

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

Report Date: 12/30/2022

Units are cfs unless noted otherwise

	<u>12/23/2022</u>	<u>12/24/2022</u>	<u>12/25/2022</u>	<u>12/26/2022</u>	<u>12/27/2022</u>	<u>12/28/2022</u>	<u>12/29/2022</u>
I. Upper East Fork Reach							
Potter Valley Project							
Tunnel Diversion	12.0	11.0	11.0	11.0	34.0	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	1.0	1.0	1.1	1.2	3.4	1.2	1.6
East Fork Release	10.0	10.0	10.0	10.0	31.0	44.0	43.0
PVID E Fork Diversions	9.0	9.0	8.9	8.8	6.6	8.8	8.4
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)	1.0	1.0	1.1	1.2	24.4	35.2	34.6
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	17.8	17.1	17.0	19.2	1,938.3	269.2	355.3
Net Reach Loss(-)/Gain(+)	+5.8	+6.1	+6.0	+8.2	+1,904.3	+224.2	+310.3
Unimpaired Natural Flow @ Calpella (est.)	6.0	6.0	5.7	5.7	15.2	262.0	95.2
Non-PVID East Fork Net Reach Losses (est.)	15.8	16.1	16.0	18.2	1914.3	234.2	320.3
Natural Flow	14.7	15.1	14.9	17.0	1889.8	198.9	285.7
Import (neg. value is return flow)	1.0	1.0	1.1	1.2	24.4	35.2	34.6
II. Lake Mendocino							
Reservoir Operations							
Calculated Inflow (ac-ft)	41	55	43	174	3,760	374	917
(cfs)	20	28	22	88	1,896	188	462
Natural Flow	19	27	20	86	1,871	153	428
Import	1	1	1	1	24	35	35
Storage Change (ac-ft)	-14.0	+0.0	-13.0	+119.0	+3,705.0	+319.0	+863.0
(cfs)	-7	+0	-7	+60	+1,868	+161	+435
Stored Natural Flow (cfs)	0	0	0	60	1,868	153	428
Stored Import Water (cfs)	0	0	0	0	0	8	7
Evaporation (ac-ft)	3.1	3.1	4.1	3.1	3.3	3.3	2.2
RVCWD Diversion (ac-ft)	0	0	0	0	0	0	0
CVD Release Gage	26	26	26	26	26	26	26
Storage (Project Water)	6	0	4	0	0	0	0
Natural Flow	19	26	20	26	2	0	0
Import Water	1	0	1	0	24	26	26
East Fork Min Instream Flow Requirement	25	25	25	25	25	25	25
Compliance Gage	<i>Rvr mi.</i>						
CVD Release	99.9	26	26	26	26	26	26
CVD Project Water Release to Meet Min Flow Requirement							
Total Pass-through Water	20	26	22	26	26	26	26
Project Water Release Required	Yes	No	Yes	No	No	No	No
III. Upper Russian River Reach							
Minimum Instream Flow Requirement	25	25	25	25	25	25	25
Controlling Compliance Gage							
Min Gage Flow	34	34	33	34	2,541	438	403
Controlling Gage	Forks	Forks	Forks	Forks	Forks	Forks	Forks
All Compliance Gages							
Forks (CVD + USGS 11461000)	99.0	34	34	33	34	2,541	438
Talmage (USGS 11462080)	96.1	56	55	54	55	3,332	589
Hopland (USGS 11462500)	84.8	54	52	50	49	3,816	906
Cloverdale (USGS 11463000)	70.9	80	76	73	71	4,017	1,975
Geyserville (USGS 11463500)	54.4	117	109	102	95	4,082	3,712
Jimtown (USGS 11463682)	48.5	125	116	110	105	3,095	4,049
Digger Bend (USGS 11463980)	38.2	175	164	155	149	>400 cfs	>400 cfs
Healdsburg (USGS 11464000)	35.6	169	157	148	145	2,893	4,852
Net Reach Loss(-)/Gain(+)							
Forks - Talmage	+22	+21	+21	+23	+888	+83	+186
Talmage - Hopland	-2	-3	-4	-4	+634	+208	+138
Hopland - Cloverdale	+25	+24	+22	+29	+1,020	+375	+360
Cloverdale - Jimtown	+43	+39	+36	+35	+1,189	+337	+514
Jimtown - Digger Bend	+49	+47	+44	+43	n/d	n/d	n/d
Digger Bend - Healdsburg *when Digger Bend > 400 cfs, next u/s gage (Jimtown) used	+43	+40	+37	+40	+443	+385	+164
Upper Russian Net Reach Loss/Gain	+181	+168	+157	+166	+4,174	+1,388	+1,361
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	20	26	22	26	26	26	26
Project Water Release Required	Yes	No	Yes	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).

