

Northern CVP Water Temperature Report

December - 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	- TCD Configuration (External Link)



— BUREAU OF —
RECLAMATION

All Data in this Report is Preliminary and Subject to Change

D A T E	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		
Nov	53.3	52.8	53.1	52.5	52.3	52.4	51.9	52.5	51.7	50.8	45.7	45.3	46.3	4309	722	5093	51.4	48.7	50.9		
12/01	52.2	51.7	51.5	51.3	51.2	51.1	49.8	#		48.4	48.5	43.7	41.8	41.9	3657	526	4223	46.5	41.0	44.8	
12/02	52.1	51.9	51.1	51.2	51.1	51.1	50.2	#		49.2	49.0	43.7	42.4	42.5	3766	45	4212	48.5	43.9	49.2	
12/03	52.1	51.9	52.4	51.2	51.2	51.2	50.3	#		49.5	49.0	43.7	42.6	43.0	3527	32	4212	51.5	45.3	47.9	
12/04	52.1	51.7	#		51.5	51.3	51.3	50.4	#		49.7	48.5	43.7	42.8	43.2	3373	1	4206	51.0	45.0	48.8
12/05	52.1	51.6	#		51.4	51.4	51.5	50.9	#		50.1	48.9	43.7	43.0	43.5	3404	1	4208	55.5	48.1	51.0
12/06	52.0	51.6	#		51.4	51.4	51.6	51.0	#		50.5	49.3	43.8	43.3	43.8	4031	1	4208	59.0	47.5	51.8
12/07	51.9	51.4	#		51.4	51.2	51.2	50.8	#		50.5	48.9	43.8	43.5	44.1	3471	1	4207	48.0	45.2	48.0
12/08	51.9	51.3	#		51.3	51.2	51.2	50.8	#		50.4	48.8	43.9	43.9	44.8	3538	1	4205	54.0	47.7	53.0
12/09	51.9	51.4	#		51.0	50.9	50.6	50.0	#		49.7	47.9	43.7	42.8	43.6	3554	1	4203	54.0	50.1	52.2
12/10	51.6	51.1	#		50.8	50.5	50.2	49.3	!		48.6	47.5	43.5	40.3	? 40.9	3797	1	4203	43.0	38.7	44.3
12/11	51.5	51.1	#		50.7	50.4	50.0	49.2		48.1	48.1	47.8	43.6	40.3	40.5	4018	1	4205	43.0	41.4	43.8
12/12	51.4	51.0	#		50.6	50.4	50.0	49.0		48.7	48.6	48.1	43.7	41.5	41.4	4445	1	4205	44.0	42.9	44.3
12/13	51.4	51.0	#		50.4	50.0	49.9	47.9		47.8	48.0	48.2	43.6	41.7	41.6	3878	1	4205	47.5	46.8	47.8
12/14	51.4	51.5	51.5	50.4	49.6	50.0	47.7	47.7	? 47.9	49.4	43.6	42.5	43.1	1825	1284	4210	44.0	44.7	45.3		
12/15	51.6	51.3	51.3	50.2	50.0	50.1	48.8	48.0	47.8	48.9	43.6	42.6	44.0	1877	1668	4206	48.0	46.0	47.6		
12/16	51.9	51.3	51.2	50.1	49.9	50.0	49.5	49.1	49.2	49.1	43.5	43.1	44.2	2074	1685	4203	46.5	46.7	47.5		
12/17	51.6	51.4	51.0	50.3	50.3	50.6	49.9	49.4	49.5	49.8	43.6	43.8	44.8	2169	1167	4214	52.5	49.5	50.8		
12/18	51.6	51.4	51.0	50.4	50.4	50.7	50.2	49.7	? 50.1	49.2	43.6	44.6	45.8	2234	1658	4206	53.5	46.8	48.3		
12/19	51.8	51.4	50.1	50.5	50.3	50.2	49.9	49.5	? 49.7	49.0	43.6	44.6	45.7	4255	101	4202	44.0	43.6	44.7		
12/20	51.6	51.2	41.5	50.9	50.7	50.6	50.1	49.4	49.5	48.9	43.6	44.6	45.7	4390	14	4204	45.5	44.0	45.3		
12/21	51.3	51.0	50.5	51.1	50.9	50.8	50.2	49.7	49.7	48.9	43.7	44.7	46.0	2933	652	4209	47.0	46.4	46.6		
12/22	51.2	50.9	50.6	50.9	50.9	51.1	50.7	50.1	50.2	49.3	43.8	45.3	46.4	2572	1064	4199	50.5	49.8	50.2		
12/23	51.2	51.5	50.5	50.7	50.8	51.1	51.4	51.1	51.2	49.9	43.9	45.8	46.9	2213	993	4190	55.5	53.8	54.0		
12/24	51.3	? 51.3	50.6	50.8	51.3	51.5	52.7	52.6	? 52.8	50.9	44.4	45.3	46.0	2826	1075	4096	49.0	51.5	51.1		
12/25	51.2	!	50.4	50.6	50.4	50.3	49.7	49.4	50.3	48.9	45.4	45.1	45.1	3315	499	4009	43.5	42.8	44.7		
12/26	51.2	!	50.4	50.7	50.5	50.5	49.9	49.2	49.1	49.5	45.7	45.8	46.0	2849	497	4053	49.5	50.0	50.2		
12/27	50.8	50.8	50.6	50.5	50.9	51.3	51.2	50.6	50.6	51.7	45.8	46.0	46.6	1844	1850	4000	↓ 54.0	53.6	53.8		
12/28	50.6	!	50.6	50.4	51.1	51.3	52.5	52.1	52.3	52.4	46.1	46.5	47.0	1173	1855	3952	↓ 57.0	56.5	57.3		
12/29	50.9	51.0	50.7	51.0	52.0	51.9	53.1	52.8	53.1	52.7	46.4	46.8	46.9	1782	1860	3988	51.0	54.8	55.8		
12/30	50.7	50.4	50.5	50.8	50.7	50.8	50.0	49.9	50.9	49.4	46.3	46.2	45.8	1286	1871	4005	46.0	43.9	47.3		
12/31	51.3	50.6	50.3	50.4	50.2	50.2	48.8	47.9	48.1	48.6	46.1	45.5	45.2	5756	1856	7814	46.5	41.9	45.2		
Dec	51.5	51.3	50.4	50.8	50.8	50.8	50.2	49.7	49.8	49.3	44.2	43.8	44.4	3003	680	4162	49.4	46.9	48.9		

Total CFS	95832	22262	132662
Total AF	190079	44156	263130

Legend

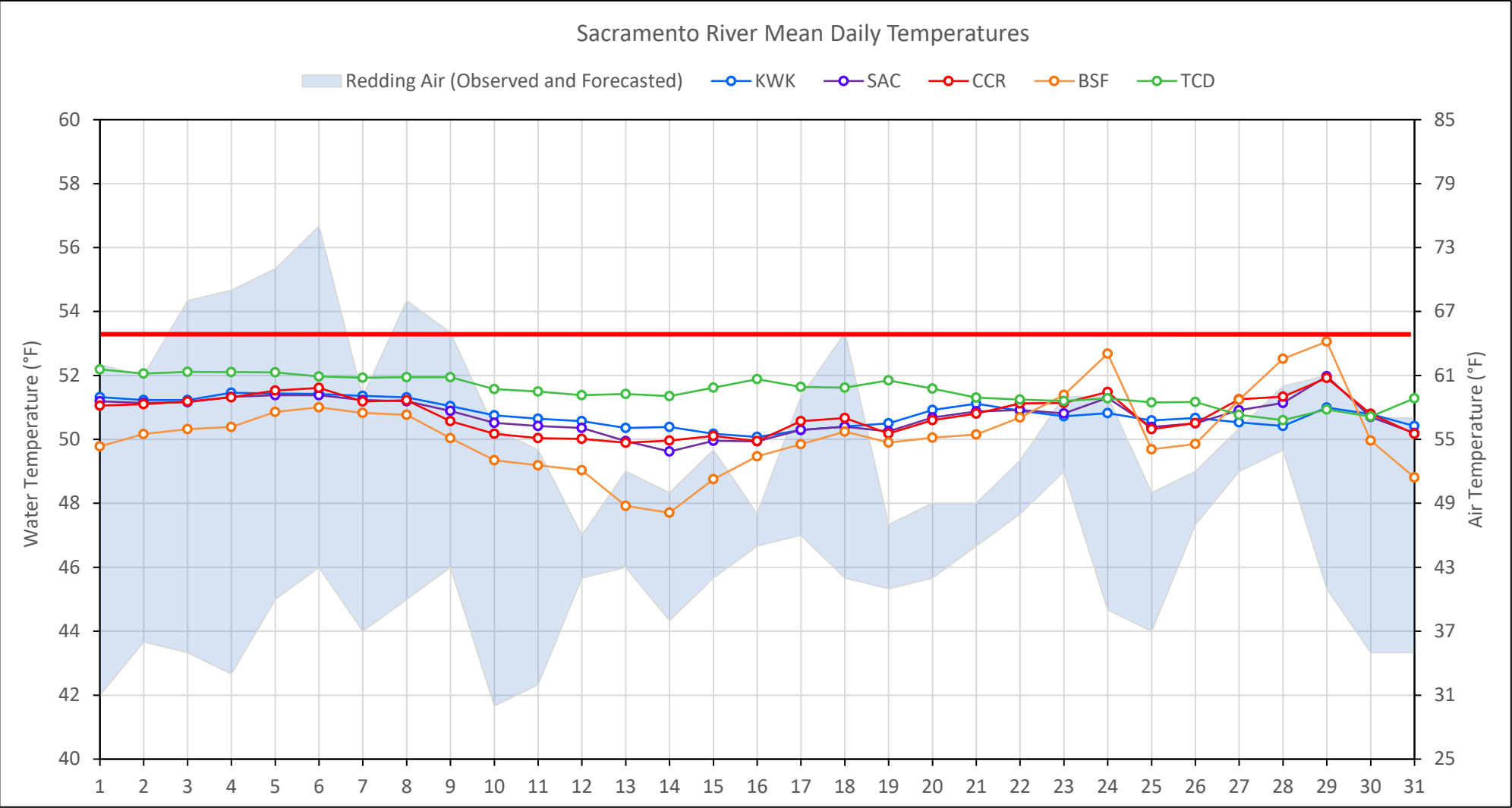
?	= 1-9 hours of data missing (Average includes estimations)
!	= 10 or more hours of data missing (Average not calculated)
#	= Station out of service
↑	= Record high air temperature
↓	= Record low air temperature
	= Monthly Averages

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)



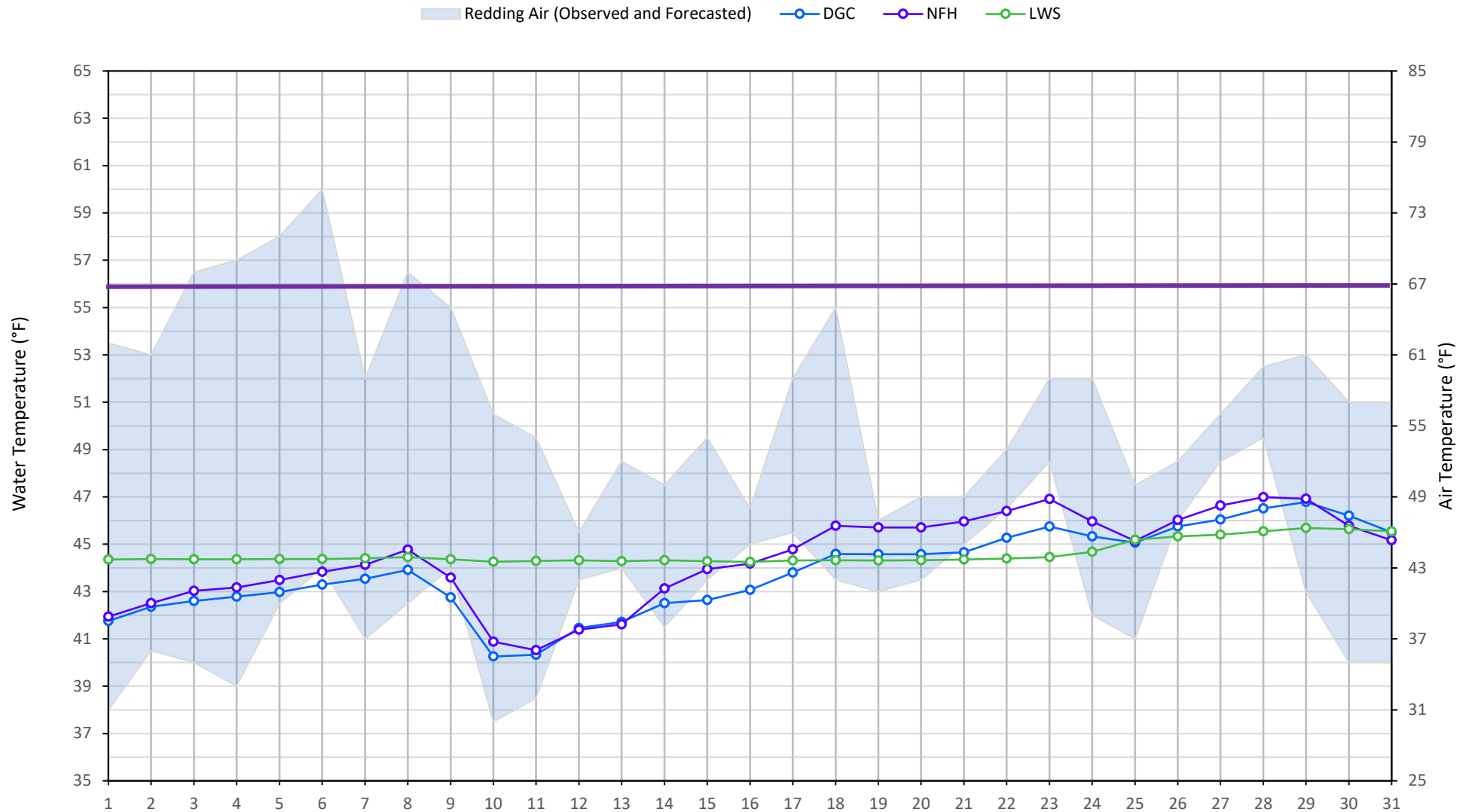
Station Details			
Code	Body of Water	Location ¹	CDEC Link
TCD	N/A	Shasta Power Plant	N/A
SHD	Sacramento River	0.3 miles downstream of Shasta Power Plant	Click Here
SPP	N/A	Spring Creek Power Plant	N/A
KWK	Sacramento River	0.8 miles downstream of Keswick Dam	Click Here
SAC	Sacramento River	4.8 miles 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	05/24/2024	TBD

