Lake Mendocino and Lake Sonoma Water Accounting Weekly Report (Term 14, June 2022 TUCO)

Report Date: 1/6/2023

Units are cfs unless noted otherwise

	12/30/2022	12/31/2022	1/1/2023	1/2/2023	1/3/2023	1/4/2023	1/5/2023
I. Upper East Fork Reach							
Potter Valley Project							
Tunnel Diversion	35.0	10.0	45.0	45.0	45.0	45.0	9.0
PVID Requested Delivery	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PVID Canals Actual Delivery	2.7	1.1	3.6	1.0	0.9	0.9	0.9
East Fork Release	32.0	9.0	9.0	44.0	44.0	44.0	8.0
PVID E Fork Diversions	7.3	8.9	6.5	9.0	9.1	9.1	9.1
PVID Water Use - PG&E Contract	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PVID Water Use - License 5264	0.0	0.0	0.0	0.0	0.0	0.0	0.0
East Fork Downstream of PVID (Import)	24.7	0.1	2.6	35.0	34.9	34.9	0.0
PVID Canal Net Return Flow (assumed)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
East Fork / Potter Valley Reach Analysis							
USGS E Fork @ Calpella	2,853.8	775.1	308.3	202.8	181.9	1,617.0	2,078.3
Net Reach Loss(-)/Gain(+)	+2,818.8	+765.1	+263.3	+157.8	+136.9	+1,572.0	+2,069.3
Unimpaired Natural Flow @ Calpella (est.)	543.5	2226.7	307.3	133.6	105.5	64.5	1423.5
Non-PVID East Fork Net Reach Losses (est.)	2828.8	775.1	273.3	167.8	146.9	1582.0	2079.3
Natural Flow	2804.1	775.0	270.8	132.8	112.0	1547.1	2079.3
Import (neg. value is return flow)	24.7	0.1	2.6	35.0	34.9	34.9	0.0
II. Lake Mendocino							
Reservoir Operations							
Calculated Inflow (ac-ft)	6,017	1,780	647	464	343	3,551	4,813
(cfs)	3,033	897	326	234	173	1,790	2,426
Natural Flow	3,009	897	323	199	138	1,755	2,426
Import	25	0	3	35	35	35	0
Storage Change (ac-ft)	+5,963.0	+1,726.0	+590.0	+411.0	+289.0	+3,496.0	+4,759.0
(cfs)	+3,006	+870	+297	+207	+146	+1,763	+2,399
Stored Natural Flow (cfs)	3,006	870	297	199	138	1,755	2,399
Stored Import Water (cfs)	0	0	0	8	8	7	0
Evaporation (ac-ft)	2.3	2.3	5.0	1.0	2.0	3.1	2.1
RVCWD Diversion (ac-ft)	0	0	0	0	0	0	0
CVD Release Gage	26	26	26	26	26	26	26
Storage (Project Water)	0	0	0	0	0	0	0
Natural Flow	2	27	25	0	0	0	26
Import Water	24	0	1	26	26	26	0
East Fork Min Instream Flow Requirement	25	25	25	25	25	25	25
Compliance Gage *Rvr mi.*							
CVD Release *99.9*	26	26	26	26	26	26	26
CVD Project Water Release to Meet Min Flow Requirement							
Total Pass-through Water	26	27	26	26	26	26	26
Project Water Release Required	No	No	No	No	No	No	No
III. Upper Russian River Reach							
Minimum Instream Flow Requirement	25	25	150	150	150	150	150
Controlling Compliance Gage							
Min Gage Flow	2,430	1,999	576	309	242	952	2,215
Controlling Gage	Healdsburg	Forks	Forks	Forks	Forks	Forks	Forks
All Compliance Gages *Rvr mi.*							
Forks (CVD + USGS 11461000) *99.0*	5,608	1,999	576	309	242	952	2,215
Talmage (USGS 11462080) *96.1*	6,240	4,425	965	613	528	1,603	4,972
Hopland (USGS 11462500) *84.8*	5,316	6,611	1,422	787	638	1,827	6,989
Cloverdale (USGS 11463000) *70.9*	4,438	7,985	2,806	1,524	1,206	3,699	11,838
Geyserville (USGS 11463500) *54.4*	3,620	10,705	4,378	2,002	1,389	2,814	17,921
Jimtown (USGS 11463682) *48.5*	2,856	9,588	5,115	2,300	1,744	2,374	15,571
Digger Bend (USGS 11463980) *38.2*	*>400 cfs*	*>400 cfs*	*>400 cfs*	*>400 cfs*	*>400 cfs*	*>400 cfs*	*>400 cfs*
Healdsburg (USGS 11464000) *35.6*	2,430	9,828	7,164	2,661	1,935	2,356	16,284
Net Reach Loss(-)/Gain(+)							
Forks - Talmage	+1,291	+1,757	+348	+296	+277	+974	+2,547
Talmage - Hopland	+68	+1,251	+388	+163	+101	+724	+1,783
Hopland - Cloverdale	+283	+420	+1,199	+704	+550	+2,672	+4,611
Cloverdale - Jimtown	-92	+1,158	+1,509	+599	+472	+951	+3,433
Jimtown - Digger Bend	*n/d*	*n/d*	*n/d*	*n/d*	*n/d*	*n/d*	*n/d*
Digger Bend - Healdsburg **when Digger Bend > 400 cfs, next u/s gage (Jimtown) used*	*-29*	*+640*	*+1,386*	*+276*	*+160*	*+399*	*+1,410*
Upper Russian Net Reach Loss/Gain	+9,034	+6,065	+9,055	+9,645	+1,560	+5,719	+13,784
CVD Project Water Release to Meet Min Flow Requirement							
Net Reach Loss(-)/Gain(+) to Controlling Gage	+9,034	+0	+0	+0	+0	+0	+0
Storage (Project Water)	0	0	0	0	0	0	0
Pass-through Water (Nat. + Imp.) + Natural	9,034	0	0	0	0	0	0
Total Pass-through Water	9060	27	26	26	26	26	26
Project Water Release Required	No	No	No	No	No	No	No

