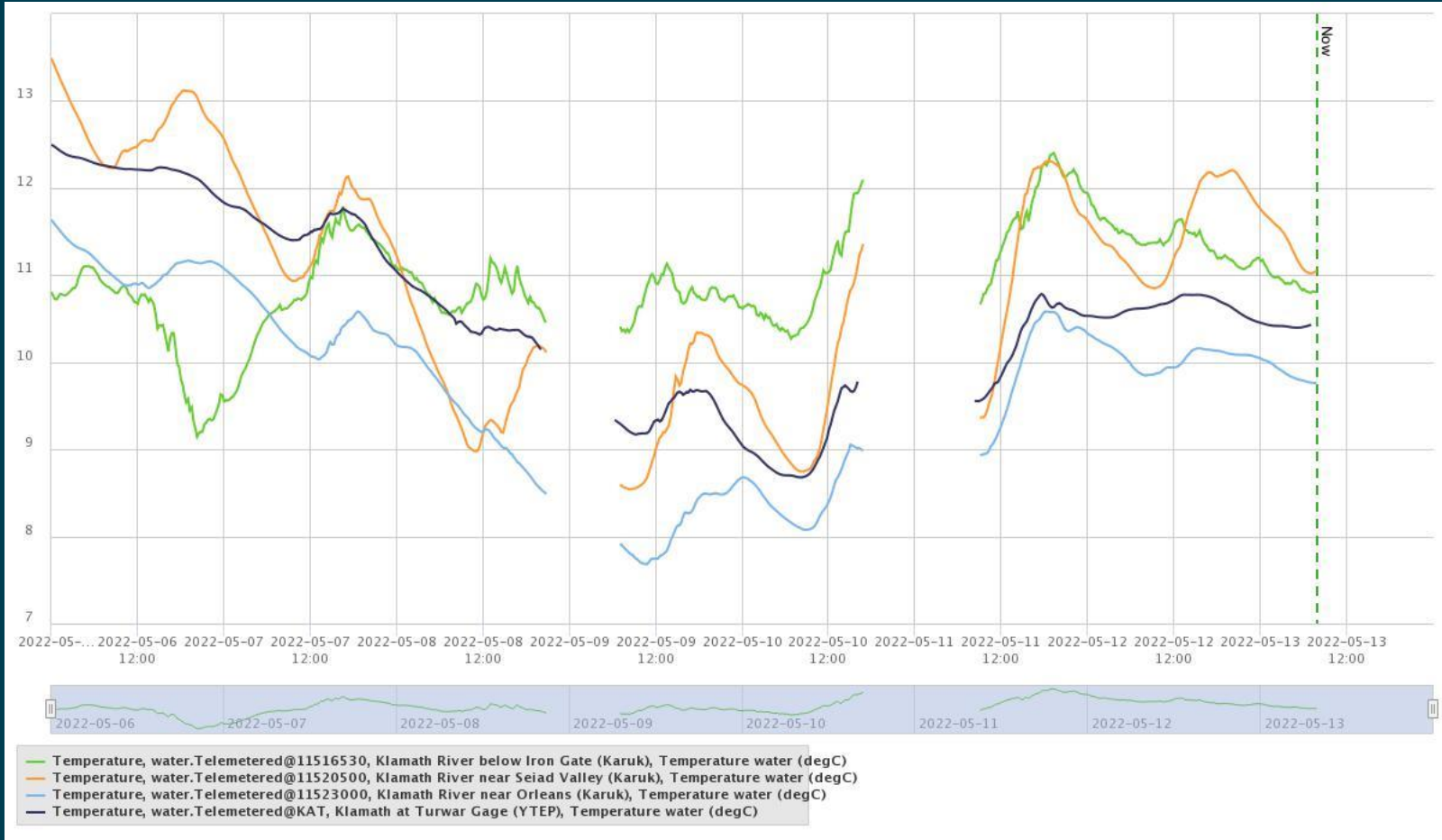
Bloom
NA: None
VL: Very Light
L: Light
M: Moderate
H: Heavy
VH: Very Heavy

Station	Date	Time (PDT)	Temp (°C)	SC (µS/cm)	pH	DO (mg/L)	PC (RFU)	Bloom
SHB	05/11/22	0954	9.13	112	8.15	9.69	1.2	NA
MDN-U	05/11/22	1120	8.86	112	8.27	10.14	1.2	NA
MDN-L	05/11/22	1122	8.44	112	8.12	9.83	1.3	NA
WMR	05/11/22	1053	8.26	108	8.45	10.77	1.1	NA
MDT-U	05/11/22	0938	8.87	113	8.17	9.77	1.2	NA
MDT-L	05/11/22	0936	10.88	112	7.97	9.79	1.2	NA
RPT	05/11/22	0859	8.13	111	8.15	10.08	1.2	NA
HDB	05/11/22	0831	7.94	113	8.26	10.26	1.0	NA

These data are preliminary and provisional and may change with further USGS review and analysis; do not cite or reference until published or peer review is complete. Values shown above are instantaneous, discrete measurements collected at different times on the same date. Depth measurements vary at different sites. MDN and MDT measurements are collected 1 meter above the lake bottom and 1 meter below the lake surface. WMR, SHB and RPT measurements are collected at 1 meter above the lake bottom (collected at half water column depth when site depth is 2 meters or less). Bloom descriptions are based on the opinion of the data recorder. This map was produced by the USGS in cooperation with the Bureau of Reclamation.



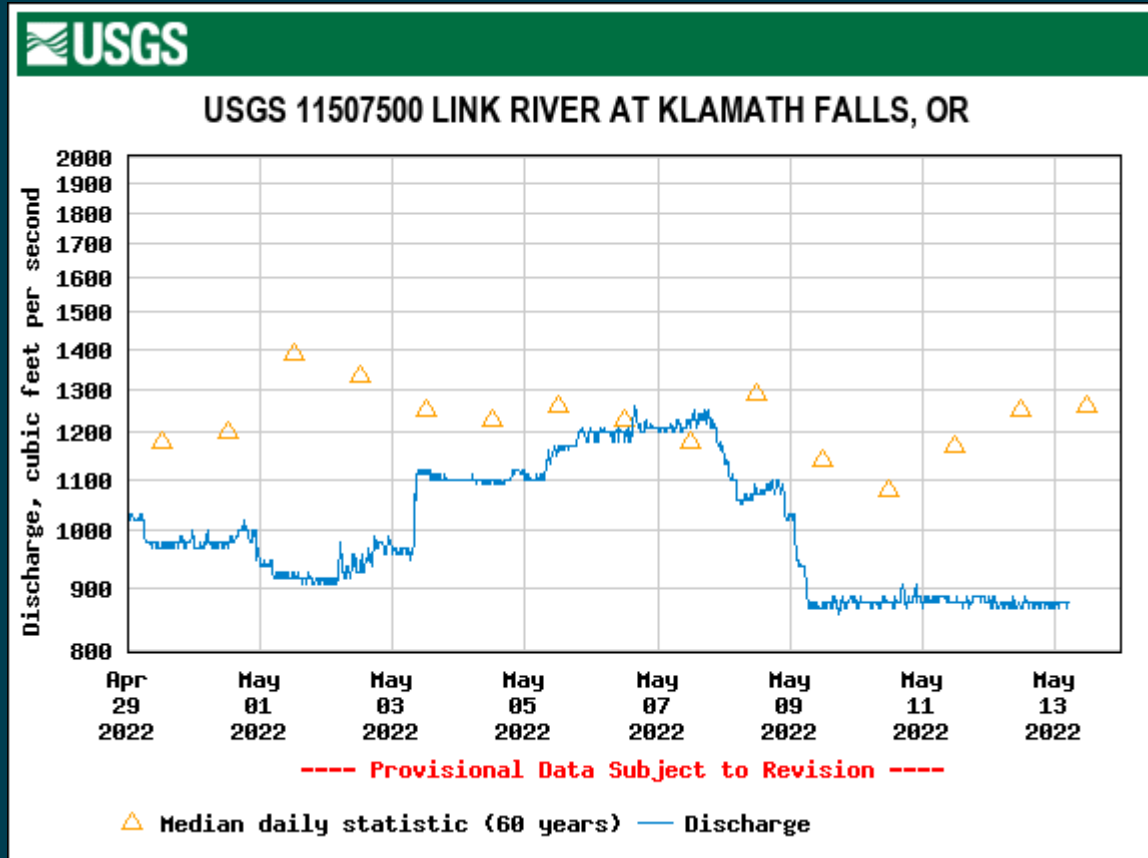
Klamath Mainstem Temperature - Karuk



Couple outages due to server updates, data to fill gaps needs to be retrieved from field.



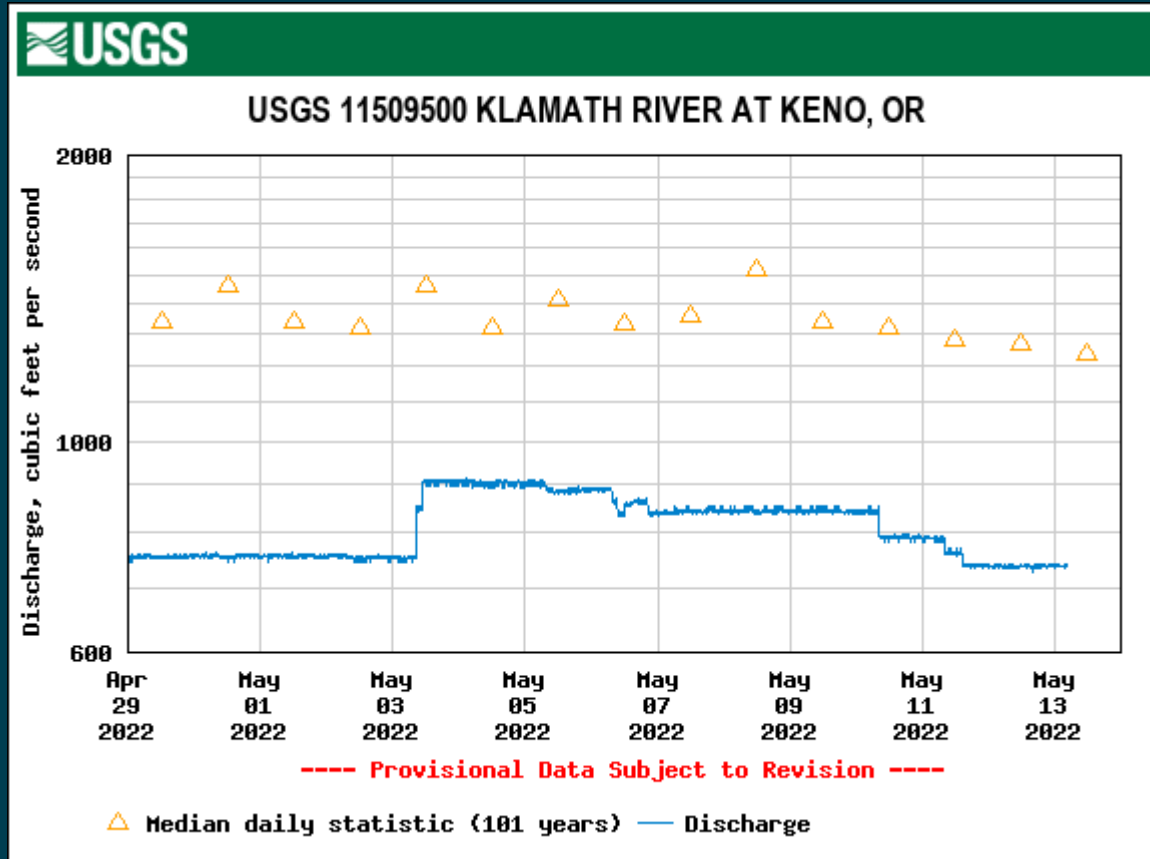
Link River Dam- USGS 11507500



Min (1970)	25th percentile	Most Recent Instantaneous Value May 13	Median	Mean	75th percentile	Max (1995)
95.0	779	875	1260	1590	2210	4630



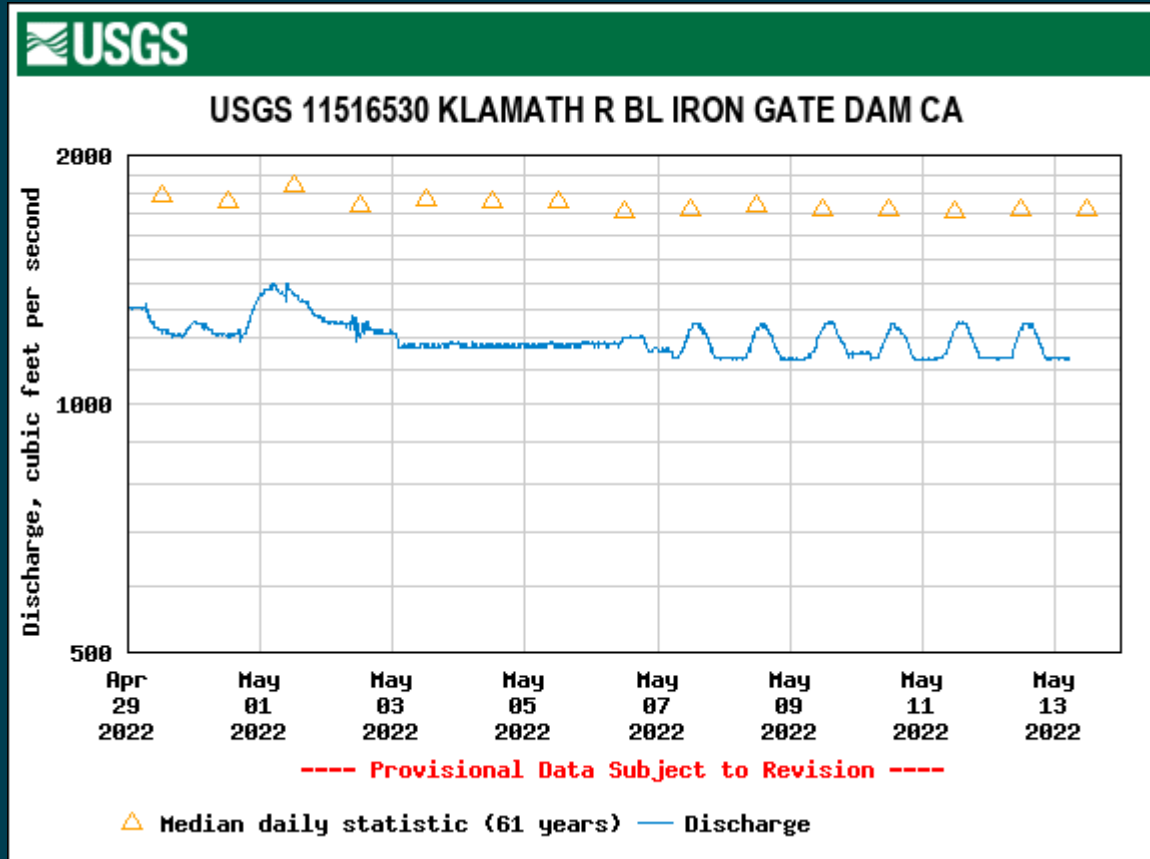
Keno Dam – USGS 11509500



Min (1934)	25th percentile	Most Recent Instantaneous Value May 13	Median	Mean	75th percentile	Max (1956)
92.0	710	742	1240	1840	2610	6400



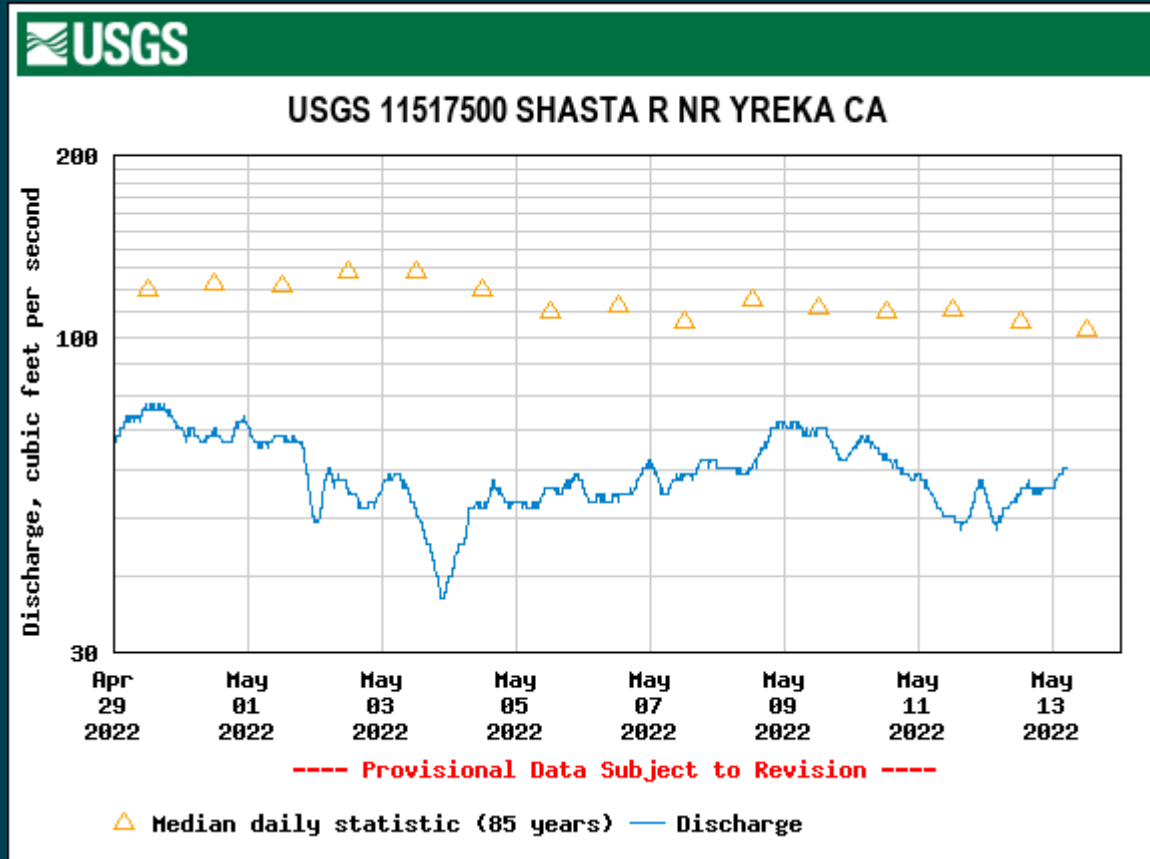
Iron Gate Dam – USGS 11516530



Min (1992)	Most Recent Instantaneous Value May 13	25th percentile	Median	Mean	75th percentile	Max (1971)
525	1130	1150	1720	2320	3170	6730