Notes

¹ Distances are approximate

Trinity River Mean Daily Temperatures



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
Trinity	DGC	56	Sep-15	Oct-01
Trinity	NFH	56	Oct-01	Dec-31

Notes

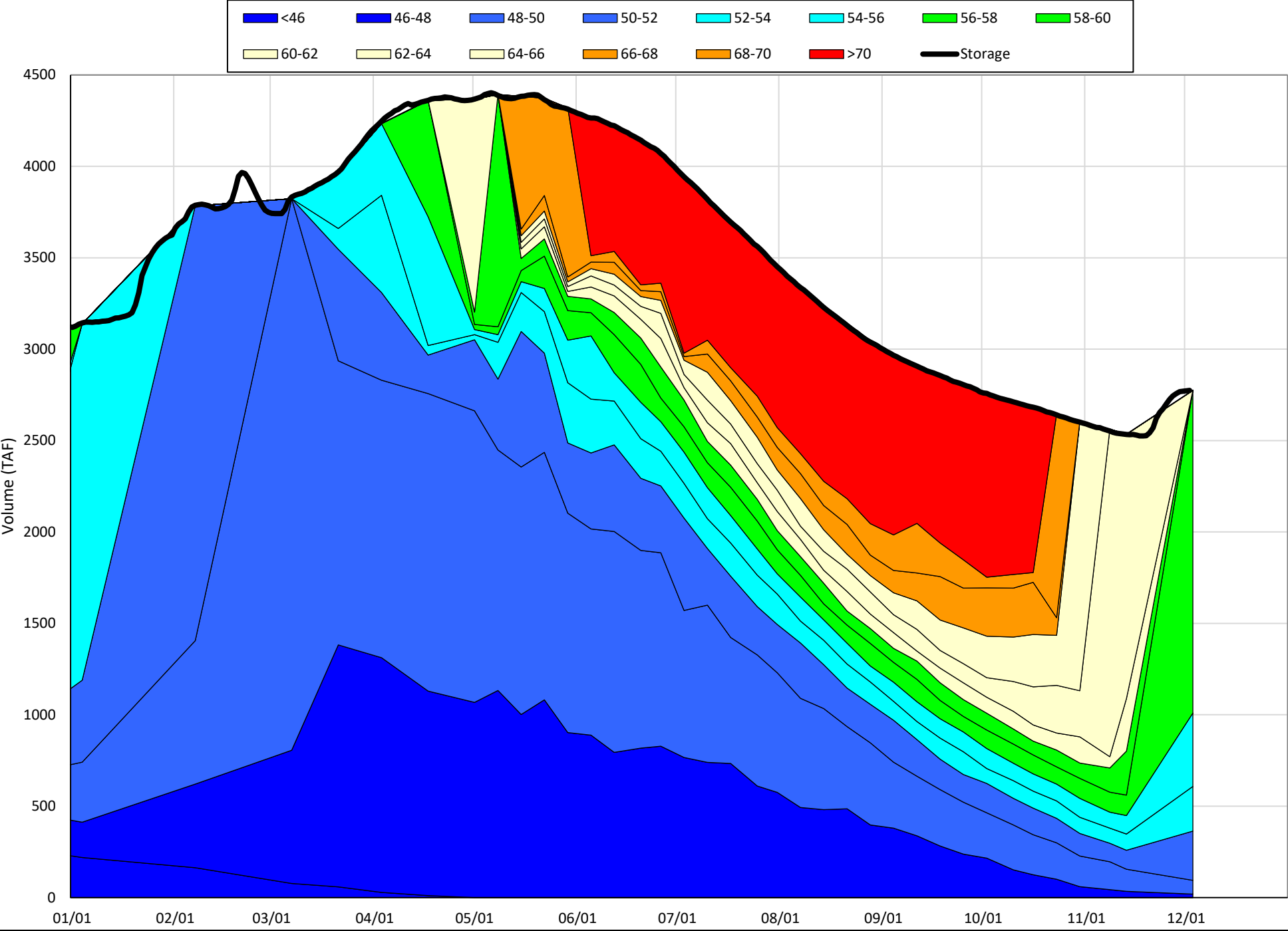
¹ Distances are approximate

Shasta Lake Isothermobaths & Cold Water Pool Statistics

2024

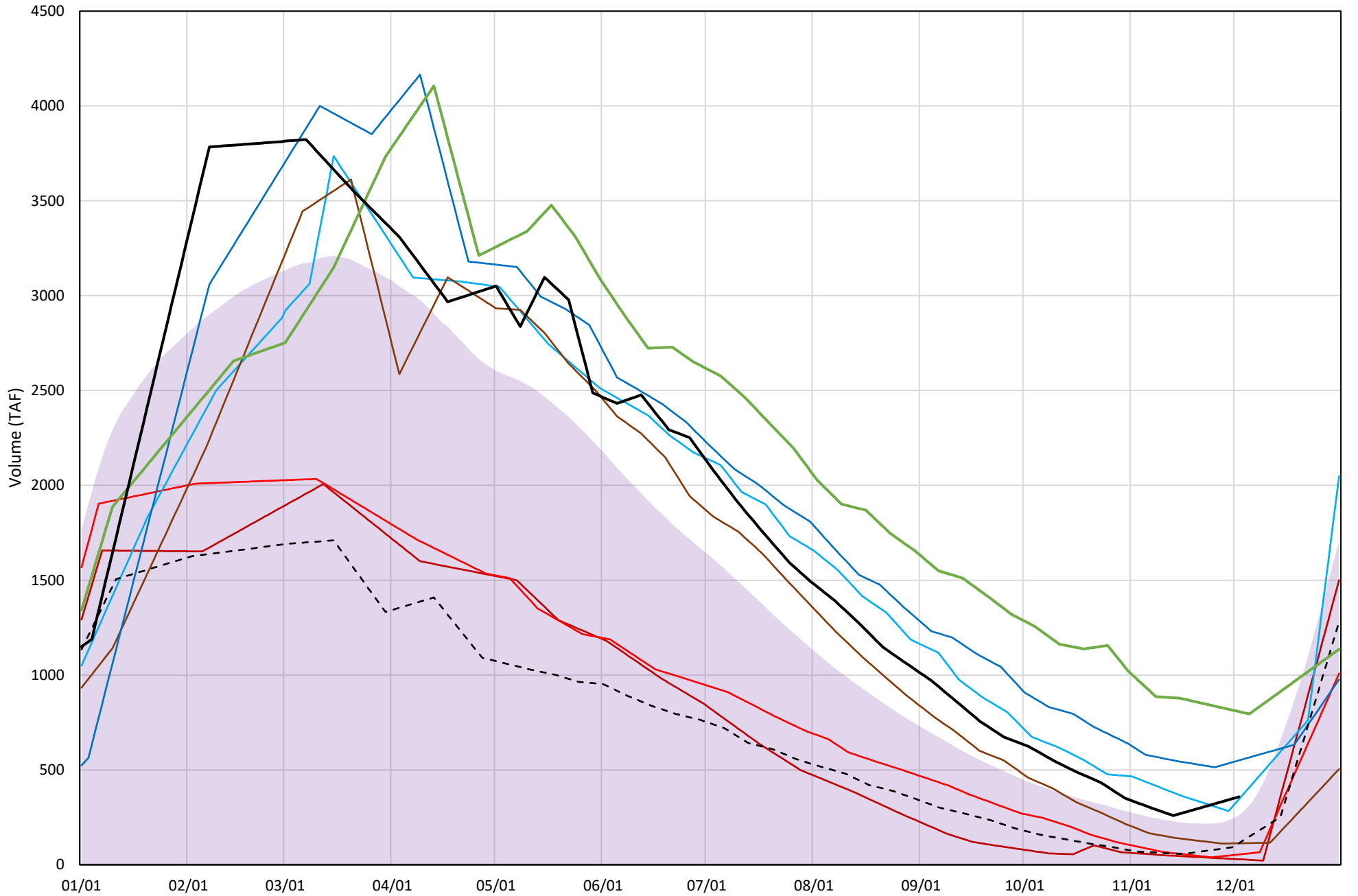
Page	Description
6	- Shasta Lake Isothermobaths Plot
7	- Shasta Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$
8	- Shasta Lake Cold Water Pool Volume $\leq 50^{\circ}\text{F}$
9	- Shasta Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$
10	- Shasta Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$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

