

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

Report Date: 3/24/2023

Units are cfs unless noted otherwise

	3/17/2023	3/18/2023	3/19/2023	3/20/2023	3/21/2023	3/22/2023	3/23/2023
I. Upper East Fork Reach							
Potter Valley Project							
Tunnel Diversion	45.0	47.0	46.0	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	1.1	1.1	1.0	0.8	0.8	0.7	0.7
East Fork Release	44.0	46.0	45.0	44.0	44.0	44.0	44.0
PVID E Fork Diversions	9.0	8.9	9.0	9.2	9.2	9.3	9.3
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)	35.1	37.1	36.0	34.8	34.8	34.7	34.7
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	441.5	354.9	506.4	390.8	332.9	295.8	257.0
Net Reach Loss(-)/Gain(+)	+396.5	+307.9	+460.4	+345.8	+287.9	+250.8	+212.0
Unimpaired Natural Flow @ Calpella (est.)	228.7	164.0	126.3	210.8	146.1	134.4	122.3
Non-PVID East Fork Net Reach Losses (est.)	406.5	317.9	470.4	355.8	297.9	260.8	222.0
Natural Flow	371.5	280.8	434.4	321.0	263.1	226.1	187.3
Import (neg. value is return flow)	35.1	37.1	36.0	34.8	34.8	34.7	34.7
II. Lake Mendocino							
Reservoir Operations							
Calculated Inflow (ac-ft)	705	817	1,177	807	711	592	524
(cfs)	355	412	593	407	358	298	264
Natural Flow	320	375	557	372	324	264	229
Import	35	37	36	35	35	35	35
Storage Change (ac-ft)	-1,232.0	-176.0	+475.0	+493.0	+405.0	+282.0	+212.0
(cfs)	-621	-89	+239	+249	+204	+142	+107
Stored Natural Flow (cfs)	0	0	239	249	204	142	107
Stored Import Water (cfs)	0	0	0	0	0	0	0
Evaporation (ac-ft)	12.8	0.0	4.9	13.8	5.9	9.9	8.9
RVCWD Diversion (ac-ft)	0	0	0	0	0	0	0
CVD Release Gage	970	500	352	151	151	151	153
Storage (Project Water)	615	89	0	0	0	0	0
Natural Flow	320	375	317	120	118	119	120
Import Water	35	37	35	31	33	32	32
East Fork Min Instream Flow Requirement	25	25	25	25	25	25	25
Compliance Gage	<i>Rvr mi.</i>						
CVD Release	99.9	970	500	352	151	151	153
CVD Project Water Release to Meet Min Flow Requirement							
Total Pass-through Water	355	412	351	151	151	151	153
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	1,495	886	874	627	532	473	437
Controlling Gage	Forks	Forks	Forks	Forks	Forks	Forks	Forks
All Compliance Gages							
Forks (CVD + USGS 11461000)	99.0	1,495	886	874	627	532	437
Talmage (USGS 11462080)	96.1	2,298	1,129	1,100	867	767	626
Hopland (USGS 11462500)	84.8	2,922	1,776	1,649	1,378	1,208	911
Cloverdale (USGS 11463000)	70.9	3,958	2,512	2,225	2,020	1,860	1,513
Geyserville (USGS 11463500)	54.4	5,172	3,693	3,235	3,078	2,883	2,638
Jimtown (USGS 11463682)	48.5	5,721	4,043	3,426	3,246	2,964	2,749
Digger Bend (USGS 11463980)	38.2	>400 cfs	>400 cfs	>400 cfs	>400 cfs	>400 cfs	>400 cfs
Healdsburg (USGS 11464000)	35.6	7,371	5,333	4,474	4,294	4,415	4,037
Net Reach Loss(-)/Gain(+)							
Forks - Talmage	+676	+206	+225	+216	+231	+203	+183
Talmage - Hopland	+469	+609	+558	+492	+439	+375	+280
Hopland - Cloverdale	+777	+647	+622	+546	+666	+686	+582
Cloverdale - Jimtown	+1,407	+1,286	+1,230	+1,083	+1,181	+1,666	+1,186
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	+1,495	+1,083	+1,041	+975	+1,532	+2,173	+1,229
Upper Russian Net Reach Loss/Gain	+4,823	+3,832	+3,676	+3,312	+4,048	+5,103	+3,460
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	355	412	351	151	151	151	153
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).