IV. Lake Sonoma

Lake Sonoma

Storage Change (ac-ft)	-128.0	-128.0	-113.0	+99.0	+6,080.0	+758.0	+895.0
(cfs)	-65	-65	-57	+50	+3,065	+382	+451
Evaporation (ac-ft)	3.3	3.3	3.3	3.3	2.3	3.4	2.3
Inflow (Natural Flow)	14	14	22	130	3,149	462	532
WSD Release Gage	77	77	77	78	83	78	80
Storage (Project Water)	63	63	55	0	0	0	0
Natural Flow	14	14	22	78	83	78	80

V. Lower Dry Creek Reach

Minimum Instream Flow Requirement

	75	75	75	75	75	75	75
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Controlling Compliance Gage

Min Gage Flow	77	77	77	78	83	78	80
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	77	77	77	78	83	80
Yoakim (USGS 11465200)	11.1	95	94	94	94	520	157
Lambert (USGS 11465240)	6.8	83	83	82	83	513	165
Dry Crk Mouth (USGS 11465350)	0.1	86	84	83	87	1,359	135

WSD to Russian River Confluence Reach Analysis

Total Pass-through Water	14	14	22	78	83	78	80
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Net Reach Loss(-)/Gain(+)

WSD - Yoakim	+18	+17	+17	+17	+436	+118	+80
Yoakim - Lambert	-12	-11	-12	-11	+9	+4	+9
Lambert - Dry Crk Mouth	+3	+2	+1	+6	+884	+138	-29
WSD - Dry Crk Mouth	+9	+7	+6	+13	+1,328	+260	+60

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	Yes	Yes	Yes	No	No	No	No

VI. Russian River - Dry Creek Confluence

Upper Russian River Flow (Healdsburg Gage)

L. Mendocino Project Water + Import Water	7	0	6	0	24	26	26
Natural Flow	200	193	177	192	4,176	1,388	1,361

Dry Creek Flow (Mouth Gage)

L. Sonoma Project Water	63	63	55	0	0	0	0
Natural Flow	23	22	28	87	1,359	374	135

Russian River d/s of Confluence Flow

	255	242	231	232	4,252	5,226	1,818
L. Mendocino Project Water + Import Water	7	0	6	0	24	26	26
L. Sonoma Project Water	63	63	55	0	0	0	0
Natural Flow	223	215	205	279	5,535	1,762	1,496

VII. Lower Russian River Reach

Minimum Instream Flow Requirement

	35	35	35	35	35	35	35
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Controlling Compliance Gage

Min Gage Flow	305	285	262	277	6,020	6,760	6,090
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>
Hacienda (USGS 11467000)	21.8	305	285	262	277	6,020	6,090

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	350	345	317	326	6,066	6,817	6,148
Net Reach Loss(-)/Gain(+)	+95	+103	+86	+94	+1,814	+1,590	+4,330
L. Mendocino Project Water + Import Water	7	0	6	0	24	26	26
L. Sonoma Project Water	61	61	53	0	0	0	0
Natural Flow	319	318	291	372	7,350	3,353	5,826

Confluence to Hacienda (Guerneville) Reach Analysis

Net Reach Loss(-)/Gain(+)	+50	+43	+31	+45	+1,768	+1,534	+4,272
L. Mendocino Project Water + Import Water	7	0	6	0	24	26	26
L. Sonoma Project Water	15	1	0	0	0	0	0
Natural Flow	319	318	289	324	7,303	3,296	5,768

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

Lower Russian River

Sonoma Water Total	90.1	118.2	110.0	96.4	91.6	112.8	114.9
Wohler	43.4	74.2	62.8	48.7	44.3	65.9	66.8
Mirabel	46.7	44.0	47.2	47.7	47.3	46.9	48.0
Town of Windsor River Wellfield	4.6	4.3	3.8	4.2	4.6	5.1	4.6
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

