

# Northern CVP Water Temperature Report

## July - 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)



— 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	
Jun	50.2	49.3	54.0	51.2	51.9	52.7	55.0	57.1	59.3	56.6	48.9	52.8	55.6	8699	1126	9486	82.5	77.6	78.4	
07/01	50.5	49.9	55.1	51.2	51.7	52.6	54.4	56.5	58.4	58.6	50.3	55.8	59.8	12222	967	13032		90.5	83.4	87.8
07/02	50.4	49.9	55.2	51.3	51.8	52.6	54.4	56.2	58.2	58.4	50.1	55.9	60.3	12521	1032	13533	↓	95.5	89.0	92.3
07/03	50.1	49.6	55.2	51.3	51.8	52.6	54.4	56.3	58.2	57.8	49.9	55.7	60.1	12031	993	13503		96.5	90.7	91.6
07/04	50.1	49.5	55.3	50.9	51.4	52.2	53.9	55.8	57.7	57.6	49.9	55.8	60.4	12011	1076	13529		91.0	85.4	85.3
07/05	50.2	49.6	55.3	51.0	51.5	52.2	53.9	55.7	57.5	57.7	50.1	56.3	61.2	11962	1187	13519	↑	94.0	87.7	89.9
07/06	50.2	49.6	55.4	51.0	51.5	52.2	53.9	55.8	57.7	57.8	50.2	56.8	61.9	12345	1113	13564	↑	95.0	89.5	90.5
07/07	50.2	49.6	55.4	51.1	51.5	52.3	53.9	55.9	57.8	57.7	50.2	57.1	62.4	12095	1163	13567	↑	96.5	88.2	89.4
07/08	50.3	49.6	55.4	51.1	51.6	52.4	54.0	56.0	57.9	57.8	50.2	57.8	63.0	11803	1147	13440	↑	96.0	87.6	87.3
07/09	50.4	49.7	55.5	51.1	51.6	52.4	54.1	56.1	58.0	57.9	50.6	60.1	65.0	12277	952	13432		91.5	84.8	83.3
07/10	50.4	49.7	55.6	51.1	51.6	52.3	54.0	55.9	57.9	58.0	50.8	60.7	66.3	12506	1025	13447		95.0	87.2	87.1
07/11	50.5	49.8	55.6	51.2	51.6	52.4	54.1	55.9	57.8	57.9	51.1	61.0	66.9	12539	1046	13507		94.0	86.5	88.5
07/12	50.5	49.8	55.7	51.3	51.8	52.5	54.1	55.9	57.7	57.9	51.0	61.0	67.0	12065	1242	13606		96.0	87.6	88.9
07/13	50.6	49.8	55.7	51.4	51.8	52.5	53.9	55.6	57.4	57.8	51.0	60.7	66.3	11672	1243	13565		91.5	84.0	85.3
07/14	50.7	49.9	55.9	51.4	51.7	52.4	53.8	55.4	57.0	57.4	50.5	59.9	65.7	11788	1265	13481		91.0	83.4	81.8
07/15	50.7	50.0	55.9	51.4	51.8	52.5	54.0	55.7	57.1	57.8	50.5	59.4	64.7	12193	1259	13496		87.5	79.7	79.2
07/16	50.7	50.0	56.0	51.5	51.9	52.7	54.3	56.0	57.8	57.9	50.6	59.3	65.3	11859	1259	13508		88.0	79.6	78.6
07/17	50.8	50.1	56.0	51.5	51.9	52.5	54.1	55.8	57.5	57.4	50.5	57.6	63.3	11411	1230	12915		81.5	76.1	76.0
07/18	50.8	50.1	56.1	51.7	52.0	52.6	54.2	55.8	57.4	57.9	50.3	57.0	62.3	11672	1225	12918		86.5	81.9	82.1
07/19	50.9	50.2	56.2	51.7	52.1	52.8	54.5	56.1	57.8	58.3	50.3	56.5	61.7	11681	1245	12964		90.0	84.0	85.9
07/20	50.9	50.3	56.2	51.8	52.2	52.9	54.5	56.2	58.0	58.7	50.6	56.5	61.8	11123	1237	13104		91.0	82.6	84.3
07/21	51.2	50.4	56.3	51.9	52.3	53.0	54.7	56.5	58.3	58.7	50.4	56.8	62.3	11239	1246	12967		91.0	84.5	82.4
07/22	51.2	50.5	56.3	52.0	52.4	53.1	54.8	56.6	58.4	58.7	50.5	57.0	62.6	11464	1266	12910		92.0	85.3	86.0
07/23	51.2	50.4	56.4	52.1	52.5	53.2	55.0	56.7	58.6	58.8	50.5	57.2	63.0	11520	1234	13141		94.5	87.1	87.8
07/24	51.2	50.4	56.5	52.0	52.5	53.3	55.1	56.9	58.9	59.0	50.4	57.6	63.4	12036	1247	12932		93.0	87.6	87.7
07/25	51.0	50.3	56.6	52.1	52.5	53.3	55.0	56.8	58.8	58.4	50.6	57.1	62.8	11206	1240	12988		87.0	82.4	82.1
07/26	51.0	50.3	56.6	51.9	52.3	52.9	54.5	56.2	58.1	58.6	50.6	57.1	62.3	9711	1332	12990		85.5	79.9	82.5
07/27	50.9	50.4	56.7	51.9	52.2	52.7	54.0	55.4	57.0	58.1	50.3	56.9	62.2	7716	1350	12927		76.0	71.8	69.5
07/28	51.1	50.6	56.8	51.9	52.2	52.7	54.1	55.4	56.5	58.0	50.2	56.4	61.5	7469	1240	12946		76.5	71.2	70.6
07/29	51.1	50.6	56.8	52.0	52.4	53.0	54.4	55.7	57.2	58.4	50.4	56.9	61.6	10581	1255	12947		78.5	73.8	73.2
07/30	51.3	50.7	56.9	52.1	52.4	53.1	54.6	56.0	57.6	58.8	50.5	57.5	62.8	11000	1236	13010		82.0	76.5	75.7
07/31	51.3	50.8	56.9	52.2	52.6	53.2	54.6	56.0	57.6	58.7	50.7	58.0	63.6	11676	1245	12979		83.0	75.9	76.1
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
														Total CFS	355394	36797	410367			
														Total AF	704909	72985	813946			

Legend

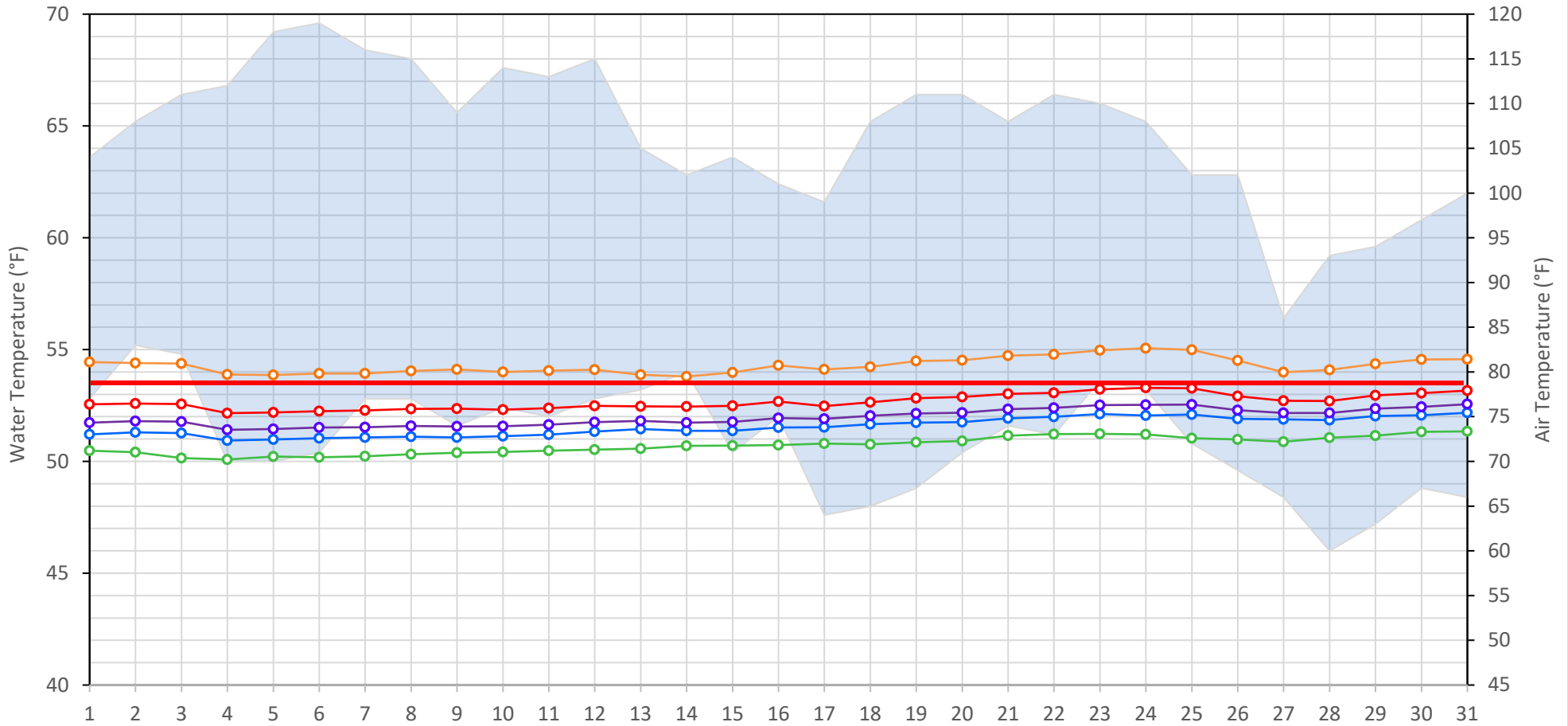
Notes

- ? = 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

- <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>

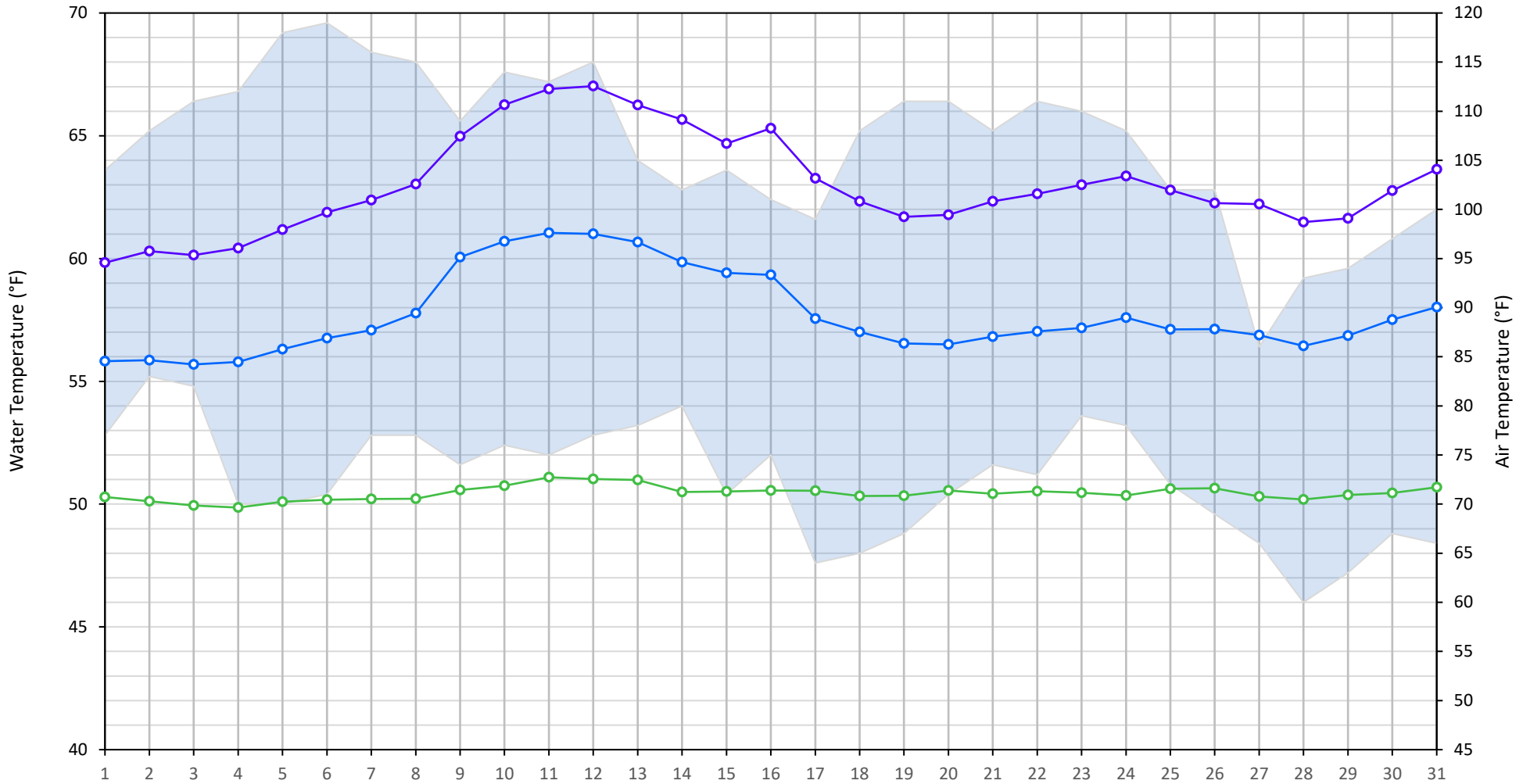
Water Right Temperature Control Points				
River	Point	Temp. (°F)	Begin Date	End Date
Sacramento	CCR	53.5	05/24/2024	TBD

