

# Northern CVP Water Temperature Report

## August - 2024

Page	Description
2	- Mean Daily Water Temperature, Release Flow Rates and Air Temperatures with Monthly Averages
3	- Sacramento River Mean Daily Water Temperature Plot
4	- Trinity River Mean Daily Water Temperature Plot
5	- Shasta Lake Isothermobaths & Cold Water Pool Statistics
14	- Trinity Lake Isothermobaths & Cold Water Pool Statistics
23	- Whiskeytown Lake Isothermobaths & Cold Water Pool Statistics
x	- <a href="#">TCD Configuration</a> (External Link)

s



— 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	
Jul	50.7	50.0	55.9	51.5	52.0	52.7	54.3	56.0	57.8	58.1	50.4	57.7	63.0	11457	1185	13246	89.8	83.3	83.8	
08/01	51.2	50.7	57.0	52.2	52.6	53.3	54.9	56.4	58.0	59.2	50.2	58.5	64.3	11658	1199	13006	88.5	80.6	81.3	
08/02	51.1	50.5	57.0	52.2	52.6	53.2	54.7	56.2	57.9	59.0	50.5	58.1	64.1	10949	1238	13025	89.0	81.5	83.2	
08/03	51.3	50.7	57.1	51.9	52.3	52.8	54.0	55.5	57.2	58.0	50.5	58.0	63.8	12101	1285	12990	88.0	81.0	83.3	
08/04	51.3	50.7	57.1	52.0	52.4	53.1	54.6	55.9	57.1	59.4	50.2	58.7	64.0	11215	1263	12604	89.5	82.3	83.6	
08/05	51.4	50.9	57.2	52.3	52.8	53.5	55.1	56.7	58.4	58.9	50.2	59.9	65.5	10610	1389	12743	86.0	79.1	79.0	
08/06	51.2	50.6	57.2	52.4	52.8	53.4	54.9	56.4	58.0	58.7	50.6	59.1	65.3	11037	1240	12884	84.0	77.5	78.9	
08/07	51.1	50.4	57.2	52.1	52.6	53.2	54.7	56.1	57.8	58.6	50.5	59.1	65.2	10855	1237	12826	85.5	78.5	80.6	
08/08	51.3	50.4	57.3	52.1	52.5	53.2	54.7	56.1	57.8	58.8	50.6	59.4	65.3	10619	1234	12155	85.5	78.9	78.7	
08/09	51.2	50.7	57.3	52.2	52.7	53.4	54.9	56.5	58.2	58.9	50.6	59.4	65.1	10451	1235	12077	85.5	79.6	79.4	
08/10	51.4	50.7	57.3	52.4	52.8	53.5	55.1	56.6	58.2	59.0	50.6	59.1	64.8	10489	1168	12075	84.5	78.6	78.8	
08/11	51.5	50.7	57.3	52.4	52.8	53.5	55.1	56.6	58.4	59.0	50.6	59.1	64.8	10314	1222	12076	84.0	78.0	78.5	
08/12	51.4	50.6	57.4	52.5	52.9	53.7	55.3	56.8	58.5	59.0	50.6	59.3	64.7	10518	1260	12074	81.0	75.3	75.4	
08/13	51.4	50.5	57.4	52.3	52.8	53.5	55.1	56.6	58.3	58.3	50.7	58.1	63.2	10255	1227	12074	80.5	76.9	75.8	
08/14	51.3	50.5	57.5	52.2	52.6	53.3 #		56.2	57.9	58.5	50.6	58.3	63.3	10357	971	12077	81.5		76.9	
08/15	51.2	50.4	57.5	52.3	52.7	53.5 #		56.3	57.9	58.8	50.6	58.7	63.5	10492	1236	11626	80.0		78.3	
08/16	51.0	50.2	57.5	52.3	52.7	53.5	54.9	56.5	58.1	59.1	51.0	58.3	63.7	9634	1616	11629	81.0	75.6	76.5	
08/17	51.3	50.4	57.5	52.2	52.6	53.2	54.7	56.6	58.4	58.1	50.7	57.6	62.2	10316	1272	11570	75.5	72.7	73.6	
08/18	51.1	50.3	57.5	52.1	52.5	53.2	54.6	55.9	57.7	58.3	50.4	57.1	61.4	9804	1258	11554	75.0	71.7	71.0	
08/19	51.3	50.5	57.5	52.2	52.6	53.3	54.6	55.8	57.3	58.2	50.1	57.5	62.3	10145	1220	11464	75.0	69.3	71.5	
08/20	51.4	50.5	57.4	52.2	52.6	53.3	54.6	55.8	57.3	58.2	50.1	57.0	62.3	10143	1225	11504	78.0	72.1	73.3	
08/21	51.1	50.4	57.4	52.3	52.7	53.4	54.9	56.2	57.7	58.6	49.9	57.2	62.3	9727	1238	11444	79.0	73.7	75.3	
08/22	51.1	50.2	57.4	52.2	52.6	53.4	54.9	56.3	57.9	58.5	49.8	57.2	62.1	9999	1262	11436	73.5	69.6	70.0	
08/23	51.0	50.0	57.4	52.1	52.3	52.8	54.1	55.8	57.3	56.7	49.5	54.4	58.9	9463	1265	11054	68.5	66.6	66.3	
08/24	51.1	50.1	57.4	51.8	52.2	52.9	54.1	55.1	56.3	57.7	49.9	54.7	58.3	9754	1220	11037	68.5	65.1	64.6	
08/25	51.1	50.1	57.3	52.1	52.5	53.1	54.4	55.4	56.7	58.0	49.4	56.3	60.1	9393	1389	11016	73.0	68.3	70.0	
08/26	51.4	50.3	57.2	52.1	52.6	53.3	54.8	56.1	57.4	58.4	49.3	56.4	61.4	9915	1234	11030	77.5	72.2	72.2	
08/27	51.5	50.2	57.2	52.5	52.9	53.7	55.0	56.2	57.6	58.5	49.6	57.0	62.2	8319	1230	10403	81.0	75.0	76.1	
08/28	50.7	49.9	57.1	52.7	53.1	54.0	55.4	56.8	58.3	58.7	49.6	57.3	62.6	8308	1448	10098	83.0	76.9	78.5	
08/29	50.6	49.5	57.0	52.3	52.9	53.9	55.6	57.1	58.6	58.5	49.6	57.2	62.8	8188	1227	10020	83.0	77.7	77.2	
08/30	50.6	49.6	57.0	52.2	52.8	53.7	55.2	56.7	58.6	58.5	49.6	57.1	62.8	8014	1332	9573	83.0	77.6	77.3	
08/31	50.5	49.6	57.0	52.1	52.7	53.7	55.3	56.9	58.6	58.6	49.7	57.2	62.8	7967	1175	9578	83.0	77.2	77.2	
Aug	51.2	50.4	57.3	52.2	52.7	53.4	54.8	56.2	57.8	58.5	50.2	57.8	63.1	10101	1261	11705	80.9	75.4	76.2	
														Total CFS	311009	39015	360722			
														Total AF	616874	77385	715477			

**Legend**

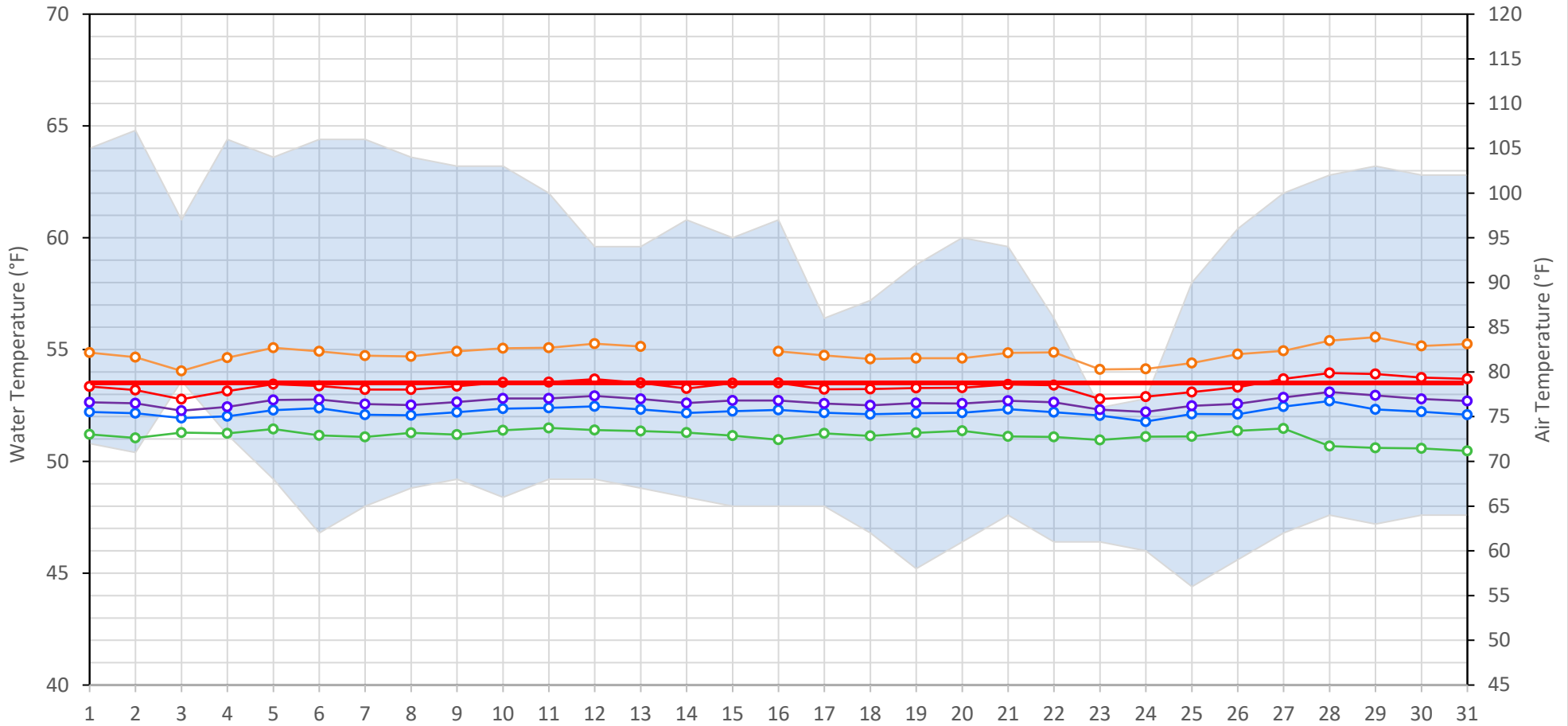
- ? = 1-9 hours of data missing (Average includes estimations)
- ! = 10 or more hours of data missing (Average not calculated)
- # = Station out of service
- ↑ = Record high air temperature
- ↓ = Record low air temperature
- = Monthly Averages

**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>

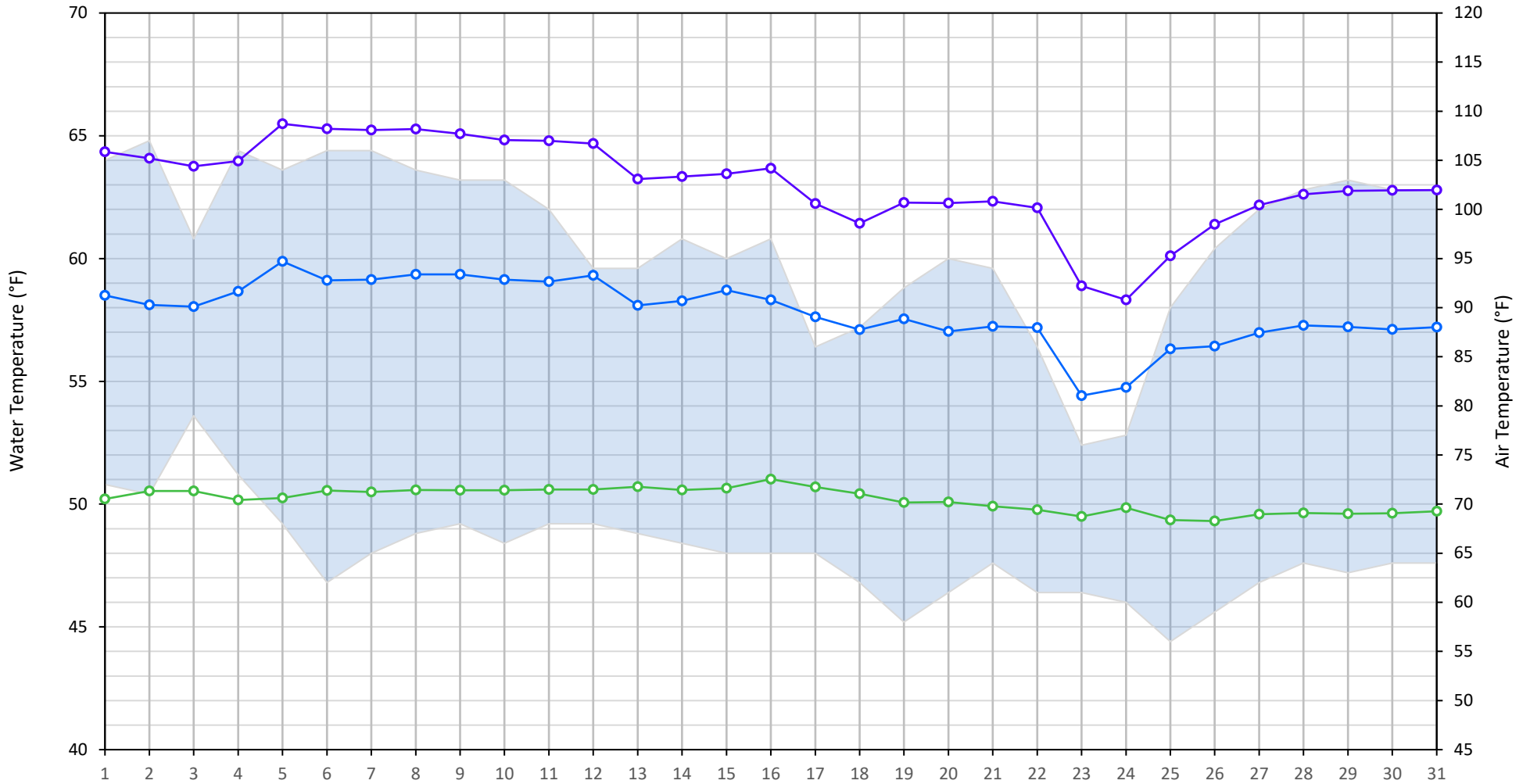
Water Right Temperature Control Points				
River	Point	Temp. (°F)	Begin Date	End Date
Sacramento	CCR	53.5	05/24/2024	TBD