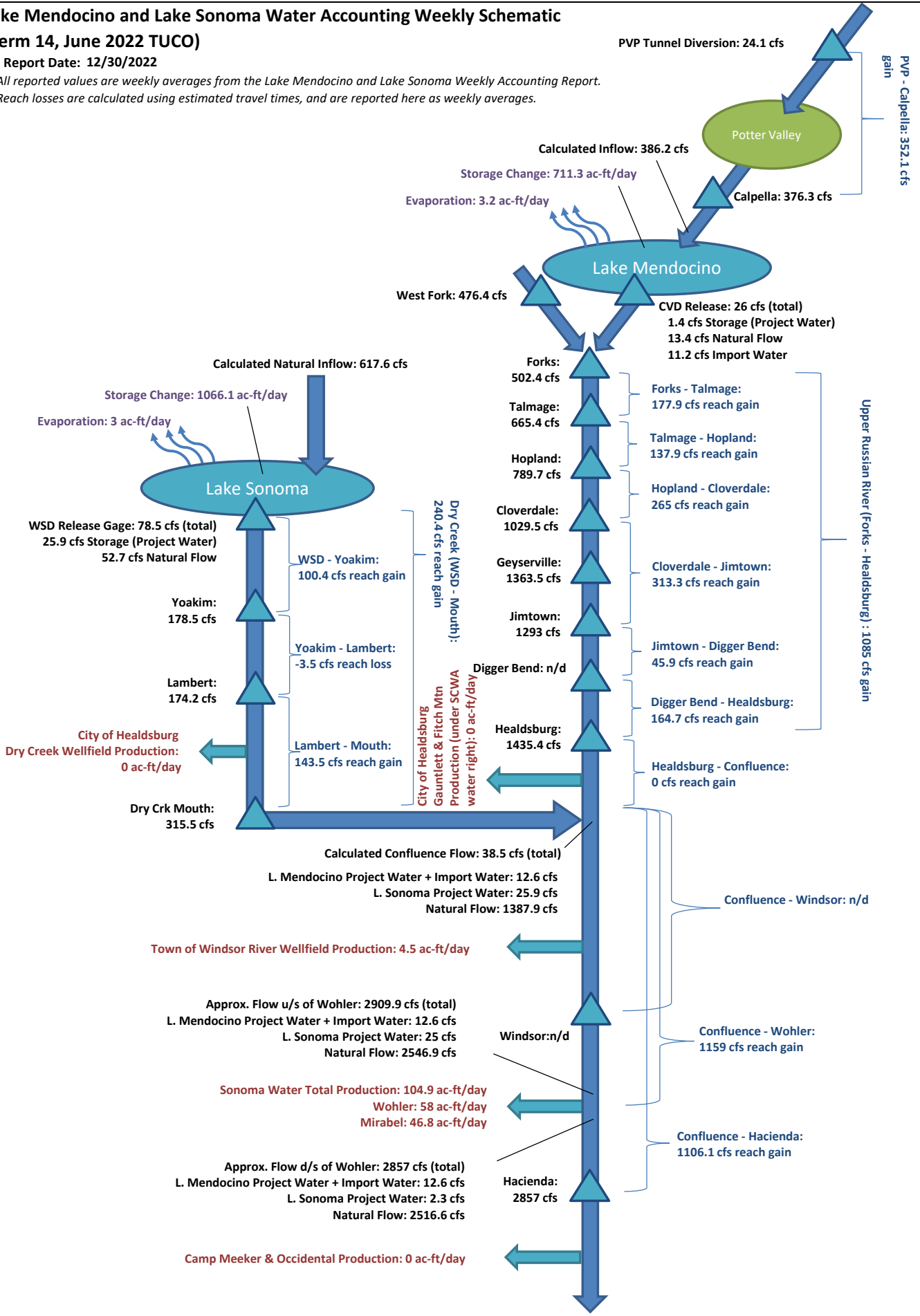
Notes:
 - Water Accounting for the Lower Russian River and Dry Creek is an analysis that approximates the current conditions based on the methodology in Term 12 (6/14/21 Order) report. Values listed include estimated values where measurements are not currently available (red italics).

Lake Mendocino and Lake Sonoma Water Accounting Weekly Schematic

(Term 14, June 2022 TUCO)