Notes:

- Water Accounting for the Upper Russian River is an analysis that approximates the current conditions based on methodology in Term 11 (2/11/21 Order) report and modified by Term 12 (6/14/21 Order) report. Values listed include estimated values where measurements are not currently available (red italics).

			12/30/2022	12/31/2022	1/1/2023	1/2/2023	1/3/2023	1/4/2023	1/5/2023
IV. Lake Sonoma									
Lake Sonoma									
Storage Change (ac-ft)			+5,668.0	+3,876.0	+1,626.0	+916.0	+661.0	+9,104.0	+9,368.0
(cfs)			+2,858	+1,954	+820	+462	+333	+4,590	+4,723
Evaporation (ac-ft)			2.4	1.2	4.2	1.1	1.1	1.1	2.4
Inflow (Natural Flow)			2,940	2,036	903	543	415	4,680	4,811
WSD Release Gage			81	82	81	81	81	89	87
Storage (Project Water)			0	0	0	0	0	0	0
Natural Flow			81	82	81	81	81	89	87
V. Lower Dry Creek Reach									
Minimum Instream Flow Requirement			75	75	75	75	75	75	75
Controlling Compliance Gage									
Min Gage Flow			81	82	81	81	81	89	87
Controlling Gage			WSD Release	WSD Release	WSD Release	WSD Release	WSD Release	WSD Release	WSD Release
All Compliance Gages		*Crk mi.*							
WSD Release		*14.3*	81	82	81	81	81	89	87
Yoakim	(USGS 11465200)	*11.1*	387	516	324	221	191	857	1,173
Lambert	(USGS 11465240)	*6.8*	353	550	357	245	212	976	1,411
Dry Crk Mouth	(USGS 11465350)	*0.1*	521	1,034	665	454	292	1,581	2,453
WSD to Russian River Confluence Reach Analysis									
Total Pass-through Water			81	82	81	81	81	89	87
Net Reach Loss(-)/Gain(+)									
WSD - Yoakim			+303	+436	+244	+140	+110	+760	+1,092
Yoakim - Lambert			-12	+24	+24	+23	+18	+220	+159
Lambert - Dry Crk Mouth			+229	+462	+281	+205	+73	+987	+735
WSD - Dry Crk Mouth			+519	+922	+549	+368	+202	+1,966	+1,986
WSD Project Water Release to Meet Min Flow Requirement									
Net Reach Loss/Gain to Controlling Gage			+0	+0	+0	+0	+0	+0	+0
Project Water Release Required			No	No	No	No	No	No	No
VI. Russian River - Dry Creek Confluence									
Upper Russian River Flow (Healdsburg Gage)									
L. Mendocino Project Water + Import Water			24	0	1	26	26	26	0
Natural Flow			9,035	6,092	9,079	9,645	1,560	5,719	13,810
Dry Creek Flow (Mouth Gage)									
L. Sonoma Project Water			0	0	0	0	0	0	0
Natural Flow			521	1,034	665	454	292	1,581	2,453
Russian River d/s of Confluence Flow			2,950	10,862	7,828	3,116	2,227	3,937	18,737
L. Mendocino Project Water + Import Water			24	0	1	26	26	26	0
L. Sonoma Project Water			0	0	0	0	0	0	0
Natural Flow			9,556	7,126	9,744	10,099	1,852	7,301	16,263
VII. Lower Russian River Reach									
Minimum Instream Flow Requirement			35	35	125	125	125	125	125
Controlling Compliance Gage									
Min Gage Flow			5,280	13,200	14,300	9,430	5,020	7,540	20,000
Controlling Gage			Hacienda	Hacienda	Hacienda	Hacienda	Hacienda	Hacienda	Hacienda
All Compliance Gages		*Rvr mi.*							
Windsor	(USGS 11465390)	*26.6*	*n/d*	*n/d*	*n/d*	*n/d*	*n/d*	*n/d*	*n/d*
Hacienda	(USGS 11467000)	*21.8*	5,280	13,200	14,300	9,430	5,020	7,540	20,000
Confluence to Windsor Reach Analysis									
Net Reach Loss/Gain to Windsor Gage			-	-	-	-	-	-	-
L. Mendocino Project Water + Import Water			-	-	-	-	-	-	-
L. Sonoma Project Water			-	-	-	-	-	-	-
Natural Flow			-	-	-	-	-	-	-
Confluence to SCWA Wohler Production Facility Reach Analysis									
Approx. Flow u/s of Wohler			5,323	13,258	14,353	9,482	5,064	7,593	20,057
Net Reach Loss(-)/Gain(+)			+2,373	+2,396	+6,524	+6,366	+2,837	+3,656	+1,321
L. Mendocino Project Water + Import Water			24	0	1	26	26	26	0
L. Sonoma Project Water			0	0	0	0	0	0	0
Natural Flow			11,929	9,522	16,268	16,465	4,688	10,956	17,584
Confluence to Hacienda (Guerneville) Reach Analysis									
Net Reach Loss(-)/Gain(+)			+2,330	+2,338	+6,472	+6,314	+2,793	+3,603	+1,263
L. Mendocino Project Water + Import Water			24	0	1	26	26	26	0
L. Sonoma Project Water			0	0	0	0	0	0	0
Natural Flow			11,886	9,464	16,216	16,413	4,644	10,903	17,527
VIII. Water Production under Sonoma Water Water Rights (ac-ft)									
Lower Russian River									
Sonoma Water Total			86.2	115.0	104.6	102.6	86.8	105.1	113.6
Wohler			39.8	68.8	56.5	53.6	39.9	55.7	65.4
Mirabel			46.4	46.2	48.1	49.0	46.8	49.4	48.2
Town of Windsor River Wellfield			5.0	4.7	4.7	4.8	5.3	5.0	4.5
Camp Meeker & Occidental			0.0	0.0	0.0	0.0	0.0	0.0	0.0
Upper Russian River									
City of Healdsburg									
Gauntlett & Fitch Mtn			0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry Creek									
City of Healdsburg									
Dry Creek Wellfield			0.0	0.0	0.0	0.0	0.0	0.0	0.0