**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

**Notes**

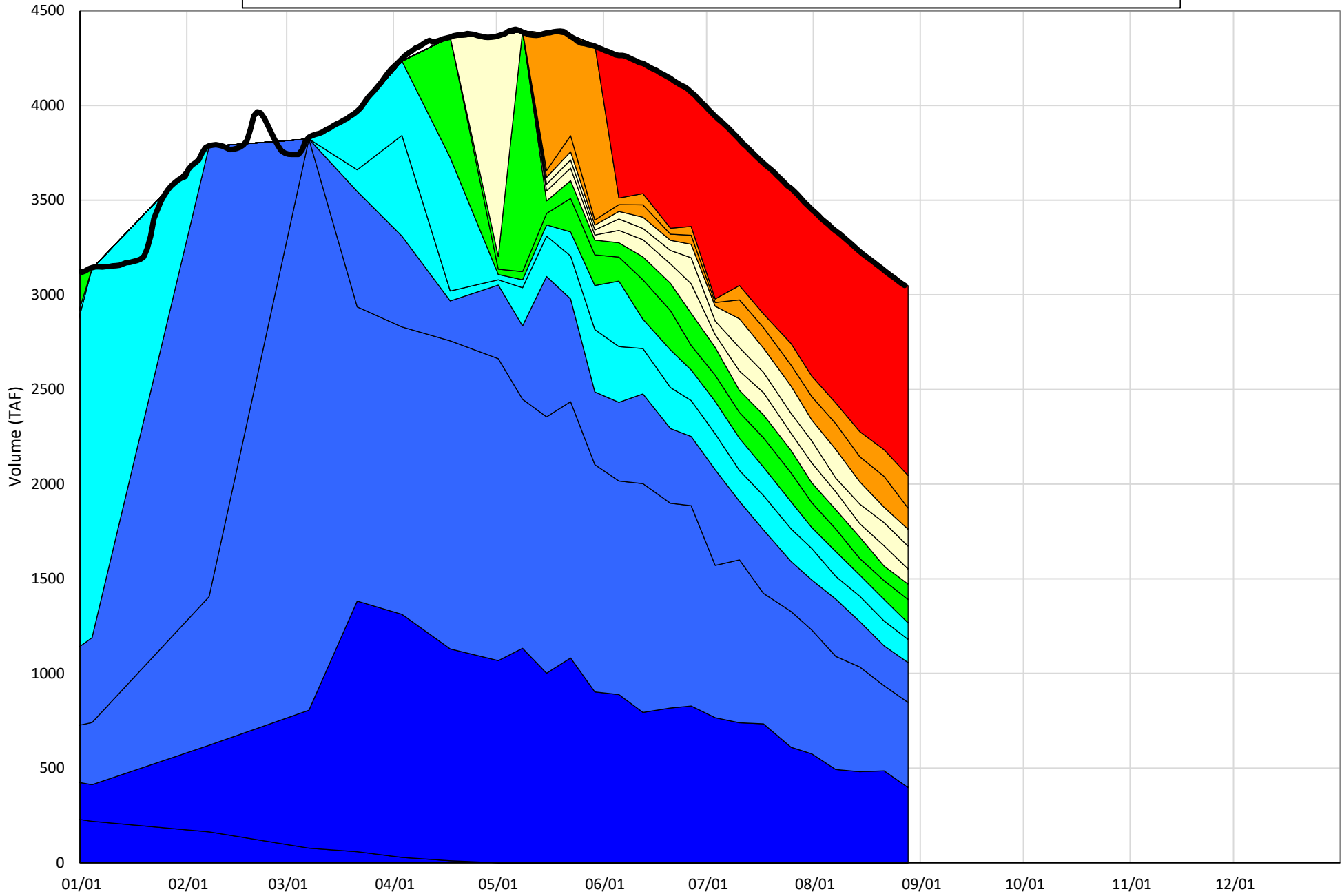
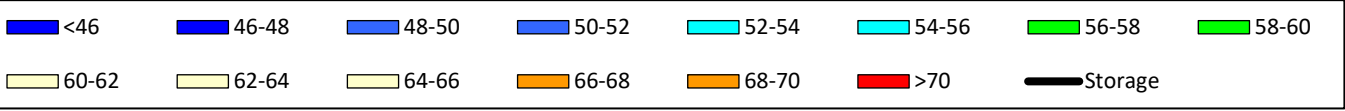
<sup>1</sup> Distances are approximate

# Shasta Lake Isothermobaths & Cold Water Pool Statistics

## 2024

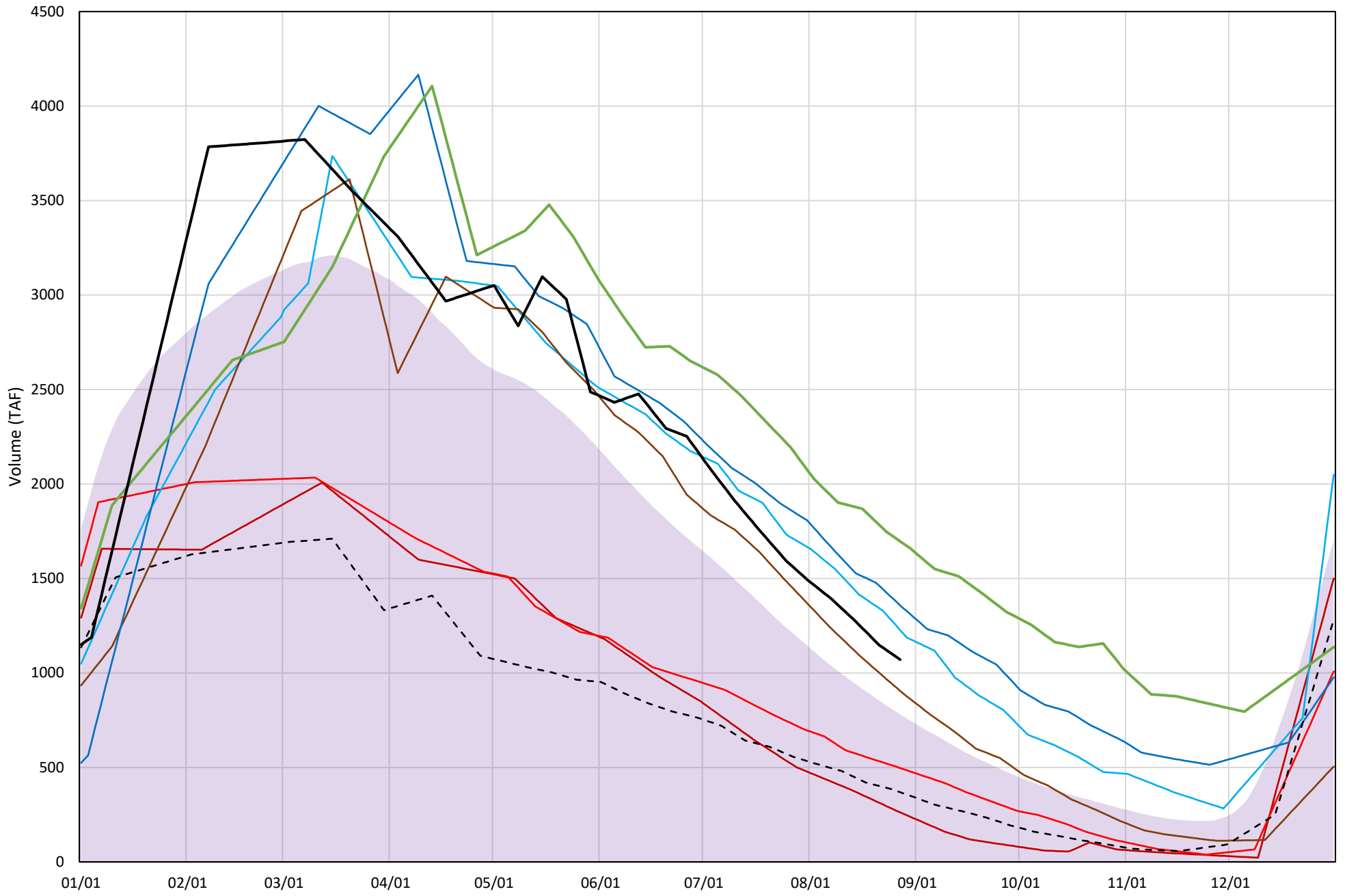
Page	Description
6	- Shasta Lake Isothermobaths Plot
7	- Shasta Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$
8	- Shasta Lake Cold Water Pool Volume $\leq 50^{\circ}\text{F}$
9	- Shasta Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$
10	- Shasta Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$ - Percent Exceedances
11	- Shasta Lake Cold Water Pool Volume $\leq 50^{\circ}\text{F}$ - Percent Exceedances
12	- Shasta Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$ - Percent Exceedances
13	- Shasta Lake Cold Water Pool Comparison by Year