Report Date: 12/30/2022

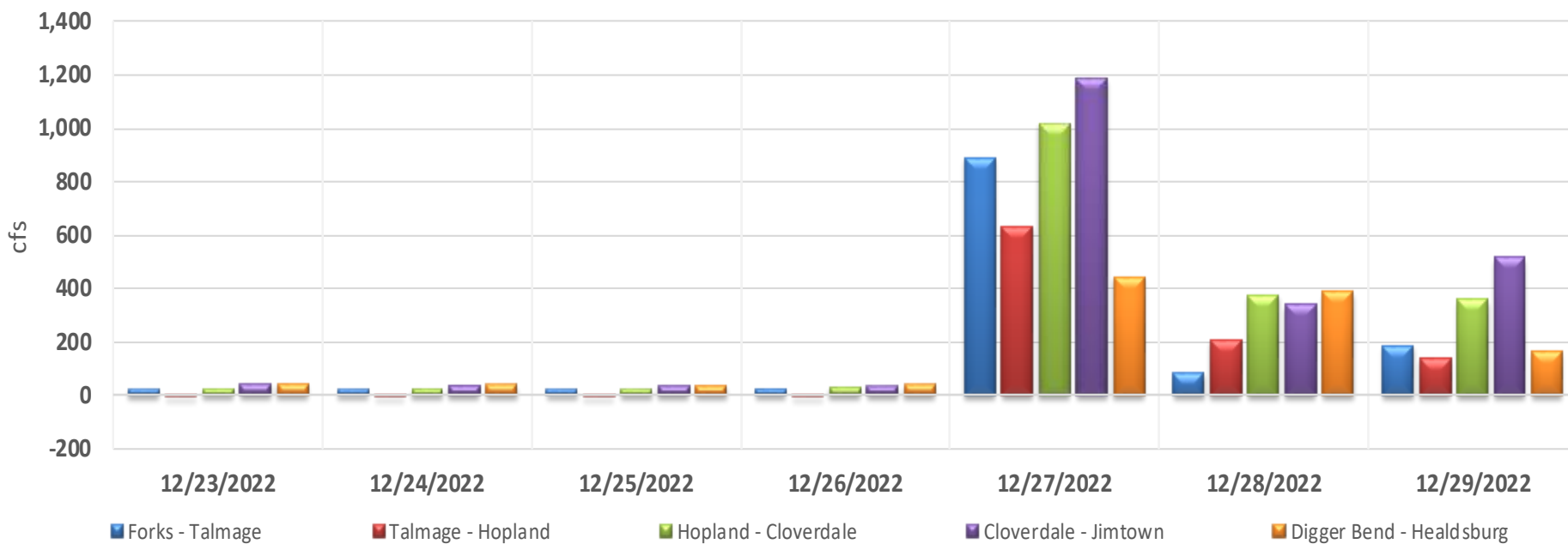
All reported values are weekly averages from the Lake Mendocino and Lake Sonoma Weekly Accounting Report.
Reach losses are calculated using estimated travel times, and are reported here as weekly averages.