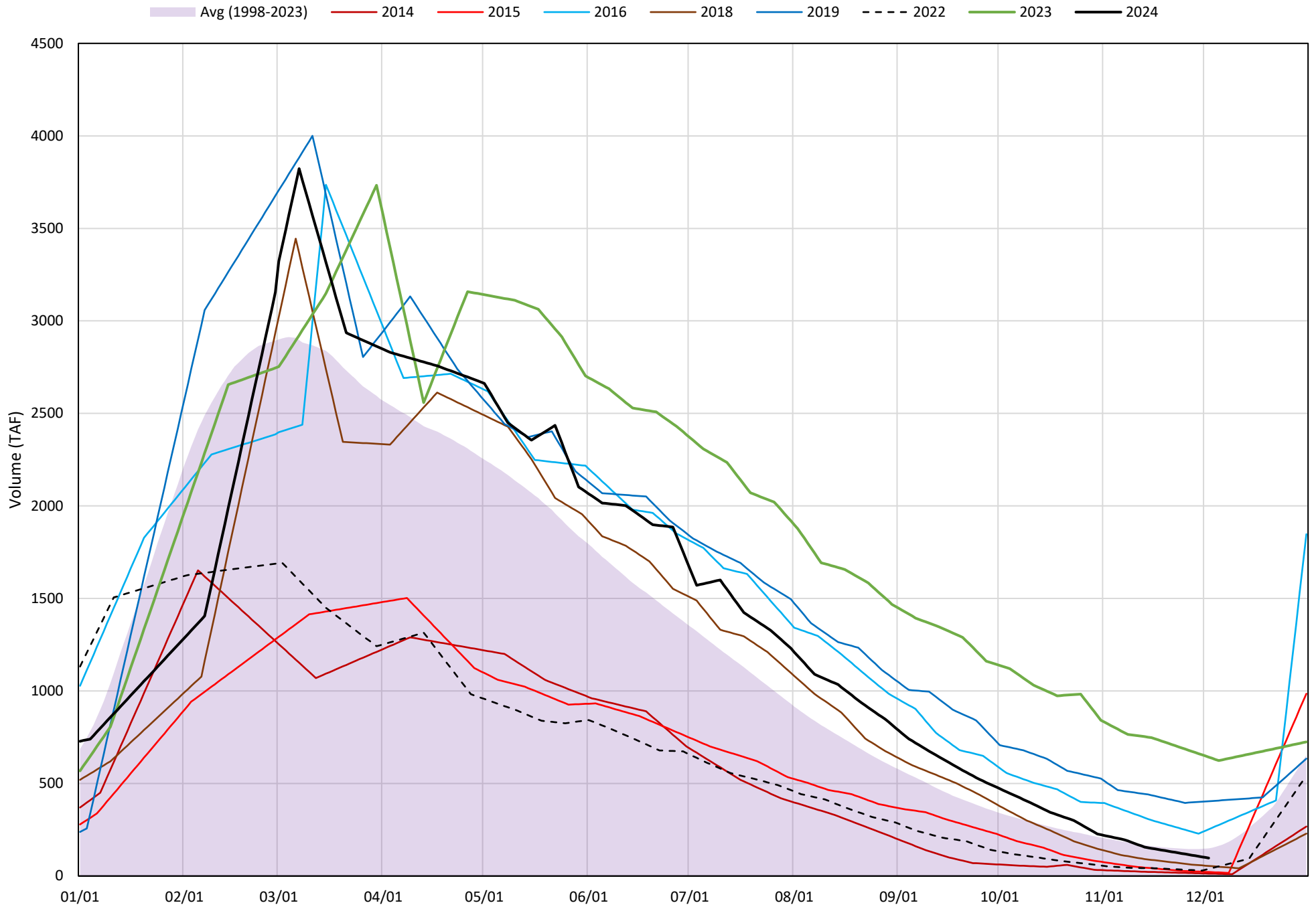


Shasta Lake Cold Water Pool Volume ≤52°F

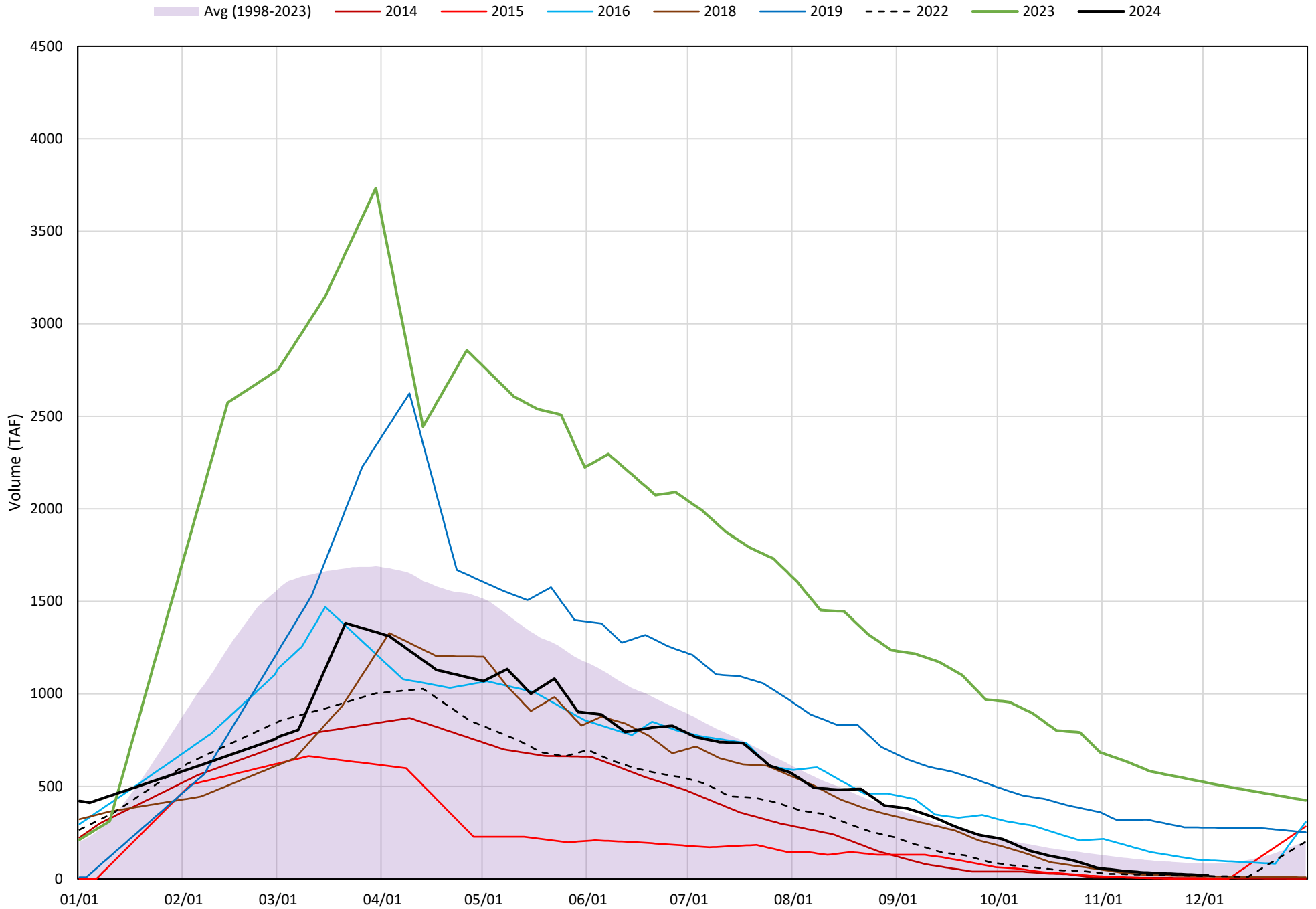
Avg (1998-2023) 2014 2015 2016 2018 2019 2022 2023 2024



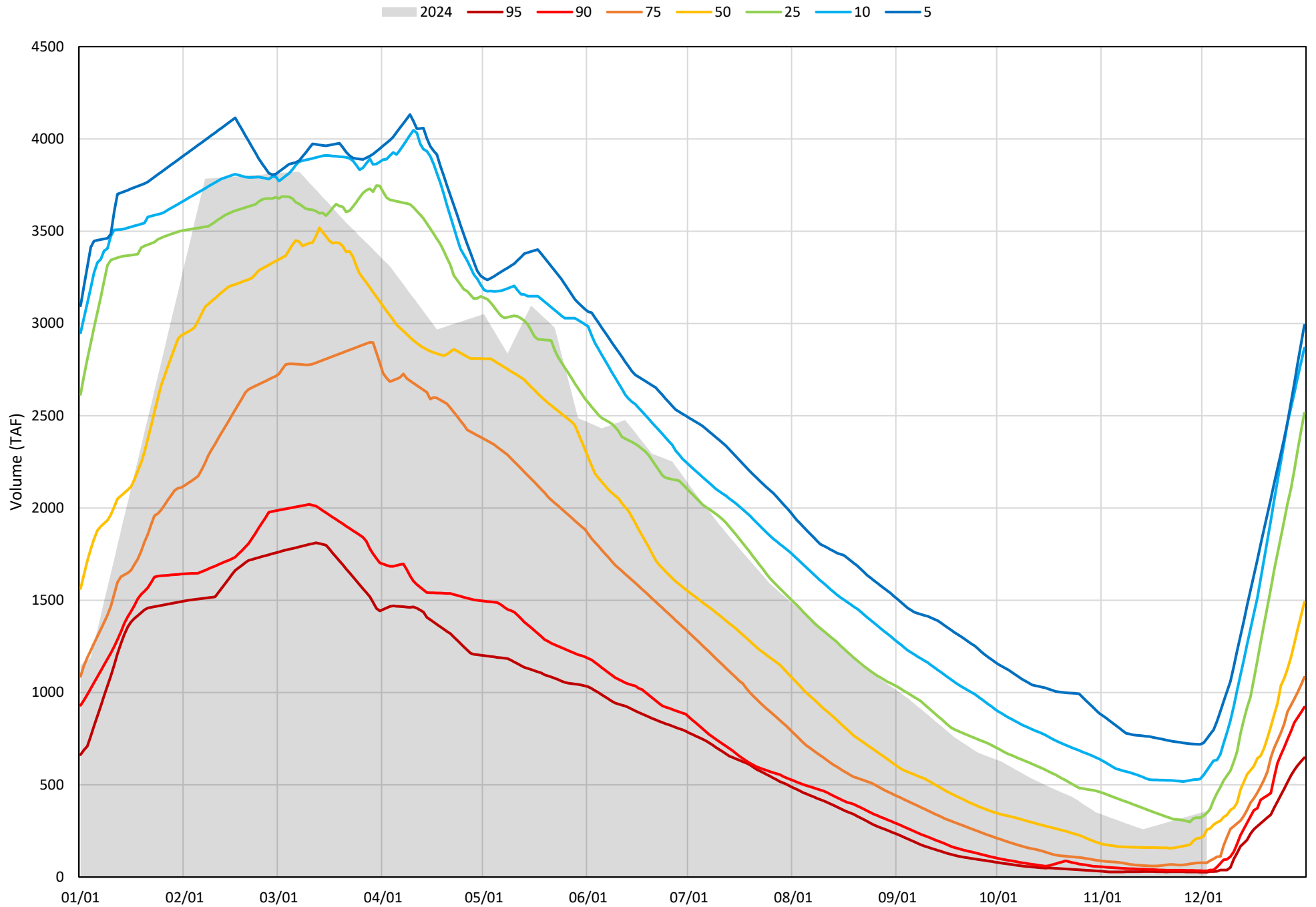
Shasta Lake Cold Water Pool Volume ≤50°F



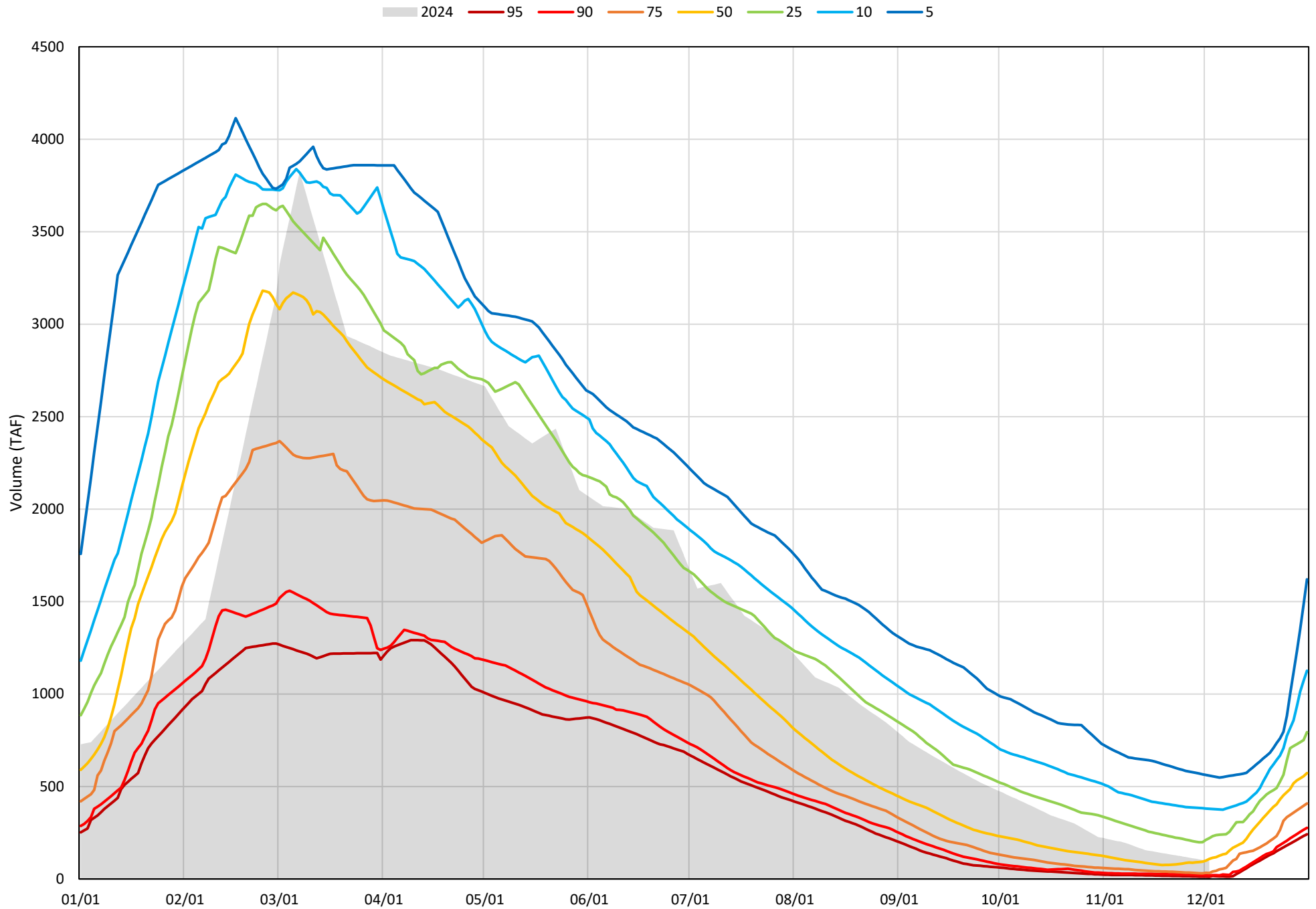
Shasta Lake Cold Water Pool Volume ≤48°F