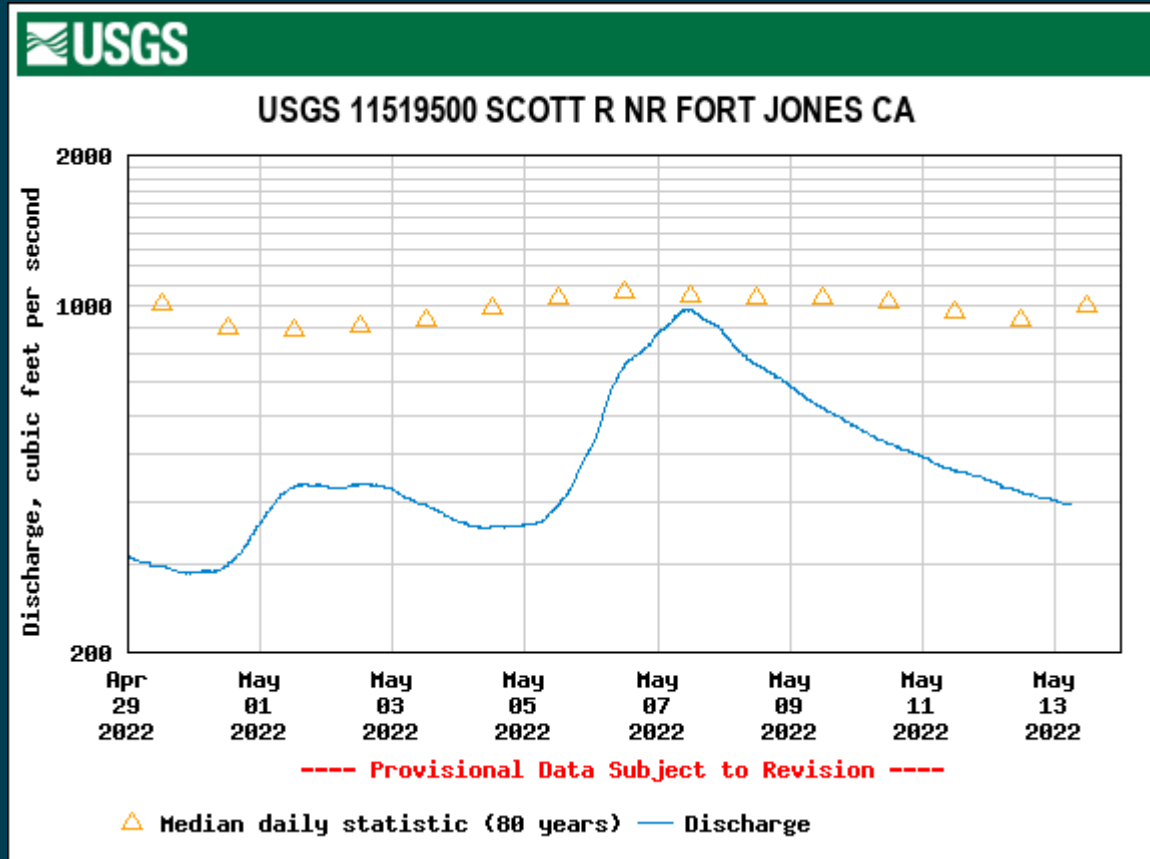
Shasta River – USGS 11517500



Min (1937)	25th percentile	Most Recent Instantaneous Value May 13	Median	Mean	75th percentile	Max (1941)
18.0	58	60.7	103	141	203	628



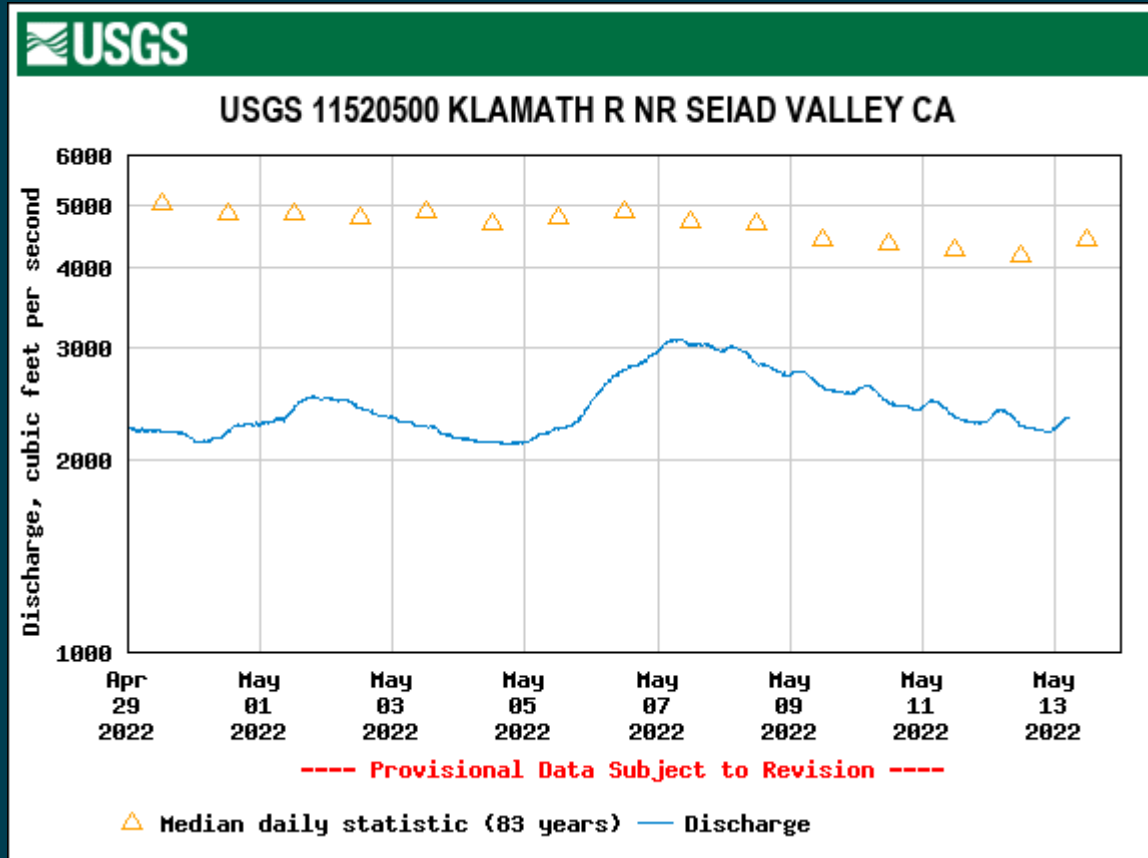
Scott River – USGS 11519500



Min (1977)	Most Recent Instantaneous Value May 13	25th percentile	Median	Mean	75th percentile	Max (1969)
111	399	658	995	1070	1310	3860



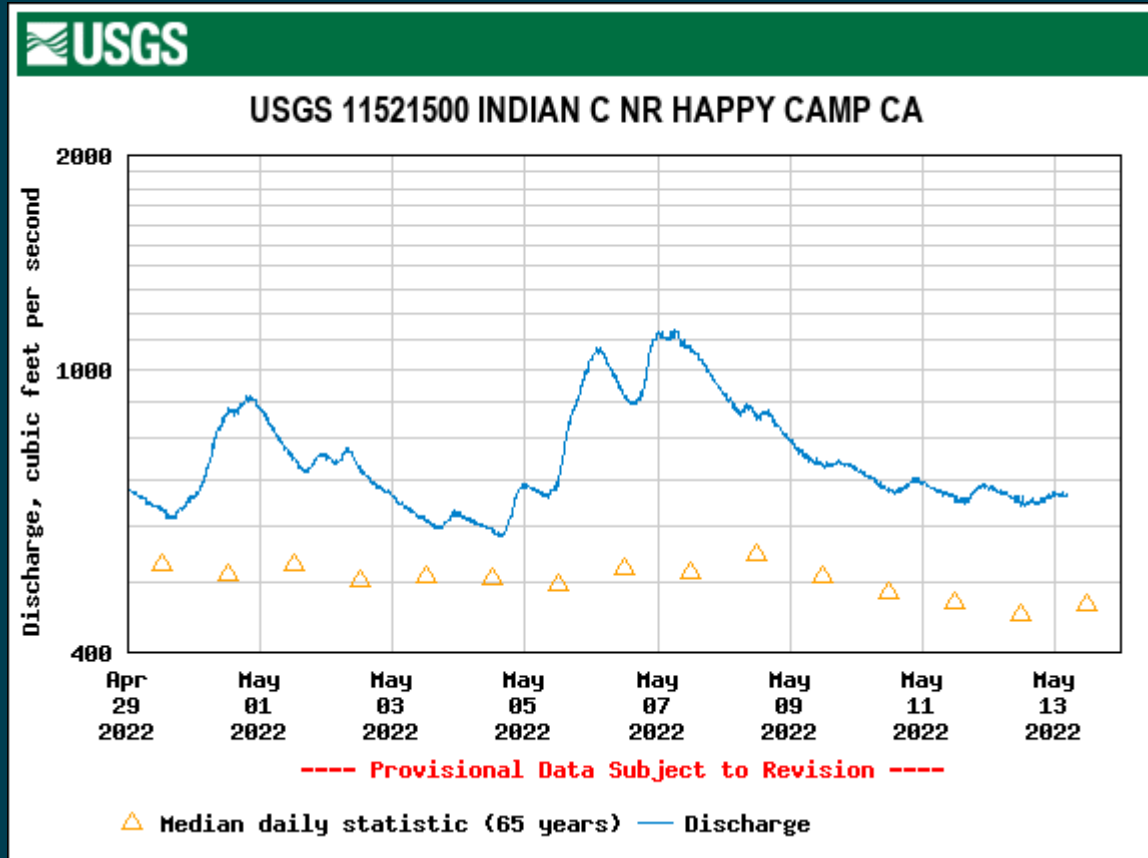
Klamath River – USGS 11520500



Min (1992)	Most Recent Instantaneous Value May 13	25th percentile	Median	Mean	75th percentile	Max (1971)
1270	2320	2990	4450	4990	6810	13000



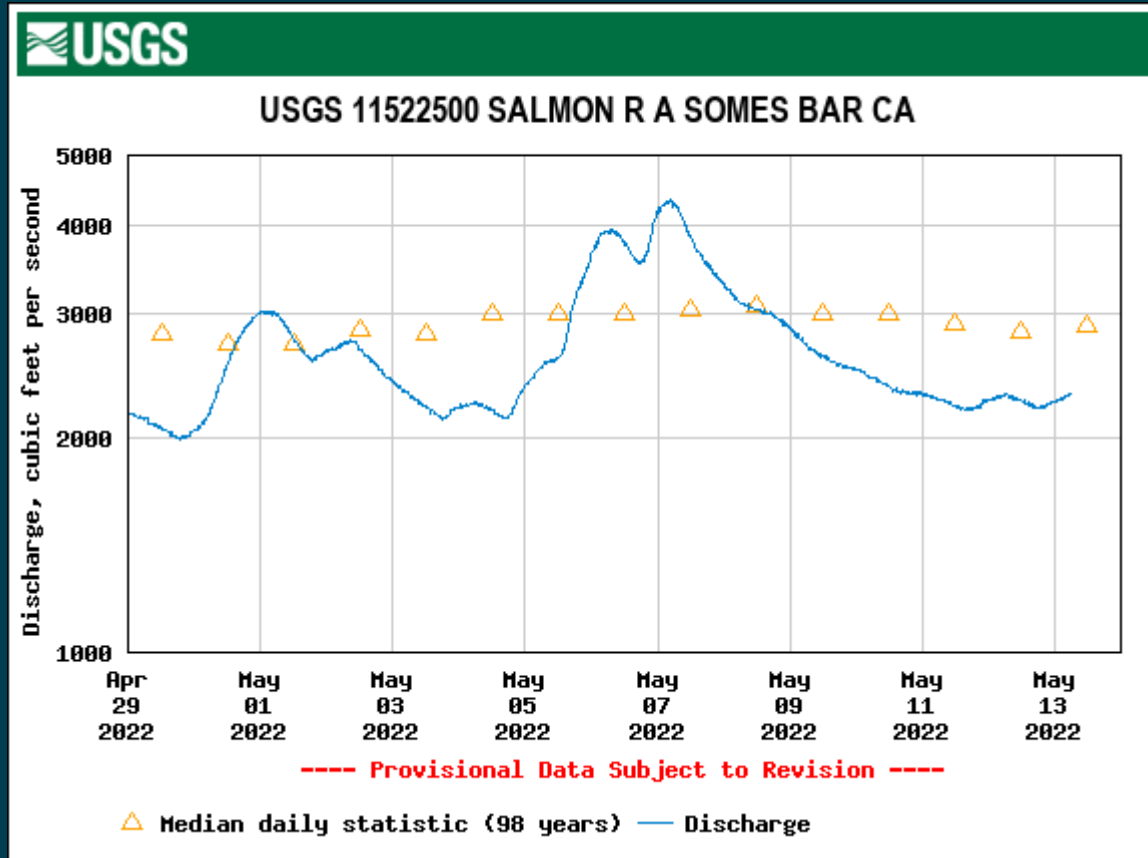
Indian Creek – USGS 11521500



Min (2015)	25th percentile	Median	Mean	Most Recent Instantaneous Value May 13	75th percentile	Max (1969)
118	312	468	541	661	789	2070



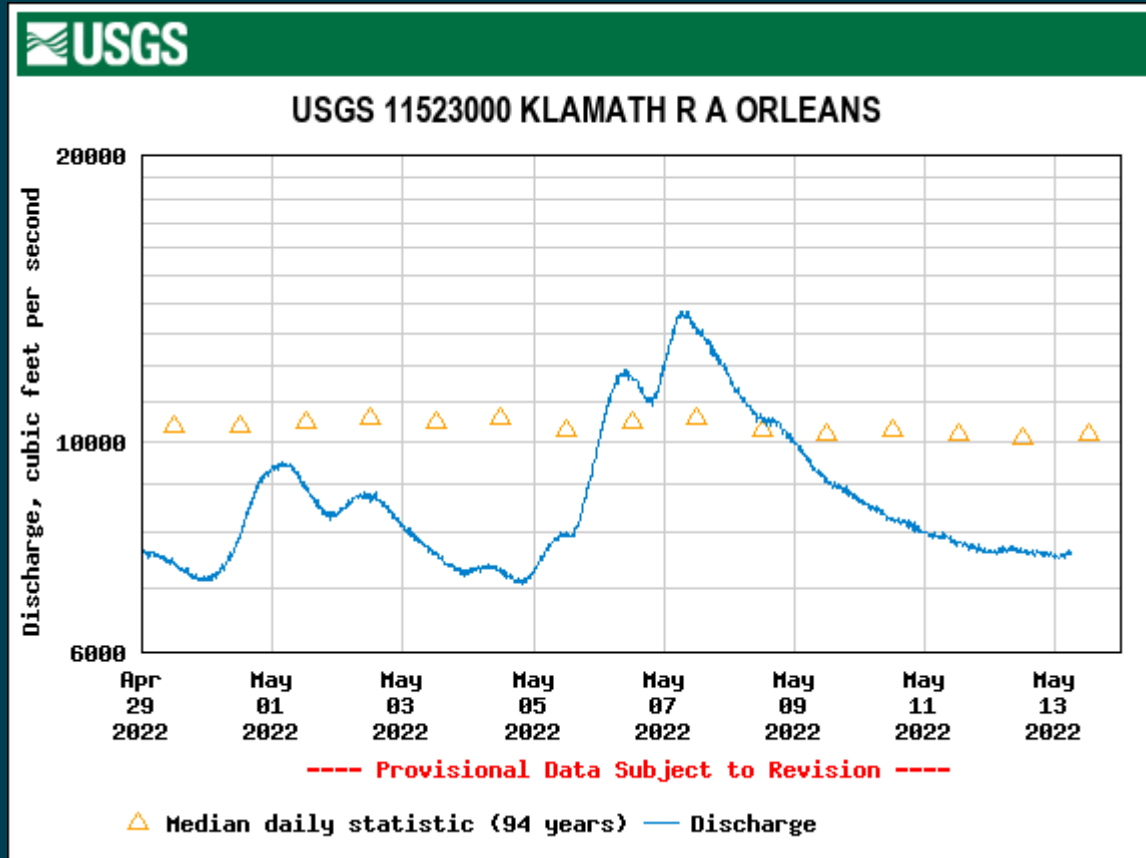
Salmon River – USGS 11522500



Min (2015)	25th percentile	Most Recent Instantaneous Value May 13	Median	Mean	75th percentile	Max (1969)
607	1850	2290	2880	3080	3960	9110



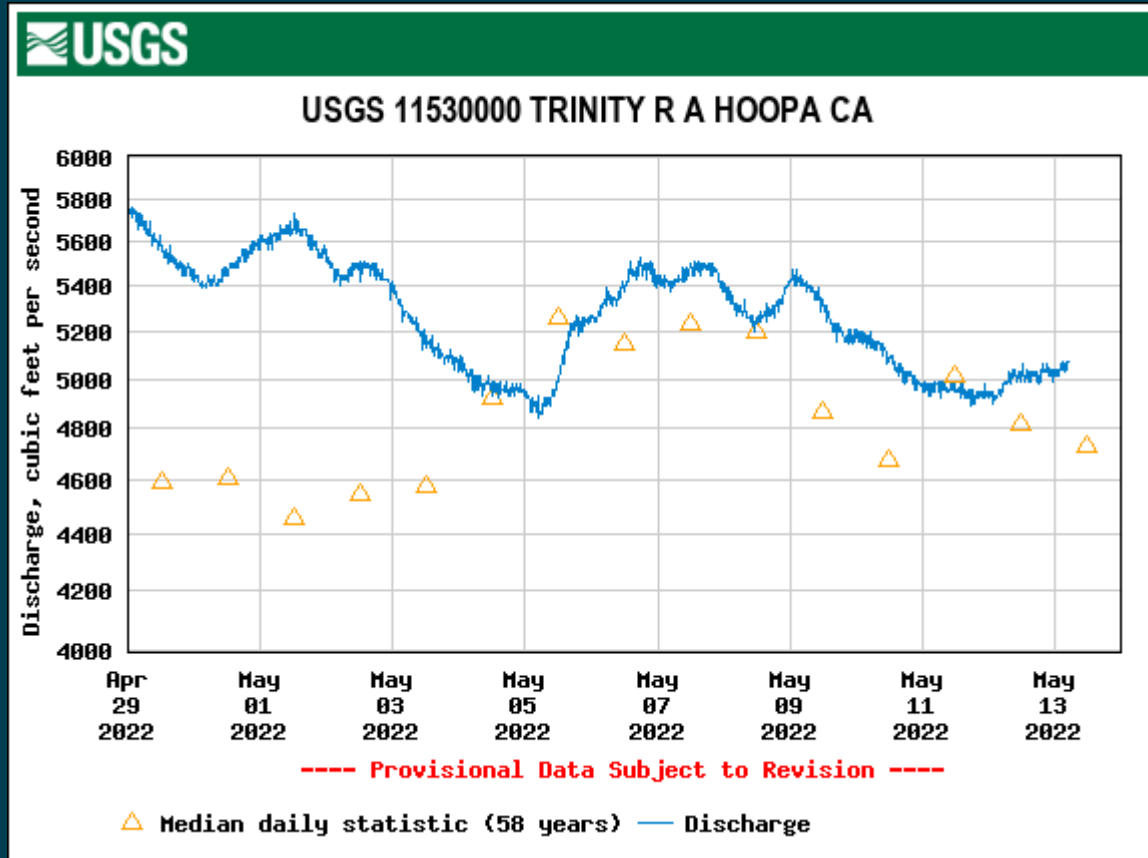
Klamath River – USGS 11523000



Min (1992)	25th percentile	Most Recent Instantaneous Value May 13	Median	Mean	75th percentile	Max (1971)
3030	6880	7590	10200	11100	14500	33900



