

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

Report Date: 3/17/2023

Units are cfs unless noted otherwise

	3/10/2023	3/11/2023	3/12/2023	3/13/2023	3/14/2023	3/15/2023	3/16/2023
I. Upper East Fork Reach							
Potter Valley Project							
Tunnel Diversion	45.0	45.0	45.0	2.0	2.0	2.0	27.0
PVID Requested Delivery	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PVID Canals Actual Delivery	2.1	1.4	2.1	1.0	1.4	0.7	0.9
East Fork Release	43.0	44.0	43.0	1.0	1.0	1.0	26.0
PVID E Fork Diversions	7.9	8.6	7.9	9.0	8.6	9.3	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)	35.1	35.4	35.1	0.0	0.0	0.0	16.9
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	2,203.0	815.7	1,176.6	1,095.7	1,965.9	957.2	580.3
Net Reach Loss(-)/Gain(+)	+2,158.0	+770.7	+1,131.6	+1,093.7	+1,963.9	+955.2	+553.3
Unimpaired Natural Flow @ Calpella (est.)	1363.1	451.3	311.3	803.0	367.2	803.0	346.4
Non-PVID East Fork Net Reach Losses (est.)	2168.0	780.7	1141.6	1103.7	1973.9	965.2	563.3
Natural Flow	2132.9	745.3	1106.5	1103.7	1973.9	965.2	546.4
Import (neg. value is return flow)	35.1	35.4	35.1	0.0	0.0	0.0	16.9
II. Lake Mendocino							
Reservoir Operations							
Calculated Inflow (ac-ft)	4,742	1,599	2,217	2,353	4,465	1,669	375
(cfs)	2,391	806	1,118	1,186	2,251	842	189
Natural Flow	2,356	771	1,083	1,186	2,251	842	172
Import	35	35	35	0	0	0	17
Storage Change (ac-ft)	+4,437.0	+594.0	+543.0	+1,964.0	+4,159.0	+672.0	-2,509.0
(cfs)	+2,237	+299	+274	+990	+2,097	+339	-1,265
Stored Natural Flow (cfs)	2,237	299	274	990	2,097	339	0
Stored Import Water (cfs)	0	0	0	0	0	0	0
Evaporation (ac-ft)	10.8	3.9	4.9	5.9	5.9	12.9	13.8
RVCWD Diversion (ac-ft)	0	0	0	0	0	0	0
CVD Release Gage	148	505	842	193	151	496	1447
Storage (Project Water)	0	0	0	0	0	0	1258
Natural Flow	116	471	808	195	153	500	172
Import Water	32	34	34	0	0	0	17
East Fork Min Instream Flow Requirement	25	25	25	25	25	25	25
Compliance Gage	<i>Rvr mi.</i>						
CVD Release	99.9	148	505	842	193	151	496
CVD Project Water Release to Meet Min Flow Requirement							
Total Pass-through Water	148	505	842	195	153	500	189
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	3,065	1,475	1,923	1,617	2,748	1,876	2,218
Controlling Gage	Forks	Forks	Forks	Forks	Forks	Forks	Forks
All Compliance Gages							
Forks (CVD + USGS 11461000)	99.0	3,065	1,475	1,923	1,617	2,748	1,876
Talmage (USGS 11462080)	96.1	5,104	2,340	2,948	2,899	4,696	3,535
Hopland (USGS 11462500)	84.8	6,074	3,021	3,336	3,633	5,677	4,387
Cloverdale (USGS 11463000)	70.9	9,083	4,684	4,570	5,455	8,805	7,958
Geyserville (USGS 11463500)	54.4	14,158	7,102	6,118	8,176	14,220	12,963
Jimtown (USGS 11463682)	48.5	15,194	8,046	6,292	8,319	14,303	15,768
Digger Bend (USGS 11463980)	38.2	>400 cfs	>400 cfs	>400 cfs	>400 cfs	>400 cfs	>400 cfs
Healdsburg (USGS 11464000)	35.6	18,446	10,897	8,895	11,217	17,579	19,567
Net Reach Loss(-)/Gain(+)							
Forks - Talmage	+1,911	+889	+1,109	+1,152	+2,064	+1,579	+1,283
Talmage - Hopland	+903	+676	+452	+646	+1,106	+880	+309
Hopland - Cloverdale	+3,041	+1,566	+1,327	+1,716	+3,816	+2,984	+1,134
Cloverdale - Jimtown	+6,331	+2,532	+1,969	+2,778	+6,872	+6,517	+1,953
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	+3,867	+1,898	+2,775	+3,067	+5,045	+2,117	+2,097
Upper Russian Net Reach Loss/Gain	+16,053	+7,560	+7,633	+9,359	+18,902	+14,077	+6,776
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	148	505	842	195	153	500	189
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).