**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

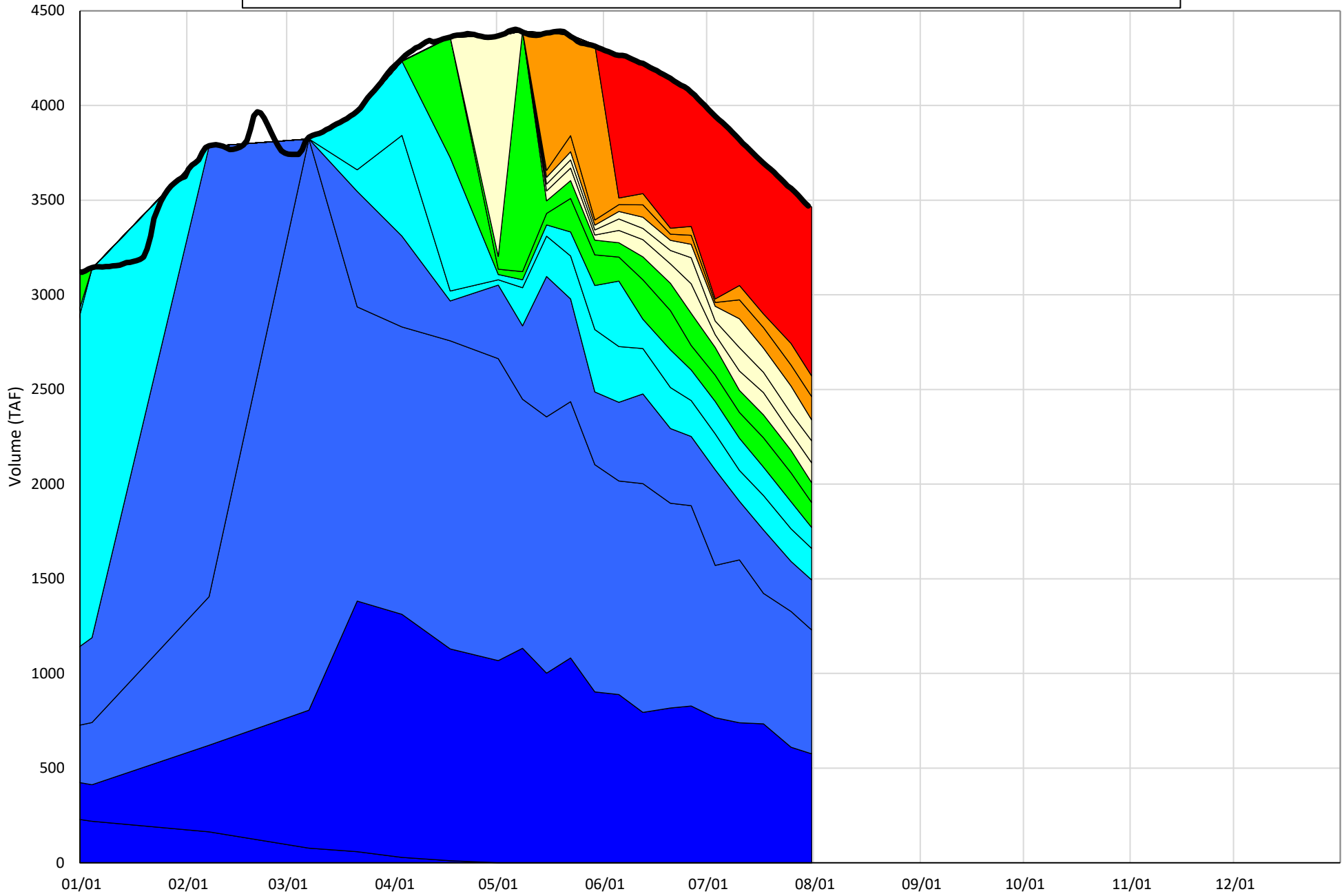
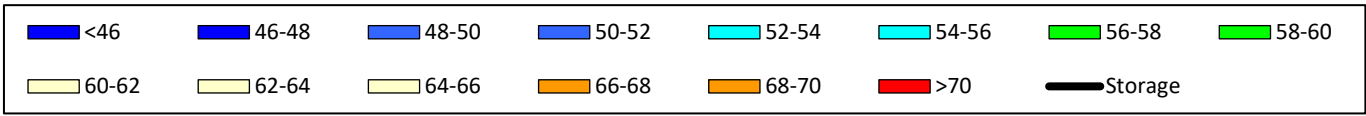
<sup>1</sup> Distances are approximate

# Shasta Lake Isothermobaths & Cold Water Pool Statistics

## 2024

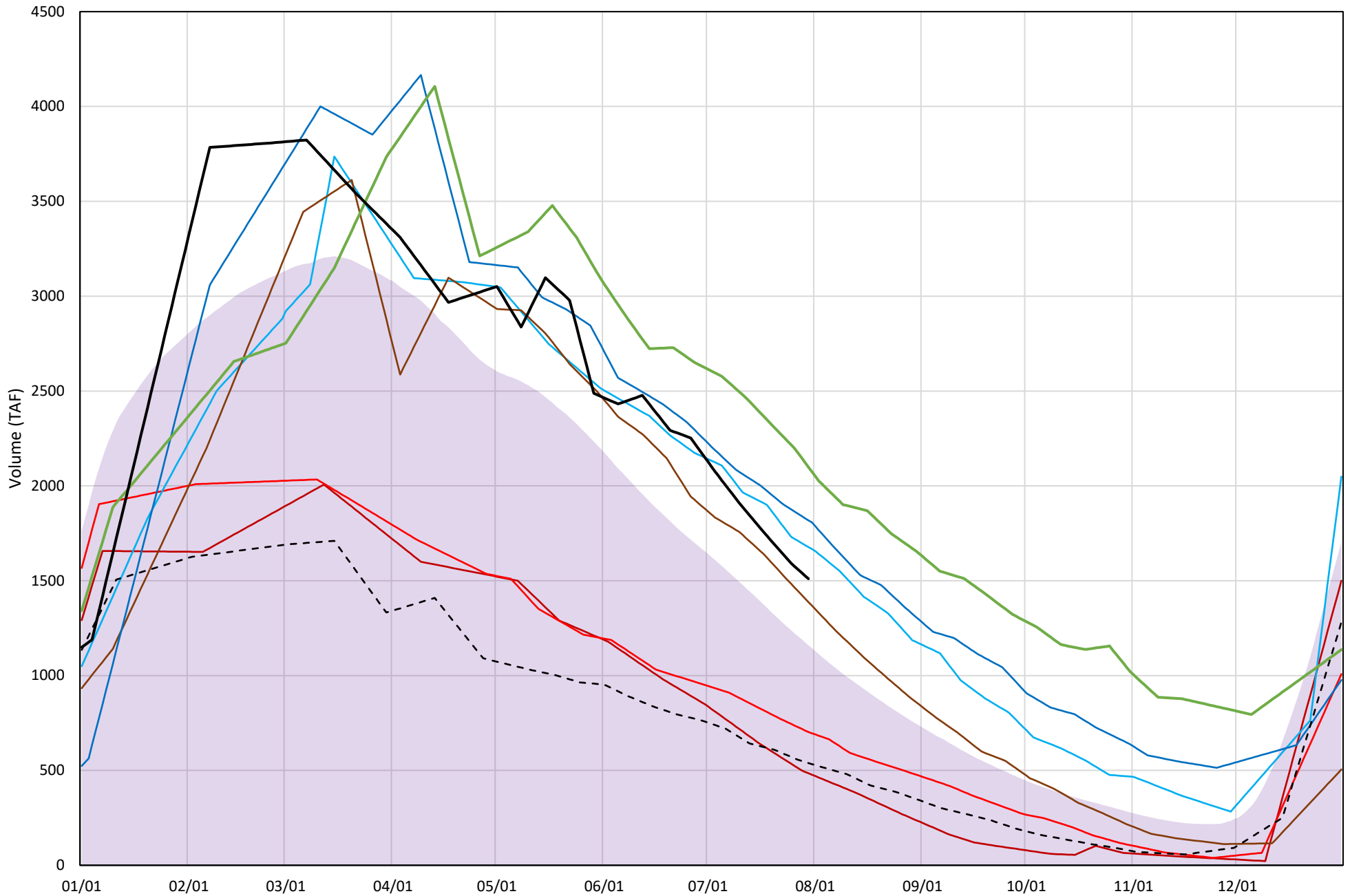
Page	Description
6	- Shasta Lake Isothermobaths Plot
7	- Shasta Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$
8	- Shasta Lake Cold Water Pool Volume $\leq 50^{\circ}\text{F}$
9	- Shasta Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$
10	- Shasta Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$ - 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

