

Northern CVP Water Temperature Report

May - 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 ¹	SHD	SPP ¹	KWK	SAC	CCR ²	BSF	BND	RDB	IGO	LWS	DGC	NFH	Shasta Generation	Spring Creek P.P.	Keswick Total	RDD	BSF	RDB	
Apr	51.7	50.5	48.0	51.4	51.8	52.4	53.9	55.0	56.0	52.0	51.2	49.9	50.7	7319	76	7221	62.2	58.4	59.9	
05/01	53.5	52.2	48.1	53.0	53.4	54.0	55.6	56.8	57.9	52.4	#	48.1	#	5956	44	6045	67.5	62.4	64.6	
05/02	52.9	? 52.4	48.1	53.8	54.0	54.7	56.2	57.4	58.5	52.4	#	48.5	#	6282	44	6107	65.0	60.4	64.8	
05/03	53.3	? 52.3	48.2	53.7	54.3	55.2	56.9	57.9	? 59.1	53.0	#	48.6	#	6069	44	6122	67.5	61.8	65.2	
05/04	52.3	50.6	48.1	53.3	53.2	53.5	55.0	56.7	58.1	51.7	#	48.1	#	6058	44	6203	57.5	52.1	53.4	
05/05	52.3	51.2	48.1	52.6	53.2	53.8	54.0	53.9	54.7	51.4	#	47.6	#	5539	44	6104	53.5	51.0	52.4	
05/06	52.4	? 51.5	48.2	52.2	52.6	53.1	54.7	55.7	56.8	51.7	#	47.4	#	5538	44	5939	59.0	56.3	57.8	
05/07	54.6	51.9	48.3	52.3	52.6	52.9	54.5	55.6	56.9	52.5	#	48.0	#	8521	44	10944	62.0	58.5	61.1	
05/08	54.5	52.7	48.4	53.1	53.2	53.4	54.4	55.2	56.3	52.8	#	48.4	#	10748	44	10991	68.5	65.3	66.7	
05/09	54.4	53.0	48.4	54.1	54.4	54.8	? 56.1	56.7	57.5	? 53.6	#	48.9	#	11415	44	11009	75.5	70.0	70.0	
05/10	54.7	53.3	49.9	54.3	54.7	? 55.2	56.9	57.9	59.2	54.1	#	49.5	#	11643	105	10848	86.0	70.7	73.2	
05/11	54.2	52.7	50.5	54.4	54.9	55.5	57.5	58.6	60.0	54.4	#	49.6	#	10419	210	9485	87.5	70.9	73.6	
05/12	53.3	51.6	48.8	53.9	54.5	55.3	57.7	59.3	61.1	54.7	#	49.8	#	8774	44	8351	73.5	71.3	72.7	
05/13	52.7	50.7	48.6	? 53.9	54.7	55.7	58.4	60.2	61.9	54.8	#	50.0	#	7832	44	7174	76.5	73.2	74.0	
05/14	51.8	? 50.8	48.6	? 53.3	54.1	55.1	58.2	60.6	62.7	54.8	#	50.1	#	6484	44	6304	79.0	74.0	75.3	
05/15	51.4	? 51.0	51.1	53.0	54.0	55.1	58.5	61.0	62.9	55.0	#	50.3	#	5466	730	6152	82.5	75.6	76.8	
05/16	51.8	? 51.0	50.9	52.6	53.7	54.8	58.4	61.1	63.1	54.5	#	50.6	#	5524	328	6193	74.0	70.5	71.2	
05/17	52.0	? 51.1	50.4	? 52.8	53.6	54.6	58.2	61.0	63.1	53.5	#	50.5	#	6236	130	6219	76.5	73.4	73.5	
05/18	51.5	? 50.2	48.8	52.9	53.7	54.7	57.8	60.4	62.8	52.4	#	50.7	#	4919	44	6397	74.5	71.4	73.1	
05/19	51.4	? 50.3	50.9	52.8	53.6	54.5	57.1	59.4	61.7	52.1	#	50.1	#	5093	269	6385	69.5	67.8	70.3	
05/20	52.3	? 50.9	49.3	52.6	53.3	54.0	56.3	58.2	60.0	52.1	#	50.2	#	6970	49	6425	72.5	68.8	70.4	
05/21	52.5	51.4	48.9	52.4	52.7	53.2	55.2	57.1	59.0	52.7	#	50.2	#	11873	44	12017	77.0	69.3	72.7	
05/22	53.0	51.6	51.1	52.8	53.1	53.7	55.3	56.4	57.8	53.5	#	50.1	#	12851	245	12185	71.5	68.7	72.4	
05/23	53.5	52.2	51.0	53.2	53.4	53.8	55.1	56.2	57.7	53.6	48.2	50.1	#	12566	187	11876	73.0	69.9	70.0	
05/24	52.3	50.9	49.3	53.6	53.9	54.4	55.9	56.9	58.2	53.9	48.0	50.4	#	11893	47	11976	69.0	65.2	65.9	
05/25	52.0	? 49.8	51.8	51.7	52.4	53.2	55.3	56.6	58.2	53.5	48.0	50.3	#	8672	253	10316	64.0	61.7	60.8	
05/26	51.4	50.3	51.4	51.3	51.9	52.6	54.8	56.3	58.0	54.3	48.2	50.7	#	8925	320	8887	71.0	67.6	68.4	
05/27	51.4	? 50.5	51.7	51.8	52.5	53.2	55.5	57.3	59.2	54.8	48.2	51.0	#	9457	551	8640	75.5	70.8	71.6	
05/28	51.2	? 50.3	52.1	52.2	52.8	53.6	56.1	58.1	60.1	55.0	48.0	50.9	#	8198	813	8716	75.5	72.3	73.1	
05/29	50.6	? 49.5	52.0	51.9	52.5	53.2	55.6	57.8	59.8	55.4	48.6	50.9	52.4	7377	804	8788	76.5	72.3	73.5	
05/30	50.7	49.5	52.4	51.5	52.3	53.1	55.5	57.4	59.3	55.2	48.5	51.3	? 53.1	7731	849	8803	81.0	77.5	79.1	
05/31	50.4	? 49.4	52.3	51.2	52.0	52.8	55.4	57.6	59.7	55.5	48.0	51.0	53.3	8560	795	8736	85.5	79.6	80.0	
May	52.5	51.2	49.8	52.9	53.4	54.1	56.2	57.8	59.4	53.5	48.2	49.7	52.8	8168	217	8387	72.1	67.3	68.9	
														Total CFS	253589	7301	260337			
														Total AF	502983	14481	516368			

Legend

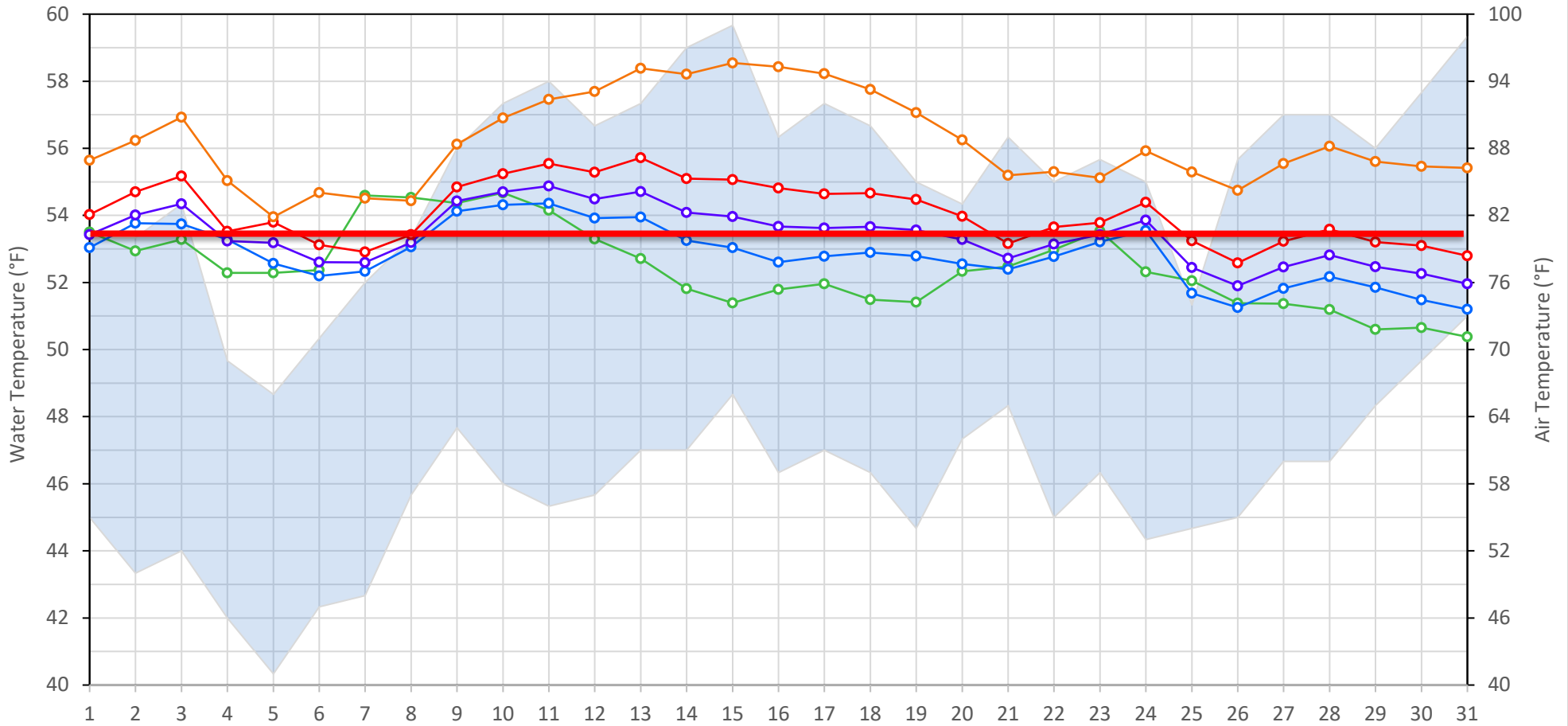
- ? = 1-9 hours of data missing (Average includes estimations)
- ! = 10 or more hours of data missing (Average not calculated)
- # = Station out of service
- ↑ = Record high air temperature
- ↓ = Record low air temperature
- = Monthly Averages

Notes

- ¹ 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
- ² Current Clear Creek River control point (see page 3 for more details)

Sacramento River Mean Daily Temperatures

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



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

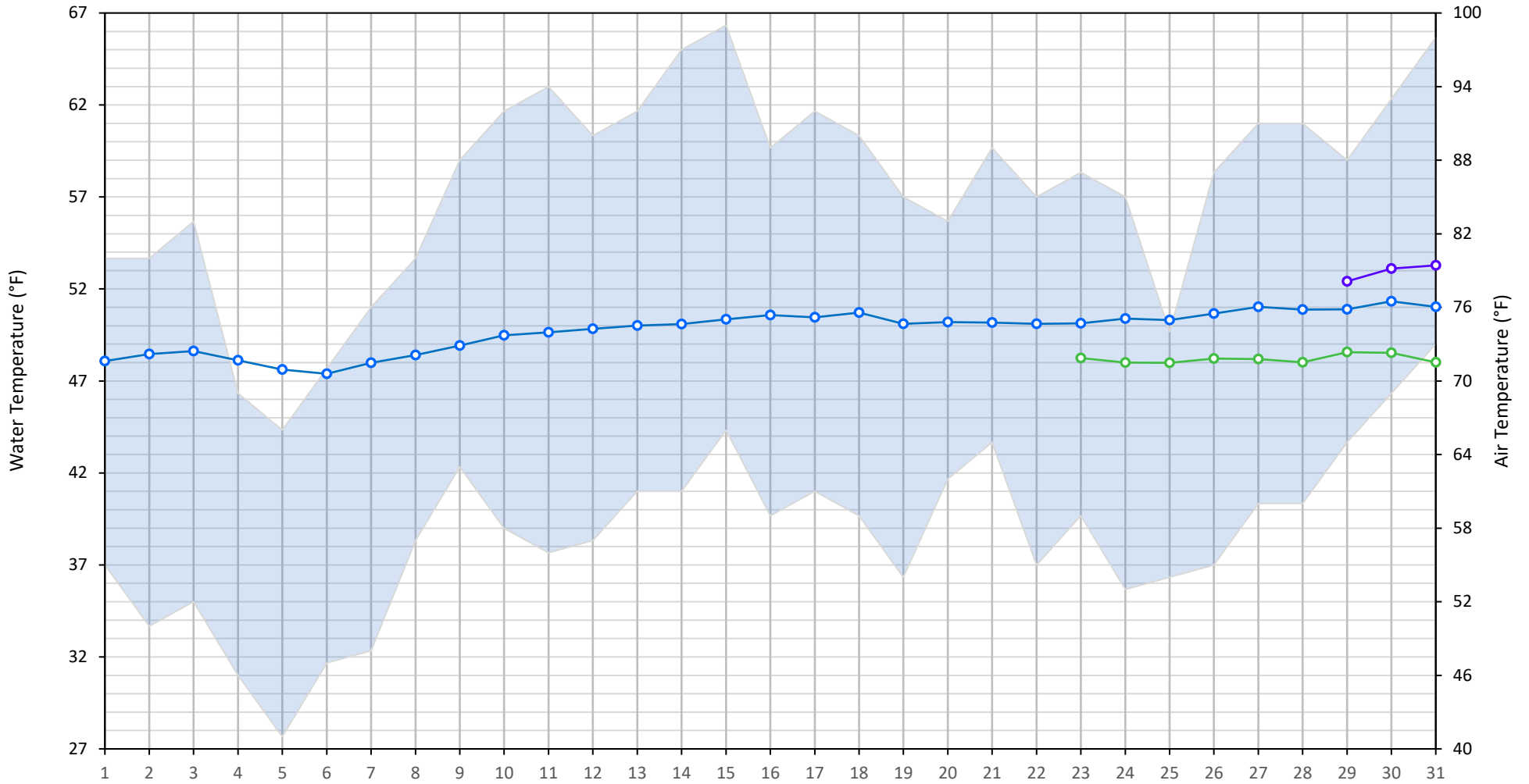
Water Right Temperature Control Points				
River	Point	Temp. (°F)	Begin Date	End Date
Sacramento	CCR	53.5	05/14/2023	TBD