Shasta Lake Isothermobaths Plot - 2024

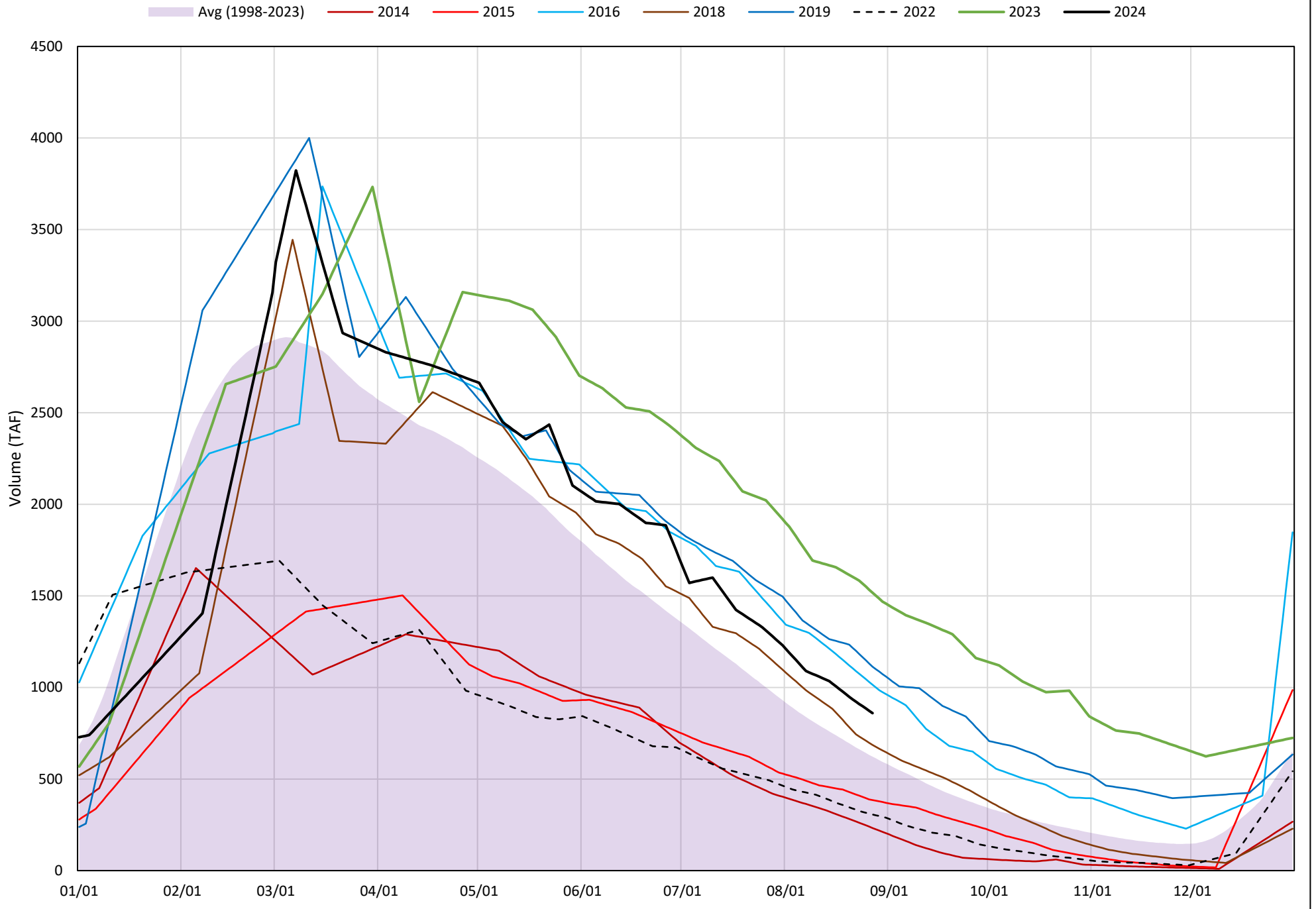


# Shasta Lake Cold Water Pool Volume ≤52°F

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



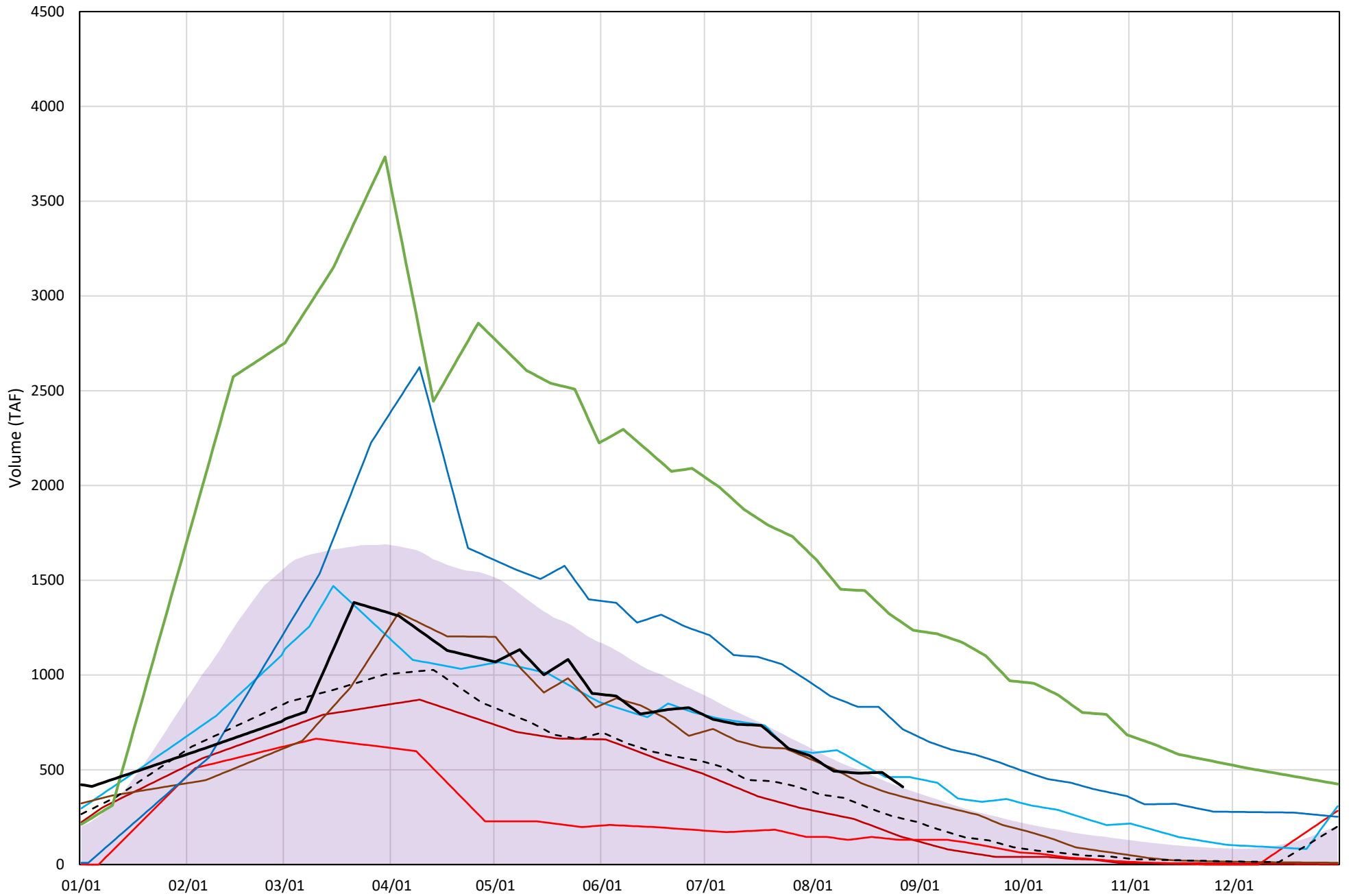
# Shasta Lake Cold Water Pool Volume ≤50°F





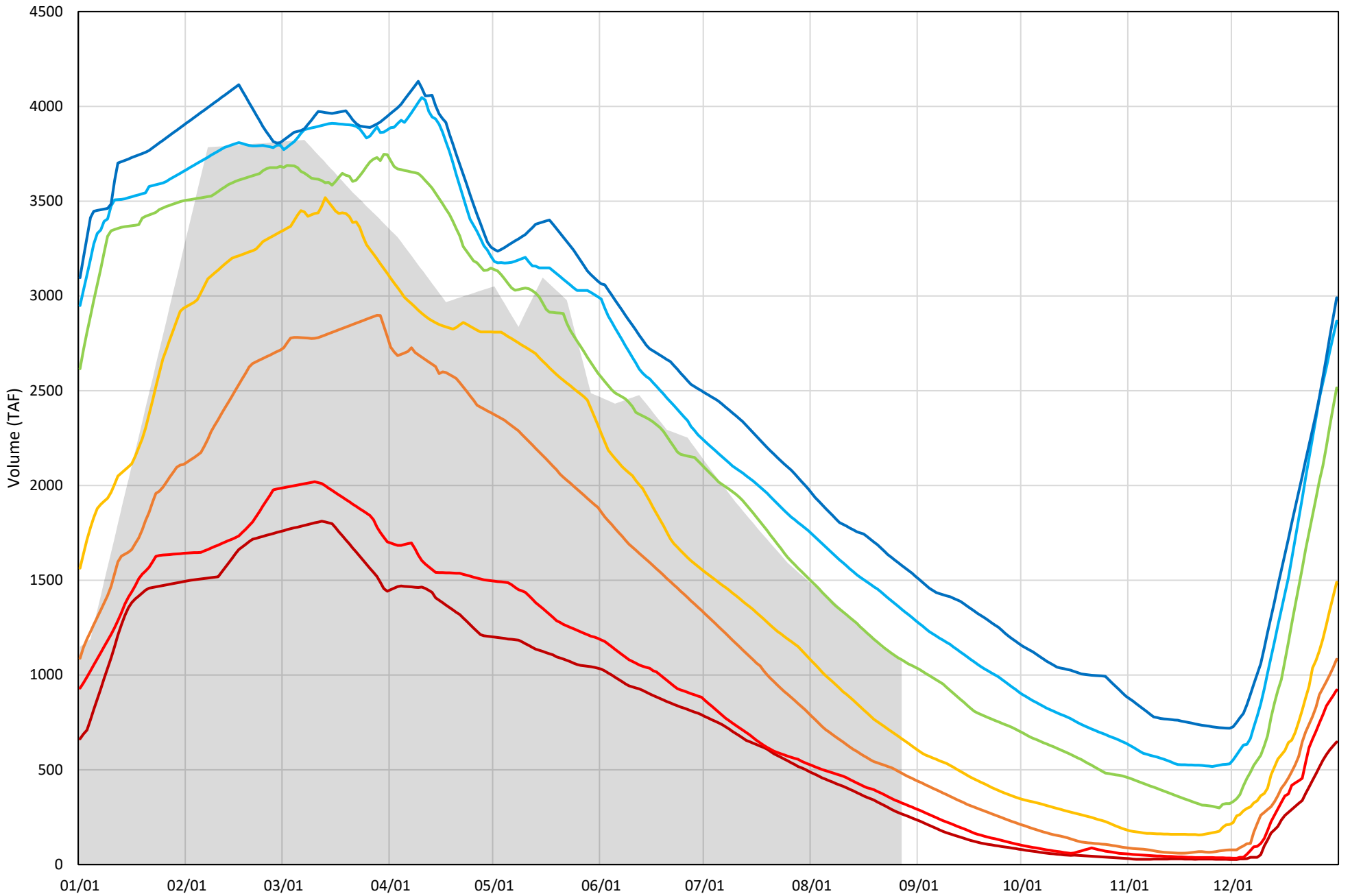
# Shasta Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$

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



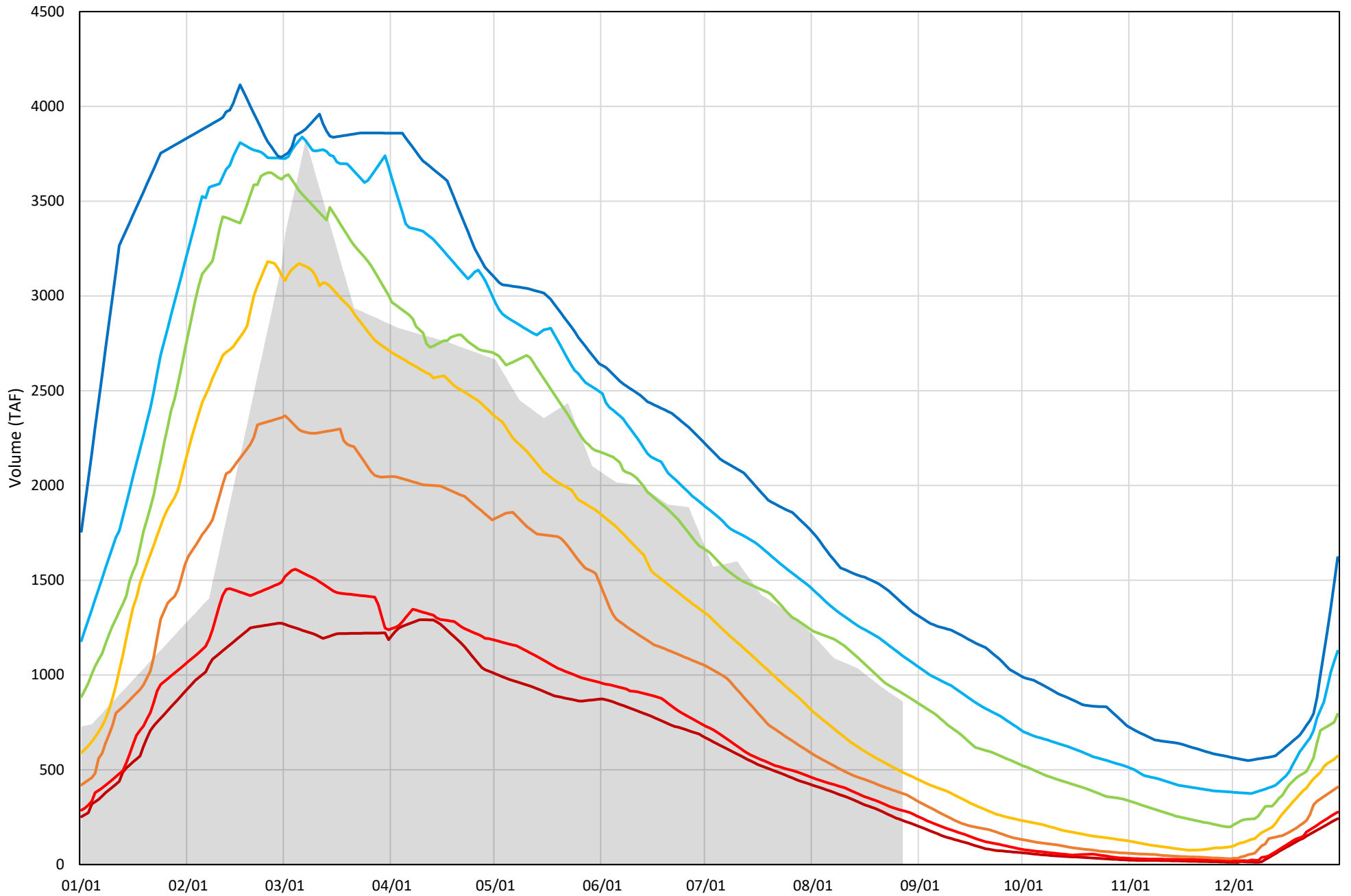
Shasta Lake Cold Water Pool Volume  $\leq 52^{\circ}\text{F}$  - Percent Exceedances (1998-2023)