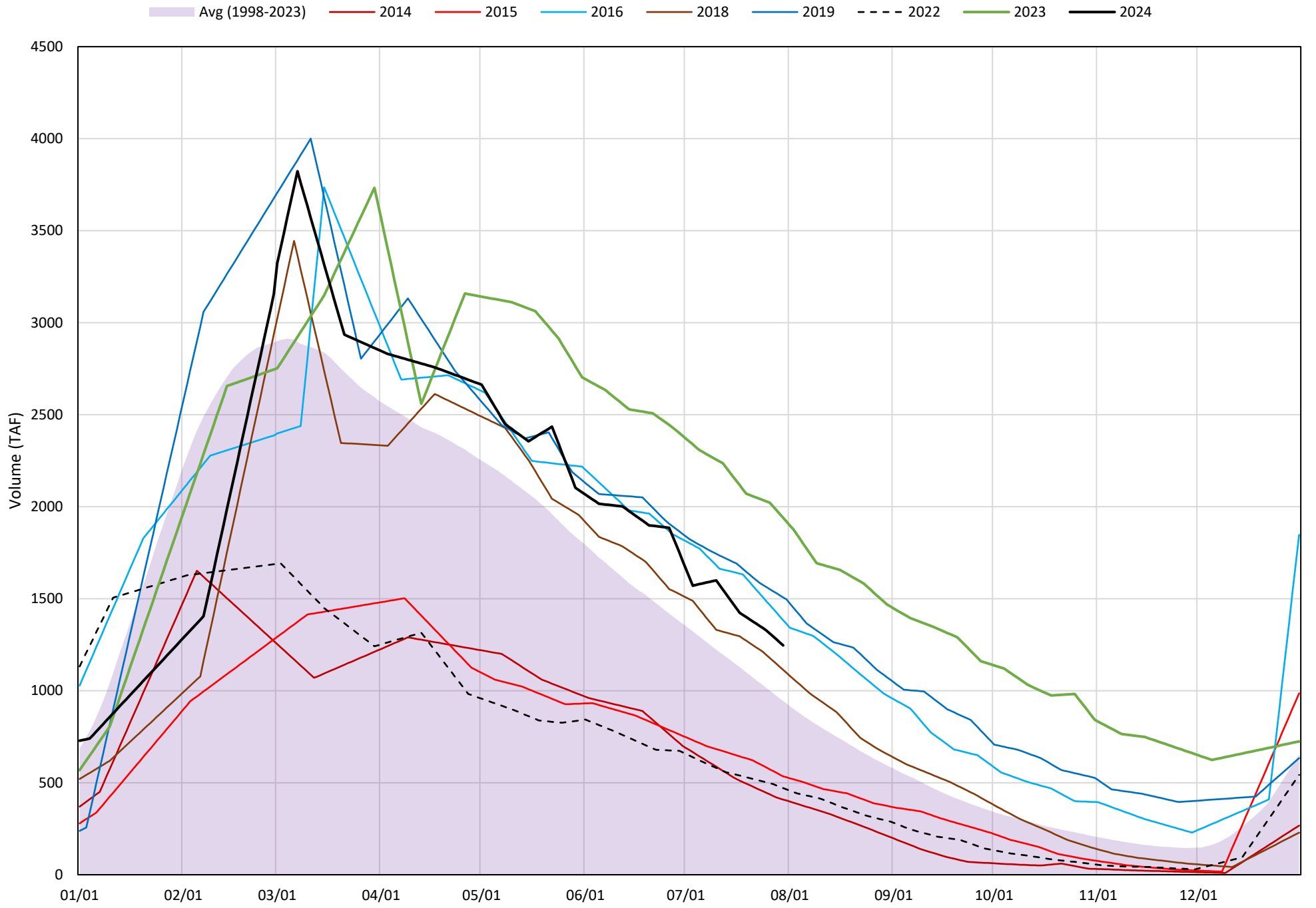


# Shasta Lake Cold Water Pool Volume ≤52°F

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



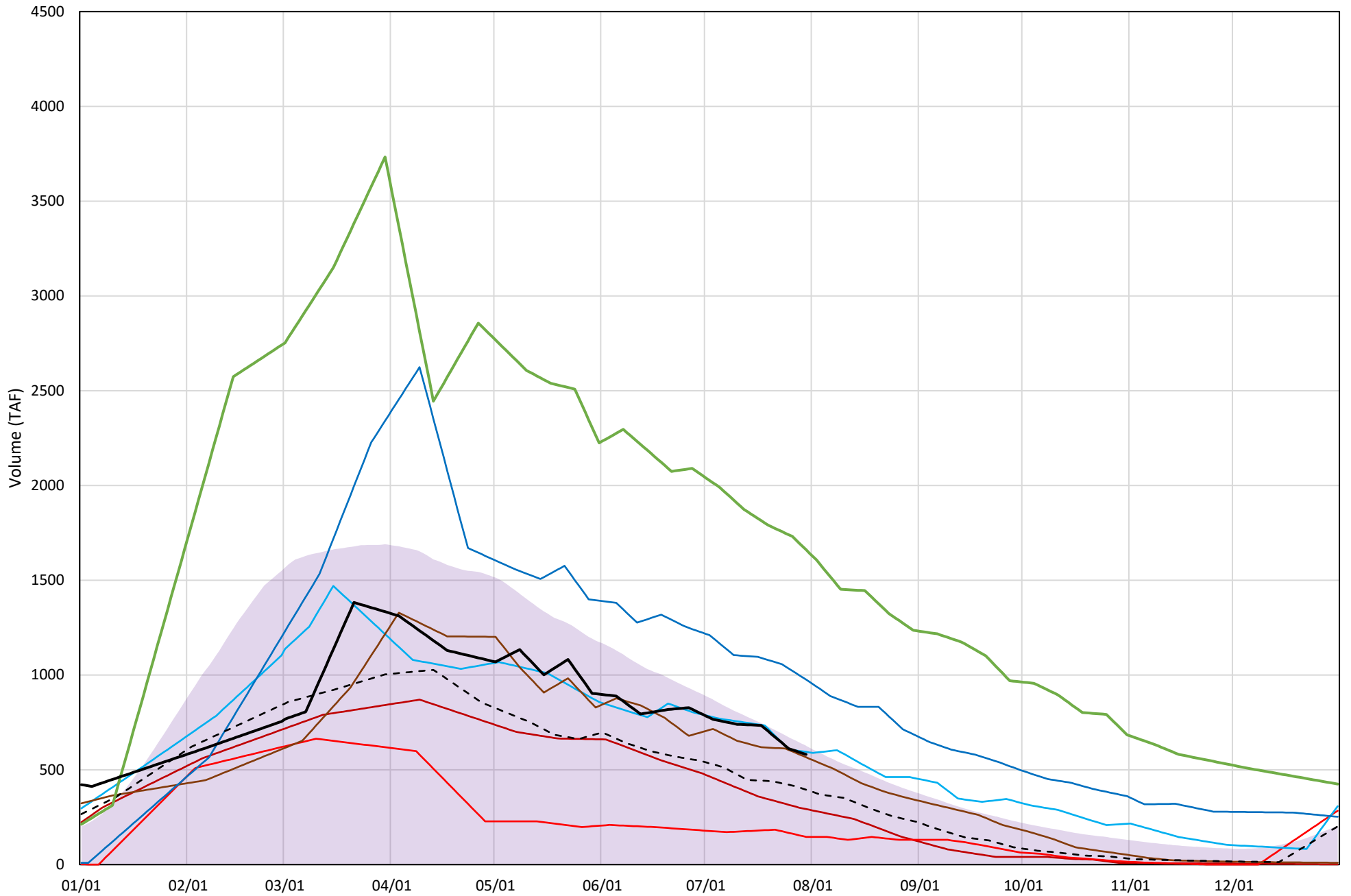
# Shasta Lake Cold Water Pool Volume $\leq 50^{\circ}\text{F}$





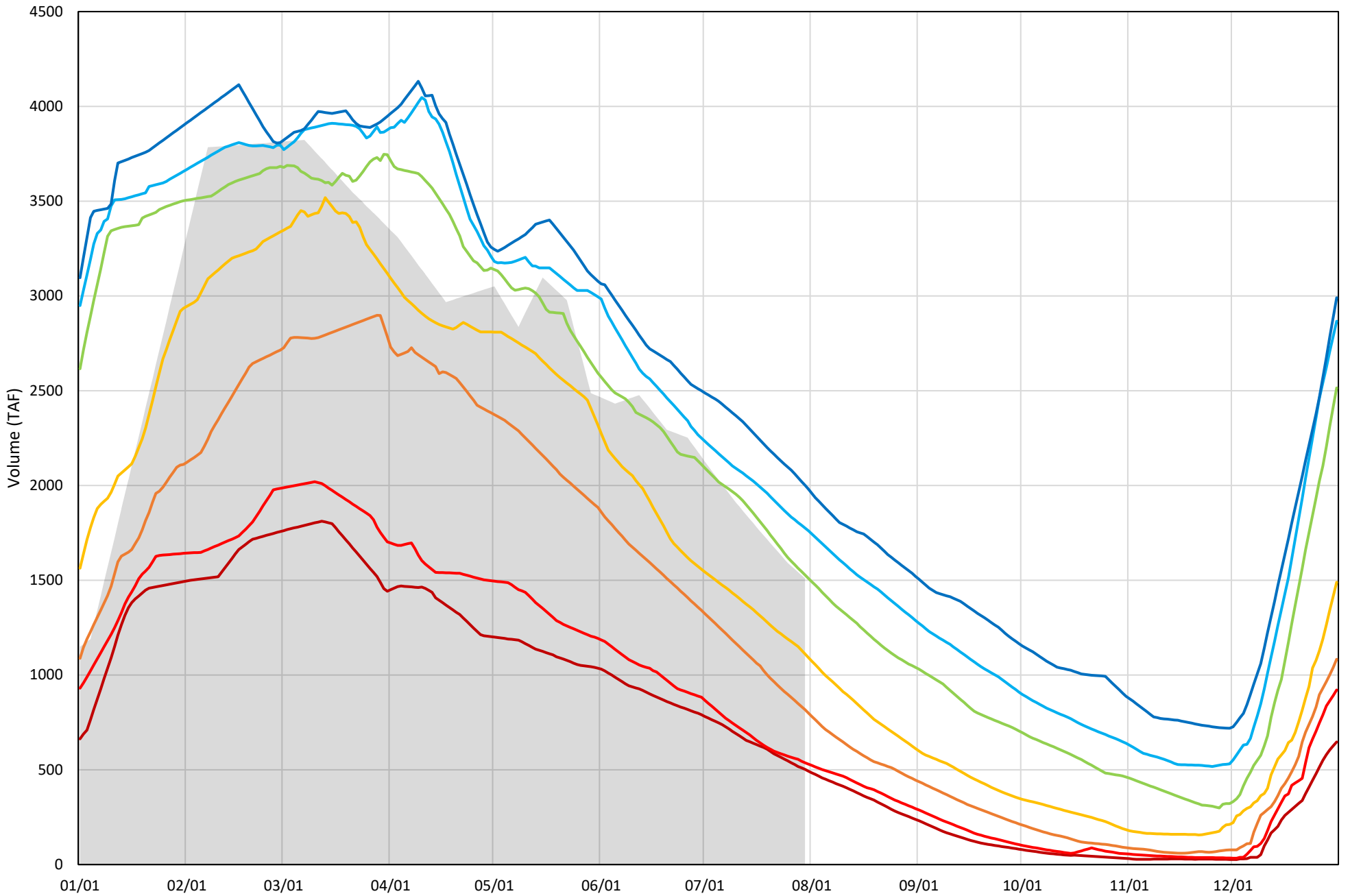
# Shasta Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$

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



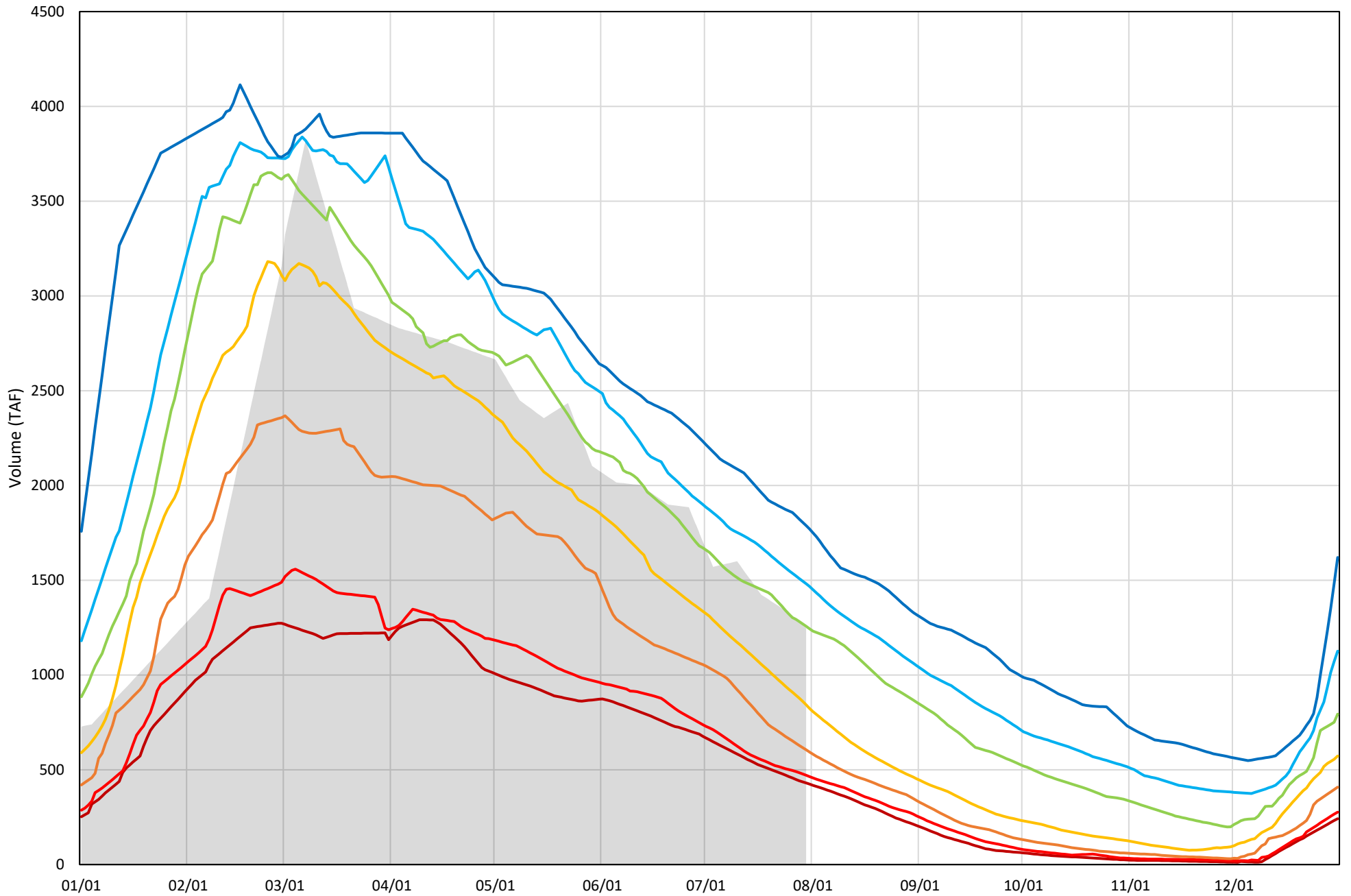
Shasta Lake Cold Water Pool Volume  $\leq 52^{\circ}\text{F}$  - Percent Exceedances (1998-2023)

