

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

Report Date: 1/27/2023

Units are cfs unless noted otherwise

	1/20/2023	1/21/2023	1/22/2023	1/23/2023	1/24/2023	1/25/2023	1/26/2023
I. Upper East Fork Reach							
Potter Valley Project							
Tunnel Diversion	46.0	46.0	45.0	45.0	45.0	45.0	45.0
PVID Requested Delivery	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PVID Canals Actual Delivery	3.5	1.2	1.8	1.1	1.1	1.1	1.1
East Fork Release	43.0	45.0	43.0	44.0	44.0	44.0	44.0
PVID E Fork Diversions	6.5	8.8	8.3	8.9	8.9	8.9	8.9
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)	36.5	36.2	34.8	35.1	35.1	35.1	35.1
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	280.2	236.8	207.3	182.5	162.1	147.5	135.8
Net Reach Loss(-)/Gain(+)	+234.2	+190.8	+162.3	+137.5	+117.1	+102.5	+90.8
Unimpaired Natural Flow @ Calpella (est.)	135.5	107.3	88.3	73.7	63.1	54.3	47.3
Non-PVID East Fork Net Reach Losses (est.)	244.2	200.8	172.3	147.5	127.1	112.5	100.8
Natural Flow	207.7	164.6	137.6	112.4	92.0	77.4	65.8
Import (neg. value is return flow)	36.5	36.2	34.8	35.1	35.1	35.1	35.1
II. Lake Mendocino							
Reservoir Operations							
Calculated Inflow (ac-ft)	267	267	479	515	483	386	332
(cfs)	135	134	241	260	243	194	167
Natural Flow	98	98	207	225	208	159	132
Import	36	36	35	35	35	35	35
Storage Change (ac-ft)	-1,949.0	-1,335.0	-727.0	-294.0	-259.0	-225.0	-242.0
(cfs)	-983	-673	-367	-148	-131	-113	-122
Stored Natural Flow (cfs)	0	0	0	0	0	0	0
Stored Import Water (cfs)	0	0	0	0	0	0	0
Evaporation (ac-ft)	6.9	6.9	8.0	8.0	9.1	10.3	9.1
RVCWD Diversion (ac-ft)	0	0	0	0	0	0	0
CVD Release Gage	1114	804	604	404	369	303	285
Storage (Project Water)	979	670	362	144	126	108	117
Natural Flow	98	98	207	225	208	159	132
Import Water	36	36	35	35	35	35	35
East Fork Min Instream Flow Requirement	25	25	25	25	25	25	25
Compliance Gage	<i>Rvr mi.</i>						
CVD Release	99.9	1114	804	604	404	369	303
CVD Project Water Release to Meet Min Flow Requirement							
Total Pass-through Water	135	134	241	260	243	194	167
Project Water Release Required	No	No	No	No	No	No	No
III. Upper Russian River Reach							
Minimum Instream Flow Requirement	150	150	150	150	150	150	150
Controlling Compliance Gage							
Min Gage Flow	1,437	1,062	819	583	521	434	400
Controlling Gage	Forks	Forks	Forks	Forks	Forks	Forks	Forks
All Compliance Gages							
Forks (CVD + USGS 11461000)	99.0	1,437	1,062	819	583	521	400
Talmage (USGS 11462080)	96.1	2,085	1,410	1,081	710	637	538
Hopland (USGS 11462500)	84.8	2,502	1,706	1,408	938	820	648
Cloverdale (USGS 11463000)	70.9	3,300	2,364	2,052	1,426	1,230	961
Geyserville (USGS 11463500)	54.4	3,999	2,857	2,445	1,981	1,726	1,386
Jimtown (USGS 11463682)	48.5	4,353	3,426	2,909	2,420	2,094	1,677
Digger Bend (USGS 11463980)	38.2	>400 cfs	>400 cfs	>400 cfs	>400 cfs	>400 cfs	>400 cfs
Healdsburg (USGS 11464000)	35.6	4,207	3,169	2,497	2,079	1,766	1,450
Net Reach Loss(-)/Gain(+)							
Forks - Talmage	+548	+341	+207	+123	+100	+140	+130
Talmage - Hopland	+322	+285	+276	+223	+176	+125	+106
Hopland - Cloverdale	+618	+623	+545	+464	+389	+346	+303
Cloverdale - Jimtown	+798	+851	+748	+840	+815	+769	+689
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	-217	-336	-441	-386	-348	-302	-241
Upper Russian Net Reach Loss/Gain	+2,068	+1,764	+1,335	+1,263	+1,132	+1,079	+987
CVD Project Water Release to Meet Min Flow Requirement							
Net Reach Loss(-)/Gain(+) to Controlling Gage	+0	+0	+0	+0	+0	+0	+0
Storage (Project Water)	0	0	0	0	0	0	0
Pass-through Water (Nat. + Imp.) + Natural	0	0	0	0	0	0	0
Total Pass-through Water	135	134	241	260	243	194	167
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).