	3/17/2023	3/18/2023	3/19/2023	3/20/2023	3/21/2023	3/22/2023	3/23/2023
IV. Lake Sonoma							
Lake Sonoma							
Storage Change (ac-ft)	-4,588.0	-4,744.0	-2,774.0	-3,248.0	-2,333.0	-2,747.0	-1,878.0
(cfs)	-2,313	-2,392	-1,399	-1,638	-1,176	-1,385	-947
Evaporation (ac-ft)	16.6	11.5	6.5	12.9	4.8	11.2	19.1
Inflow (Natural Flow)	1,579	894	612	376	831	614	488
WSD Release Gage	3883	3280	2007	2007	2005	1993	1425
Storage (Project Water)	2305	2386	1395	1631	1174	1379	937
Natural Flow	1579	894	612	376	831	614	488

V. Lower Dry Creek Reach

Minimum Instream Flow Requirement		75	75	75	75	75	75	75
Controlling Compliance Gage								
Min Gage Flow		3783	3280	2007	2007	2005	1993	1425
Controlling Gage		Lambert	WSD Release	WSD Release	WSD Release	WSD Release	WSD Release	WSD Release
All Compliance Gages								
	<i>Crk mi.</i>							
WSD Release	14.3	3,883	3,280	2,007	2,007	2,005	1,993	1,425
Yoakim (USGS 11465200)	11.1	3,842	3,672	2,518	2,463	2,504	2,555	1,899
Lambert (USGS 11465240)	6.8	3,783	3,819	2,610	2,511	2,545	2,616	2,115
Dry Crk Mouth (USGS 11465350)	0.1	4,310	4,362	3,221	2,506	2,688	2,910	2,394
WSD to Russian River Confluence Reach Analysis								
Total Pass-through Water		1579	894	612	376	831	614	488
Net Reach Loss(-)/Gain(+)								
WSD - Yoakim		-39	+177	+510	+455	+498	+561	+374
Yoakim - Lambert		-46	+82	+93	+47	+47	+59	+162
Lambert - Dry Crk Mouth		+556	+435	+592	-8	+158	+286	+182
WSD - Dry Crk Mouth		+471	+694	+1,195	+494	+703	+905	+718
WSD Project Water Release to Meet Min Flow Requirement								
Net Reach Loss/Gain to Controlling Gage		-85	+0	+0	+0	+0	+0	+0
Project Water Release Required		Yes	Yes	Yes	Yes	Yes	Yes	Yes

VI. Russian River - Dry Creek Confluence

Upper Russian River Flow (Healdsburg Gage)								
L. Mendocino Project Water + Import Water		650	126	35	31	33	32	32
Natural Flow		5,143	4,206	3,993	3,432	4,166	5,222	3,580
Dry Creek Flow (Mouth Gage)								
L. Sonoma Project Water		2,305	2,386	1,395	1,631	1,174	1,379	937
Natural Flow		2,049	1,976	1,826	875	1,534	1,531	1,457
Russian River d/s of Confluence Flow								
L. Mendocino Project Water + Import Water		650	126	35	31	33	32	32
L. Sonoma Project Water		2,305	2,386	1,395	1,631	1,174	1,379	937
Natural Flow		7,193	6,182	5,818	4,307	5,700	6,752	5,037

VII. Lower Russian River Reach

Minimum Instream Flow Requirement		125	125	125	125	125	125	125
Controlling Compliance Gage								
Min Gage Flow		16,900	12,400	9,620	8,400	9,110	13,000	12,200
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	16,900	12,400	9,620	8,400	9,110	13,000	12,200
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		16,929	12,444	9,664	8,444	9,153	13,025	12,227
Net Reach Loss(-)/Gain(+)		+5,249	+2,750	+1,969	+1,644	+2,050	+4,280	+5,797
L. Mendocino Project Water + Import Water		650	126	35	31	33	32	32
L. Sonoma Project Water		2,303	2,384	1,394	1,629	1,172	1,378	935
Natural Flow		12,442	8,932	7,788	5,951	7,749	11,032	10,833
Confluence to Hacienda (Guerneville) Reach Analysis								
Net Reach Loss(-)/Gain(+)		+5,220	+2,705	+1,925	+1,600	+2,007	+4,255	+5,769
L. Mendocino Project Water + Import Water		650	126	35	31	33	32	32
L. Sonoma Project Water		2,274	2,340	1,349	1,585	1,129	1,352	908
Natural Flow		12,442	8,932	7,788	5,951	7,749	11,032	10,833