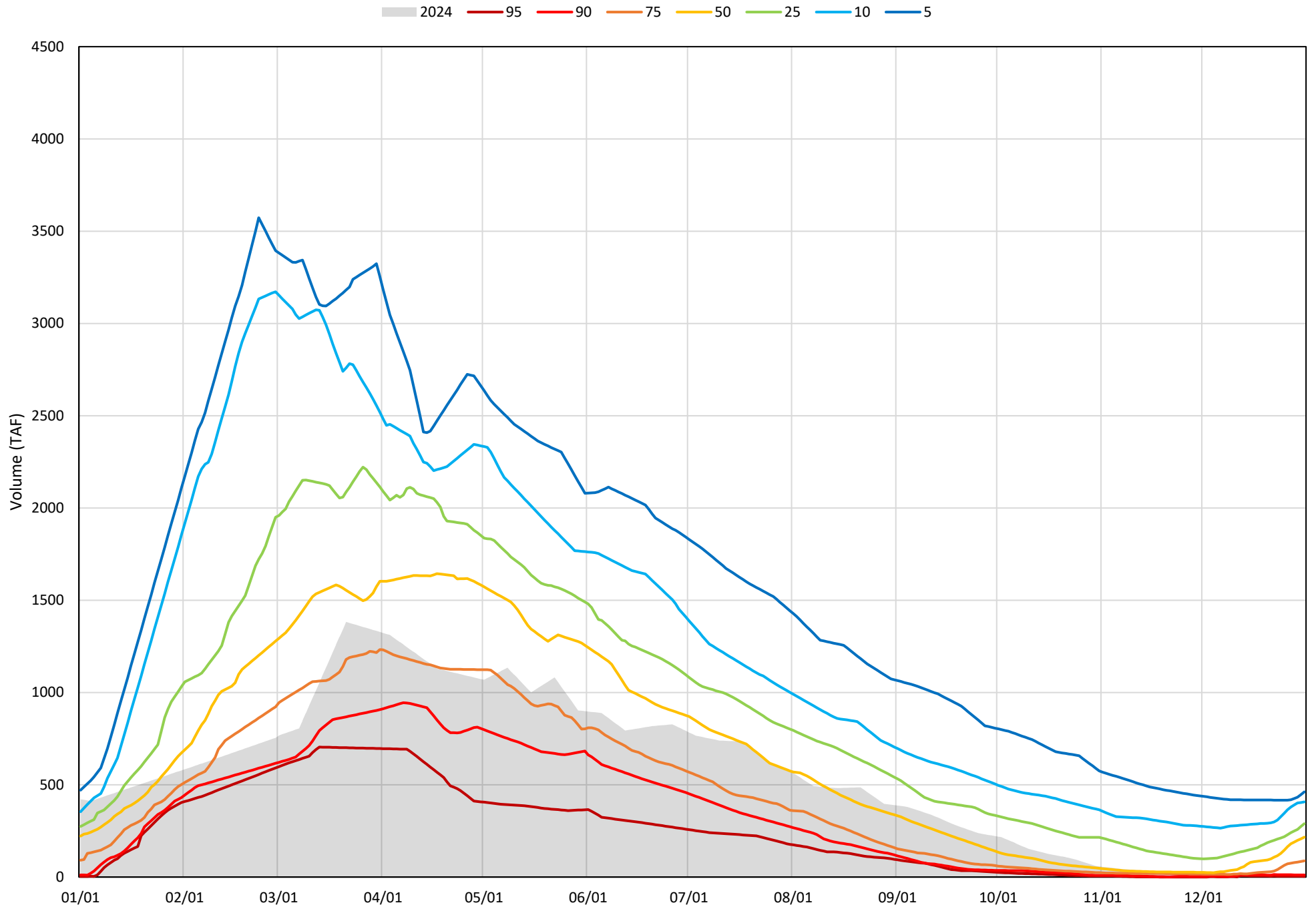
Shasta Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$ - Percent Exceedances (1998-2023)



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



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



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

Dec-03 2024	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.
1998	-20	17	-13	17	-6	17	-68	30
1999	-44	144	154	114	-12	149	777	312
2000	-76	6	0	27	-21	6	1	9
2001	-122	36	9	56	-34	38	43	38
2002	286	118	79	161	80	121	401	201
2003	-79	-6	-1	29	-22	-6	-3	11
2004	-142	-9	-4	52	-40	-9	-22	24
2005	-278	-63	1	114	-78	-65	6	50
2006	-69	57	65	64	-19	59	328	135
2007	-319	-75	-3	132	-89	-77	-14	60
2008	-322	-72	-4	133	-90	-74	-22	62
2009	-288	-57	10	118	-80	-59	52	64
2010	-4	56	29	30	-1	58	144	68
2011	170	272	250	231	48	281	1261	530
2012	-68	87	77	77	-19	89	388	165
2013	-128	21	21	57	-36	22	106	55
2014	-329	-84	-15	142	-92	-86	-75	84
2015	-304	-76	-20	133	-85	-78	-100	88
2016	-12	155	81	83	-3	160	409	191
2017	84	236	223	181	23	243	1128	465
2018	-245	-43	-5	97	-68	-44	-26	46
2019	192	307	258	252	54	316	1302	557
2020	-268	-68	-14	117	-75	-70	-71	72
2021	-333	-86	-20	146	-93	-88	-100	94
2022	-243	-59	-4	102	-68	-60	-19	49
2023	450	546	499	498	126	562	2521	1069
2024	0	0	0	0	0	0	0	0