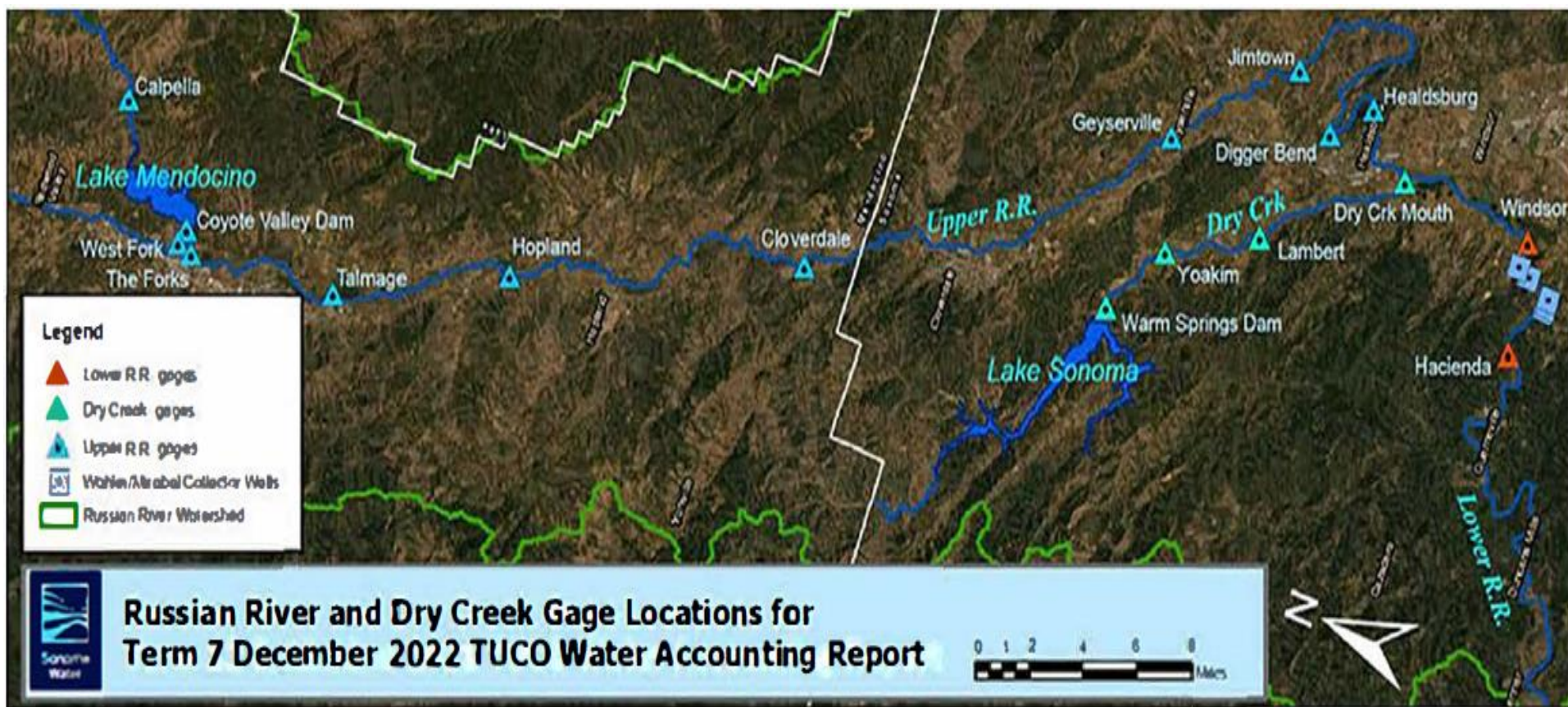
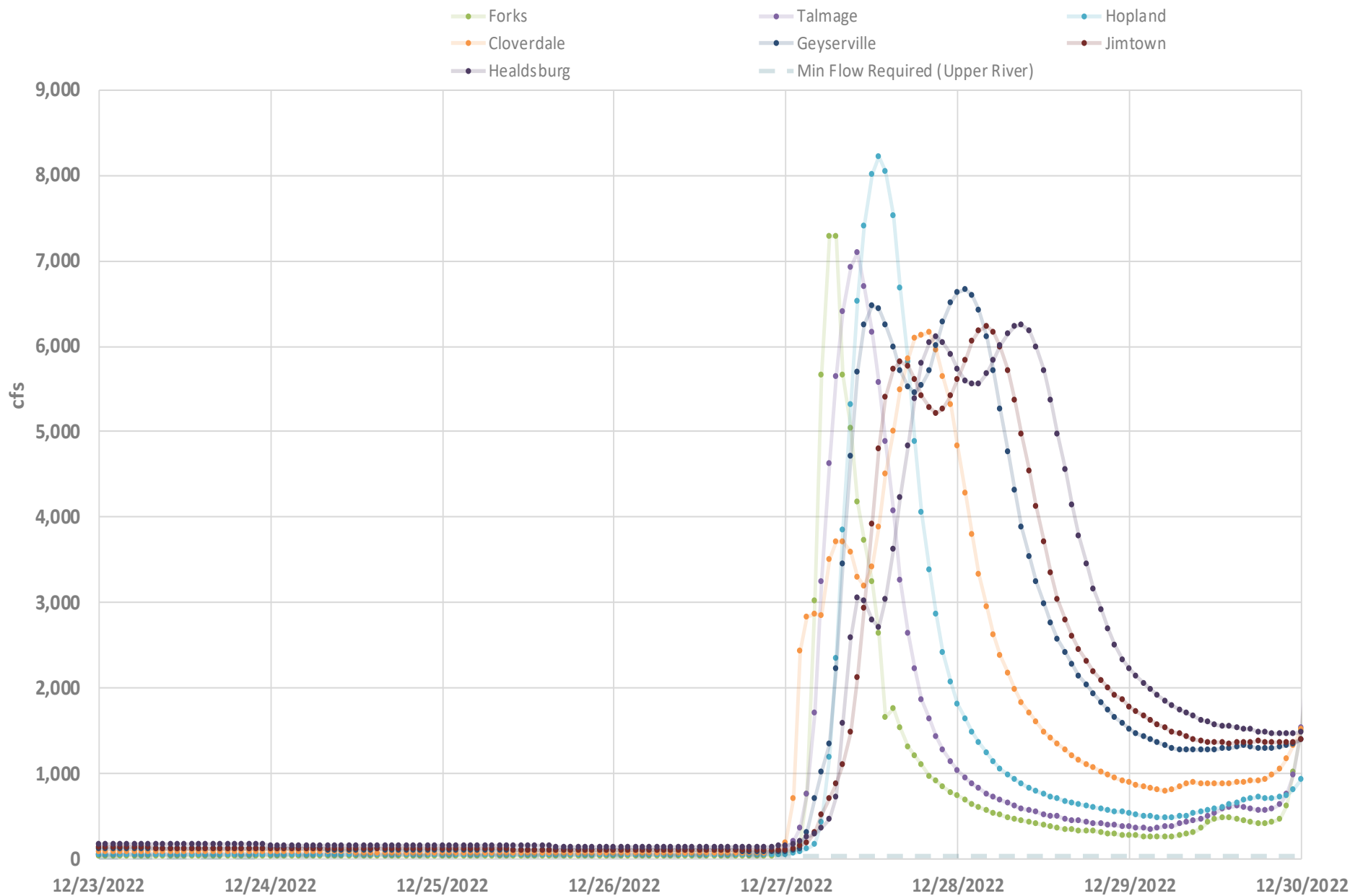
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UPPER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