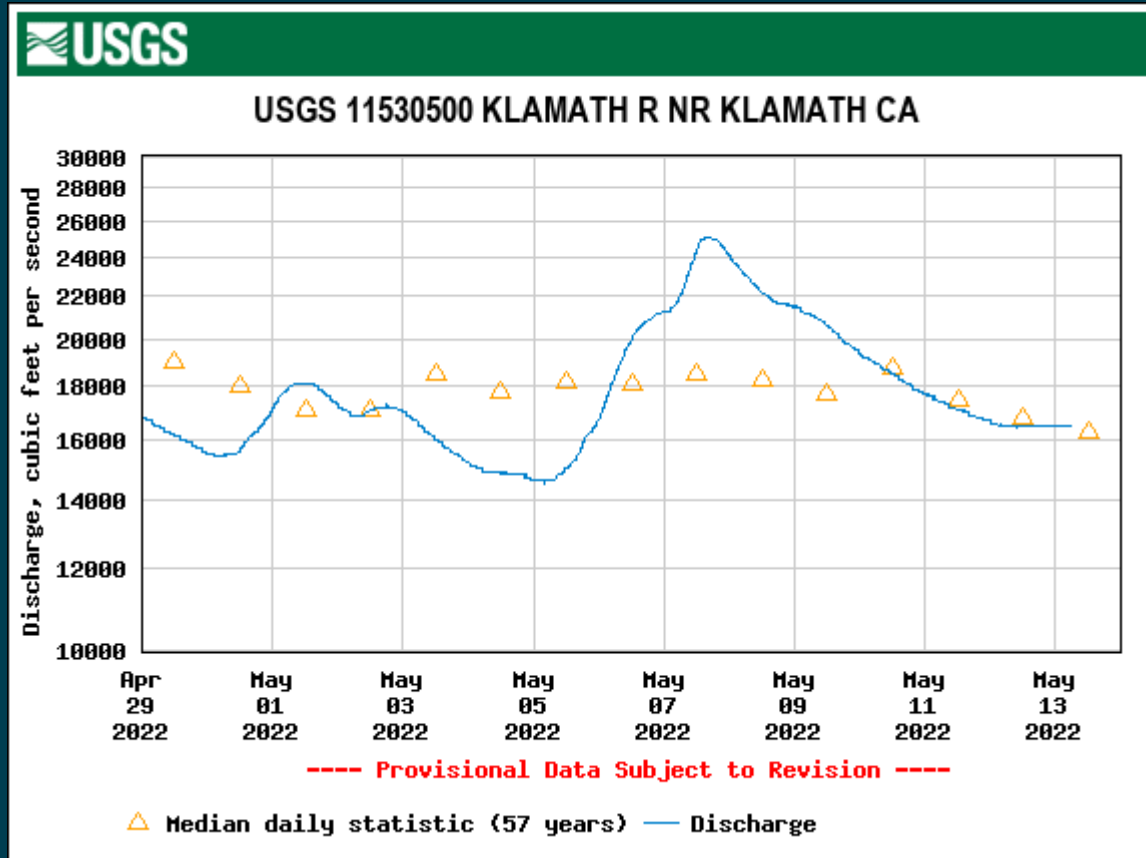
Trinity River – USGS 11530000



Min (1977)	25th percentile	Median	Most Recent Instantaneous Value May 13	Mean	75th percentile	Max (2005)
1230	3080	4730	5070	5580	7790	14900



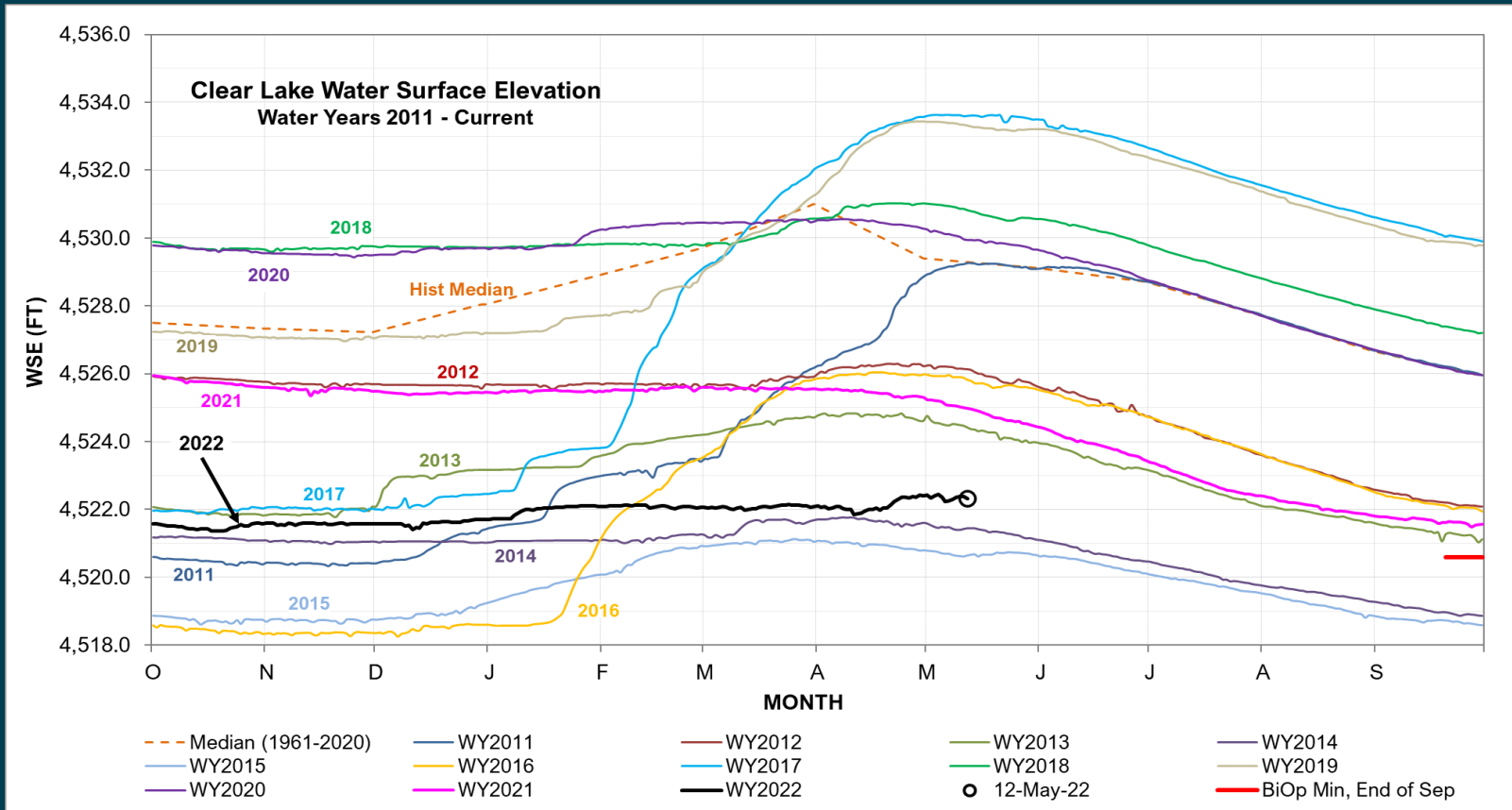
Klamath River – USGS 11530500



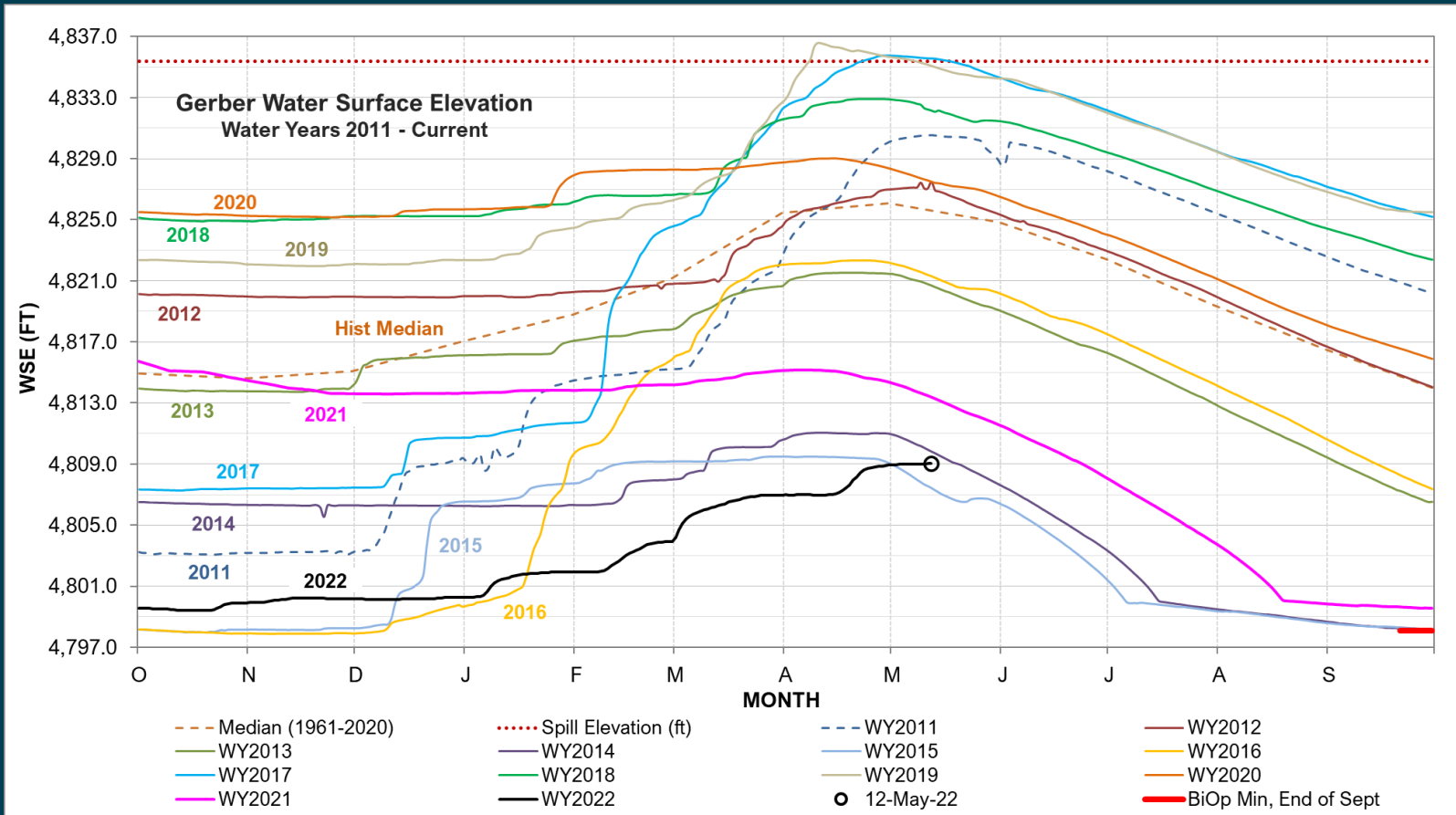
Min (1977)	25th percentile	Median	Most Recent Instantaneous Value May 13	Mean	75th percentile	Max (1969)
5460	12000	16300	16500	19900	28000	45000



Clear Lake Reservoir – USBR



Gerber Reservoir – USBR



C. shasta monitoring update

2022 DATA UPDATES:

- Total *C. shasta* spore density data to share with you at this time - coho type II data are forthcoming but will be negligible given the total densities measured.
- The density of *C. shasta* continued to decrease over the past week with an average of 1 or fewer spores per liter measured throughout the lower basin
- Stephen observed that all sites have returned to an early spring pattern of very low levels of *C. shasta*, and that, interestingly, a similar decrease in spore levels happened in almost the same week in 2020 and 2021.

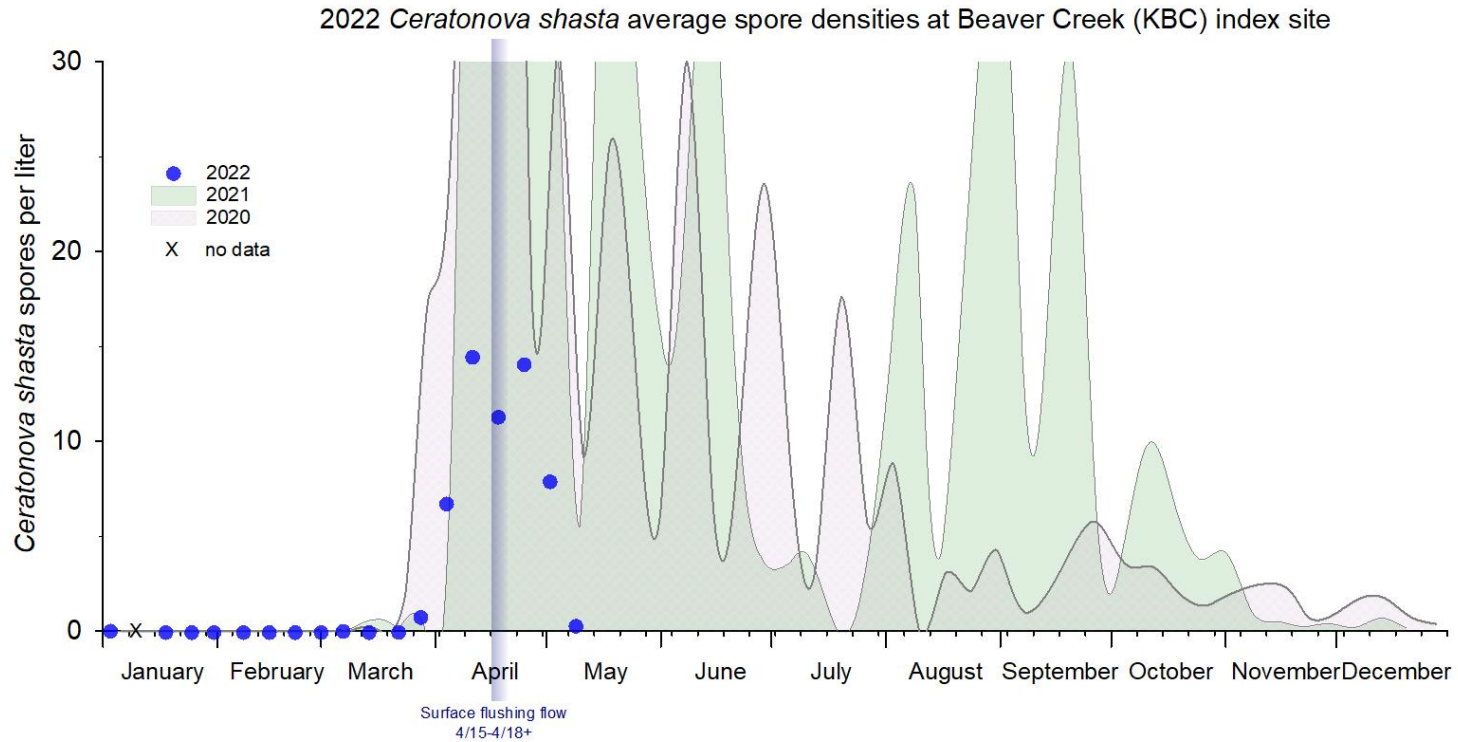
All sites have returned to an early spring pattern of very low levels of *C. shasta*. (interestingly - a similar decrease in spore levels happened in almost the same week in 2020 and 2021)

- Coho-relevant *Cs* genotype data in spores per liter are also given:***waiting for data, but will be negligible!

KI5 1 i
KBC <1 i
KMN <1 i
KSV <1 i
KOR 1 i
KTC <1 g

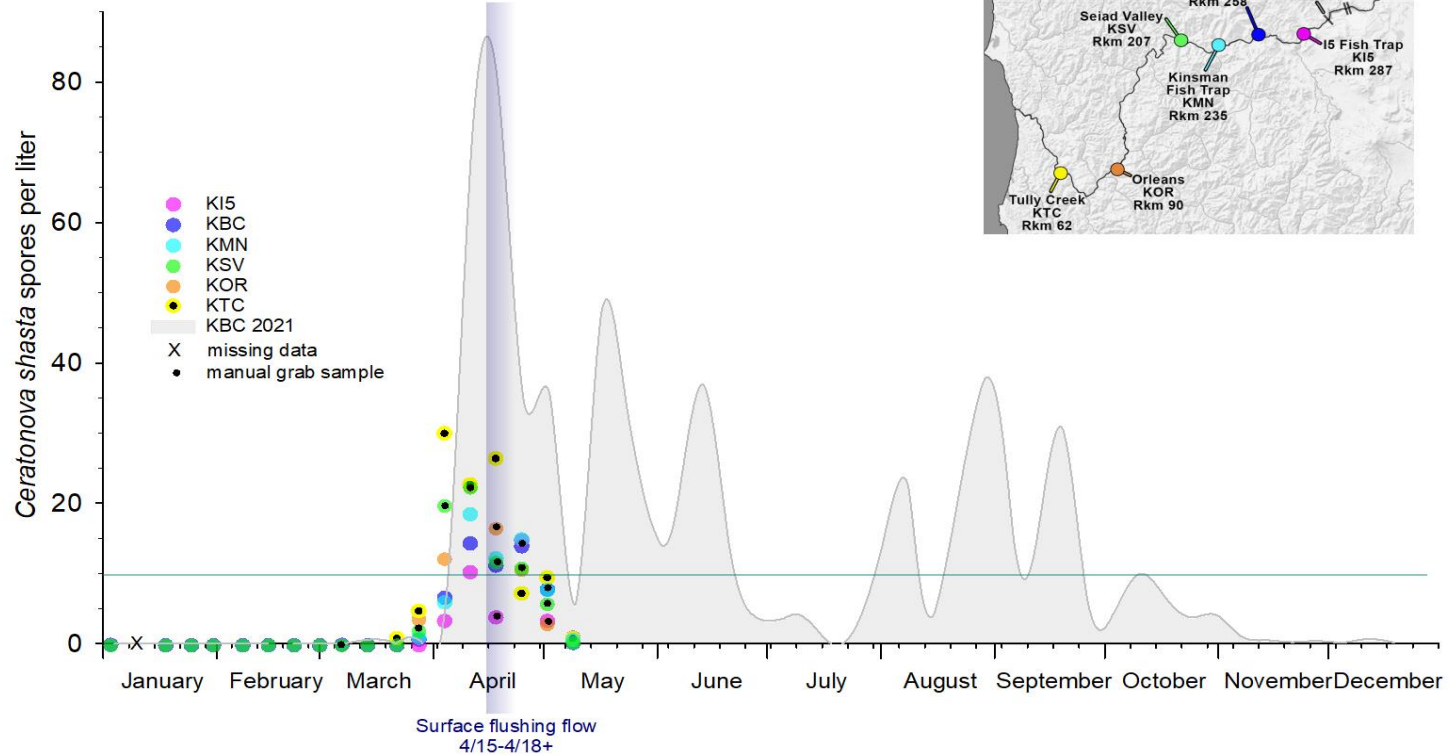


C. shasta monitoring update – 2022



C. shasta monitoring update – 2022

Ceratonova shasta average spore densities at all index sites in 2022



Scott and Shasta River Juvenile Salmonid Outmigration Monitoring



Scott and Shasta River Juvenile Salmonid Outmigration Monitoring

In-Season Update

May 6, 2022

Since 2001, the California Department of Fish and Wildlife has operated rotary screw traps on the Scott and Shasta Rivers to estimate abundances of outmigrating Chinook Salmon (*Oncorhynchus tshawytscha*), Coho Salmon (*Oncorhynchus kisutch*) and rainbow trout/steelhead (*Oncorhynchus mykiss*). The Scott River rotary screw traps (RST) are located approximately 7 river kilometers (RK) upstream from the confluence with the Klamath River, while the Shasta River RST is located approximately 0.2 RK from the confluence with the Klamath River. The data presented below is preliminary and subject to revision.

