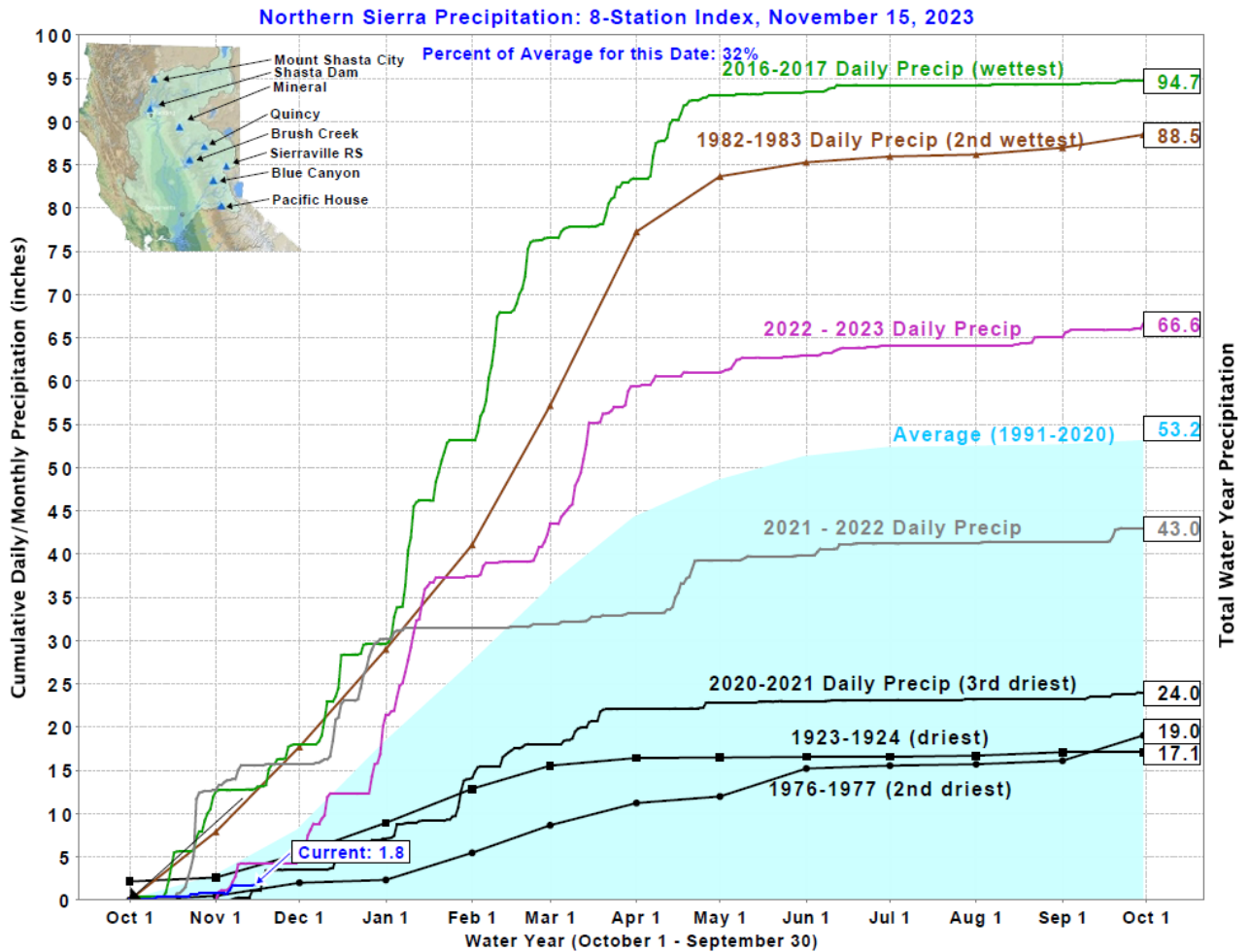




Sacramento River Temperature Task Group Meeting Packet

November 16, 2022



Northern Sierra Precipitation: 8-Station Index, November 16, 2023

This figure shows a line graph precipitation at the Northern Sierra 8-station Index. The graph includes the current cumulative daily and monthly precipitation, 61.0 (127% average for this date), in inches, average for 1991-2020 (53.2), daily precipitation for 2016-2017 (94.7 wettest), 1982-1983 (88.5 2nd wettest), 2018-2019 (70.7), 2021-2022 (43.0), 2019-2020 (31.7), 2020-2021 (24.0 3rd driest), 1976-1977 (19.0 2nd driest), and 1923-1924 (17.1 driest).

Daily Central Valley Project Water Supply Report

United States Department of the Interior
 U.S. Bureau of Reclamation, Central Valley Project-California
 Daily CVP Water Supply Report

October 18, 2023

Run Date: October 19, 2023

Reservoir Releases in Cubic Feet Per Second

Reservoir	Dam	WY 2023	WY 2024	15-Year Median
Trinity	Lewiston	304	292	303
Sacramento	Keswick	3,726	4,998	4,804
Feather	Oroville (SWP)	2,000	1,750	1,750
American	Nimbus	1,320	2,070	1,798
Stanislaus	Goodwin	202	206	206
San Joaquin	Friant	501	428	375

Storage in Major Reservoirs in Thousands of Acre-Feet

Reservoir	Capacity	15-Yr Avg	WY 2023	WY 2024	% O 15 Yr Avg
Trinity	2,448	1,225	532	1,210	99
Shasta	4,552	2,242	1,397	3,112	139
Folsom	977	382	266	516	135
New Melones	2,420	1,246	585	1,905	153
Fed. San Luis	966	384	185	713	186
Total North CVP	11,363	5,479	2,965	7,456	136
Millerton	521	245	313	146	59
Oroville (SWP)	3,538	1,492	1,022	2,362	158

Accumulated Inflow for water Year to Date in Thousands of Acre-Feet

Reservoir	Current WY 2024	WY 1977	WY 1983	15-Yr Avg	% O 15 Yr Avg
Trinity	22	12	58	31	71
Shasta	274	342	418	308	89
Folsom	85	67	250	91	94

Reservoir	Current WY 2024	WY 1977	WY 1983	15-Yr Avg	% O 15 Yr Avg
New Melones	71	---	126	51	140
Millerton	166	38	164	82	202

Accumulated Precipitation for Water Year to Date in Inches

Reservoir	Current WY 2024	WY 1977	WY 1983	Avg (N Yrs)	% of Avg	Last 24 Hours
Trinity at Fish Hatchery	1.62	0.85	4.63	3.54 (63)	46	0.04
Sacramento at Shasta Dam	1.14	1.41	6.49	6.28 (68)	18	0.00
American at Blue Canyon	0.00	2.34	10.92	6.23 (49)	0	0.00
Stanislaus at New Melones	1.27	---	5.20	2.60 (46)	49	0.00
San Joaquin at Huntington LK	0.13	1.80	9.60	3.86 (50)	3	0.00

Sacramento River Station Temperature Summary Report

Date	MDWT TCD ¹	MDWT SHD	MDWT SPP ¹	MDWT KWK	MDWT SAC	MDWT CCR ²	MDWT BSF	MDWT BND	MDWT RBD	MDWT IGO	MDWT LWS	MDWT DGC	MDWT NFH	MDR Shasta Genera- tion	MDR Spring Creek PP	MDR Keswick Total	MDAT RDD	MDAT BSF	MDAT RDB
Oct	48.7	47.7	57.7	49.7	50.0	50.7	51.9	52.8	53.7	54.4	49.4	51.6	54.4	5719	511	6313	66.1	60.6	63.3
11/01	49.6	48.3	56.7	49.1	49.2	49.7	50.4	50.5 ^A	50.6	54.1	47.8	47.1	48.2	5284	505	6041	58.5	50.6	54.0
11/02	49.5	48.3	56.7	49.9	49.8	49.9	50.2	50.2 ^A	50.6	53.9	47.8	48.0	49.0	5518	463	5797	56.0	51.4	55.4
11/03	49.3	48.0	56.6	50.1	50.3	50.8	51.2	51.3	51.4	54.9	47.9	49.4	51.2	4872	491	5597	64.5	58.8	62.8
11/04	49.1	48.0	56.4	50.1	50.1	50.6	51.7	52.4 ^A	52.8	54.8	47.8	50.7	52.6	5132	516	5491	63.0	60.3	61.5
11/05	49.2	47.8	56.3	49.9	50.3	50.9	51.6	52.2 ^A	52.7	54.6	47.9	50.1	52.8	4509	502	5200	60.5	59.1	61.2
11/06	49.3	48.3	56.5	50.0	50.2	50.9	52.4	53.6	54.4	54.9	48.1	50.2	52.6	4711	526	5023	60.5	58.8	60.7
11/07	49.2	48.3	56.5	50.2	50.2	50.7	51.5	52.0	52.9	53.7	48.0	49.0	51.1	4227	519	4992	55.0	52.0	54.5
11/08	49.5	48.3	56.6	50.2	50.2	50.6	51.1	51.3 ^A	51.8	53.4	48.0	48.1	49.8	4567	364	5005	56.0	51.3	53.7
11/09	49.3	48.1	56.4	49.6	49.5	49.8	50.4	50.4 ^A	50.9	53.2	48.0	46.7	47.9	4328	561	4328	49.5	44.6	48.7
11/10	49.4	48.5	56.2	50.0	50.0	50.4	50.7	50.7	50.7	53.9	48.2	47.4	48.6	4568	501	4991	57.5	51.3	52.6
11/11	49.7	49.0 ^A	56.2	49.8	49.8	50.3	50.9	51.0 ^A	51.3	53.8	48.3	48.2	49.1	4660	528	4992	56.5	50.3	53.6
11/12	49.1	48.1	55.9	49.9	49.9	50.2	50.7	50.8 ^A	51.2	53.6	48.2	48.0	49.0	4500	512	4995	54.0	49.8	52.0
11/13	49.0	48.1	55.9	49.9	50.1	50.6	51.1	51.2 ^A	51.4	53.7	48.1	48.4	49.4	4528	493	4995	57.5	52.4	53.9
11/14	49.2	47.7 ^A	55.9	49.9	49.7	49.9	50.6	50.9	51.2	53.5	48.1	47.9	49.4	4359	463	4998	52.5	49.1	50.0
Nov	49.3	48.2	56.3	49.9	49.9	50.4	51.0	51.3	51.7	54.0	48.0	48.5	50.1	4697	496	5175	57.3	52.8	55.3
													Total CFS	65763	6944	72445			
													Total AF	130438	13773	143692			