UPPER RUSSIAN RIVER STREAM FLOWS

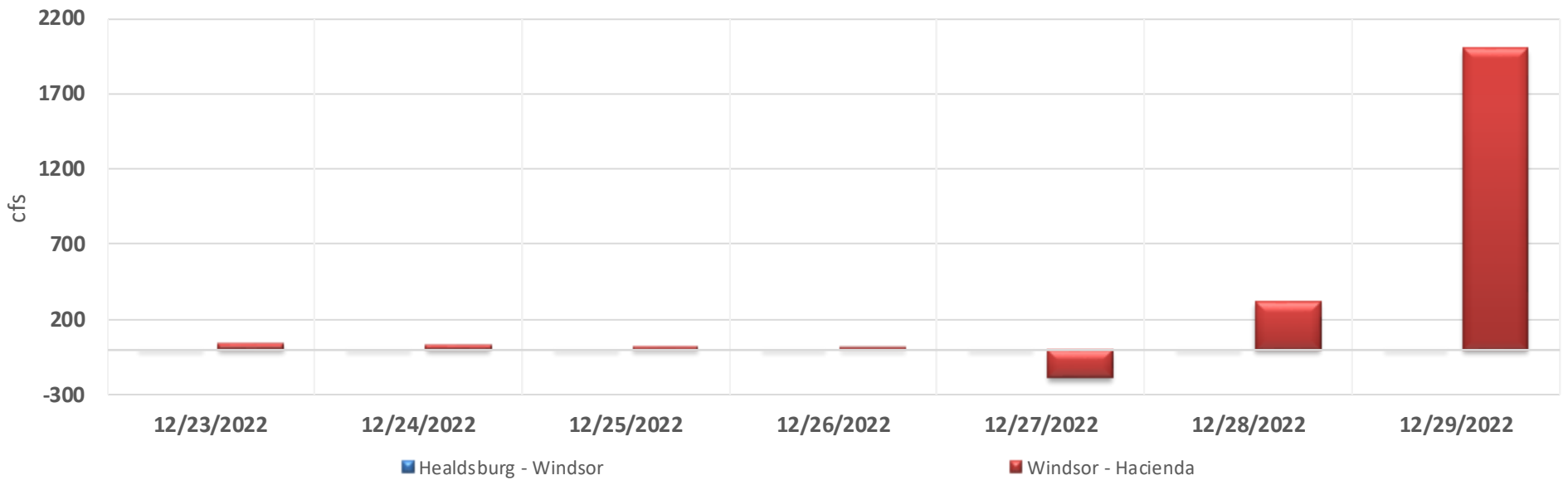


Russian River and Dry Creek Gage Locations for Term 7 December 2022 TUCO Water Accounting Report