The Shasta River RST has been operational since January 13, 2022. Mark-recapture trials have been conducted on age 0+ Chinook Salmon and age 1+ Coho Salmon, allowing for a preliminary population estimate. An estimated **1,385,109 age 0+ Chinook Salmon** have outmigrated from the Shasta River (Figure 1). An estimated **2,134 age 1+ Coho Salmon** have outmigrated from the Shasta River (Figure 2).

The raw catch at the Shasta RST is as follows:

Chinook Salmon		Coho Salmon		<i>Oncorhynchus mykiss</i>			
Age 0+	Age 1+	Age 0+	Age 1+	Age 0+	Age 1+	Age 2+	Age 3+
331,863	31	71	468	284	47	3,085	273

Raw catch numbers are not population estimates.

The Scott River 8-foot RST has been operational since January 26, 2022. The 5-foot RST has been operational since February 7, 2022. Mark-recapture trials have been conducted on age 0+ Chinook Salmon and age 1+ Coho Salmon, allowing for a preliminary population estimate. An estimated **283,812 age 0+ Chinook Salmon** have outmigrated from the Scott River (Figure 3). An estimated **49,095 age 1+ Coho** have outmigrated from the Scott River (Figure 4).

The raw catch from **both** Scott RST's is as follows:

Chinook Salmon		Coho Salmon		<i>Oncorhynchus mykiss</i>			
Age 0+	Age 1+	Age 0+	Age 1+	Age 0+	Age 1+	Age 2+	Age 3+
18,089	66	16	1,250	347	1,249	218	13



Scott and Shasta River Juvenile Salmonid Outmigration Monitoring

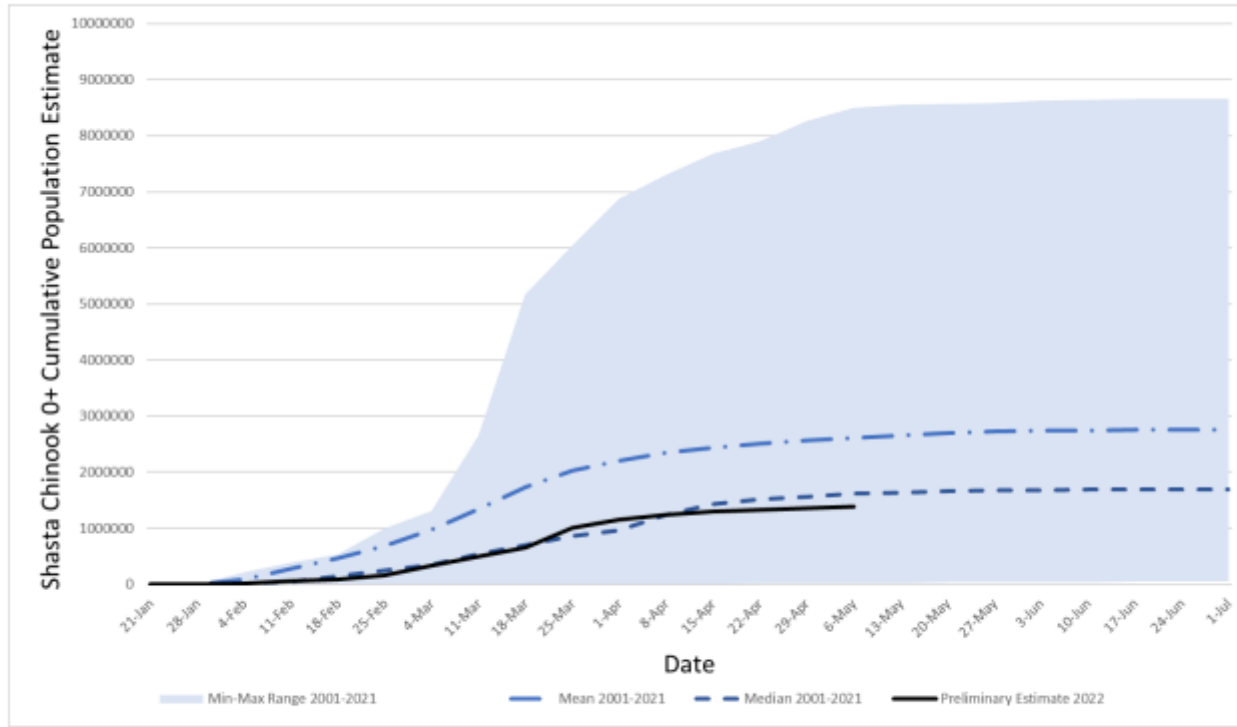


Figure 1. 2022 preliminary population estimates for Chinook Salmon age 0+ at the Shasta RST compared to historical mean, median, and min-max range.



Scott and Shasta River Juvenile Salmonid Outmigration Monitoring

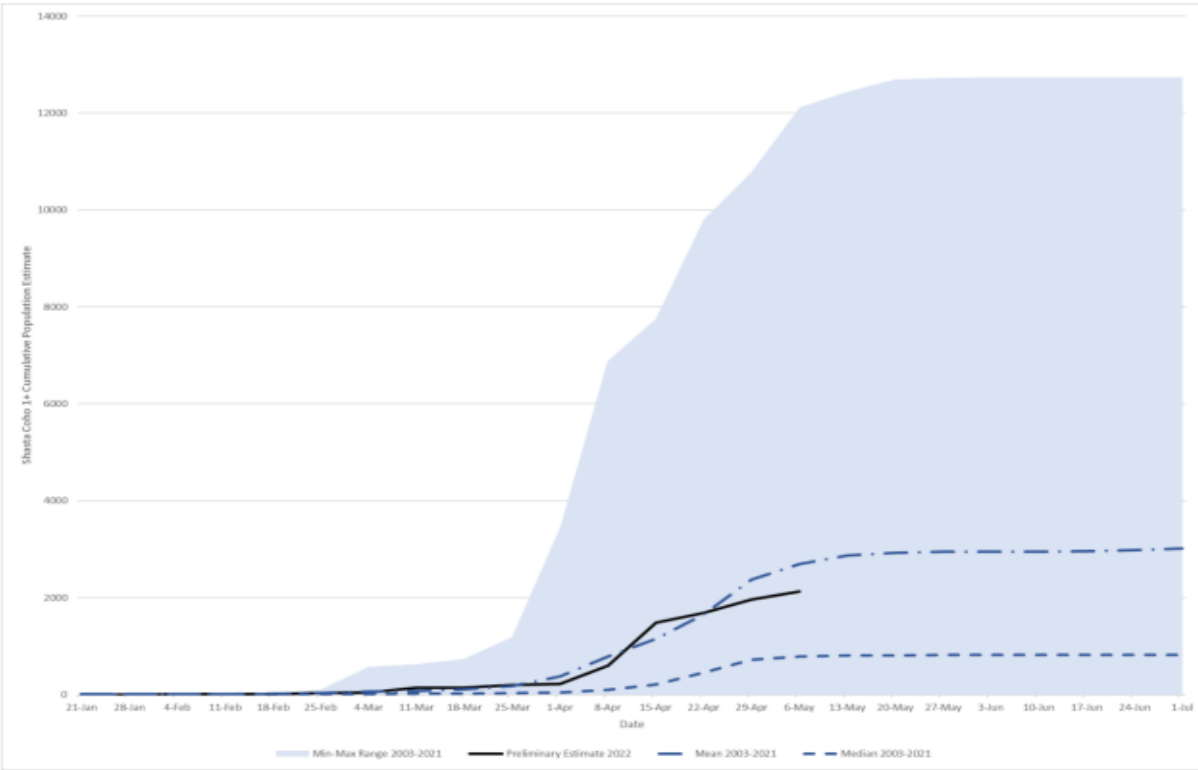


Figure 2. 2022 preliminary population estimates for Coho Salmon age 1+ at the Shasta RST compared to historical mean, median, and min-max range.



Scott and Shasta River Juvenile Salmonid Outmigration Monitoring

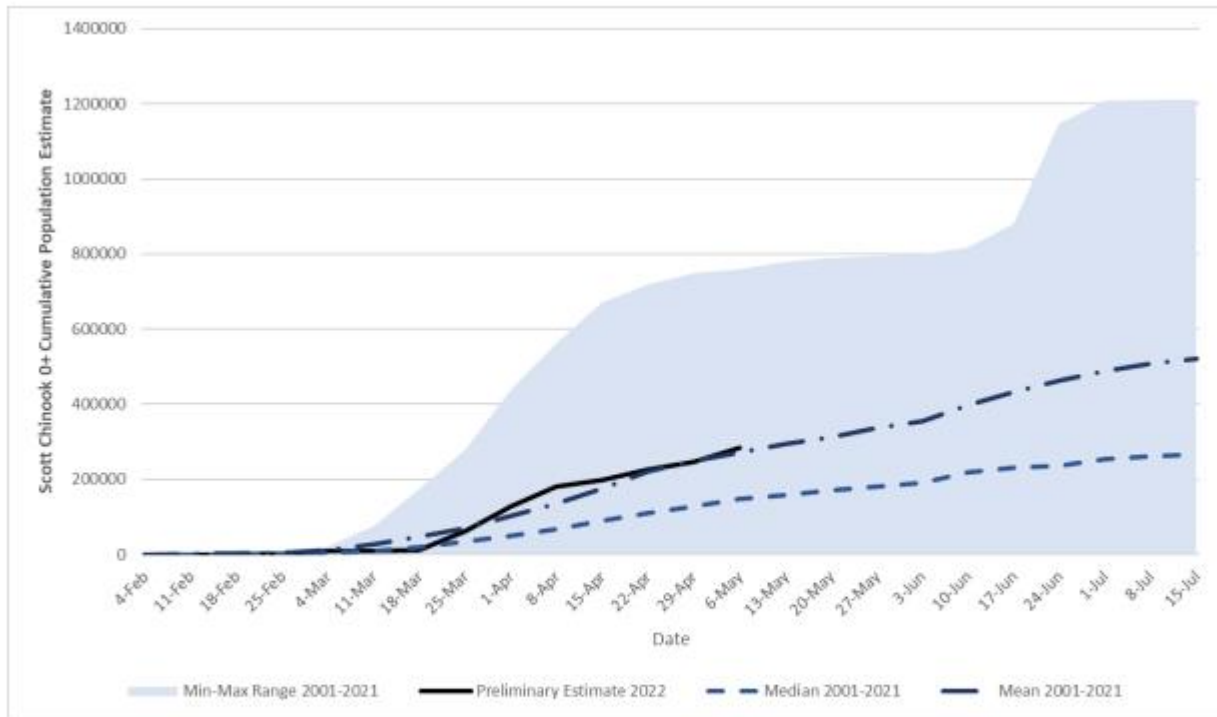


Figure 3. 2022 preliminary population estimates for Chinook Salmon age 0+ at the Scott RST compared to historical mean, median, and min-max range.



Scott and Shasta River Juvenile Salmonid Outmigration Monitoring

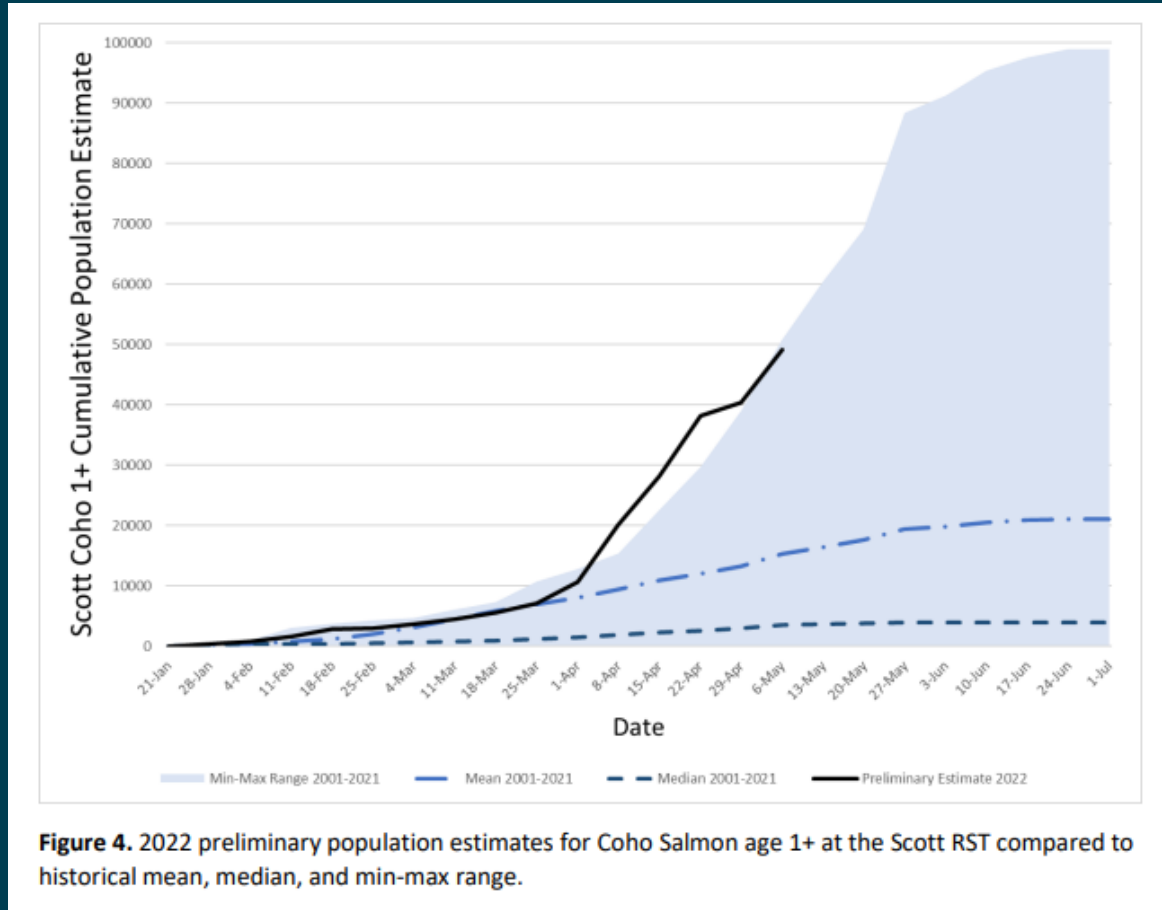


Figure 4. 2022 preliminary population estimates for Coho Salmon age 1+ at the Scott RST compared to historical mean, median, and min-max range.



2022 Klamath River Fish Health Monitoring

May 9, 2022

Table 1. Weekly-stratified prevalence of infection (POI) of *Ceratonova shasta* in juvenile Chinook salmon captured in the Shasta River to Scott River reach (K4) of the Klamath River.

Sample Week	Collection Date	Number of Fish Collected	Number of Fish Positive	<i>C. shasta</i> POI	DNA copy number range (log scale)	DNA copy number over 3 logs
1	3/22/2022	29	0	0%	n/a	n/a
2	3/29/2022	30	0	0%	n/a	n/a
3	4/05/2022	60	0	0%	n/a	n/a
4	4/12/2022	60	10	17%	0.8 – 3.3	2%
5	4/20/2022	57	38	67%	0.7 – 2.9	0%
6	4/26/2022	30	14	47%	0.8 – 2.9	0%
7	5/02/2022	60	33	55%	0.7 – 3.8	12%
8	5/09/2022	60	38	63%	0.9 – 5.2	5%

*Note: Fish collected in week 1 through 4 were of natural origin.

Iron Gate Hatchery released Chinook Salmon smolts into the Klamath River on April 12, 2022 therefore fish in week 5 through 8 were collected from the combined natural and hatchery population.



Klamath River Outmigrant Monitoring Update

May 9, 2022

Table 1. In-season summary of the total catch by week of adipose fin-clipped (AD Clip) and non-adipose fin-clipped (No Clip) Chinook Salmon and steelhead and left maxillary-clipped (LM Clip) and non-maxillary clipped (No Clip) Coho Salmon by trap at the Bogus, I-5, Kinsman trap sites on the mainstem Klamath River, 2022. Note that RST = rotary screw trap, UPS = upstream, DNS = downstream, and YOY = young-of-the-year.