	<u>1/20/2023</u>	<u>1/21/2023</u>	<u>1/22/2023</u>	<u>1/23/2023</u>	<u>1/24/2023</u>	<u>1/25/2023</u>	<u>1/26/2023</u>
IV. Lake Sonoma							
Lake Sonoma							
Storage Change (ac-ft)	+946.0	+744.0	+668.0	+514.0	+387.0	+361.0	+258.0
(cfs)	+477	+375	+337	+259	+195	+182	+130
Evaporation (ac-ft)	6.8	6.8	6.8	10.2	8.5	10.2	11.9
Inflow (Natural Flow)	572	470	433	356	291	279	228
WSD Release Gage	92	92	93	92	92	92	92
Storage (Project Water)	0	0	0	0	0	0	0
Natural Flow	91	92	93	92	92	92	92

V. Lower Dry Creek Reach

Minimum Instream Flow Requirement		75	75	75	75	75	75	75
Controlling Compliance Gage								
Min Gage Flow		92	92	93	92	92	92	92
Controlling Gage		WSD Release	WSD Release	WSD Release	WSD Release	WSD Release	WSD Release	WSD Release
All Compliance Gages								
	<i>Crk mi.</i>							
WSD Release	14.3	92	92	93	92	92	92	92
Yoakim (USGS 11465200)	11.1	264	241	218	202	185	171	167
Lambert (USGS 11465240)	6.8	350	307	279	257	238	224	212
Dry Crk Mouth (USGS 11465350)	0.1	557	428	364	381	382	320	293
WSD to Russian River Confluence Reach Analysis								
Total Pass-through Water		91	92	93	92	92	92	92
Net Reach Loss(-)/Gain(+)								
WSD - Yoakim		+172	+149	+126	+110	+93	+79	+75
Yoakim - Lambert		+83	+65	+59	+54	+51	+52	+45
Lambert - Dry Crk Mouth		+197	+116	+80	+121	+141	+94	+79
WSD - Dry Crk Mouth		+453	+330	+265	+285	+285	+225	+199
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		1,016	706	397	179	161	143	152
Natural Flow		2,166	1,862	1,542	1,488	1,341	1,238	1,119
Dry Creek Flow (Mouth Gage)								
L. Sonoma Project Water		0	0	0	0	0	0	0
Natural Flow		557	428	364	381	382	320	293
Russian River d/s of Confluence Flow								
L. Mendocino Project Water + Import Water		4,764	3,597	2,861	2,460	2,148	1,913	1,743
L. Sonoma Project Water		1,016	706	397	179	161	143	152
Natural Flow		0	0	0	0	0	0	0
Natural Flow		2,723	2,291	1,906	1,869	1,723	1,558	1,412

VII. Lower Russian River Reach

Minimum Instream Flow Requirement		125	125	125	125	125	125	125
Controlling Compliance Gage								
Min Gage Flow		8,400	6,720	5,340	4,560	3,770	3,250	2,940
Controlling Gage		Hacienda	Hacienda	Hacienda	Hacienda	Hacienda	Hacienda	Hacienda
All Compliance Gages								
	<i>Rvr mi.</i>							
Windsor (USGS 11465390)	26.6	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>	<i>n/d</i>
Hacienda (USGS 11467000)	21.8	8,400	6,720	5,340	4,560	3,770	3,250	2,940
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		8,449	6,763	5,381	4,603	3,817	3,293	2,979
Net Reach Loss(-)/Gain(+)		+3,686	+3,165	+2,520	+2,144	+1,669	+1,380	+1,236
L. Mendocino Project Water + Import Water		1,016	706	397	179	161	143	152
L. Sonoma Project Water		0	0	0	0	0	0	0
Natural Flow		6,408	5,456	4,426	4,013	3,392	2,938	2,648
Confluence to Hacienda (Guerneville) Reach Analysis								
Net Reach Loss(-)/Gain(+)		+3,636	+3,123	+2,479	+2,101	+1,622	+1,337	+1,197
L. Mendocino Project Water + Import Water		1,016	706	397	179	161	143	152
L. Sonoma Project Water		0	0	0	0	0	0	0
Natural Flow		6,359	5,413	4,385	3,969	3,345	2,895	2,608

VIII. Water Production under Sonoma Water Rights (ac-ft)

Lower Russian River								
Sonoma Water Total		98.2	84.5	81.5	86.0	93.7	85.7	78.3
Wohler		48.1	51.5	48.0	38.6	46.3	38.0	31.4
Mirabel		50.0	33.0	33.5	47.4	47.4	47.6	46.8
Town of Windsor River Wellfield		4.4	4.0	4.0	4.5	4.5	4.5	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:

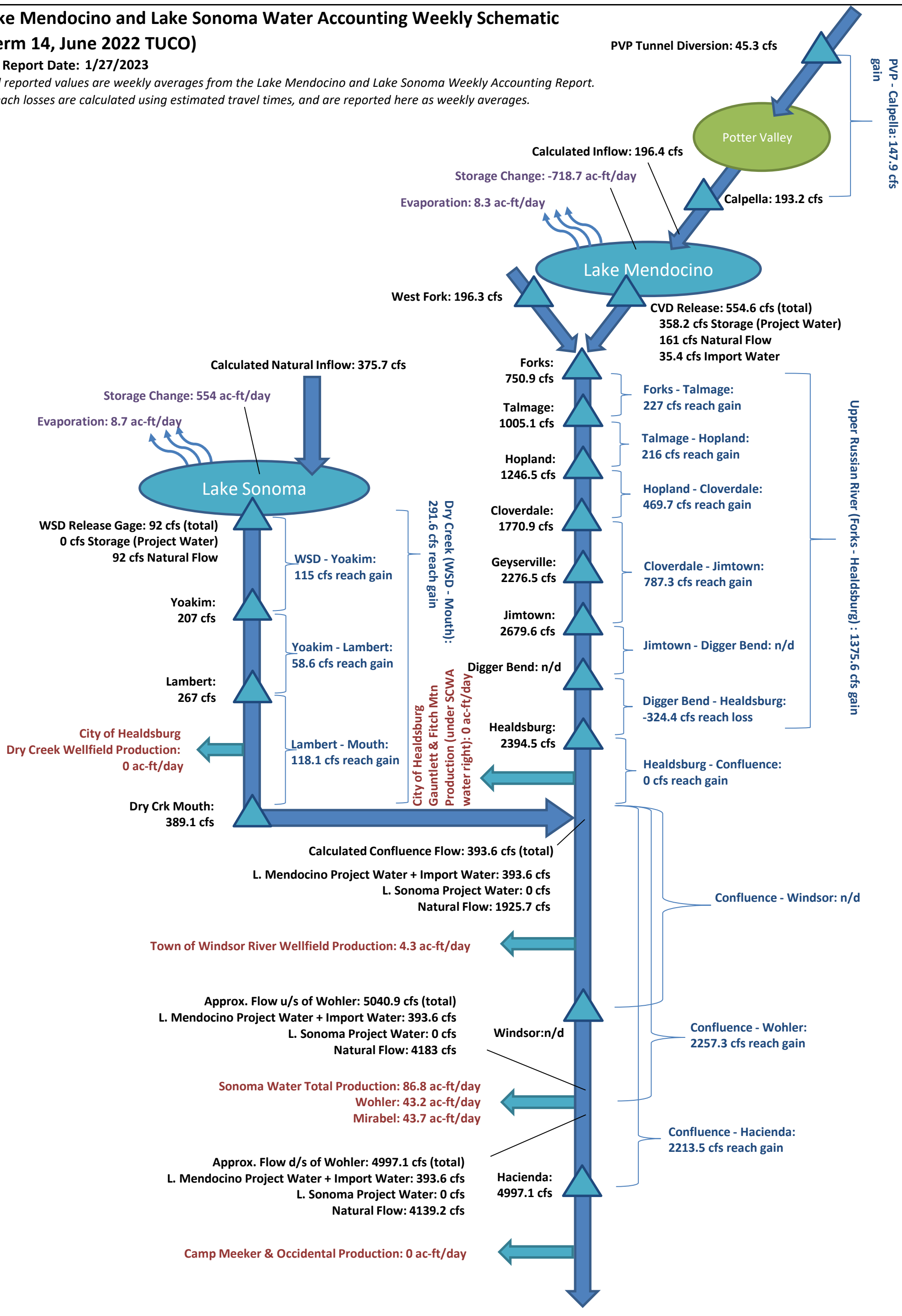
- Water Accounting for the Lower Russian River and Dry Creek is an analysis that approximates the current conditions based on the methodology in Term 12 (6/14/21 Order) report. Values listed include estimated values where measurements are not currently available (red italics).