	3/10/2023	3/11/2023	3/12/2023	3/13/2023	3/14/2023	3/15/2023	3/16/2023
IV. Lake Sonoma							
Lake Sonoma							
Storage Change (ac-ft)	+8,469.0	+3,073.0	+3,557.0	+4,111.0	+12,282.0	+3,186.0	-3,216.0
(cfs)	+4,270	+1,549	+1,793	+2,073	+6,192	+1,606	-1,621
Evaporation (ac-ft)	11.1	8.0	9.7	11.4	10.1	16.9	15.1
Inflow (Natural Flow)	4,359	1,635	1,881	2,160	6,283	3,090	2,295
WSD Release Gage	83	82	83	82	85	1475	3909
Storage (Project Water)	0	0	0	0	0	0	1614
Natural Flow	83	82	83	82	85	1475	2295

V. Lower Dry Creek Reach

Minimum Instream Flow Requirement		75	75	75	75	75	75	75
Controlling Compliance Gage								
Min Gage Flow		83	82	83	82	85	1475	3682
Controlling Gage		WSD Release	WSD Release	WSD Release	WSD Release	WSD Release	WSD Release	Lambert
All Compliance Gages								
	<i>Crk mi.</i>							
WSD Release	14.3	83	82	83	82	85	1,475	3,909
Yoakim (USGS 11465200)	11.1	1,396	571	532	576	1,957	1,694	3,805
Lambert (USGS 11465240)	6.8	1,807	725	647	678	2,420	1,777	3,682
Dry Crk Mouth (USGS 11465350)	0.1	3,686	1,383	1,397	1,394	4,385	2,745	4,621
WSD to Russian River Confluence Reach Analysis								
Total Pass-through Water		83	82	83	82	85	1475	2295
Net Reach Loss(-)/Gain(+)								
WSD - Yoakim		+1,303	+490	+449	+495	+1,864	+639	-96
Yoakim - Lambert		+353	+142	+120	+104	+501	+182	-132
Lambert - Dry Crk Mouth		+1,807	+613	+761	+720	+2,087	+1,083	+949
WSD - Dry Crk Mouth		+3,463	+1,245	+1,330	+1,320	+4,453	+1,904	+722
WSD Project Water Release to Meet Min Flow Requirement								
Net Reach Loss/Gain to Controlling Gage		+0	+0	+0	+0	+0	+0	-228
Project Water Release Required		No	No	No	No	No	No	Yes

VI. Russian River - Dry Creek Confluence

Upper Russian River Flow (Healdsburg Gage)								
L. Mendocino Project Water + Import Water		32	34	34	0	0	0	1,275
Natural Flow		16,169	8,031	8,441	9,554	19,055	14,577	6,948
Dry Creek Flow (Mouth Gage)								
L. Sonoma Project Water		0	0	0	0	0	0	1,614
Natural Flow		3,686	1,383	1,397	1,394	4,385	2,745	3,017
Russian River d/s of Confluence Flow								
L. Mendocino Project Water + Import Water		32	34	34	0	0	0	1,275
L. Sonoma Project Water		0	0	0	0	0	0	1,614
Natural Flow		19,855	9,413	9,838	10,947	23,440	17,322	9,965