USFWS 2022 Mainstem Klamath River Outmigrant Trap Juvenile Salmonid Catch Summary

U.S. Fish & Wildlife Service, Arcata Fish & Wildlife Office, 1655 Heindon Road, Arcata, CA 95521, (707)822-7201

Preliminary Data - Subject to Revision

Trap	Calendar week	Sample dates	Q (cfs) ^a		Water temp. (°F) ^b		Trapping days	Chinook (<i>O. tshawytscha</i>)			Coho (<i>O. kisutch</i>)			Steelhead (<i>O. mykiss</i>)			
			Min	Max	Min	Max		YOY			Age 1+			Age 1+			
								No clip	AD clip	Age 1+	YOY	No clip	LM clip	YOY	No clip	AD clip	
Bogus Frame Net	10	3/2-3/4	990	1,020	43.8	44.2	3	74	0	0	0	0	0	0	0	0	0
	11	3/8-3/11	985	996	44.6	45.3	4	120	0	0	0	0	0	0	0	0	0
	12*	3/14-3/18	982	992	-	-	0	-	-	-	-	-	-	-	-	-	-
	13	3/22-3/25	983	995	48.7	51	4	108	0	0	2	0	0	0	0	0	0
	14	3/29-4/1	987	1,190	50.1	50.9	4	483	0	0	44	0	0	0	0	0	0
	15	4/5-4/8	1,290	1,350	50.7	51.6	4	944	0	0	236	0	0	0	27	0	0
	16	4/12-4/15	1,340	1,990	50.9	50.9	1	61	0	0	49	0	0	0	6	1	0
	17*	4/19-4/22	1,650	3,090	-	-	0	0	0	0	0	0	0	0	0	0	0
	18	4/26-4/28	1,310	1,340	53.7	53.9	3	572	0	0	1712	0	0	0	213	0	0
	19	5/3-5/6	1,180	1,180	52.1	53.8	4	347	0	0	445	0	0	0	549	0	0
	I-5 UPS RST	10	3/1-3/4	964	1,020	41.9	43.8	4	226	0	12	0	0	0	0	1	0
		11	3/8-3/11	985	996	42.6	44	4	452	0	1	0	0	0	0	0	0
		12	3/15-3/18	982	990	43.8	44.9	4	291	0	0	0	1	378	0	0	0
		13	3/22-3/25	983	995	45.2	46.9	4	319	0	5	6	0	2	0	4	0
		14	3/29-4/1	987	1,190	48.1	49.6	4	416	0	0	19	0	1	0	0	0
		15	4/5-4/8	1,290	1,350	48.7	50.3	4	212	0	0	12	0	0	1	2	0
		16	4/12-4/15	1,340	1,990	47.4	49.1	4	831	0	1	8	0	1	5	0	0
		17	4/19-4/22	1,650	3,090	48.9	49.4	4	1857	0	0	113	1	2	59	1	0
		18	4/26-4/29	1,250	1,340	52.3	52.8	4	2336	0	0	79	3	1	280	1	0
19		5/3-5/6	1,180	1,180	51.2	52.7	4	572	0	0	23	2	4	465	2	0	
I-5 DNS RST	10	3/1-3/4	985	1,020	41.9	43.8	3	104	0	8	0	0	0	0	3	0	
	11	3/8-3/11	964	996	42.6	44	4	207	0	1	0	1	0	0	0	0	
	12	3/15-3/18	982	990	43.8	44.9	3	134	0	0	0	0	123	0	0	0	
	13	3/22-3/25	983	995	45.2	46.9	4	220	0	0	2	0	9	0	3	0	
	14	3/29-4/1	987	1,190	48.1	49.6	4	290	0	0	15	0	2	0	1	0	
	15	4/5-4/8	1,290	1,350	48.7	50.3	4	206	0	0	7	0	0	2	1	0	
	16	4/12-4/15	1,340	1,990	47.4	48.9	4	380	0	0	7	0	1	2	0	0	
	17	4/19-4/22	1,650	3,090	48.9	49.4	4	752	0	0	42	0	0	25	0	0	
	18	4/26-4/29	1,250	1,340	52.3	52.8	4	850	0	1	49	2	0	131	0	0	
	19	5/3-5/6	1,180	1,180	51.2	52.7	4	273	0	0	11	1	0	236	0	0	
I-5 Frame Net	10	3/2-3/4	990	1,020	42.2	43.8	3	23	0	0	0	0	0	0	0	0	
	11	3/8-3/11	985	996	42.6	44	4	103	0	0	0	2	0	0	0	0	
	12	3/15-3/18	982	990	43.8	44.9	4	32	0	0	0	0	7	0	0		
	13	3/22-3/25	983	995	45.2	46.9	4	50	0	0	1	0	2	1	0		
	14	3/29-4/1	987	1,190	48.1	49.6	4	78	0	0	11	0	0	0	0		
	15	4/5-4/8	1,290	1,350	48.7	50.3	2	17	0	0	0	0	0	0	0		
	16	4/12-4/15	1,340	1,990	48.9	48.9	1	16	0	0	1	0	0	0	0		
	17*	4/19-4/22	1,650	3,090	-	-	0	0	0	0	0	0	0	0	0		
	18	4/26-4/29	1,250	1,340	52.3	52.8	4	1133	0	0	378	0	0	228	0		
	19	5/3-5/6	1,180	1,180	51.2	52.7	4	248	0	0	81	0	0	260	0		

^a mean discharge from day of sampling (discharge below IGD used for Bogus and I-5 sites; flow at Kinsman Site is Klamath River flow at Seiad minus Scott River flow; discharge at Weitchpec Site is discharge near Orleans)

^b temperature recorded at time of trap check

* trap not set this week because trapping operations were limited due to a flow event and/or hatchery release



Klamath River Outmigrant Monitoring Update

May 9, 2022

Table 1 cont. In-season summary of the total catch by week of adipose fin-clipped (AD Clip) and non-adipose fin clipped (No Clip) Chinook Salmon and steelhead and left maxillary-clipped (LM Clip) and non-maxillary clipped (No Clip) Coho Salmon by trap at the Bogus, I 5, and Kinsman trap sites on the mainstem Klamath River, 2022. Note that RST = rotary screw trap, UPS = upstream, DNS = downstream, and YOY = young-of-the-year.

USFWS 2022 Mainstem Klamath River Outmigrant Trap Juvenile Salmonid Catch Summary (continued)

U.S. Fish & Wildlife Service, Arcata Fish & Wildlife Office, 1655 Heindon Road, Arcata, CA 95521, (707)822-7201

Preliminary Data - Subject to Revision

Trap	Calendar week	Sample dates	Q (cfs) ^a		Water temp. (F) ^b		Trapping days	Chinook (<i>O. tshawytscha</i>)			Coho (<i>O. kisutch</i>)			Steelhead (<i>O. mykiss</i>)			
			Min	Max	Min	Max		YOY			Age 1 +			Age 1 +			
			No clip	AD clip	Age 1+	YOY		No clip	LM clip	YOY	No clip	AD clip					
Kinsman RST	10	3/1-3/4	1,338	1,432	45.0	47.2	4	162	0	1	3	8	0	5	3	0	
	11	3/8-3/11	1,330	1,349	43.3	46.5	4	144	0	0	2	5	0	1	0	0	
	12	3/15-3/18	1,416	1,438	44.7	47.8	4	109	0	0	1	5	6	0	5	0	
	13	3/22-3/25	1,416	1,503	47.1	52.8	4	191	0	0	5	2	45	4	7	0	
	14	3/29-4/1	1,449	1,498	49.1	51.4	4	349	0	0	37	4	2	0	11	0	
	15	4/5-4/8	1,733	1,791	49.2	55.5	4	325	0	0	4	7	2	2	3	0	
	16	4/12-4/15	1,750	1,804	47.4	49.8	4	179	0	2	2	2	1	2	2	0	
	17 ^c	4/19-4/22	2,654	4,004	-	-	0	0	0	0	0	0	0	0	0	0	
	18	4/26-4/29	1,913	2,015	52.1	58.4	4	148	0	2	4	1	5	4	8	0	
	19	5/3-5/6	1,782	2,030	56.9	60.1	4	123	0	1	46	6	4	27	14	0	
	Weitchpec RST	10	3/1-3/4	4,194	4,597	-	-	4	265	0	2	0	1	0	0	5	0
		11	3/8-3/11	3,461	3,687	46.2	46.6	4	203	0	2	0	1	0	0	2	0
		12	3/15-3/18	4,470	5,610	48.2	48.4	1	18	0	0	0	0	0	0	6	0
		13	3/22-3/24	4,110	5,290	48.9	50.5	3	138	0	0	0	1	16	0	15	0
		14	3/29-4/1	4,480	5,190	50.2	52.0	4	84	0	0	0	1	0	0	20	0
		15	4/5-4/8	4,730	6,000	48.2	51.6	4	82	0	0	0	0	2	2	39	0
		16	4/12-4/15	4,560	5,280	49.5	49.6	2	67	0	0	0	1	0	0	11	0
		17 ^c	4/19-4/22	8,750	11,600	-	-	0	0	0	0	0	0	0	0	0	0
		18	4/26-4/29	7,380	8,720	50.0	51.8	4	27	0	0	4	1	0	0	3	0
19		5/3-5/6	7,260	11,400	49.8	50.5	3	17	0	0	1	2	3	2	12	0	
Weitchpec US Frame	11	3/8-3/11	3,461	3,687	46.2	46.6	4	94	0	0	0	0	0	0	0	0	
	12	3/15-3/18	4,470	5,610	-	-	0	-	-	-	-	-	-	-	-	-	
	13	3/22-3/24	4,110	5,290	48.9	50.5	3	107	0	0	0	0	0	0	0	0	
	14	3/30-4/1	4,480	5,130	50.2	50.5	3	50	0	0	0	0	0	0	0	0	
	15	4/7-4/8	4,730	4,940	50.5	51.6	2	30	0	0	0	0	0	0	0	0	
	16	4/12-4/15	4,560	5,280	49.5	49.6	2	41	0	0	0	0	0	0	0	0	
	17 ^c	4/19-4/22	8,750	11,600	-	-	0	0	0	0	0	0	0	0	0	0	
	18 ^c	4/26-4/29	7,380	8,720	-	-	0	0	0	0	0	0	0	0	0	0	
	19 ^c	5/3-5/6	7,260	11,400	-	-	0	0	0	0	0	0	0	0	0	0	

^a mean discharge from day of sampling (discharge below IGD used for Bogus and I-5 sites; flow at Kinsman Site is Klamath River flow at Seiad minus Scott River flow; discharge at Weitchpec Site is discharge near Orleans)

^b temperature recorded at time of trap check

^c trap not set this week because trapping operations were limited due to a flow event and/or hatchery release



Klamath River Outmigrant Monitoring Update

May 9, 2022

Table 2. In-season summary of the average catch-per-day by week of non-adipose fin-clipped (No Clip) and adipose fin-clipped (AD Clip) Chinook Salmon and steelhead and non-maxillary clipped (No Clip) and left maxillary-clipped (LM Clip) Coho Salmon by trap at the Bogus, I-5, and Kinsman trap sites on the mainstem Klamath River, 2022. Note that RST = rotary screw trap, UPS = upstream, DNS = downstream, and YOY = young-of-the-year.

USFWS 2022 Mainstem Klamath River Outmigrant Trap Juvenile Salmonid Catch-per-Day Summary

U.S. Fish & Wildlife Service, Arcata Fish & Wildlife Office, 1655 Heindon Road, Arcata, CA 95521, (707)822-7201

Preliminary Data - Subject to Revision

Trap	Calendar week	Sample dates	Q (cfs) ^a		Water temp. (°F) ^b		Trapping days	Chinook (<i>O. tshawytscha</i>)			Coho (<i>O. kisutch</i>)			Steelhead (<i>O. mykiss</i>)		
			Min	Max	Min	Max		YOY			Age 1+		Age 1+			
								No clip	AD clip	Age 1+	YOY	No clip	LM clip	YOY	No clip	AD clip
Bogus Frame Net	10	3/2-3/4	990	1,020	43.8	44.2	3	24.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	3/8-3/11	985	996	44.6	45.3	4	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	12*	3/14-3/18	982	992	-	-	0	-	-	-	-	-	-	-	-	-
	13	3/22-3/25	983	995	48.7	51.0	4	27.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00
	14	3/29-4/1	987	1,190	50.1	50.9	4	120.75	0.00	0.00	11.00	0.00	0.00	0.00	0.00	0.00
	15	4/5-4/8	1,290	1,350	50.7	51.6	4	236.00	0.00	0.00	59.00	0.00	0.00	6.75	0.00	0.00
	16	4/12-4/15	1,340	1,990	50.9	50.9	1	61.00	0.00	0.00	49.00	0.00	0.00	6.00	1.00	0.00
	17*	4/19-4/22	1,650	3,090	-	-	0	-	-	-	-	-	-	-	-	-
	18	4/26-4/28	1,310	1,340	53.7	53.9	3	190.67	0.00	0.00	570.67	0.00	0.00	71.00	0.00	0.00
	19	5/3-5/6	1,180	1,180	52.1	53.8	4	86.75	0.00	0.00	111.25	0.00	0.00	137.25	0.00	0.00
I-5 UPS RST	10	3/1-3/4	964	1,020	41.9	43.8	4	56.50	0.00	3.00	0.00	0.00	0.00	0.00	0.25	0.00
	11	3/8-3/11	985	996	42.6	44.0	4	113.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00
	12	3/15-3/18	982	990	43.8	44.9	4	72.75	0.00	0.00	0.00	0.25	94.50	0.00	0.00	0.00
	13	3/22-3/25	983	995	45.2	46.9	4	79.75	0.00	1.25	1.50	0.00	0.50	0.00	1.00	0.00
	14	3/29-4/1	987	1,190	48.1	49.6	4	104.00	0.00	0.00	4.75	0.00	0.25	0.00	0.00	0.00
	15	4/5-4/8	1,290	1,350	48.7	50.3	4	53.00	0.00	0.00	3.00	0.00	0.00	0.25	0.50	0.00
	16	4/12-4/15	1,340	1,990	47.4	49.1	4	207.75	0.00	0.25	2.00	0.00	0.25	1.25	0.00	0.00
	17	4/19-4/22	1,650	3,090	48.9	49.4	4	464.25	0.00	0.00	28.25	0.25	0.50	14.75	0.25	0.00
	18	4/26-4/29	1,250	1,340	52.3	52.8	4	584.00	0.00	0.00	19.75	0.75	0.25	70.00	0.25	0.00
	19	5/3-5/6	1,180	1,180	51.2	52.7	4	143.00	0.00	0.00	5.75	0.50	1.00	116.25	0.50	0.00
I-5 DNS RST	10	3/1-3/4	964	1,020	41.9	43.8	3	34.67	0.00	2.67	0.00	0.00	0.00	0.00	1.00	0.00
	11	3/8-3/11	985	996	42.6	44.0	4	51.75	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.00
	12	3/15-3/18	982	990	43.8	44.9	3	44.67	0.00	0.00	0.00	0.00	41.00	0.00	0.00	0.00
	13	3/22-3/25	983	995	45.2	46.9	4	55.00	0.00	0.00	0.50	0.00	2.25	0.00	0.75	0.00
	14	3/29-4/1	987	1,190	48.1	49.6	4	72.50	0.00	0.00	3.75	0.00	0.50	0.00	0.25	0.00
	15	4/5-4/8	1,290	1,350	48.7	50.3	4	51.50	0.00	0.00	1.75	0.00	0.00	0.50	0.25	0.00
	16	4/12-4/15	1,340	1,990	47.4	48.9	4	95.00	0.00	0.00	1.75	0.00	0.25	0.50	0.00	0.00
	17	4/19-4/22	1,650	3,090	48.9	49.4	4	188.00	0.00	0.00	10.50	0.00	0.00	6.25	0.00	0.00
	18	4/26-4/29	1,250	1,340	52.3	52.8	4	212.50	0.00	0.25	12.25	0.50	0.00	32.75	0.00	0.00
	19	5/3-5/6	1,180	1,180	51.2	52.7	4	68.25	0.00	0.00	2.75	0.25	0.00	59.00	0.00	0.00
I-5 Frame Net	10	3/2-3/4	990	1,020	42.2	43.8	3	7.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	11	3/8-3/11	985	996	42.6	44.0	4	25.75	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.00
	12	3/15-3/18	982	990	43.8	44.9	4	8.00	0.00	0.00	0.00	0.00	1.75	0.00	0.00	0.00
	13	3/22-3/25	983	995	45.2	46.9	4	12.50	0.00	0.00	0.25	0.00	0.50	0.25	0.00	0.00
	14	3/29-4/1	987	1,190	48.1	49.6	4	19.50	0.00	0.00	2.75	0.00	0.00	0.00	0.00	0.00
	15	4/5-4/8	1,290	1,350	48.7	50.3	2	8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	16	4/12-4/15	1,340	1,990	48.9	48.9	1	16.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
	17*	4/19-4/22	1,650	3,090	-	-	0	-	-	-	-	-	-	-	-	-
	18	4/26-4/29	1,250	1,340	52.3	52.8	4	283.25	0.00	0.00	94.50	0.00	0.00	57.00	0.00	0.00
	19	5/3-5/6	1,180	1,180	51.2	52.7	4	62.00	0.00	0.00	20.25	0.00	0.00	65.00	0.00	0.00

^a mean daily discharge range during sampling dates (discharge below IGD used for Bogus and I-5 sites; flow at Kinsman Site is Klamath River flow at Seiad minus Scott River flow; discharge at Wekivec Site is discharge near Orleans)

^b temperature recorded at time of trap check

* trap not set this week because trapping operations were limited due to a flow event and/or hatchery release



Klamath River Outmigrant Monitoring Update

May 9, 2022

Table 2 cont. In-season summary of the average catch-per-day by week of non-adipose fin-clipped (No Clip) and adipose fin-clipped (AD Clip) Chinook Salmon and steelhead and non-maxillary clipped (No Clip) and left maxillary-clipped (LM Clip) Coho Salmon by trap at the Bogus, I-5, and Kinsman trap sites on the mainstem Klamath River, 2022. Note that RST = rotary screw trap, UPS = upstream, DNS = downstream, and YOY = young-of-the-year.

USFWS 2022 Mainstem Klamath River Outmigrant Trap Juvenile Salmonid Catch-per-Day Summary (continued)

U.S. Fish & Wildlife Service, Arcata Fish & Wildlife Office, 1655 Heindon Road, Arcata, CA 95521, (707)822-7201

Preliminary Data - Subject to Revision

Trap	Calendar week	Sample dates	Q (cfs) ^a		Water temp. (F) ^b		Trapping days	Chinook (<i>O. tshawytscha</i>)			Coho (<i>O. kisutch</i>)			Steelhead (<i>O. mykiss</i>)			
			Min	Max	Min	Max		YOY			Age 1+		YOY	Age 1+			
								No clip	AD clip	Age 1+	No clip	LM clip		No clip	AD clip		
Kinsman RST	10	3/1-3/4	1,338	1,432	45.0	47.2	4	40.50	0.00	0.25	0.75	2.00	0.00	1.25	0.75	0.00	
	11	3/8-3/11	1,410	1,349	43.3	46.5	4	36.00	0.00	0.00	0.50	1.25	0.00	0.25	0.00	0.00	
	12	3/15-3/18	1,416	1,438	44.7	47.8	4	27.25	0.00	0.00	0.25	1.25	1.50	0.00	1.25	0.00	
	13	3/22-3/25	1,416	1,503	47.1	52.8	4	47.75	0.00	0.00	1.25	0.50	11.25	1.00	1.75	0.00	
	14	3/29-4/1	1,449	1,498	49.1	51.4	4	87.25	0.00	0.00	9.25	1.00	0.50	0.00	2.75	0.00	
	15	4/5-4/8	1,733	1,791	49.2	55.5	4	81.25	0.00	0.00	1.00	1.75	0.50	0.50	0.75	0.00	
	16	4/12-4/15	1,750	1,804	47.4	49.8	4	44.75	0.00	0.50	0.50	0.50	0.25	0.50	0.50	0.00	
	17 ^c	4/19-4/22	2,654	4,004	-	-	0	-	-	-	-	-	-	-	-	-	-
	18	4/26-4/29	1,913	2,015	52.1	58.4	4	37.00	0.00	0.50	1.00	0.25	1.25	1.00	2.00	0.00	
	19	5/3-5/6	1,782	2,030	56.9	60.1	4	30.75	0.00	0.25	11.50	1.50	1.00	6.75	3.50	0.00	
Weitchpec RST	10	3/1-3/4	4,194	4,597	-	-	4	66.25	0.00	0.50	0.00	0.25	0.00	0.00	1.25	0.00	
	11	3/8-3/11	3,461	3,687	46.2	46.6	4	50.75	0.00	0.50	0.00	0.25	0.00	0.00	0.50	0.00	
	12	3/15-3/18	4,470	5,610	48.2	48.4	1	18.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	
	13	3/22-3/24	4,110	5,290	48.9	50.5	3	46.00	0.00	0.00	0.00	0.33	5.33	0.00	5.00	0.00	
	14	3/29-4/1	4,480	5,190	50.2	52.0	4	21.00	0.00	0.00	0.00	0.25	0.00	0.00	5.00	0.00	
	15	4/5-4/8	4,730	6,000	48.2	51.6	4	20.50	0.00	0.00	0.00	0.00	0.50	0.50	9.75	0.00	
	16	4/12-4/15	4,560	5,280	49.5	49.6	2	33.50	0.00	0.00	0.00	0.50	0.00	0.00	5.50	0.00	
	17 ^c	4/19-4/22	8,750	11,600	-	-	0	-	-	-	-	-	-	-	-	-	-
	18	4/26-4/29	7,380	8,720	50.0	51.8	4	6.75	0.00	0.00	1.00	0.25	0.00	0.00	0.75	0.00	
	19	5/3-5/6	7,260	11,400	49.8	50.5	3	5.67	0.00	0.00	0.33	0.67	1.00	0.67	4.00	0.00	
Weitchpec US Frame	11	3/8-3/11	3,461	3,687	46.2	46.6	4	23.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	12	3/15-3/18	4,470	5,610	-	-	0	-	-	-	-	-	-	-	-	-	
	13	3/22-3/24	4,110	5,290	48.9	50.5	3	35.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	14	3/30-4/1	4,480	5,130	50.2	50.5	3	16.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	15	4/7-4/8	4,730	4,940	50.5	51.6	2	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	16	4/12-4/15	4,560	5,280	49.5	49.6	2	20.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	17 ^c	4/19-4/22	8,750	11,600	-	-	0	-	-	-	-	-	-	-	-	-	
	18 ^c	4/26-4/29	7,380	8,720	-	-	0	-	-	-	-	-	-	-	-	-	
	19 ^c	5/3-5/6	7,260	11,400	-	-	0	-	-	-	-	-	-	-	-	-	