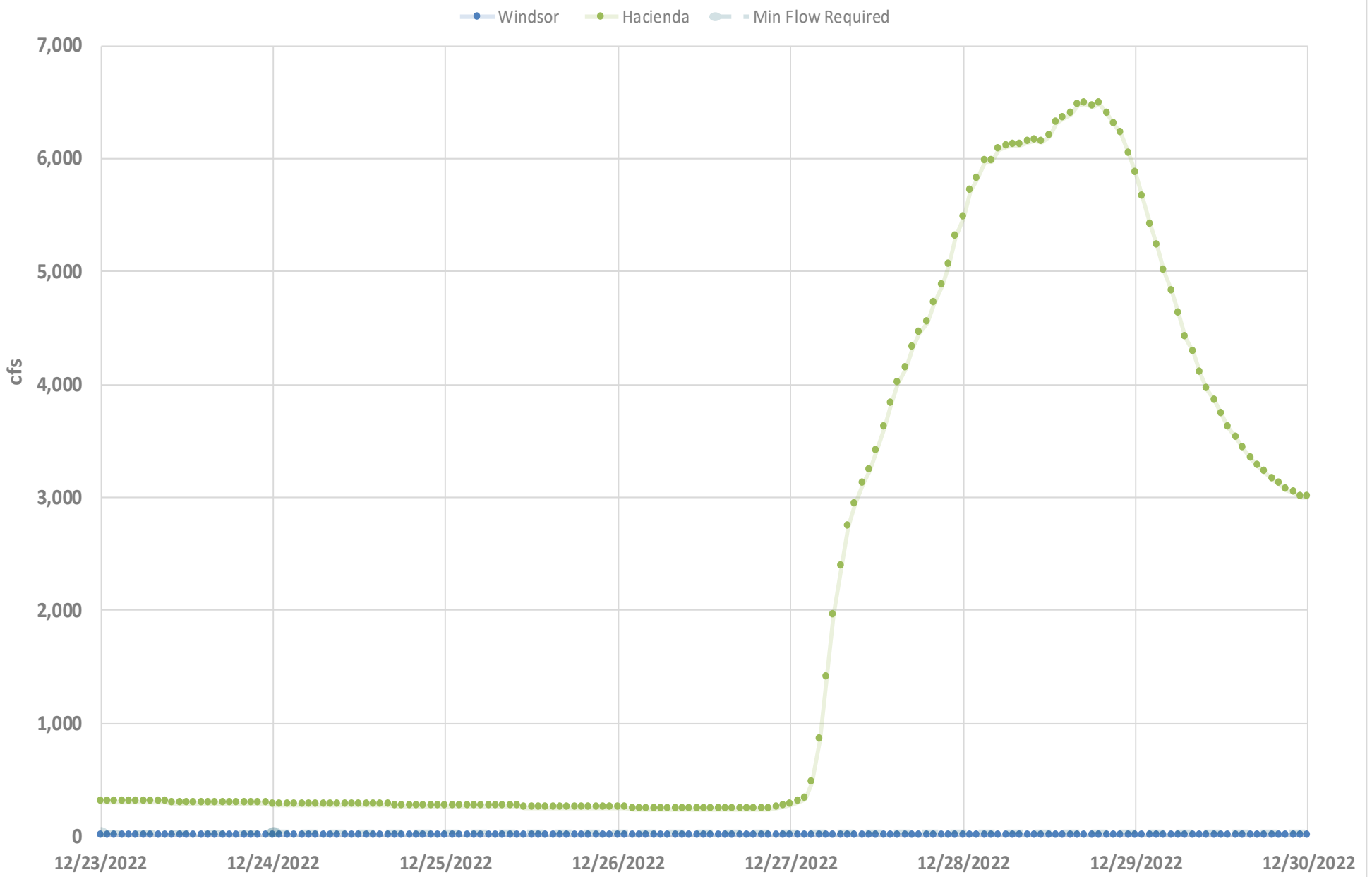
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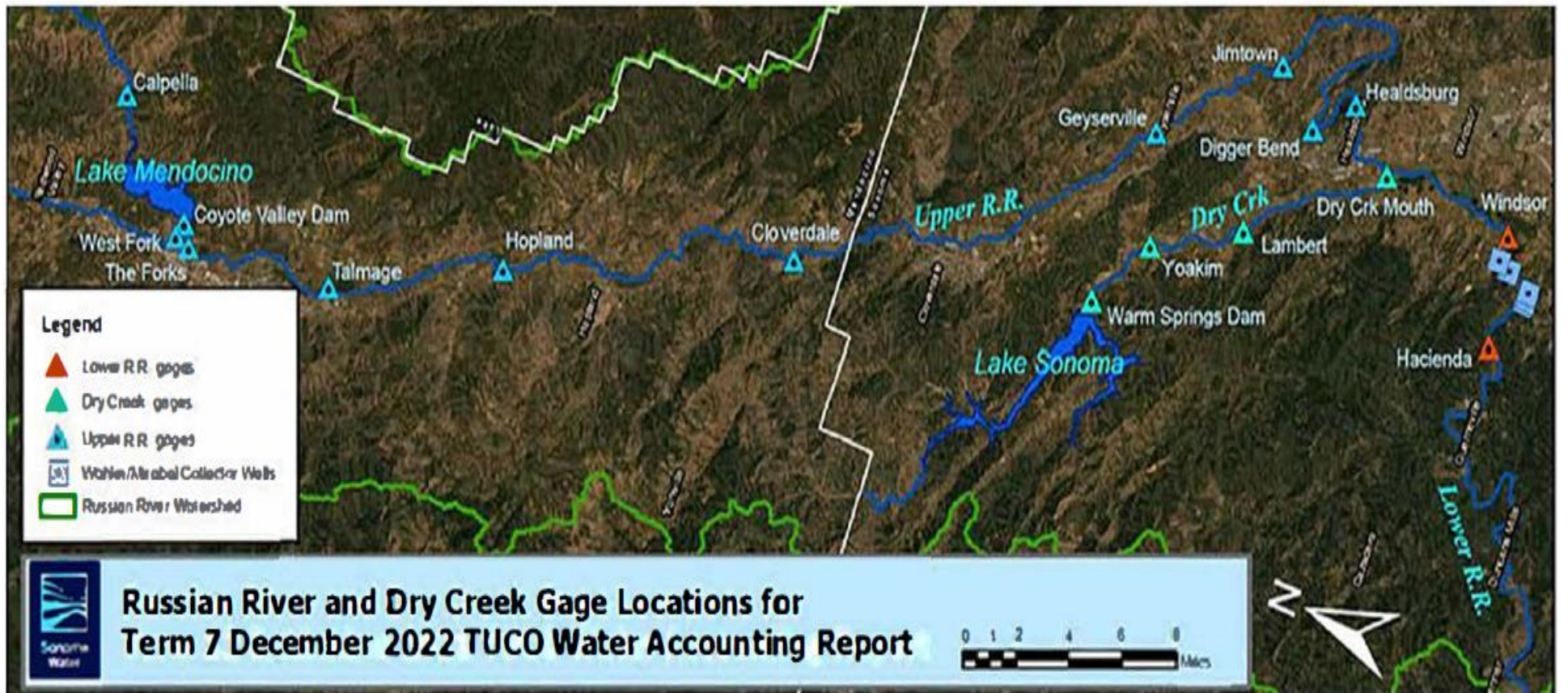
LOWER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