Notes

¹ Distances are approximate

Trinity River Mean Daily Temperatures

Redding Air (Observed and Forecasted) LWS DGC NFH



Station Details			
Code	Body of Water	Location ¹	CDEC Link
LWS	Trinity River	1.1 miles downstream of Lewiston Dam	Click Here
DGC	Trinity River	19 miles downstream of Lewiston Dam	Click Here
NFH	Trinity River	38 miles downstream of Lewiston Dam	Click Here

Water Right Temperature Control Points				
River	Point	Temp. (°F)	Begin Date	End Date

Notes

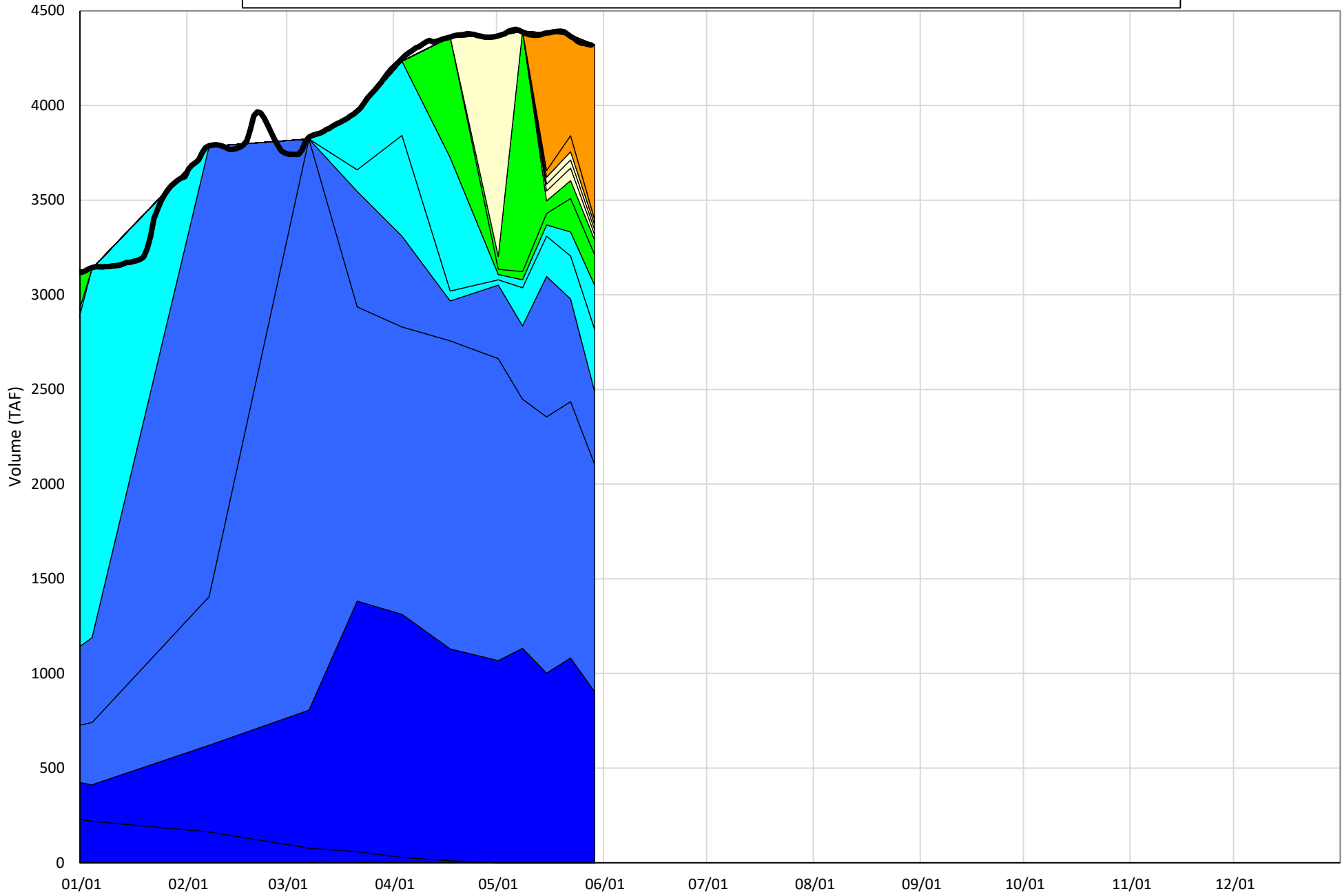
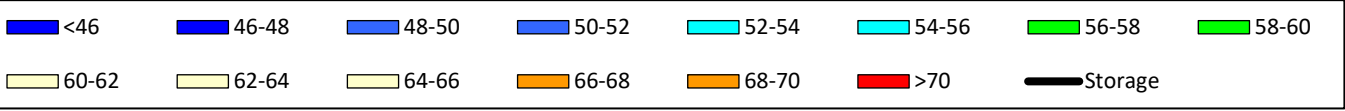
¹ Distances are approximate

Shasta Lake Isothermobaths & Cold Water Pool Statistics

2024

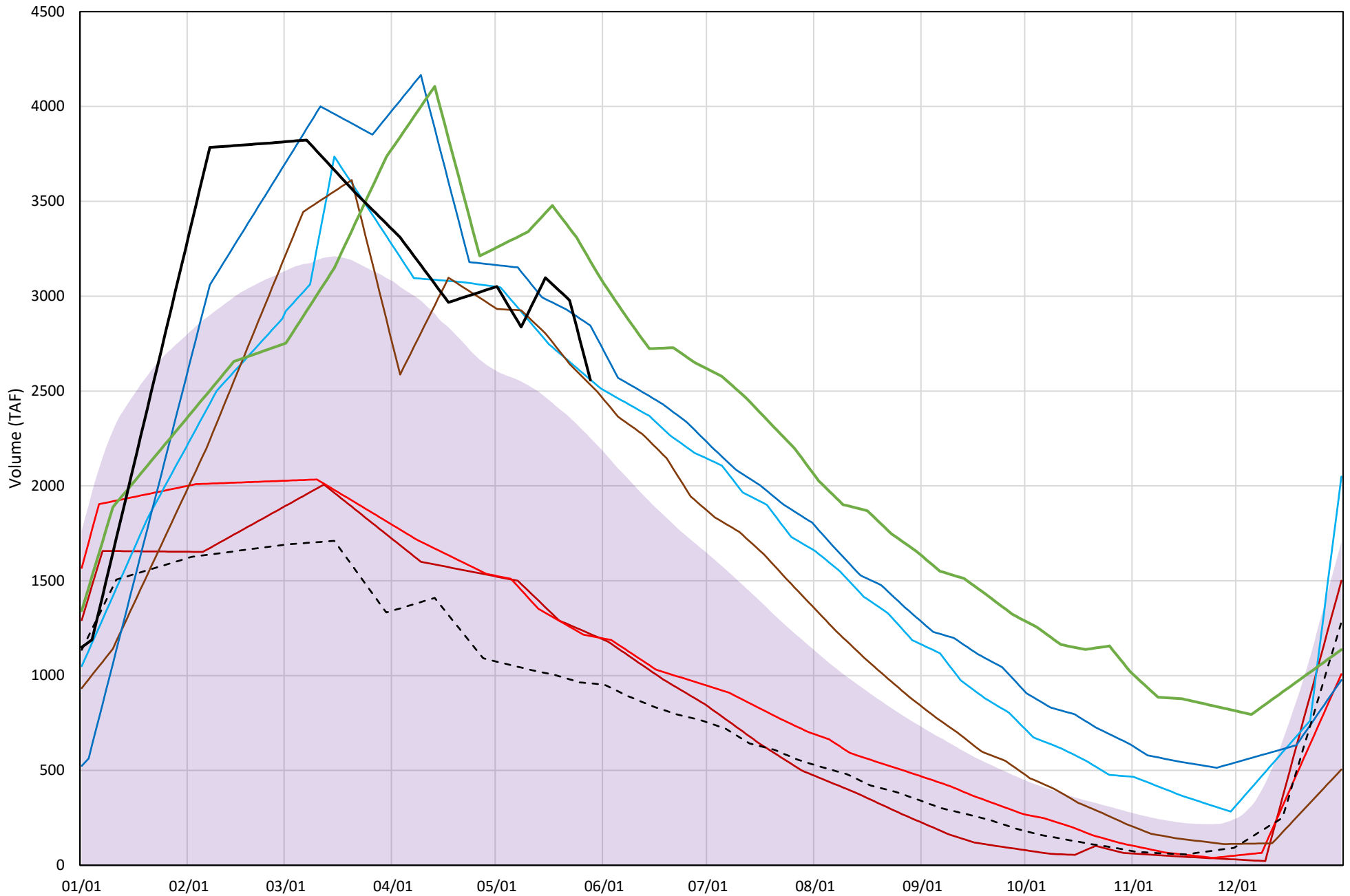
Page	Description
6	- Shasta Lake Isothermobaths Plot
7	- Shasta Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$
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12	- Shasta Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$ - Percent Exceedances
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Shasta Lake Isothermobaths Plot - 2024