^a mean daily discharge range during sampling dates (discharge below IGD used for Bogus and I-5 sites; flow at Kinsman Site is Klamath River flow at Seiad minus Scott River flow; discharge at Weitchpec Site is discharge near Orleans)

^b temperature recorded at time of trap check

^c trap not set this week because trapping operations were limited due to a flow event and/or hatchery release



Klamath River Outmigrant Monitoring Update

May 9, 2022

Table 4. In-season summary of clinical signs of disease in young-of-the-year Chinook Salmon by site at the Bogus, I-5, and Kinsman sites on the mainstem Klamath River, 2022. *Note: Although only Chinook Salmon are reported in this table, we also monitor clinical signs of diseases in Coho Salmon and other species.*

USFWS 2022 Mainstem Klamath River YOY Chinook Salmon Clinical Signs of Disease Summary

U.S. Fish & Wildlife Service, Arcata Fish & Wildlife Office, 1655 Heindon Road, Arcata, CA 95521, (707)822-7201

Preliminary Data - Subject to Revision

Site	Calendar week	Sampling dates	Weekly mean flow (cfs) ^a	Water temp. (°F) ^b		Belly condition			Gills									
				Min	Max	Sample size	Distended		Sample size	Color		Condition						
							# positive	%		Pale or worse	Eroded or fungal							
Bogus	10	3/2-3/4	980	43.8	44.2	40	0	0.0%	0	-	-	-	-	-	-	-	-	
	11	3/8-3/11	994	44.6	45.3	51	0	0.0%	0	-	-	-	-	-	-	-	-	
	12 ^d	3/14-3/18	993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	13	3/22-3/25	995	48.7	51.0	70	0	0.0%	1	0	-	0	-	-	-	-	-	
	14	3/29-4/1	1,061	50.1	50.9	87	0	0.0%	2	0	-	0	-	-	-	-	-	
	15	4/5-4/8	1,310	50.7	51.6	90	0	0.0%	7	0	-	0	-	-	-	-	-	
	16	4/12-4/15	1,877	50.9	50.9	30	0	0.0%	5	0	-	0	-	-	-	-	-	
	17 ^d	4/19-4/22	2,599	-	-	0	-	-	0	-	-	-	-	-	-	-	-	-
	18	4/26-4/28	1,309	53.7	53.9	89	8	9.0%	23	1	-	0	-	-	-	-	-	
	19	5/3-5/6	1,211	52.1	53.8	89	1	1.1%	30	0	0.0%	2	6.7%	-	-	-	-	
I-5	10	3/1-3/4	980	41.9	43.8	98	0	0.0%	0	-	-	-	-	-	-	-	-	
	11	3/8-3/11	994	42.6	44.0	161	0	0.0%	0	-	-	-	-	-	-	-	-	
	12	3/15-3/18	993	43.8	44.9	114	0	0.0%	2	0	-	0	-	-	-	-	-	
	13	3/22-3/25	995	45.2	46.9	128	0	0.0%	2	0	-	0	-	-	-	-	-	
	14	3/29-4/1	1,061	48.1	49.6	158	0	0.0%	7	0	-	0	-	-	-	-	-	
	15	4/5-4/8	1,310	48.7	50.3	93	0	0.0%	36	0	0.0%	0	0.0%	-	-	-	-	
	16	4/12-4/15	1,877	47.4	49.1	151	1	0.7%	111	1	0.9%	0	0.0%	-	-	-	-	
	17	4/19-4/22	2,599	48.9	49.4	87	0	0.0%	68	0	0.0%	0	0.0%	-	-	-	-	
	18	4/26-4/29	1,309	52.3	52.8	177	1	0.6%	110	0	0.0%	0	0.0%	-	-	-	-	
	19	5/3-5/6	1,211	51.2	52.7	160	0	0.0%	110	0	0.0%	0	0.0%	-	-	-	-	
Kinsman	10	3/1-3/4	1,367	45.0	47.2	85	0	0.0%	3	0	-	0	-	-	-	-	-	
	11	3/8-3/11	1,345	43.3	46.5	85	0	0.0%	12	0	-	0	-	-	-	-	-	
	12	3/15-3/18	1,410	44.7	47.8	67	0	0.0%	13	0	-	0	-	-	-	-	-	
	13	3/22-3/25	1,444	47.1	52.8	90	0	0.0%	41	0	0.0%	0	0.0%	-	-	-	-	
	14	3/29-4/1	1,507	49.1	51.4	90	0	0.0%	66	0	0.0%	0	0.0%	-	-	-	-	
	15	4/5-4/8	1,752	49.2	55.5	90	0	0.0%	78	0	0.0%	0	0.0%	-	-	-	-	
	16	4/12-4/15	2,070	47.4	49.8	90	1	1.1%	88	0	0.0%	0	0.0%	-	-	-	-	
	17 ^d	4/19-4/22	3,311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18	4/26-4/29	1,978	52.1	58.4	85	0	0.0%	82	0	0.0%	0	0.0%	-	-	-	-	
	19	5/3-5/6	1,939	56.9	60.1	74	3	4.1%	69	0	0.0%	0	0.0%	-	-	-	-	
Weitchpec	10	3/1-3/4	4,167	-	-	120	0	0.0%	0	-	-	-	-	-	-	-	-	
	11	3/8-3/11	3,644	46.2	46.6	195	0	0.0%	0	-	-	-	-	-	-	-	-	
	12	3/15-3/18	4,542	48.2	48.4	7	0	-	0	-	-	-	-	-	-	-	-	
	13	3/22-3/24	4,750	48.9	50.5	176	0	0.0%	0	-	-	-	-	-	-	-	-	
	14	3/29-4/1	4,937	50.2	52.0	105	0	0.0%	9	0	-	0	-	-	-	-	-	
	15	4/5-4/8	5,024	48.2	51.6	59	0	0.0%	26	0	-	0	-	-	-	-	-	
	16	4/12-4/15	4,914	49.5	49.6	40	0	0.0%	32	0	0.0%	0	0.0%	-	-	-	-	
	17 ^d	4/19-4/22	9,094	-	-	0	-	-	0	-	-	-	-	-	-	-	-	-
	18	4/26-4/29	8,243	50.0	51.8	13	0	-	2	0	-	0	-	-	-	-	-	
	19	5/3-5/6	9,256	49.8	50.5	16	0	-	7	0	-	0	-	-	-	-	-	

^a discharge below IGD used for Bogus and I-5 sites; discharge at Kinsman Site is Klamath River discharge near Seiad Valley minus discharge in the Scott River near Fort Jones; discharge at Weitchpec Site is discharge near Orleans

^b temperature recorded at time of trap check/seine

^c sample size too low for a reportable calculation

^d trap not set this week because trapping operations were limited due to a flow event and/or hatchery release



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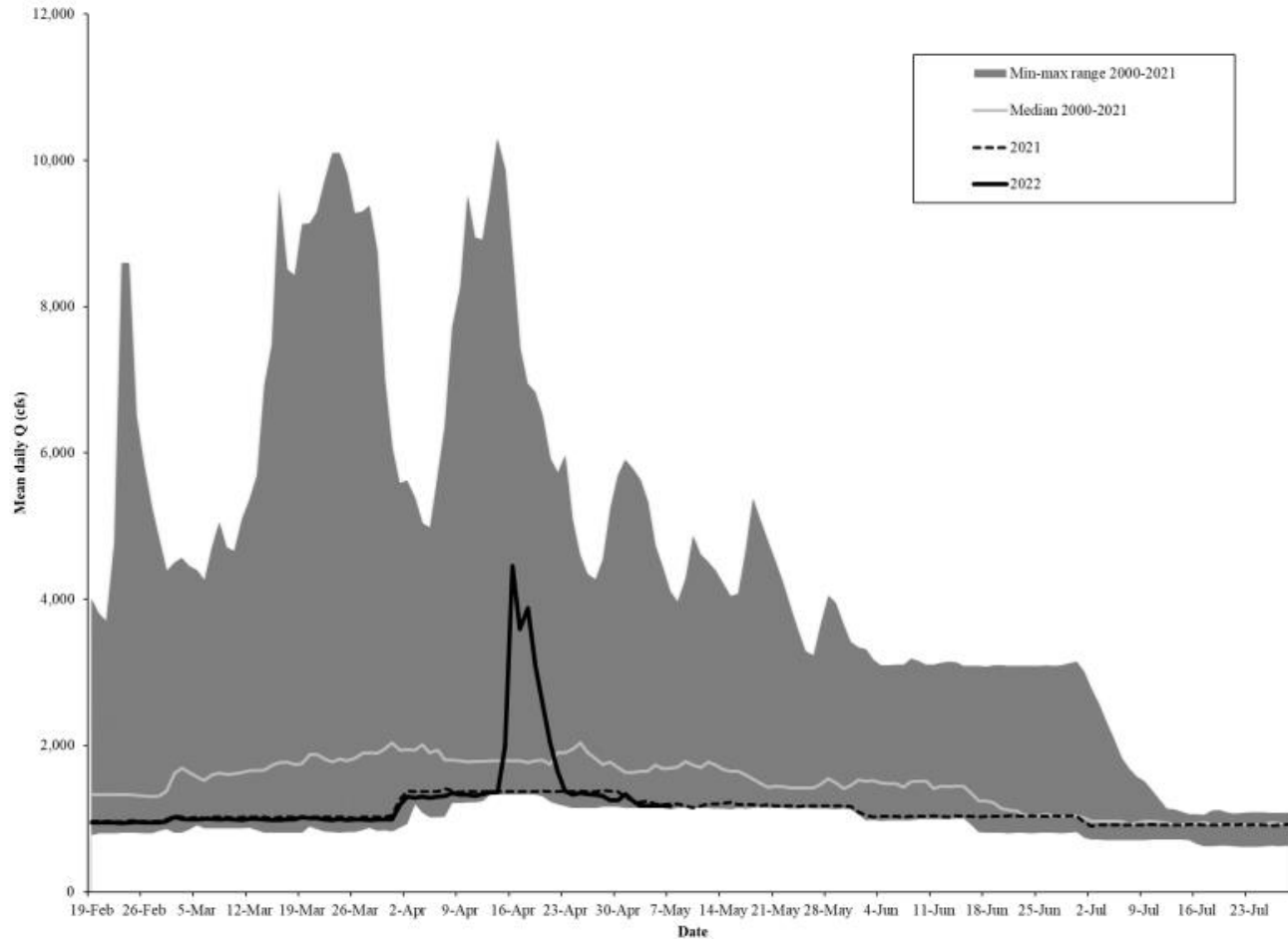


Figure 1. Daily mean discharge below Iron Gate Dam, Klamath River (USGS Gaging Station 11516530) from late February through July, 2000–2022.



Klamath River Outmigrant Monitoring Update May 9, 2022

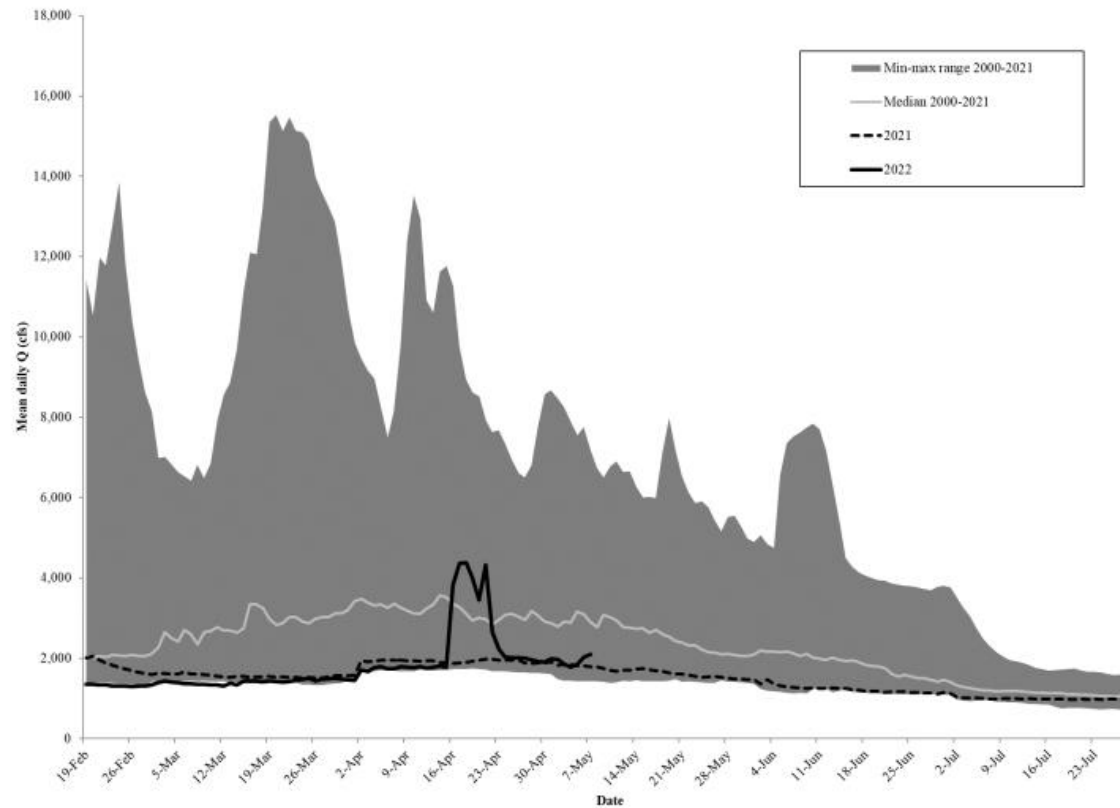


Figure 2. Klamath River daily mean discharge at the Kinsman Trap Site from late February through July 2000–2020. Flow measurements are not available at this location. Therefore, Klamath River flow near Seiad Valley, California (USGS Gaging Station 11520500) minus flow from the Scott River near Fort Jones, California (USGS 11519500) is used as a surrogate.



Klamath River Outmigrant Monitoring Update May 09, 2022

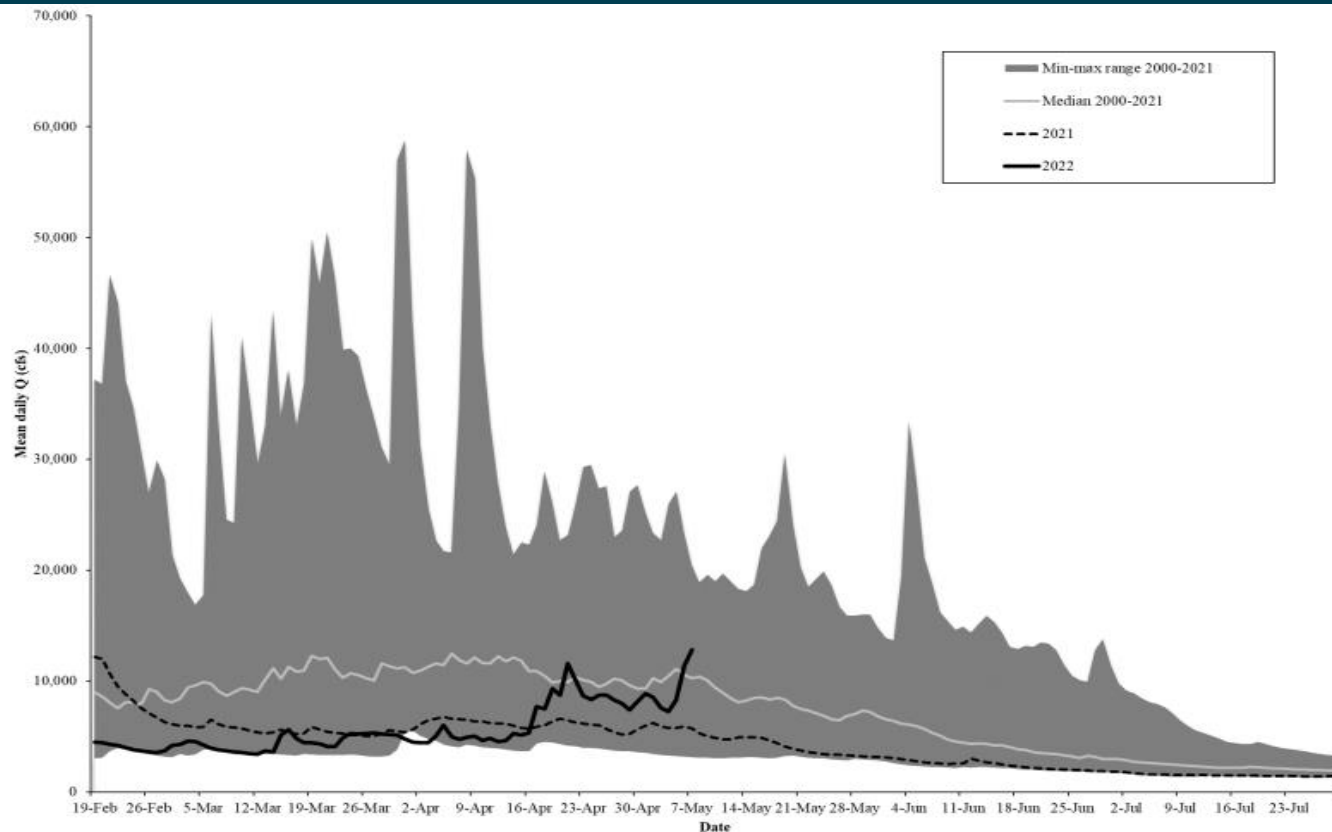
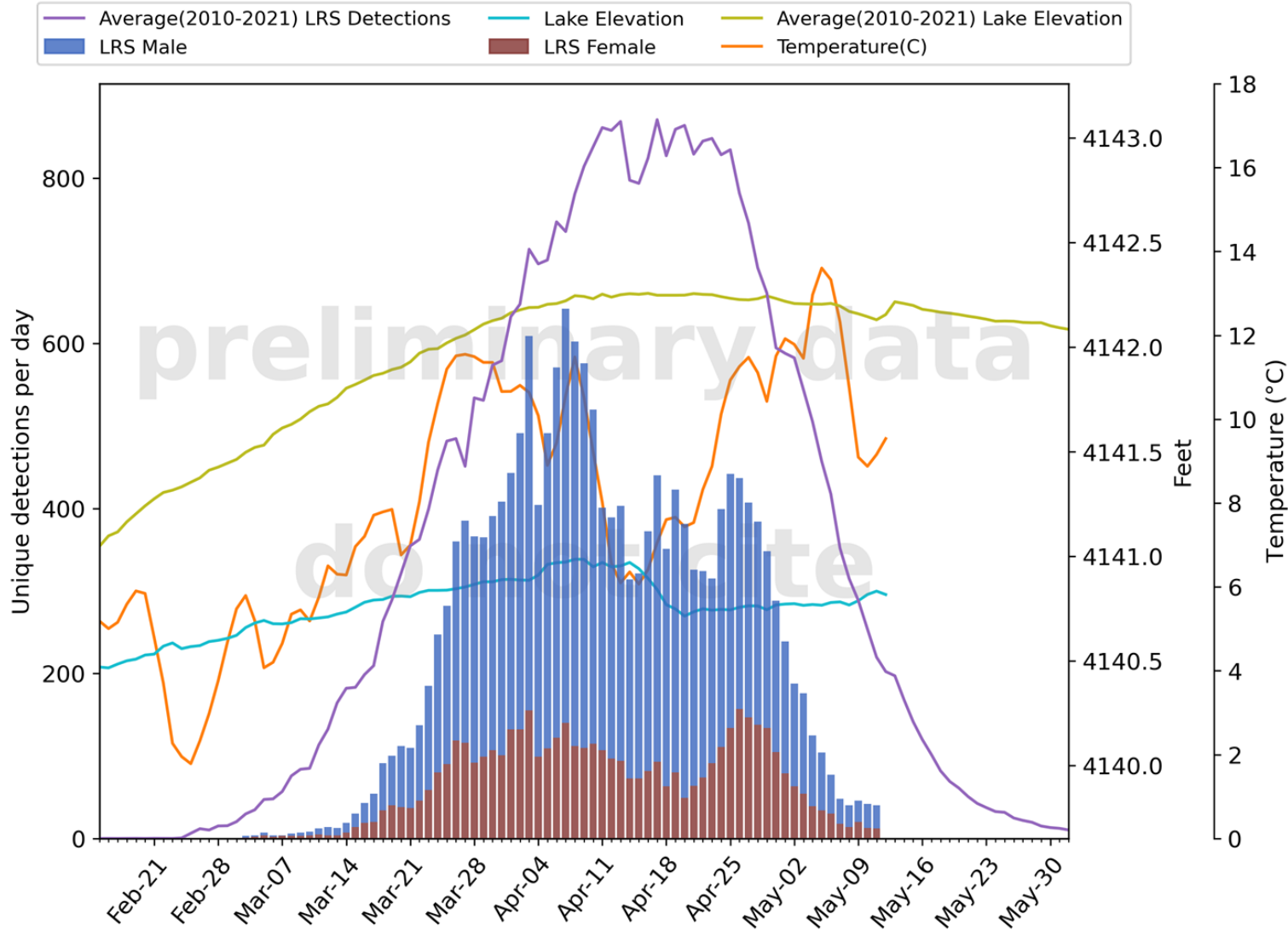