Lake Mendocino and Lake Sonoma Water Accounting Weekly Schematic

(Term 14, June 2022 TUCO)

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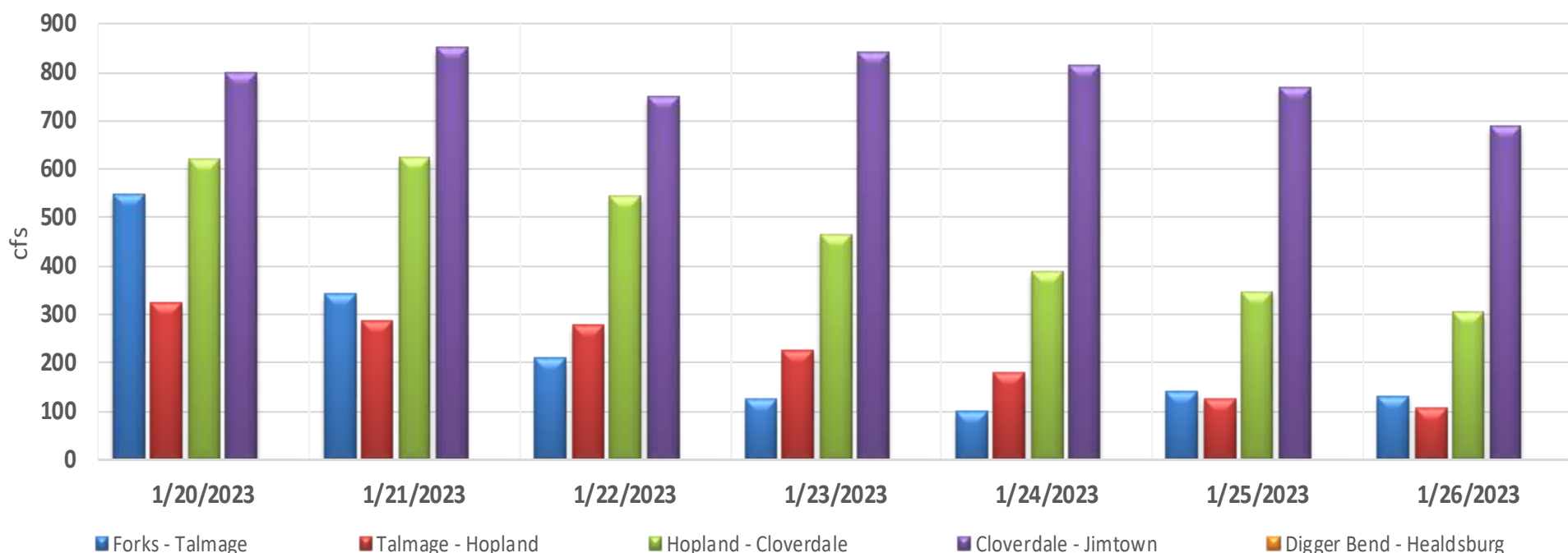
All reported values are weekly averages from the Lake Mendocino and Lake Sonoma Weekly Accounting Report. Reach losses are calculated using estimated travel times, and are reported here as weekly averages.



