

# Northern CVP Water Temperature Report

## October - 2024

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— BUREAU OF —  
RECLAMATION

All Data in this Report is Preliminary and Subject to Change

DATE	Mean Daily Water Temperatures (°F)													Mean Daily Release (CFS)			Mean Daily Air Temperatures (°F)			
	TCD <sup>1</sup>	SHD	SPP <sup>1</sup>	KWK	SAC	CCR <sup>2</sup>	BSF	BND	RDB	IGO	LWS	DGC	NFH	Shasta Generation	Spring Creek P.P.	Keswick Total	RDD	BSF	RDB	
Sep	50.6	49.5	56.6	51.8	52.3	53.2	54.7	56.0	57.5	57.5	49.4	55.2	59.6	6604	1180	8356	77.5	71.7	73.4	
10/01	51.1	? 50.3	56.0	52.0	52.5	53.5	55.0	55.9	57.3	56.6	48.8	53.0	56.8	5199	1020	7024	85.0	72.4	77.1	
10/02	50.6	? 50.2	55.9	52.3	52.8	53.7	55.1	55.9	57.3	56.6	48.8	53.2	56.9	5238	882	7006	80.5	71.4	76.3	
10/03	50.4	? 49.8	55.9	52.4	52.9	53.7	55.2	56.1	57.5	56.4	48.8	53.5	57.2	5688	1108	7003	78.0	70.1	74.8	
10/04	50.6	? 49.9	55.9	51.8	52.4	53.3	55.1	56.0	? 57.4	56.1	48.8	53.3	57.0	5350	1144	6996	75.5	68.8	71.5	
10/05	50.6	? 49.8	55.8	51.9	52.4	53.1	54.6	55.5	57.0	55.9	48.8	52.6	56.1	5562	930	6943	77.5	69.3	73.8	
10/06	51.0	? 50.2	55.8	52.0	52.5	53.3	54.8	55.7	56.9	56.2	48.8	52.6	55.9	4981	1107	6953	83.0	71.7	78.4	
10/07	51.1	? 50.5	55.8	52.0	52.5	53.2	54.9	55.8	57.2	56.3	48.6	52.7	56.2	5565	1040	7030	81.5	71.8	77.8	
10/08	51.2	? 50.3	55.7	52.1	52.6	53.3	54.8	55.6	? 56.9	56.1	48.6	52.3	55.9	5148	1058	6881	78.5	70.3	75.8	
10/09	51.3	? 50.3	55.7	52.1	52.5	53.1	54.6	55.3	56.6	56.2	48.6	52.2	55.8	5600	1065	6915	73.5	67.8	70.7	
10/10	51.2	50.3	55.6	52.2	52.5	? 53.1	54.5	55.2	56.2	56.0	48.5	52.6	55.9	5121	1157	7031	72.0	66.5	68.2	
10/11	51.1	50.4	55.5	52.0	52.2	52.9	54.0	55.0	56.1	55.5	48.5	51.6	54.9	5302	1044	6867	70.0	63.8	67.6	
10/12	51.3	? 50.3	55.5	52.1	52.4	53.0	54.0	54.8	55.7	55.5	48.4	52.4	55.2	5198	1173	6851	66.5	62.3	63.8	
10/13	51.4	? 50.6	55.4	52.2	52.5	53.2	54.2	54.9	55.9	55.5	48.2	51.8	55.1	5268	1116	6903	69.0	63.5	66.4	
10/14	51.5	50.7	55.4	52.1	52.5	53.1	54.2	55.2	56.2	55.5	48.1	51.5	54.9	5313	1060	6869	85.0	64.5	67.6	
10/15	51.6	50.7	55.3	52.3	52.6	53.3	54.3	55.2	56.2	55.6	48.2	51.6	54.8	4899	1173	6892	68.5	64.6	67.1	
10/16	51.4	50.6	55.3	52.4	52.8	53.4	54.7	55.7	56.7	55.9	48.4	53.0	56.0	4633	1045	6796	70.5	65.4	64.5	
10/17	51.8	? 51.0	55.1	52.5	52.8	53.3	54.3	55.2	56.2	54.8	48.3	52.1	54.9	5800	942	6798	64.0	60.9	64.3	
10/18	51.5	? 51.0	55.2	51.9	52.1	52.5	53.1	53.5	54.5	54.0	48.8	48.9	!	5504	888	6799	66.5	61.2	63.0	
10/19	51.6	? 51.2	55.2	52.1	52.4	53.0	53.6	53.7	54.2	55.0	48.2	49.4	!	5331	1110	6789	76.0	66.1	68.9	
10/20	51.8	? 51.2	55.1	52.0	52.2	52.7	53.7	54.3	55.0	54.8	47.7	50.8	!	6240	903	6740	64.0	59.0	61.3	
10/21	51.8	? 51.1	55.1	52.1	52.3	52.7	53.2	53.6	54.5	54.4	47.7	51.0	? 53.2	5355	1149	6797	62.0	56.3	59.2	
10/22	51.8	51.2	54.8	52.3	52.4	52.8	53.1	53.3	54.0	54.3	47.6	50.4	52.7	5227	1150	6792	59.5	54.9	59.0	
10/23	51.9	? 51.2	54.9	52.3	52.4	52.7	53.4	53.6	54.1	54.0	47.6	49.7	52.6	5538	992	6837	62.5	58.2	61.8	
10/24	52.0	? 51.6	54.6	52.1	52.3	52.6	52.9	53.1	53.7	53.5	47.3	47.8	50.8	5366	1223	6849	65.0	61.2	62.5	
10/25	51.9	? 51.5	54.7	52.2	52.3	52.6	53.0	53.1	53.6	53.5	47.4	47.8	49.7	5632	1124	6849	61.5	55.3	57.4	
10/26	52.3	? 51.6	54.4	52.3	52.4	52.9	53.3	? 53.3	53.9	53.6	47.2	48.7	51.0	5893	1090	6849	62.5	57.4	61.1	
10/27	52.1	? 51.7	54.6	52.5	52.6	53.1	53.7	#	54.8	53.8	47.2	50.0	52.3	5715	1245	6852	64.5	60.2	64.0	
10/28	52.3	? 51.7	54.2	52.5	52.6	53.0	53.3	#	54.3	52.9	47.2	48.7	51.5	5393	1059	6852	54.0	52.3	55.7	
10/29	52.4	? 51.7	54.2	52.3	52.3	52.6	52.9	52.9	53.6	52.5	47.3	47.4	49.7	5674	1075	6853	55.0	51.6	54.5	
10/30	52.5	51.9	54.0	52.2	52.1	52.2	52.3	52.2	52.6	52.3	47.1	47.1	48.5	5264	1265	6851	51.0	50.0	51.8	
10/31	52.6	52.1	53.9	52.3	52.3	52.5	52.8	52.8	53.0	52.1	47.0	48.0	49.1	4836	1279	6753	53.0	53.0	54.1	
Oct	51.5	50.8	55.2	52.2	52.5	53.0	54.0	54.6	55.5	55.0	48.1	51.0	54.1	5400	1078	6882	69.4	63.0	66.2	
														Total CFS	166833	33616	213220			
														Total AF	330906	66676	422913			

**Legend**

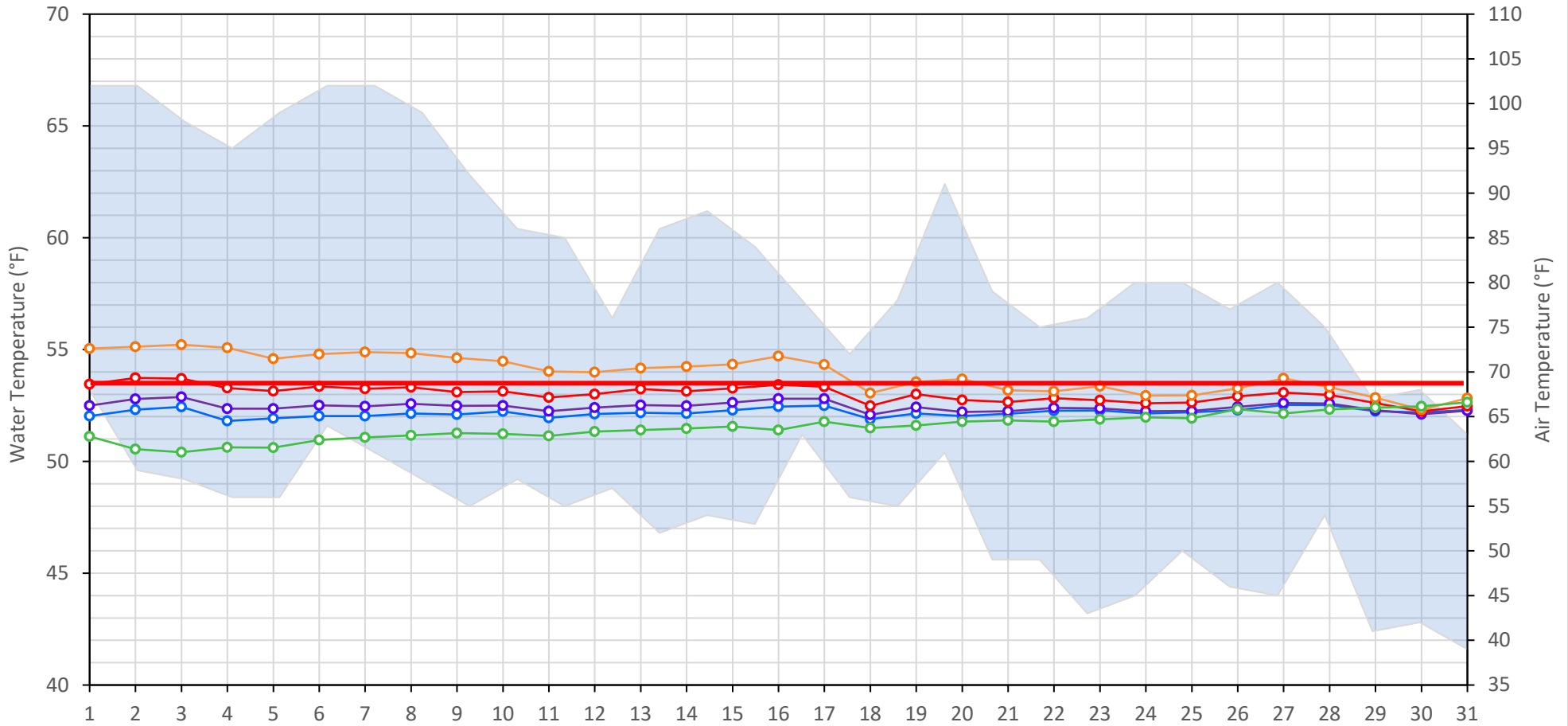
- ? = 1-9 hours of data missing (Average includes estimations)
- ! = 10 or more hours of data missing (Average not calculated)
- # = Station out of service
- ↑ = Record high air temperature
- ↓ = Record low air temperature
- = Monthly Averages

**Notes**

- <sup>1</sup> Temperatures are weighted averages based on individual penstock flow and temperature
- Highlighted cells in the TCD column indicate a TCD change was made on that day
- <sup>2</sup> Current Clear Creek River control point (see page 3 for more details)

### Sacramento River Mean Daily Temperatures

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



Station Details			
Code	Body of Water	Location <sup>1</sup>	CDEC Link
TCD	N/A	Shasta Power Plant	N/A
SHD	Sacramento River	0.3 miles downstream of Shasta Power Plant	<a href="#">Click Here</a>
SPP	N/A	Spring Creek Power Plant	N/A
KWK	Sacramento River	0.8 miles downstream of Keswick Dam	<a href="#">Click Here</a>
SAC	Sacramento River	4.8 miles downstream of Keswick Dam	<a href="#">Click Here</a>
CCR	Sacramento River	9.7 miles downstream of Keswick Dam	<a href="#">Click Here</a>
BSF	Sacramento River	25 miles downstream of Keswick Dam	<a href="#">Click Here</a>
JLF	Sacramento River	34 miles downstream of Keswick Dam	<a href="#">Click Here</a>
BND	Sacramento River	41 miles downstream of Keswick Dam	<a href="#">Click Here</a>
RDB	Sacramento River	58 miles downstream of Keswick Dam	<a href="#">Click Here</a>
IGO	Clear Creek	7.3 miles downstream of Whiskeytown Dam	<a href="#">Click Here</a>