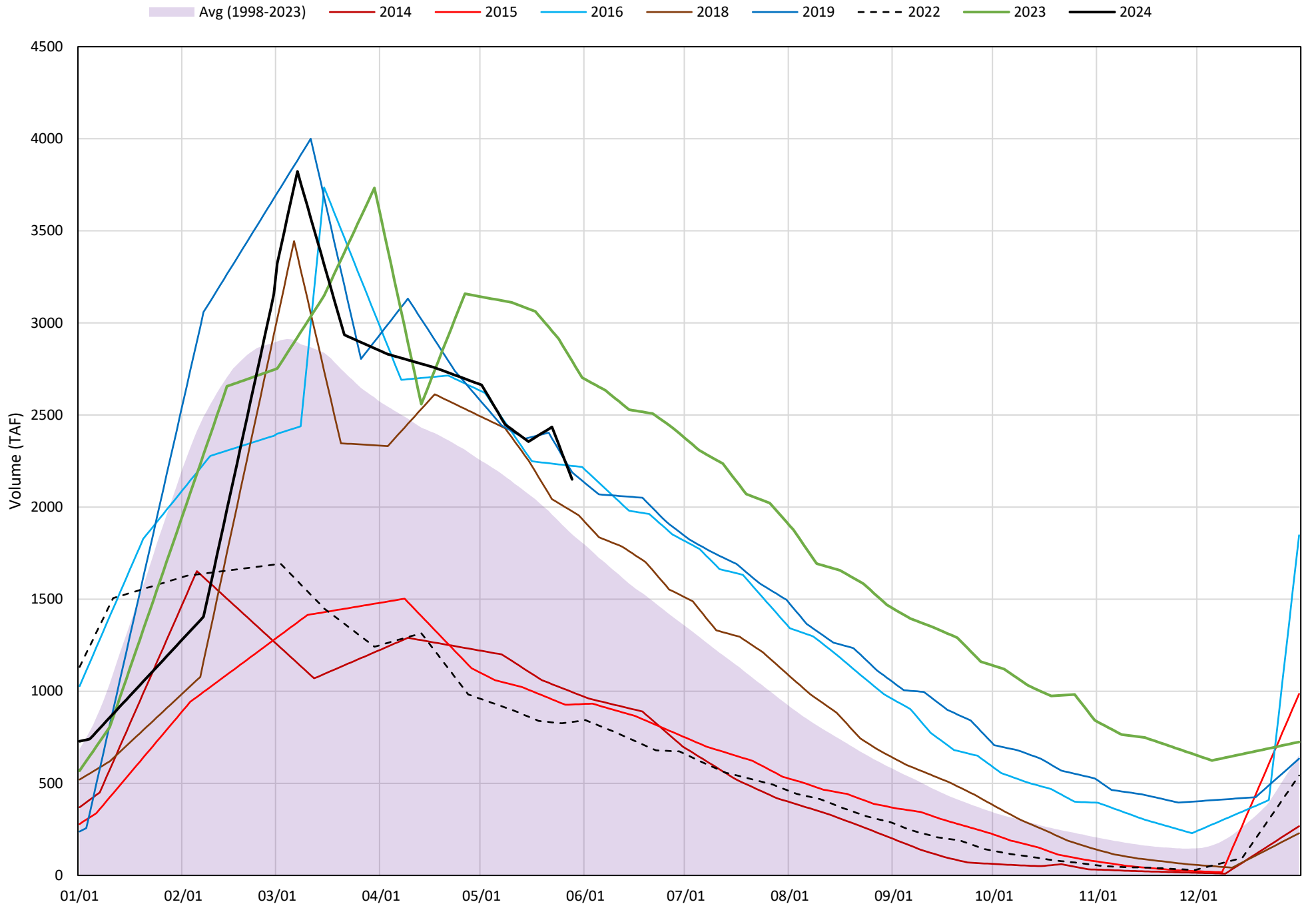


Shasta Lake Cold Water Pool Volume ≤52°F

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

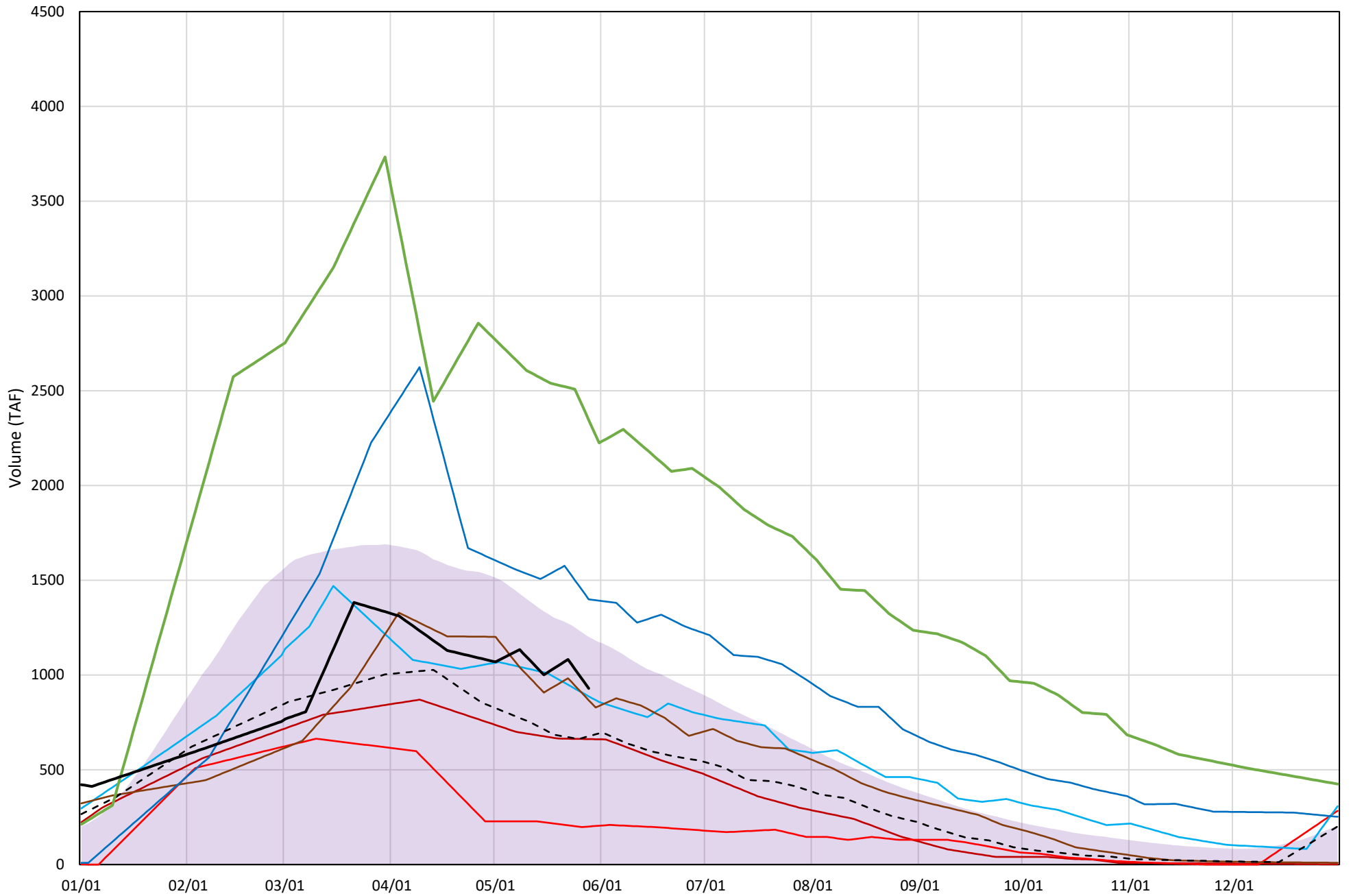


Shasta Lake Cold Water Pool Volume $\leq 50^{\circ}\text{F}$



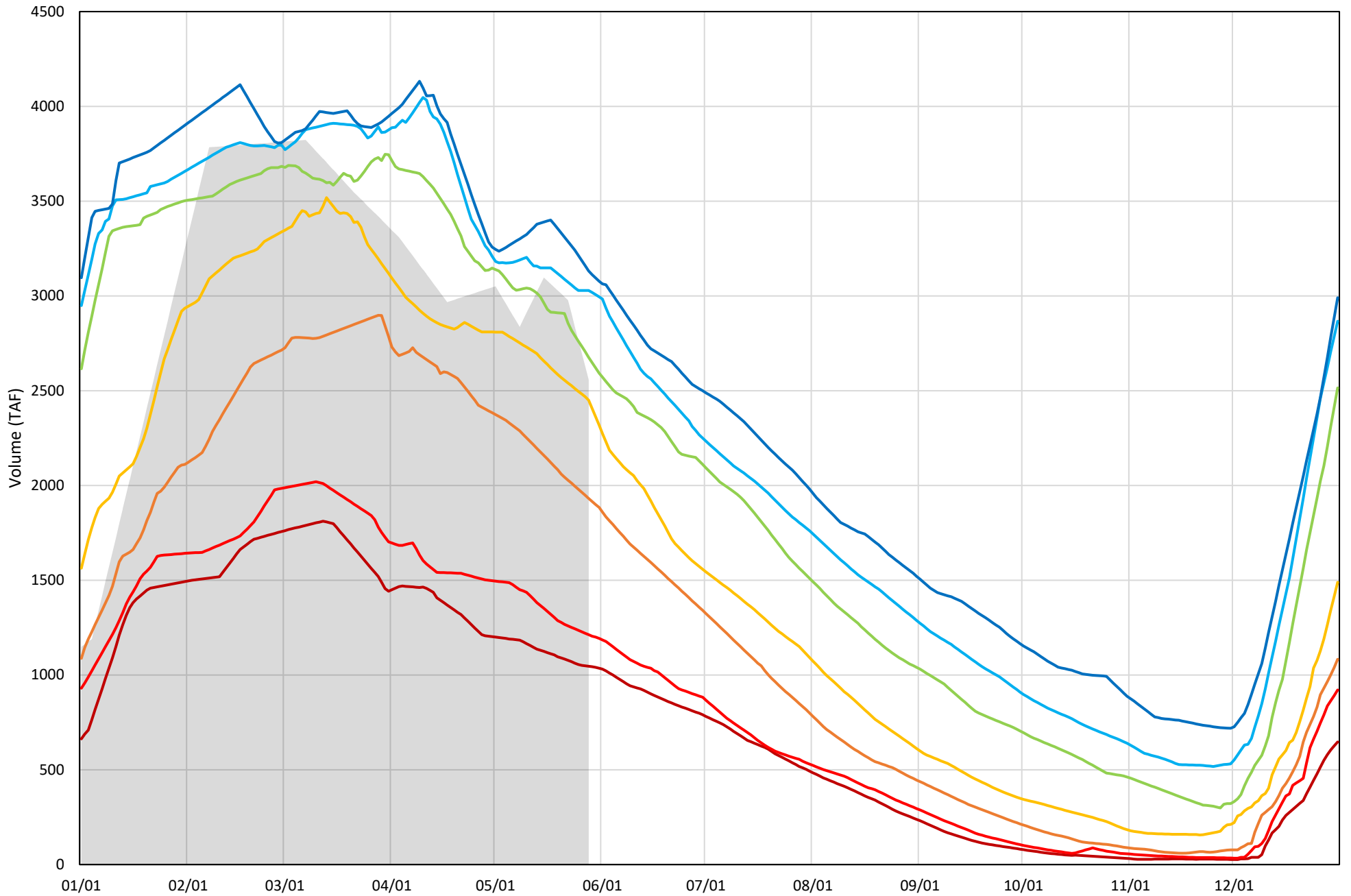
Shasta Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$

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



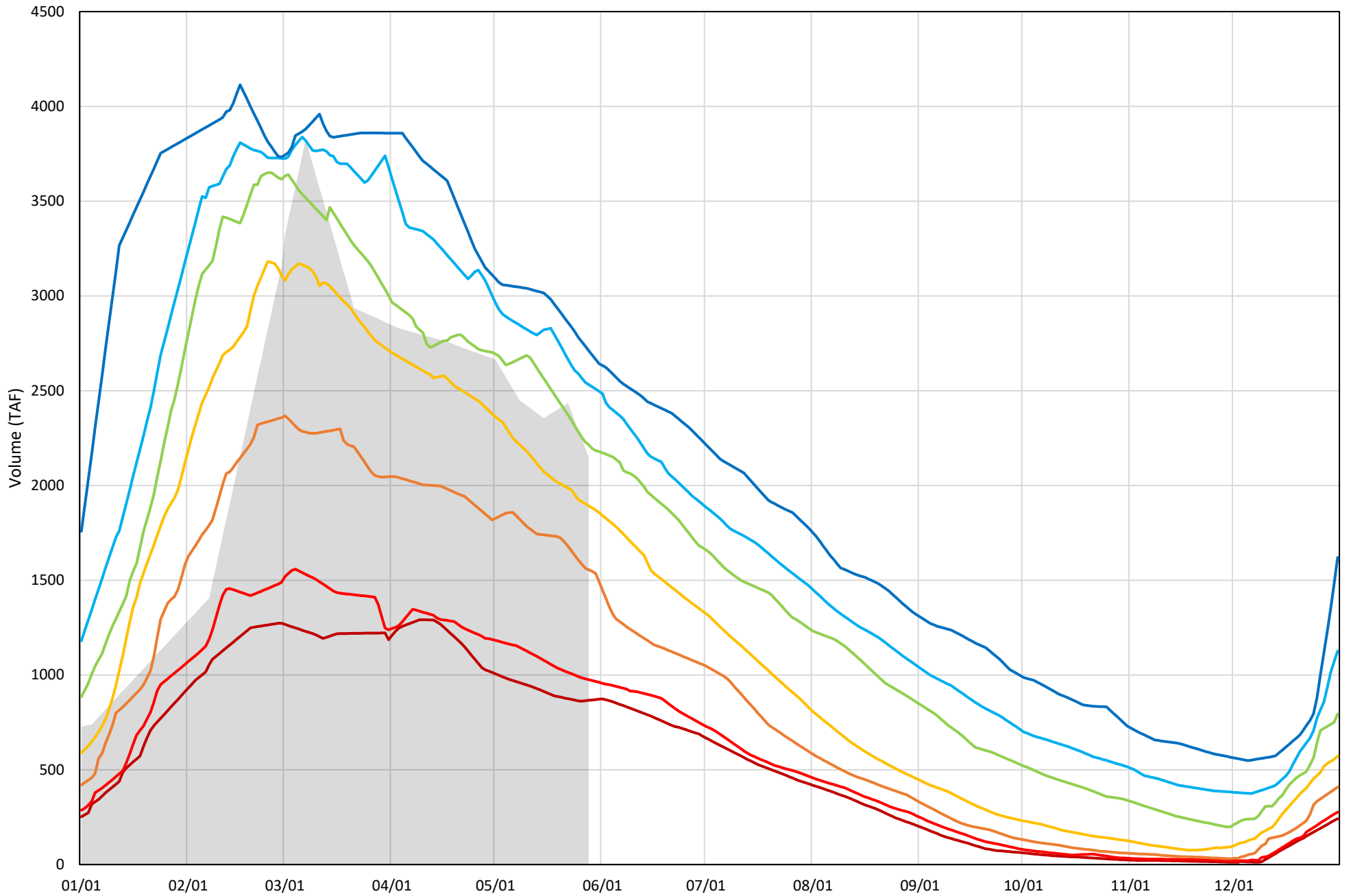
Shasta Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$ - Percent Exceedances (1998-2023)