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

Lower Russian River								
Sonoma Water Total		58.4	87.9	87.9	87.9	84.6	50.2	54.4
Wohler		10.2	38.7	39.6	38.2	35.6	2.2	28.7
Mirabel		48.2	49.1	48.3	49.7	48.9	48.0	25.8
Town of Windsor River Wellfield		3.5	3.1	3.1	3.3	3.4	3.4	3.4
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

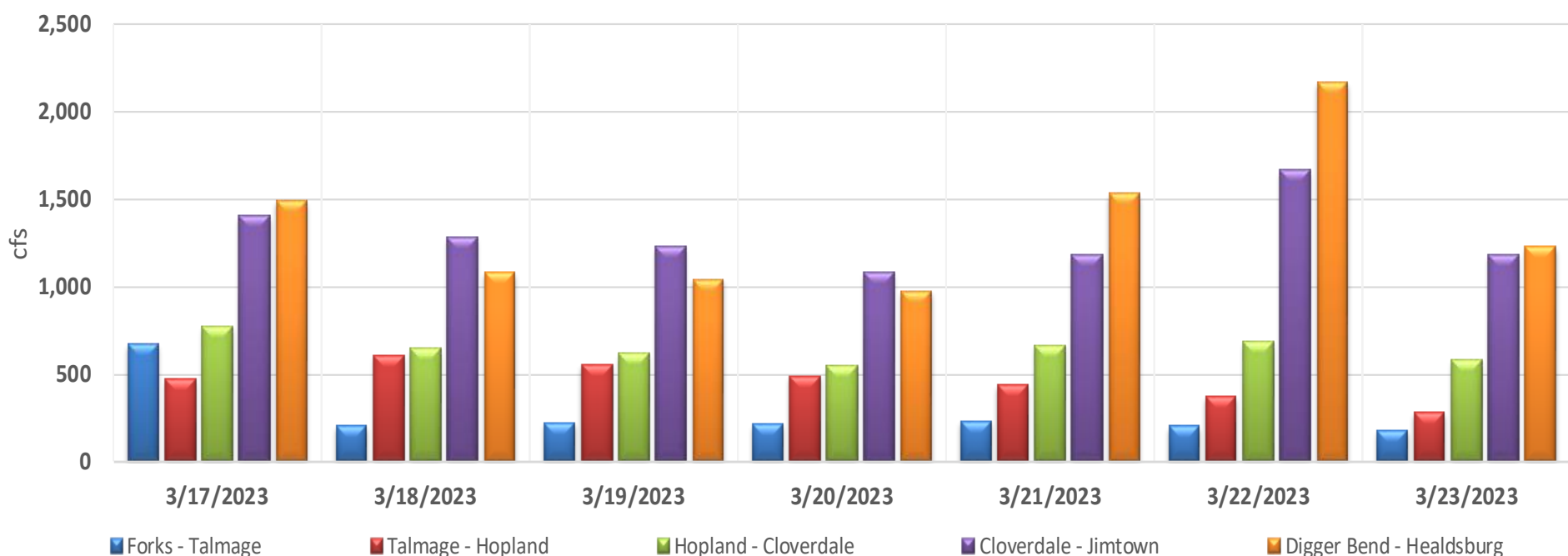
Notes:

- 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).