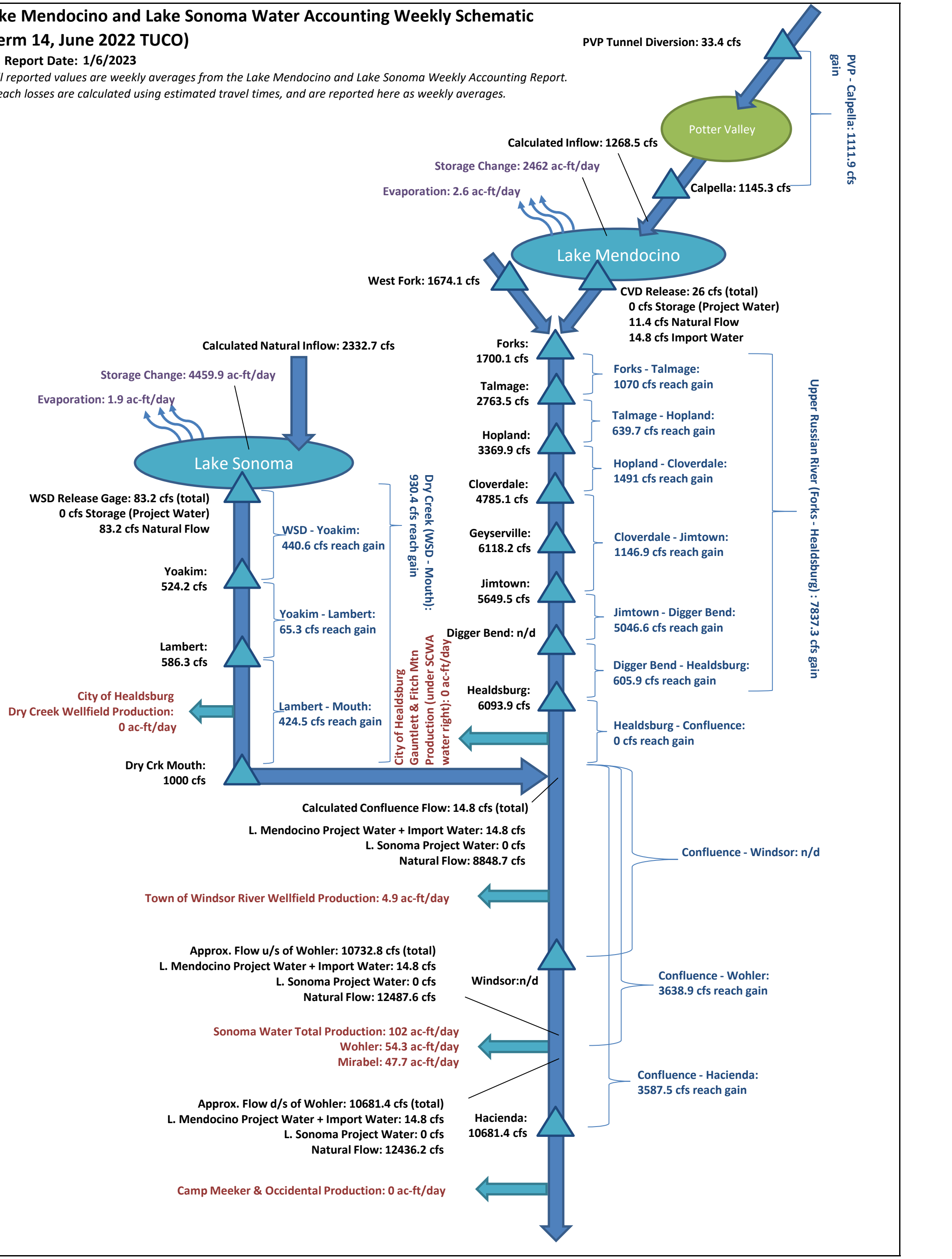
Notes:

- Water Accounting for the Lower Russian River and Dry Creek is an analysis that approximates the current conditions based on the methodology in Term 12 (6/14/21 Order) report. Values listed include estimated values where measurements are not currently available (red italics).

Lake Mendocino and Lake Sonoma Water Accounting Weekly Schematic
(Term 14, June 2022 TUCO)

Report Date: 1/6/2023

All reported values are weekly averages from the Lake Mendocino and Lake Sonoma Weekly Accounting Report.
Reach losses are calculated using estimated travel times, and are reported here as weekly averages.



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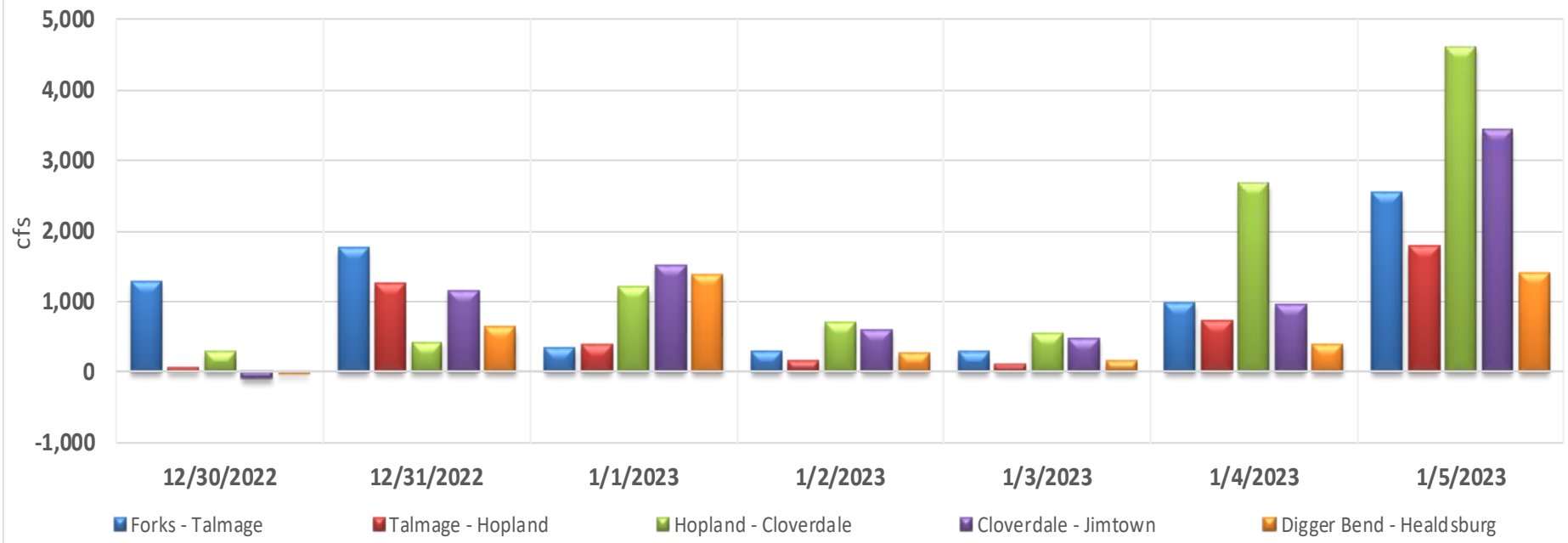
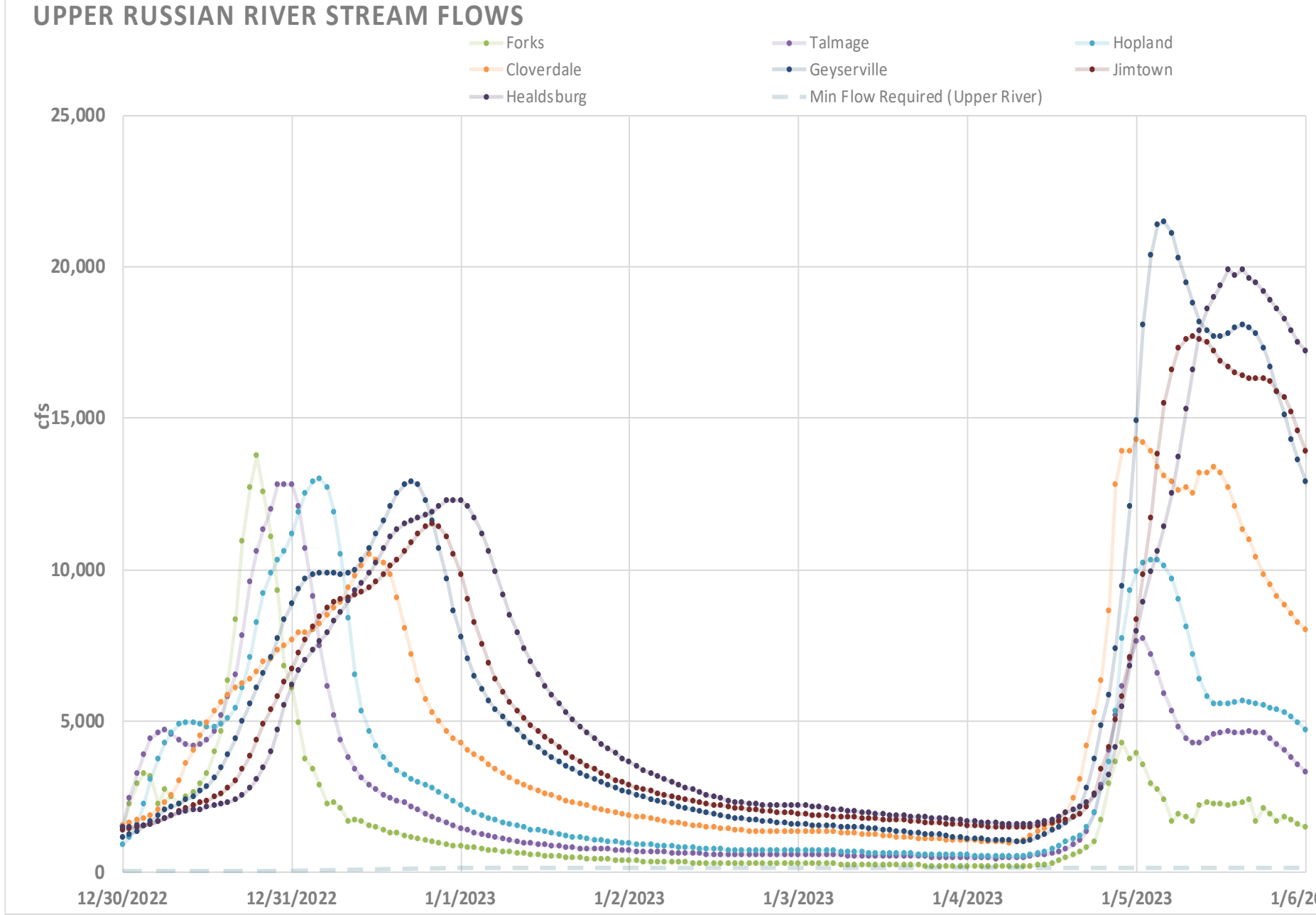
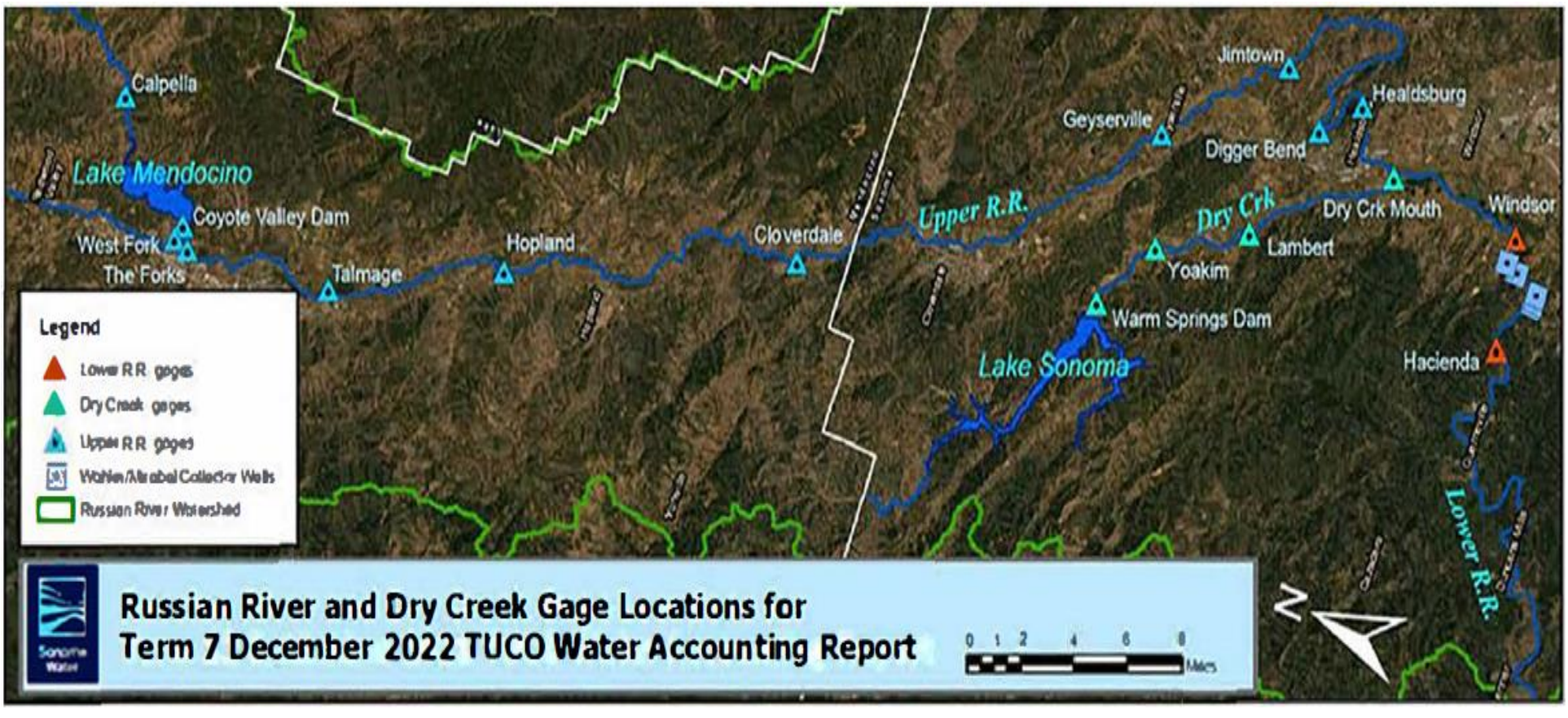
UPPER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