Legend

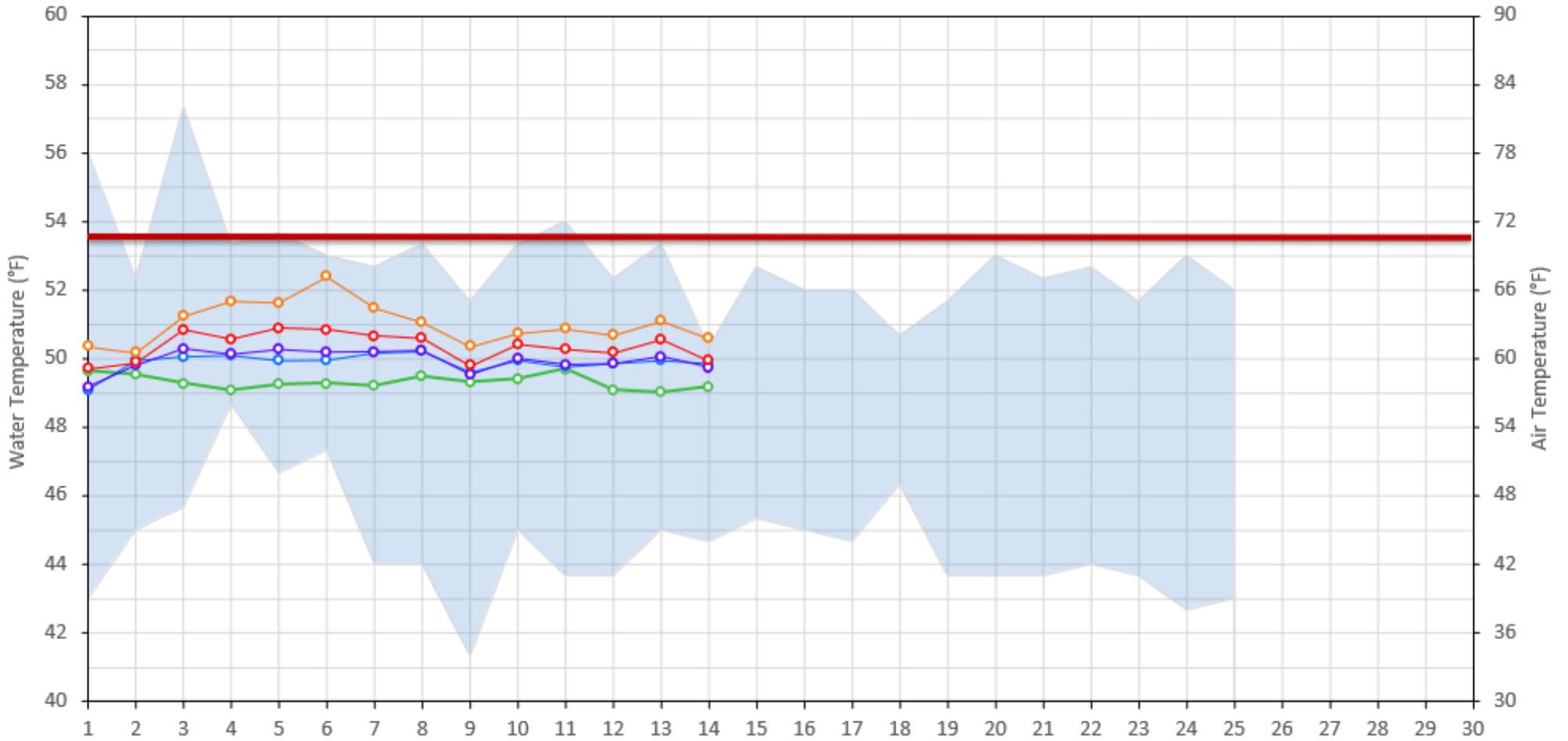
A = 1-9 hours of data missing (Average includes estimations)
B = 10 or more hours of data missing (Average not calculated)
C = Station out of service
D = Record high air temperature
E = Record low air temperature
MDAT = Mean Daily Air Temperatures (Fahrenheit)
MDR = Mean Daily Release (CFS)
MDWT = Mean Daily Water Temperature (Fahrenheit)

Notes

1 Temperatures are weighted averages based on individual penstock flow and temperature
X Highlighted cells in the TCD column indicate a TCD change was made on that day
2 Current Clear Creek River control point (see page 4 for more details)

Sacramento River Mean Daily Temperatures

Redding Air (Observed and Forecasted) TCD KWK SAC CCR BSF



Sacramento River Mean Daily Temperatures

This figure shows mean Sacramento River daily temperatures in degrees Fahrenheit at Shasta Power Plant and various stations 0.8, 4.8, 9.7, and 25 miles downstream of Keswick Dam for the past 25 days. It also includes a shaded area depicting observed and forecasted air temperatures in degrees Fahrenheit in Redding California.

Station Details

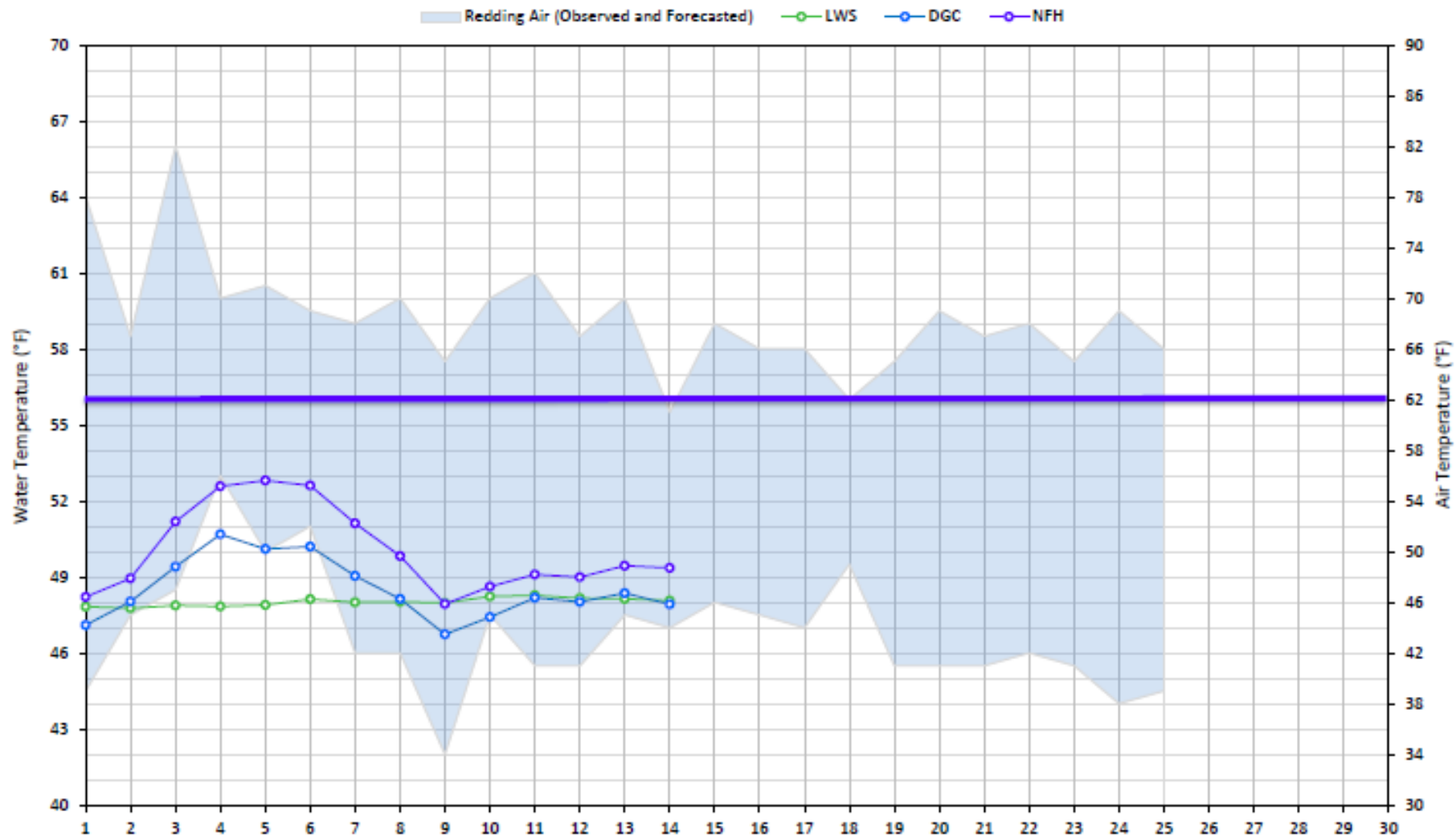
Code	Body of Water	Location ¹
TCD	N/A	Shasta Power Plant
SHD	Sacramento River	0.3 miles downstream of Shasta Power Plant
SPP	N/A	Spring Creek Power Plant
KWK	Sacramento River	0.8 miles downstream of Keswick Dam
SAC	Sacramento River	4.8 miles downstream of Keswick Dam
CCR	Sacramento River	9.7 miles downstream of Keswick Dam
BSF	Sacramento River	25 miles downstream of Keswick Dam
JLF	Sacramento River	34 miles downstream of Keswick Dam
BND	Sacramento River	41 miles downstream of Keswick Dam
RDB	Sacramento River	58 miles downstream of Keswick Dam
IGO	Clear Creek	7.3 miles downstream of Whiskeytown Dam