2024 95 90 75 50 25 10 5



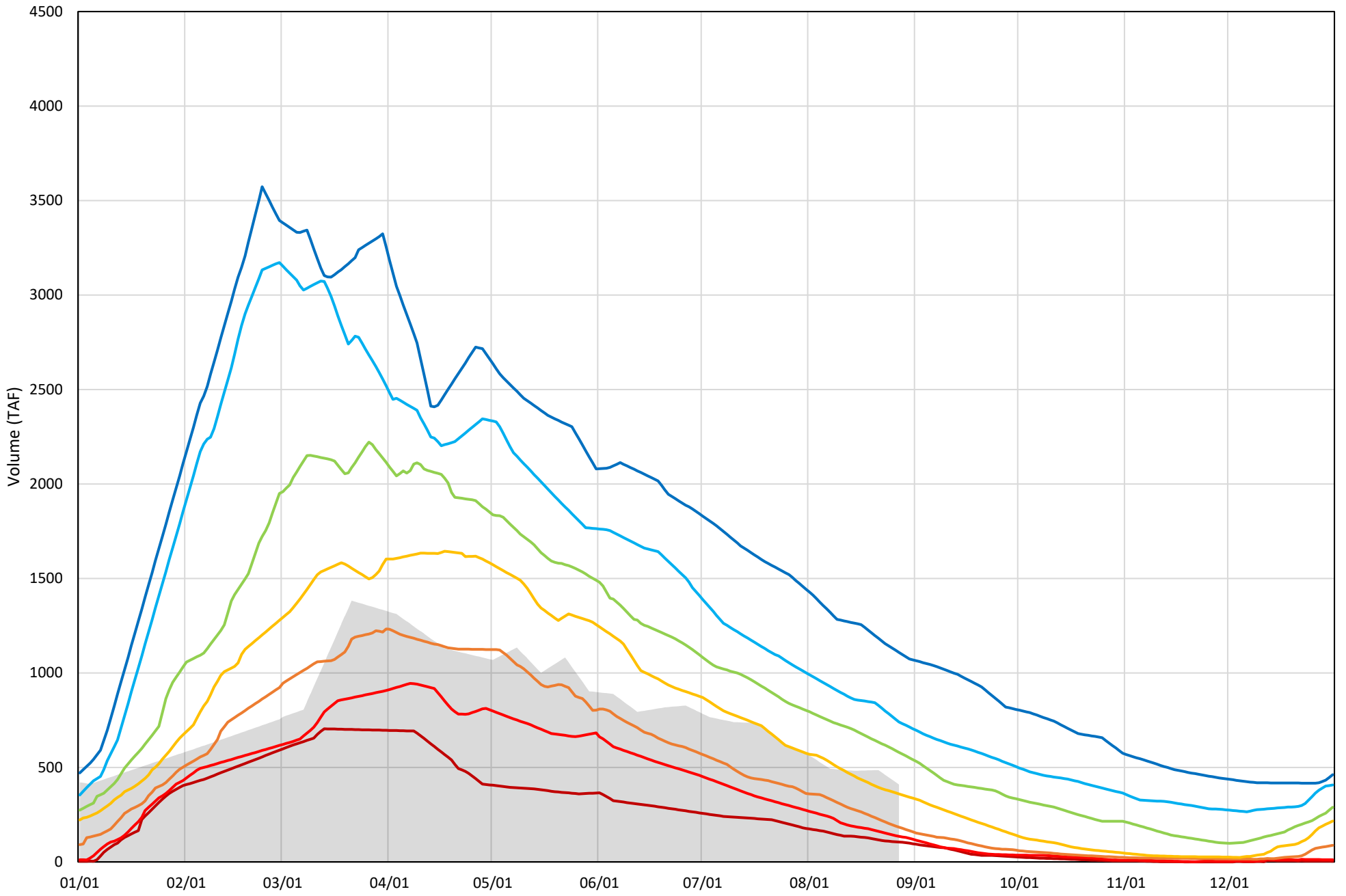
Shasta Lake Cold Water Pool Volume  $\leq 50^{\circ}\text{F}$  - Percent Exceedances (1998-2023)

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)

Aug-28 2024	Δ TAF				% Δ			
	≤52°	≤50°	≤48°	Abs. Avg.	≤52°	≤50°	≤48°	Abs. Avg.
1998	-387	-470	-268	375	-36	-55	-65	52
1999	-39	24	263	109	-4	3	64	24
2000	-477	-453	-257	396	-45	-53	-63	53
2001	-526	-402	-48	326	-49	-47	-12	36
2002	-220	-168	96	161	-21	-19	24	21
2003	-315	-475	-318	369	-29	-55	-78	54
2004	-665	-528	-197	463	-62	-61	-48	57
2005	-587	-513	-215	439	-55	-60	-53	56
2006	-181	-190	37	136	-17	-22	9	16
2007	-512	-370	-24	302	-48	-43	-6	32
2008	-725	-544	-134	468	-68	-63	-33	55
2009	-592	-453	-87	377	-55	-53	-21	43
2010	182	100	198	160	17	12	48	26
2011	272	235	393	300	25	27	96	50
2012	-69	2	161	77	-6	0	39	15
2013	-438	-314	8	253	-41	-37	2	27
2014	-808	-627	-265	567	-76	-73	-65	71
2015	-574	-474	-280	443	-54	-55	-68	59
2016	157	155	52	121	15	18	13	15
2017	157	107	224	162	15	12	55	27
2018	-166	-173	-52	130	-15	-20	-13	16
2019	287	254	304	282	27	30	74	44
2020	-427	-375	-157	320	-40	-44	-38	41
2021	-793	-627	-273	564	-74	-73	-67	71
2022	-702	-553	-168	474	-66	-64	-41	57
2023	626	658	864	716	58	77	211	115
2024	0	0	0	0	0	0	0	0

Historical - Current

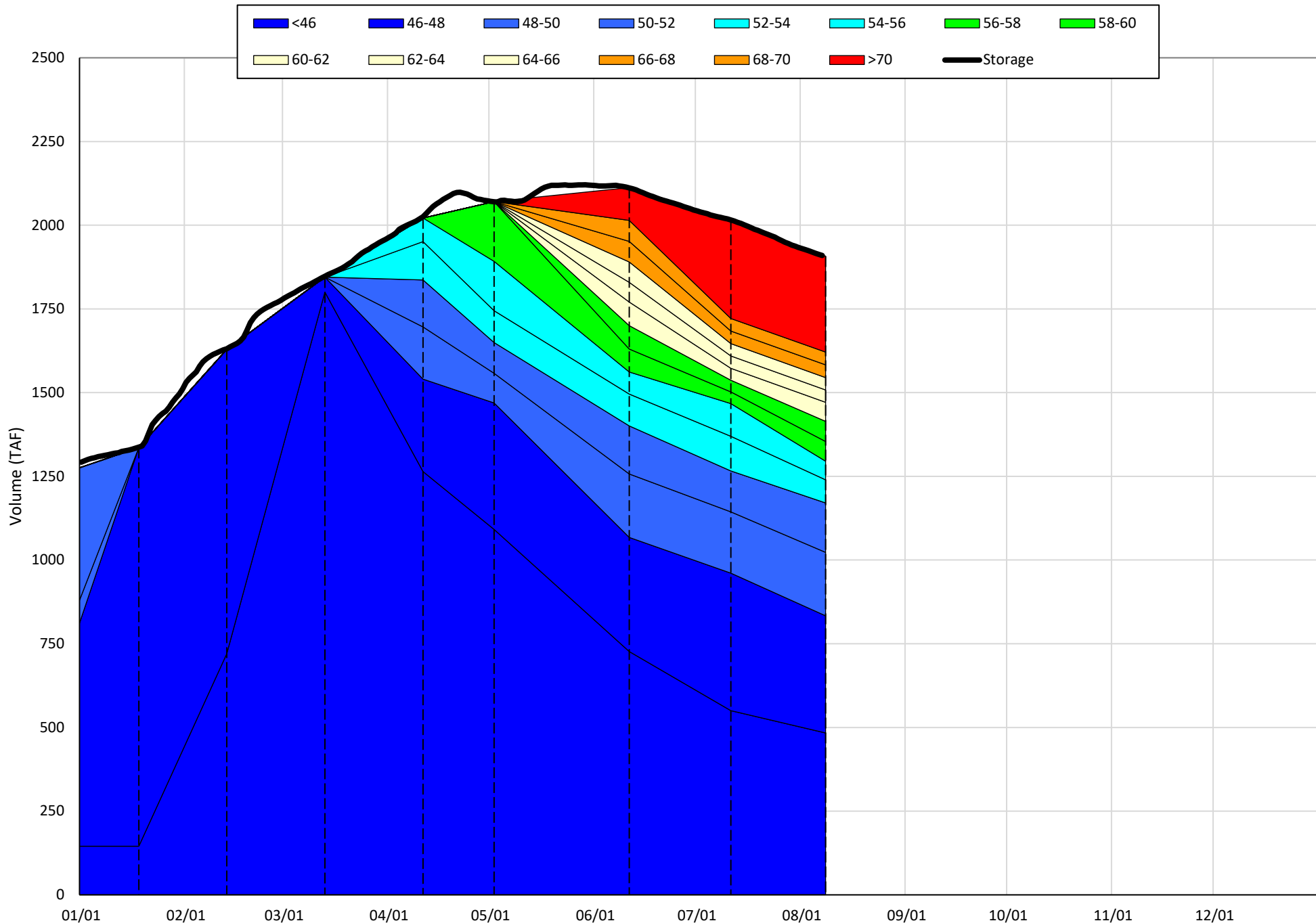
(Historical - Current) / Current

# Trinity Lake Isothermobaths & Cold Water Pool Statistics

## 2024

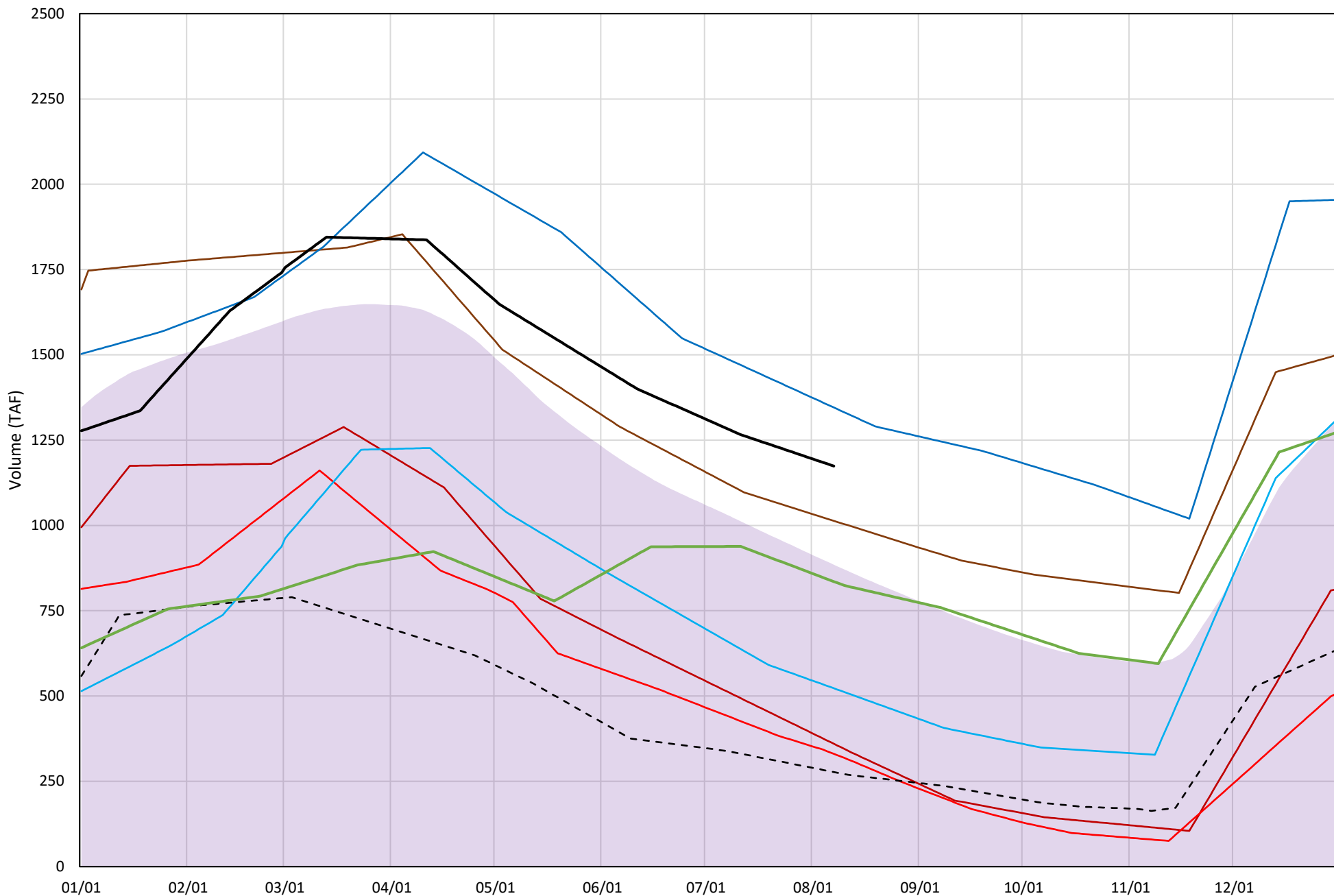
Page	Description
15	- Trinity Lake Isothermobaths Plot
16	- Trinity Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$
17	- Trinity Lake Cold Water Pool Volume $\leq 50^{\circ}\text{F}$
18	- Trinity Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$
19	- Trinity Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$ - 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