2024 95 90 75 50 25 10 5



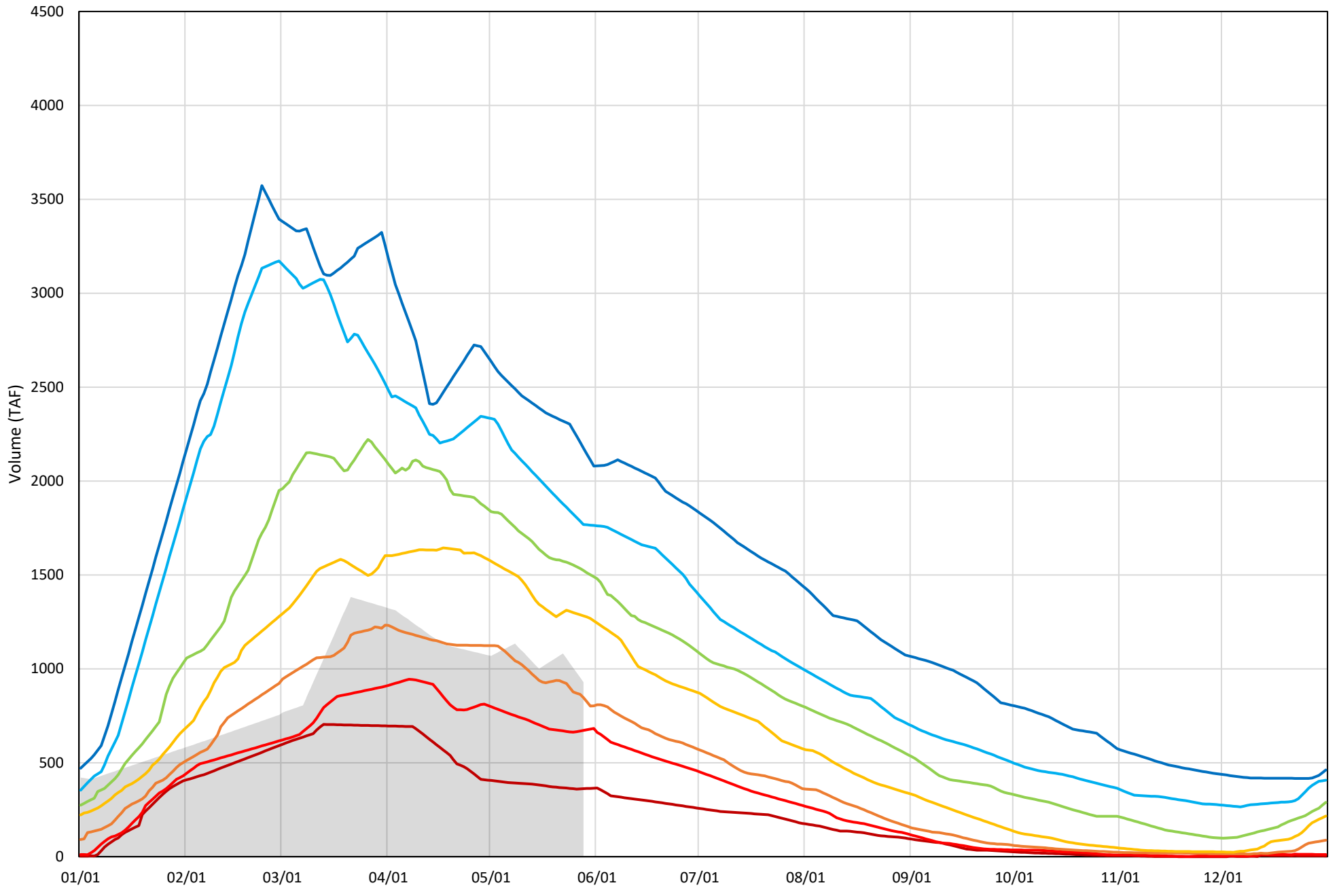
Shasta Lake Cold Water Pool Volume ≤50°F - Percent Exceedances (1998-2023)

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)

May-29 2024	Δ TAF				% Δ			
	≤52°	≤50°	≤48°	Abs. Avg.	≤52°	≤50°	≤48°	Abs. Avg.
1998	475	371	659	501	19	17	71	36
1999	-57	30	801	296	-2	1	86	30
2000	-98	-451	15	188	-4	-21	2	9
2001	-432	-265	516	405	-17	-12	56	28
2002	-110	-40	587	246	-4	-2	63	23
2003	-105	-441	-143	230	-4	-21	-15	13
2004	-491	-428	313	411	-19	-20	34	24
2005	-326	-493	-47	289	-13	-23	-5	14
2006	-5	62	496	188	0	3	53	19
2007	-402	-232	476	370	-16	-11	51	26
2008	-1025	-813	174	670	-40	-38	19	32
2009	-916	-779	160	618	-36	-36	17	30
2010	403	350	629	461	16	16	68	33
2011	470	410	930	603	18	19	100	46
2012	233	304	621	386	9	14	67	30
2013	-529	-343	415	429	-21	-16	45	27
2014	-1338	-1154	-267	920	-52	-54	-29	45
2015	-1349	-1222	-728	1100	-53	-57	-78	63
2016	2	74	-41	39	0	3	-4	3
2017	80	-250	394	241	3	-12	42	19
2018	-25	-173	-62	86	-1	-8	-7	5
2019	288	38	471	266	11	2	51	21
2020	-351	-534	-225	370	-14	-25	-24	21
2021	-1343	-1098	-223	888	-53	-51	-24	43
2022	-1598	-1317	-252	1056	-63	-61	-27	50
2023	627	643	1417	896	25	30	153	69
2024	0	0	0	0	0	0	0	0

Historical - Current

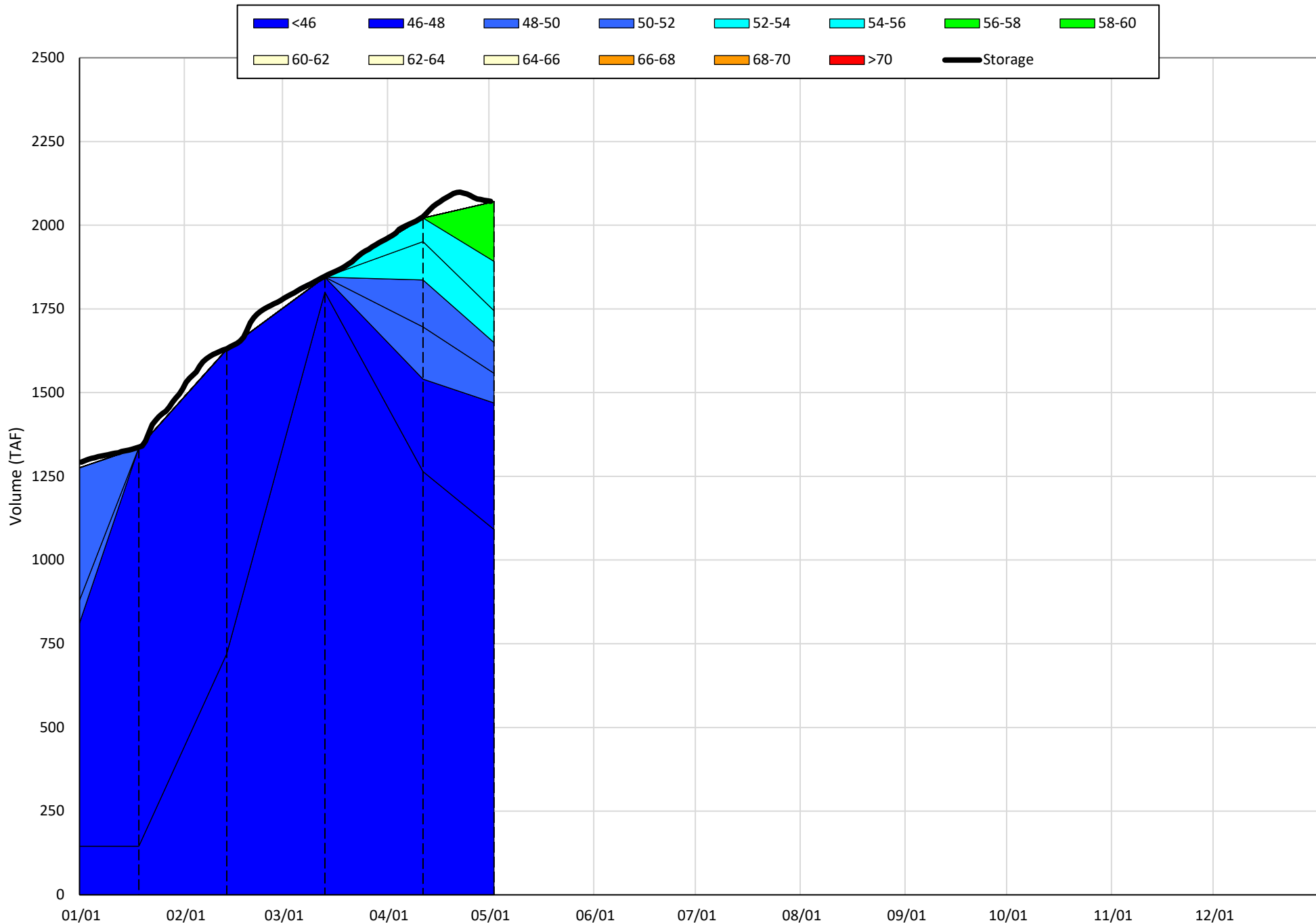
(Historical - Current) / Current

Trinity Lake Isothermobaths & Cold Water Pool Statistics

2024

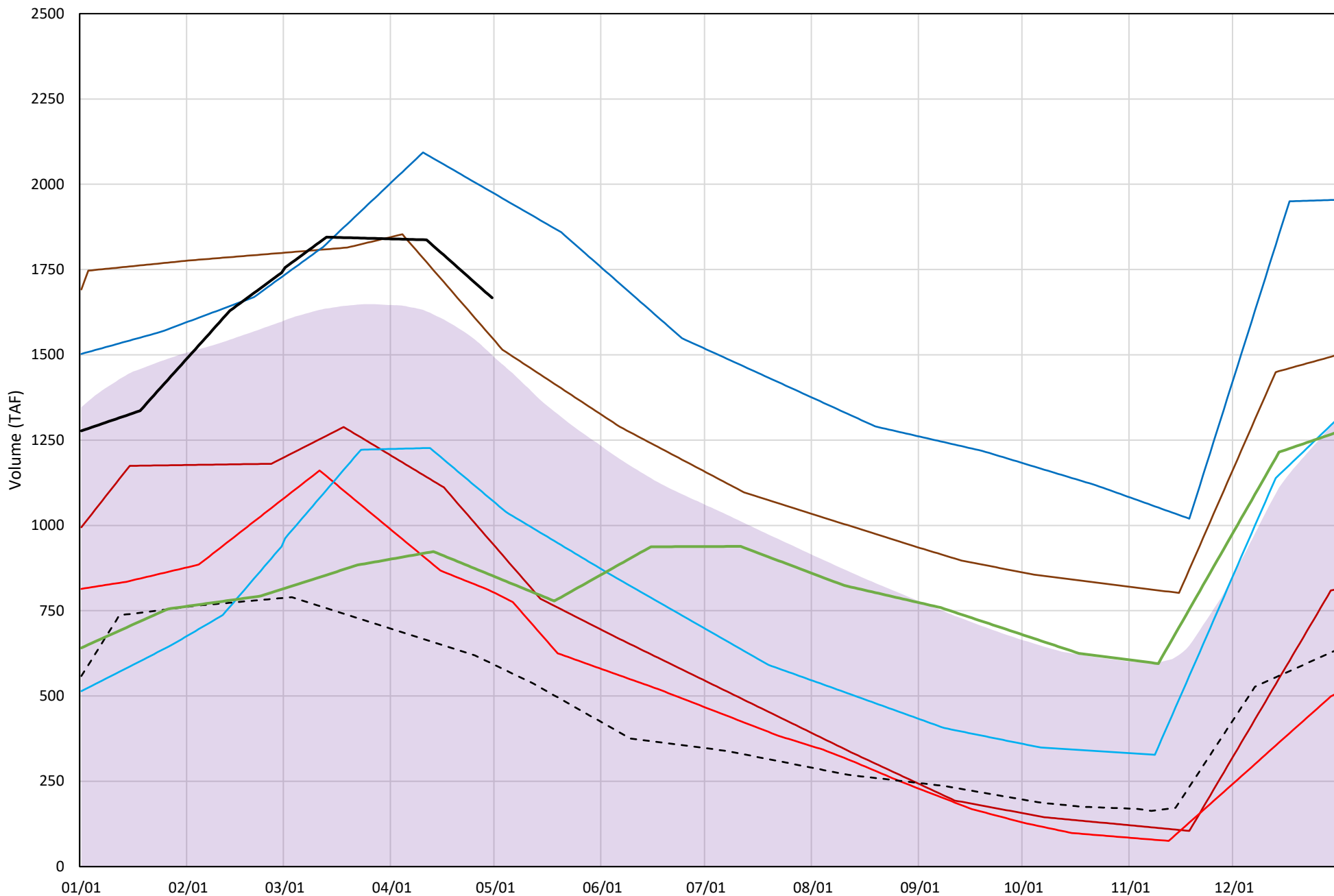
Page	Description
15	- Trinity Lake Isothermobaths Plot
16	- Trinity Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$
17	- Trinity Lake Cold Water Pool Volume $\leq 50^{\circ}\text{F}$
18	- Trinity Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$
19	- Trinity Lake Cold Water Pool Volume $\leq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