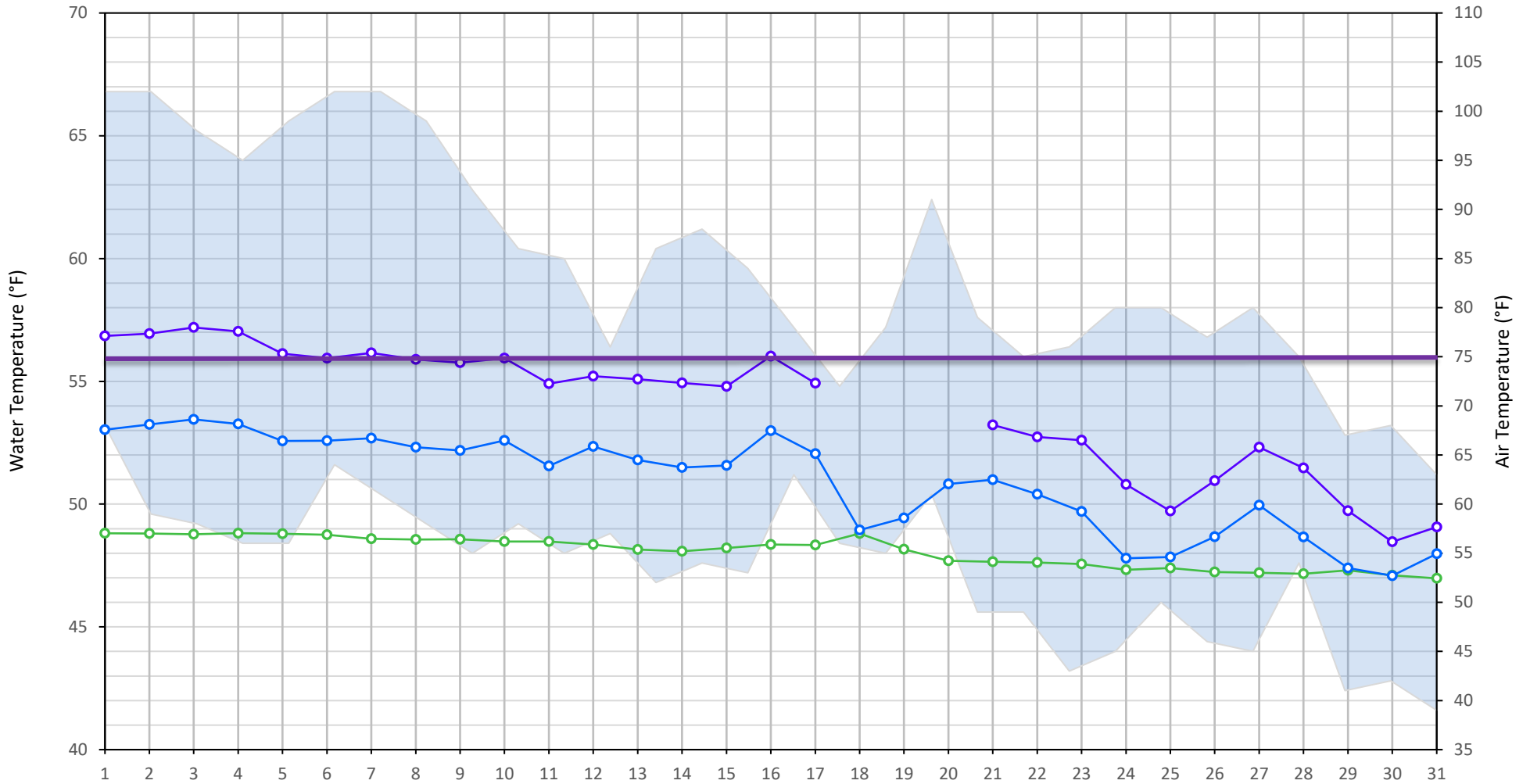
Water Right Temperature Control Points				
River	Point	Temp. (°F)	Begin Date	End Date
Sacramento	CCR	53.5	05/24/2024	TBD

**Notes**

<sup>1</sup> Distances are approximate

### Trinity River Mean Daily Temperatures

Redding Air (Observed and Forecasted) LWS DGC NFH



Station Details			
Code	Body of Water	Location <sup>1</sup>	CDEC Link
LWS	Trinity River	1.1 miles downstream of Lewiston Dam	<a href="#">Click Here</a>
DGC	Trinity River	19 miles downstream of Lewiston Dam	<a href="#">Click Here</a>
NFH	Trinity River	38 miles downstream of Lewiston Dam	<a href="#">Click Here</a>

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**

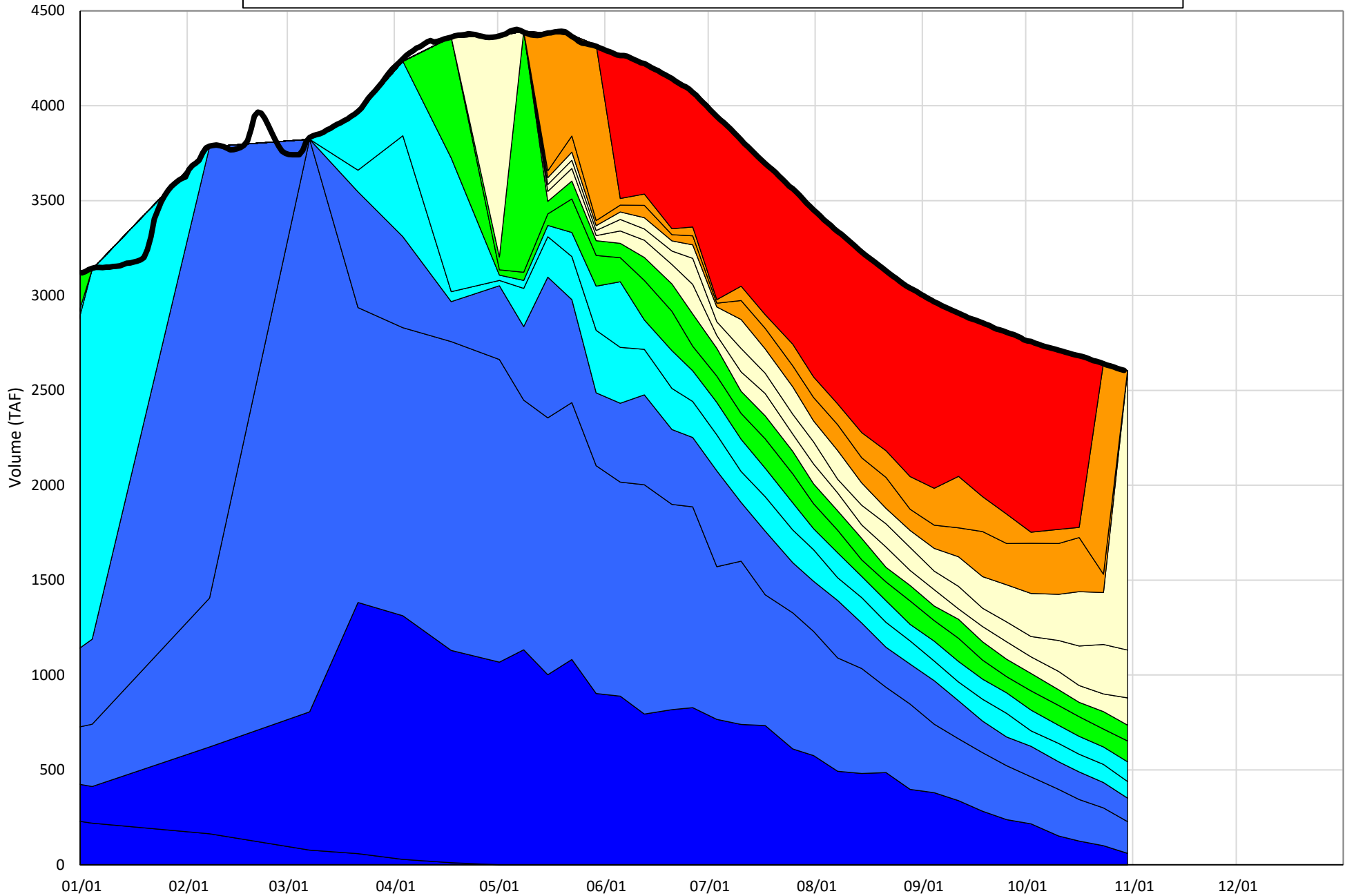
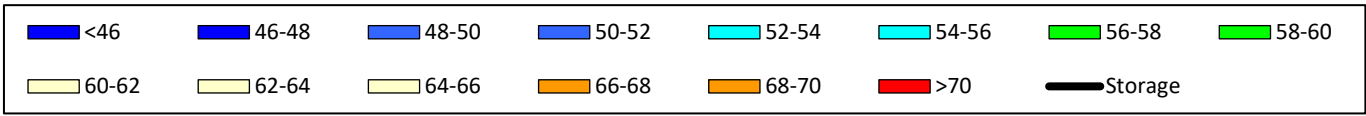
<sup>1</sup> Distances are approximate

# Shasta Lake Isothermobaths & Cold Water Pool Statistics

## 2024

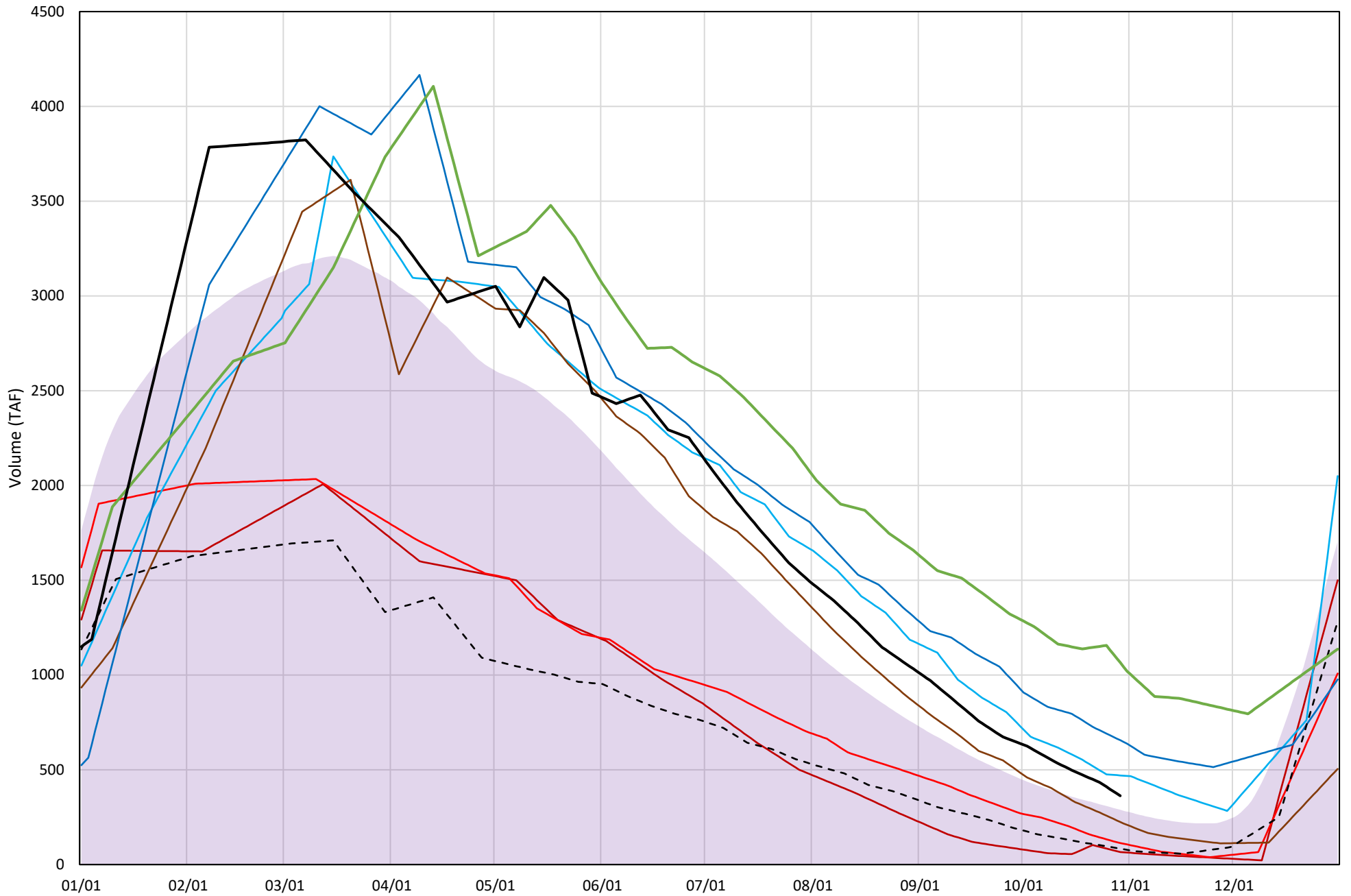
Page	Description
6	- Shasta Lake Isothermobaths Plot
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13	- Shasta Lake Cold Water Pool Comparison by Year