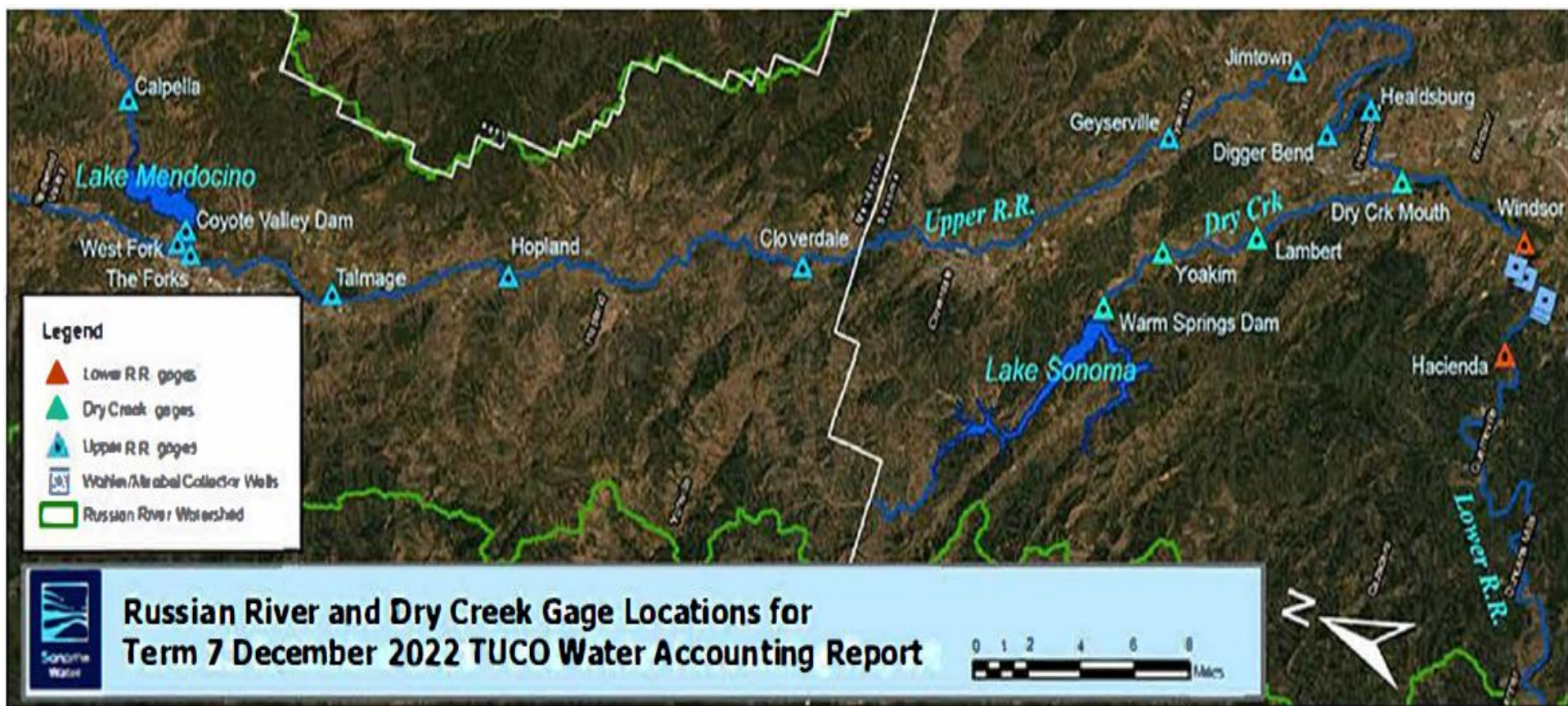
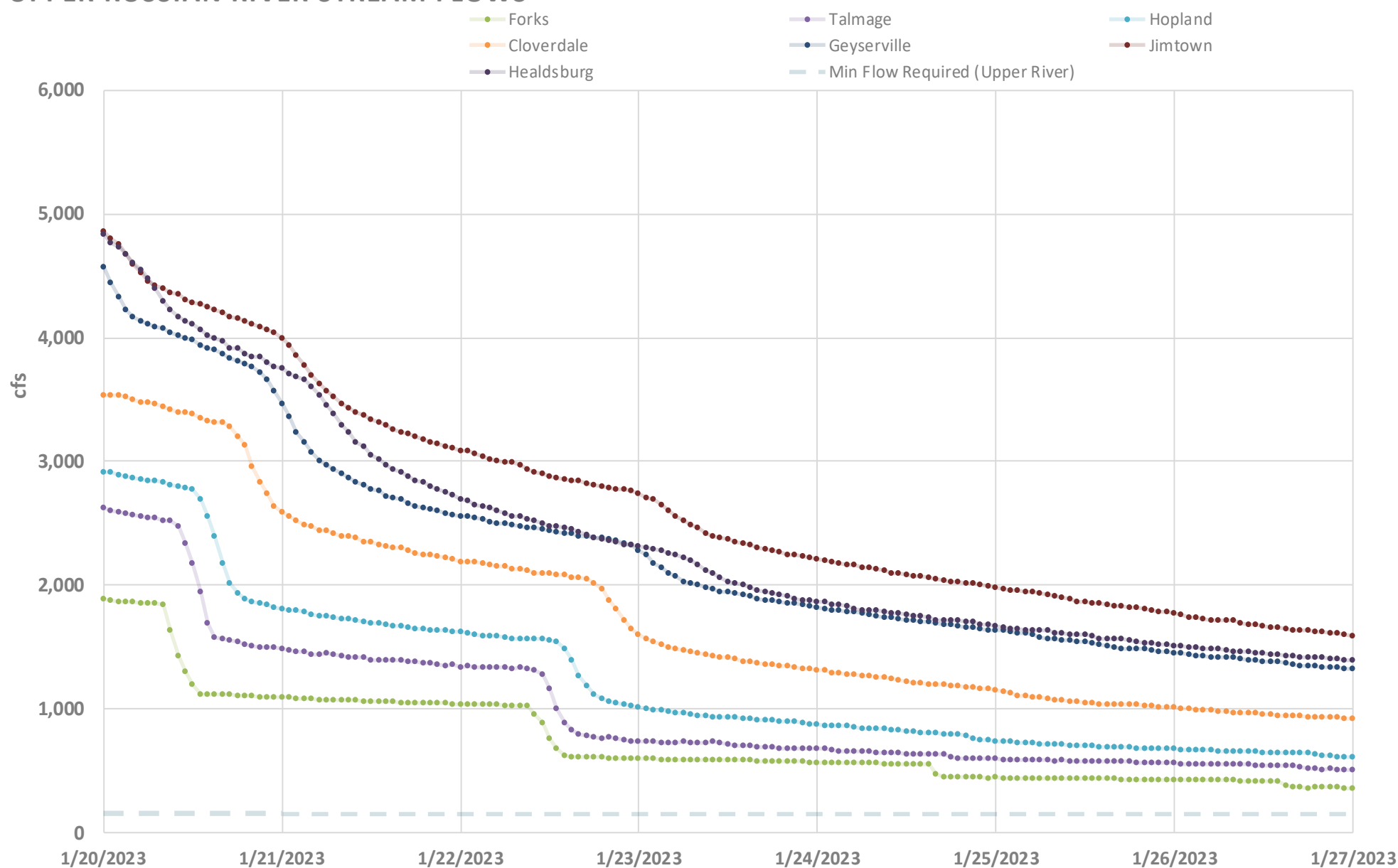
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UPPER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