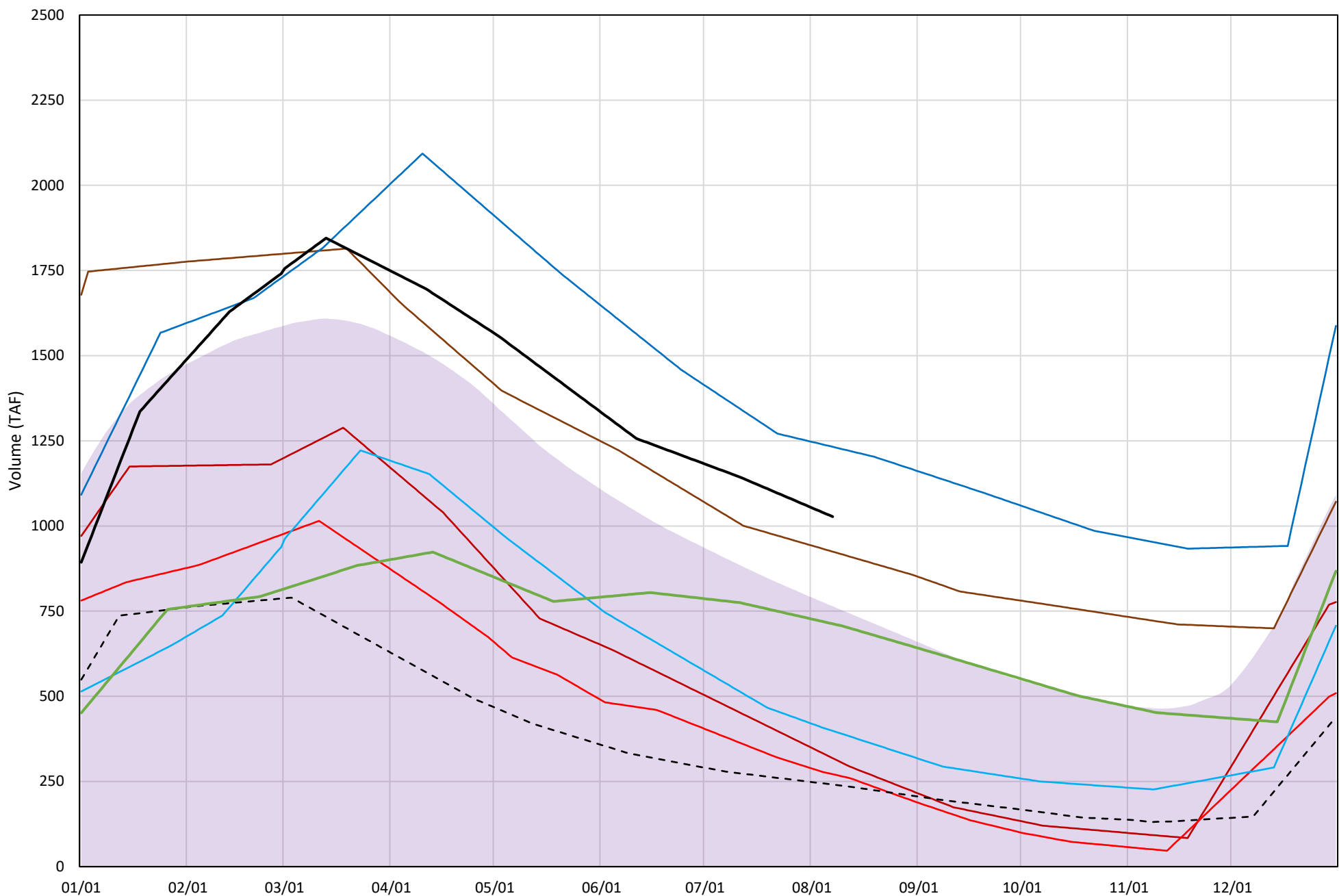
Avg (2000-2023) 2014 2015 2016 2018 2019 2022 2023 2024





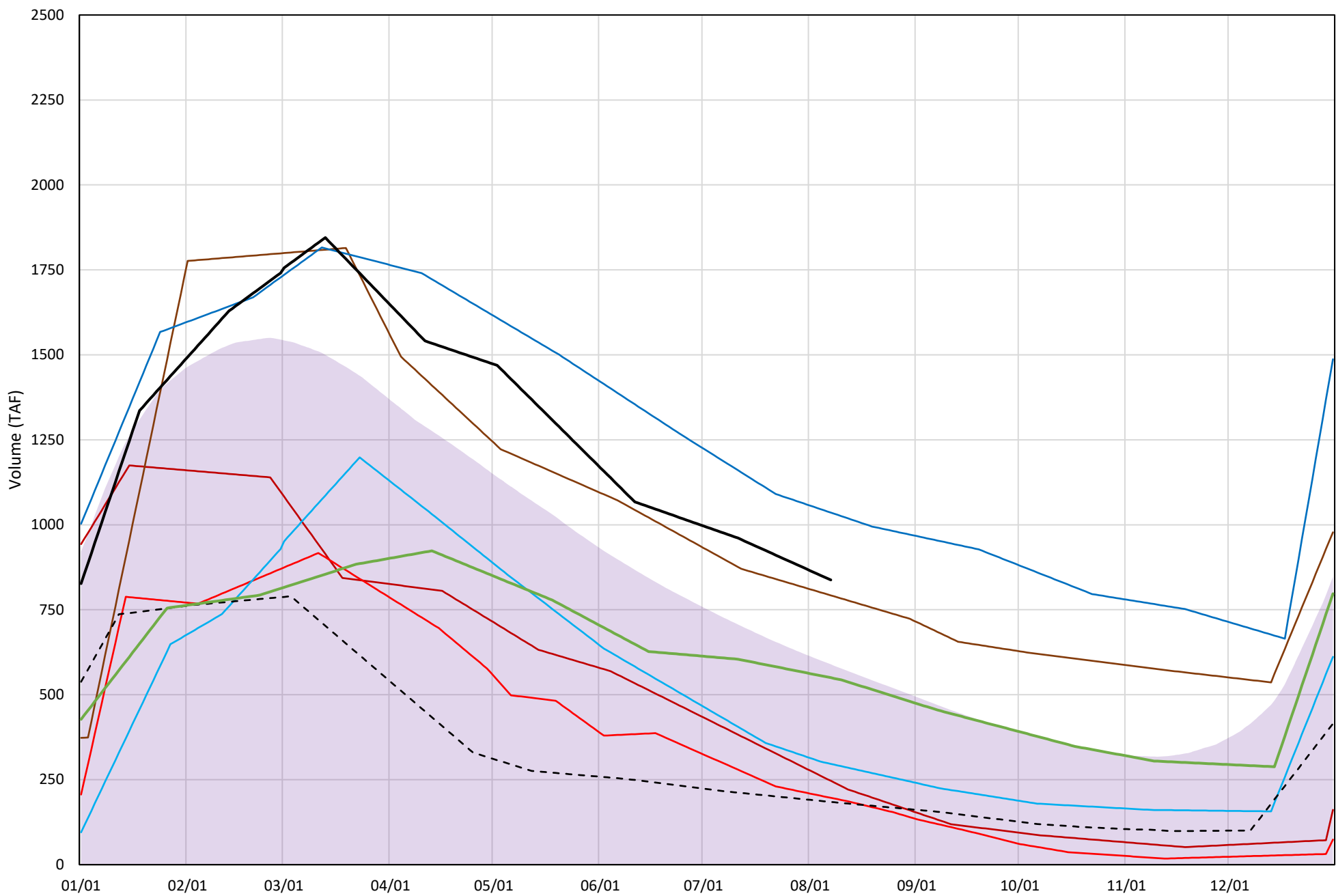
# Trinity Lake Cold Water Pool Volume ≤50°F

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



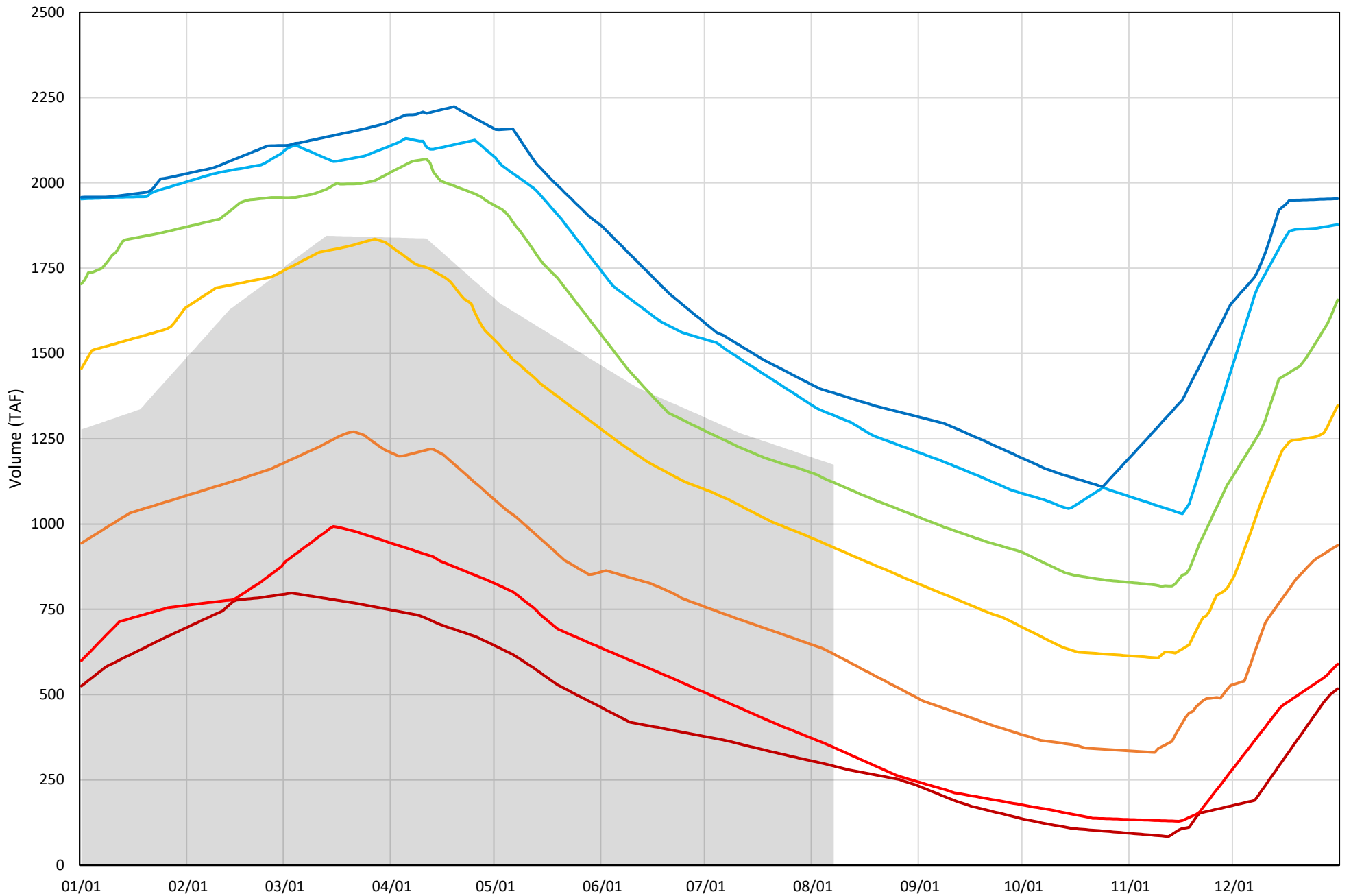
# Trinity Lake Cold Water Pool Volume ≤48°F