Shasta Lake Isothermobaths Plot - 2024

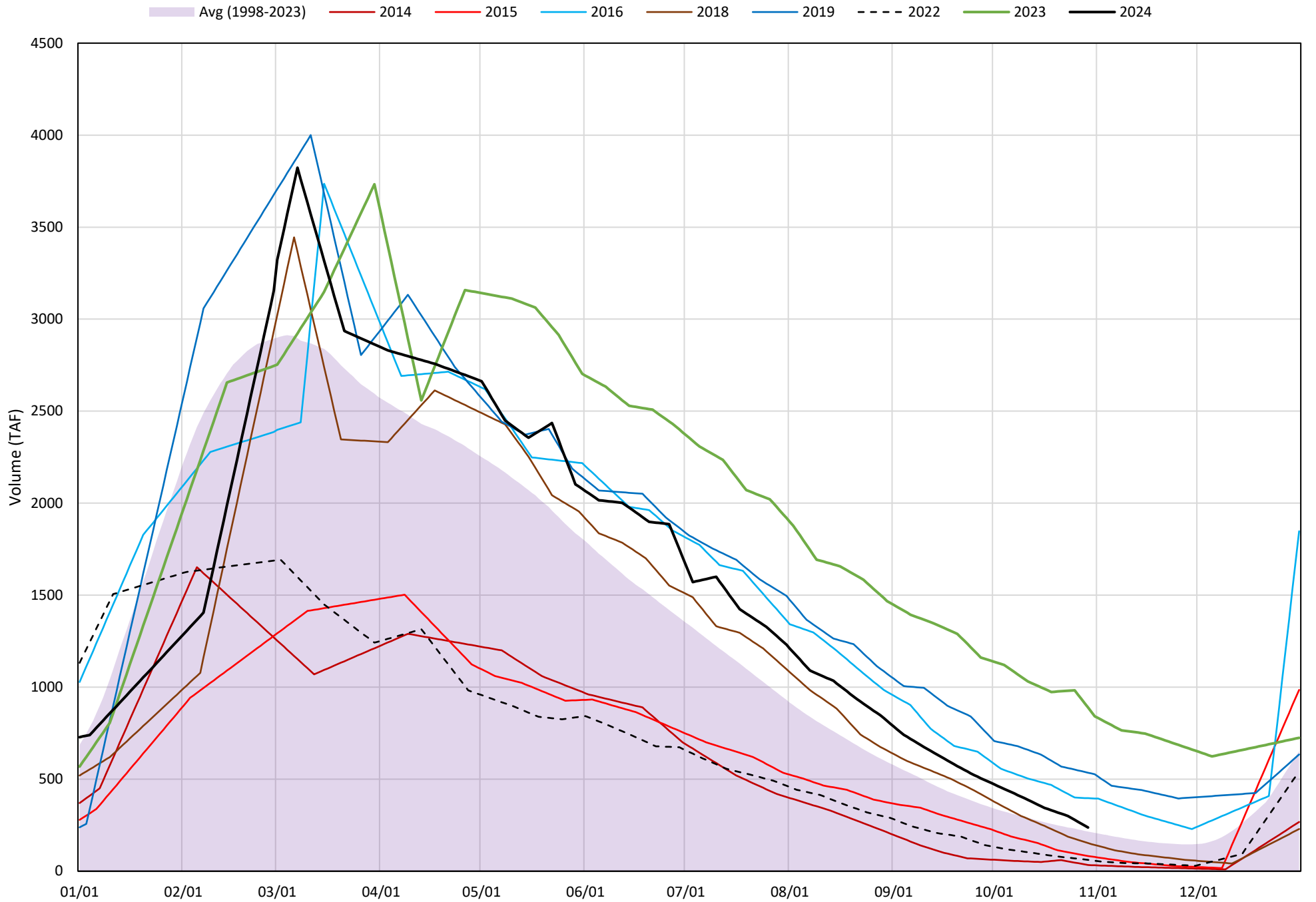


# Shasta Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$

Avg (1998-2023) 2014 2015 2016 2018 2019 2022 2023 2024



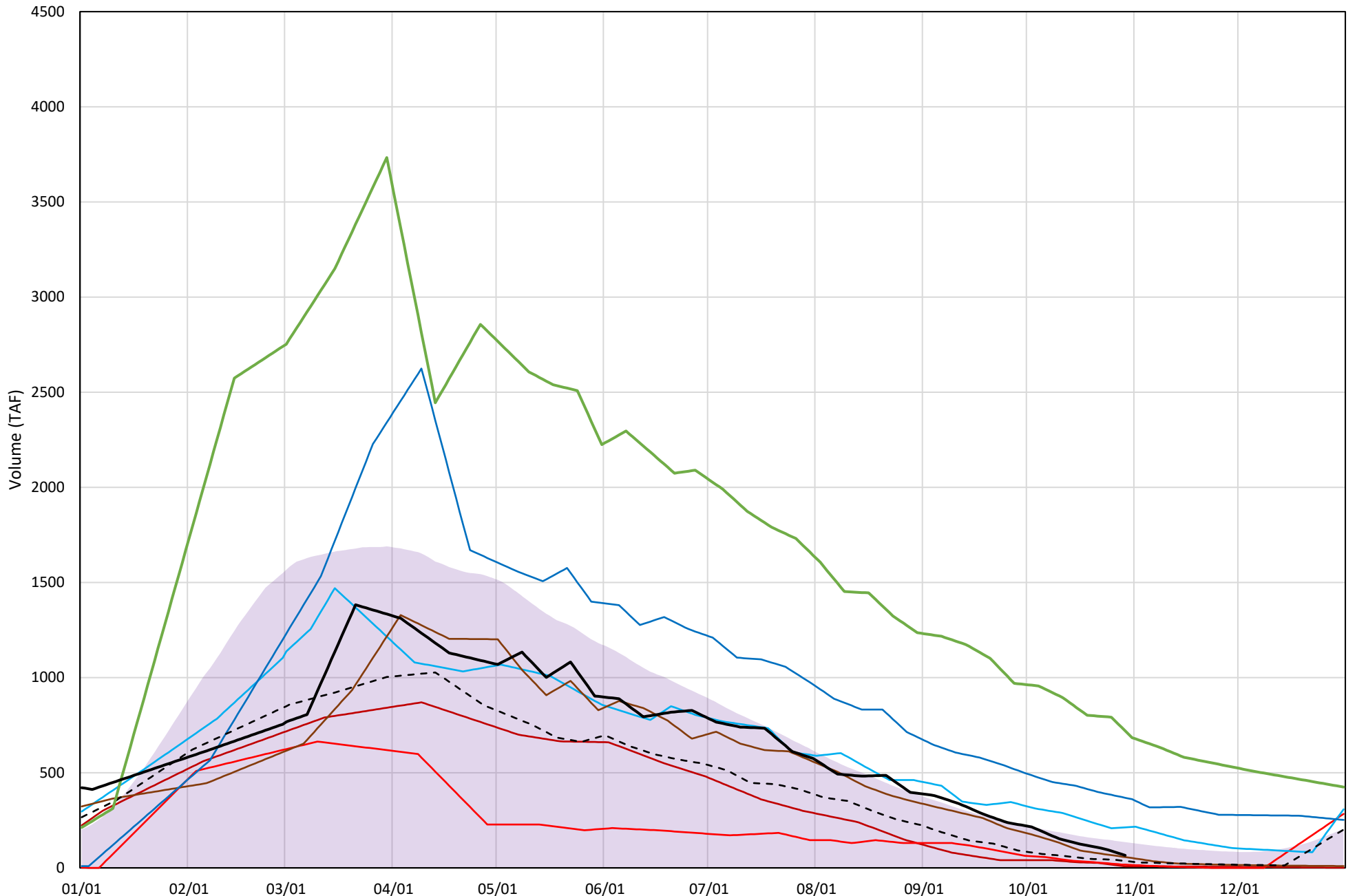
# Shasta Lake Cold Water Pool Volume ≤50°F





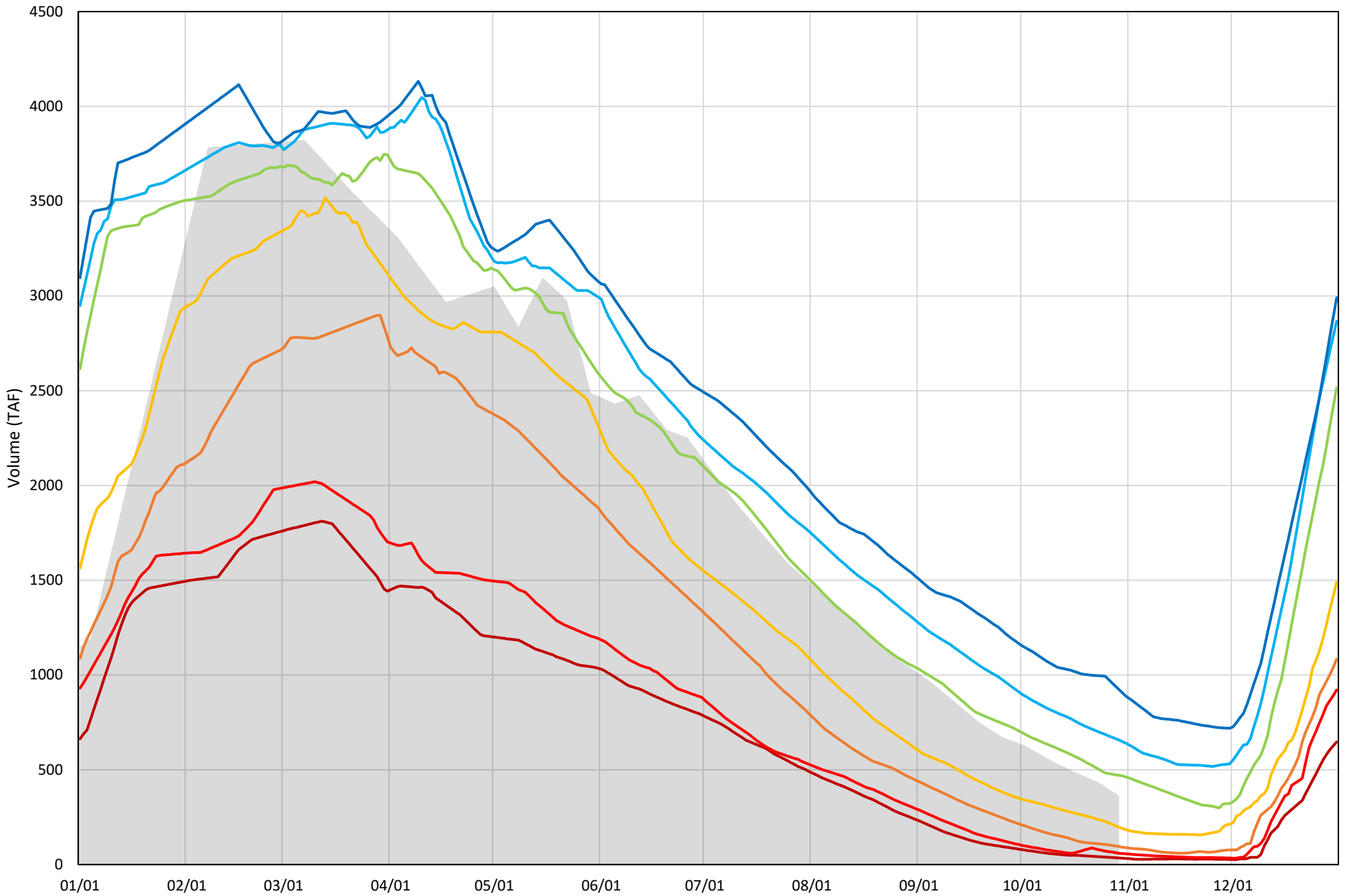
# Shasta Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$

Avg (1998-2023) 2014 2015 2016 2018 2019 2022 2023 2024



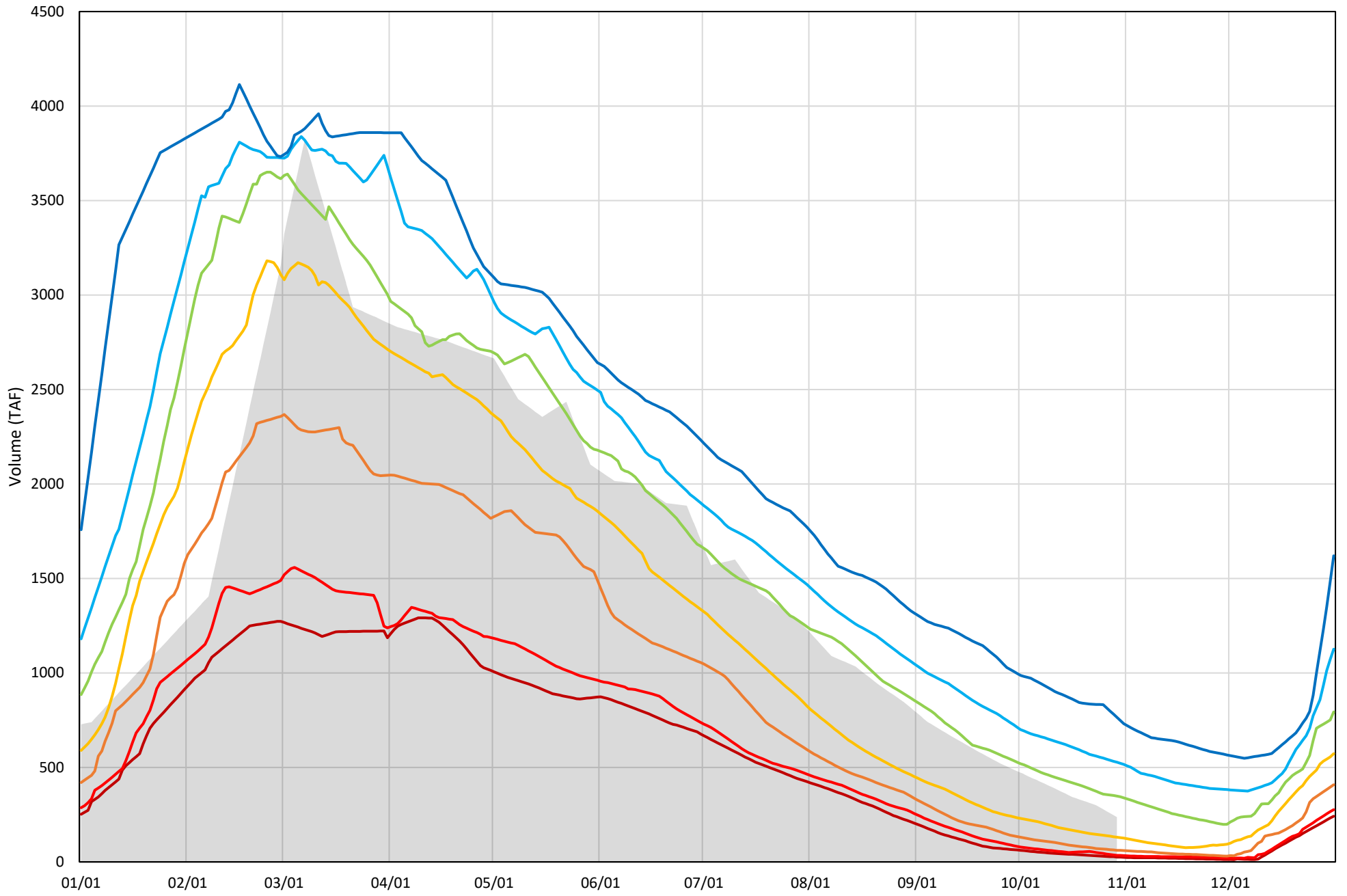
Shasta Lake Cold Water Pool Volume  $\leq 52^{\circ}\text{F}$  - Percent Exceedances (1998-2023)