Figure 3. Daily mean discharge of Klamath River at Orleans, California (USGS Gaging Station 10523000) from late February through July 2000–2022.

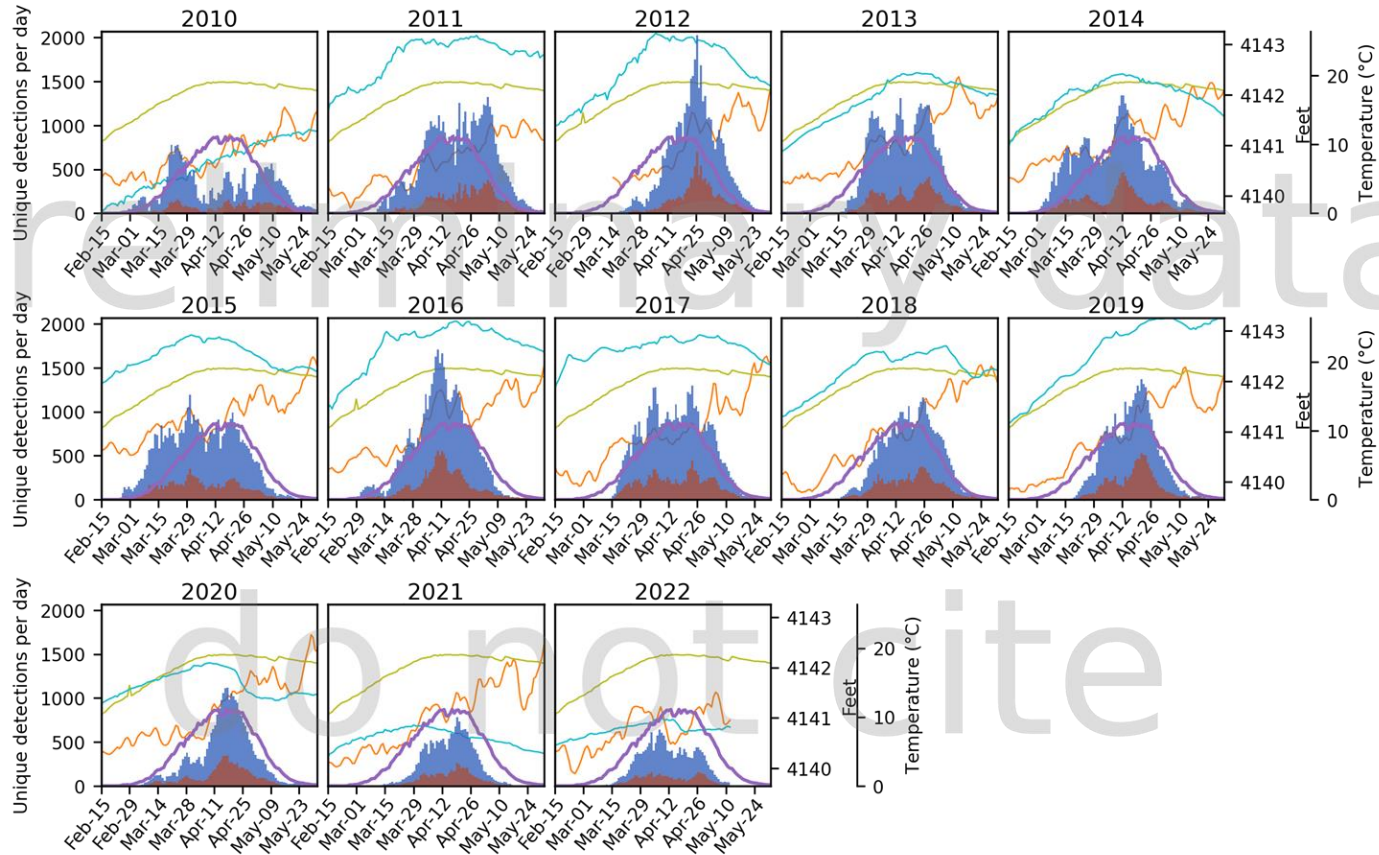


UKL Sucker Spawning Update May 12- 2022

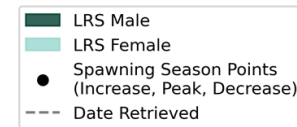
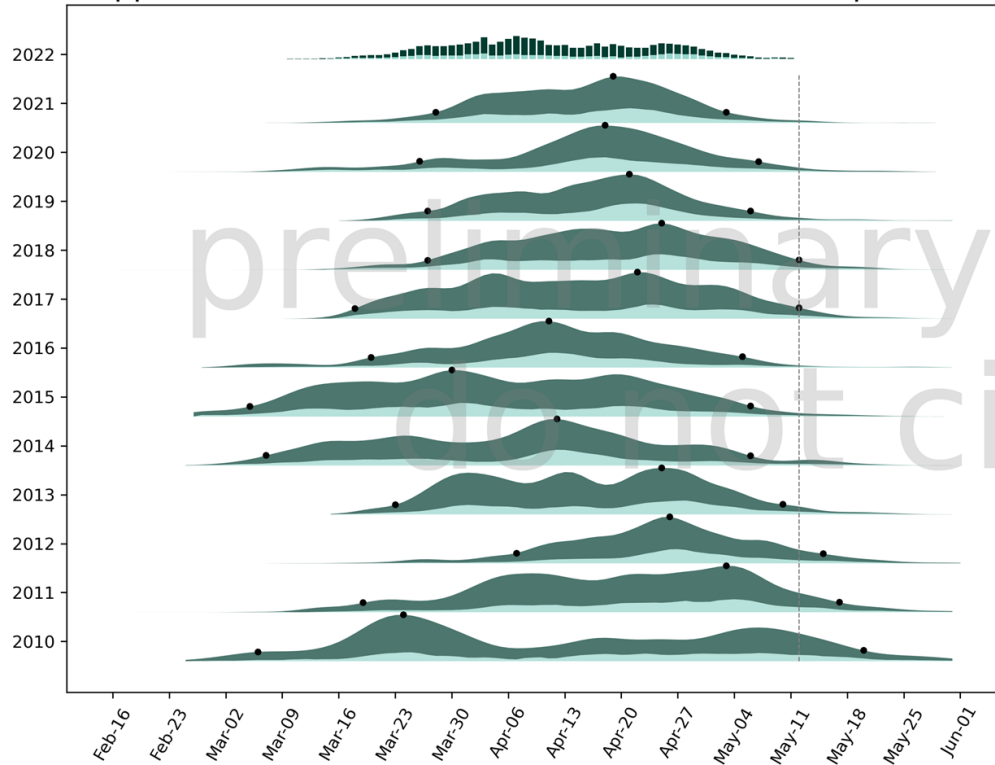
Upper Klamath Lake Lost River Sucker Shoreline Spawners 2022



Upper Klamath Lake Lost River Sucker Shoreline Spawners



Upper Klamath Lake Lost River Sucker Shoreline Spawners

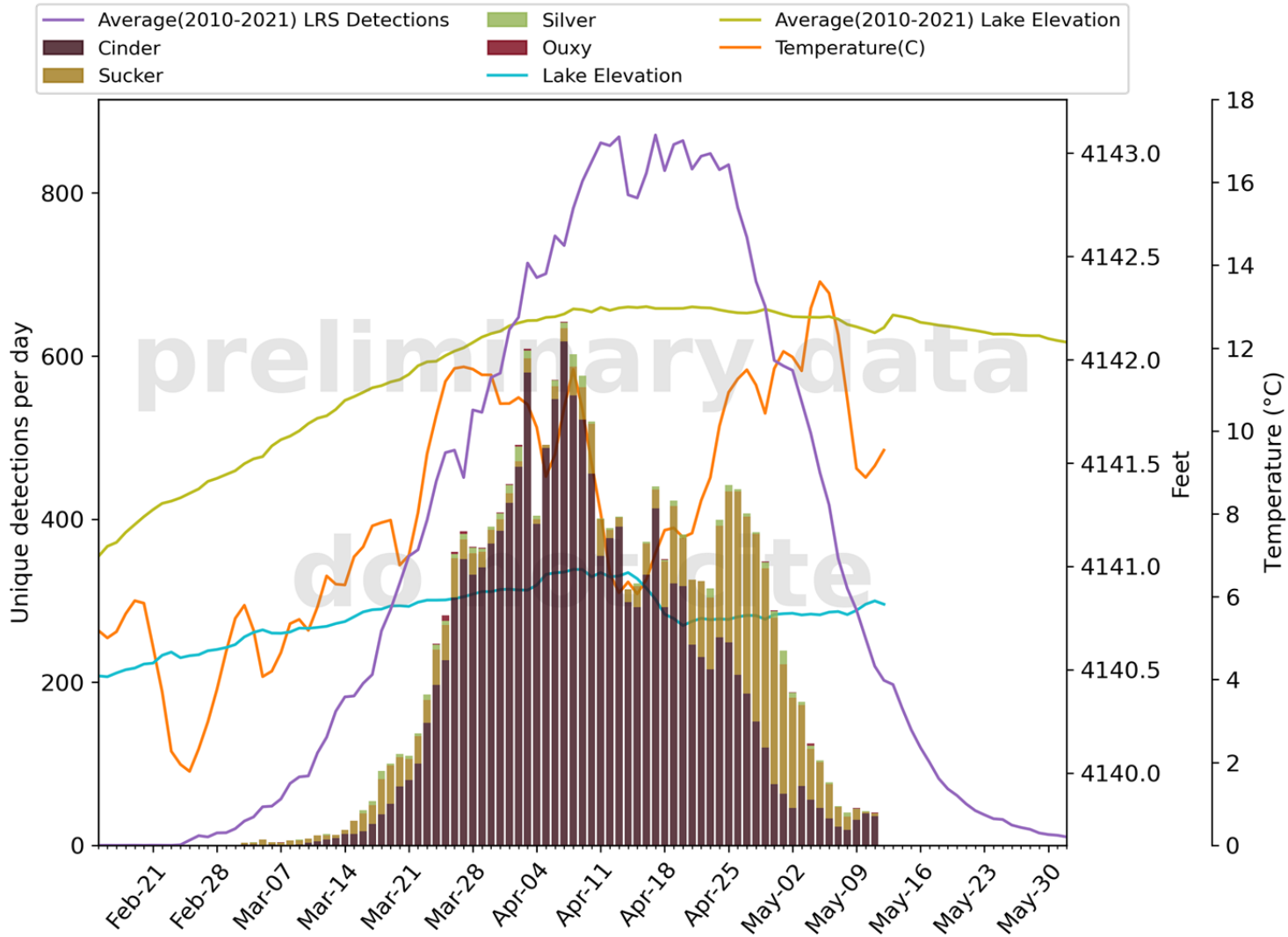


Year	Elevation Start	Elevation End	Male	Female	*Increase Temp	*Peak Temp	*Decrease Temp
2022	4140.5	4140.8	999	1484	9.5° - Most Recent		
2021	4140.2	4140.3	1214	1879	8.0°	13.5°	14.4°
2020	4141.3	4141.5	1574	2368	7.5°	12.6°	15.7°
2019	4141.1	4143.2	1922	2734	7.2°	12.6°	16.1°
2018	4141.3	4142.2	2124	2893	5.9°	13.3°	14.1°
2017	4141.8	4142.3	2480	3317	8.3°	10.5°	13.6°
2016	4141.5	4142.6	2772	3527	7.4°	15.8°	14.0°
2015	4141.9	4142.2	2880	3424	7.0°	13.4°	15.5°
2014	4140.9	4141.6	2952	3417	7.5°	14.0°	13.7°
2013	4140.9	4142.0	3116	3423	6.3°	12.8°	17.2°
2012	4141.4	4142.2	3222	3358	5.9°	13.7°	16.0°
2011	4141.7	4142.8	3323	3222	3.7°	10.1°	11.0°
2010	4139.7	4141.3	2883	2578	5.4°	9.4°	13.2°

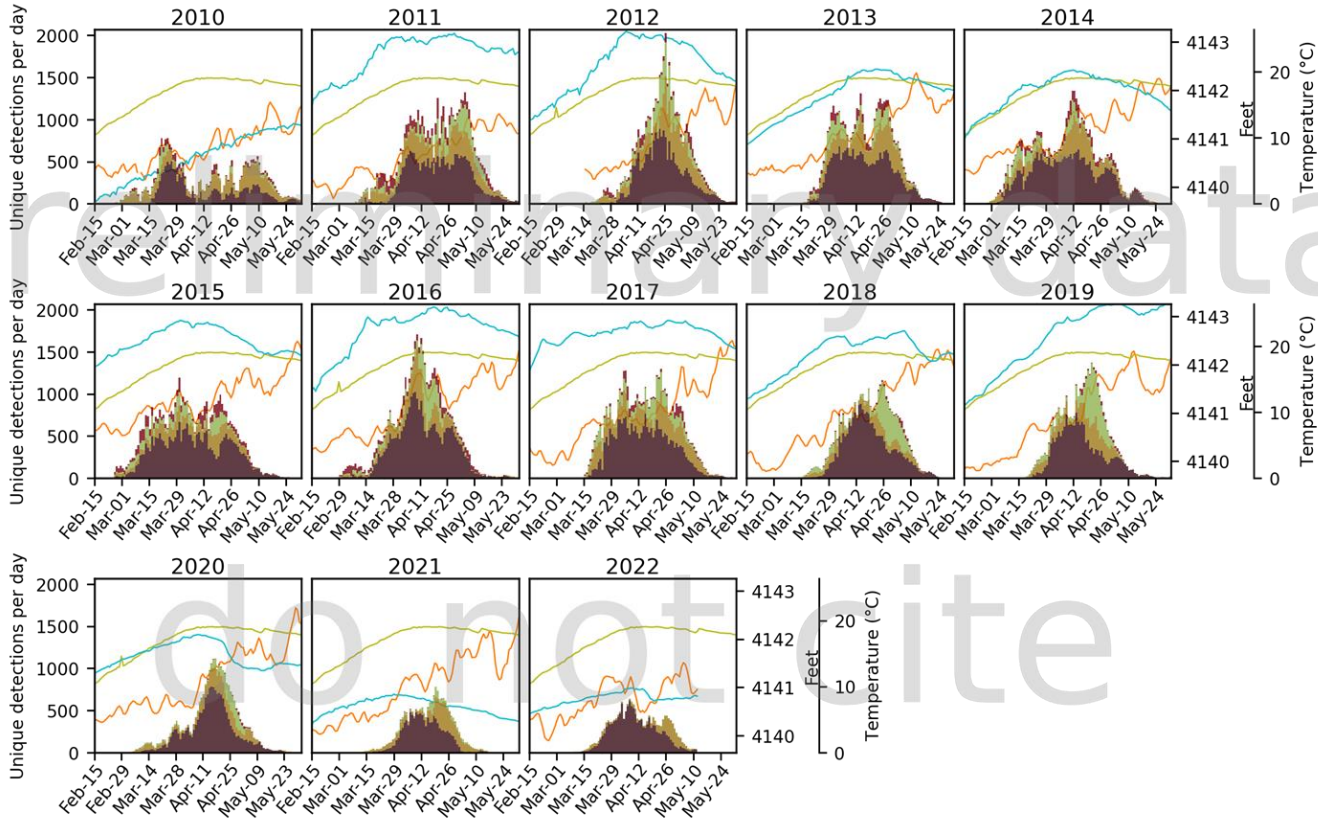
*Initial increase, peak and final decrease of spawning run.