2024 95 90 75 50 25 10 5



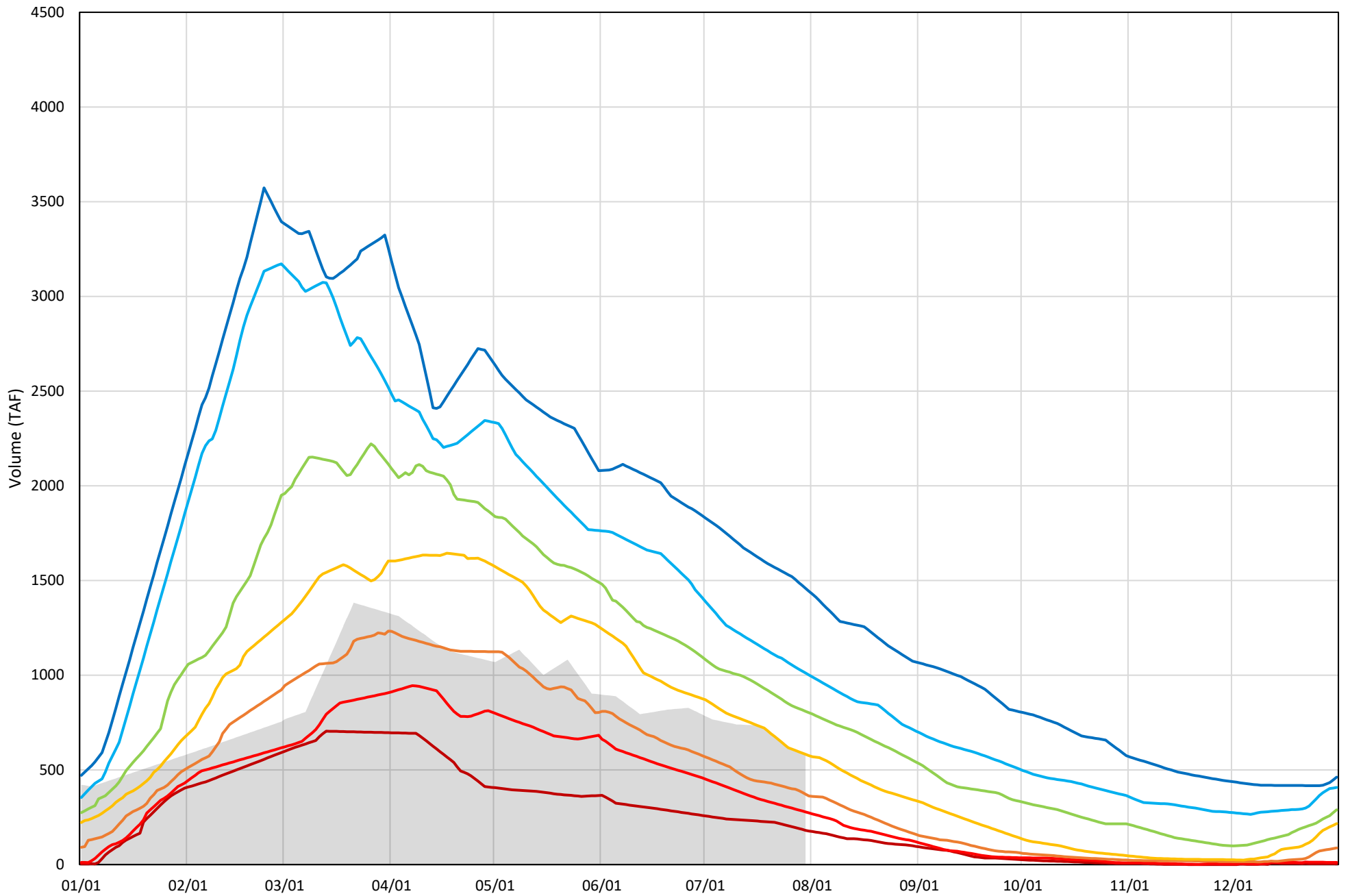
Shasta Lake Cold Water Pool Volume  $\leq 50^{\circ}\text{F}$  - Percent Exceedances (1998-2023)

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)

Jul-31 2024	Δ TAF				% Δ			
	≤52°	≤50°	≤48°	Abs. Avg.	≤52°	≤50°	≤48°	Abs. Avg.
1998	-344	-478	-205	342	-23	-38	-35	32
1999	-107	-30	399	179	-7	-2	69	26
2000	-480	-517	-222	407	-32	-42	-38	37
2001	-565	-409	83	352	-37	-33	14	28
2002	-314	-209	168	230	-21	-17	29	22
2003	-378	-646	-337	454	-25	-52	-58	45
2004	-715	-613	-121	483	-47	-49	-21	39
2005	-685	-640	-242	522	-45	-51	-42	46
2006	-129	-132	146	136	-9	-11	25	15
2007	-524	-398	66	329	-35	-32	11	26
2008	-841	-663	-90	531	-56	-53	-15	41
2009	-686	-545	-12	414	-45	-44	-2	30
2010	102	24	220	115	7	2	38	16
2011	247	224	503	325	16	18	87	40
2012	-10	118	300	142	-1	9	52	21
2013	-524	-391	83	333	-35	-31	14	27
2014	-1025	-838	-289	717	-68	-67	-50	62
2015	-808	-712	-435	652	-53	-57	-75	62
2016	167	137	13	106	11	11	2	8
2017	116	6	254	125	8	1	44	17
2018	-122	-133	-15	90	-8	-11	-3	7
2019	308	261	394	321	20	21	68	36
2020	-420	-413	-133	322	-28	-33	-23	28
2021	-976	-777	-264	672	-65	-62	-45	57
2022	-971	-775	-186	644	-64	-62	-32	53
2023	589	693	1079	787	39	56	186	93
2024	0	0	0	0	0	0	0	0

Historical - Current

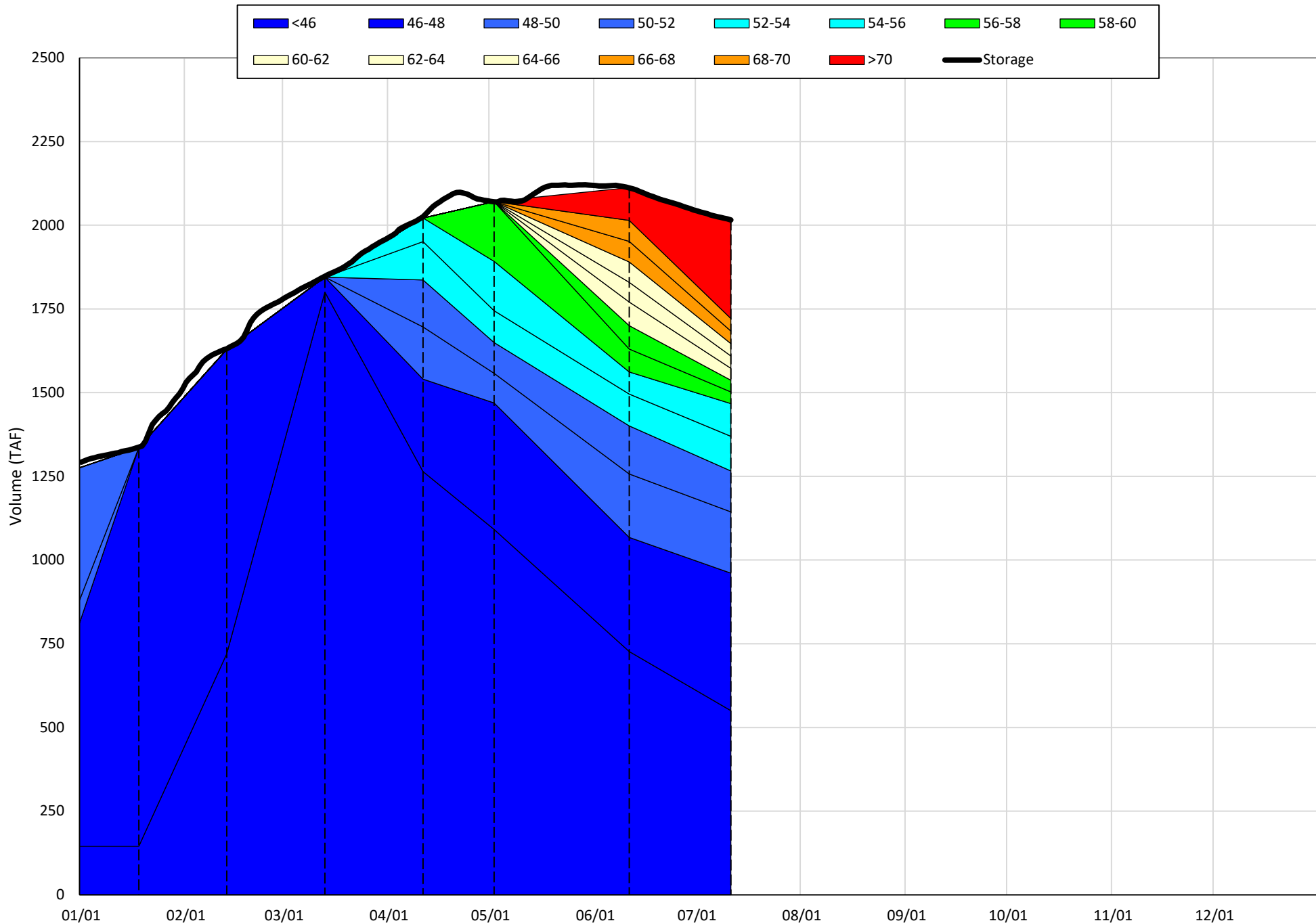
(Historical - Current) / Current

# Trinity Lake Isothermobaths & Cold Water Pool Statistics

## 2024

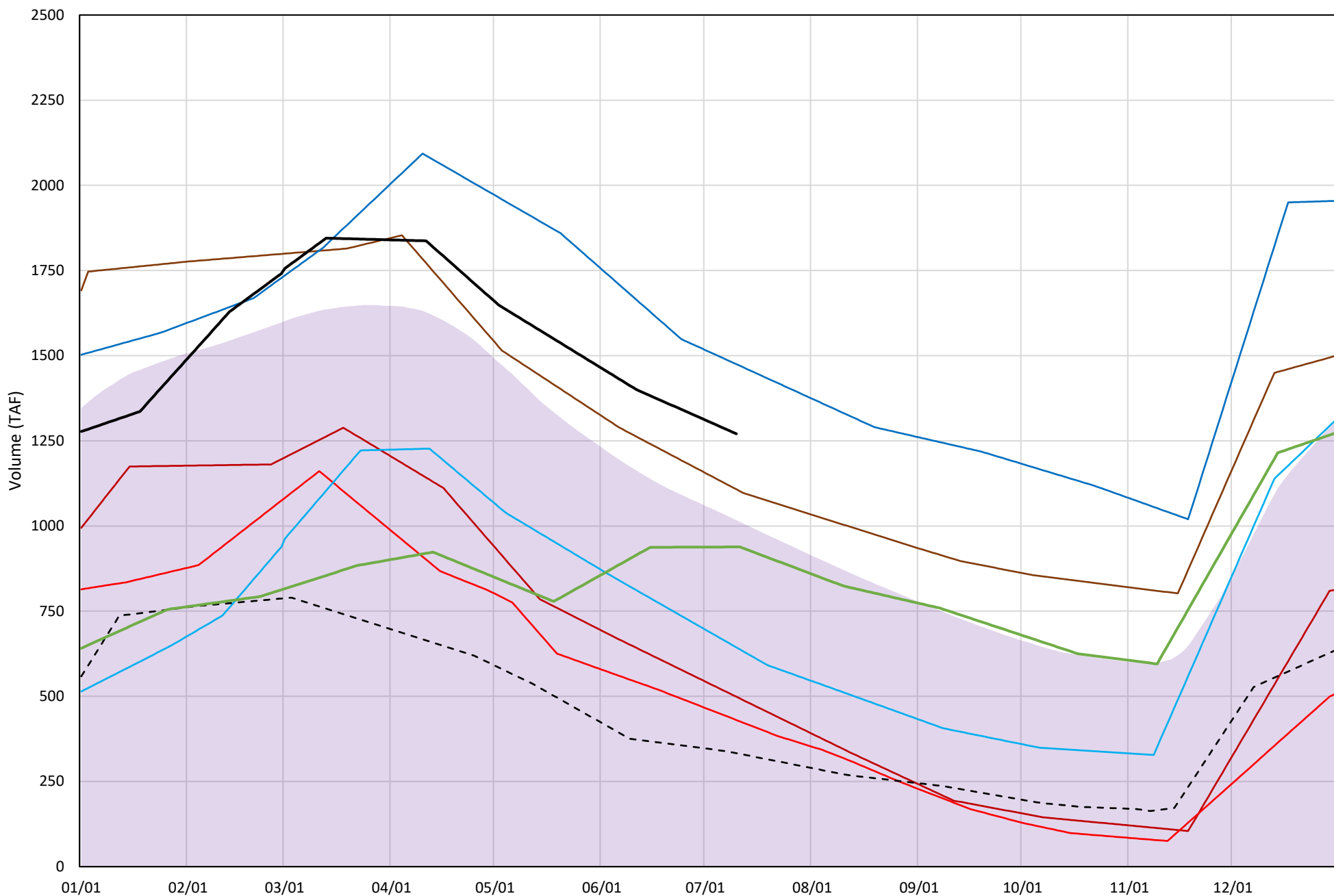
Page	Description
15	- Trinity Lake Isothermobaths Plot
16	- Trinity Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$
17	- Trinity Lake Cold Water Pool Volume $\leq 50^{\circ}\text{F}$
18	- Trinity Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$
19	- Trinity Lake Cold Water Pool Volume $\leq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