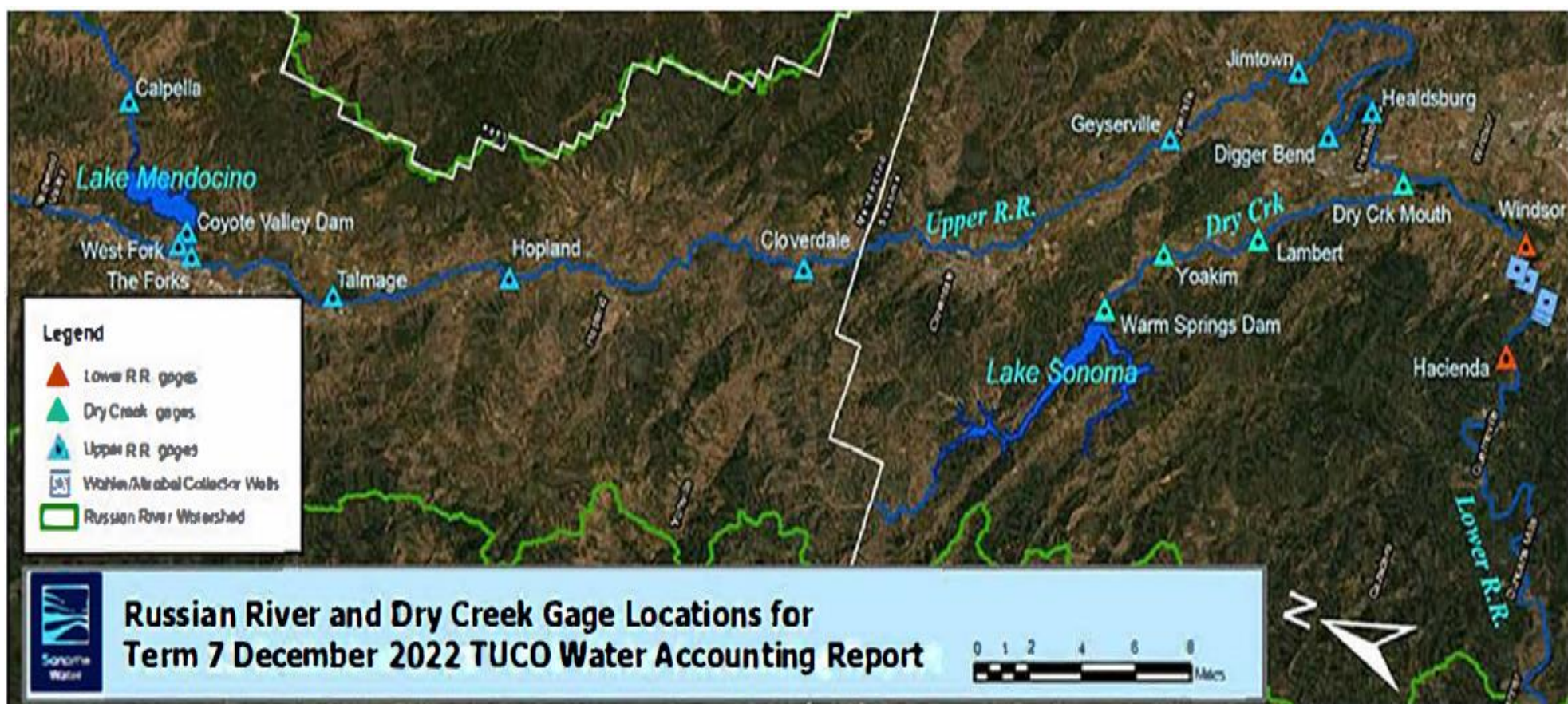
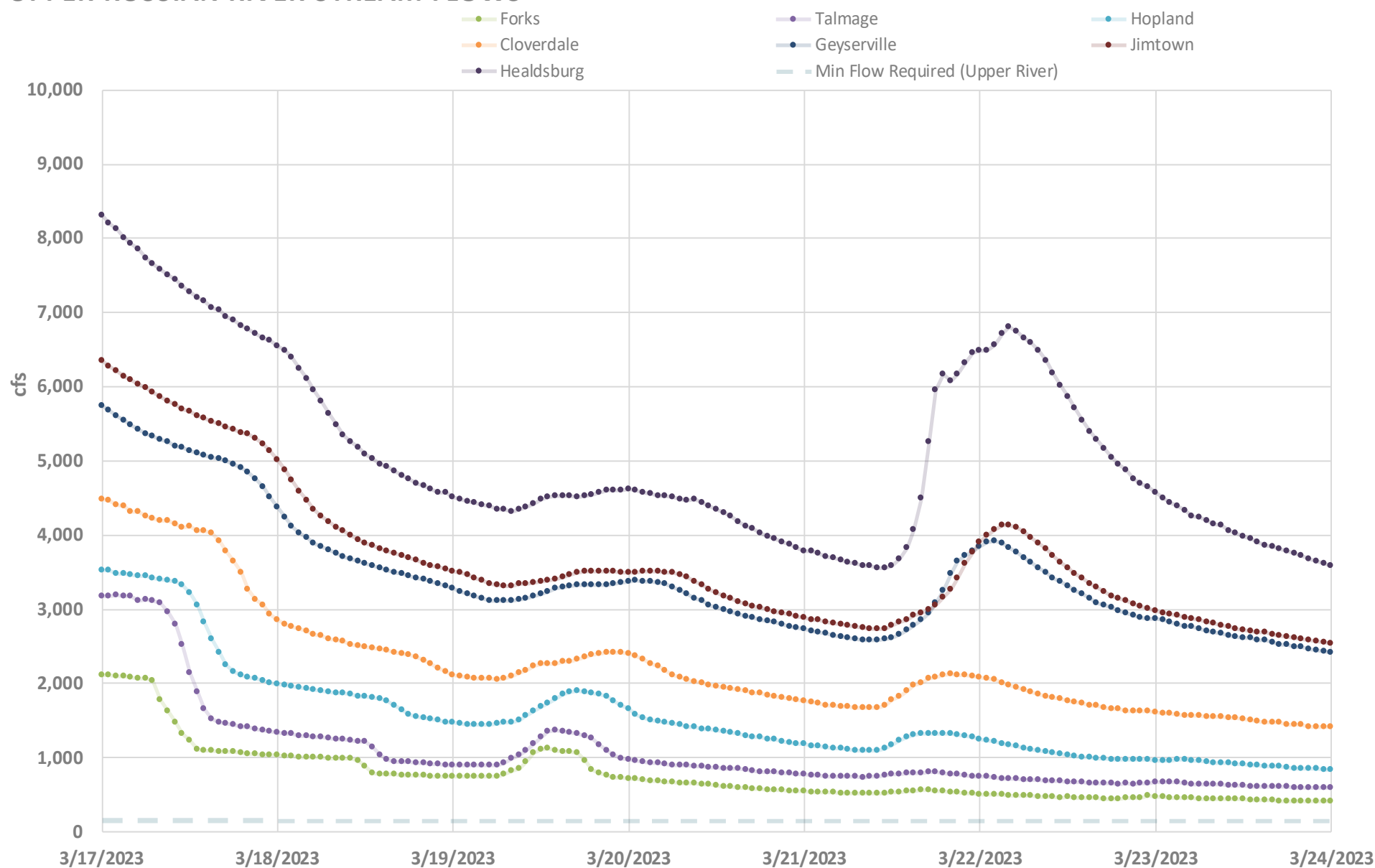
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UPPER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