LOWER RUSSIAN RIVER STREAM FLOWS



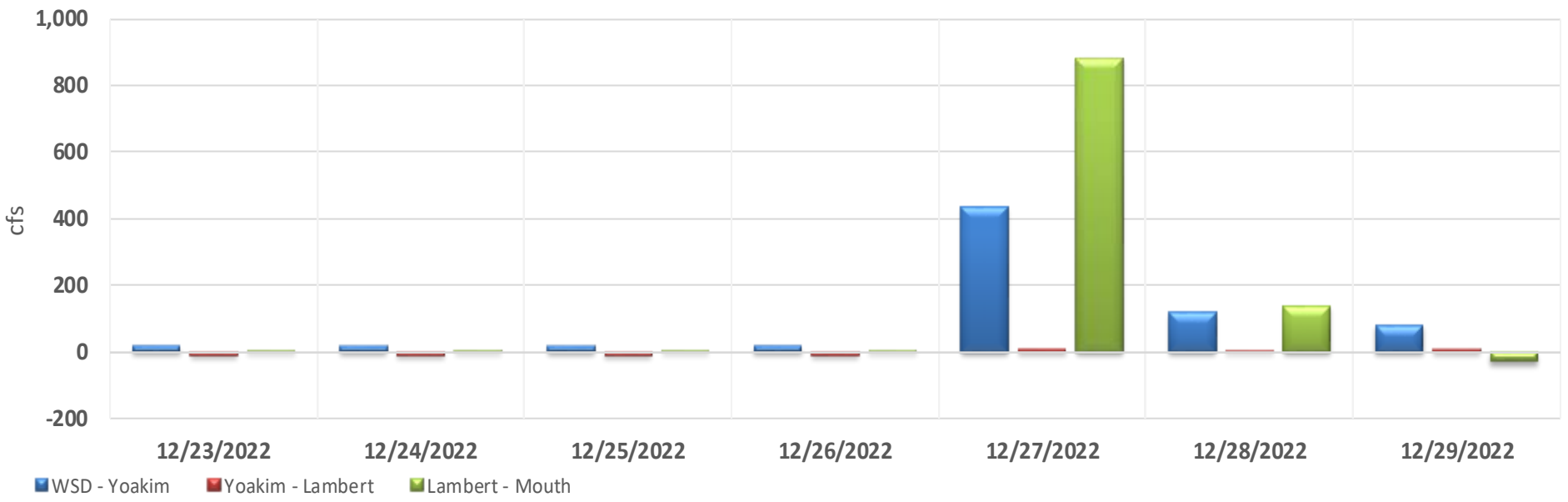
Note: Windsor gage is a seasonal gage and currently not operational. Windsor – Hacienda reach gain/loss is calculated with Healdsburg gages as the upstream gage.



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



DRY CREEK STREAM FLOWS