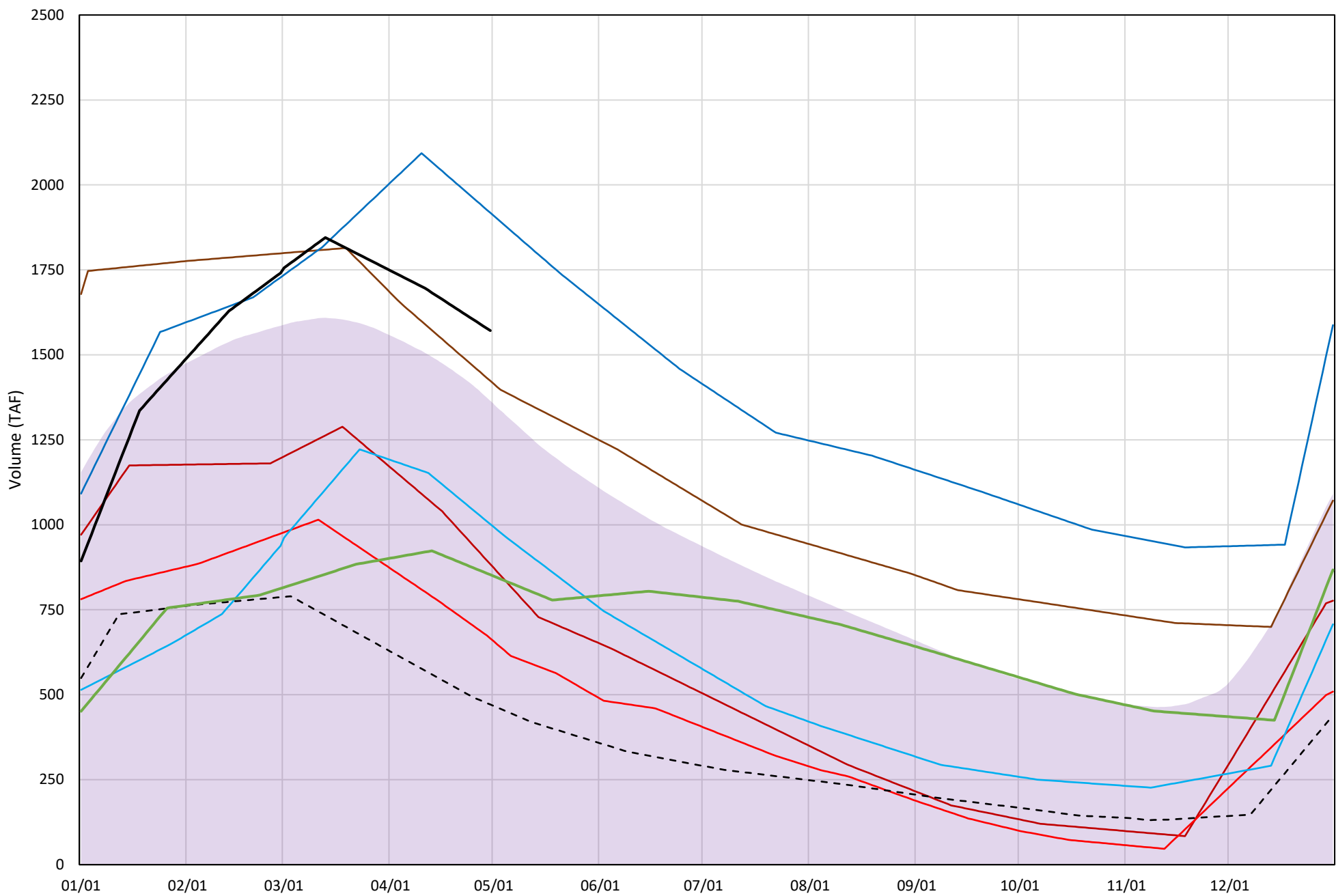
Trinity Lake Cold Water Pool Volume ≤52°F

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



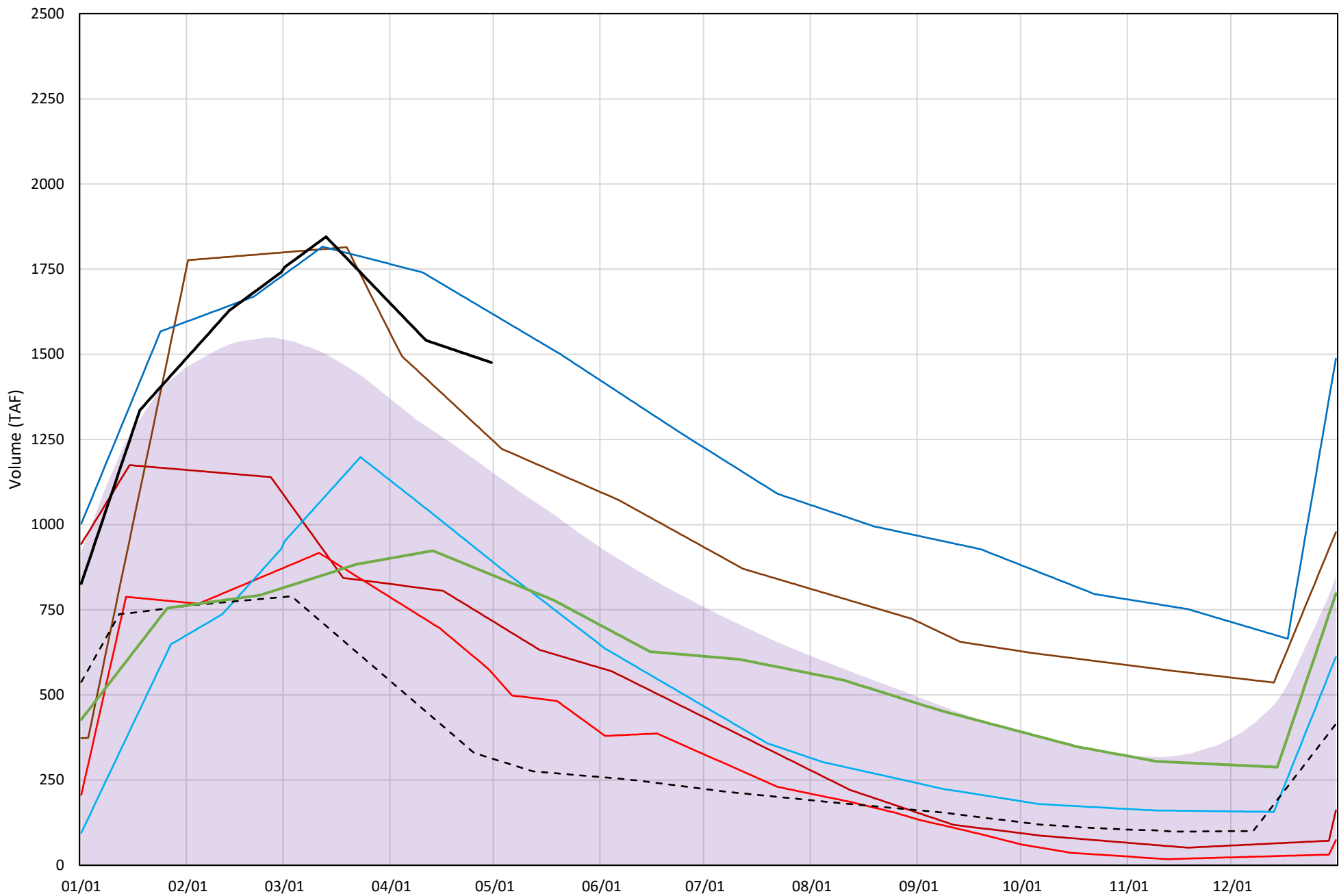
Trinity Lake Cold Water Pool Volume ≤50°F

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



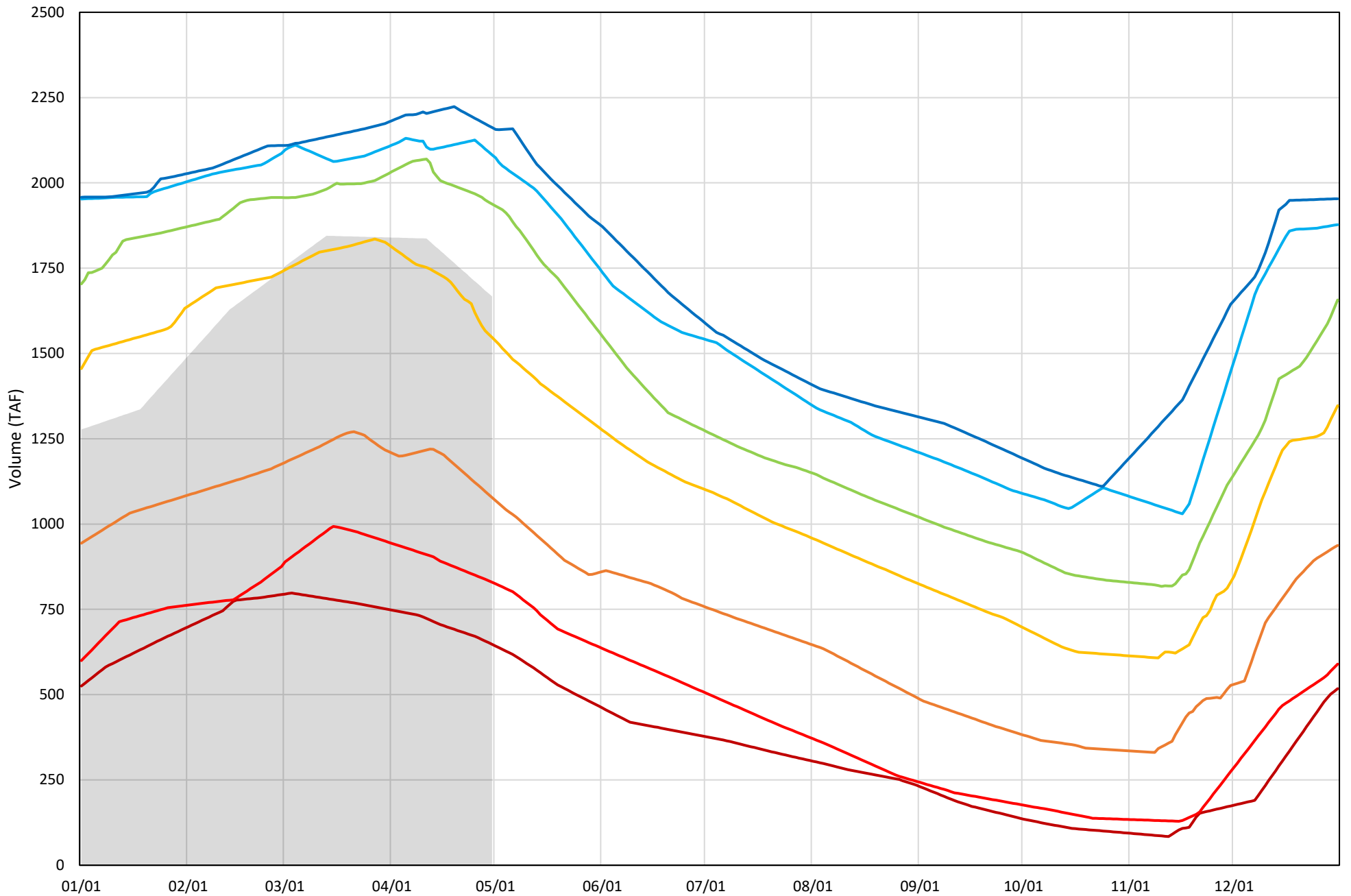
Trinity Lake Cold Water Pool Volume ≤48°F