UPPER RUSSIAN RIVER STREAM FLOWS

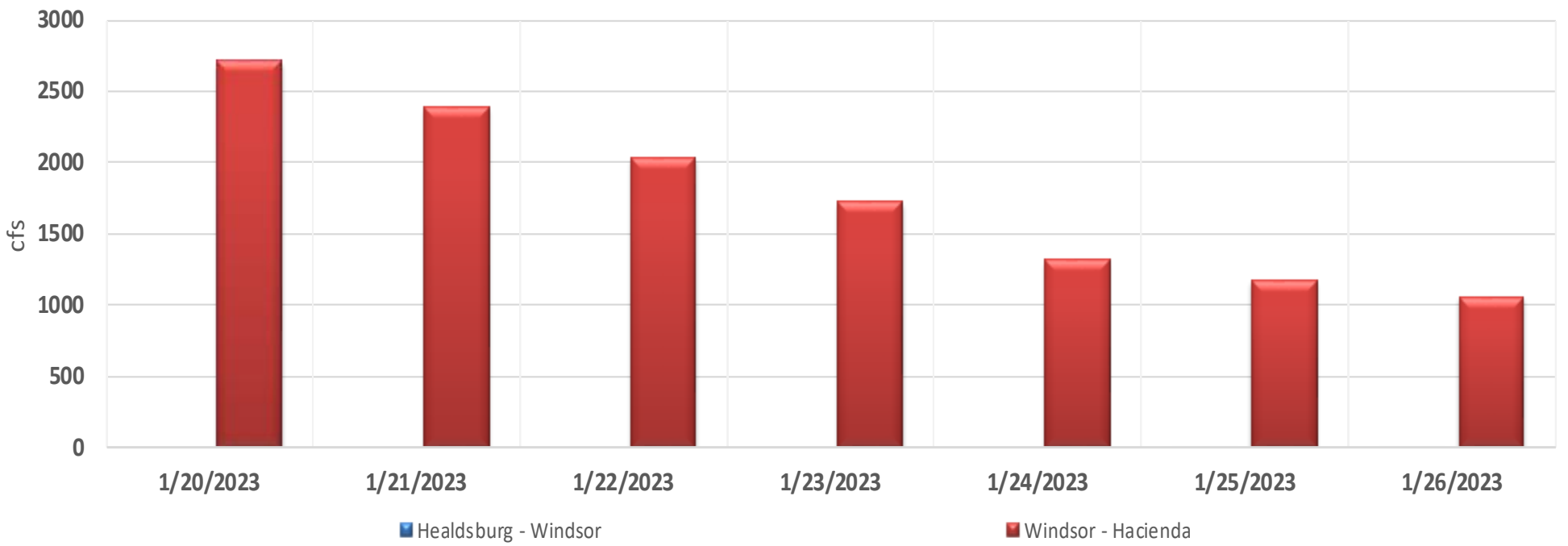


Russian River and Dry Creek Gage Locations for Term 7 December 2022 TUCO Water Accounting Report