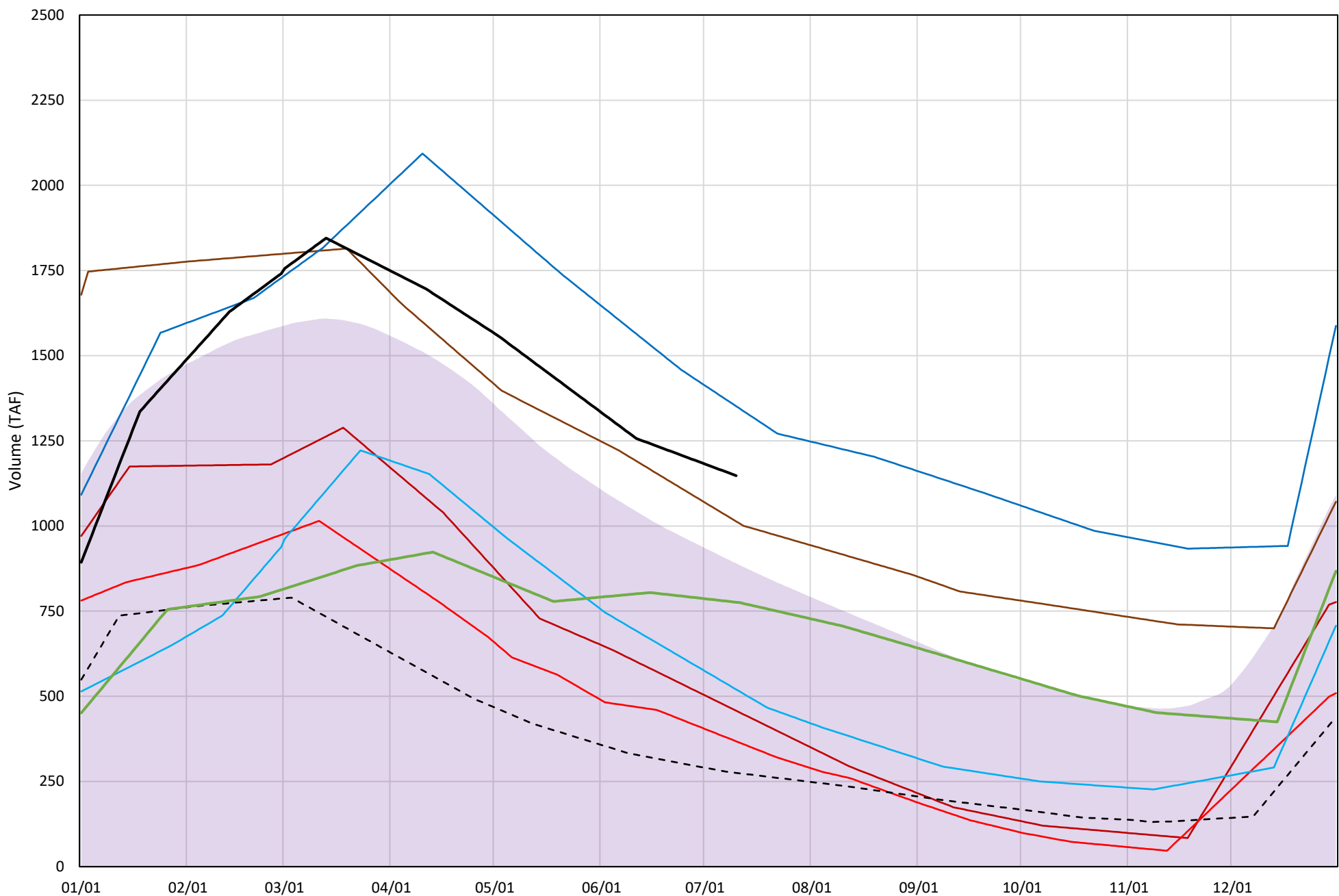
Avg (2000-2023) 2014 2015 2016 2018 2019 2022 2023 2024





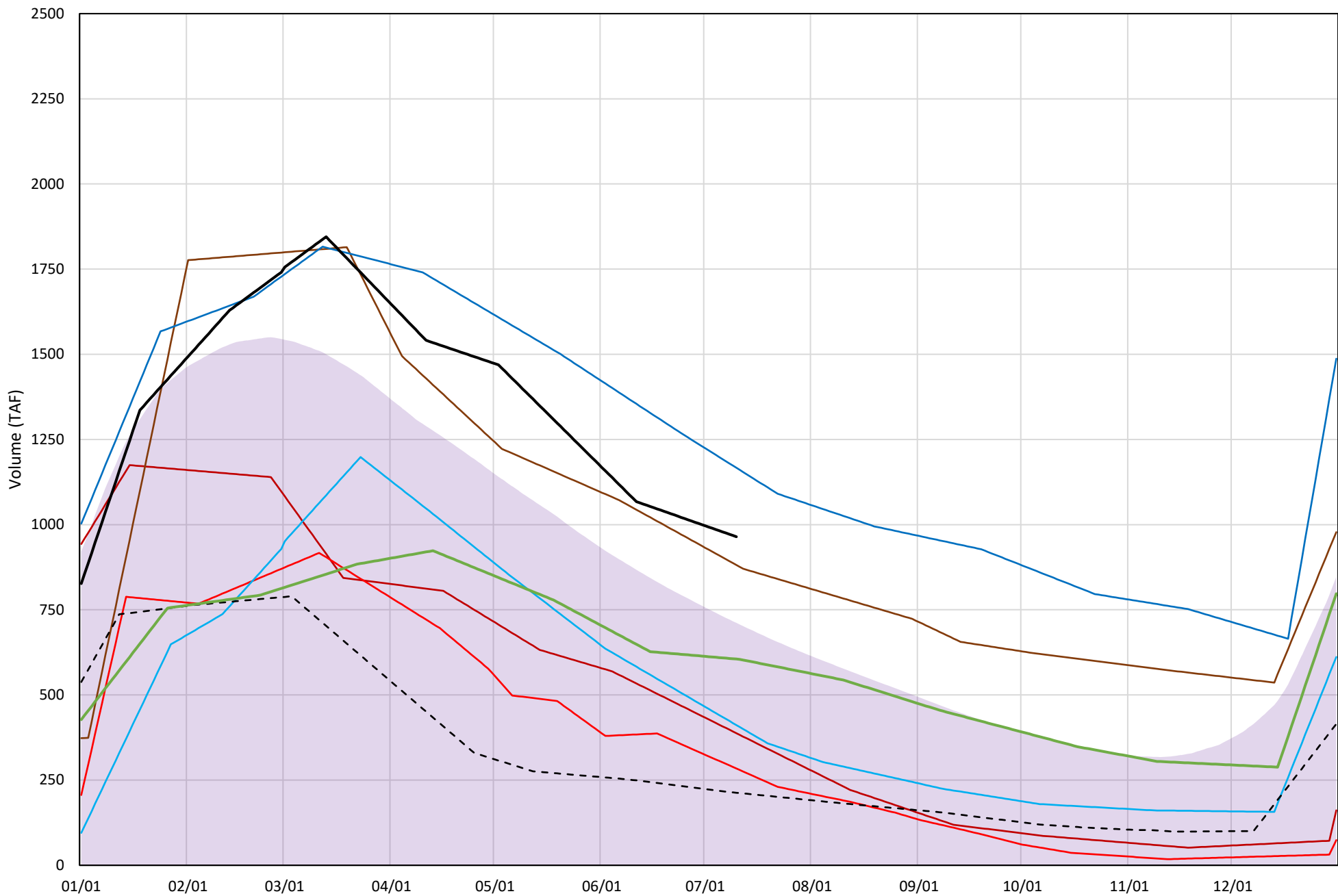
# Trinity Lake Cold Water Pool Volume ≤50°F

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



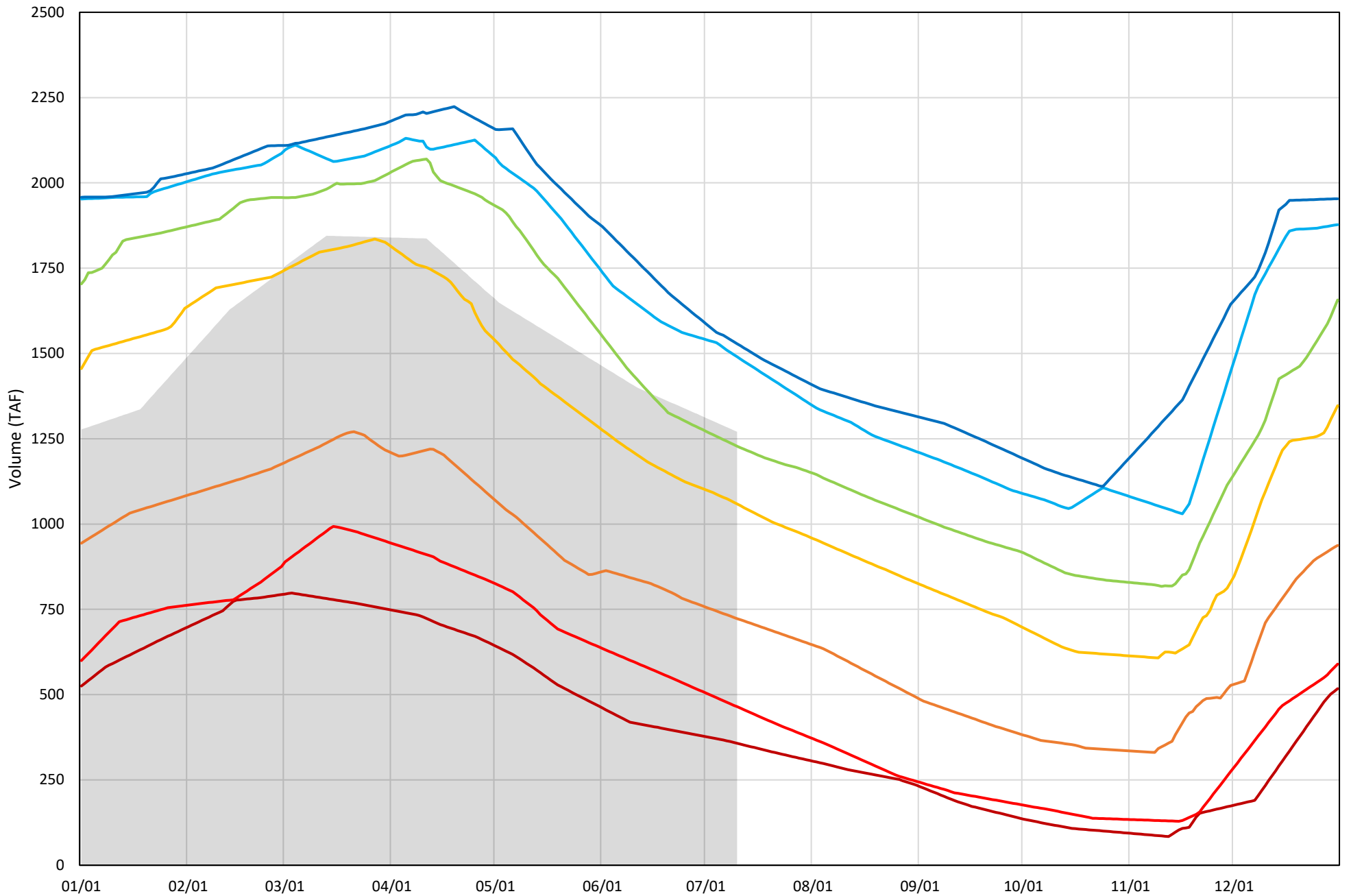
# Trinity Lake Cold Water Pool Volume ≤48°F