VII. Lower Russian River Reach

Minimum Instream Flow Requirement		125	125	125	125	125	125	125
Controlling Compliance Gage								
Min Gage Flow		29,100	28,900	18,100	17,000	30,200	32,300	28,300
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	29,100	28,900	18,100	17,000	30,200	32,300	28,300
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		29,144	28,944	18,142	17,046	30,244	32,345	28,341
Net Reach Loss(-)/Gain(+)		+7,012	+16,665	+7,851	+4,435	+8,280	+10,033	+14,195
L. Mendocino Project Water + Import Water		32	34	34	0	0	0	1,275
L. Sonoma Project Water		0	0	0	0	0	0	1,612
Natural Flow		26,867	26,079	17,689	15,383	31,721	27,355	24,160
Confluence to Hacienda (Guerneville) Reach Analysis								
Net Reach Loss(-)/Gain(+)		+6,968	+16,621	+7,809	+4,390	+8,236	+9,988	+14,154
L. Mendocino Project Water + Import Water		32	34	34	0	0	0	1,275
L. Sonoma Project Water		0	0	0	0	0	0	1,571
Natural Flow		26,823	26,034	17,646	15,337	31,676	27,310	24,160

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

Lower Russian River								
Sonoma Water Total		87.6	88.2	84.1	90.8	88.2	88.5	81.9
Wohler		38.4	38.6	37.4	42.5	40.7	39.0	32.4
Mirabel		49.1	49.6	46.7	48.3	47.5	49.5	49.5
Town of Windsor River Wellfield		3.5	3.3	3.0	3.5	3.6	4.0	3.7
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

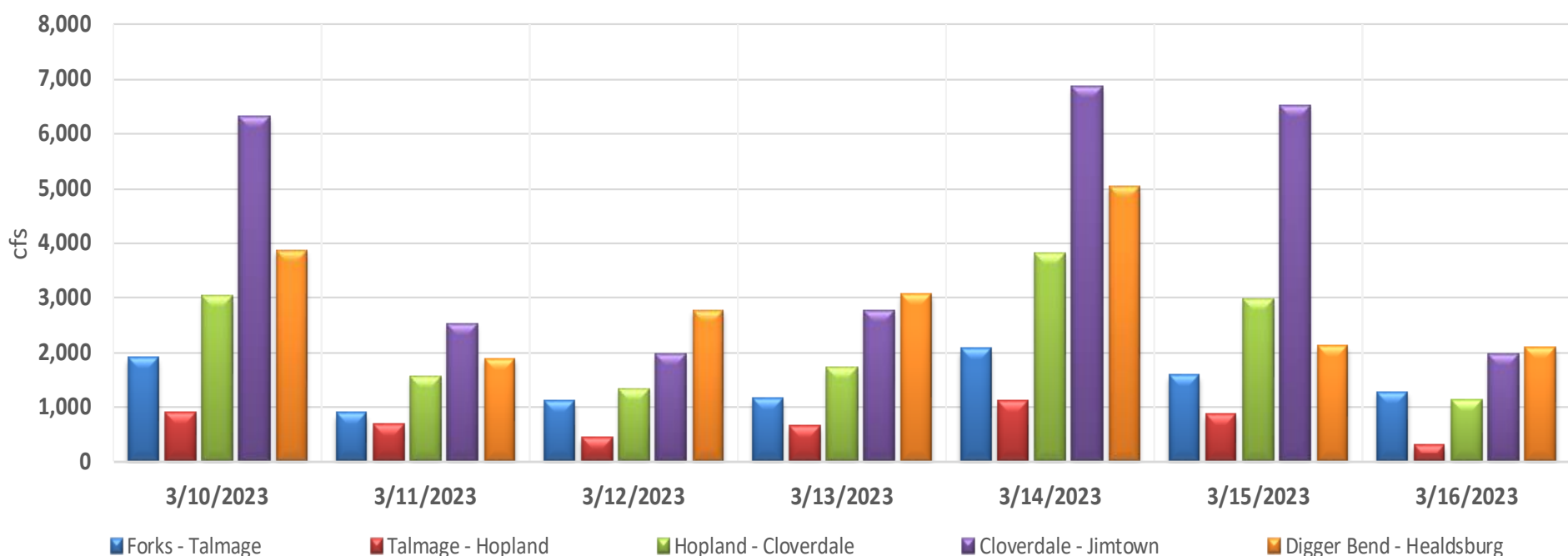
Notes:

- 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).