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



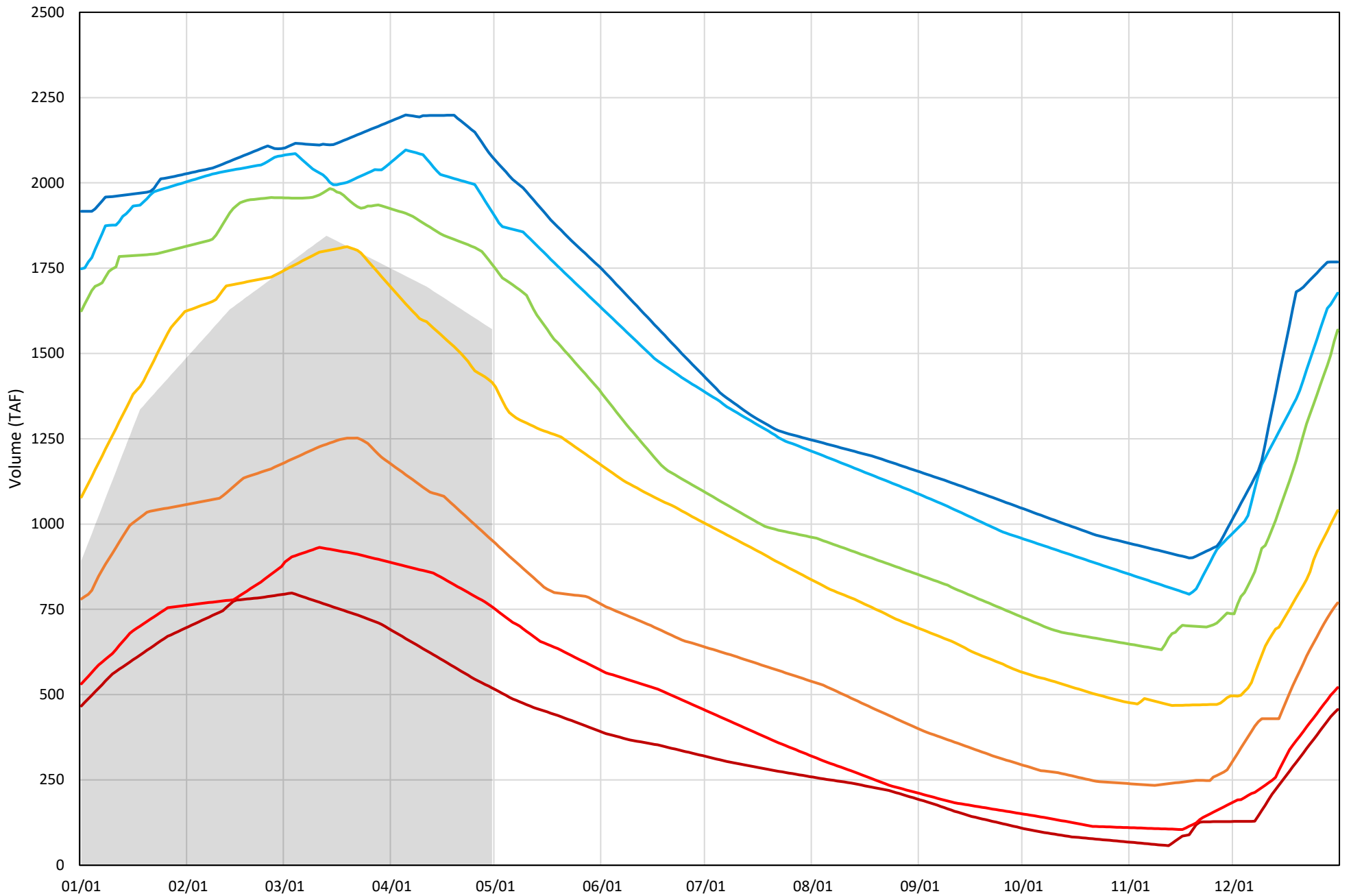
Trinity Lake Cold Water Pool Volume ≤52°F - Percent Exceedances (2000-2023)

2024 95 90 75 50 25 10 5



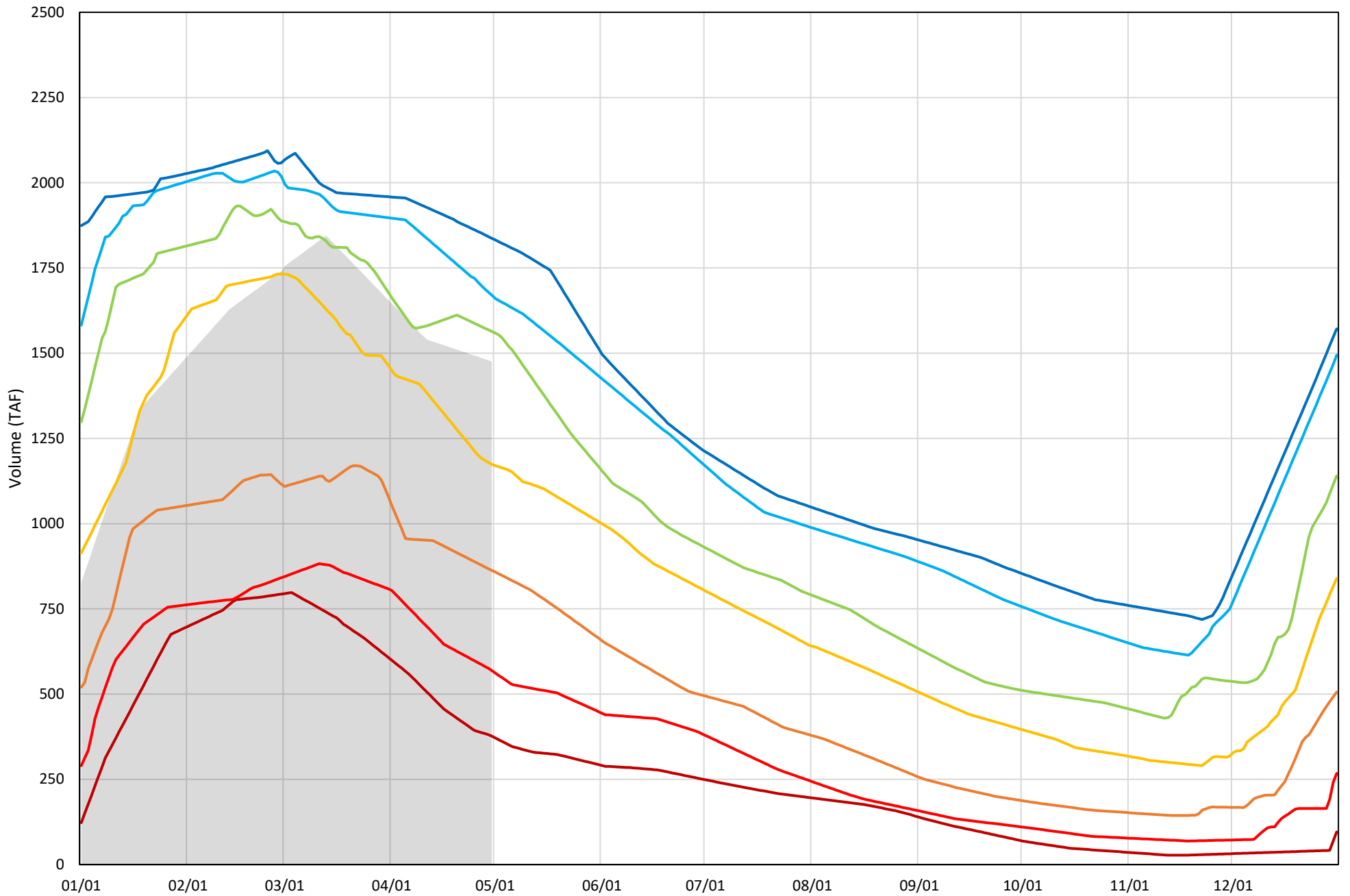
Trinity Lake Cold Water Pool Volume ≤50°F - Percent Exceedances (2000-2023)

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)

	Δ TAF				% Δ			
	$\leq 52^\circ$	$\leq 50^\circ$	$\leq 48^\circ$	Abs. Avg.	$\leq 52^\circ$	$\leq 50^\circ$	$\leq 48^\circ$	Abs. Avg.
May-02								
2024								
2000	334	324	122	260	20	21	8	16
2001	-167	-149	-296	204	-10	-10	-20	13
2002	-123	-156	-172	151	-7	-10	-12	10
2003	496	166	25	229	30	11	2	14
2004	92	11	-102	68	6	1	-7	4
2005	6	-291	-491	263	0	-19	-33	17
2006	500	553	402	485	30	35	27	31
2007	-115	-241	-243	200	-7	-15	-17	13
2008	-180	-166	-523	290	-11	-11	-36	19
2009	-578	-638	-903	707	-35	-41	-61	46
2010	-200	-226	-514	314	-12	-14	-35	20
2011	267	189	142	199	16	12	10	13
2012	277	280	235	264	17	18	16	17
2013	-253	-253	-364	290	-15	-16	-25	19
2014	-721	-692	-760	724	-44	-44	-52	46
2015	-857	-908	-918	894	-52	-58	-62	57
2016	-593	-571	-587	584	-36	-37	-40	37
2017	281	227	107	205	17	15	7	13
2018	-120	-150	-231	167	-7	-10	-16	11
2019	312	344	142	266	19	22	10	17
2020	-94	-159	-308	187	-6	-10	-21	12
2021	-742	-722	-777	747	-45	-46	-53	48
2022	-1068	-1098	-1162	1109	-64	-70	-79	71
2023	-809	-716	-624	716	-49	-46	-42	46
2024	0	0	0	0	0	0	0	0