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



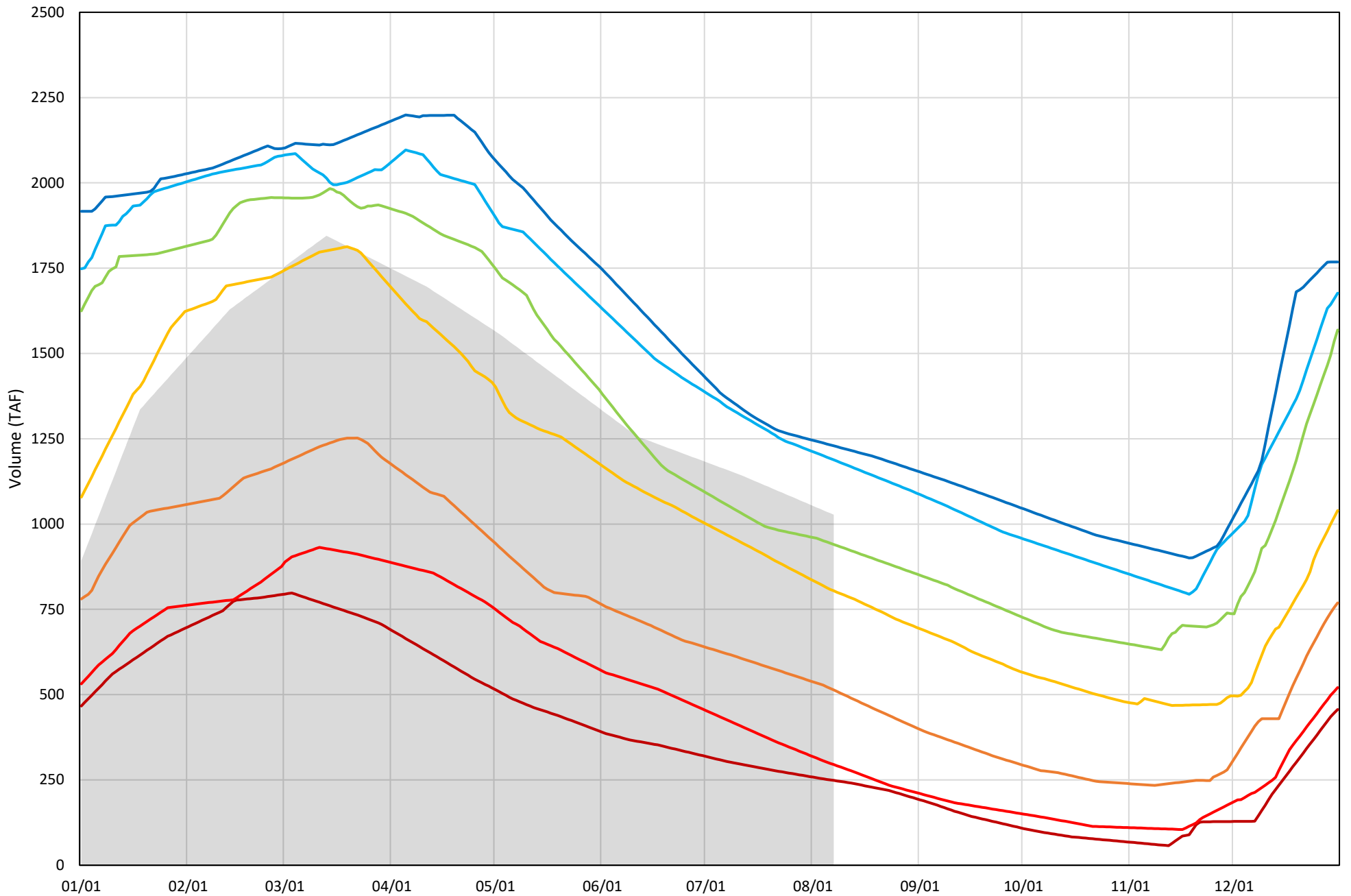
Trinity Lake Cold Water Pool Volume ≤52°F - Percent Exceedances (2000-2023)

2024 95 90 75 50 25 10 5



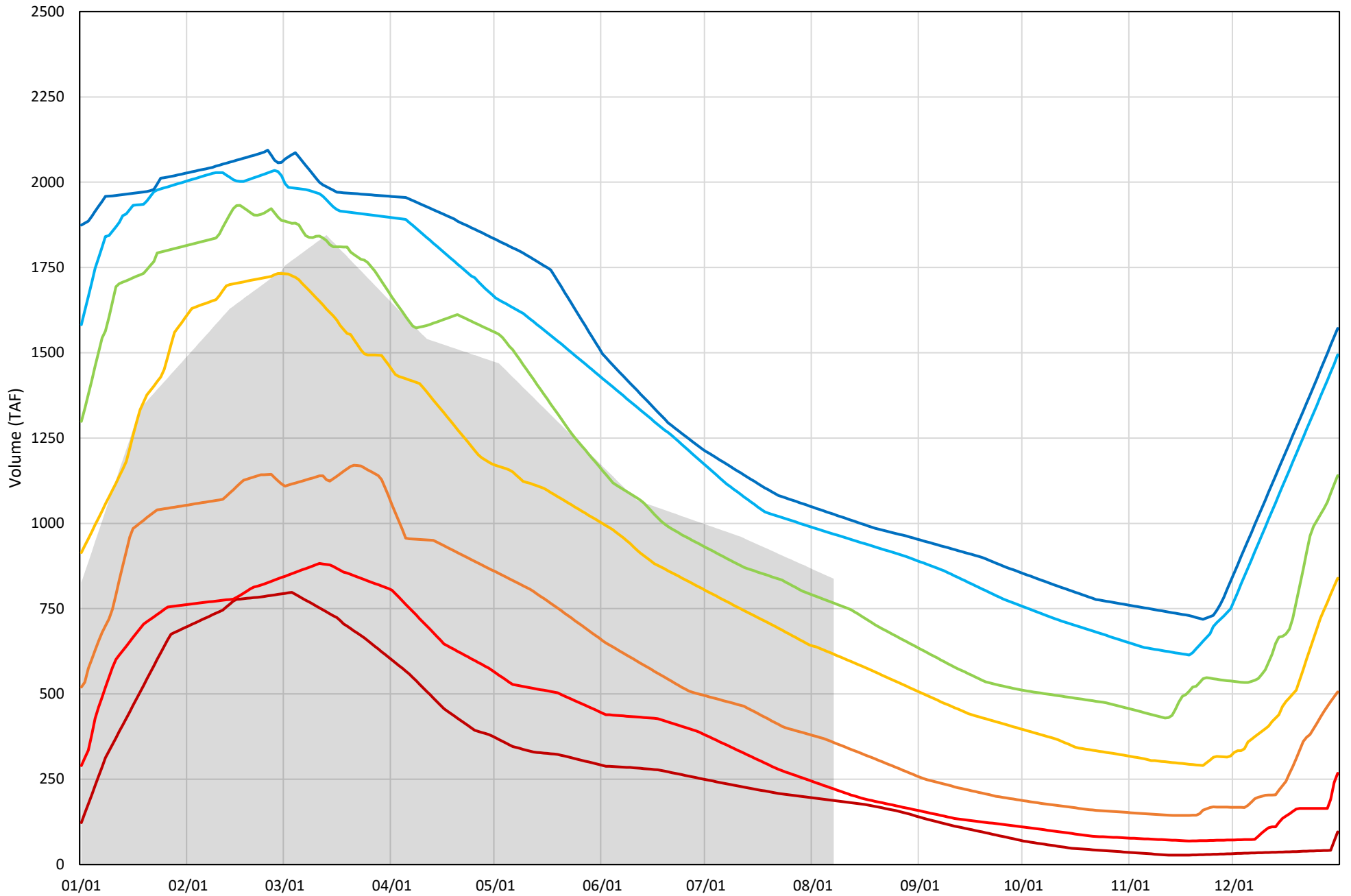
Trinity Lake Cold Water Pool Volume ≤50°F - Percent Exceedances (2000-2023)

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)

Aug-08 2024	Δ TAF				% Δ			
	≤52°	≤50°	≤48°	Abs. Avg.	≤52°	≤50°	≤48°	Abs. Avg.
2000	-105	-156	-197	152	-9	-15	-23	16
2001	-266	-233	-192	230	-23	-23	-23	23
2002	-250	-198	-137	195	-21	-19	-16	19
2003	117	11	-68	65	10	1	-8	6
2004	-215	-235	-272	241	-18	-23	-33	25
2005	-38	-82	-246	122	-3	-8	-29	13
2006	111	87	3	67	9	8	0	6
2007	-206	-147	-81	145	-18	-14	-10	14
2008	-489	-467	-443	466	-42	-45	-53	47
2009	-577	-529	-492	533	-49	-52	-59	53
2010	-235	-261	-356	284	-20	-25	-42	29
2011	223	193	101	172	19	19	12	17
2012	59	129	161	116	5	13	19	12
2013	-394	-334	-295	341	-34	-33	-35	34
2014	-814	-709	-591	705	-69	-69	-71	70
2015	-843	-756	-641	747	-72	-74	-77	74
2016	-651	-629	-541	607	-55	-61	-65	60
2017	-96	-137	-156	130	-8	-13	-19	13
2018	-160	-103	-45	103	-14	-10	-5	10
2019	172	205	198	192	15	20	24	19
2020	-297	-213	-192	234	-25	-21	-23	23
2021	-747	-648	-536	643	-64	-63	-64	64
2022	-897	-786	-653	779	-76	-77	-78	77
2023	-338	-314	-288	313	-29	-31	-34	31
2024	0	0	0	0	0	0	0	0

Historical - Current

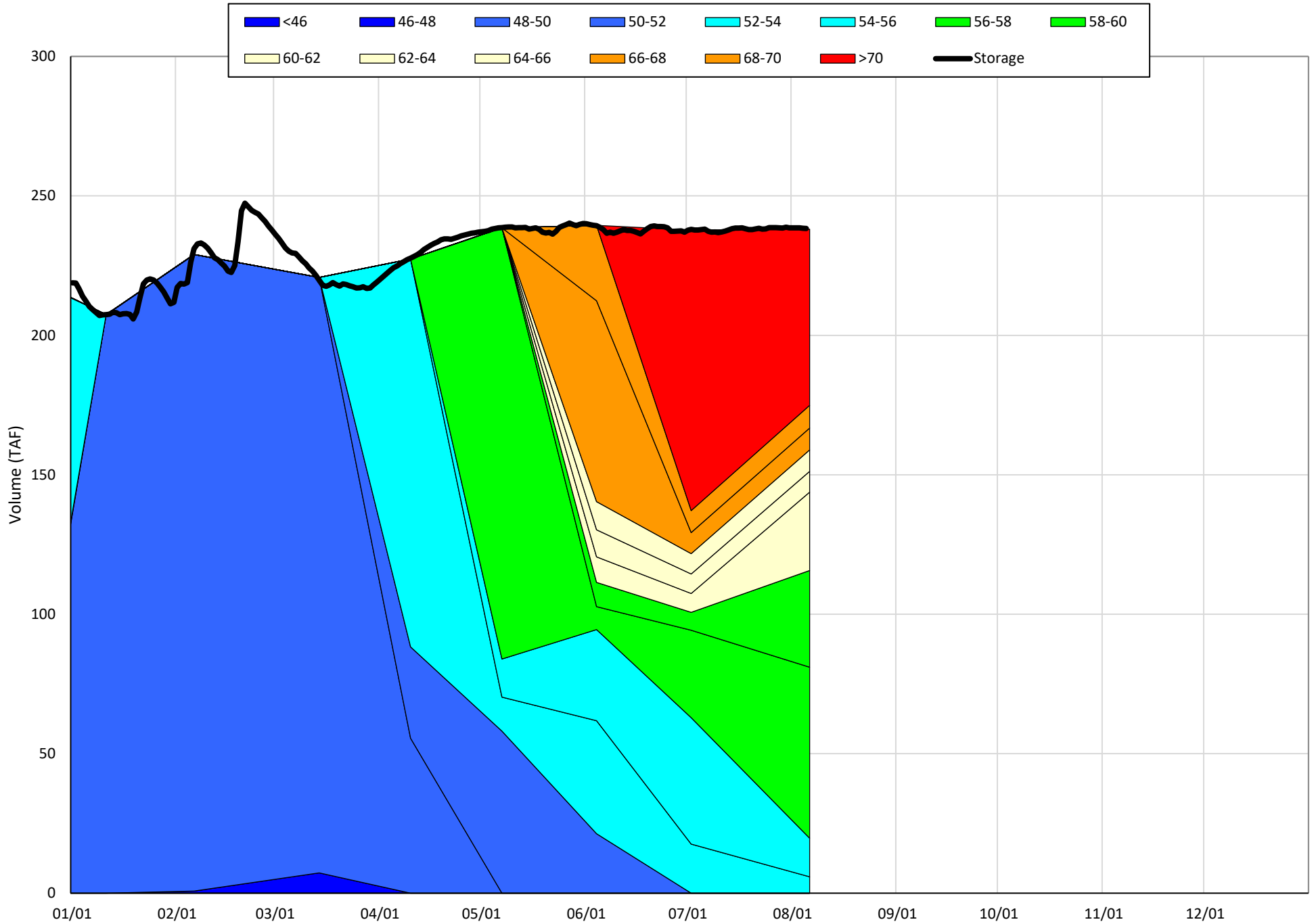
(Historical - Current) / Current

# Whiskeytown Lake Isothermobaths & Cold Water Pool Statistics

## 2024

Page	Description
24	- Whiskeytown Lake Isothermobaths Plot
25	- Whiskeytown Lake Cold Water Pool Volume $\leq 60^{\circ}\text{F}$
26	- Whiskeytown Lake Cold Water Pool Volume $\leq 58^{\circ}\text{F}$
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