Historical - Current

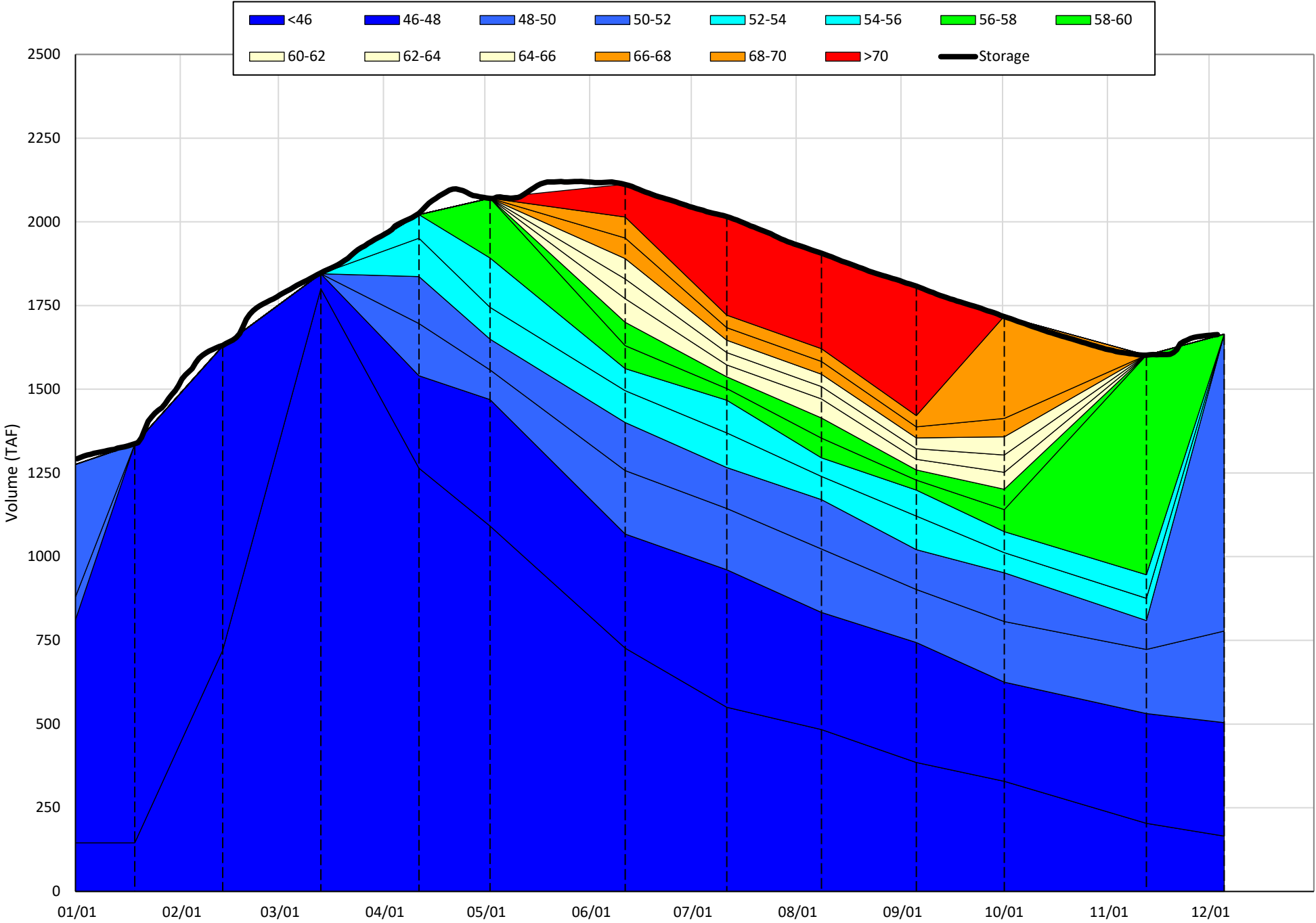
(Historical - Current) / Current

Trinity Lake Isothermobaths & Cold Water Pool Statistics

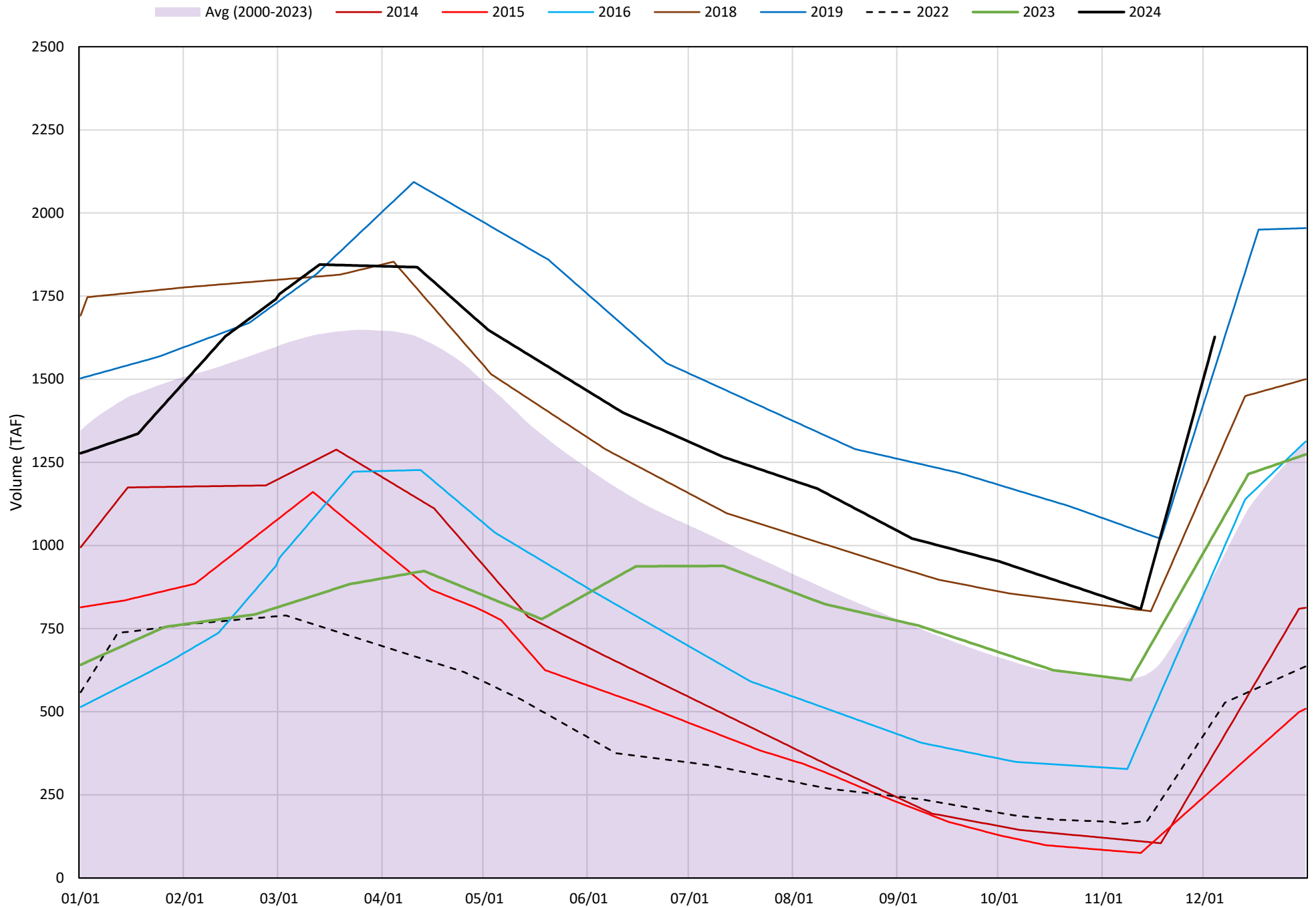
2024

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

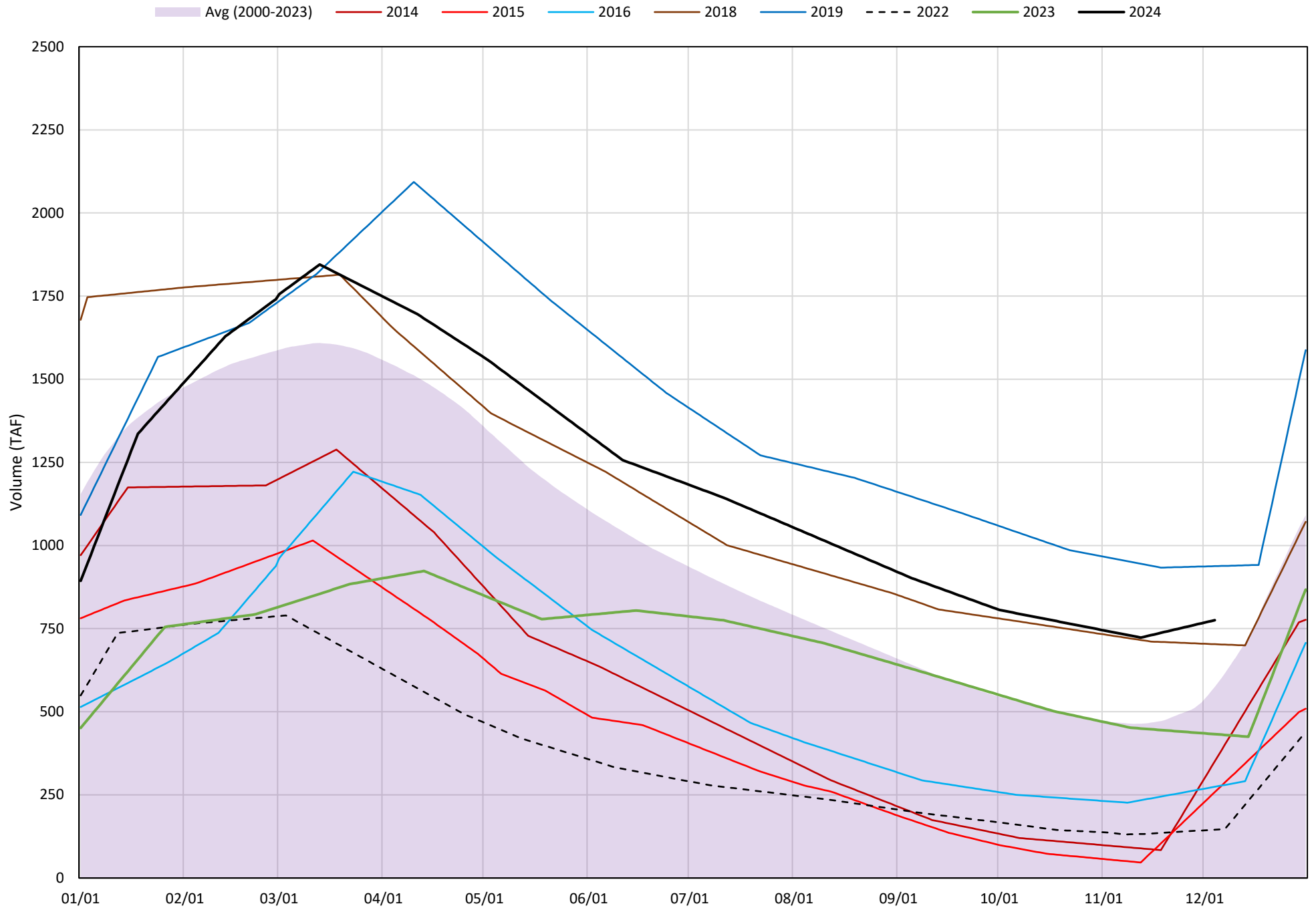
Trinity Lake Isothermobaths Plot - 2024



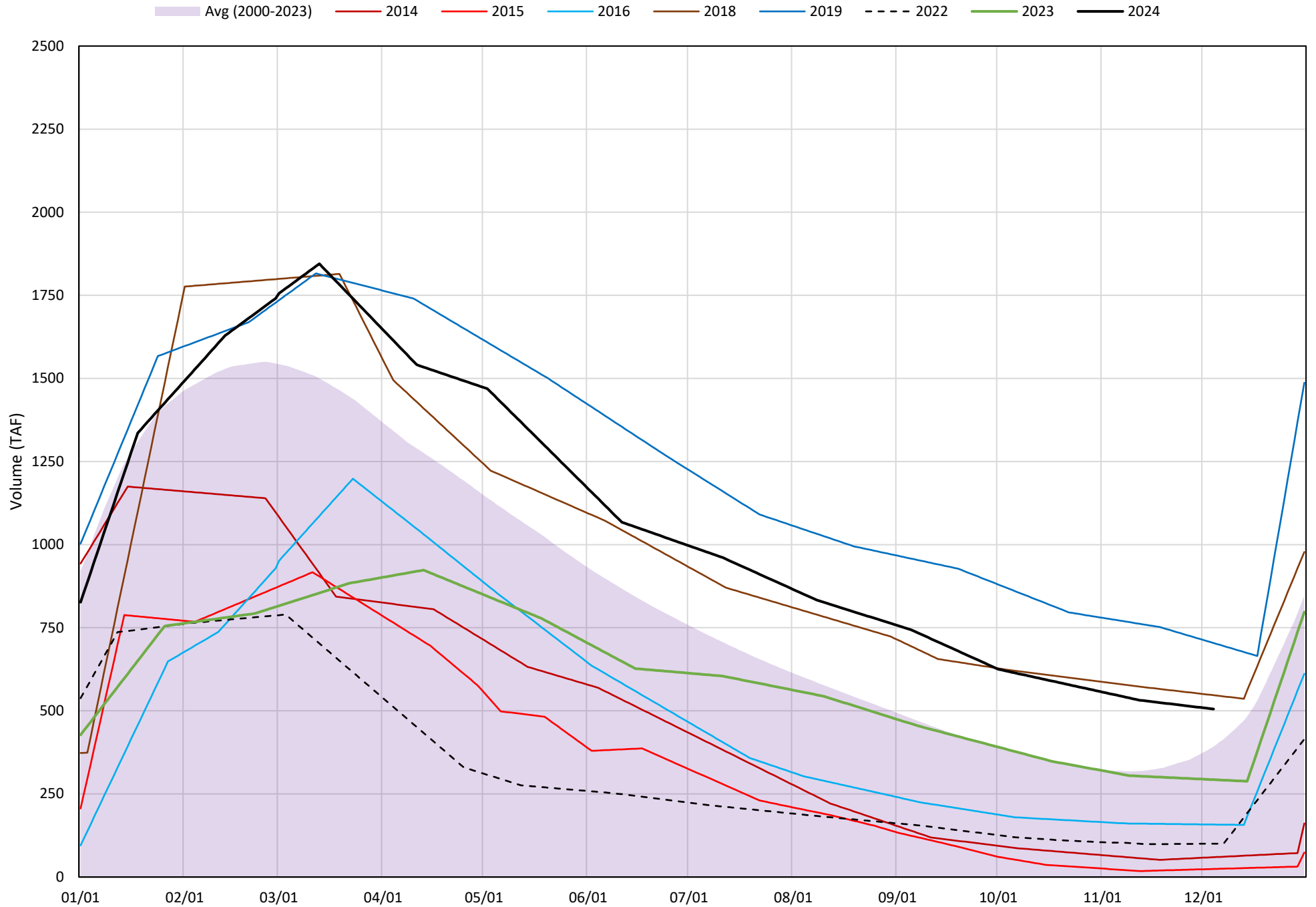
Trinity Lake Cold Water Pool Volume ≤52°F



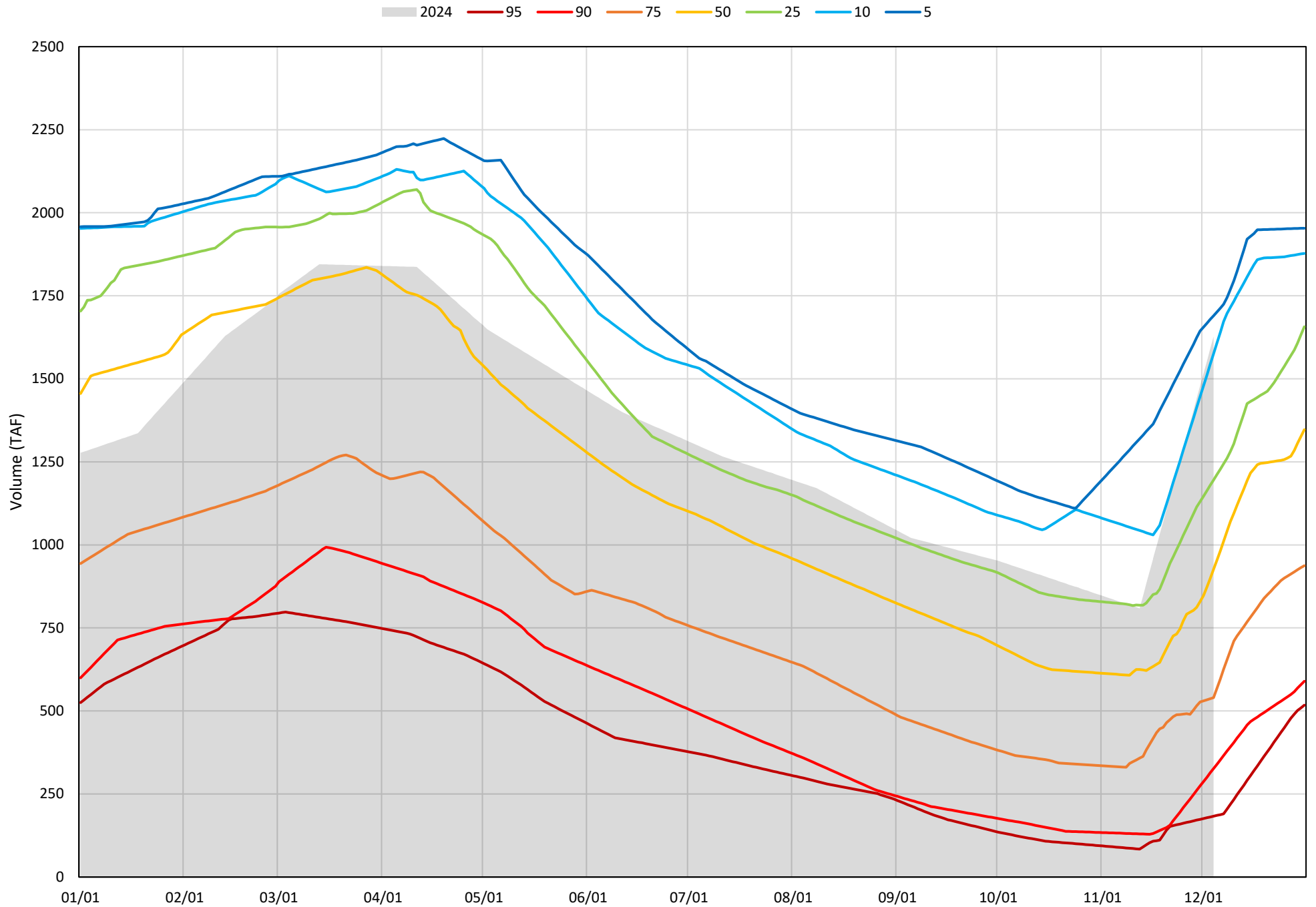
Trinity Lake Cold Water Pool Volume ≤50°F