Water Right Temperature Control Points

River	Point	Temp (°F)	Begin Date	End Date
Sacramento	SAC	54.5	06/07/2022	05/14/2023
Sacramento	CCR	53.5	05/14/2023	TBD

Notes: ¹ Distances are approximate

Trinity River Mean Daily Temperatures



Trinity River Mean Daily Temperatures

This figure shows mean Trinity River daily temperatures in degrees Fahrenheit at stations 1.1, 19, and 38 miles downstream of Lewiston Dam for the past 25 days. It also includes a shaded area depicting observed and forecasted air temperatures in degrees Fahrenheit in Redding California.

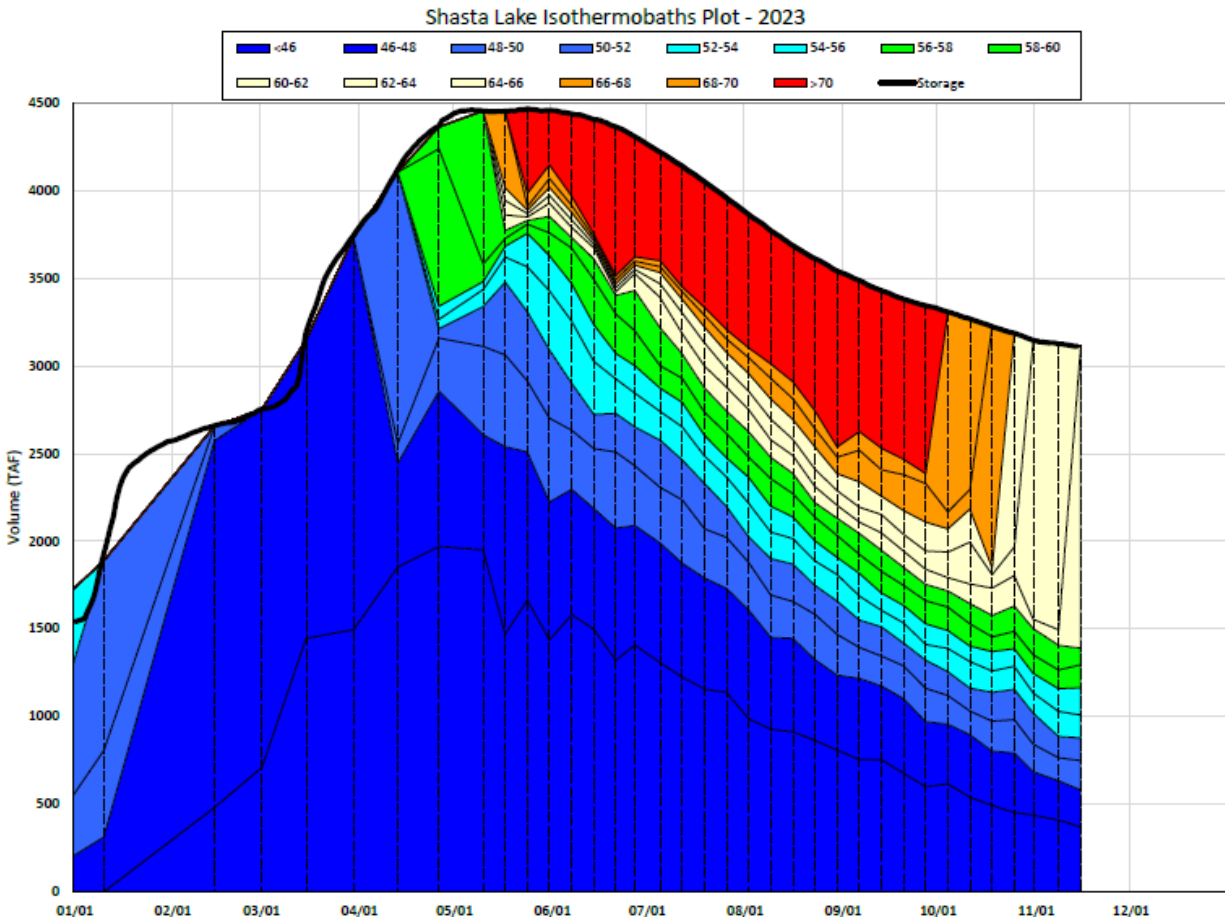
Station Details

Code	Body of Water	Location ¹
LWS	Trinity River	1.1 miles downstream of Lewiston Dam
DGC	Trinity River	19 miles downstream of Lewiston Dam
NFH	Trinity River	38 miles downstream of Lewiston Dam

Water Right Temperature Control Points

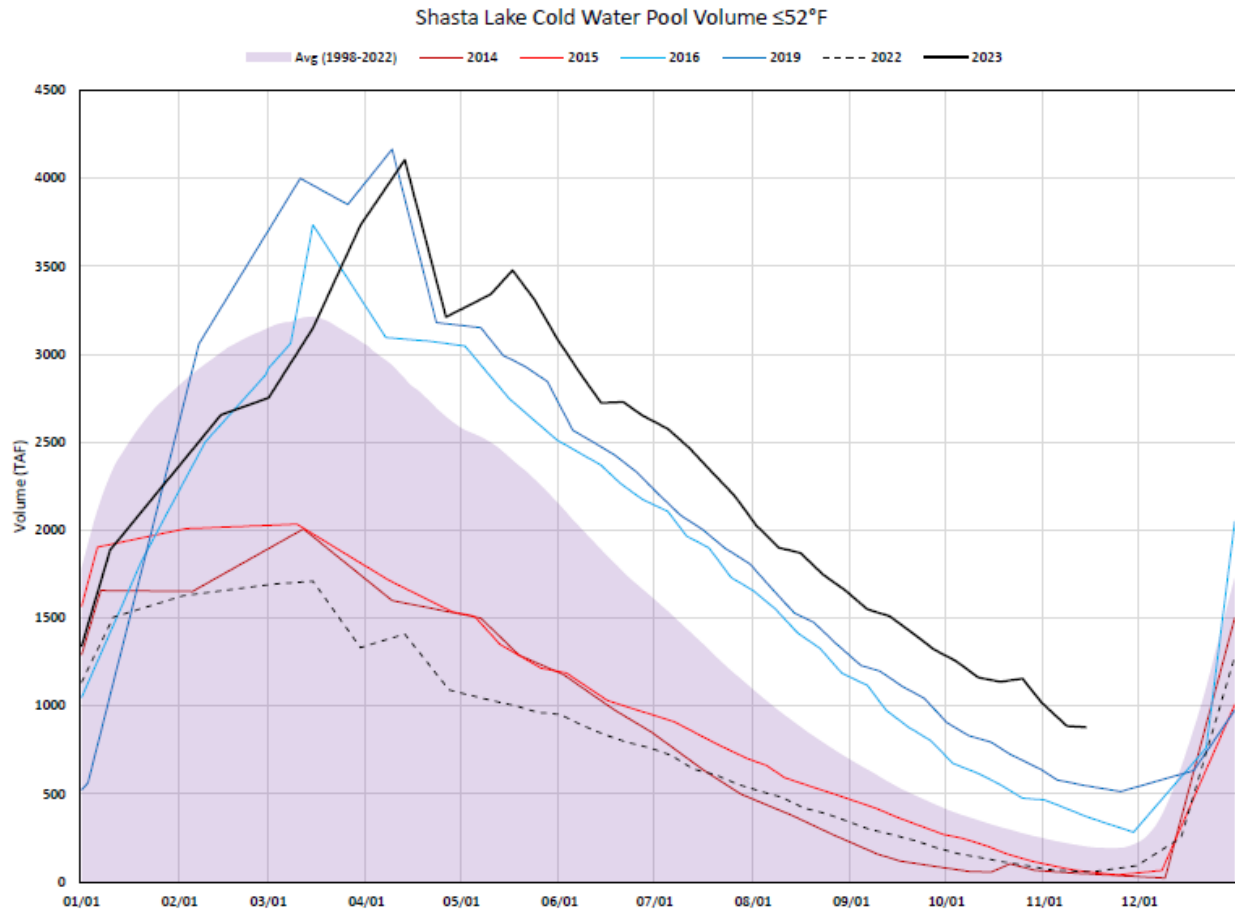
River	Point	Temp (°F)	Begin Date	End Date
Trinity	DGC	56	Sep-15	Oct-01
Trinity	NFH	56	Oct-01	Dec-31