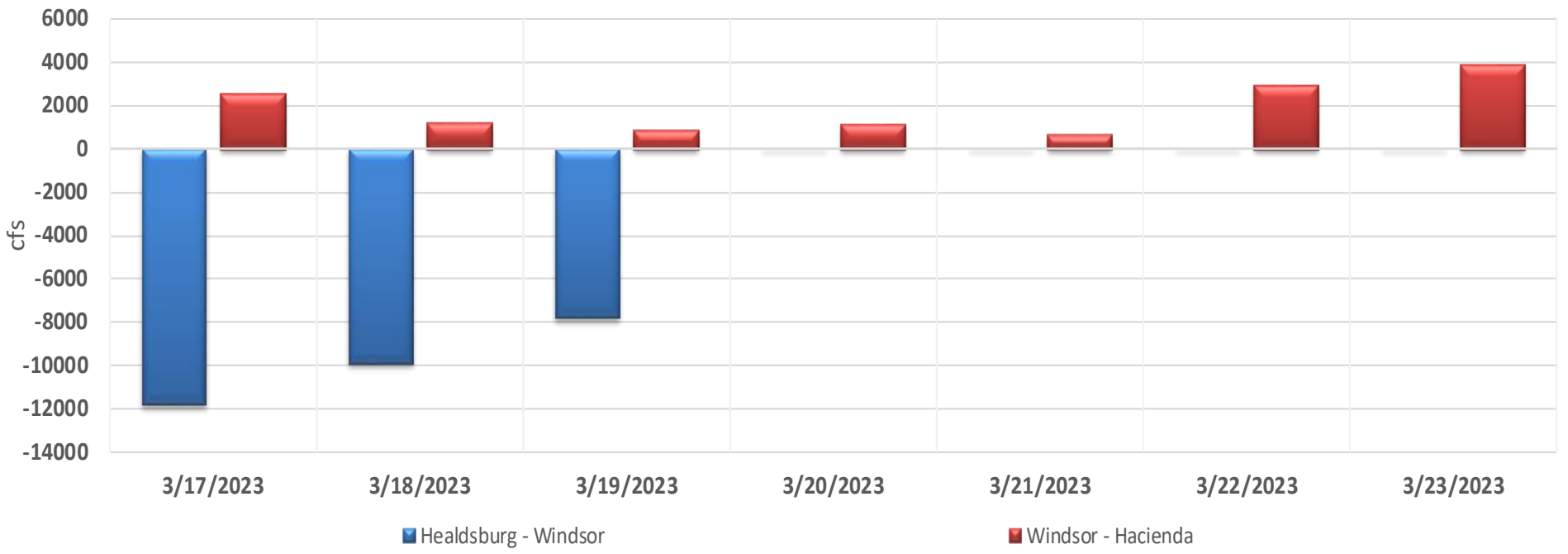
UPPER RUSSIAN RIVER STREAM FLOWS



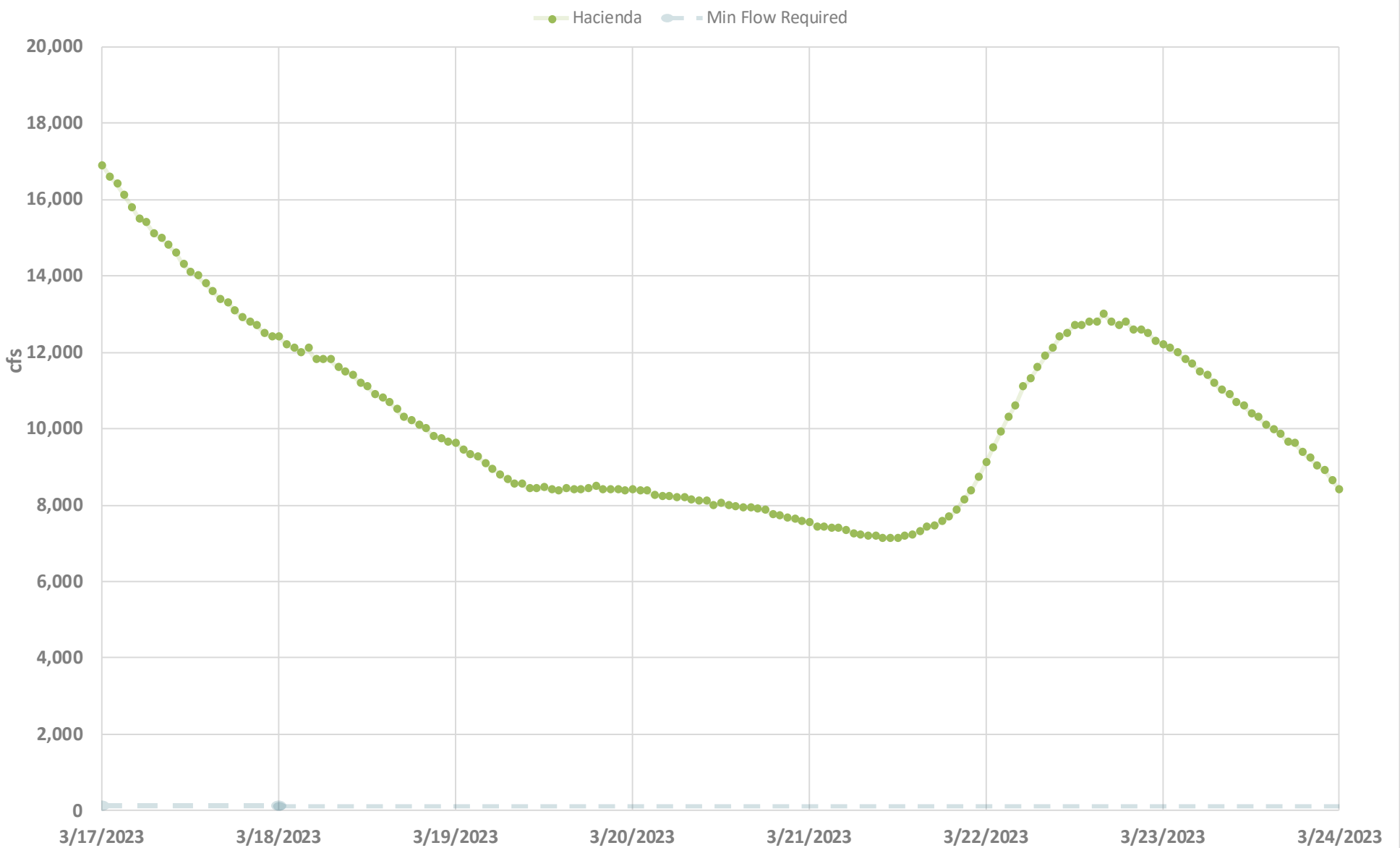