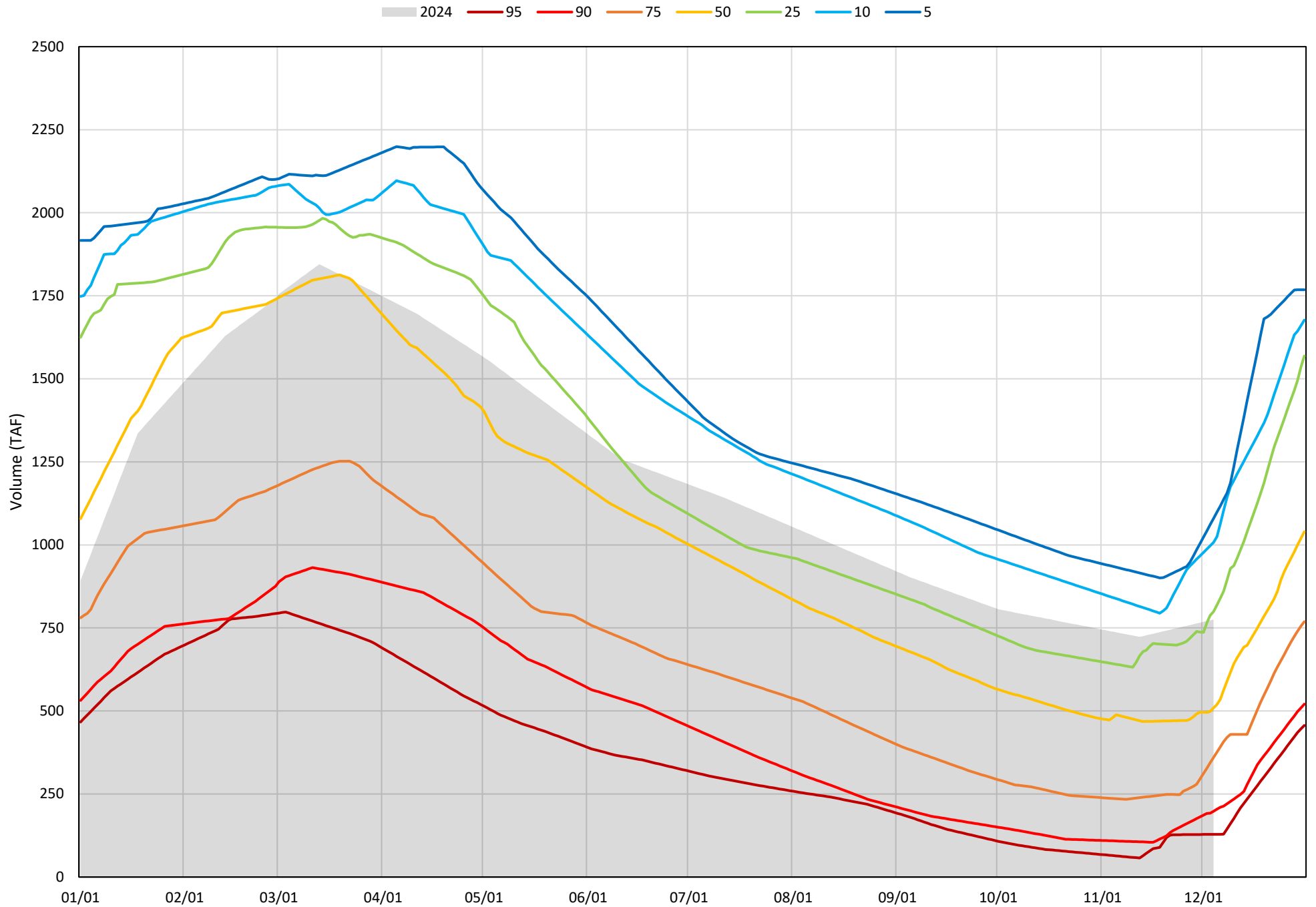
Trinity Lake Cold Water Pool Volume $\leq 48^{\circ}\text{F}$



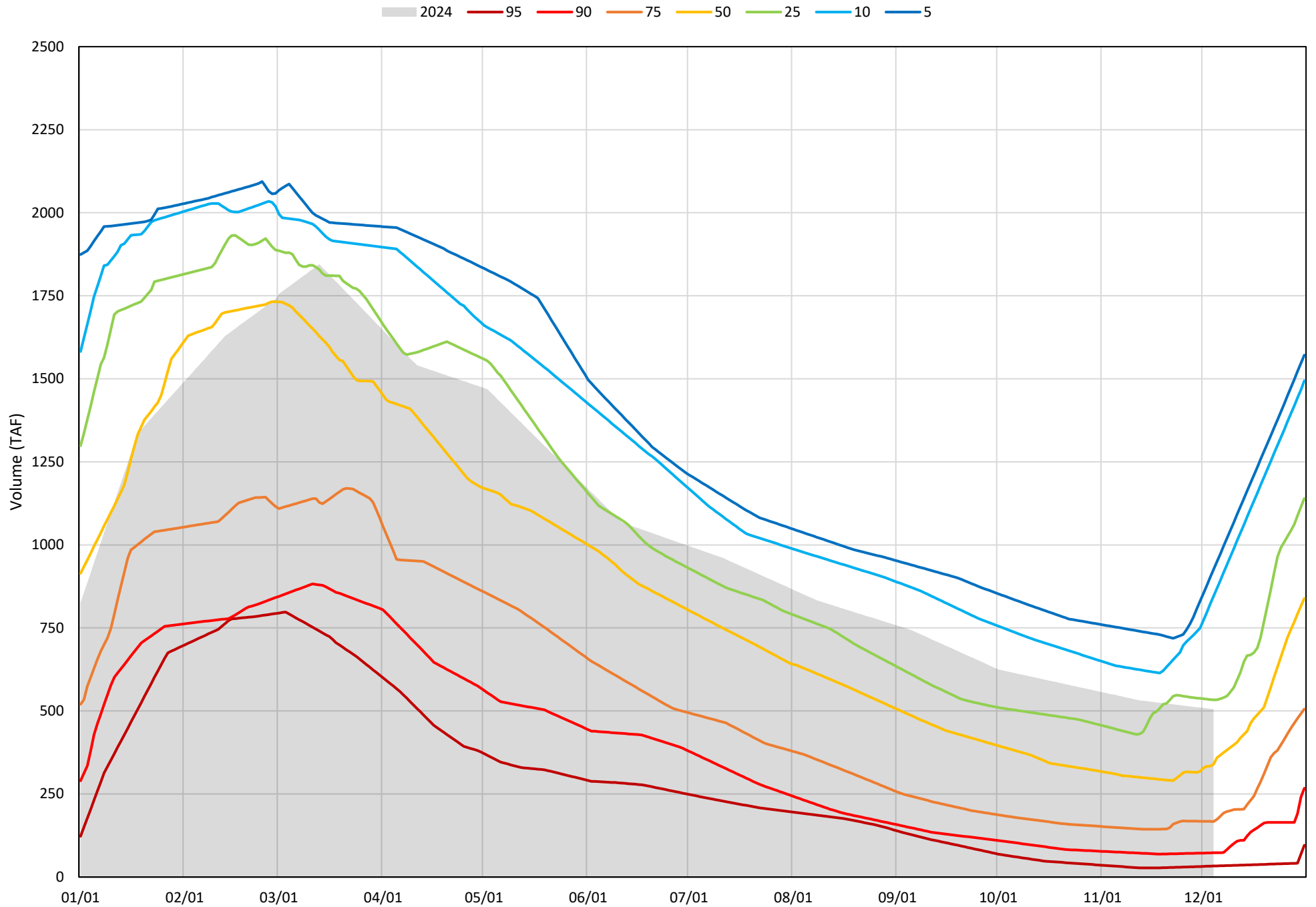
Trinity Lake Cold Water Pool Volume $\leq 52^{\circ}\text{F}$ - Percent Exceedances (2000-2023)



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



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



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

Dec-05 2024	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.
2000	-705	-36	-237	326	-43	-5	-47	32
2001	-1025	-258	-115	466	-63	-33	-23	40
2002	-1109	-329	-176	538	-68	-42	-35	48
2003	-257	-275	-268	267	-16	-35	-53	35
2004	-531	-358	-310	400	-33	-46	-61	47
2005	-423	305	365	364	-26	39	72	46
2006	87	117	-13	72	5	15	-2	8
2007	-756	43	234	344	-46	6	46	33
2008	-1185	-389	-163	579	-73	-50	-32	52
2009	-815	-525	-352	564	-50	-68	-70	62
2010	-459	302	439	400	-28	39	87	51
2011	-9	-45	-25	26	-1	-6	-5	4
2012	-651	147	314	371	-40	19	62	40
2013	-993	-213	-25	410	-61	-27	-5	31
2014	-1248	-424	-446	706	-77	-55	-88	73
2015	-1354	-517	-481	784	-83	-67	-95	82
2016	-697	-501	-347	515	-43	-65	-69	59
2017	-710	-48	-144	301	-44	-6	-29	26
2018	-386	-72	42	167	-24	-9	8	14
2019	-94	162	199	152	-6	21	39	22
2020	-540	-285	-169	331	-33	-37	-33	34
2021	-1474	-653	-419	849	-91	-84	-83	86
2022	-1146	-630	-405	727	-70	-81	-80	77
2023	-590	-343	-213	382	-36	-44	-42	41
2024	0	0	0	0	0	0	0	0