Notes: ¹ Distances are approximate



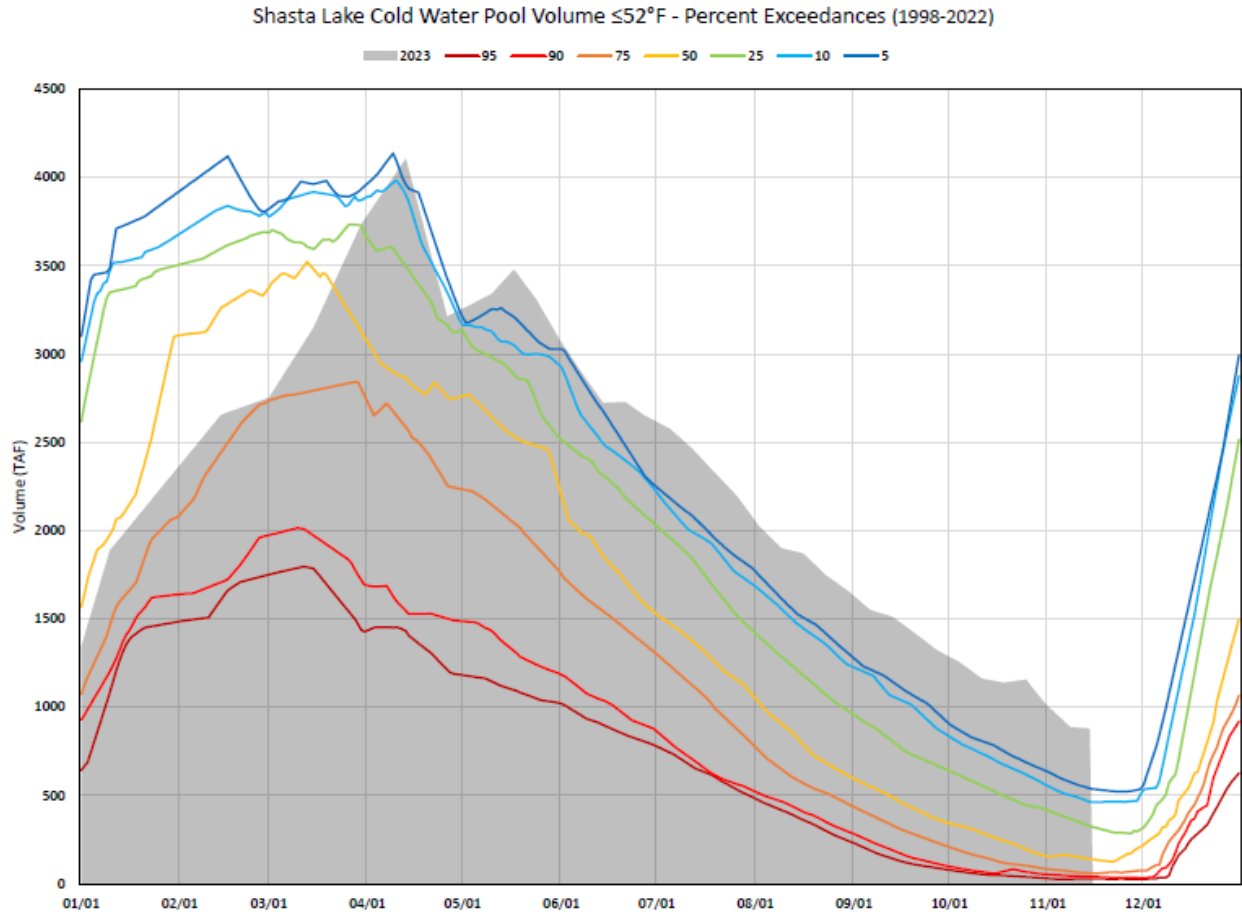
Shasta Lake Isothermobaths Plot - 2023

This figure is a chart showing Shasta Lake Isothermobaths with volume in Thousand Acre-Feet from 0-4500; with dates 01/01-12/01.



Shasta Lake Cold Water Pool Volume ≤52°F

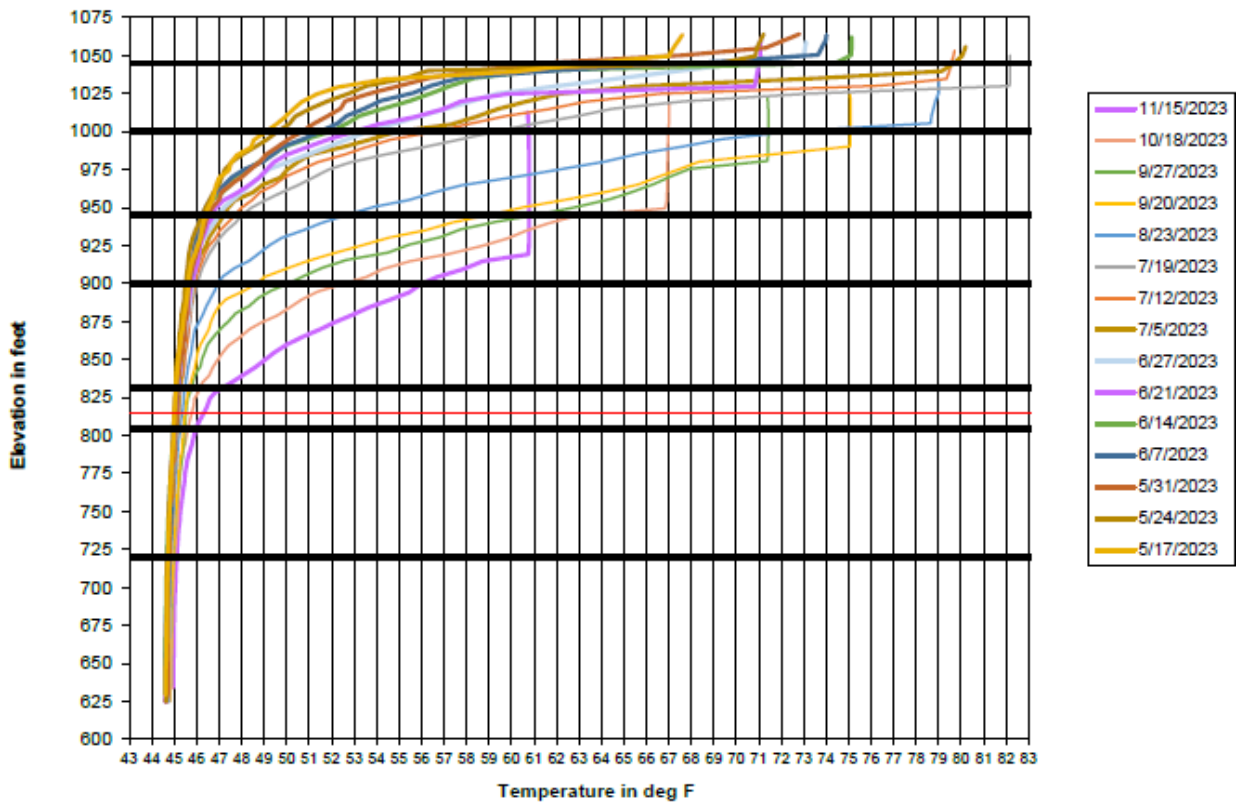
This figure is a line graph showing Shasta Lake Cold Water Pool Volume equal to or less than 52 degrees Fahrenheit from 01/01 to 12/01.



Shasta Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$ - Percent Exceedances (1998-2022)

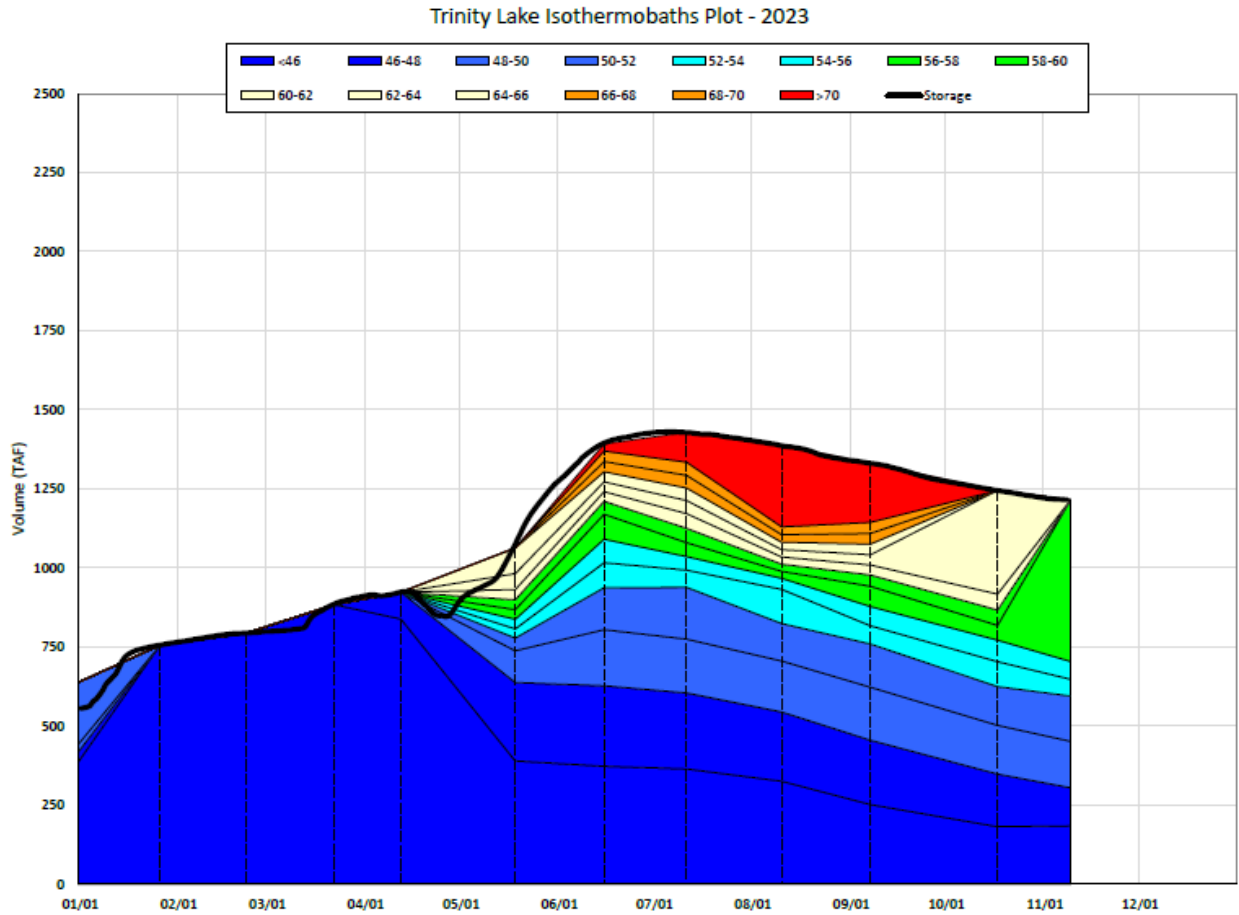
This figure is a line graph showing Shasta Lake Cold Water Pool Volume less than or equal to 52 degrees Fahrenheit as percent exceedances from 01/01 to 12/01.