UPPER RUSSIAN RIVER STREAM FLOWS





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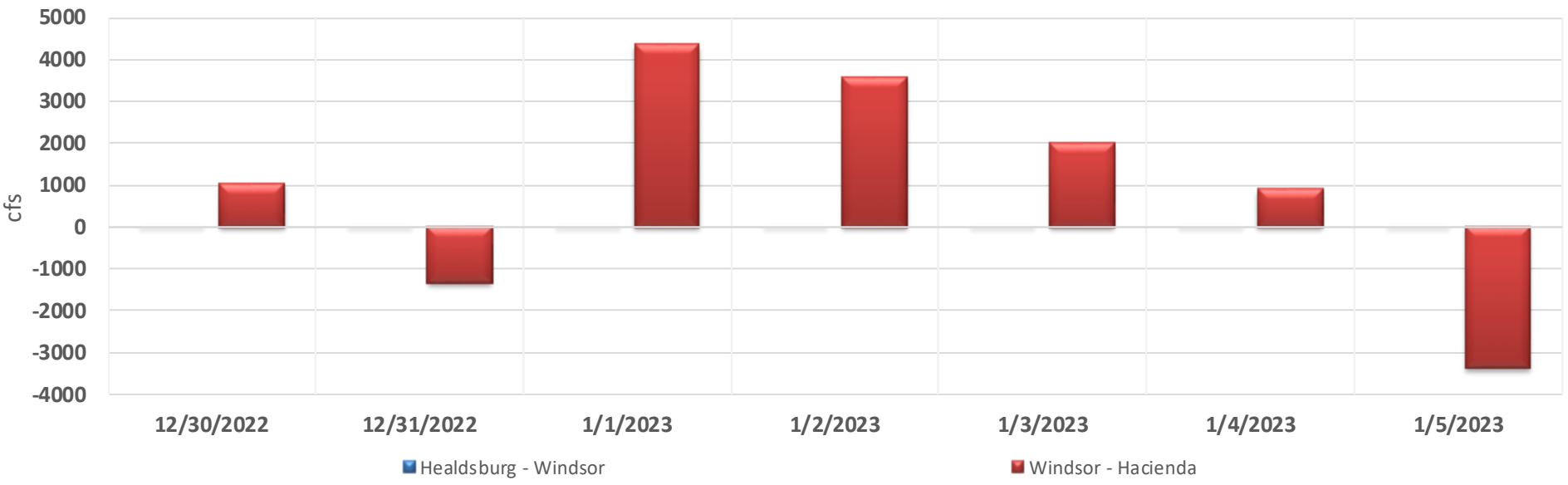