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



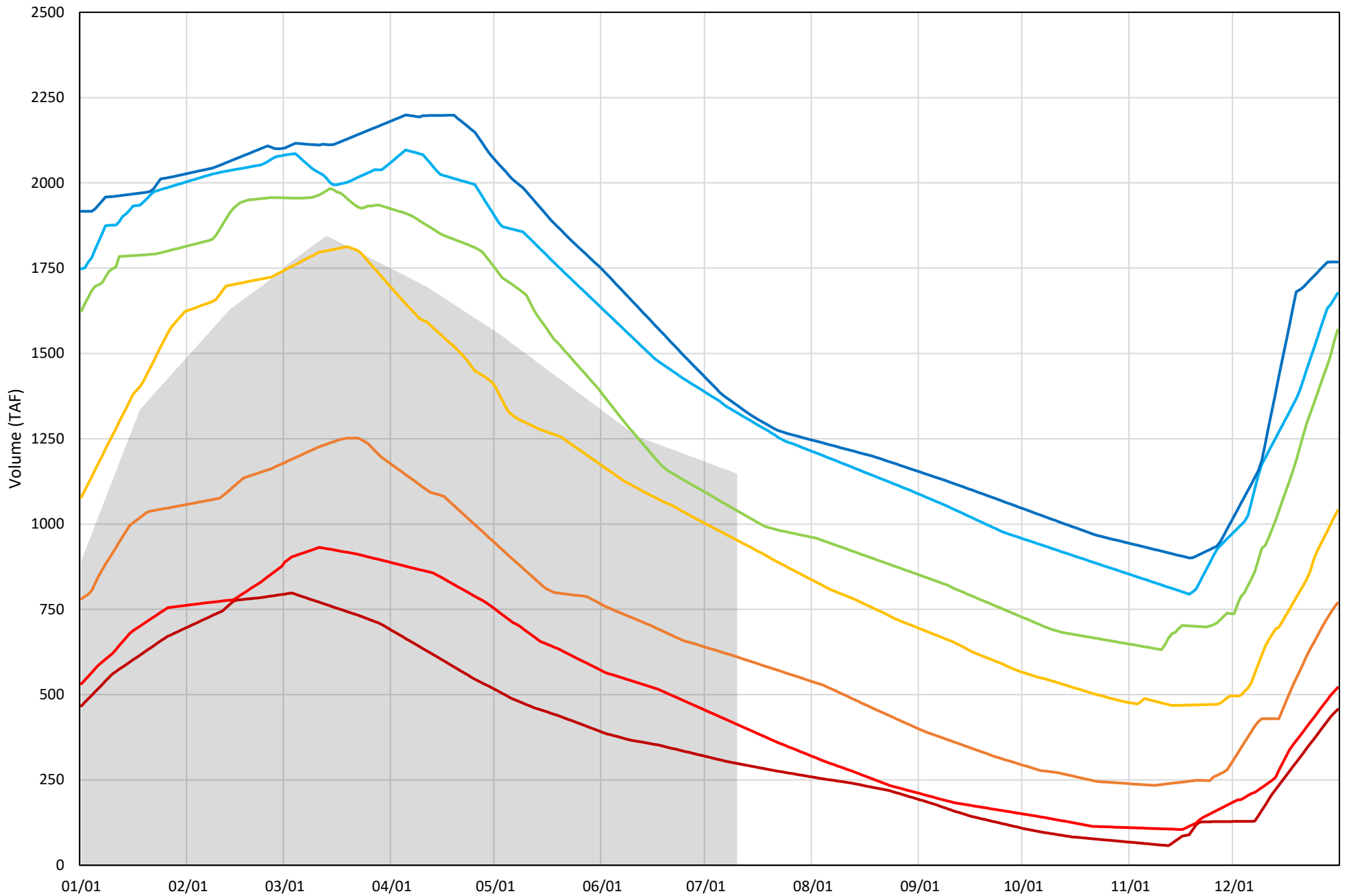
Trinity Lake Cold Water Pool Volume ≤52°F - Percent Exceedances (2000-2023)

2024 95 90 75 50 25 10 5



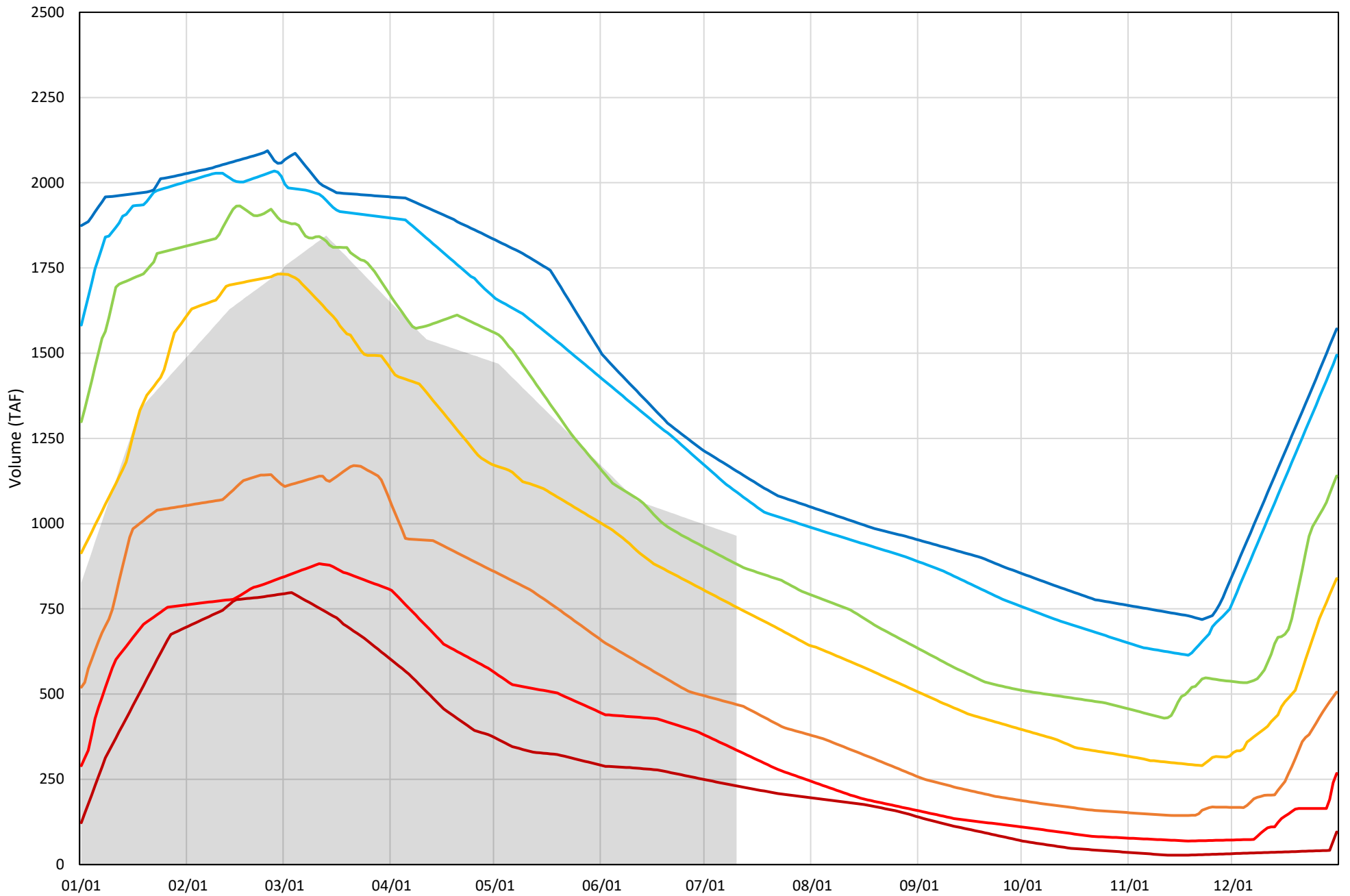
Trinity Lake Cold Water Pool Volume ≤50°F - Percent Exceedances (2000-2023)

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)

Jul-11 2024	$\Delta$ TAF				% $\Delta$			
	$\leq 52^\circ$	$\leq 50^\circ$	$\leq 48^\circ$	Abs. Avg.	$\leq 52^\circ$	$\leq 50^\circ$	$\leq 48^\circ$	Abs. Avg.
2000	-43	-107	-138	96	-3	-9	-14	9
2001	-202	-200	-160	188	-16	-17	-17	17
2002	-227	-190	-142	186	-18	-17	-15	16
2003	173	37	-52	87	14	3	-5	7
2004	-138	-172	-207	172	-11	-15	-21	16
2005	-58	-134	-294	162	-5	-12	-30	16
2006	235	190	103	176	18	17	11	15
2007	-185	-147	-84	139	-15	-13	-9	12
2008	-435	-434	-465	445	-34	-38	-48	40
2009	-585	-572	-544	567	-46	-50	-56	51
2010	-222	-269	-395	295	-17	-23	-41	27
2011	265	167	58	164	21	15	6	14
2012	99	144	153	132	8	13	16	12
2013	-312	-278	-260	283	-25	-24	-27	25
2014	-772	-690	-577	680	-61	-60	-60	60
2015	-840	-780	-681	767	-66	-68	-71	68
2016	-627	-628	-553	603	-49	-55	-57	54
2017	-43	-114	-126	94	-3	-10	-13	9
2018	-163	-134	-83	127	-13	-12	-9	11
2019	204	204	202	203	16	18	21	18
2020	-273	-213	-212	233	-21	-19	-22	21
2021	-670	-614	-505	596	-53	-53	-52	53
2022	-938	-873	-752	854	-74	-76	-78	76
2023	-332	-371	-359	354	-26	-32	-37	32
2024	0	0	0	0	0	0	0	0