2023 Shasta Temperature Profiles



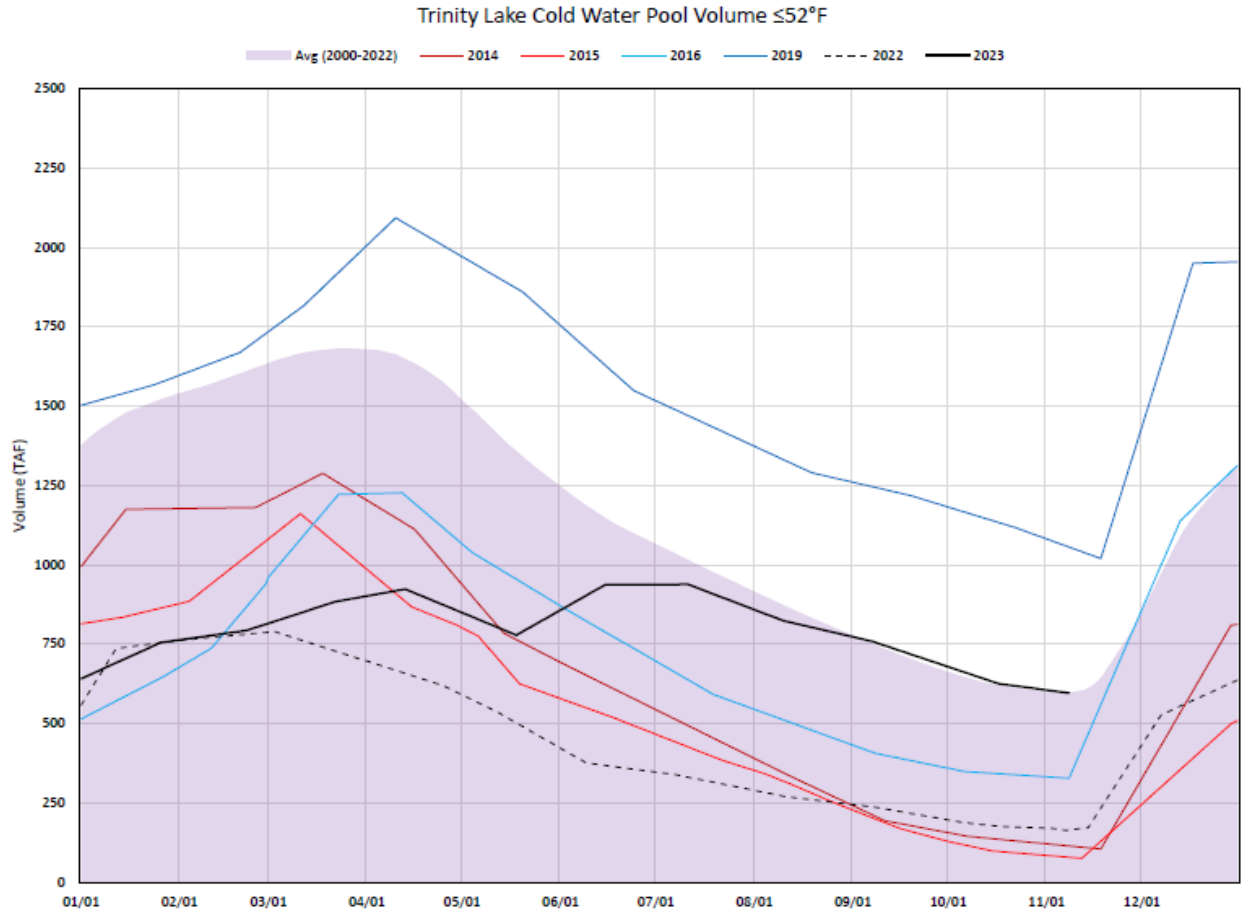
2023 Shasta Temperature Profiles

This figure is a multiple line graph showing Shasta Lake temperature profiles from 05/17-11/15 with lake elevation 600-1075' and lake temperatures from 43-83 degrees fahrenheit.



Trinity Lake Isothermobaths Plot - 2023

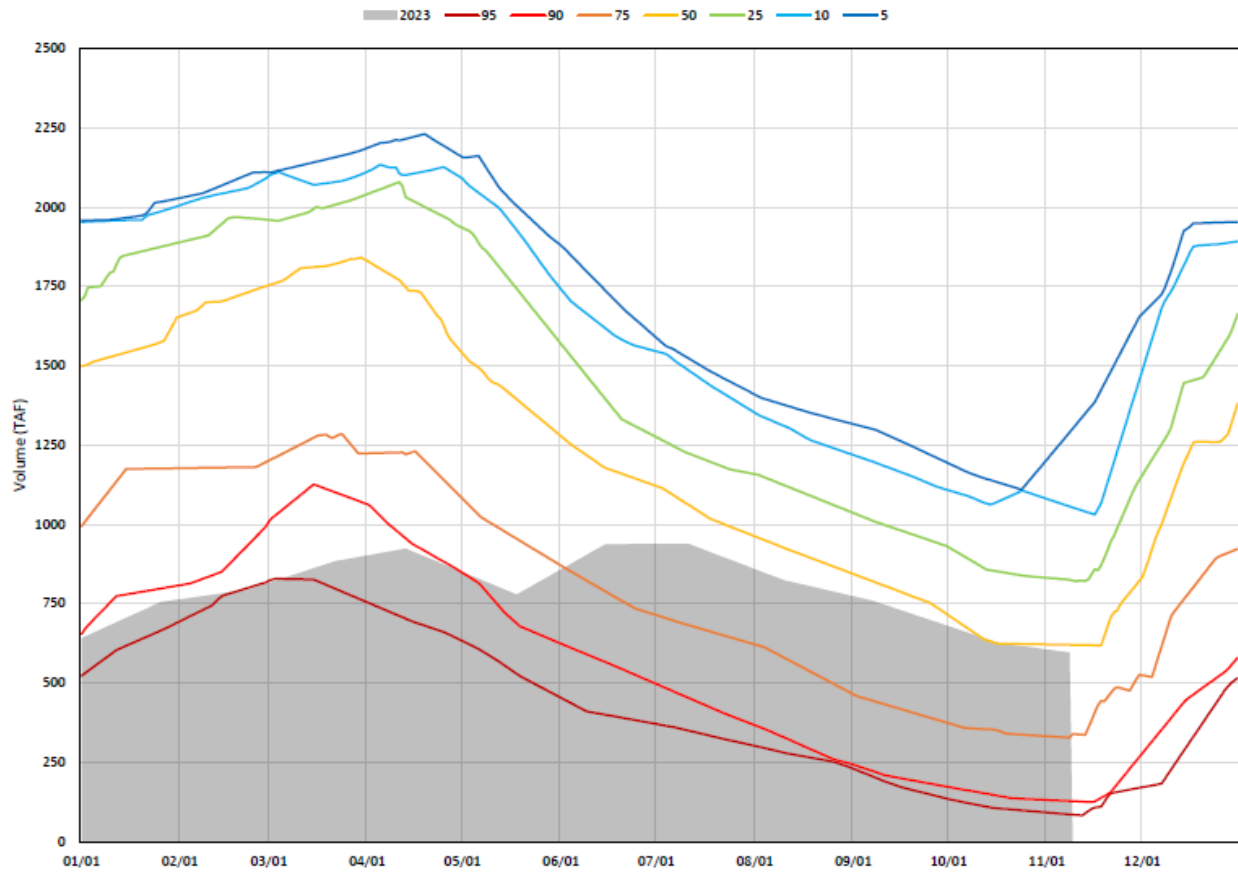
This figure is a chart showing Trinity Lake Isothermobaths with volume in Thousand Acre-Feet from 0-2500; with dates 01/01-12/01.