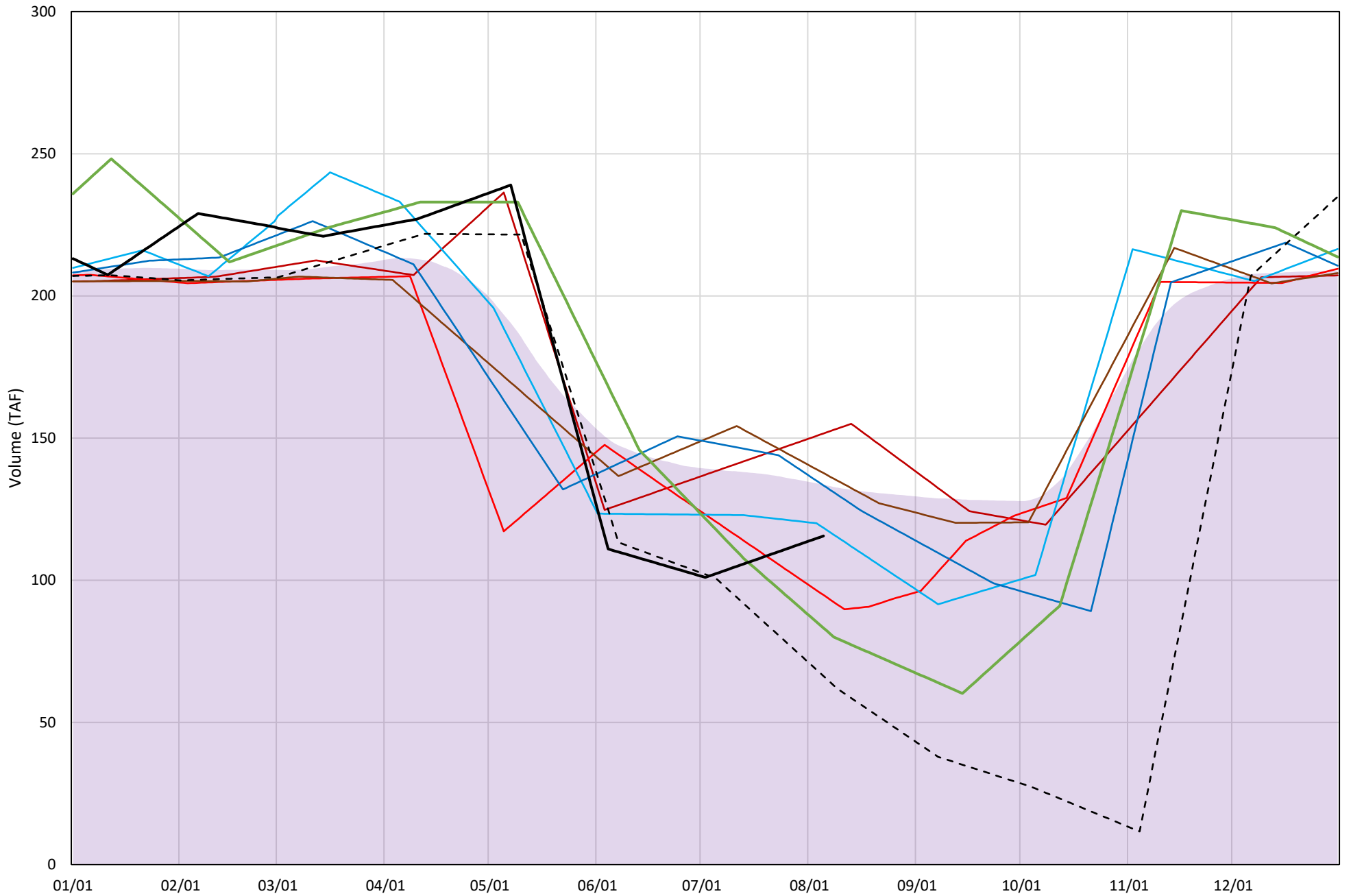
# Whiskeytown Lake Isothermobaths Plot - 2024





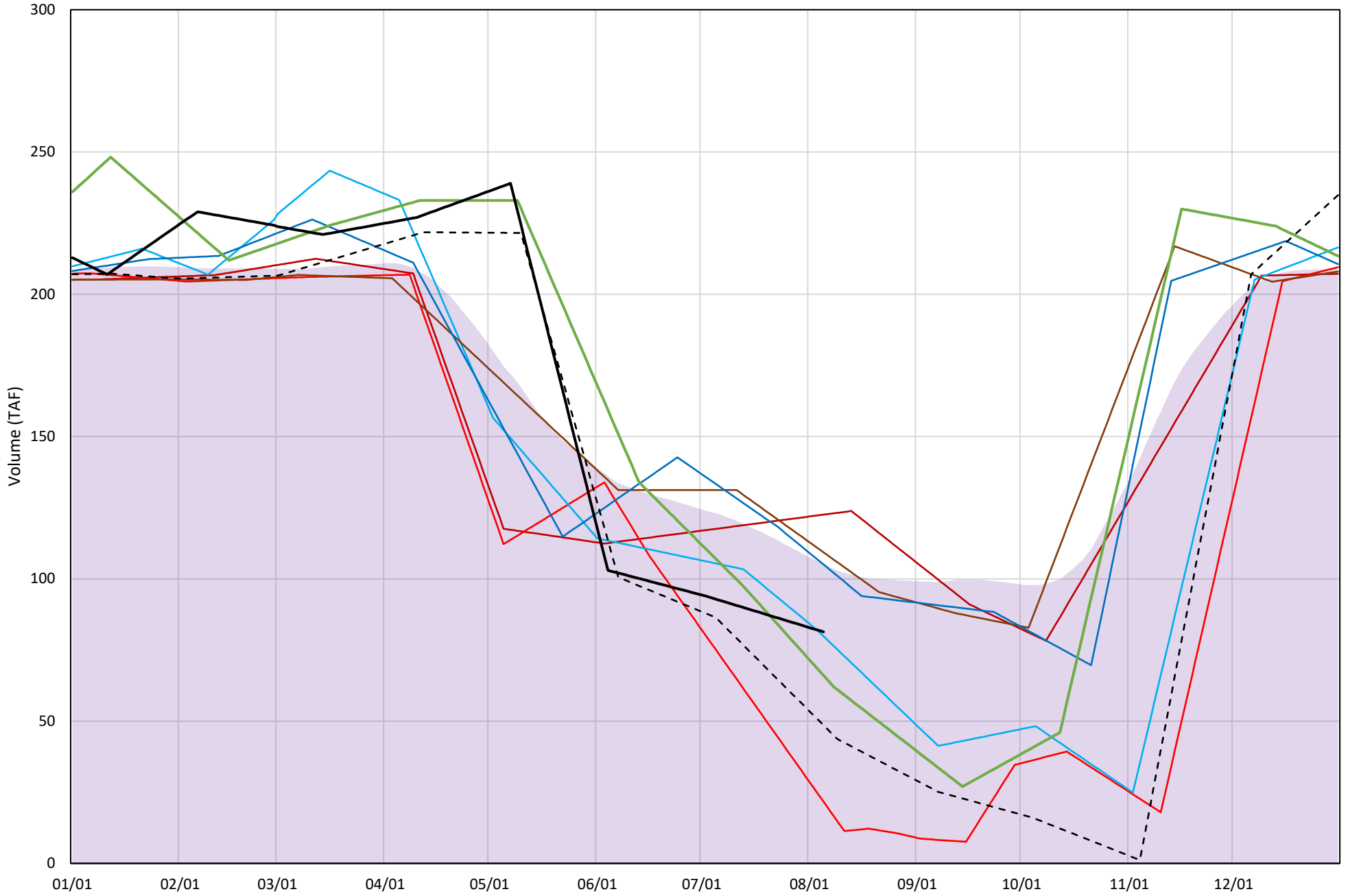
# Whiskeytown Lake Cold Water Pool Volume $\leq 60^{\circ}\text{F}$