Historical - Current

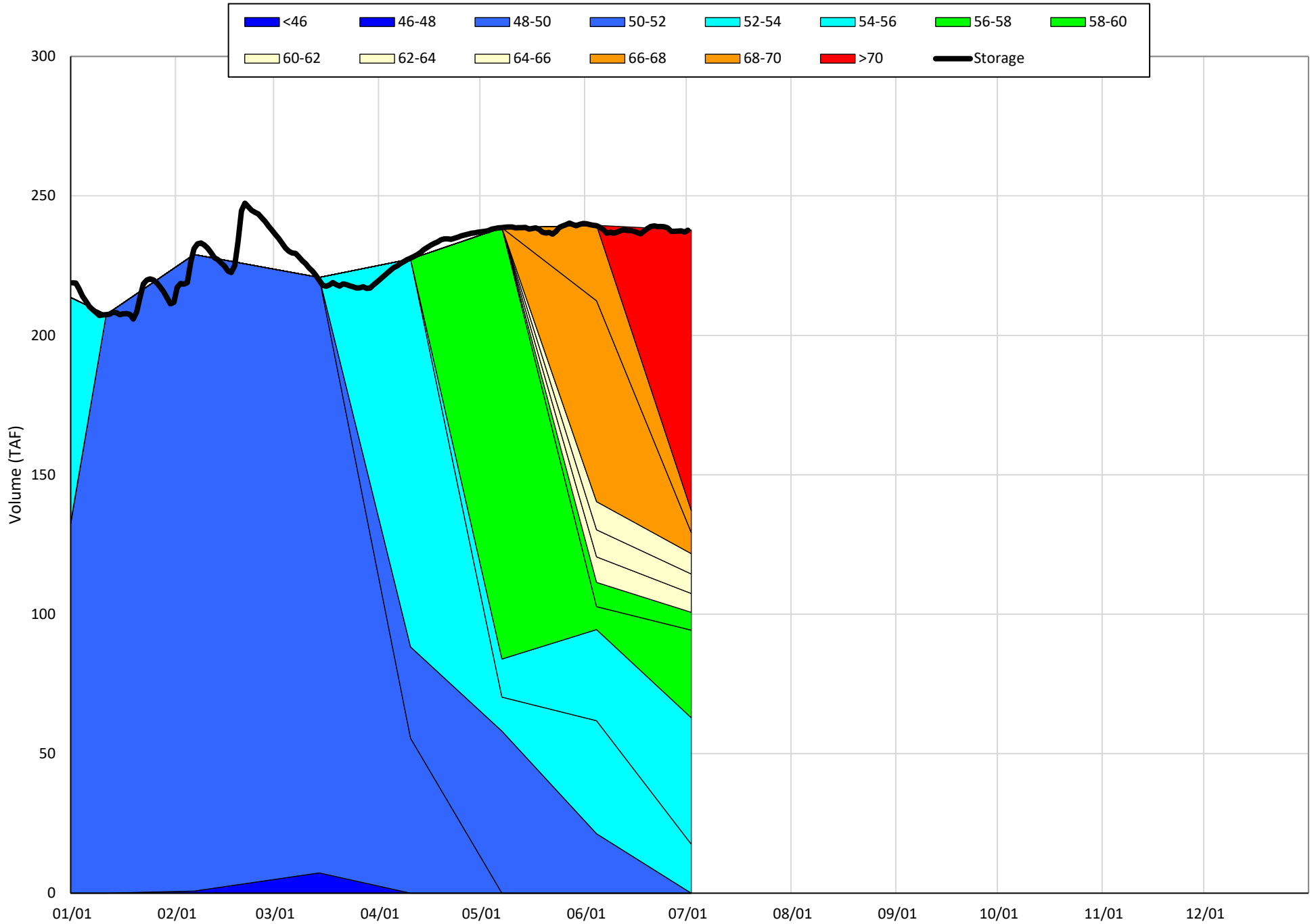
(Historical - Current) / Current

# Whiskeytown Lake Isothermobaths & Cold Water Pool Statistics

## 2024

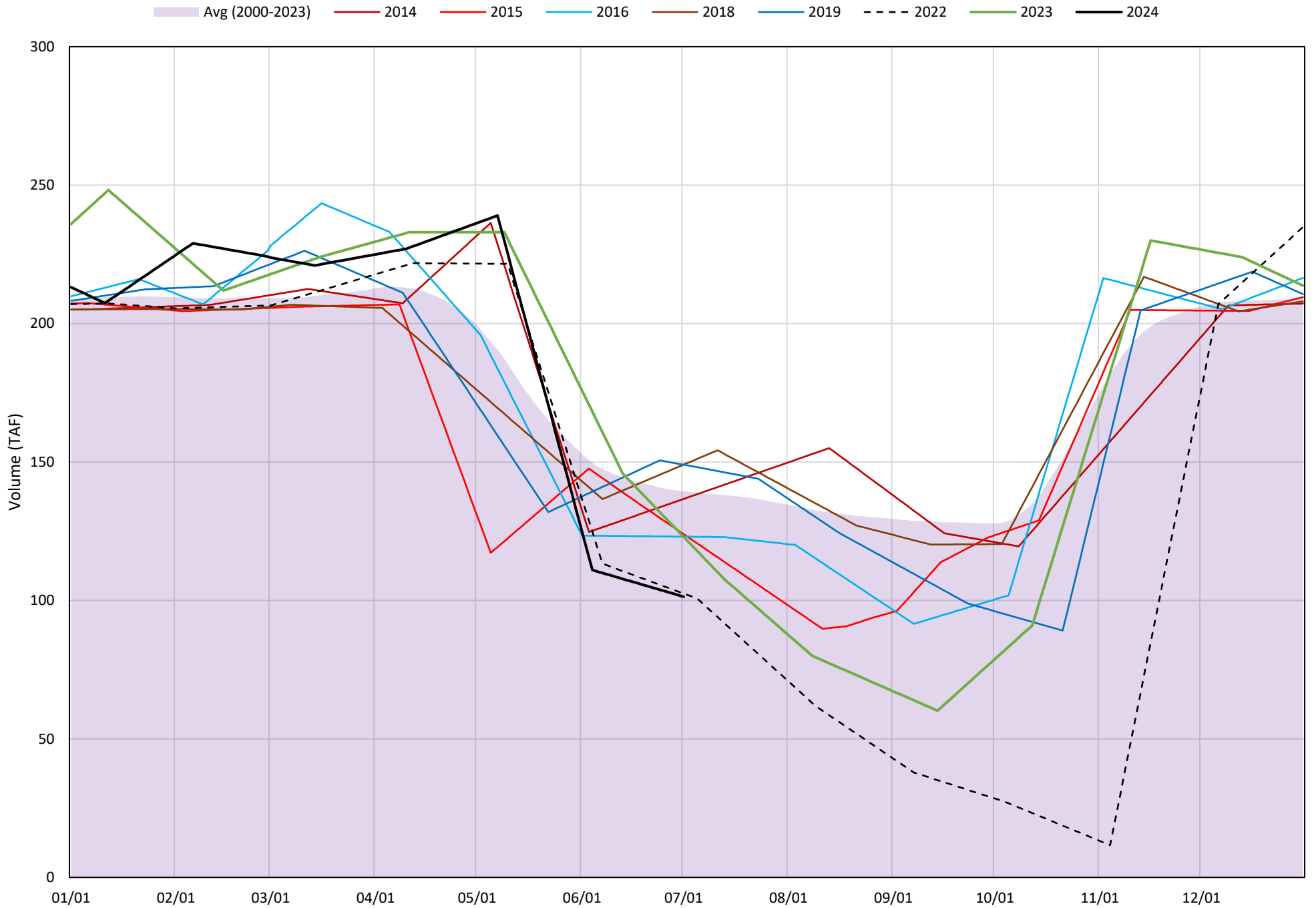
Page	Description
24	- Whiskeytown Lake Isothermobaths Plot
25	- Whiskeytown Lake Cold Water Pool Volume $\leq 60^{\circ}\text{F}$
26	- Whiskeytown Lake Cold Water Pool Volume $\leq 58^{\circ}\text{F}$
27	- Whiskeytown Lake Cold Water Pool Volume $\leq 56^{\circ}\text{F}$
28	- Whiskeytown Lake Cold Water 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

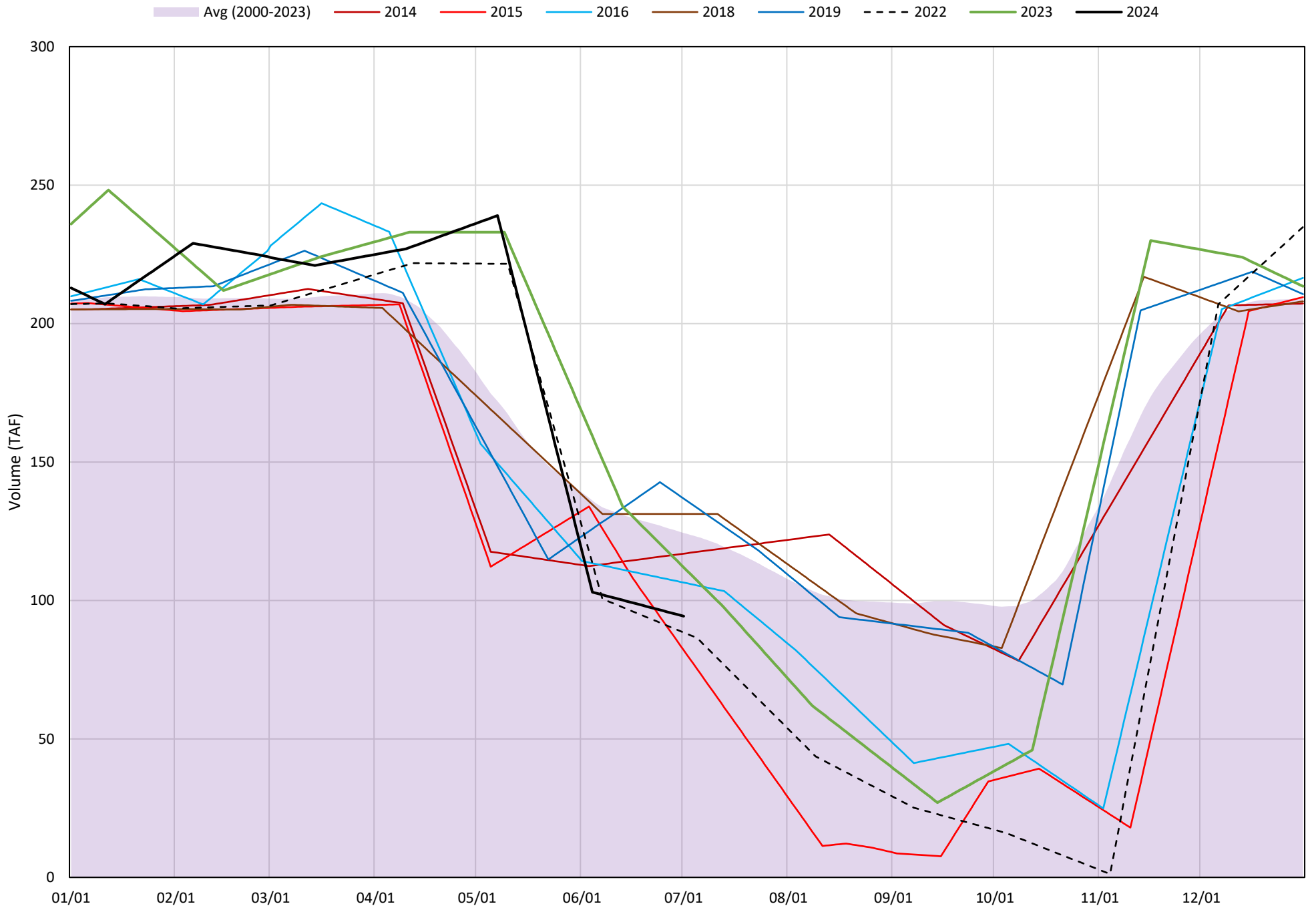




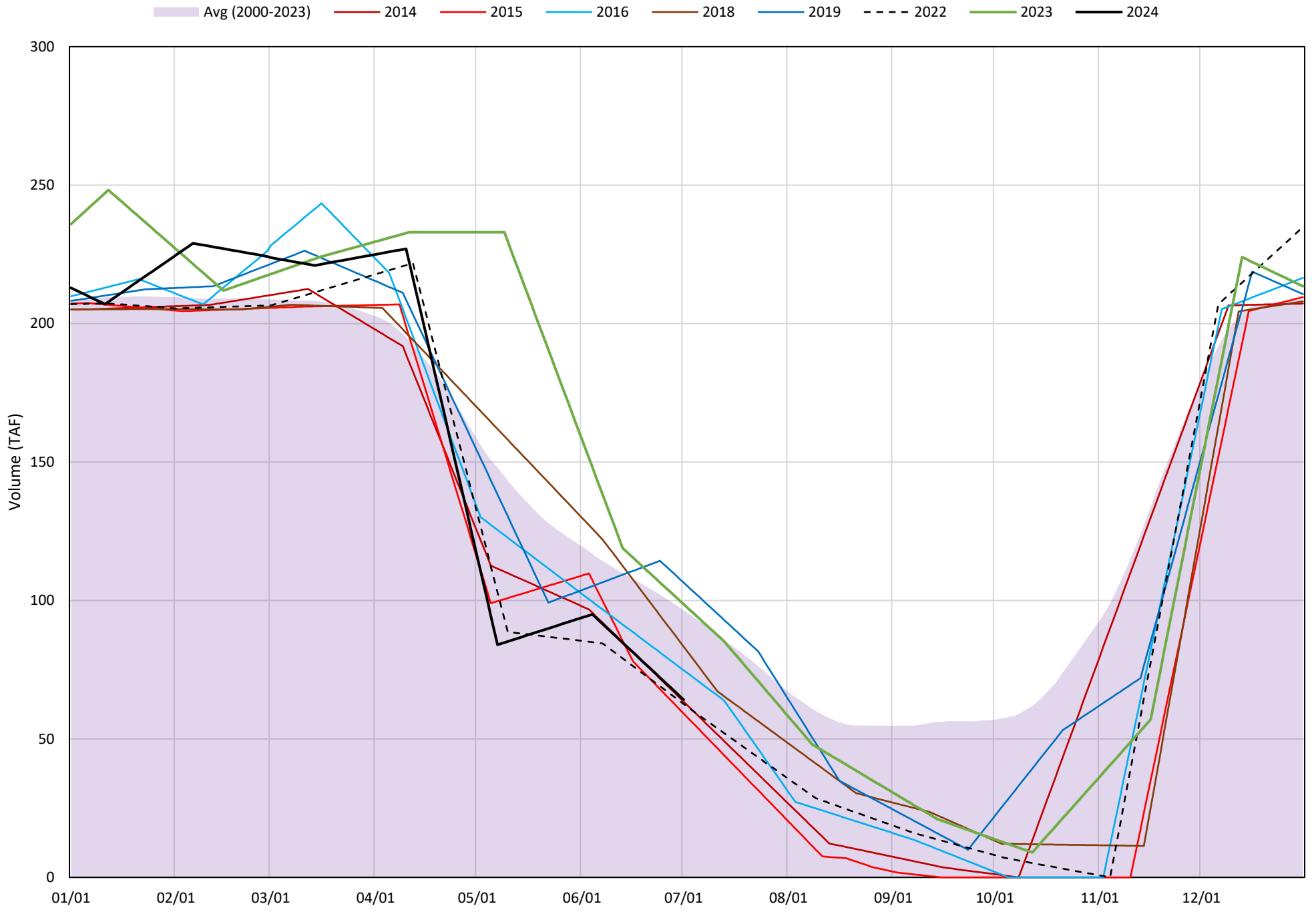
# Whiskeytown Lake Cold Water Pool Volume $\leq 60^{\circ}\text{F}$