Historical - Current

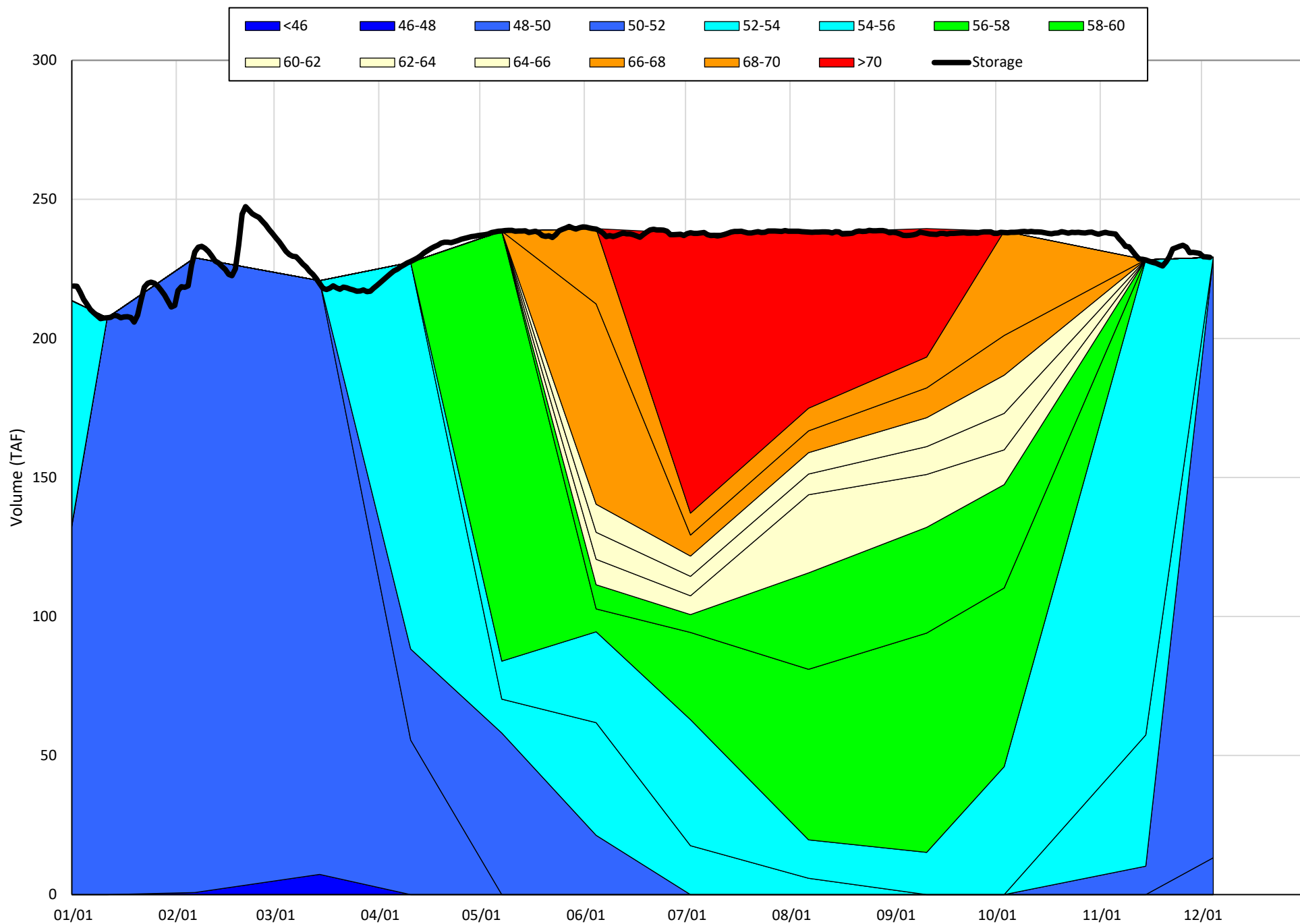
(Historical - Current) / Current

Whiskeytown Lake Isothermobaths & Cold Water Pool Statistics

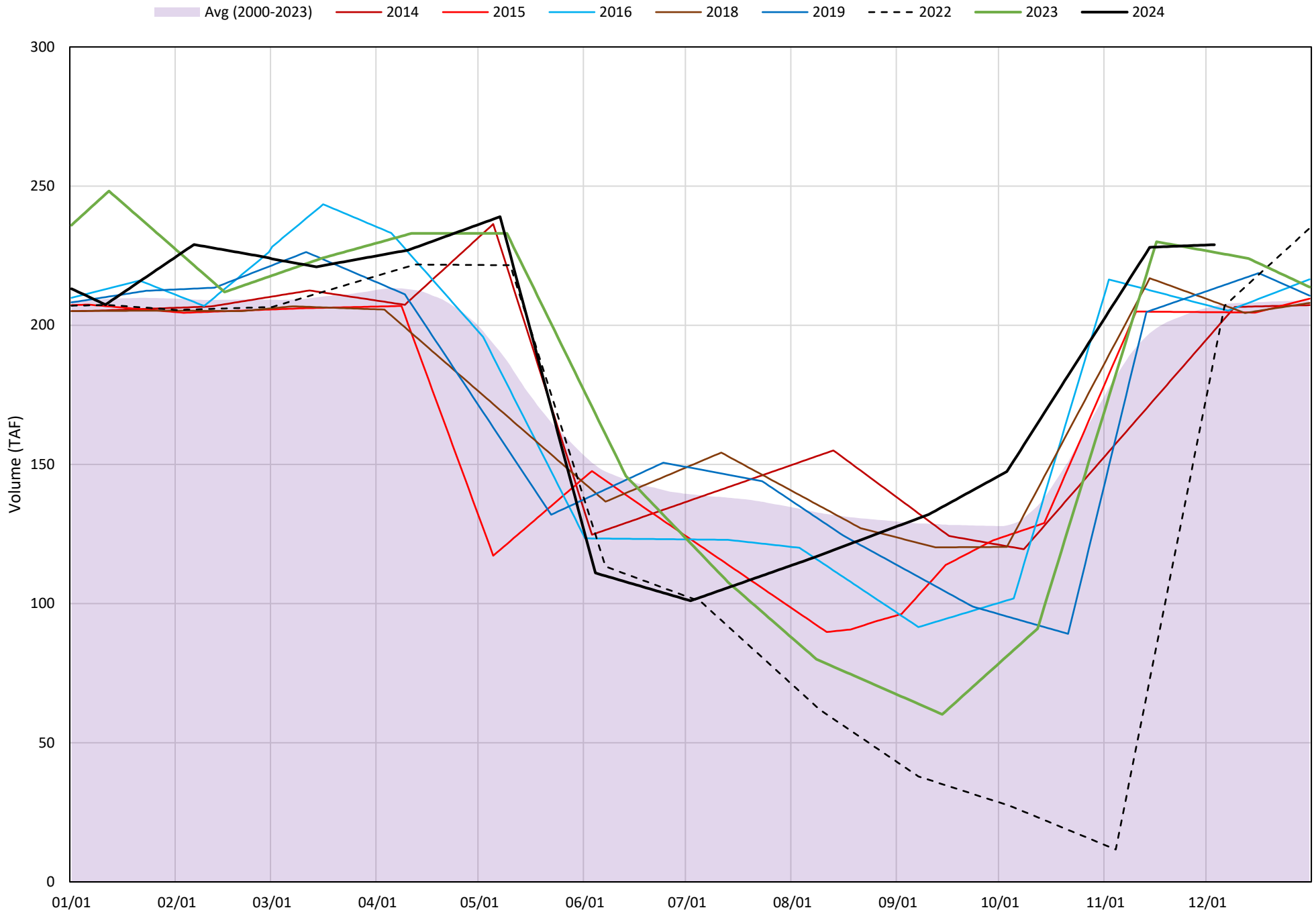
2024

Page	Description
24	- Whiskeytown Lake Isothermobaths Plot
25	- Whiskeytown Lake Cold Water Pool Volume ≤60°F
26	- Whiskeytown Lake Cold Water Pool Volume ≤58°F
27	- Whiskeytown Lake Cold Water Pool Volume ≤56°F
28	- Whiskeytown Lake Cold Water Pool Volume ≤60°F - Percent Exceedances
29	- Whiskeytown Lake Cold Water Pool Volume ≤58°F - Percent Exceedances
30	- Whiskeytown Lake Cold Water Pool Volume ≤56°F - Percent Exceedances
31	- Whiskeytown Lake Cold Water Pool Comparison by Year