2024 95 90 75 50 25 10 5



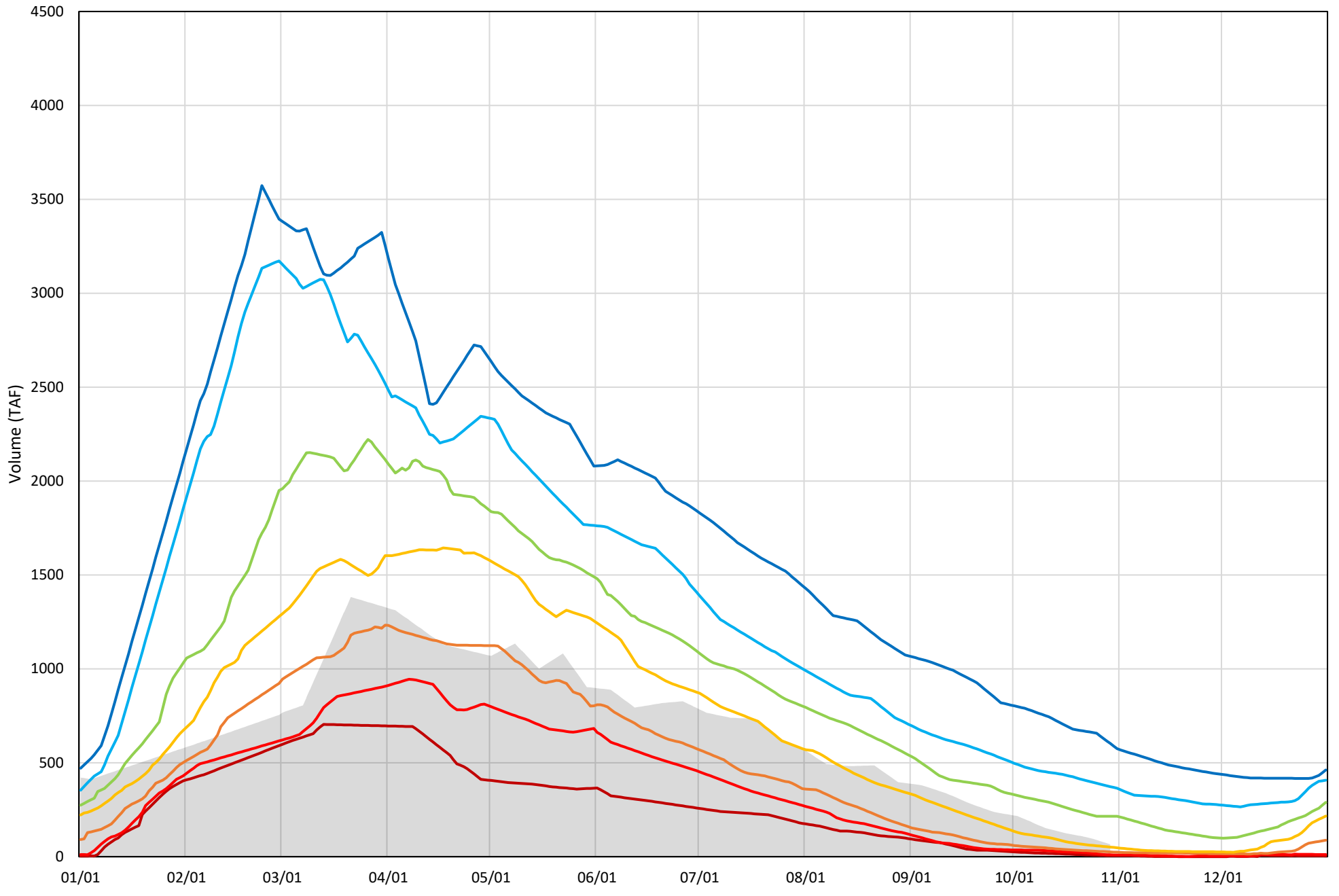
Shasta Lake Cold Water Pool Volume  $\leq 50^{\circ}\text{F}$  - Percent Exceedances (1998-2023)

2024 95 90 75 50 25 10 5



Shasta Lake Cold Water Pool Volume  $\leq 48^{\circ}\text{F}$  - Percent Exceedances (1998-2023)

2024 95 90 75 50 25 10 5



## Shasta Lake Cold Water Pool Comparison by Year (for Specified Date)

Oct-30 2024	Δ TAF				% Δ			
	≤52°	≤50°	≤48°	Abs. Avg.	≤52°	≤50°	≤48°	Abs. Avg.
1998	-216	-187	-55	153	-59	-79	-83	74
1999	110	157	230	166	30	66	350	149
2000	-116	-103	-29	83	-32	-44	-44	40
2001	-208	-122	9	113	-57	-52	14	41
2002	-60	-2	82	48	-17	-1	125	48
2003	-49	-109	-42	67	-13	-46	-64	41
2004	-264	-163	-26	151	-73	-69	-39	60
2005	-259	-175	-38	157	-71	-74	-57	68
2006	-29	13	80	41	-8	5	122	45
2007	-291	-183	-29	168	-80	-77	-43	67
2008	-320	-201	-40	187	-88	-85	-60	78
2009	-280	-172	-20	157	-77	-73	-31	60
2010	142	82	86	103	39	34	131	68
2011	294	287	318	300	81	121	484	229
2012	32	96	157	95	9	40	239	96
2013	-196	-100	26	107	-54	-42	40	45
2014	-297	-204	-58	187	-82	-86	-89	86
2015	-249	-155	-49	151	-69	-65	-75	69
2016	107	159	147	138	30	67	224	107
2017	170	186	242	200	47	78	369	165
2018	-138	-84	-9	77	-38	-35	-13	29
2019	293	298	303	298	81	125	461	222
2020	-194	-144	-43	127	-54	-61	-66	60
2021	-332	-216	-62	203	-92	-91	-94	92
2022	-279	-176	-29	162	-77	-74	-44	65
2023	702	652	654	669	194	274	996	488
2024	0	0	0	0	0	0	0	0

}

Historical - Current

}

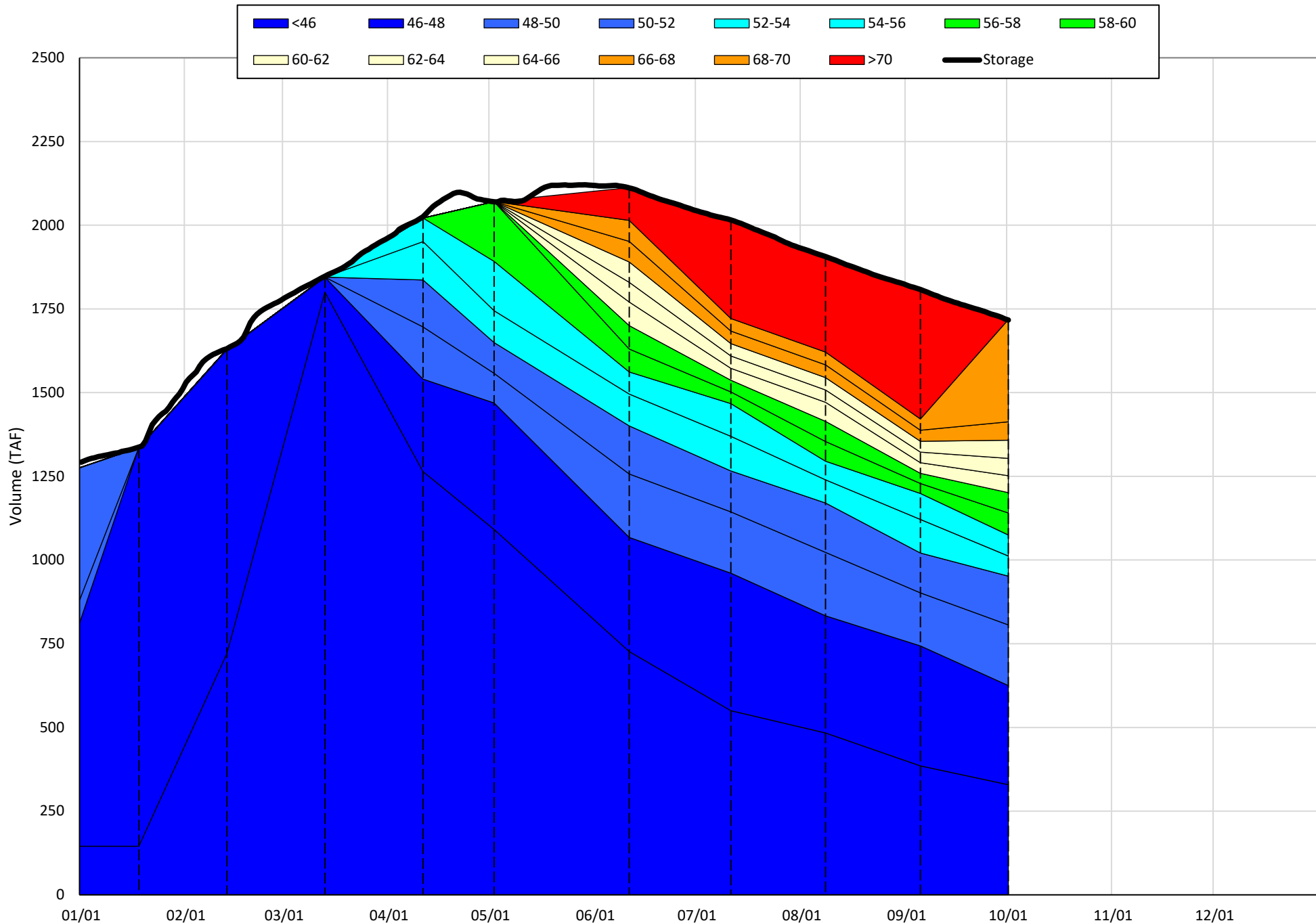
(Historical - Current) / Current

# Trinity Lake Isothermobaths & Cold Water Pool Statistics

## 2024

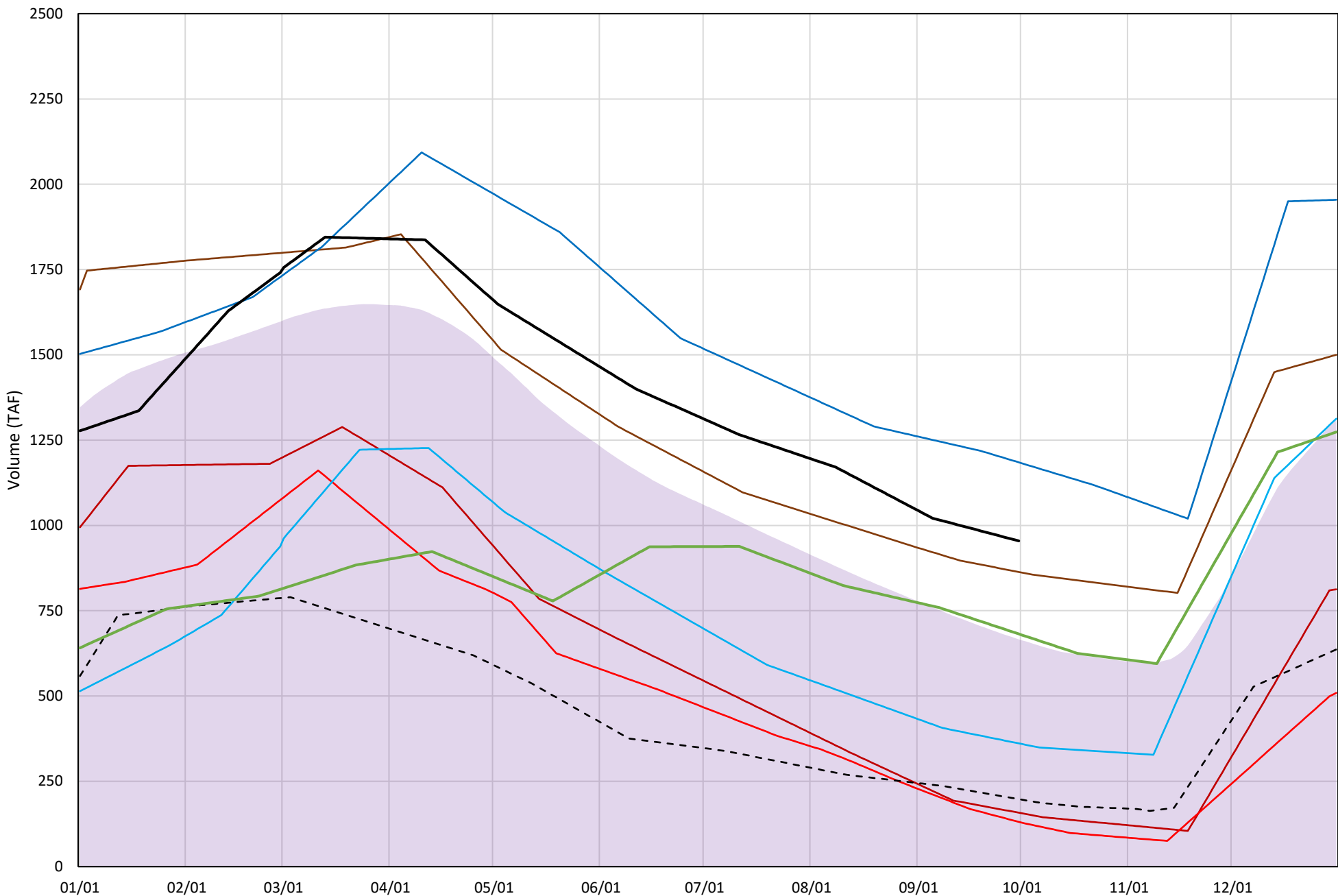
Page	Description
15	- Trinity Lake Isothermobaths Plot
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17	- Trinity Lake Cold Water Pool Volume $\leq 50^{\circ}\text{F}$
18	- Trinity Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$
19	- Trinity Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$ - Percent Exceedances
20	- Trinity Lake Cold Water Pool Volume $\leq 50^{\circ}\text{F}$ - Percent Exceedances
21	- Trinity Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$ - Percent Exceedances
22	- Trinity Lake Cold Water Pool Comparison by Year