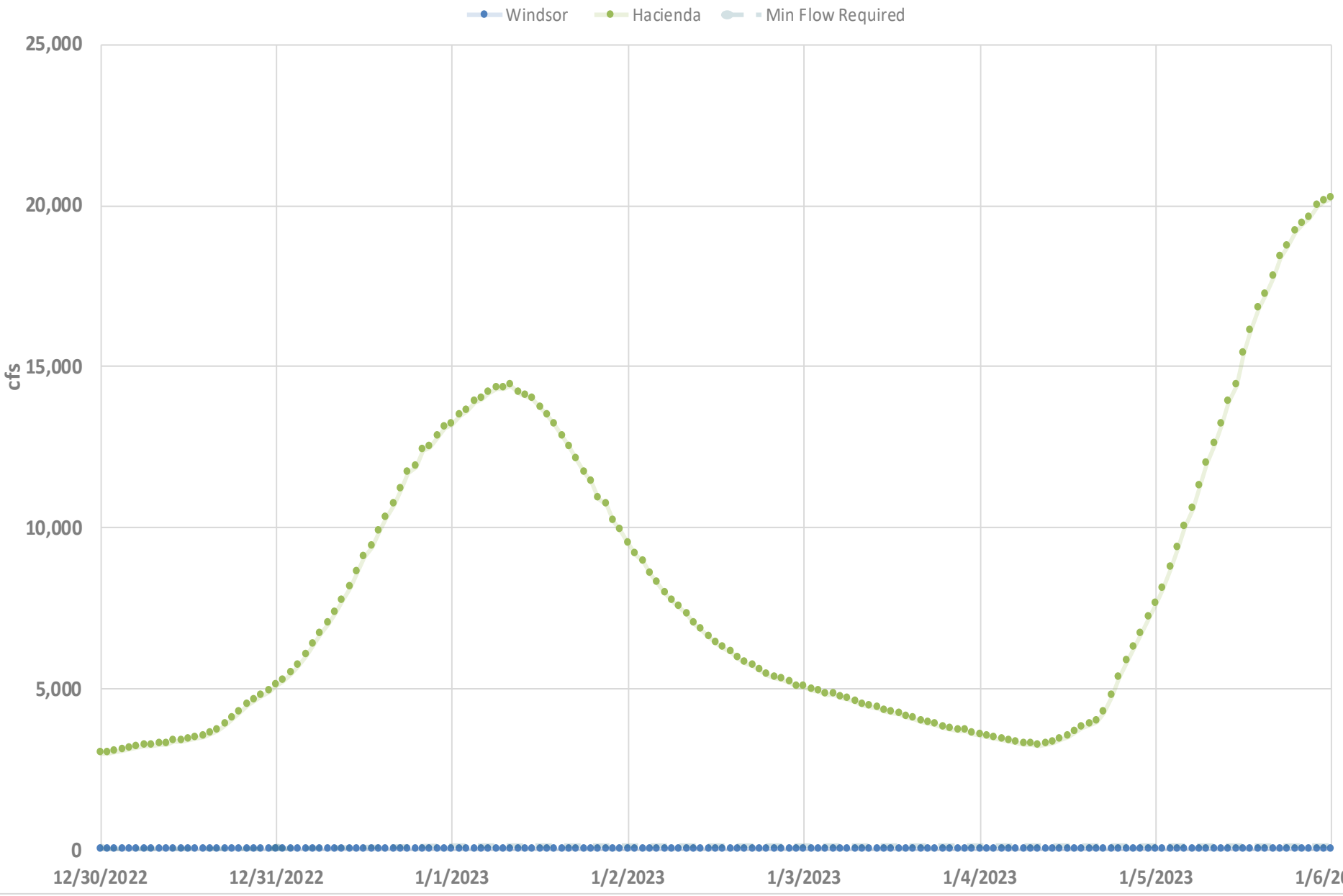
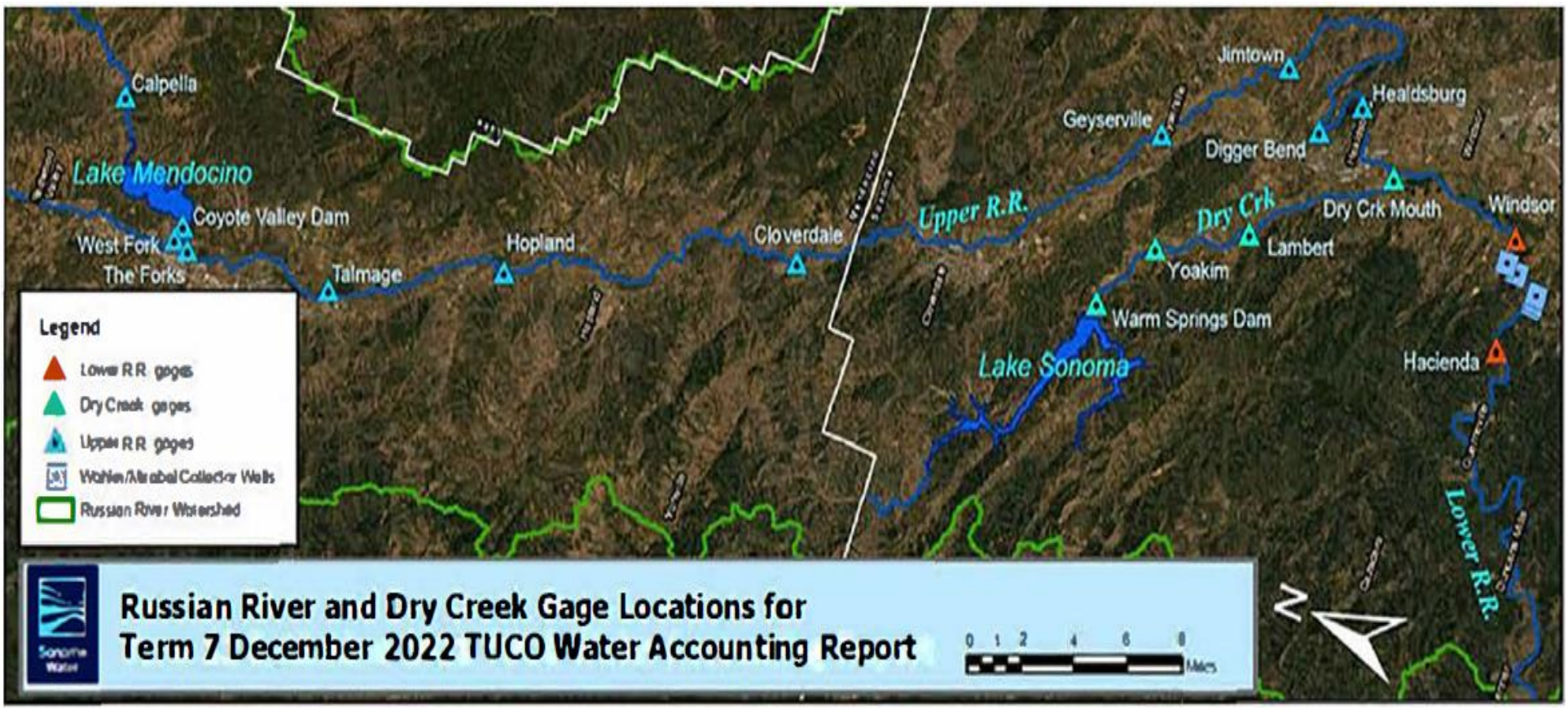
LOWER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