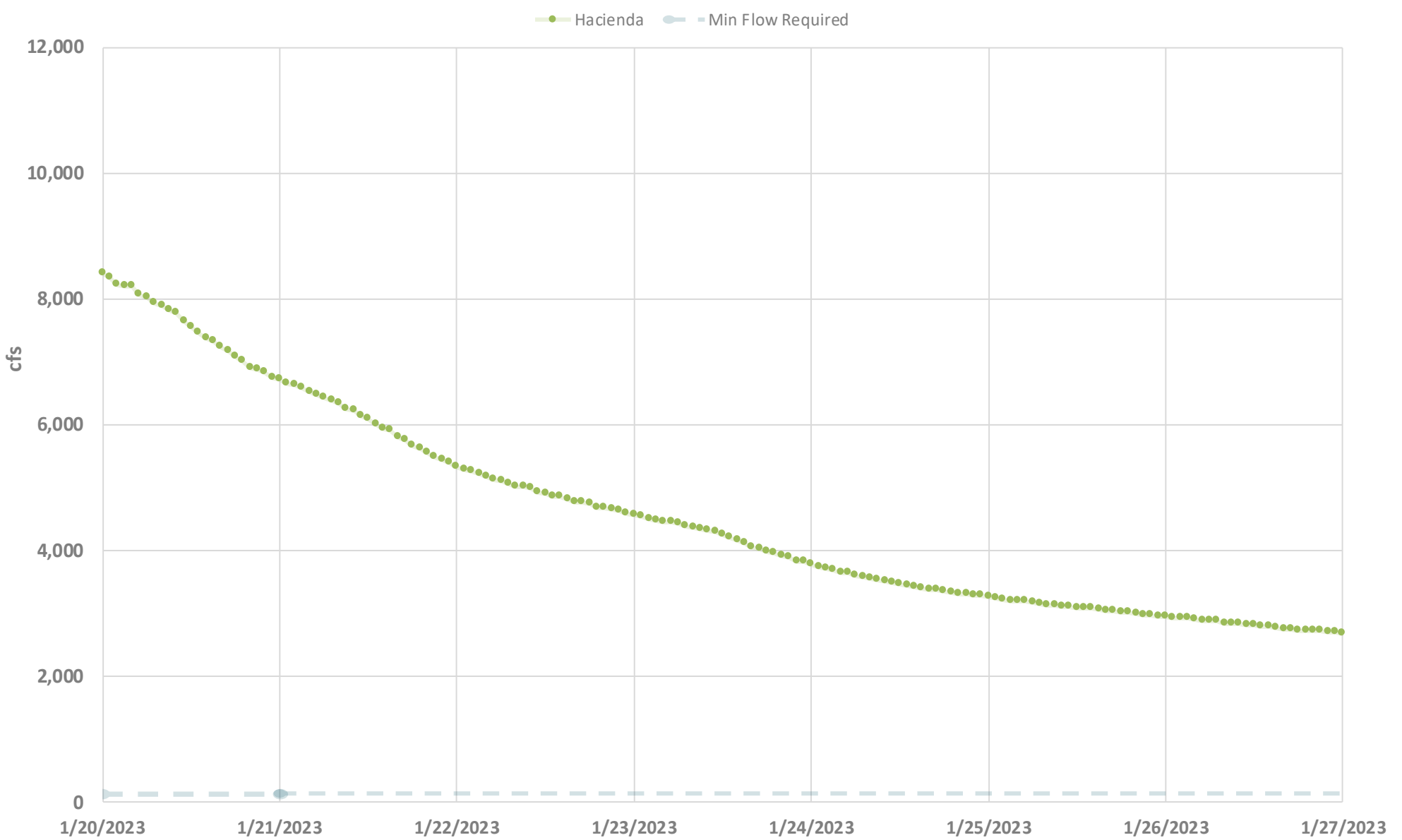
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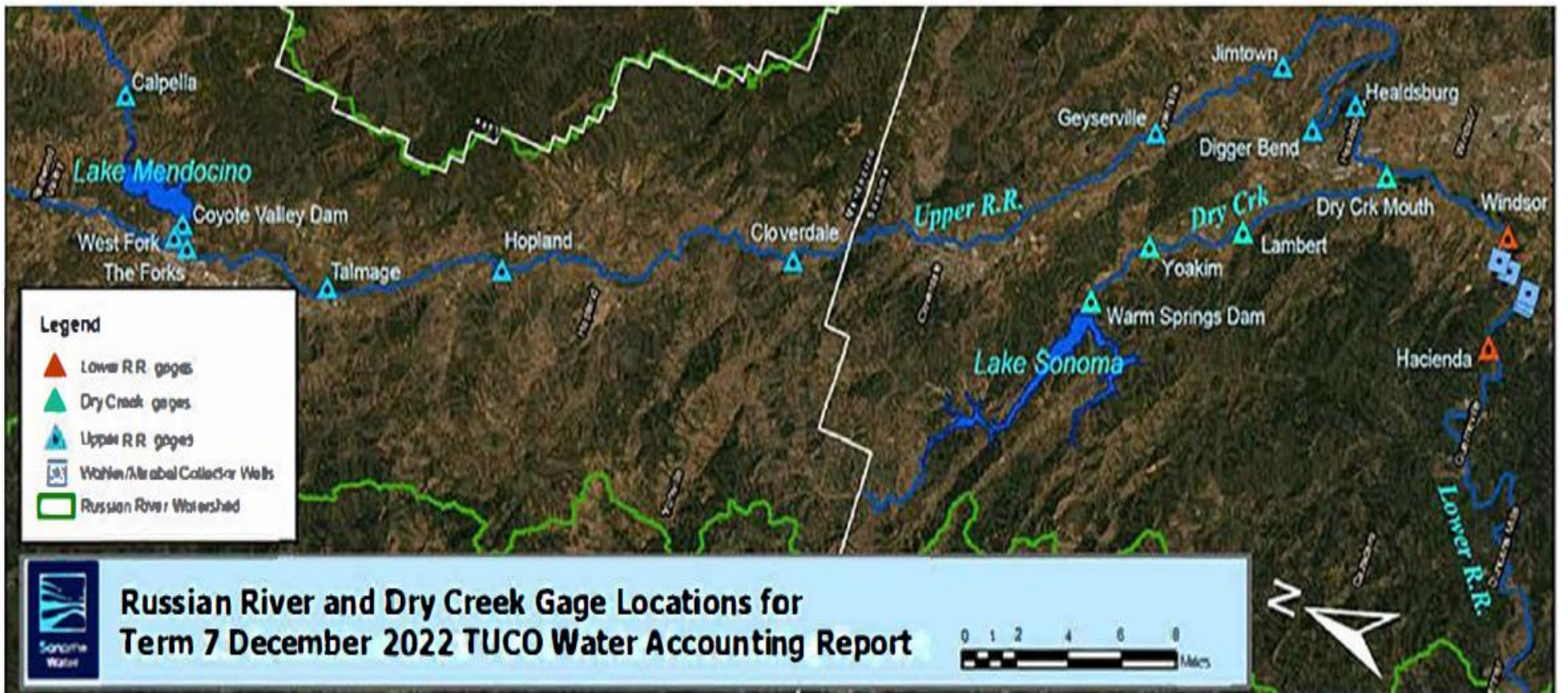
LOWER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