Trinity Lake Isothermobaths Plot - 2024



# Trinity Lake Cold Water Pool Volume ≤52°F

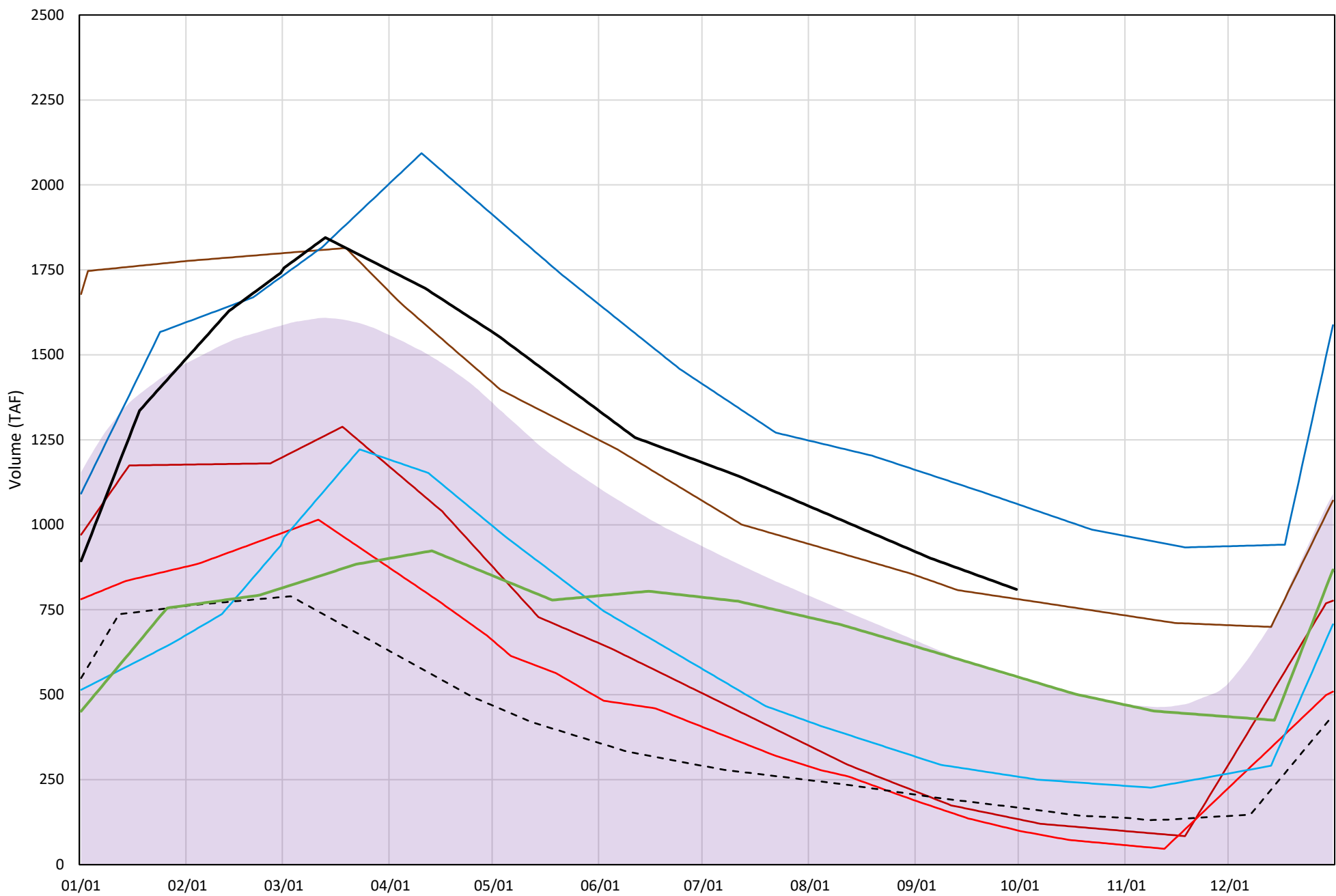
Avg (2000-2023) 2014 2015 2016 2018 2019 2022 2023 2024





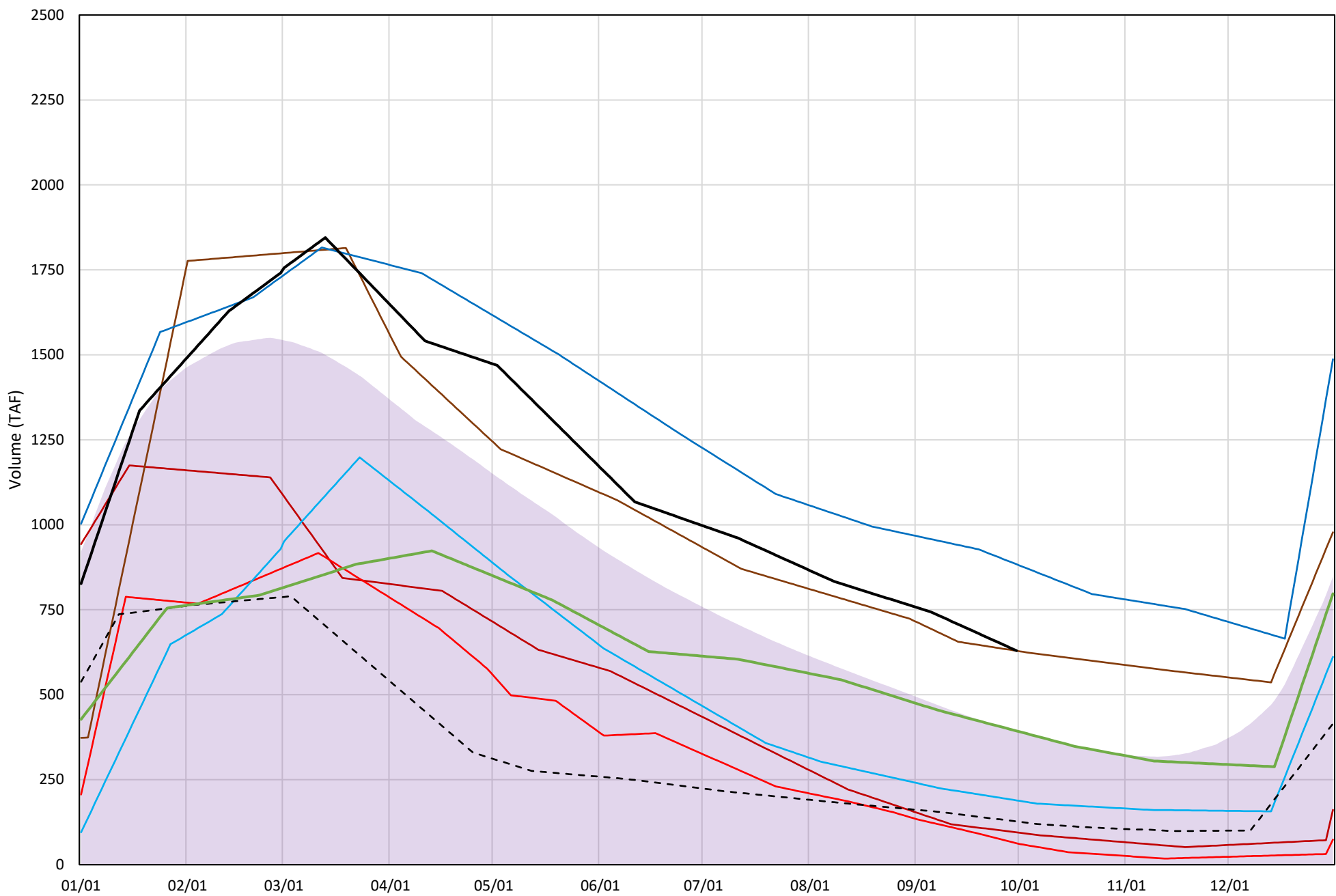
# Trinity Lake Cold Water Pool Volume ≤50°F

Avg (2000-2023) 2014 2015 2016 2018 2019 2022 2023 2024



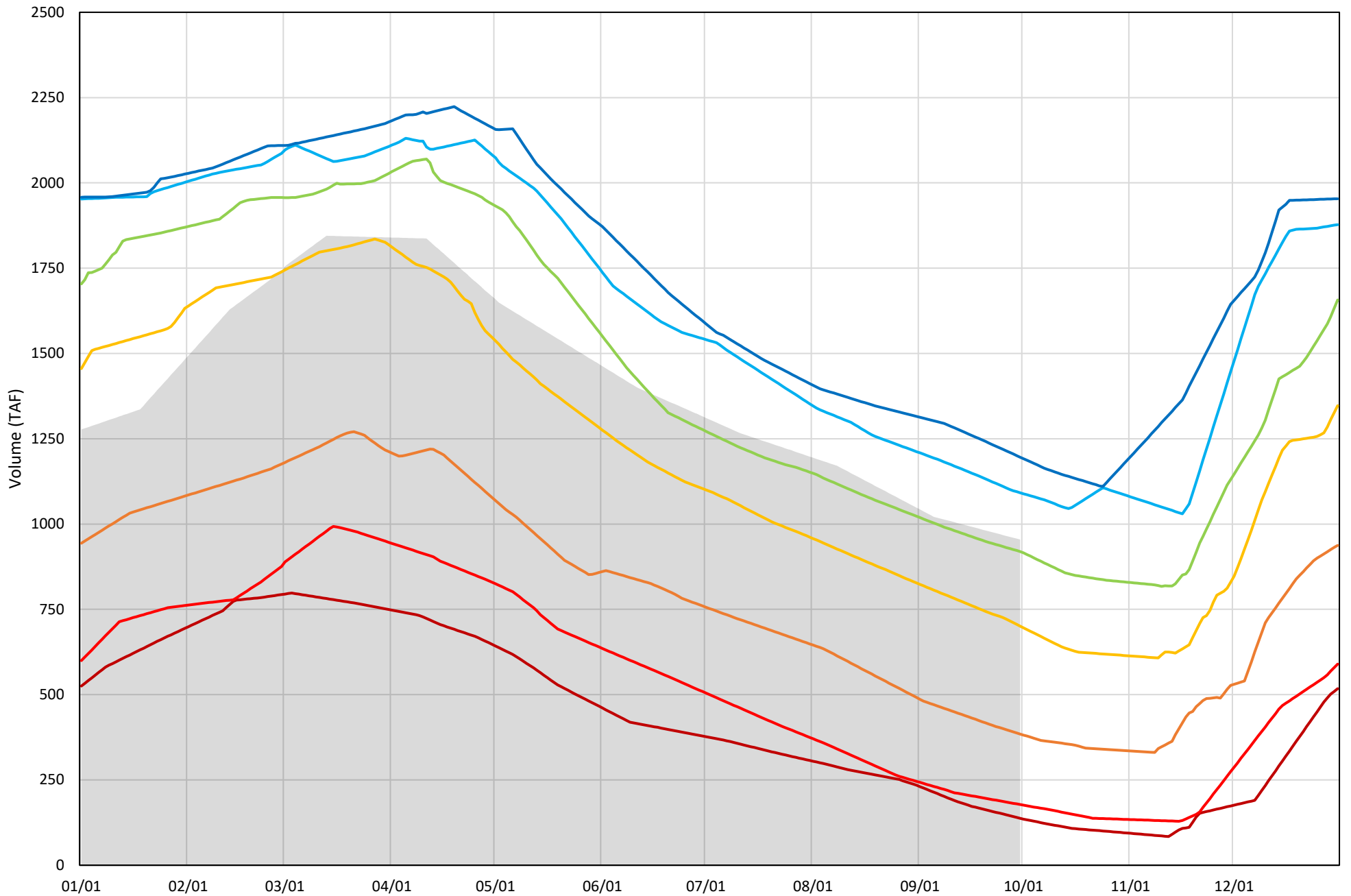
# Trinity Lake Cold Water Pool Volume ≤48°F