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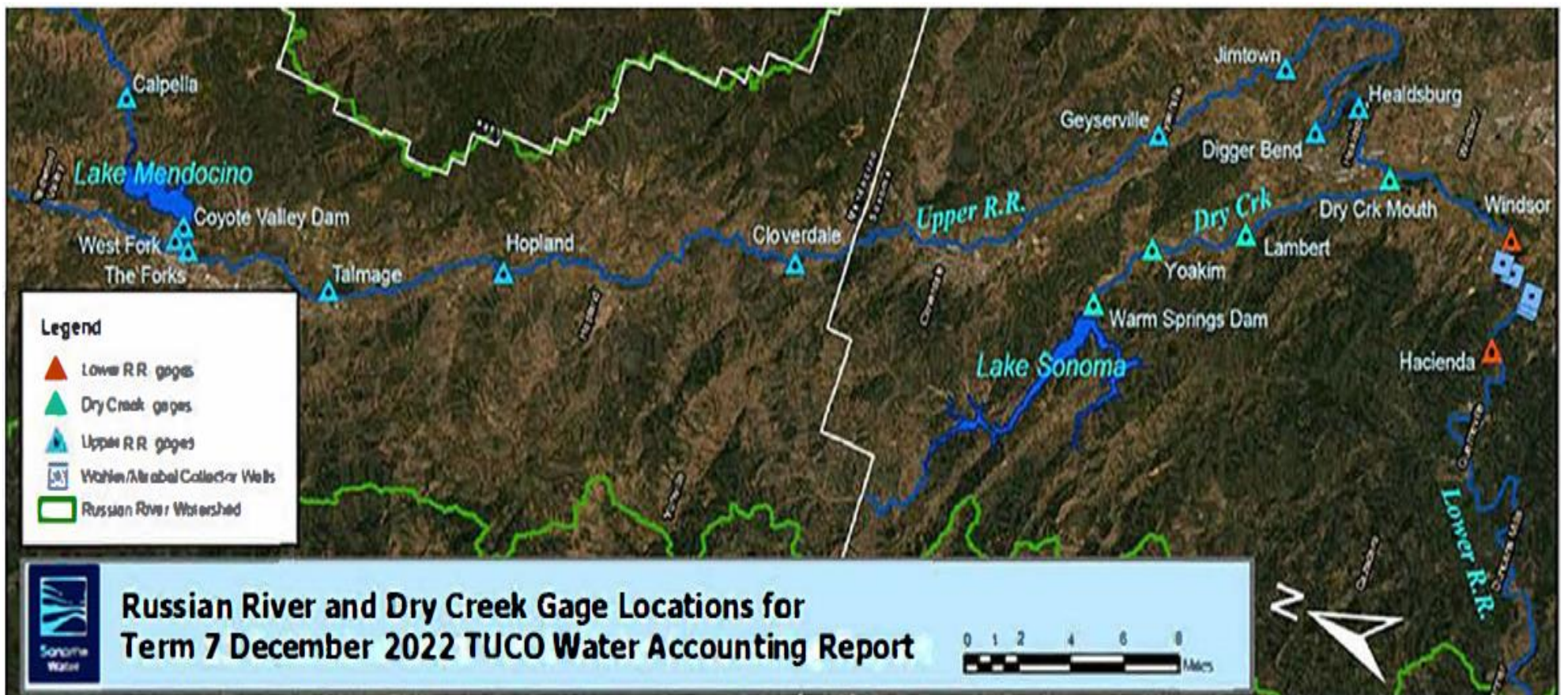
LOWER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