LOWER RUSSIAN RIVER STREAM FLOWS



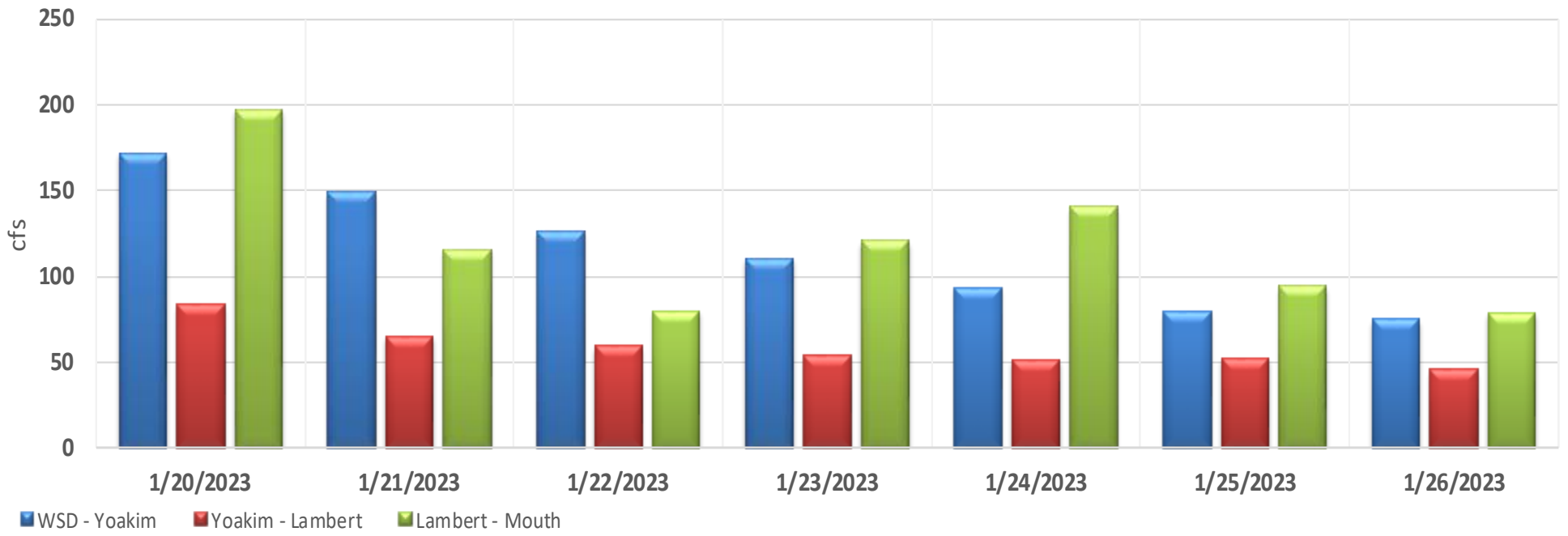
Note: Winsor gage is a seasonal gage and currently not operational. Winsor – Hacienda reach gain/loss is calculated with Healdsburg gages as the upstream gage.



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



DRY CREEK STREAM FLOWS