Avg (2000-2023) 2014 2015 2016 2018 2019 2022 2023 2024



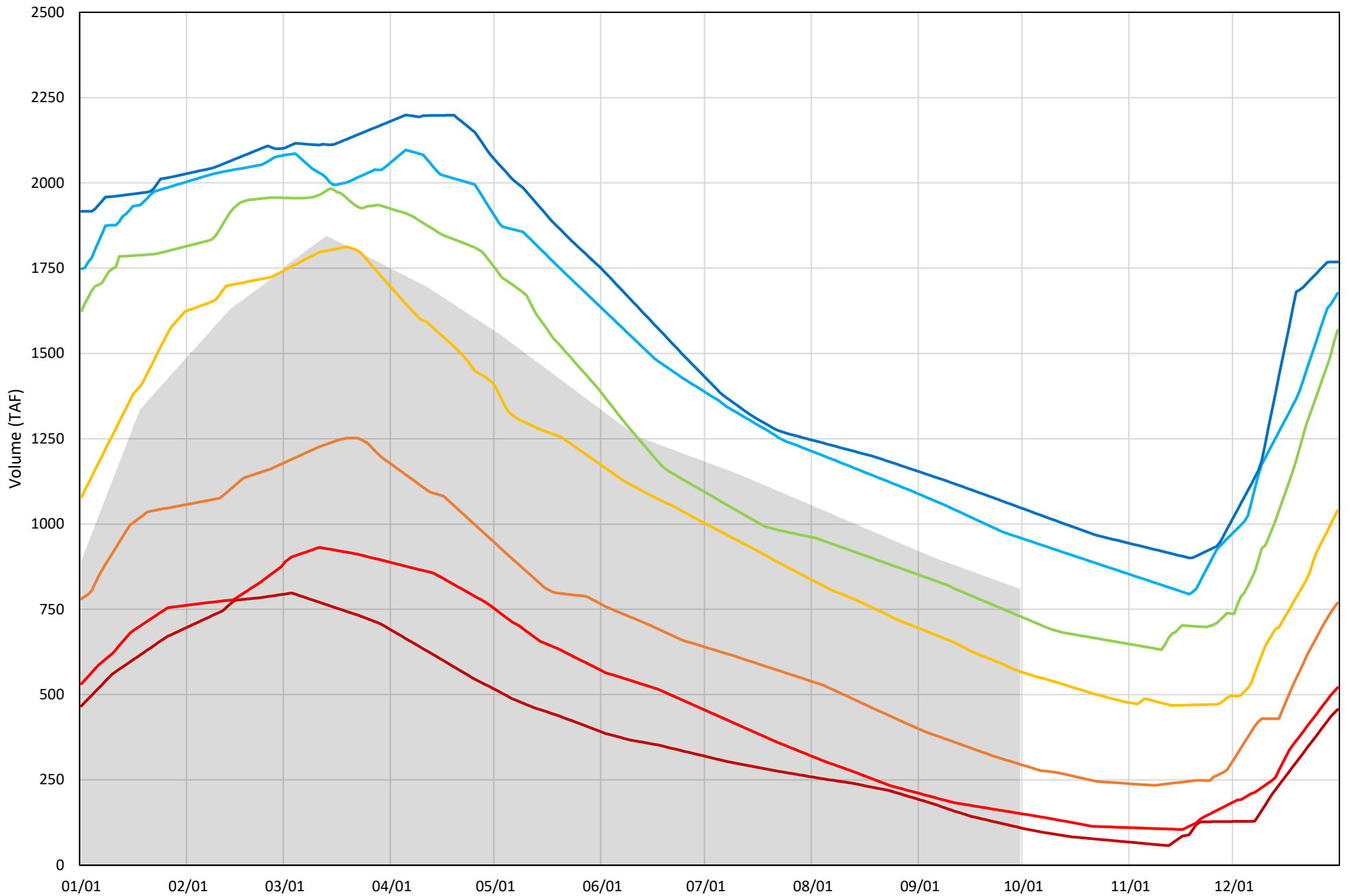
Trinity Lake Cold Water Pool Volume ≤52°F - Percent Exceedances (2000-2023)

2024 95 90 75 50 25 10 5



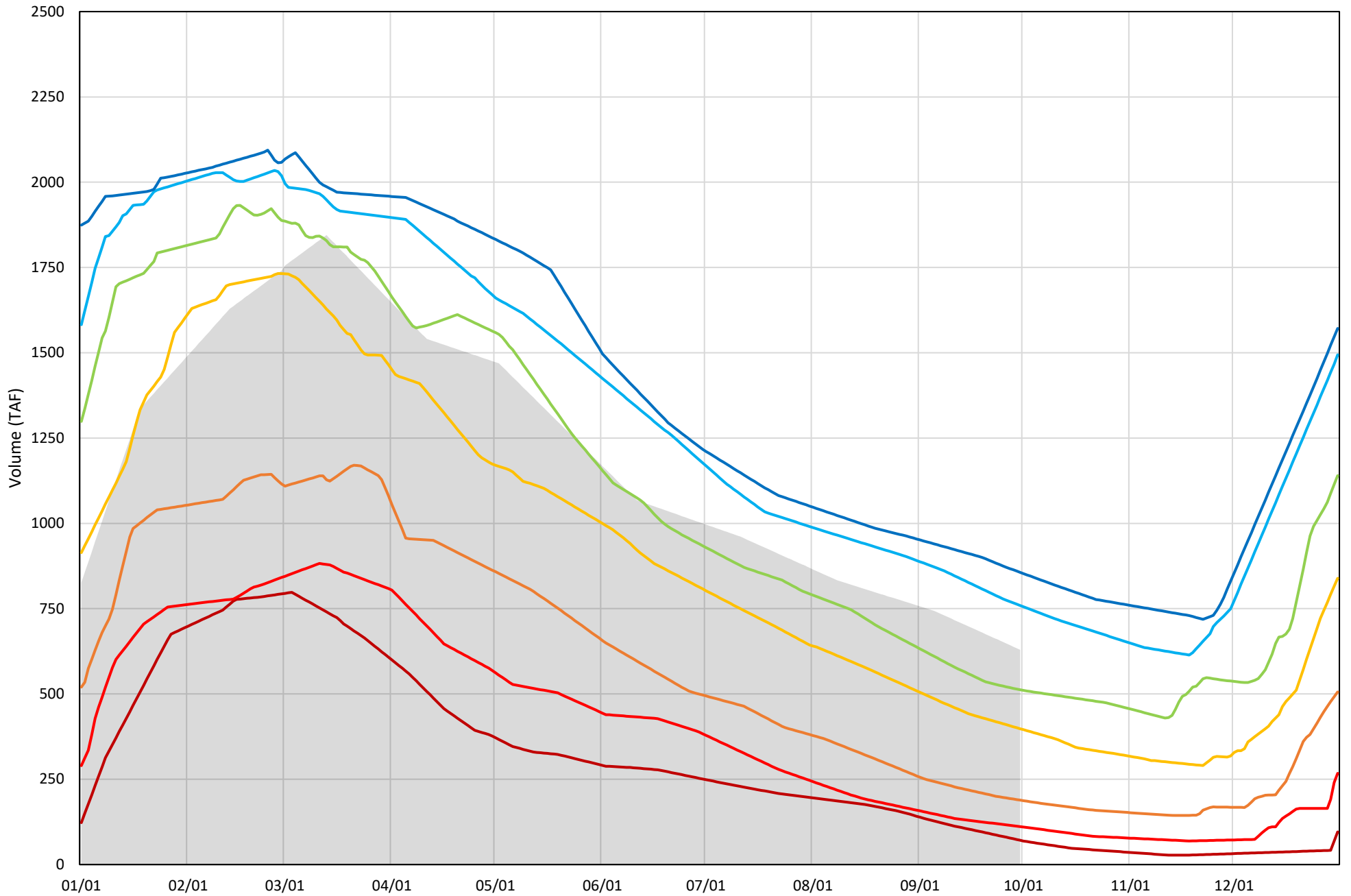
Trinity Lake Cold Water Pool Volume  $\leq 50^{\circ}\text{F}$  - Percent Exceedances (2000-2023)

2024 95 90 75 50 25 10 5



Trinity Lake Cold Water Pool Volume  $\leq 48^{\circ}\text{F}$  - Percent Exceedances (2000-2023)

2024 95 90 75 50 25 10 5



### Trinity Cold Water Pool Comparison by Year (for Specified Date)

	$\Delta$ TAF				% $\Delta$			
	$\leq 52^\circ$	$\leq 50^\circ$	$\leq 48^\circ$	Abs. Avg.	$\leq 52^\circ$	$\leq 50^\circ$	$\leq 48^\circ$	Abs. Avg.
<b>Oct-01</b>								
<b>2024</b>								
2000	-172	-251	-272	232	-18	-31	-43	31
2001	-308	-252	-218	260	-32	-31	-35	33
2002	-278	-229	-169	226	-29	-28	-27	28
2003	-21	-113	-198	111	-2	-14	-31	16
2004	-235	-233	-262	244	-25	-29	-42	32
2005	-22	-69	-227	106	-2	-9	-36	16
2006	36	2	-55	31	4	0	-9	4
2007	-210	-160	-100	157	-22	-20	-16	19
2008	-544	-507	-441	498	-57	-63	-70	63
2009	-578	-516	-450	515	-61	-64	-71	65
2010	-220	-272	-356	283	-23	-34	-57	38
2011	245	198	115	186	26	24	18	23
2012	44	102	145	97	5	13	23	13
2013	-418	-357	-305	360	-44	-44	-48	45
2014	-797	-675	-534	669	-83	-83	-85	84
2015	-824	-708	-566	699	-86	-87	-90	88
2016	-593	-550	-440	528	-62	-68	-70	67
2017	-76	-155	-172	134	-8	-19	-27	18
2018	-91	-28	0	40	-10	-3	0	4
2019	230	252	254	245	24	31	40	32
2020	-311	-224	-208	248	-33	-28	-33	31
2021	-746	-630	-499	625	-78	-78	-79	78
2022	-757	-641	-503	634	-79	-79	-80	79
2023	-273	-256	-236	255	-29	-32	-38	33
2024	0	0	0	0	0	0	0	0