LOWER RUSSIAN RIVER STREAM FLOWS



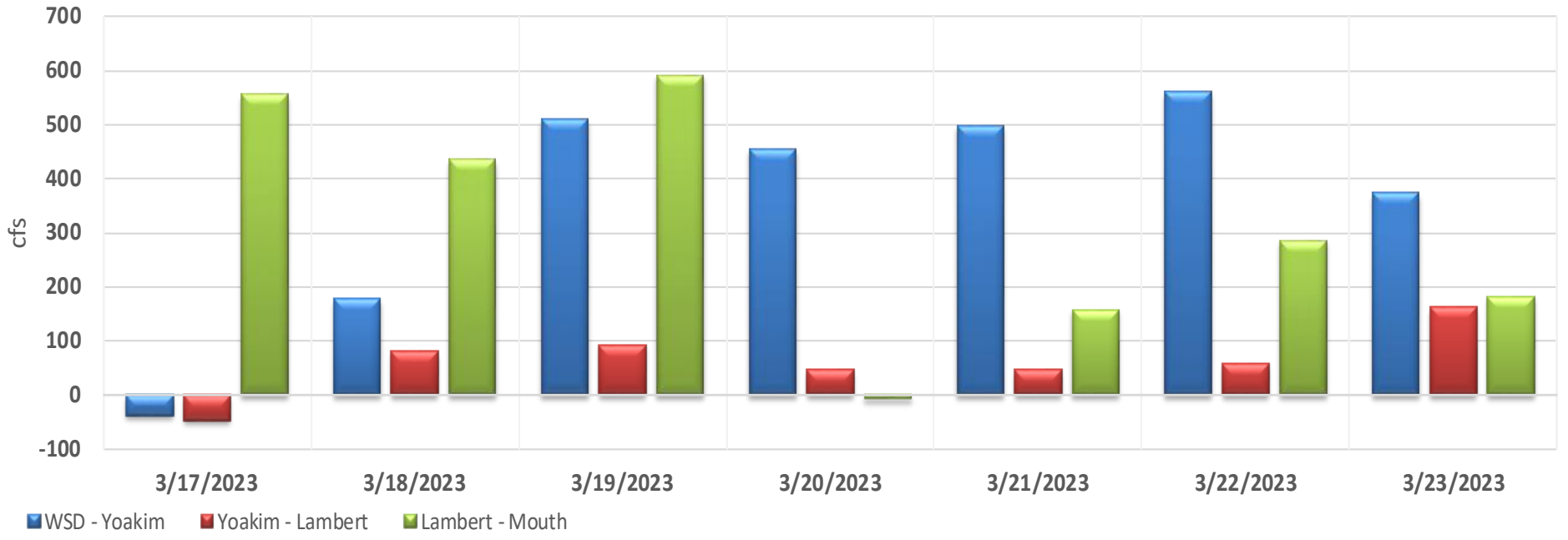
Note: Winsor gage is a seasonal gage and currently not operational. Winsor – Hacienda reach gain/loss is calculated with Healdsburg gages as the upstream gage.



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



DRY CREEK STREAM FLOWS