Trinity Lake Cold Water Pool Volume ≤52°F

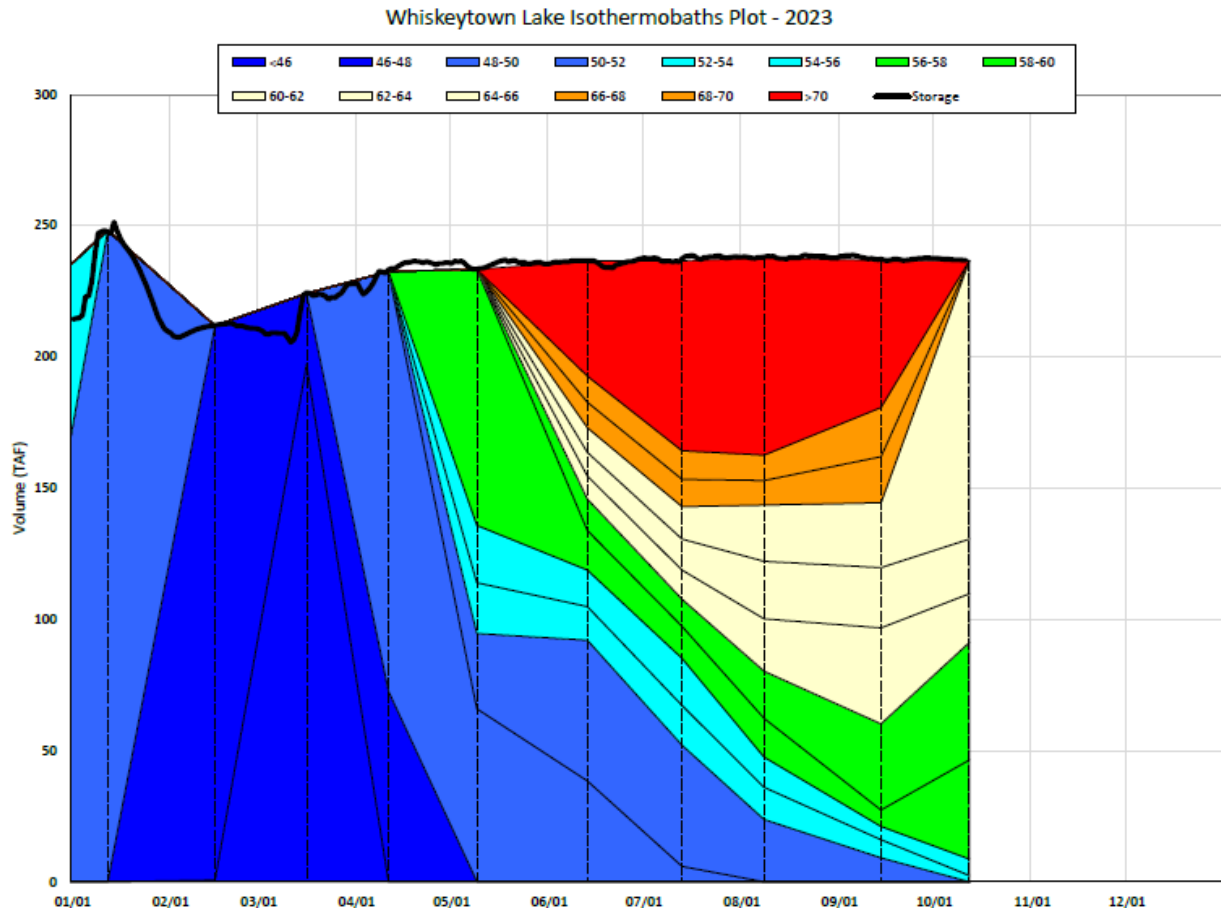
This figure is a line graph showing Trinity Lake Cold Water Pool Volume equal to or less than 52 degrees Fahrenheit from 01/01 to 12/01.

Trinity Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$ - Percent Exceedances (2000-2022)



Trinity Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$ - Percent Exceedances (2000-2022)

This figure is a line graph showing Trinity Lake Cold Water Pool Volume less than or equal to 52 degrees Fahrenheit as percent exceedances from 01/01 to 12/01.



Whiskeytown Lake Isothermobaths Plot - 2023

This figure is a chart showing Whiskeytown Lake Isothermobaths with volume in Thousand Acre-Feet from 0-300; with dates 01/01-12/01.

Estimated CVP Operations 90% Exceedance

Storages – Federal End of the Month Storage/Elevation (TAF/Feet)

Facility	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Trinity	1275	1223	1225	1247	1260	1297	1365	1439	1393	1385	1328	1246	1155
Trinity Elev.	N/A	2278	2279	2281	2282	2285	2292	2298	2294	2293	2288	2281	2272
Whiskeytown	238	238	206	206	206	206	206	238	238	238	238	238	238
Whiskeytown Elev.	N/A	1209	1199	1199	1199	1199	1199	1209	1209	1209	1209	1209	1209
Shasta	3332	3147	3123	3133	3142	3242	3481	3546	3357	2958	2495	2200	1983
Shasta Elev.	N/A	1014	1013	1014	1014	1018	1028	1030	1023	1006	984	969	956
Folsom	667	551	475	415	370	390	470	584	682	564	412	272	200
Folsom Elev.	N/A	423	413	405	399	402	413	427	437	424	405	382	367
New Melones	1896	1888	1901	1915	1917	1916	1943	1846	1751	1662	1576	1517	1489
New Melones Elev.	N/A	1042	1043	1045	1045	1045	1047	1038	1029	1020	1011	1005	1002
San Luis	788	722	807	943	944	925	955	876	696	443	150	46	21
San Luis Elev.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	8196	7769	7737	7860	7840	7976	8420	8531	8117	7250	6199	5520	5086

State End of the Month Reservoir Storage (TAF)

Facility	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Oroville	2596	2353	2191	2147	2256	2402	2621	2777	2693	2503	2130	1734	1499
Oroville Elev.	N/A	814	800	796	806	818	836	848	841	827	795	756	730
State San Luis	869	687	666	642	829	793	839	773	606	383	260	271	146
Total San Luis (TAF)	1657	1408	1473	1585	1773	1719	1795	1649	1302	825	410	317	167
Total San Luis Elev.	N/A	491	497	507	522	518	524	512	482	435	385	372	346

Monthly River Releases (TAF/cfs)

Facility	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Trinity (TAF)	N/A	23	18	18	18	17	18	32	180	47	28	53	52
Trinity (cfs)	N/A	373	300	300	300	300	300	540	2,924	783	450	857	870
Clear Creek (TAF)	N/A	12	12	12	12	11	22	12	18	14	9	9	9
Clear Creek (cfs)	N/A	200	200	200	200	200	363	200	291	242	150	150	150
Sacramento (TAF)	N/A	387	297	307	307	278	277	375	516	625	676	510	416
Sacramento (cfs)	N/A	6300	5000	5000	5000	5000	4500	6300	8400	10500	11000	8300	7000
American (TAF)	N/A	166	119	123	108	83	92	92	77	192	195	182	119

Facility	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
American (cfs)	N/A	2700	2001	2000	1750	1501	1500	1538	1250	3230	3167	2953	2000
Stanislaus (TAF)	N/A	48	12	12	14	22	12	91	76	22	15	15	15
Stanislaus (cfs)	N/A	774	200	200	226	400	200	1537	1242	363	250	250	250
Feather (TAF)	N/A	270	149	108	58	53	58	57	108	131	264	332	268
Feather (cfs)	N/A	4400	2500	1750	950	950	950	950	1750	2200	4300	5400	4500

Trinity Diversions (TAF)

Diversion Facility	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Carr PP	N/A	39	0	0	0	0	0	29	12	12	40	40	40
Spring Creek PP	N/A	30	26	0	0	0	0	0	0	0	30	30	30

Delta Summary (TAF)

Facility	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Tracy	140	200	220	100	125	116	48	49	46	57	173	240
USBR Banks	44	44	44	0	0	0	0	0	0	11	11	0
Contra Costa	14.0	16.0	18.0	14.0	14.0	12.7	12.7	12.7	9.8	11.1	12.7	14.0
Total USBR	198	260	282	114	139	129	60	62	56	79	197	254
State Export	125	266	250	290	68	151	42	43	37	142	374	151
Total Export	323	526	532	404	207	280	102	105	93	221	571	405
COA Balance	0	-1	-1	-1	-1	0	-5	-5	0	-29	11	11
Vernalis (TAF)	201	83	83	93	121	120	181	175	69	54	165	179
Vernalis (cfs)	3263	1393	1355	1511	2183	1957	3038	2843	1153	884	2690	3007
Old/Middle River calc.	-3,167	-6,771	-6,644	-4,971	-2,478	-3,213	-543	-625	-1,272	-2,961	-6,528	-4,479
Computed DOI	10590	4505	6914	8931	11400	11403	9497	7564	7094	6507	3497	8422
Excess Outflow	3481	0	2408	2928	0	0	0	455	0	0	0	1328
% Export/Inflow	29%	61%	52%	43%	23%	28%	12%	13%	11%	24%	55%	37%
% Export/inflow std.	65%	65%	65%	65%	45%	35%	35%	35%	35%	65%	65%	65%

Hydrology

Statistic	Trinity	Shasta	Folsom	New Melones
Water Year Inflow (TAF)	642	3,580	1,220	495
Year to Date + Forecasted % of mean	53%	65%	45%	47%

CVP actual operations do not follow any forecasted operation or outlook; actual operations are based on real-time conditions.

CVP operational forecasts or outlooks represent general system-wide dynamics and do not necessarily address specific watershed/tributary details.

CVP releases or export values represent monthly averages.

CVP Operations are updated monthly as new hydrology information is made available December through May.