Historical - Current

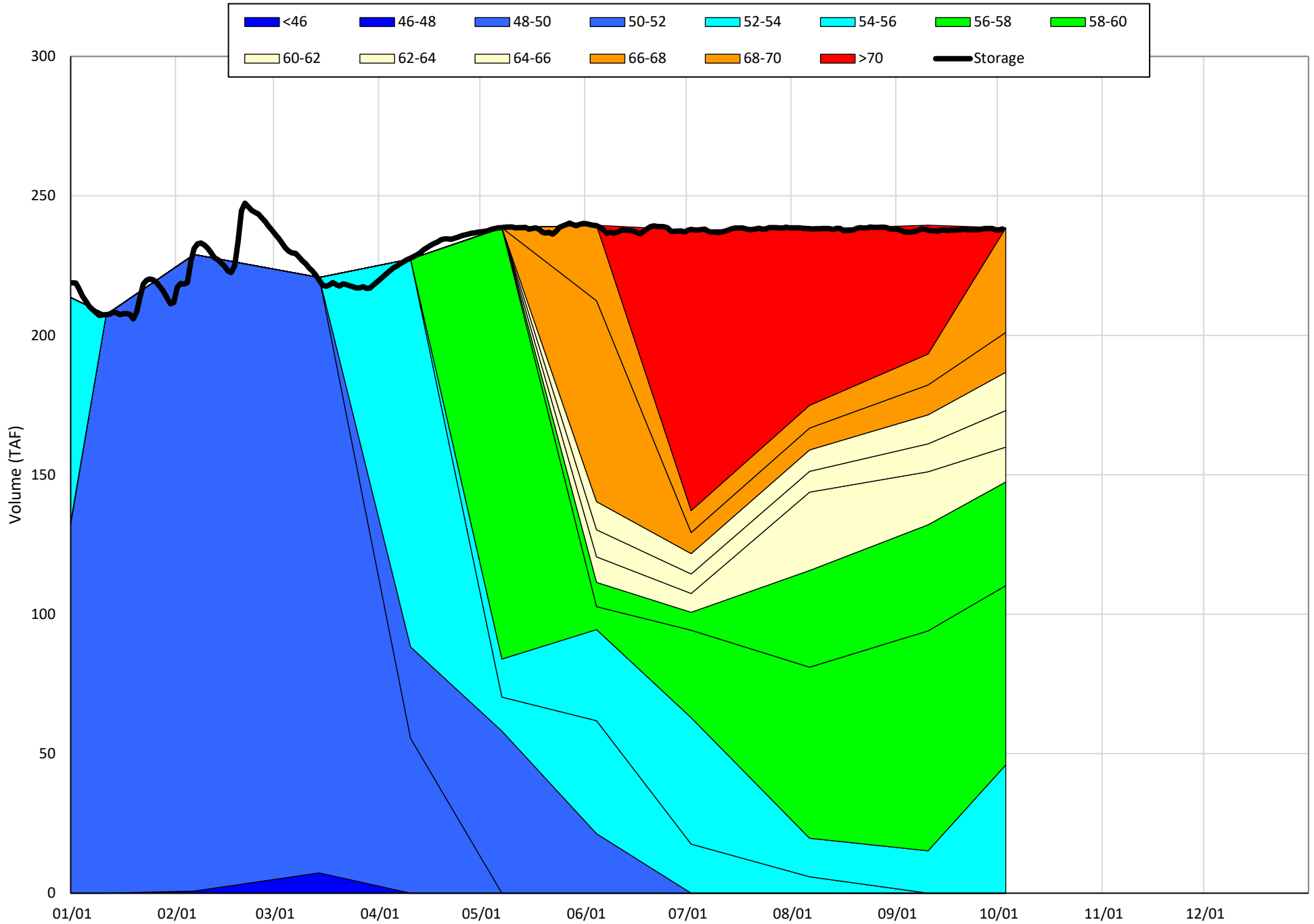
(Historical - Current) / Current

# Whiskeytown Lake Isothermobaths & Cold Water Pool Statistics

## 2024

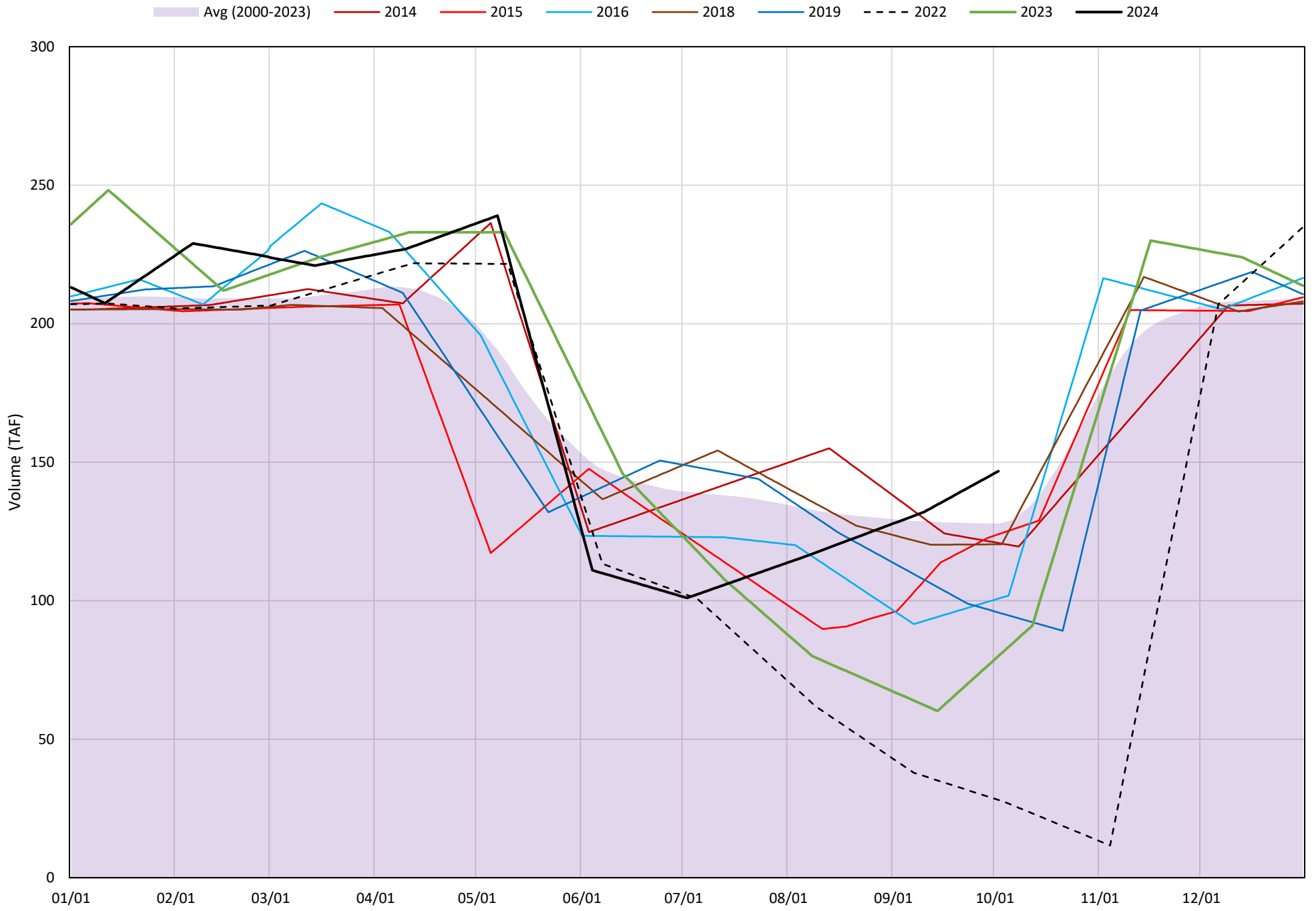
Page	Description
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27	- Whiskeytown Lake Cold Water Pool Volume $\leq 56^{\circ}\text{F}$
28	- Whiskeytown Lake Cold Water Pool Volume $\leq 60^{\circ}\text{F}$ - Percent Exceedances
29	- Whiskeytown Lake Cold Water Pool Volume $\leq 58^{\circ}\text{F}$ - Percent Exceedances
30	- Whiskeytown Lake Cold Water Pool Volume $\leq 56^{\circ}\text{F}$ - Percent Exceedances
31	- Whiskeytown Lake Cold Water Pool Comparison by Year