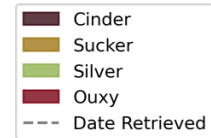
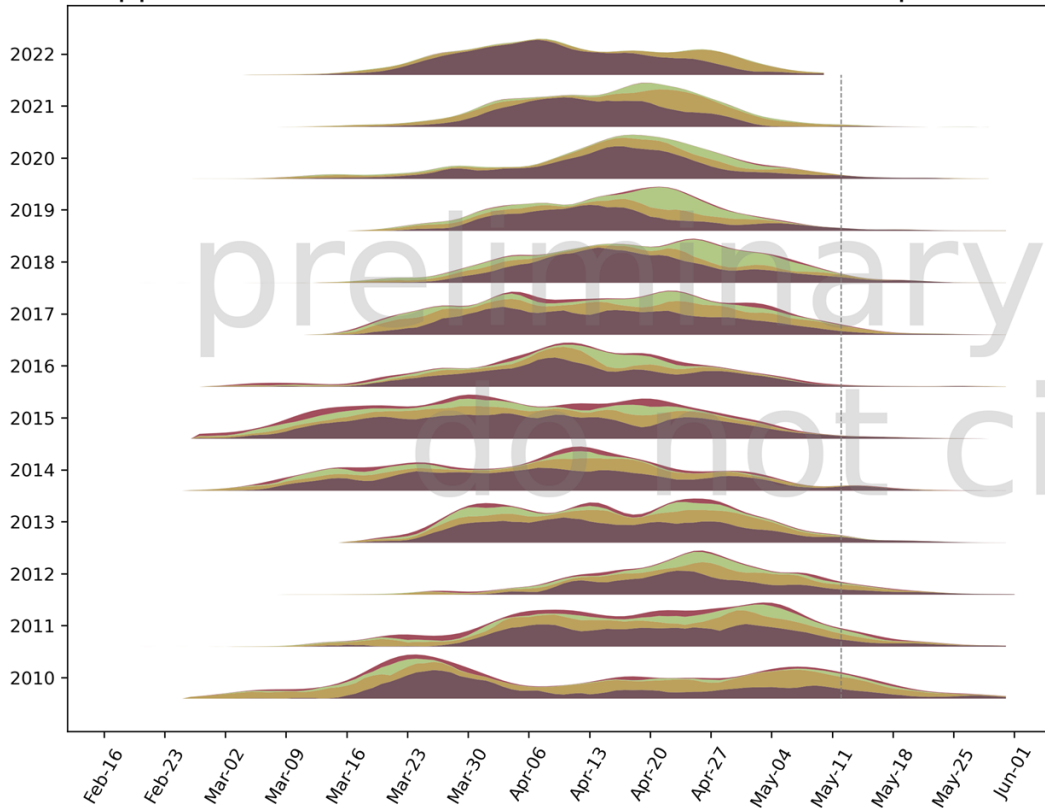
Upper Klamath Lake Lost River Sucker Shoreline Spawners 2022



Upper Klamath Lake Lost River Sucker Shoreline Spawners



Upper Klamath Lake Lost River Sucker Shoreline Spawners

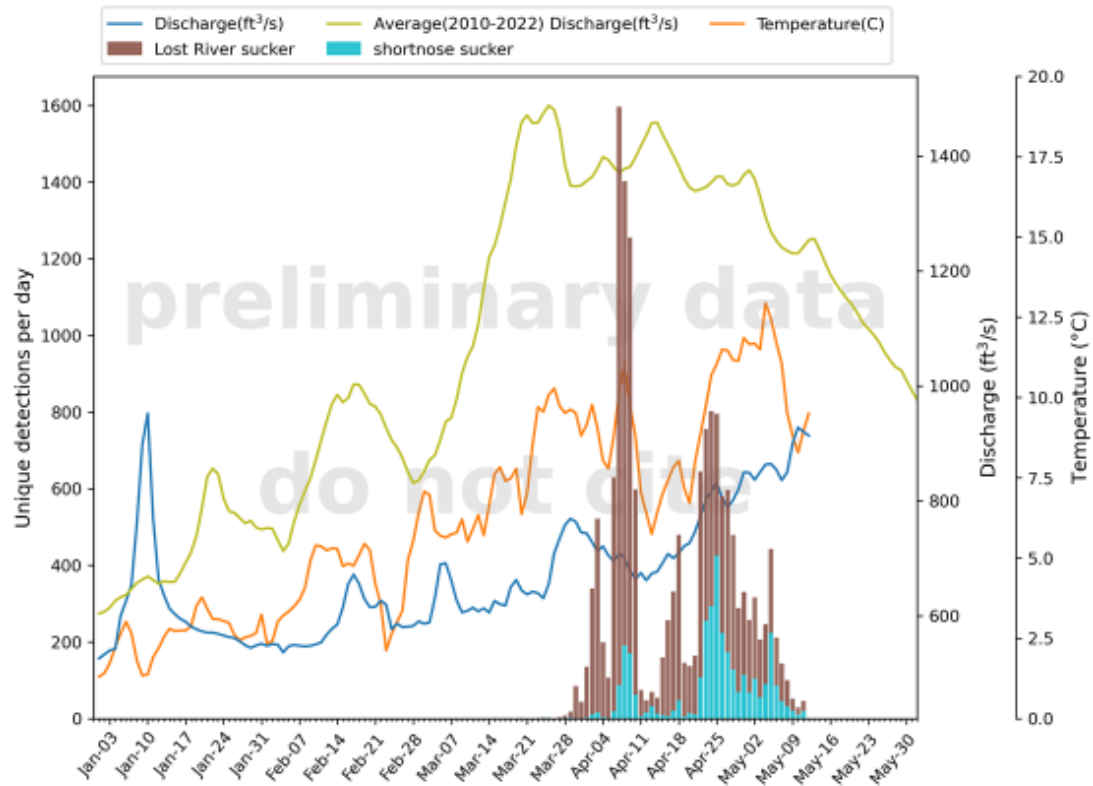


Year	Start Elevation	End Elevation	*Cinder	*Sucker	*Silver	*Ouxy	**Tags Detected
2022	4140.5	4140.8	78.7%	19.5%	1.7%	0.2%	2483
2021	4140.2	4140.3	59.1%	31.8%	8.5%	0.6%	3093
2020	4141.3	4141.5	64.0%	22.5%	12.3%	1.2%	3942
2019	4141.1	4143.2	52.6%	20.8%	24.1%	2.6%	4656
2018	4141.3	4142.2	60.7%	15.0%	21.9%	2.4%	5017
2017	4141.8	4142.3	54.0%	27.0%	13.8%	5.3%	5797
2016	4141.5	4142.6	59.3%	18.2%	13.7%	8.8%	6299
2015	4141.9	4142.2	57.4%	18.7%	12.4%	11.4%	6304
2014	4140.9	4141.6	59.9%	23.0%	9.0%	8.1%	6369
2013	4140.9	4142.0	55.5%	25.3%	12.3%	6.9%	6539
2012	4141.4	4142.2	49.5%	28.4%	15.8%	6.4%	6580
2011	4141.7	4142.8	46.3%	27.2%	14.4%	12.0%	6545
2010	4139.7	4141.3	42.9%	40.1%	8.0%	9.1%	5461

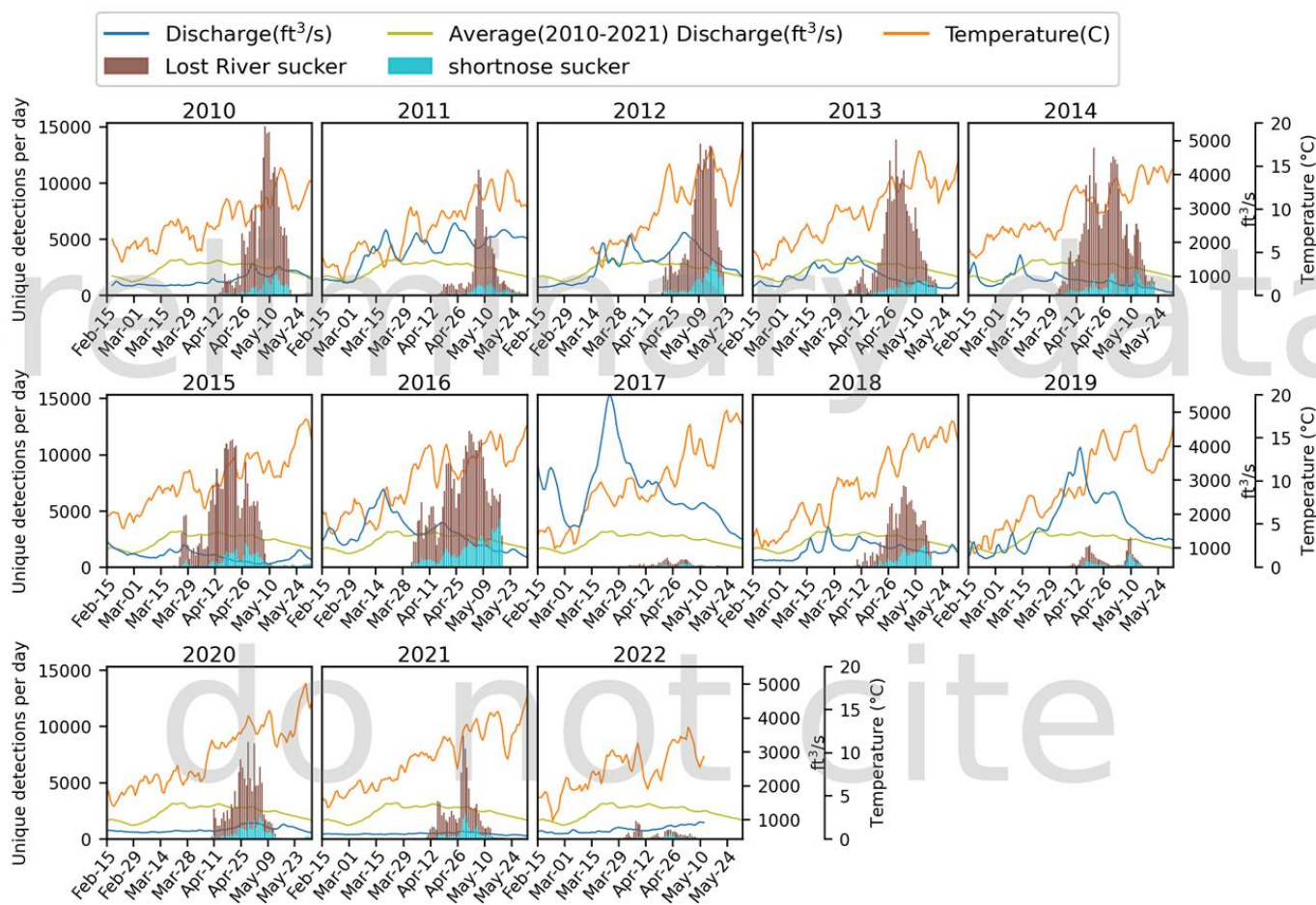
*Percent of unique daily detections.
 **Unique tags detected.



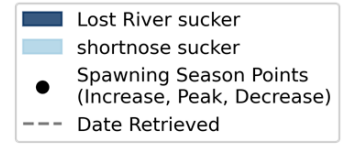
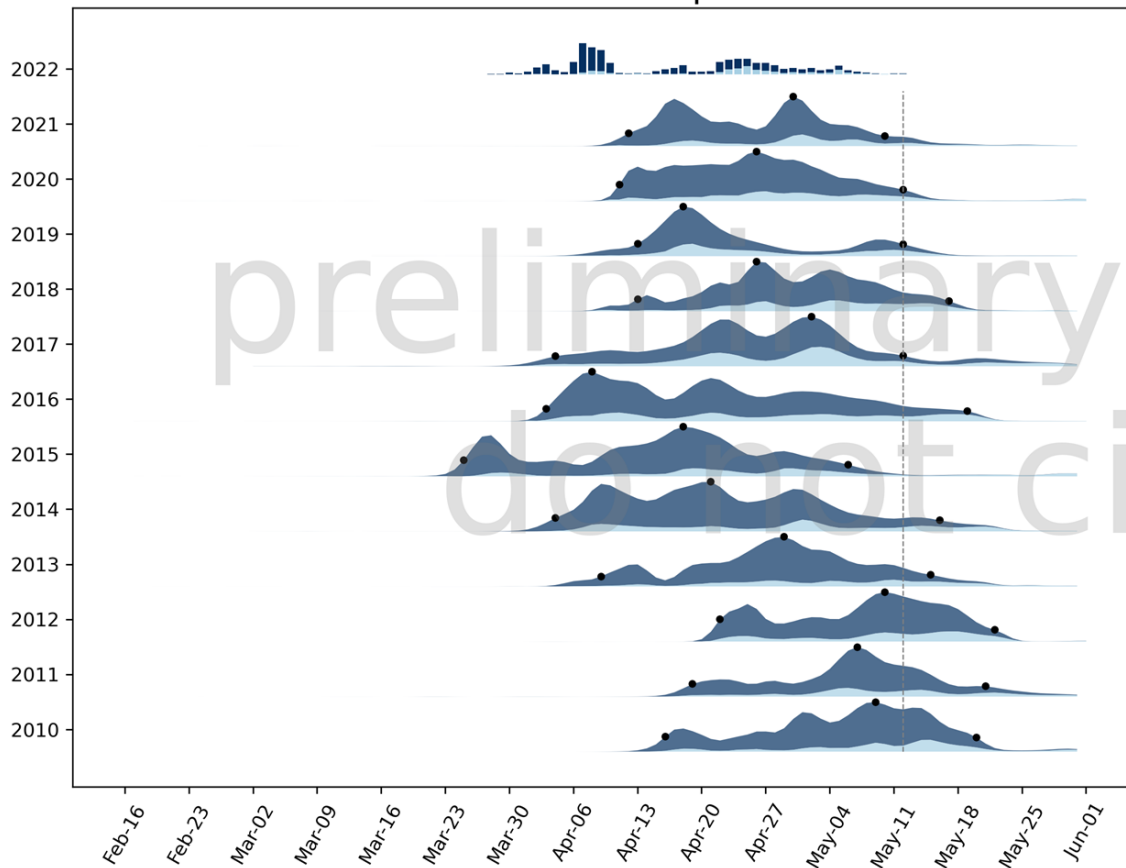
Williamson River - 2022



Williamson River



Williamson River Spawners



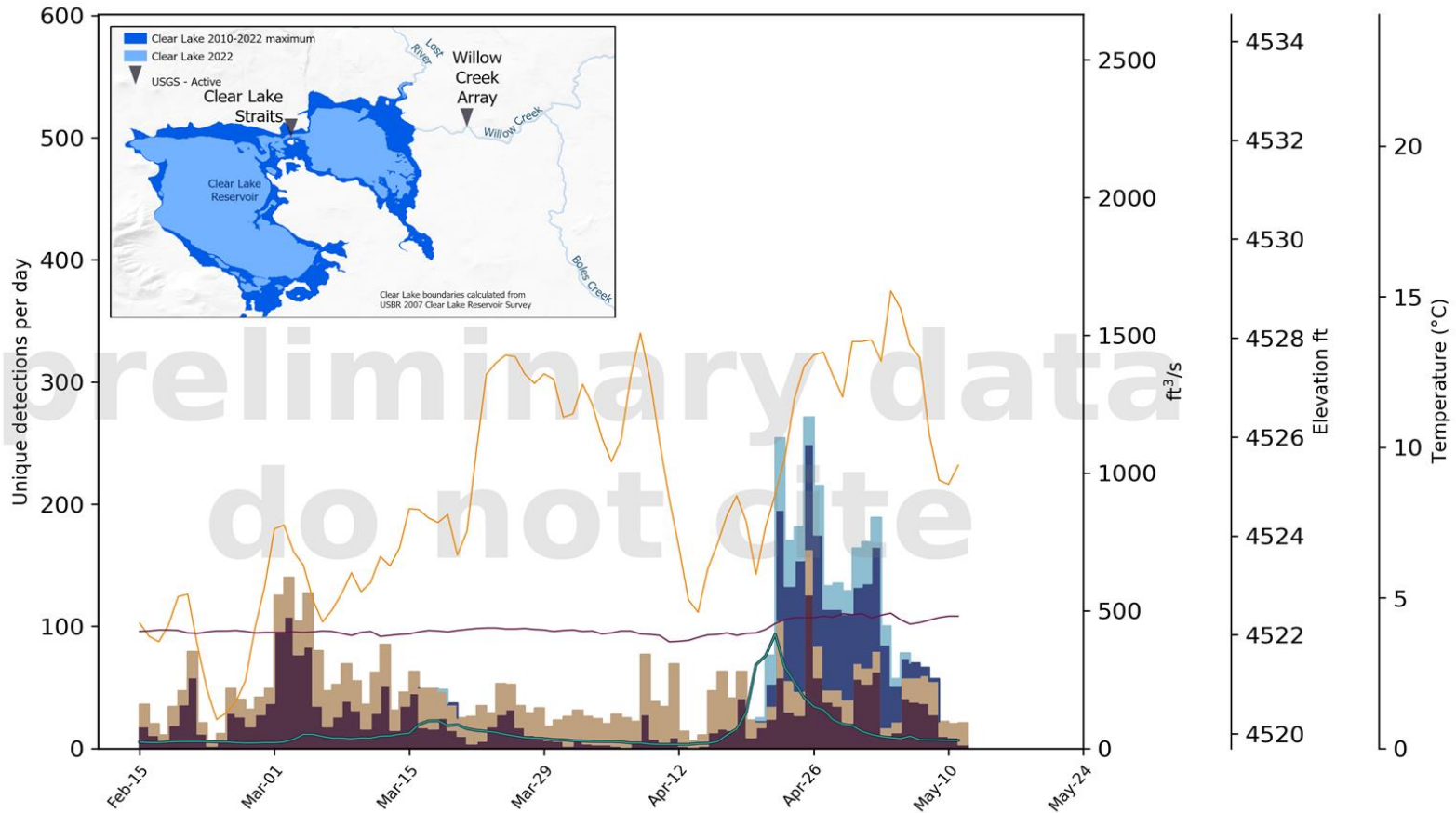
Year	Lost River sucker	shortnose sucker	*Increase Temp	*Peak Temp	*Decrease Temp
2022	10441	2741	9.5°	13.0°	11.9°
2021	12499	3495	9.6°	12.1°	14.3°
2020	14202	3970	11.4°	12.1°	14.3°
2019	11554	3921	9.2°	11.4°	16.5°
2018	13549	4578	8.0°	14.0°	13.9°
2017	7780	3511	10.3°	13.5°	13.5°
2016	27678	7667	11.3°	12.6°	15.4°
2015	25130	6598	9.1°	11.8°	11.7°
2014	23426	6402	7.6°	11.3°	15.1°
2013	22159	6127	8.8°	13.1°	15.1°
2012	19224	6181	12.6°	15.0°	14.6°
2011	16214	5370	9.7°	12.2°	14.1°
2010	15417	6378	10.2°	11.4°	12.0°

*Initial increase, peak and final decrease of spawning run.



Clear Lake - Willow Creek/Straits Arrays 2022

- Willow Creek Temperature (°C)
- Shortnose/Klamath Largescale sucker Willow Creek
- Shortnose/Klamath Largescale sucker Straits
- West Lobe Elevation
- Lost River sucker Willow Creek
- Lost River sucker Straits
- Willow Creek Discharge



Clear Lake - Willow Creek and Straits Arrays