Historical - Current

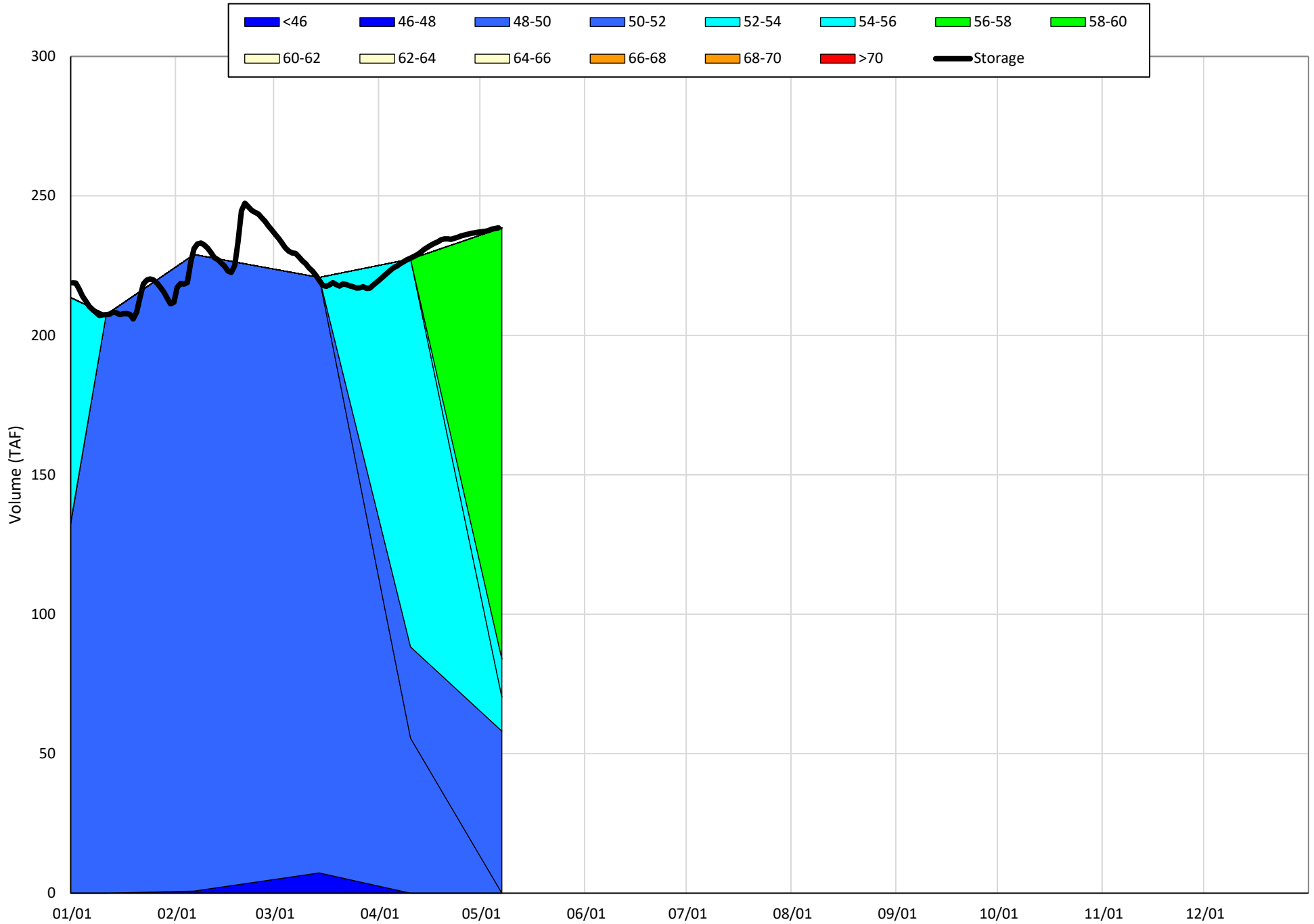
(Historical - Current) / Current

Whiskeytown Lake Isothermobaths & Cold Water Pool Statistics

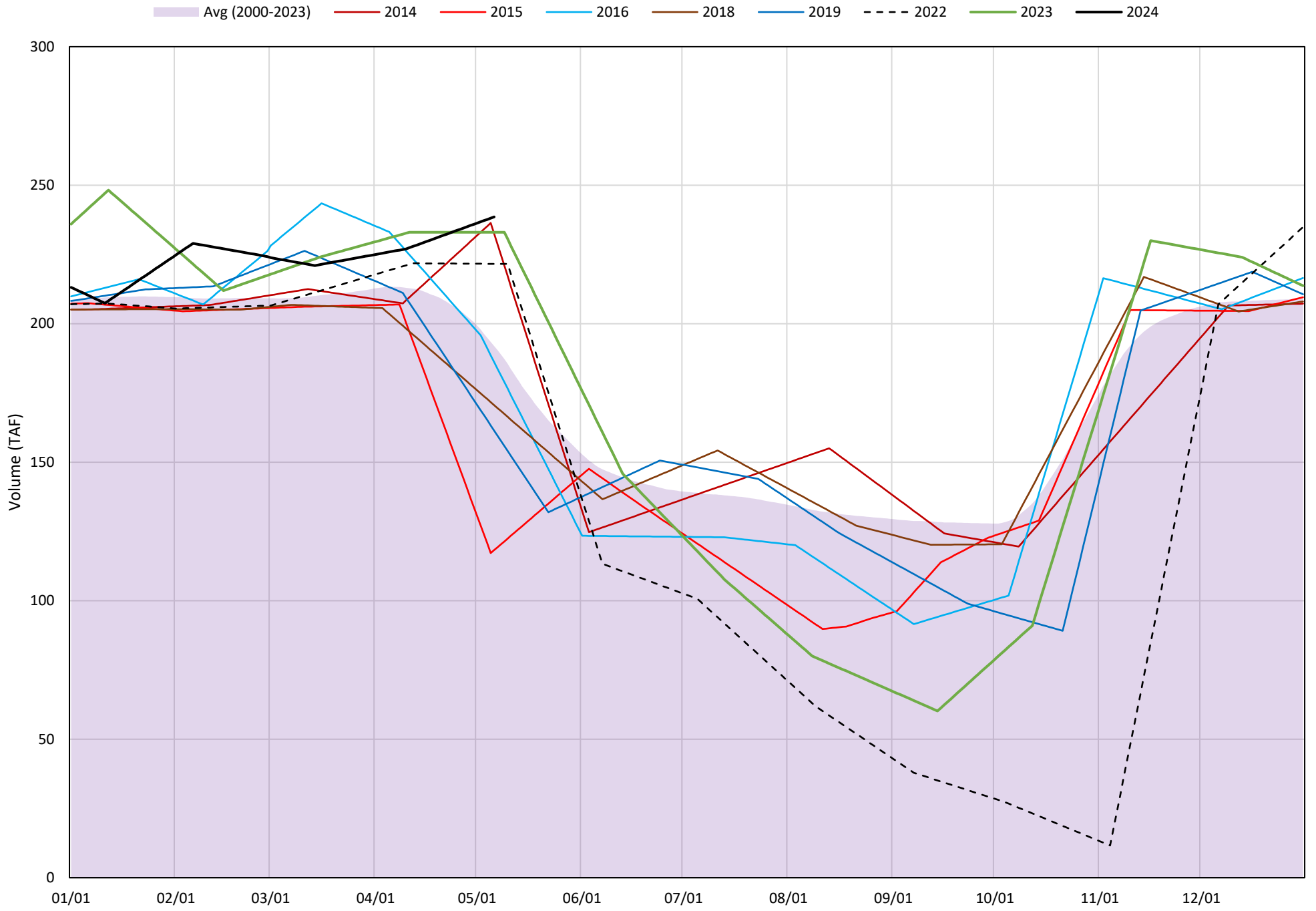
2024

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

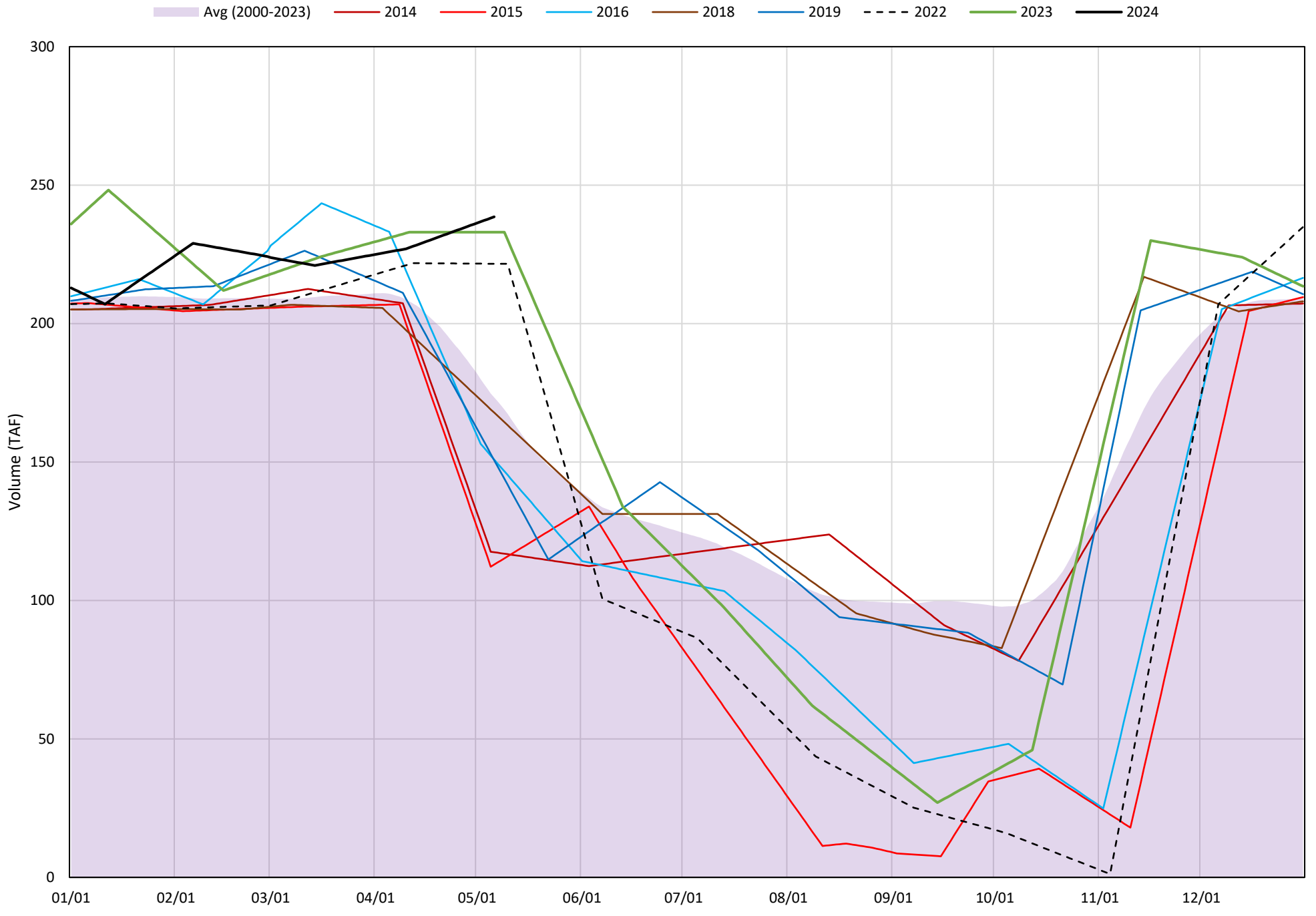
Whiskeytown Lake Isothermobaths Plot - 2024



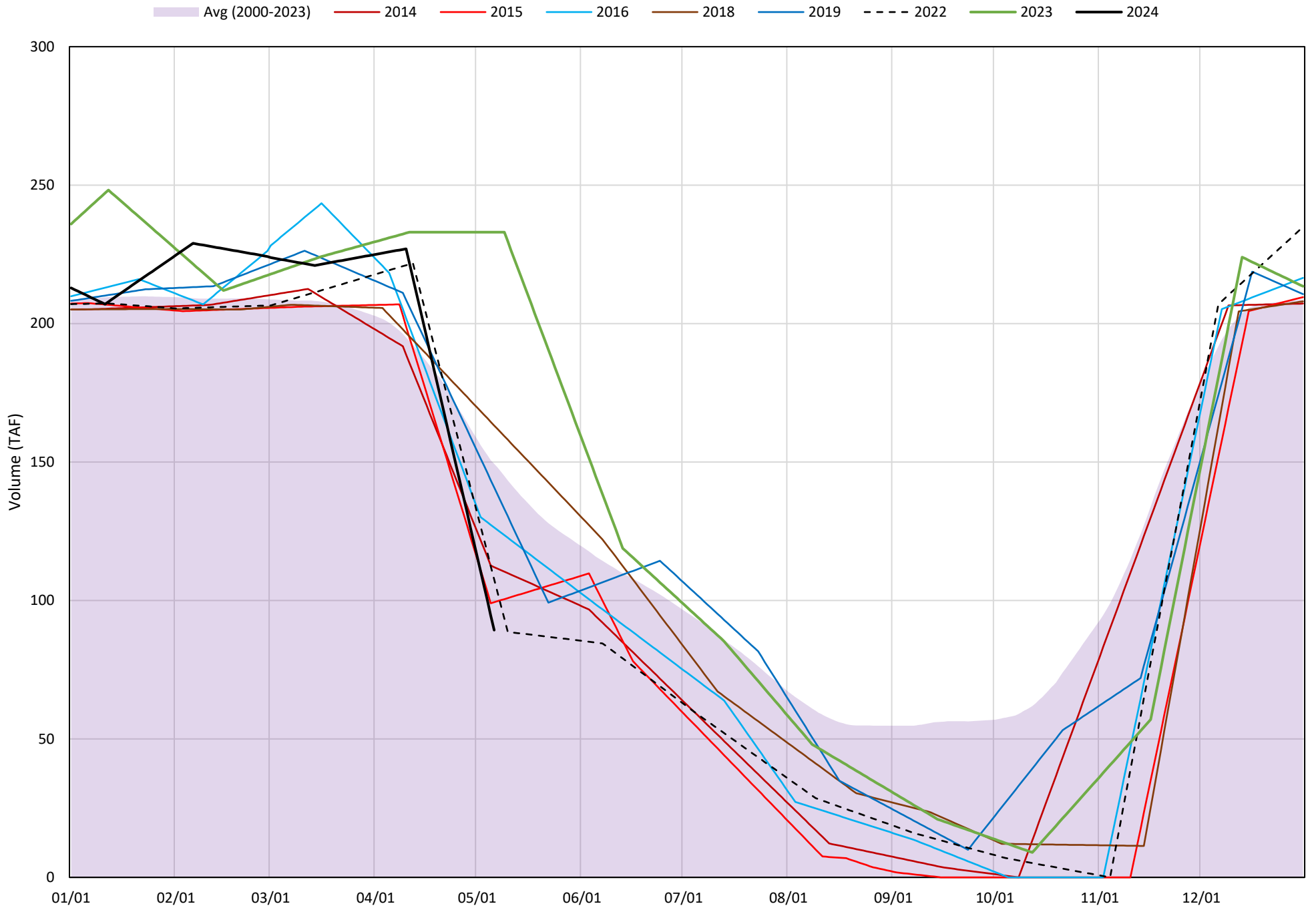
Whiskeytown Lake Cold Water Pool Volume ≤60°F