LOWER RUSSIAN RIVER STREAM FLOWS



Note: Winsor gage is a seasonal gage and currently not operational. Winsor – Hacienda reach gain/loss is calculated with Healdsburg gages as the upstream gage.



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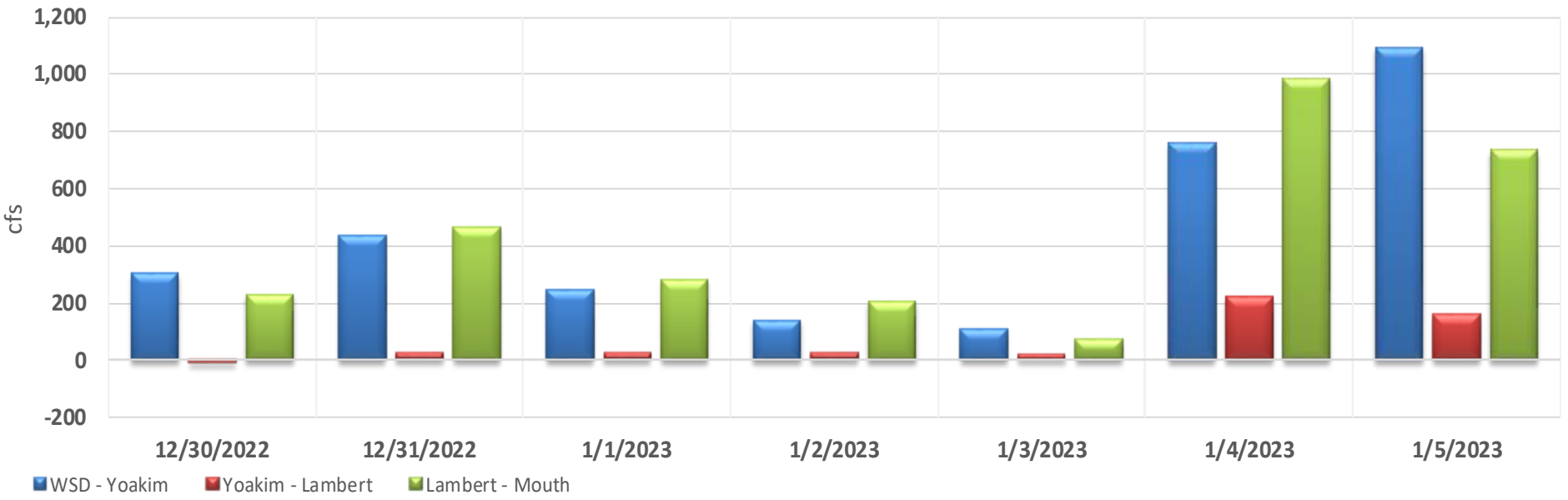
DRY CREEK NET REACH GAINS (+) / LOSSES (-)



DRY CREEK STREAM FLOWS