# Whiskeytown Lake Isothermobaths Plot - 2024



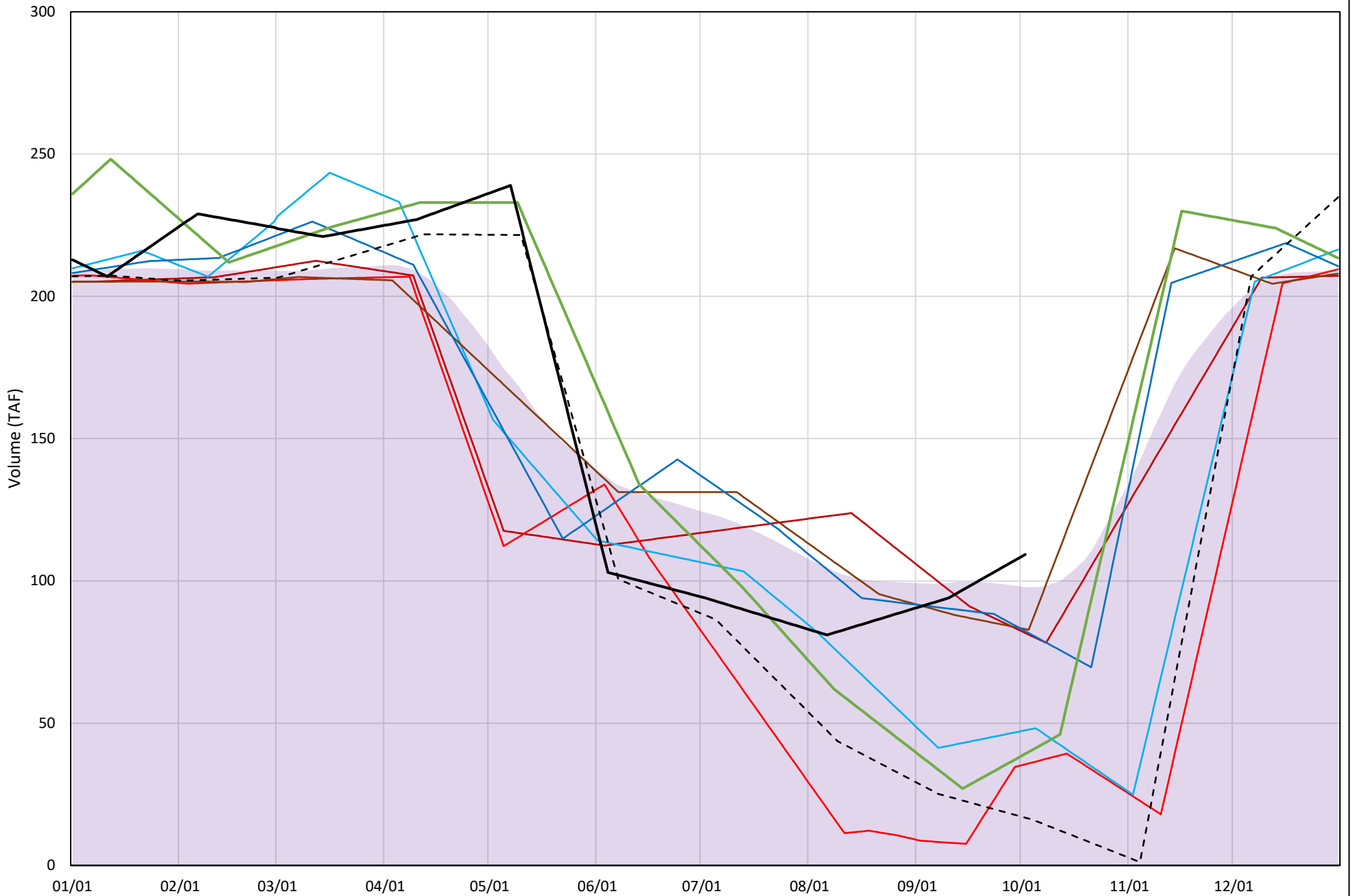


# Whiskeytown Lake Cold Water Pool Volume $\leq 60^{\circ}\text{F}$

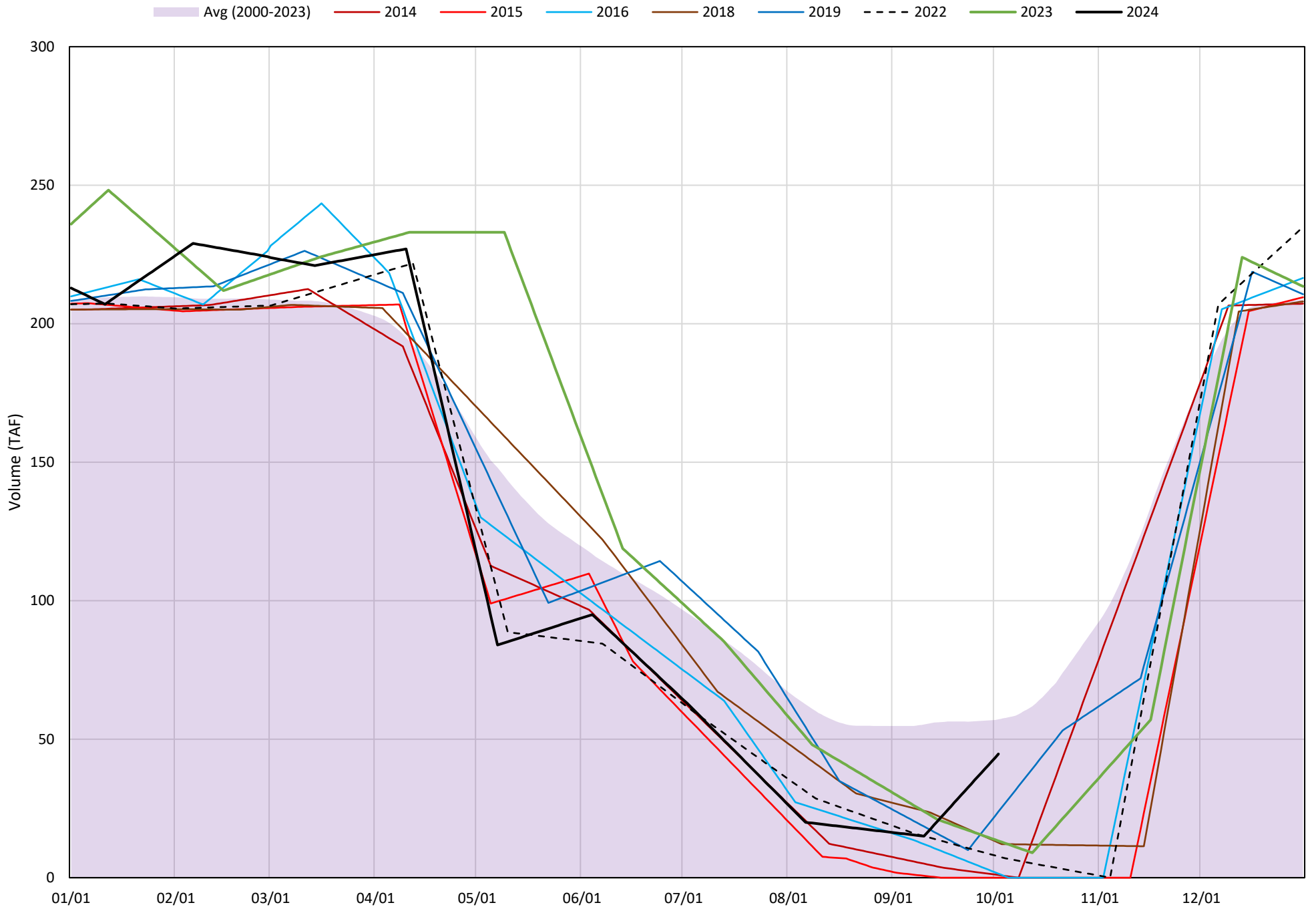


# Whiskeytown Lake Cold Water Pool Volume $\leq 58^{\circ}\text{F}$

Avg (2000-2023) 2014 2015 2016 2018 2019 2022 2023 2024

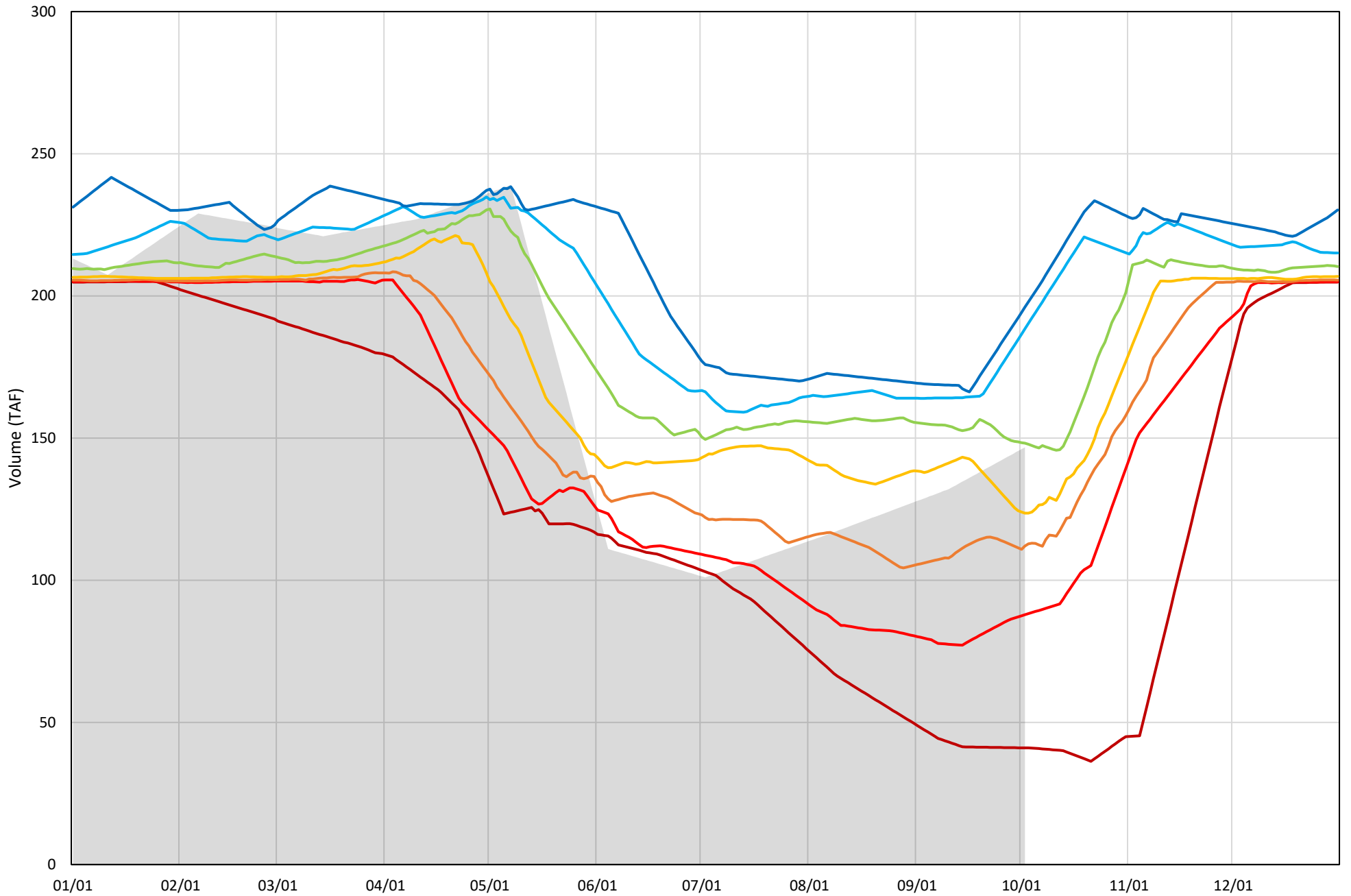


# Whiskeytown Lake Cold Water Pool Volume ≤56°F



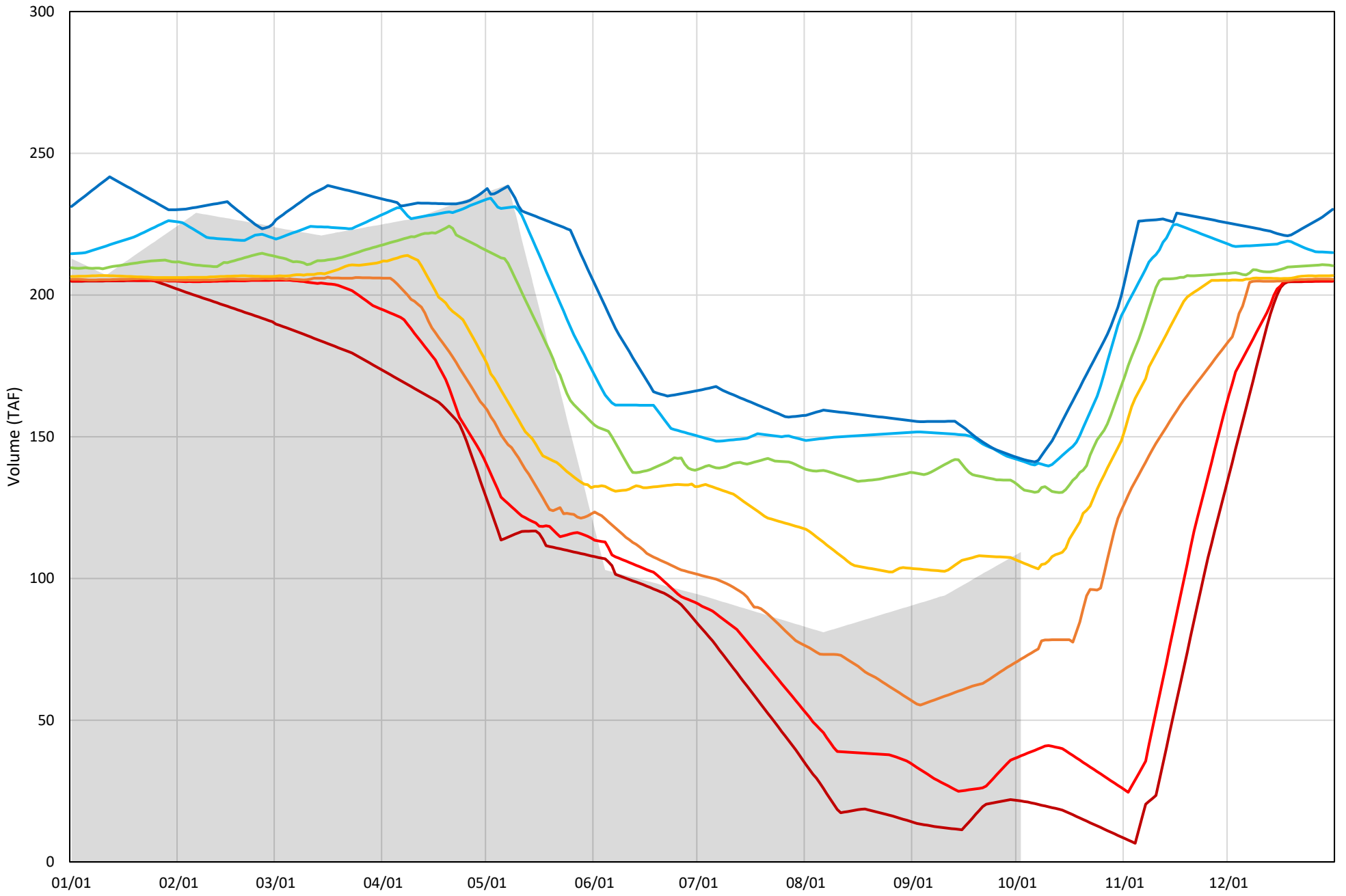
Whiskeytown Lake Cold Water Pool Volume  $\leq 60^{\circ}\text{F}$  - Percent Exceedances (2000-2023)

2024 95 90 75 50 25 10 5



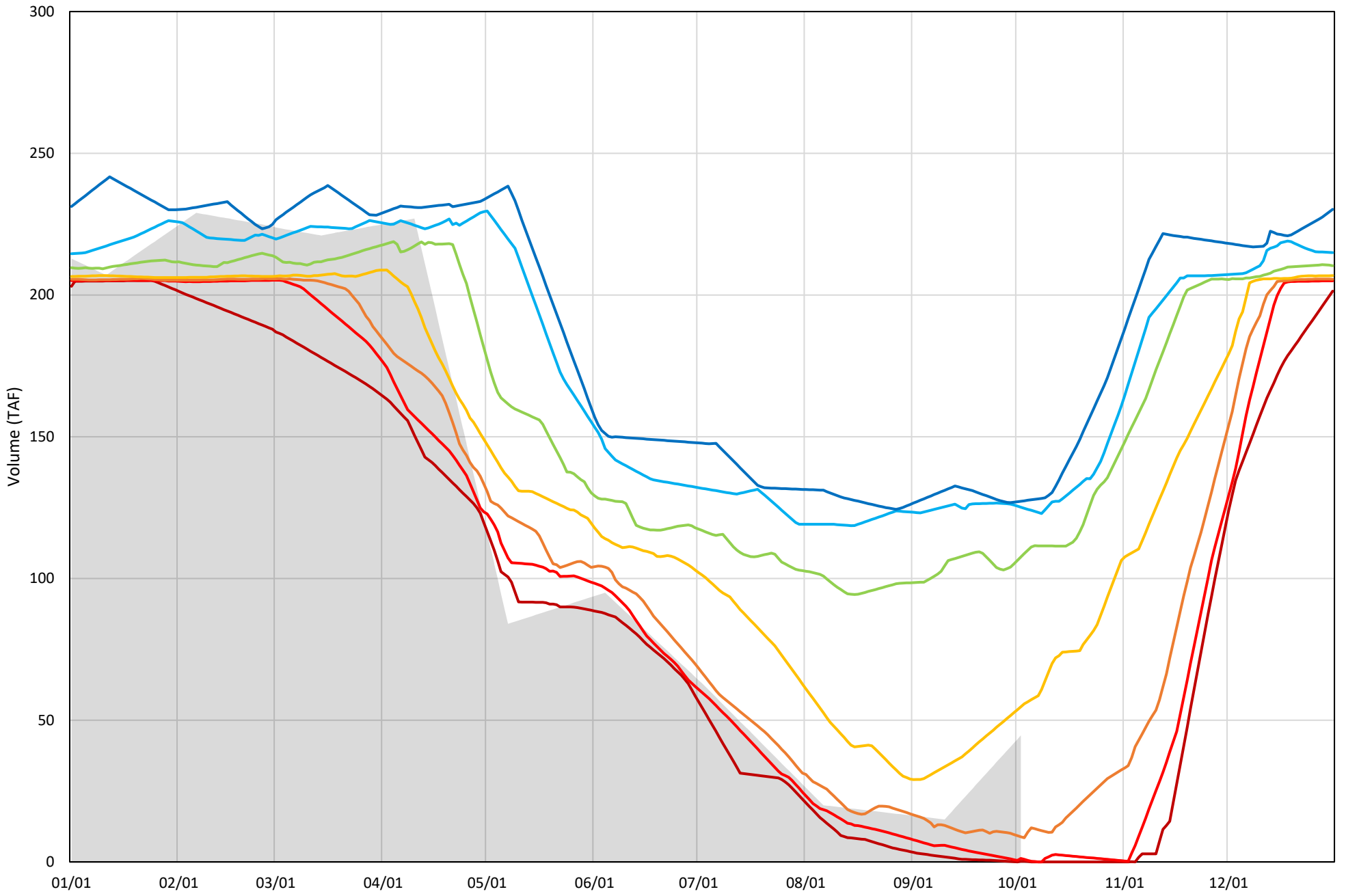
Whiskeytown Lake Cold Water Pool Volume  $\leq 58^{\circ}\text{F}$  - Percent Exceedances (2000-2023)

2024 95 90 75 50 25 10 5



Whiskeytown Lake Cold Water Pool Volume  $\leq 56^{\circ}\text{F}$  - Percent Exceedances (2000-2023)

2024 95 90 75 50 25 10 5



## Whiskeytown Cold Water Pool Comparison by Year (for Specified Date)

Oct-03 2024	Δ TAF				% Δ			
	≤60°	≤58°	≤56°	Abs. Avg.	≤60°	≤58°	≤56°	Abs. Avg.
2000	-27.2	1.8	47.3	25.4	-18.5	1.7	105.9	42.0
2001	0.9	31.8	81.4	38.1	0.6	29.1	182.4	70.7
2002	4.4	33.1	68.8	35.4	3.0	30.3	154.1	62.5
2003	-2.2	32.7	83.0	39.3	-1.5	29.9	185.8	72.4
2004	1.7	29.6	64.0	31.8	1.2	27.1	143.4	57.2
2005	-48.6	-41.2	-28.6	39.5	-33.1	-37.7	-64.0	44.9
2006	-5.3	26.2	79.6	37.0	-3.6	23.9	178.2	68.6
2007	-23.6	9.8	28.9	20.7	-16.1	9.0	64.6	29.9
2008	-15.8	12.8	59.5	29.4	-10.8	11.7	133.3	51.9
2009	-35.1	-17.1	-41.3	31.2	-23.9	-15.7	-92.6	44.0
2010	-24.9	-48.5	-43.2	38.9	-17.0	-44.4	-96.8	52.7
2011	-33.9	-8.8	-0.1	14.3	-23.1	-8.0	-0.3	10.5
2012	1.6	6.2	7.1	5.0	1.1	5.7	15.9	7.6
2013	51.3	30.2	69.4	50.3	35.0	27.7	155.4	72.7
2014	-25.9	-27.6	-43.7	32.4	-17.7	-25.3	-97.8	46.9
2015	-22.8	-73.7	-44.7	47.1	-15.5	-67.5	-100.0	61.0
2016	-46.0	-61.8	-43.2	50.3	-31.3	-56.6	-96.7	61.6
2017	43.2	6.1	37.5	28.9	29.4	5.6	84.0	39.7
2018	-26.4	-26.3	-32.0	28.2	-18.0	-24.0	-71.6	37.9
2019	-51.0	-27.0	-20.8	32.9	-34.8	-24.7	-46.6	35.3
2020	-22.7	-10.4	13.1	15.4	-15.4	-9.5	29.3	18.1
2021	40.1	8.8	27.1	25.4	27.4	8.1	60.7	32.1
2022	-118.7	-92.5	-37.0	82.7	-80.9	-84.6	-82.9	82.8
2023	-66.8	-70.1	-31.4	56.1	-45.5	-64.1	-70.2	60.0
2024	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Historical - Current

(Historical - Current) / Current