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

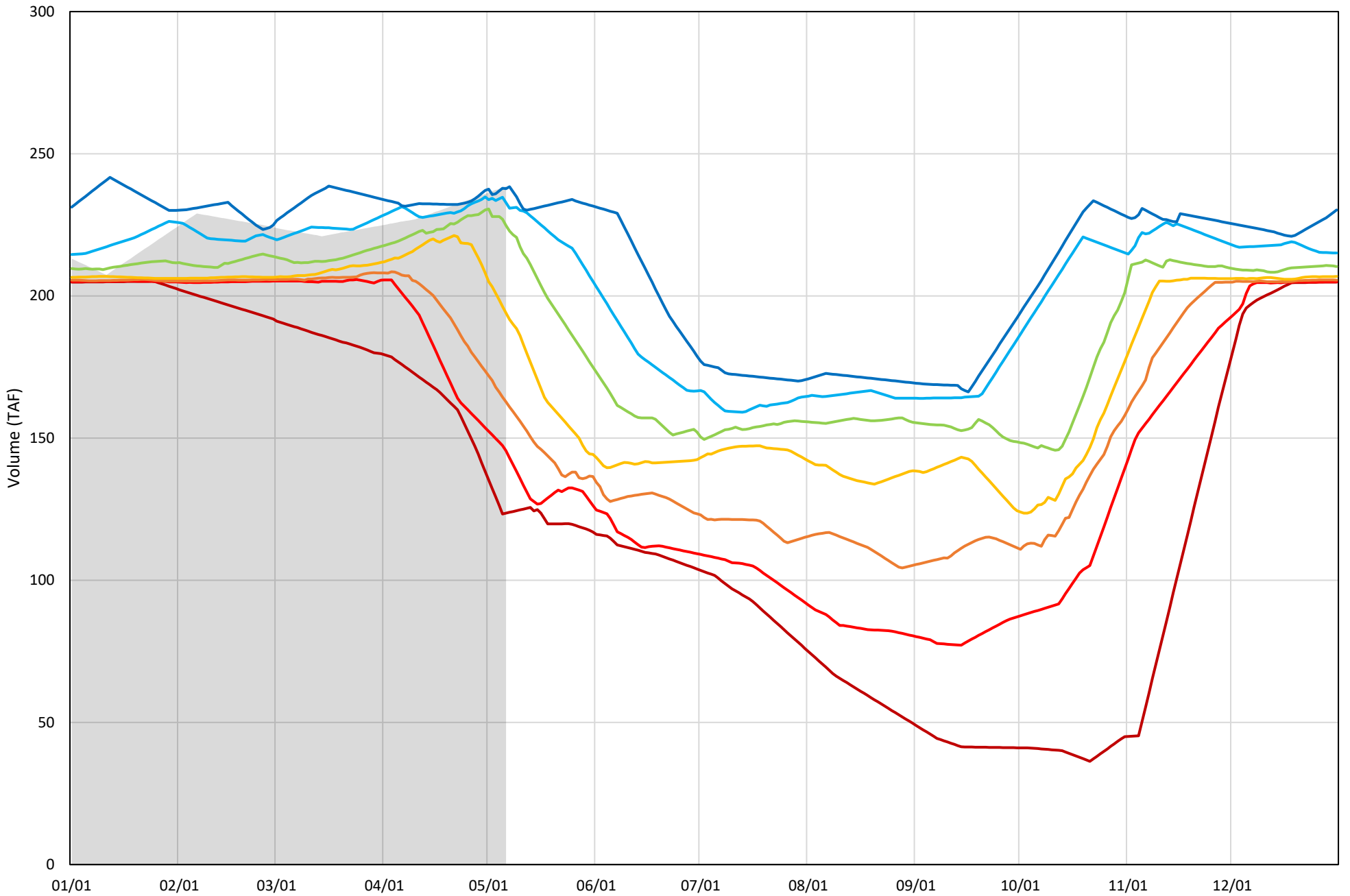


Whiskeytown Lake Cold Water Pool Volume $\leq 56^{\circ}\text{F}$



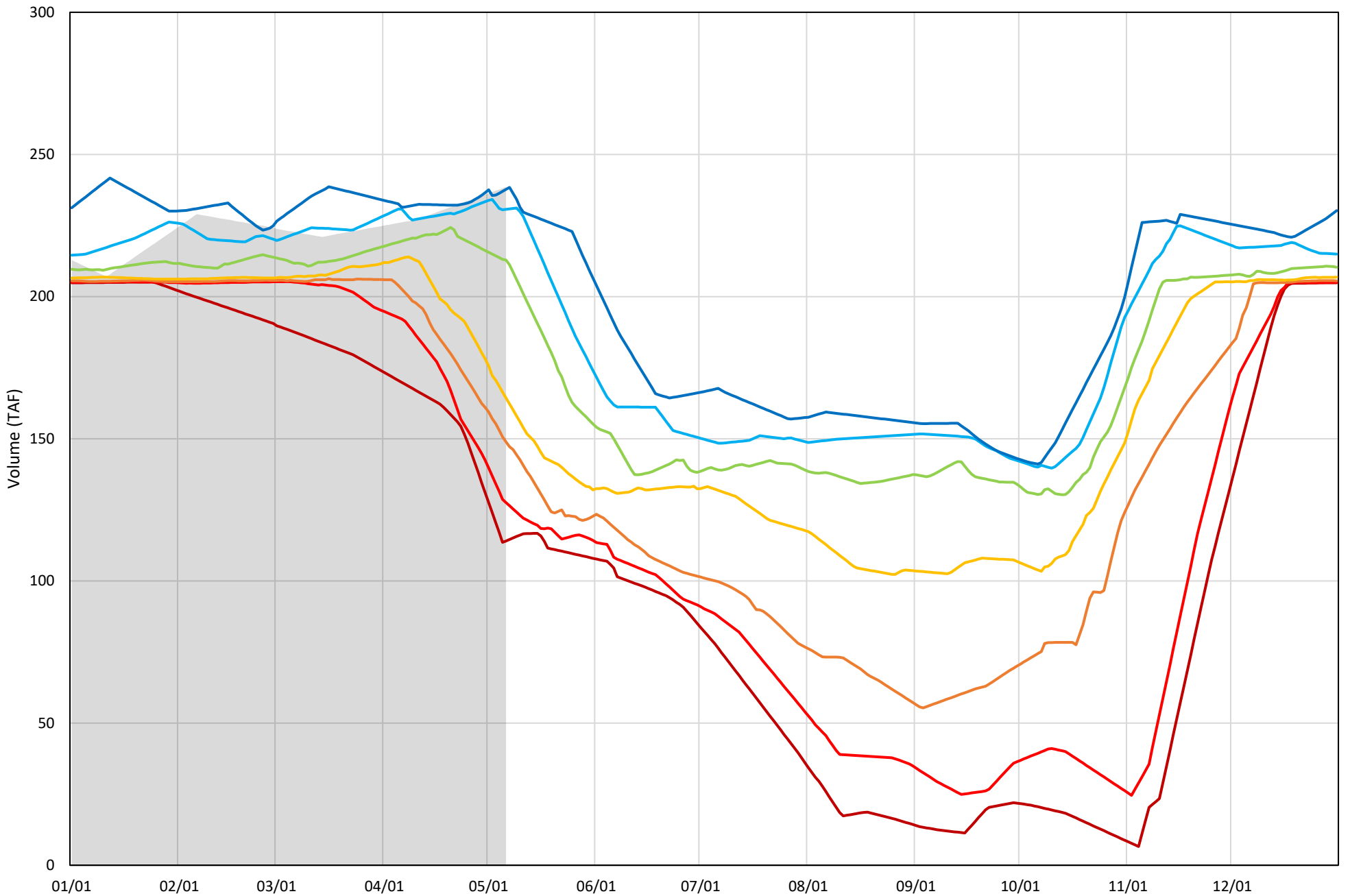
Whiskeytown Lake Cold Water Pool Volume $\leq 60^{\circ}\text{F}$ - Percent Exceedances (2000-2023)

2024 95 90 75 50 25 10 5



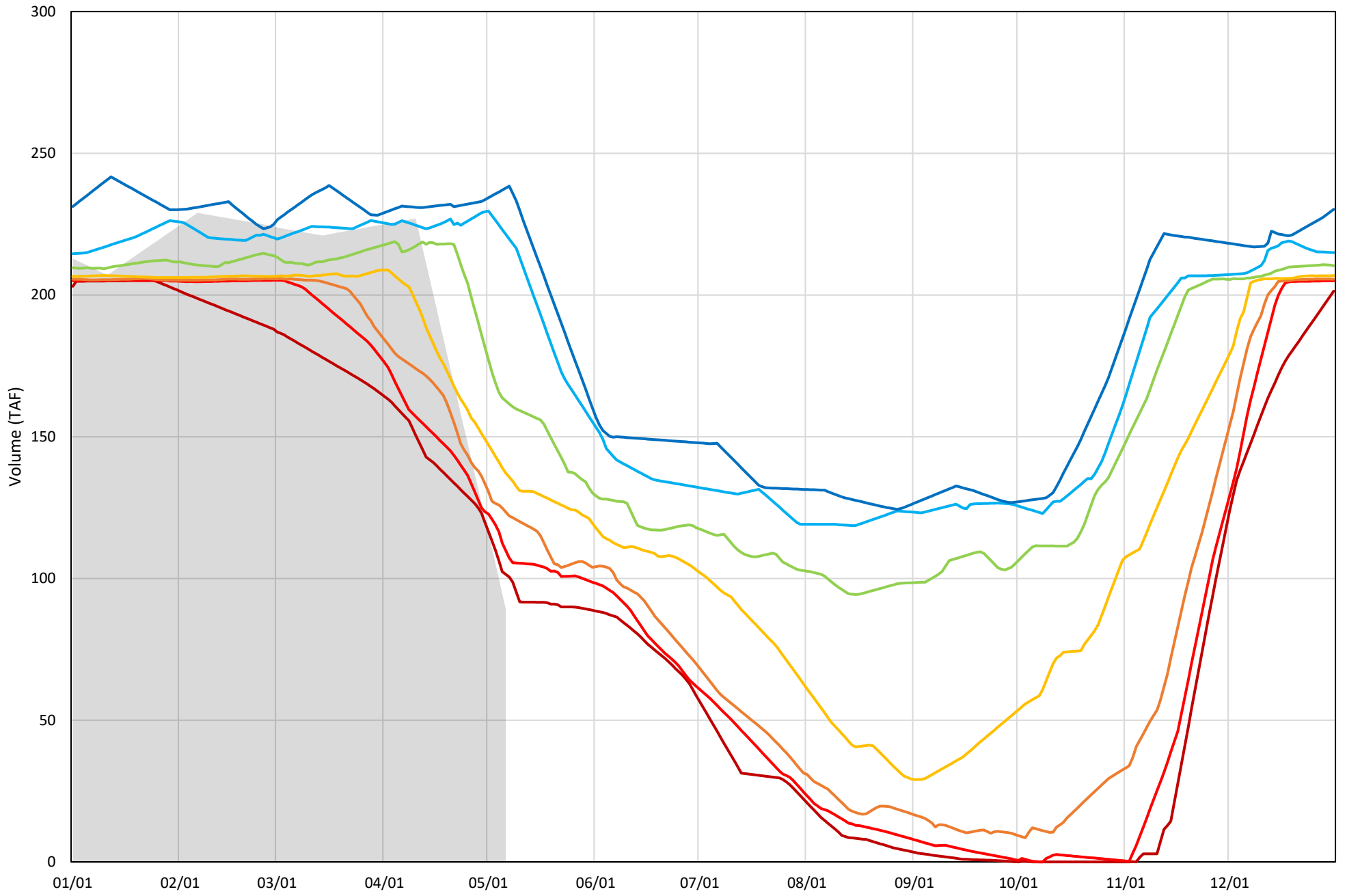
Whiskeytown Lake Cold Water Pool Volume $\leq 58^{\circ}\text{F}$ - Percent Exceedances (2000-2023)

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)

May-07 2024	Δ TAF				% Δ			
	≤60°	≤58°	≤56°	Abs. Avg.	≤60°	≤58°	≤56°	Abs. Avg.
2000	-22.9	-76.3	33.1	44.1	-9.6	-32.0	37.1	26.2
2001	-29.6	-59.3	32.2	40.4	-12.4	-24.8	36.1	24.4
2002	-36.7	-83.9	44.2	54.9	-15.4	-35.2	49.5	33.3
2003	0.8	0.8	150.0	50.5	0.3	0.3	168.0	56.2
2004	-60.8	-72.6	58.3	63.9	-25.5	-30.4	65.3	40.4
2005	-71.9	-75.8	70.3	72.7	-30.2	-31.8	78.7	46.9
2006	-28.4	-51.8	71.5	50.6	-11.9	-21.7	80.1	37.9
2007	-54.5	-72.1	56.4	61.0	-22.9	-30.2	63.1	38.7
2008	-15.2	-15.8	120.5	50.5	-6.4	-6.6	135.0	49.3
2009	-77.7	-90.2	48.0	72.0	-32.6	-37.8	53.7	41.4
2010	-10.2	-10.2	96.8	39.1	-4.3	-4.3	108.5	39.0
2011	-10.1	-14.6	97.4	40.7	-4.2	-6.1	109.0	39.8
2012	-86.0	-91.1	47.8	75.0	-36.0	-38.2	53.5	42.6
2013	-98.9	-100.9	44.9	81.6	-41.5	-42.3	50.3	44.7
2014	-6.0	-121.1	22.8	50.0	-2.5	-50.8	25.5	26.3
2015	-120.3	-125.6	10.1	85.3	-50.4	-52.7	11.3	38.1
2016	-52.4	-87.7	37.1	59.0	-22.0	-36.7	41.5	33.4
2017	-13.3	-65.5	38.5	39.1	-5.6	-27.5	43.2	25.4
2018	-68.0	-70.7	73.9	70.9	-28.5	-29.6	82.8	47.0
2019	-77.2	-87.9	51.5	72.2	-32.3	-36.8	57.7	42.3
2020	-69.7	-77.7	47.4	64.9	-29.2	-32.6	53.1	38.3
2021	-87.2	-91.8	26.6	68.6	-36.6	-38.5	29.8	35.0
2022	-17.0	-17.0	18.4	17.4	-7.1	-7.1	20.6	11.6
2023	-5.6	-5.6	143.7	51.6	-2.3	-2.3	160.9	55.2
2024	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Historical - Current

(Historical - Current) / Current