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

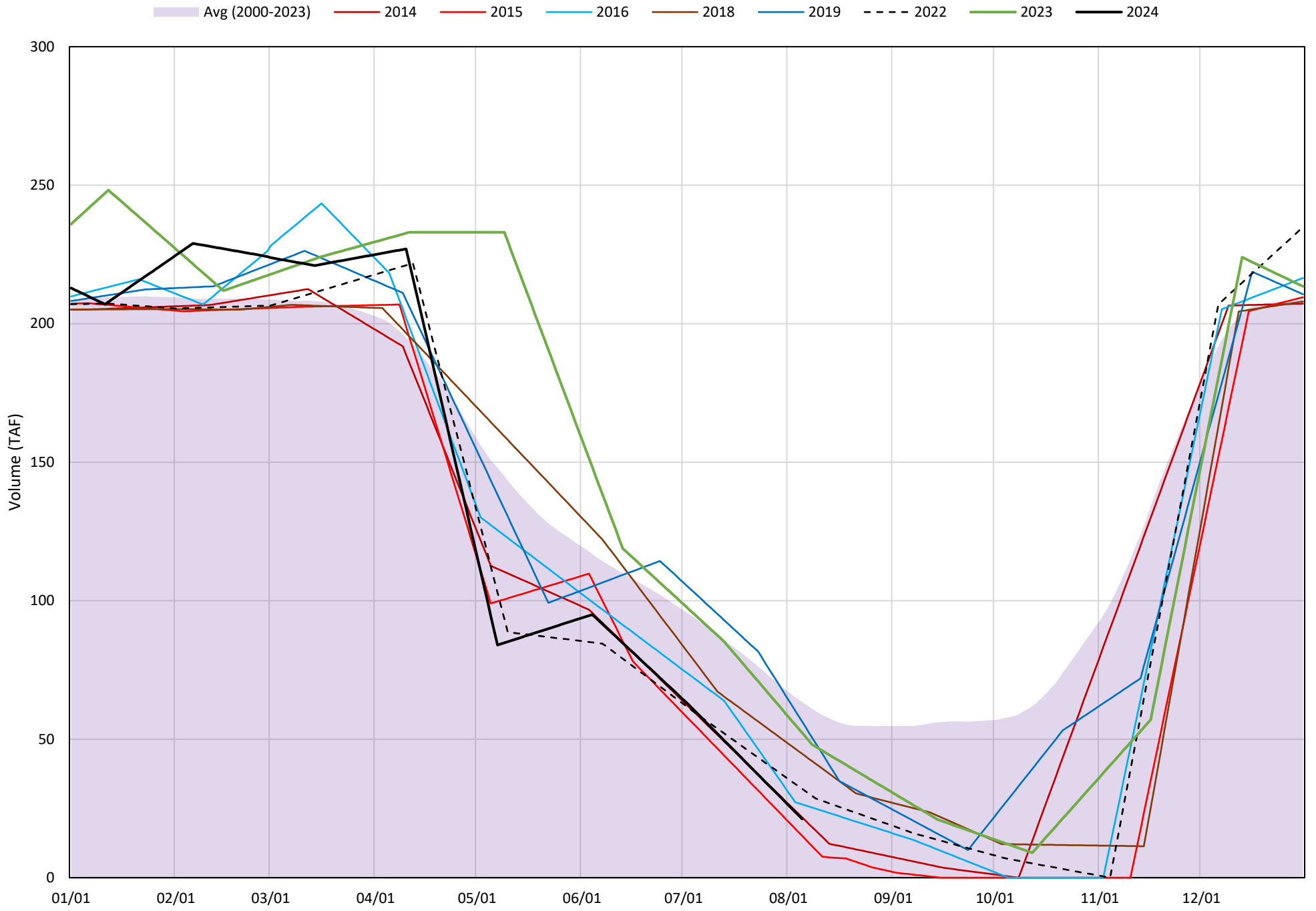


# Whiskeytown Lake Cold Water Pool Volume $\leq 58^{\circ}\text{F}$

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

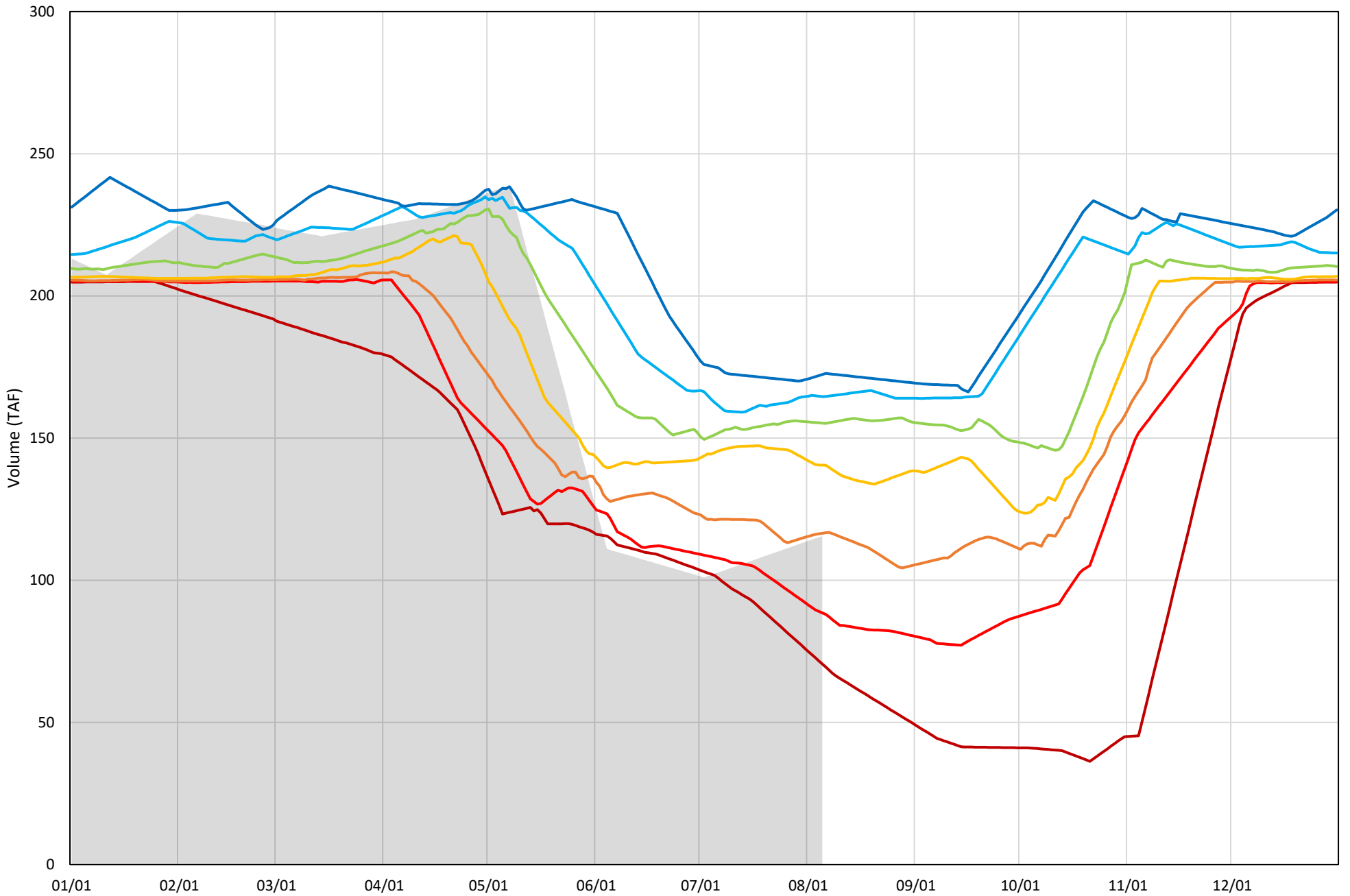


# Whiskeytown Lake Cold Water Pool Volume ≤56°F



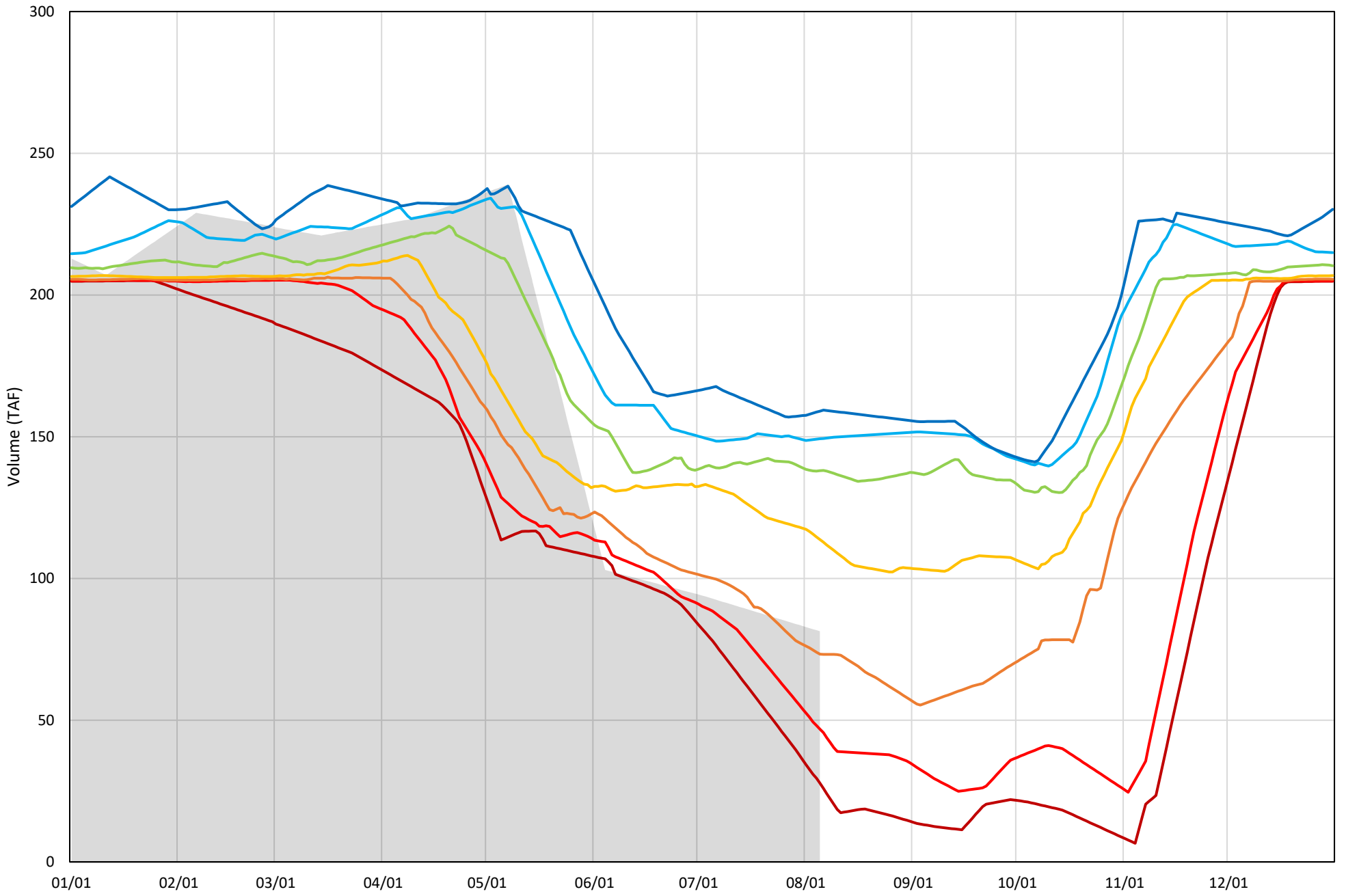
Whiskeytown Lake Cold Water Pool Volume  $\leq 60^{\circ}\text{F}$  - Percent Exceedances (2000-2023)

2024 95 90 75 50 25 10 5



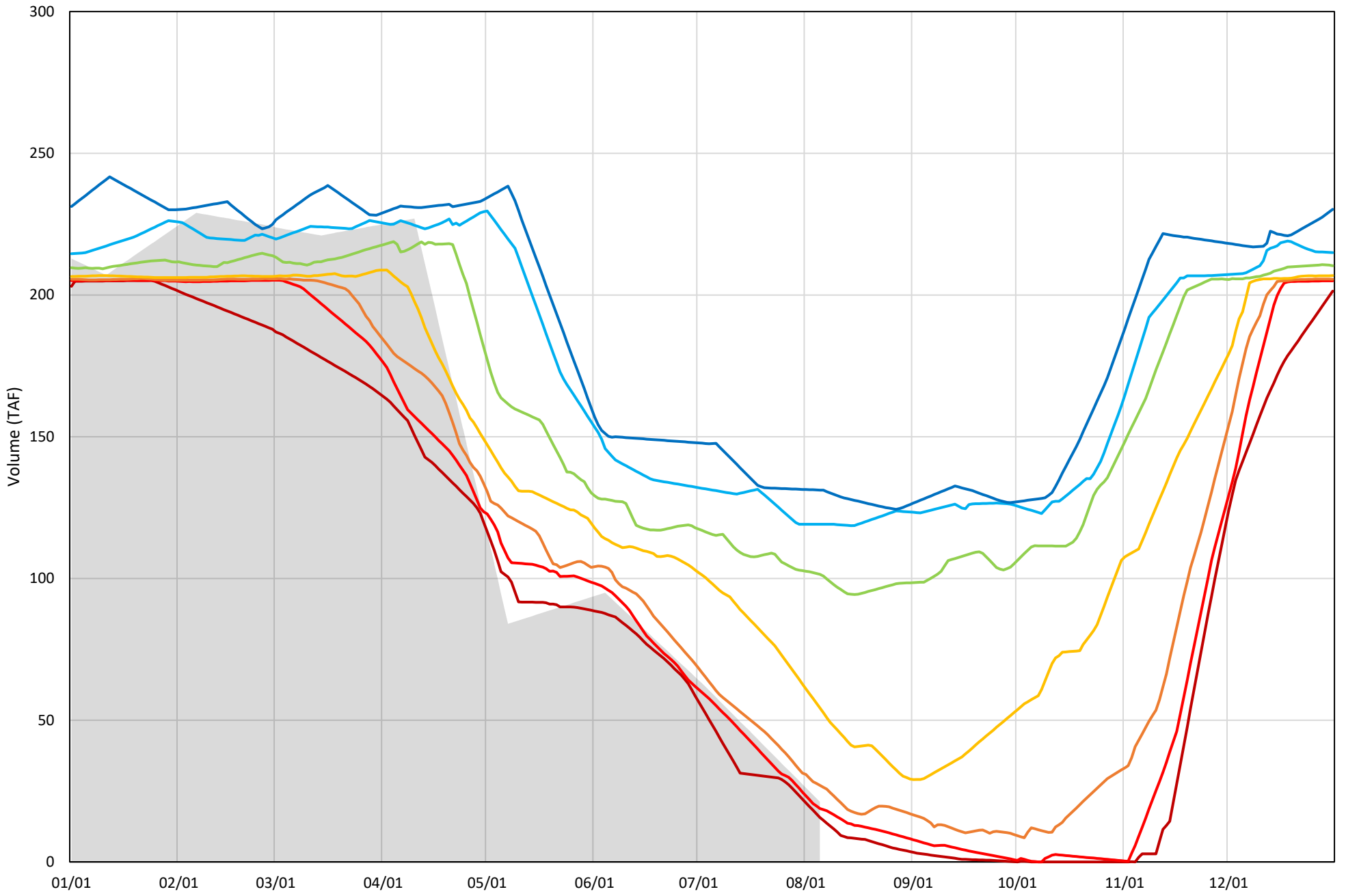
Whiskeytown Lake Cold Water Pool Volume  $\leq 58^{\circ}\text{F}$  - Percent Exceedances (2000-2023)

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)

Aug-06 2024	Δ TAF				% Δ			
	≤60°	≤58°	≤56°	Abs. Avg.	≤60°	≤58°	≤56°	Abs. Avg.
2000	26.1	54.2	100.6	60.3	22.6	66.6	473.9	187.7
2001	42.8	64.5	95.1	67.5	37.0	79.3	448.2	188.1
2002	39.2	56.9	71.6	55.9	34.0	69.9	337.2	147.0
2003	32.9	45.6	53.9	44.1	28.4	56.1	254.0	112.8
2004	39.7	51.5	63.6	51.6	34.4	63.3	299.6	132.4
2005	-21.8	-33.8	-1.1	18.9	-18.9	-41.5	-5.0	21.8
2006	53.6	71.3	90.4	71.8	46.3	87.6	426.0	186.6
2007	44.4	55.9	74.7	58.4	38.4	68.8	351.9	153.0
2008	44.2	61.7	82.1	62.7	38.3	75.8	386.7	166.9
2009	4.8	-10.3	-3.8	6.3	4.2	-12.7	-17.7	11.5
2010	-19.4	-35.3	2.5	19.0	-16.8	-43.4	11.6	23.9
2011	25.3	36.8	47.2	36.4	21.9	45.2	222.3	96.5
2012	21.4	15.7	7.3	14.8	18.5	19.3	34.6	24.1
2013	57.8	79.8	113.1	83.6	50.1	98.1	532.6	226.9
2014	36.0	41.2	0.5	25.9	31.2	50.6	2.6	28.1
2015	-20.8	-59.7	-6.1	28.9	-18.0	-73.3	-28.9	40.1
2016	2.8	-1.5	5.2	3.2	2.5	-1.9	24.7	9.7
2017	39.6	57.8	82.6	60.0	34.2	71.0	388.9	164.7
2018	22.1	28.0	23.5	24.5	19.1	34.4	110.7	54.7
2019	17.8	23.7	35.1	25.5	15.4	29.1	165.3	69.9
2020	0.3	0.2	21.4	7.3	0.3	0.3	101.0	33.8
2021	24.5	15.1	10.7	16.8	21.2	18.5	50.5	30.1
2022	-49.3	-32.8	10.8	31.0	-42.6	-40.3	51.0	44.7
2023	-32.4	-15.3	31.1	26.2	-28.0	-18.8	146.3	64.4
2024	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Historical - Current

(Historical - Current) / Current