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

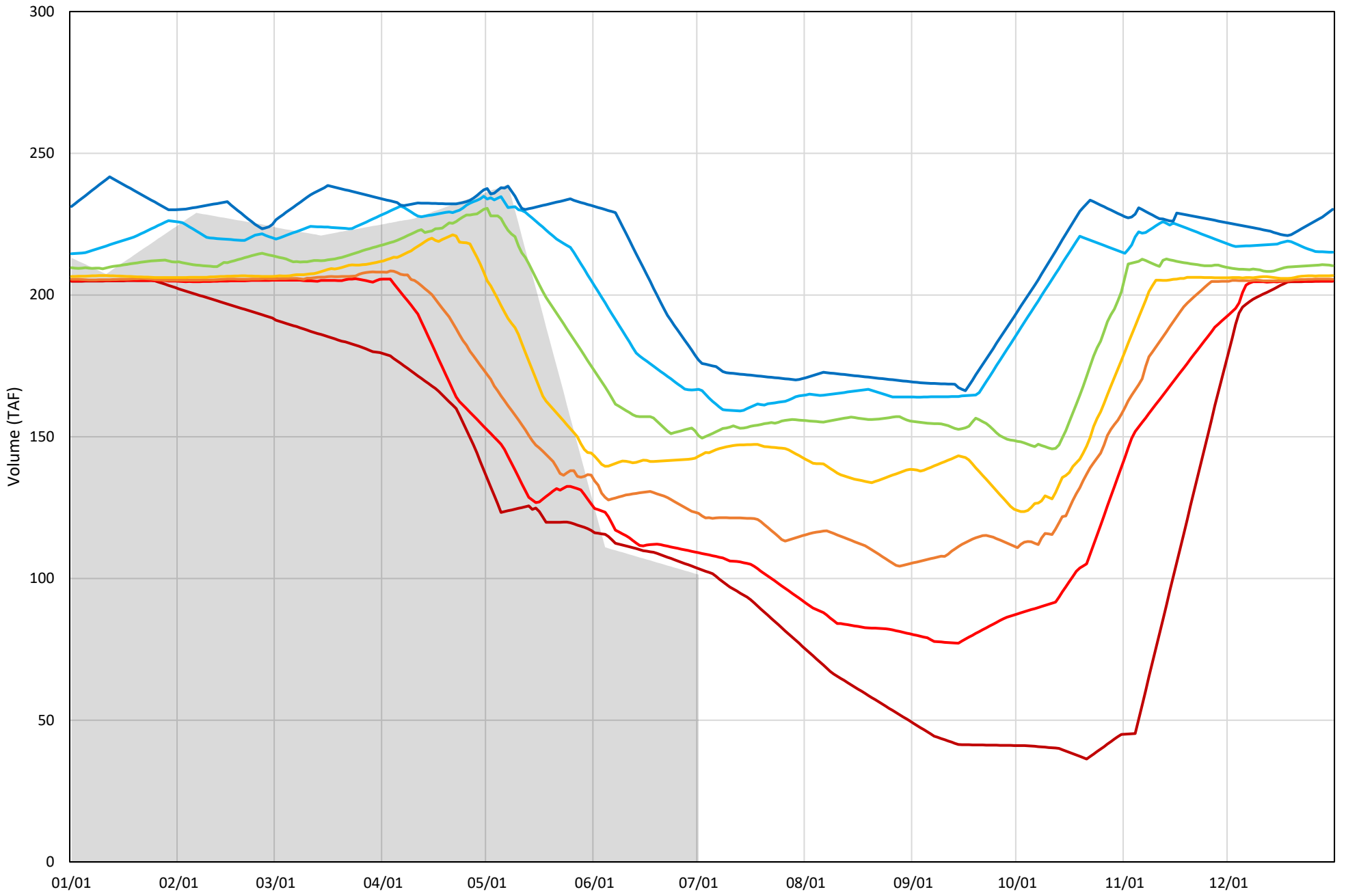


# Whiskeytown Lake Cold Water Pool Volume $\leq 56^{\circ}\text{F}$



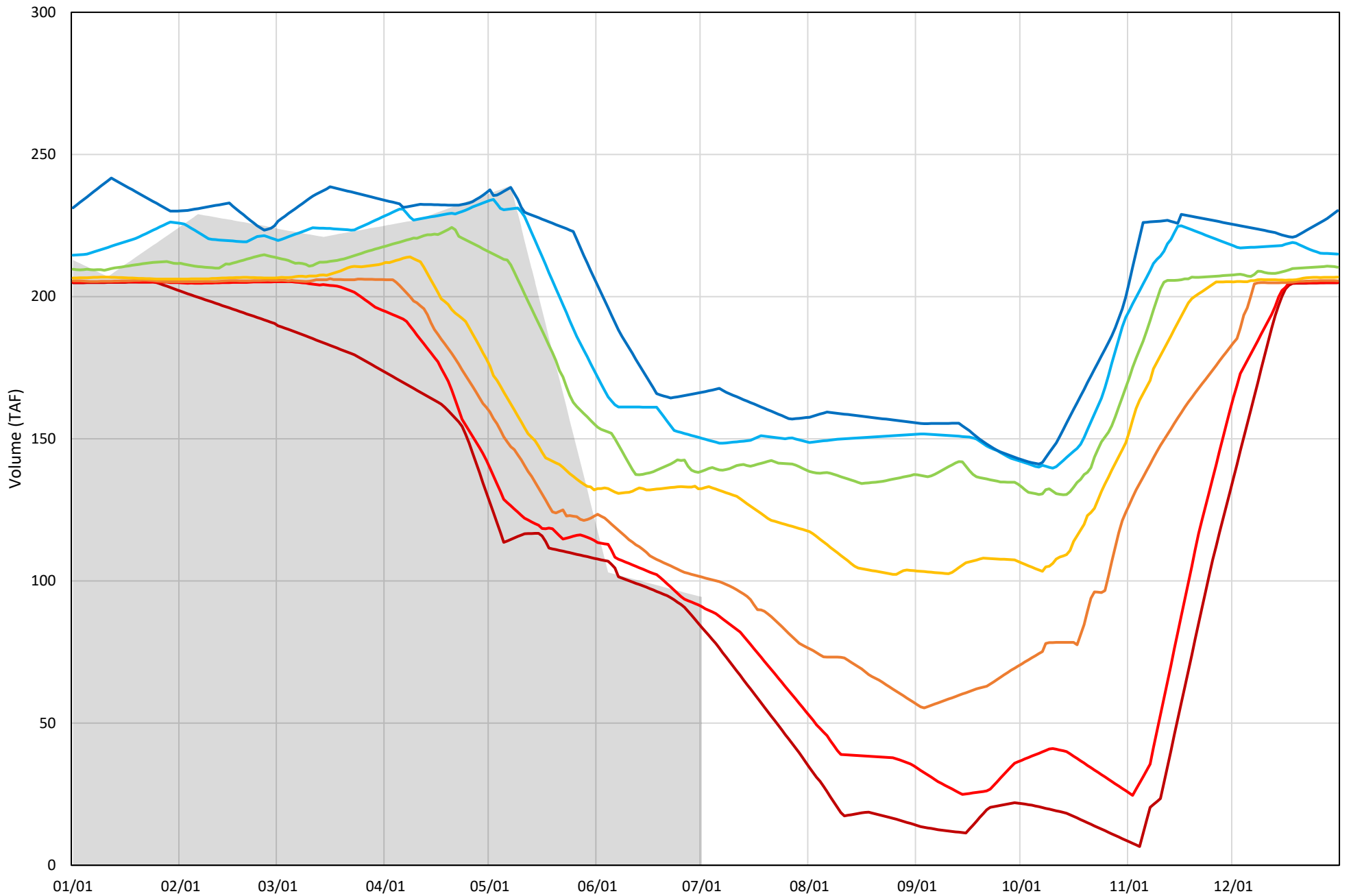
Whiskeytown Lake Cold Water Pool Volume  $\leq 60^{\circ}\text{F}$  - Percent Exceedances (2000-2023)

2024 95 90 75 50 25 10 5



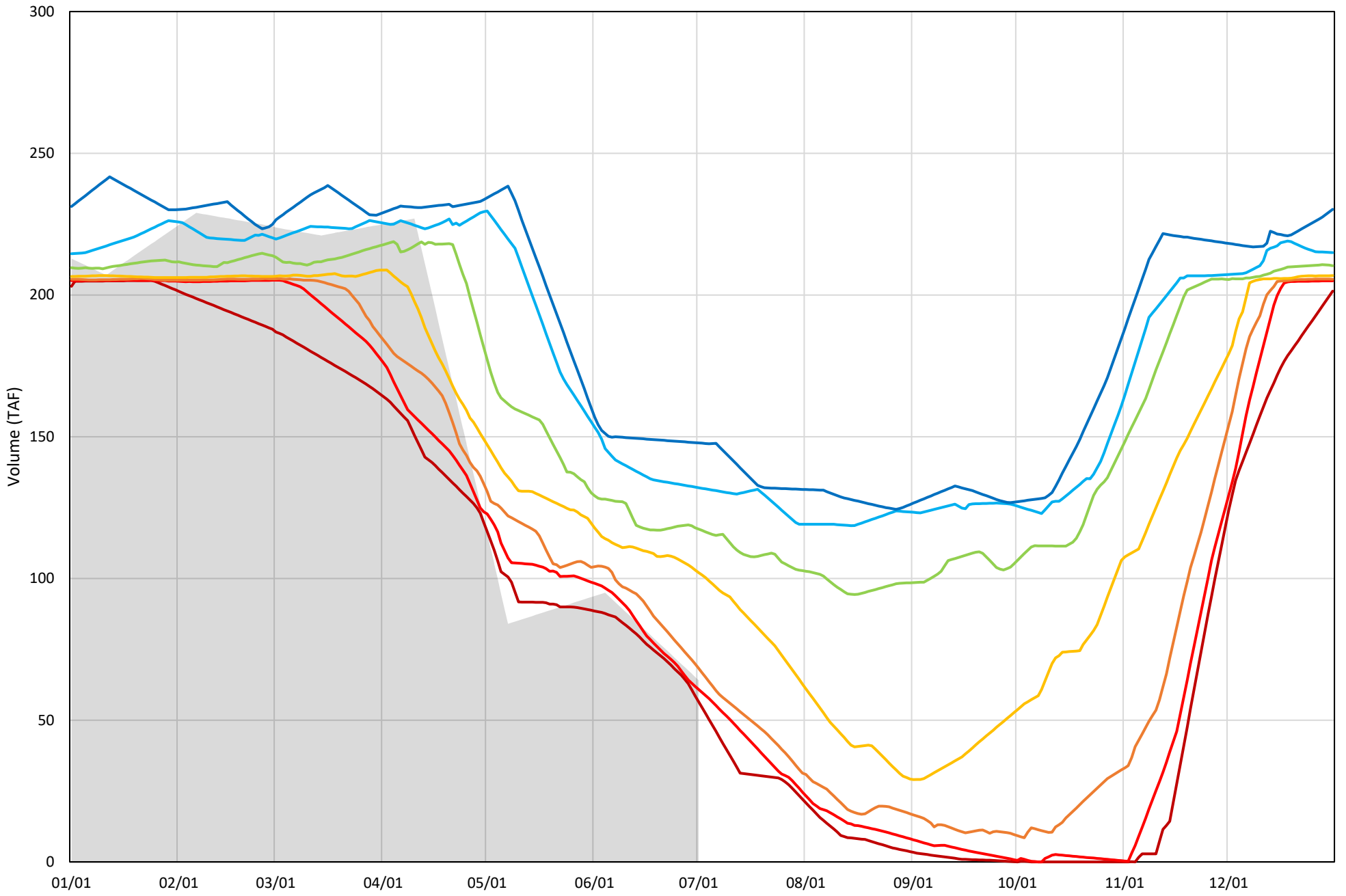
Whiskeytown Lake Cold Water Pool Volume  $\leq 58^{\circ}\text{F}$  - Percent Exceedances (2000-2023)

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)

Jul-02 2024	Δ TAF				% Δ			
	≤60°	≤58°	≤56°	Abs. Avg.	≤60°	≤58°	≤56°	Abs. Avg.
2000	47.4	44.3	58.0	49.9	46.7	47.0	90.4	61.4
2001	41.0	39.4	42.8	41.1	40.4	41.8	66.7	49.6
2002	43.0	42.0	46.7	43.9	42.4	44.5	72.8	53.2
2003	55.8	47.9	54.9	52.9	55.1	50.7	85.6	63.8
2004	40.3	40.2	58.4	46.3	39.8	42.7	91.0	57.8
2005	10.4	3.7	2.2	5.4	10.2	3.9	3.4	5.8
2006	74.3	77.3	88.6	80.1	73.3	82.0	138.2	97.8
2007	42.5	42.1	41.4	42.0	41.9	44.7	64.6	50.4
2008	46.8	44.1	47.2	46.0	46.1	46.7	73.6	55.5
2009	20.3	-0.8	0.9	7.4	20.1	-0.9	1.5	7.5
2010	49.5	34.7	10.2	31.4	48.8	36.8	15.8	33.8
2011	76.1	55.9	48.4	60.1	75.1	59.3	75.4	69.9
2012	34.2	25.8	19.8	26.6	33.8	27.4	30.9	30.7
2013	54.0	50.9	67.0	57.3	53.3	54.0	104.5	70.6
2014	35.3	22.6	-0.7	19.5	34.8	24.0	-1.1	20.0
2015	22.6	-12.3	-5.0	13.3	22.3	-13.0	-7.8	14.4
2016	21.7	12.1	10.7	14.8	21.4	12.9	16.6	17.0
2017	56.4	55.8	68.8	60.3	55.6	59.1	107.2	74.0
2018	47.7	36.9	19.2	34.6	47.1	39.1	29.9	38.7
2019	47.7	42.5	42.3	44.1	47.0	45.0	65.9	52.7
2020	5.1	5.3	29.0	13.1	5.0	5.7	45.2	18.6
2021	18.3	-0.7	-8.5	9.1	18.0	-0.7	-13.2	10.6
2022	1.1	-5.9	-1.5	2.8	1.1	-6.2	-2.4	3.2
2023	21.6	17.6	34.5	24.6	21.3	18.7	53.8	31.3
2024	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Historical - Current

(Historical - Current) / Current