Estimated CVP Operations 50% Exceedance

Storages – Federal End of the Month Storage/Elevation (TAF/Feet)

Facility	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Trinity	1275	1254	1261	1301	1366	1478	1607	1712	1665	1627	1539	1450	1348
Trinity Elev.	N/A	2281	2282	2286	2292	2301	2312	2320	2316	2313	2306	2299	2290
Whiskeytown	238	206	206	206	206	206	206	238	238	238	238	238	238
Whiskeytown Elev.	N/A	1199	1199	1199	1199	1199	1199	1209	1209	1209	1209	1209	1209
Shasta	3332	3166	3165	3177	3416	3621	3887	4140	4172	3935	3436	3044	2867
Shasta Elev.	N/A	1015	1015	1015	1025	1033	1044	1053	1054	1045	1026	1010	1002
Folsom	667	563	537	527	526	528	698	856	951	922	774	604	530
Folsom Elev.	N/A	424	421	420	420	420	439	455	464	461	447	429	420
New Melones	1896	1860	1871	1889	1914	1970	1969	1941	2005	1990	1910	1846	1797
New Melones Elev.	N/A	1039	1040	1042	1044	1050	1049	1047	1053	1051	1044	1038	1033
San Luis	788	744	857	966	966	966	966	849	613	410	176	16	24
Total	8196	7792	7898	8066	8394	8769	9334	9737	9644	9121	8073	7198	6804

State End of the Month Reservoir Storage (TAF)

Facility	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Oroville	2596	2377	2310	2325	2536	2762	2902	3175	3300	3095	2614	2091	1746
Oroville Elev.	N/A	816	811	812	829	847	857	876	885	871	835	791	757
State San Luis	869	657	649	635	819	996	1052	745	503	362	338	386	465
Total San Luis (TAF)	1657	1400	1506	1601	1785	1963	2019	1594	1115	772	514	402	489
Total San Luis Elev.	N/A	491	500	508	523	538	542	507	464	429	399	384	396

Monthly River Releases (TAF/cfs)

Facility	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Trinity (TAF)	N/A	23	18	18	18	17	18	80	258	126	68	53	52
Trinity (cfs)	N/A	373	300	300	300	300	300	1,347	4,189	2,120	1,102	857	870
Clear Creek (TAF)	N/A	12	12	12	12	11	22	12	18	14	9	9	9
Clear Creek (cfs)	N/A	200	200	200	200	200	363	200	291	242	150	150	150
Sacramento (TAF)	N/A	369	297	369	369	555	553	357	434	521	738	615	416
Sacramento (cfs)	N/A	6000	5000	6000	6000	10000	9000	6000	7061	8753	12000	10000	7000

Facility	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
American (TAF)	N/A	154	119	123	154	261	141	268	369	251	268	270	179
American (cfs)	N/A	2500	2000	2000	2500	4700	2300	4500	6000	4227	4362	4400	3004
Stanislaus (TAF)	N/A	49	12	12	14	13	93	91	76	56	18	18	18
Stanislaus (cfs)	N/A	797	200	200	232	236	1521	1537	1242	940	300	300	300
Feather (TAF)	N/A	246	104	108	108	222	307	178	108	256	430	498	387
Feather (cfs)	N/A	4000	1750	1760	1750	4000	5000	3000	1750	4300	7000	8100	6500

Trinity Diversions (TAF)

Diversion Facility	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Carr PP	N/A	8	5	0	0	0	0	20	4	8	39	40	52
Spring Creek PP	N/A	30	0	3	22	33	15	0	0	0	30	30	43

Delta Summary (TAF)

Facility	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Tracy	138	228	193	89	134	109	54	55	200	236	208	253
USBR Banks	44	44	44	0	0	0	0	0	0	22	22	0
Contra Costa	14.0	16.0	18.0	14.0	14.0	12.7	12.7	12.7	9.8	11.1	12.7	14.0
Total USBR	196	288	255	103	148	122	66	68	210	269	243	267
State Export	95	279	260	310	300	407	36	38	186	374	411	356
Total Export	291	567	515	413	448	529	102	106	396	643	654	623
COA Balance	0	0	0	0	0	0	0	0	0	0	-16	0
Vernalis (TAF)	127	99	103	119	237	330	255	279	130	83	74	77
Vernalis (cfs)	2066	1662	1680	1940	4270	5376	4278	4543	2184	1357	1211	1292
Old/Middle River calc.	-3,305	-7,181	-6,285	-4,890	-4,881	-4,793	15	128	-4,730	-8,035	-8,233	-8,072
Computed DOI	11143	4505	11257	18577	32310	29981	21046	15568	7094	6507	6914	7094
Excess Outflow	4034	0	6751	12575	20910	18577	11548	7564	0	0	0	0
% Export/Inflow	25%	62%	41%	27%	20%	22%	6%	8%	38%	48%	48%	50%
% Export/inflow std.	65%	65%	65%	65%	45%	35%	35%	35%	35%	65%	65%	65%

Hydrology

Statistic	Trinity	Shasta	Folsom	New Melones
Water Year Inflow (TAF)	1049	5,040	2,570	1,055
Year to Date + Forecasted % of mean	87%	91%	94%	100%

CVP actual operations do not follow any forecasted operation or outlook; actual operations are based on real-time conditions.

CVP operational forecasts or outlooks represent general system-wide dynamics and do not necessarily address specific watershed/tributary details.

CVP releases or export values represent monthly averages.

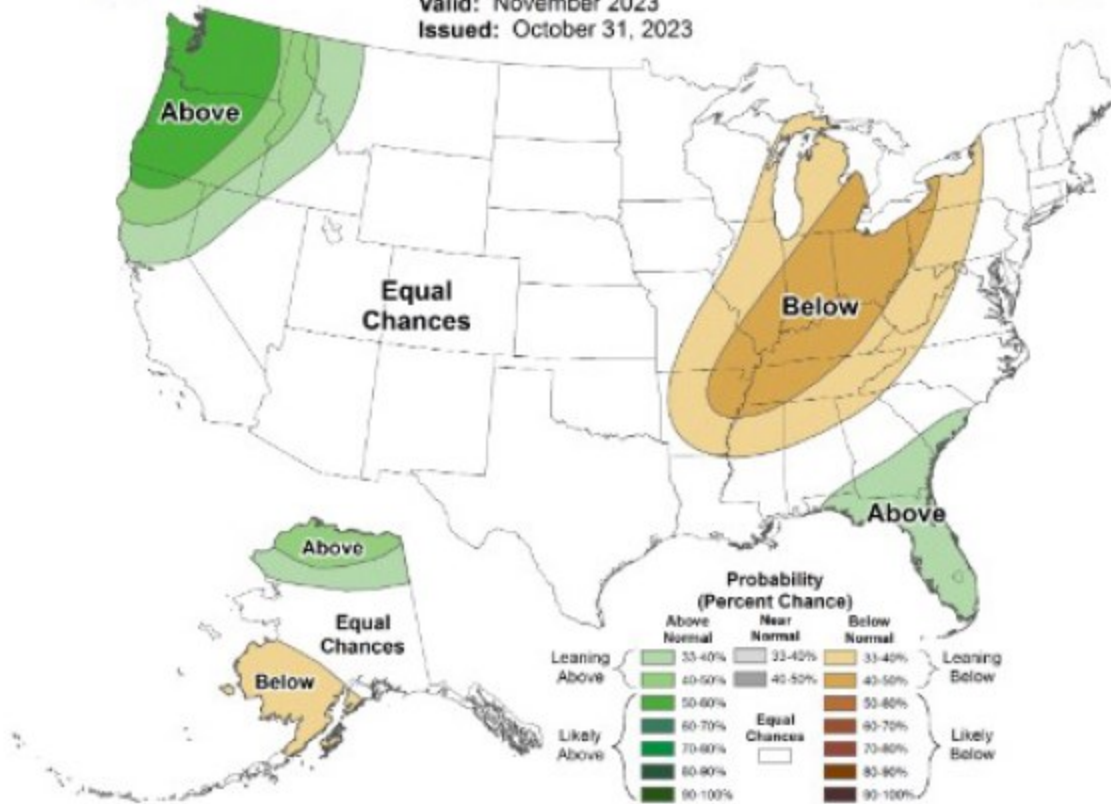
CVP Operations are updated monthly as new hydrology information is made available December through May.