Whiskeytown Lake Isothermobaths Plot - 2024

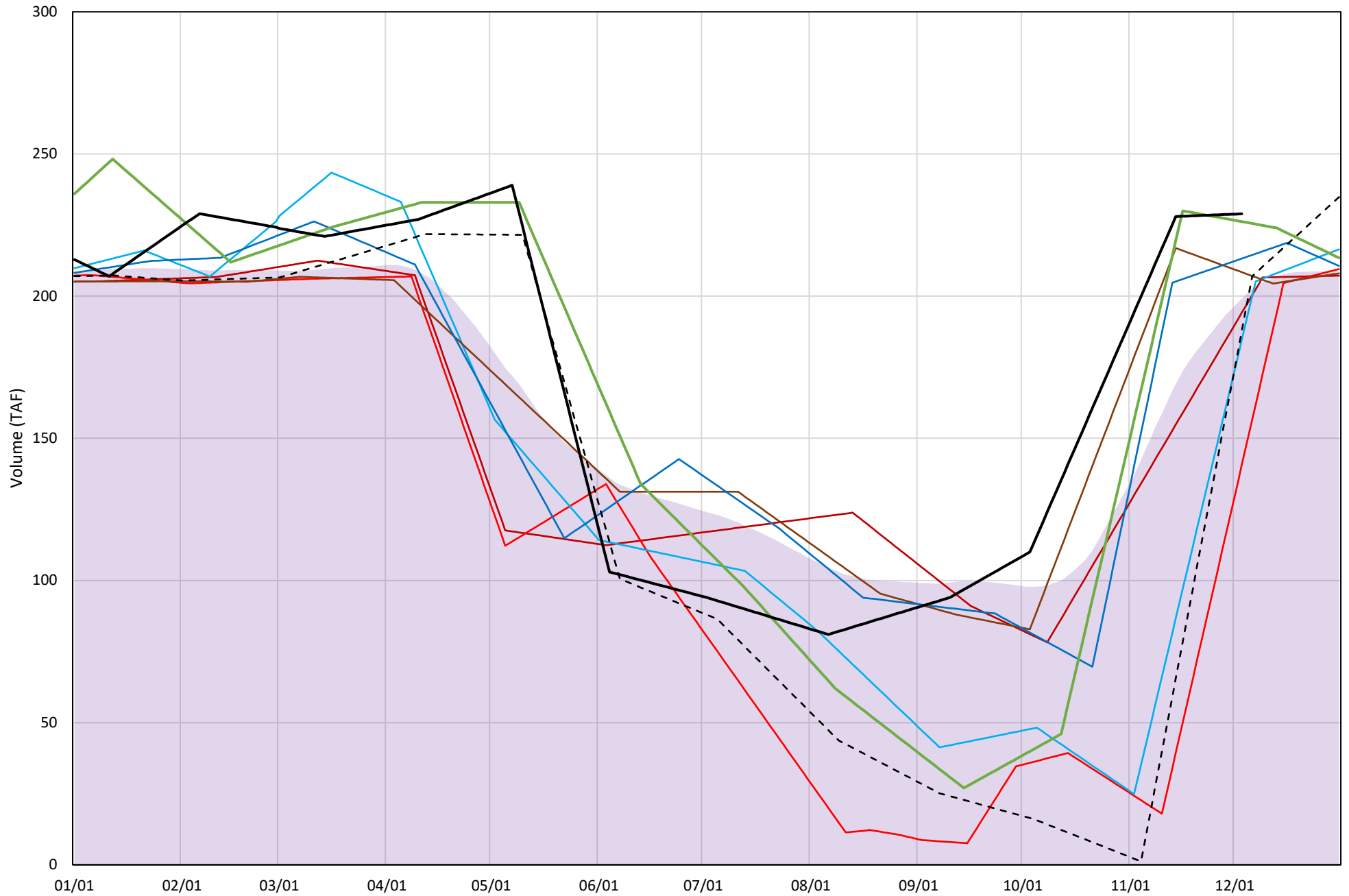


Whiskeytown Lake Cold Water Pool Volume ≤60°F

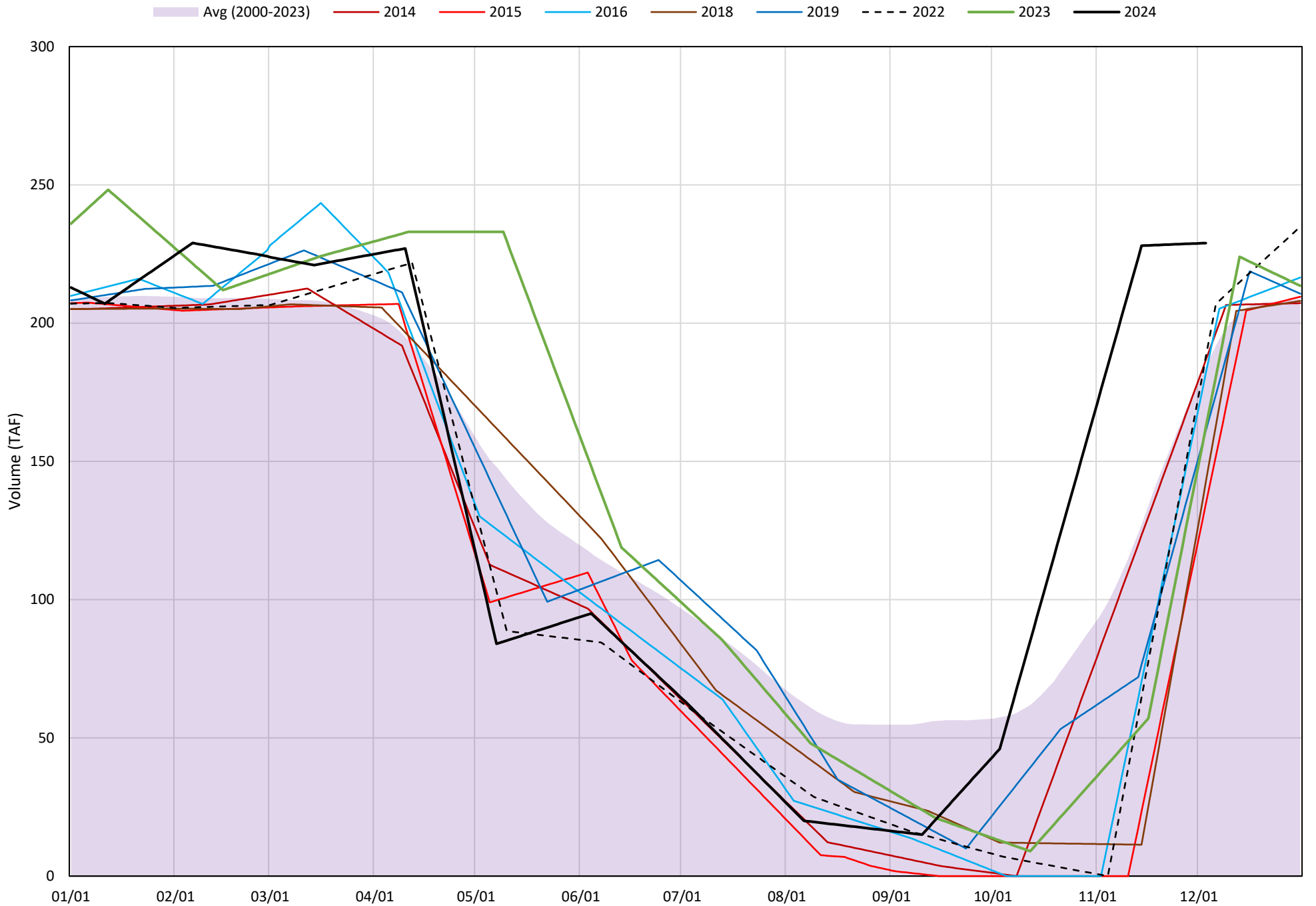


Whiskeytown Lake Cold Water Pool Volume ≤58°F

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

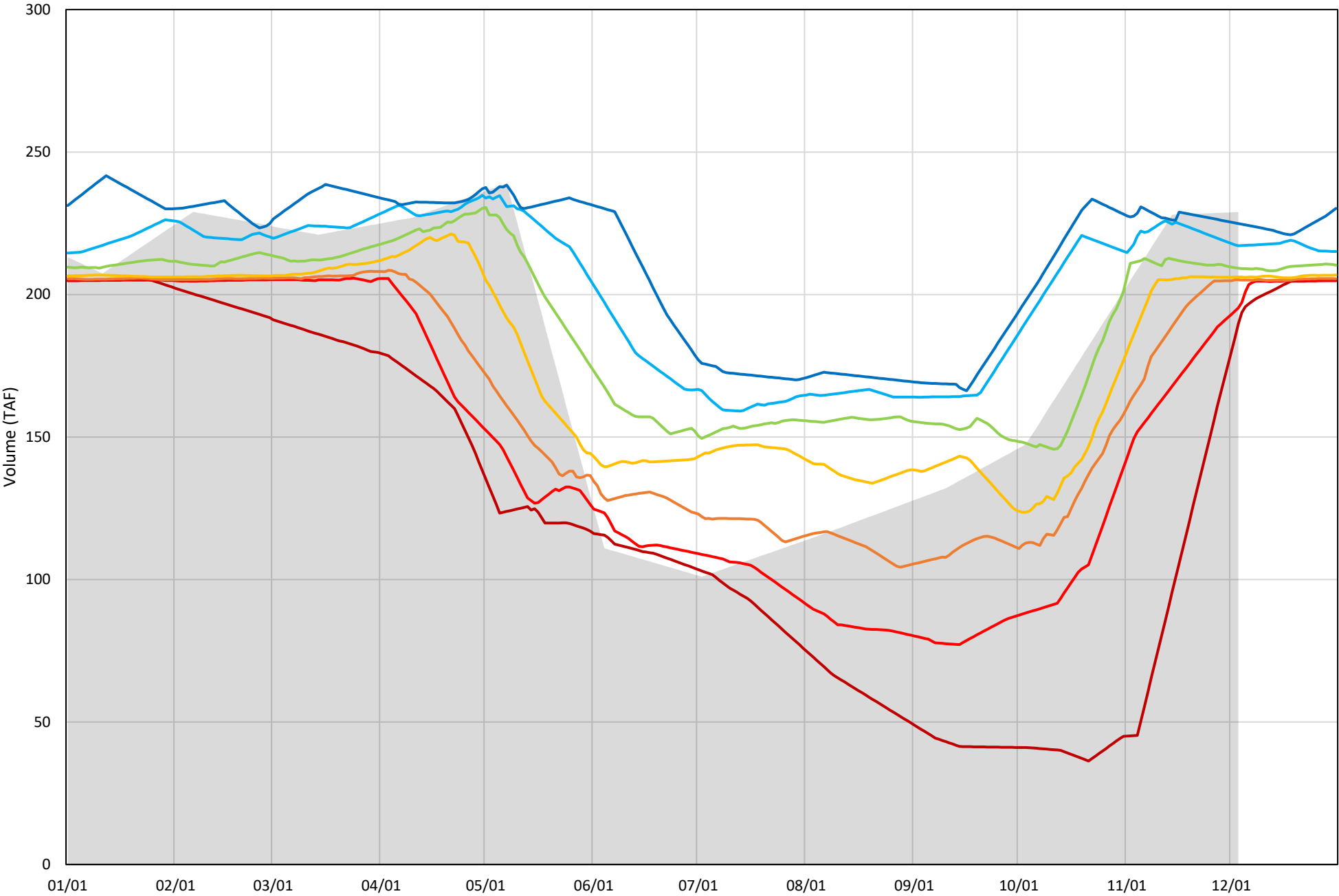


Whiskeytown Lake Cold Water Pool Volume ≤56°F

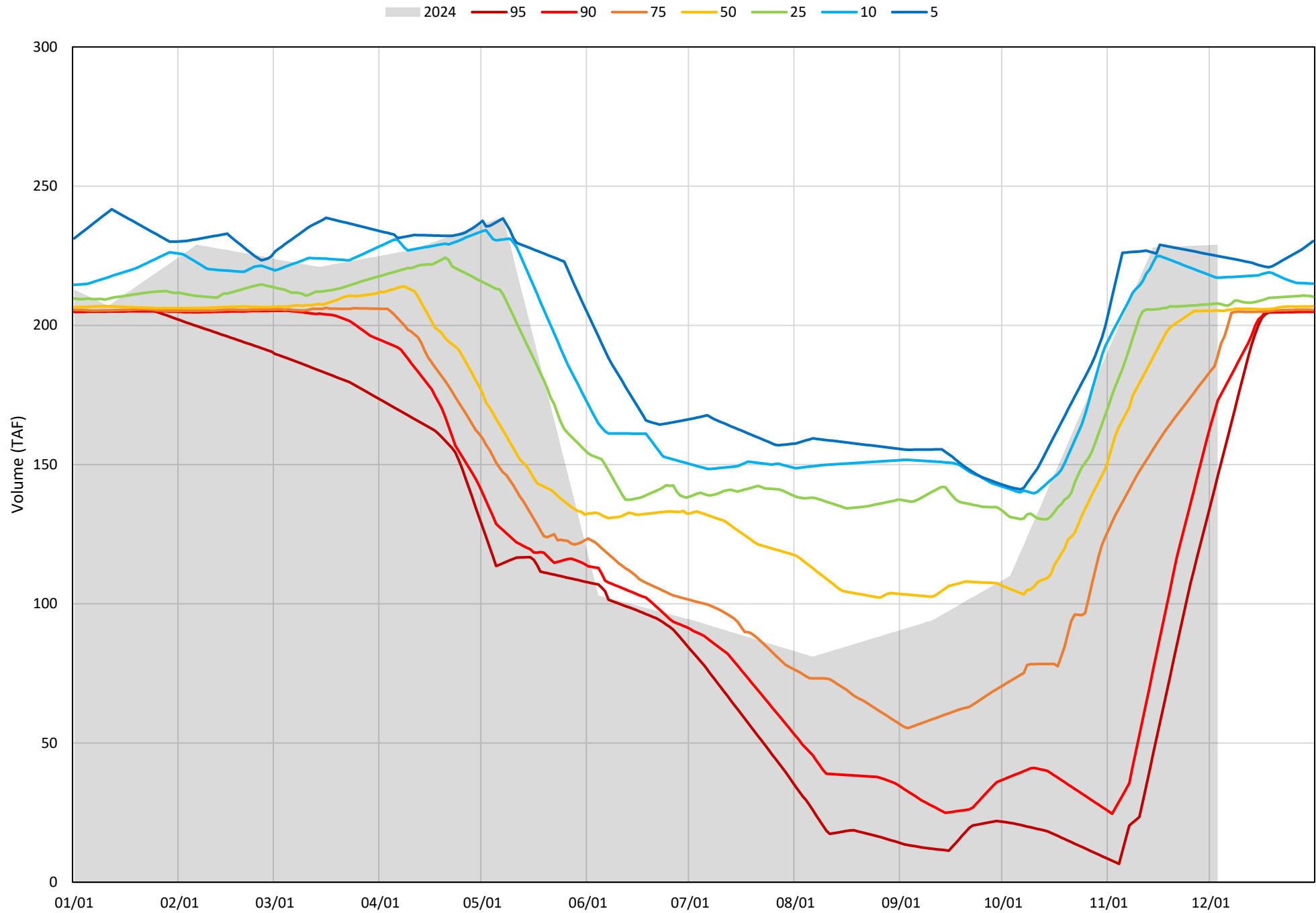


Whiskeytown Lake Cold Water Pool Volume ≤60°F - Percent Exceedances (2000-2023)

2024 95 90 75 50 25 10 5

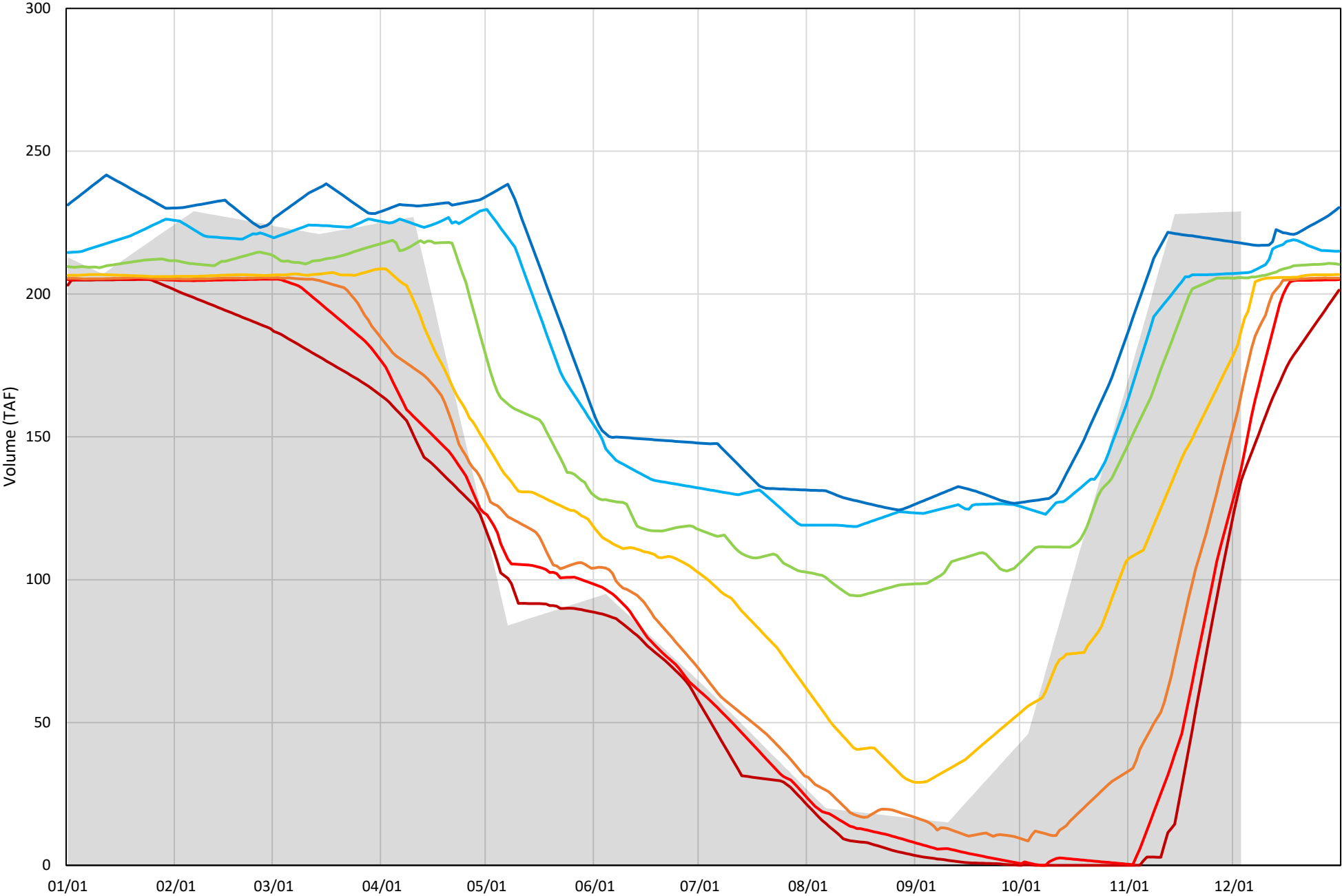


Whiskeytown Lake Cold Water Pool Volume ≤58°F - Percent Exceedances (2000-2023)



Whiskeytown Lake Cold Water Pool Volume ≤56°F - Percent Exceedances (2000-2023)

2024 95 90 75 50 25 10 5



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

Dec-04 2024	Δ TAF				% Δ			
	$\leq 60^\circ$	$\leq 58^\circ$	$\leq 56^\circ$	Abs. Avg.	$\leq 60^\circ$	$\leq 58^\circ$	$\leq 56^\circ$	Abs. Avg.
2000	-36.5	-36.5	-36.5	36.5	-16.0	-16.0	-16.0	16.0
2001	-20.6	-20.6	-20.6	20.6	-9.0	-9.0	-9.0	9.0
2002	-23.7	-23.7	-23.7	23.7	-10.4	-10.4	-10.4	10.4
2003	-16.1	-16.1	-54.2	28.8	-7.0	-7.0	-23.7	12.6
2004	-8.0	-8.0	-8.0	8.0	-3.5	-3.5	-3.5	3.5
2005	-22.9	-22.9	-56.9	34.2	-10.0	-10.0	-24.8	15.0
2006	-23.9	-23.9	-23.9	23.9	-10.4	-10.4	-10.4	10.4
2007	-23.8	-23.8	-93.9	47.2	-10.4	-10.4	-41.0	20.6
2008	-22.8	-22.8	-22.8	22.8	-9.9	-9.9	-9.9	9.9
2009	-22.8	-22.8	-22.8	22.8	-10.0	-10.0	-10.0	10.0
2010	-19.5	-42.6	-44.8	35.6	-8.5	-18.6	-19.6	15.6
2011	-23.1	-23.1	-23.1	23.1	-10.1	-10.1	-10.1	10.1
2012	-21.7	-67.8	-75.7	55.1	-9.5	-29.6	-33.0	24.0
2013	-16.0	-44.3	-47.0	35.8	-7.0	-19.4	-20.5	15.6
2014	-30.8	-34.8	-42.4	36.0	-13.5	-15.2	-18.5	15.7
2015	-24.3	-88.4	-94.5	69.1	-10.6	-38.6	-41.3	30.2
2016	-22.5	-44.4	-47.2	38.0	-9.8	-19.4	-20.6	16.6
2017	-24.3	-24.3	-24.3	24.3	-10.6	-10.6	-10.6	10.6
2018	-20.5	-20.5	-86.6	42.5	-9.0	-9.0	-37.8	18.6
2019	-15.7	-15.7	-68.0	33.2	-6.9	-6.9	-29.7	14.5
2020	-23.6	-23.6	-23.6	23.6	-10.3	-10.3	-10.3	10.3
2021	-22.5	-22.5	-22.5	22.5	-9.8	-9.8	-9.8	9.8
2022	-40.3	-41.2	-41.3	40.9	-17.6	-18.0	-18.1	17.9
2023	-2.7	-2.7	-66.8	24.1	-1.2	-1.2	-29.2	10.5
2024	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Historical - Current

(Historical - Current) / Current