Monthly Precipitation Outlook



Valid: November 2023
Issued: October 31, 2023



Monthly Precipitation Outlook

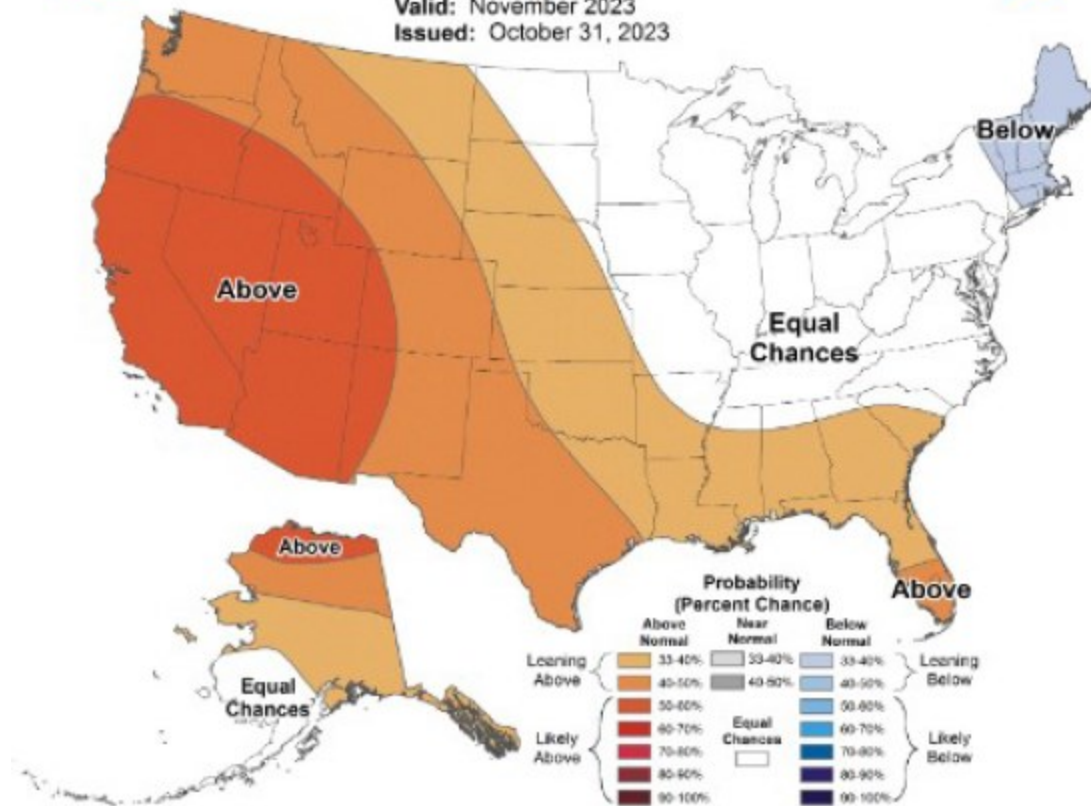
This figure shows a seasonal precipitation outlook with the percent probability of near normal, below, or above normal temperatures for all of the United States. The figure is valid for November 2023 and was issued on October 31, 2023.



Monthly Temperature Outlook



Valid: November 2023
Issued: October 31, 2023



Monthly Temperature Outlook

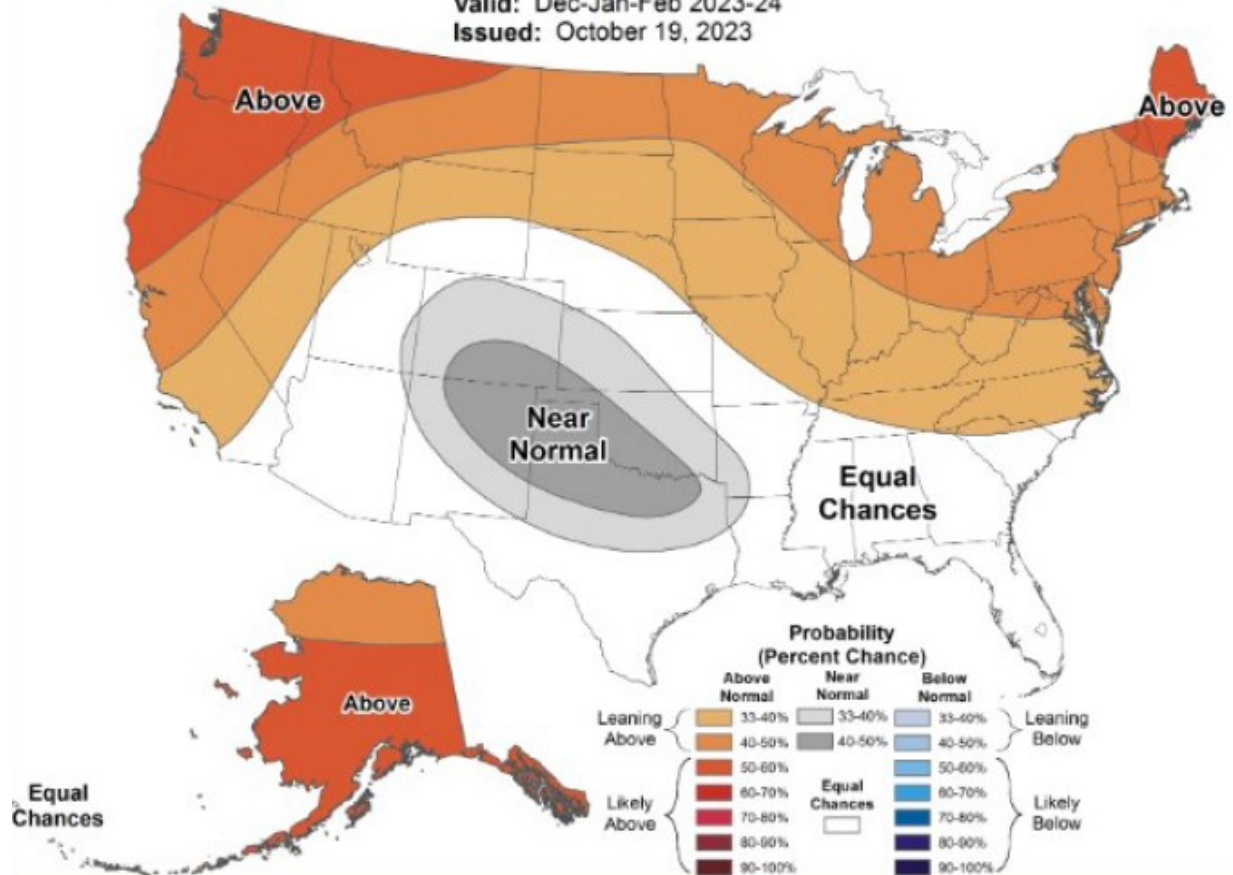
This figure shows a monthly temperature outlook with the percent probability of near normal, below, or above normal temperatures for all of the United States. The figure is valid for November 2023 and was issued on October 31, 2023.



Seasonal Temperature Outlook



Valid: Dec-Jan-Feb 2023-24
Issued: October 19, 2023



Seasonal Temperature Outlook

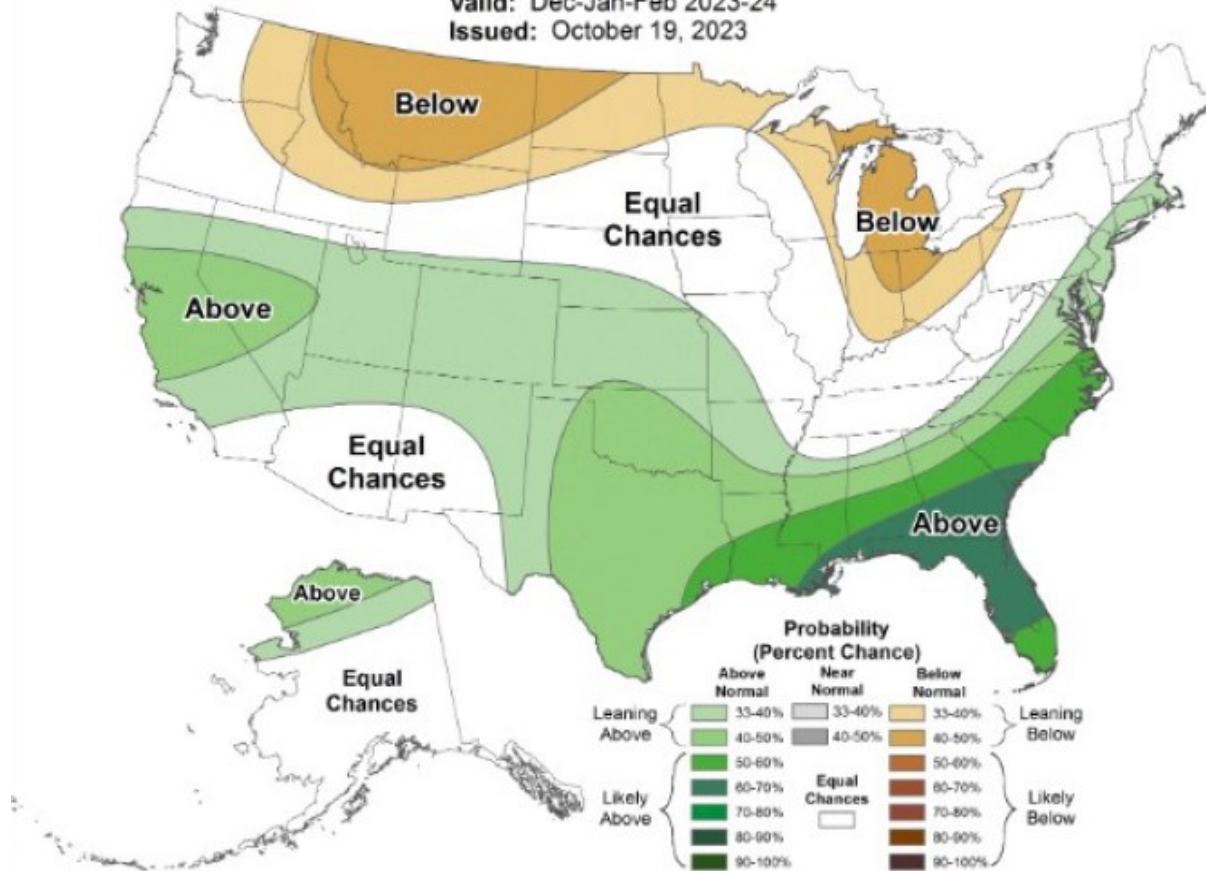
This figure shows a seasonal temperature outlook with the percent probability of near normal, below, or above normal temperatures for all of the United States. The figure is valid for December 2023 to February 2024 and was issued on October 19, 2023.



Seasonal Precipitation Outlook



Valid: Dec-Jan-Feb 2023-24
Issued: October 19, 2023



Seasonal Precipitation Outlook

This figure shows a seasonal precipitation outlook with the percent probability of near normal, below, or above normal temperatures for all of the United States. The figure is valid for October-December 2023 and was issued on September 21, 2023.