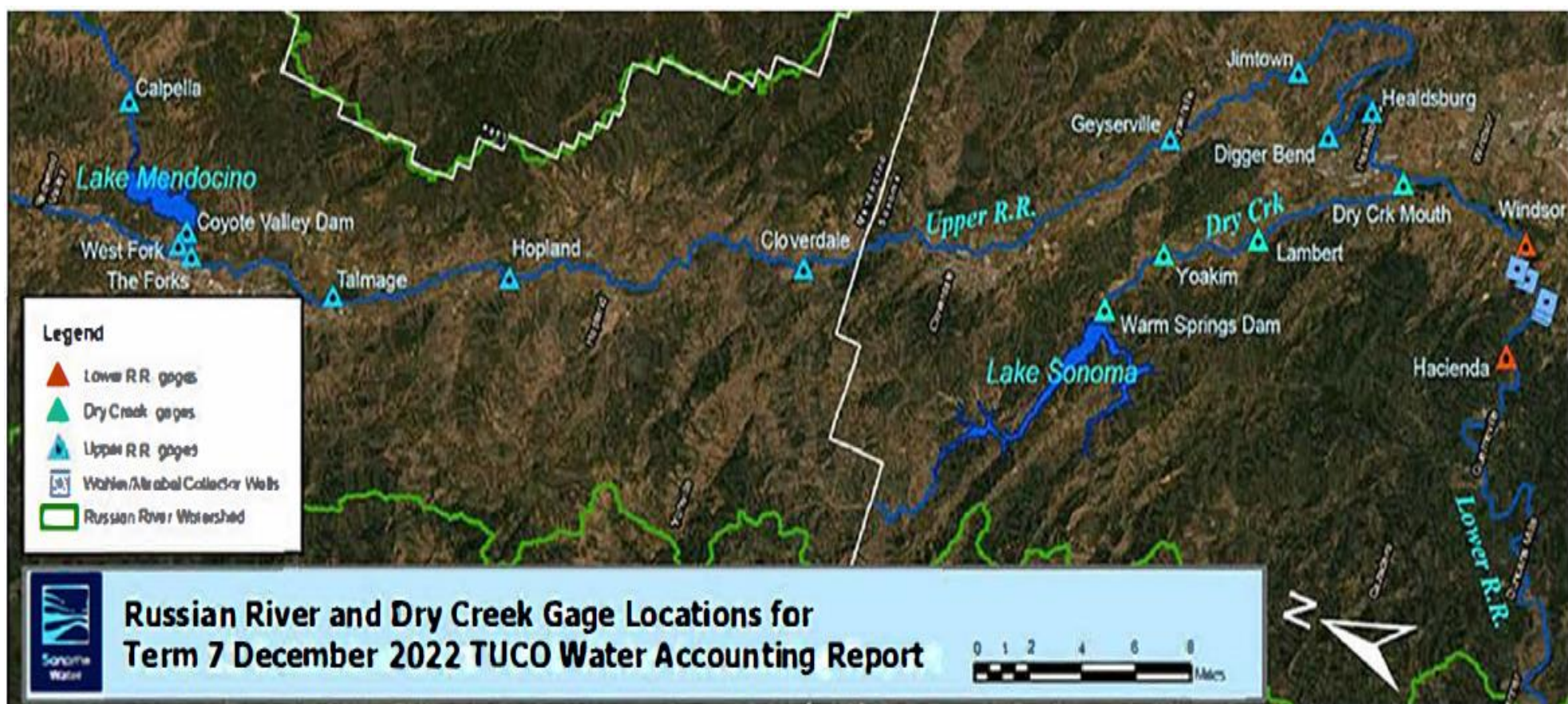
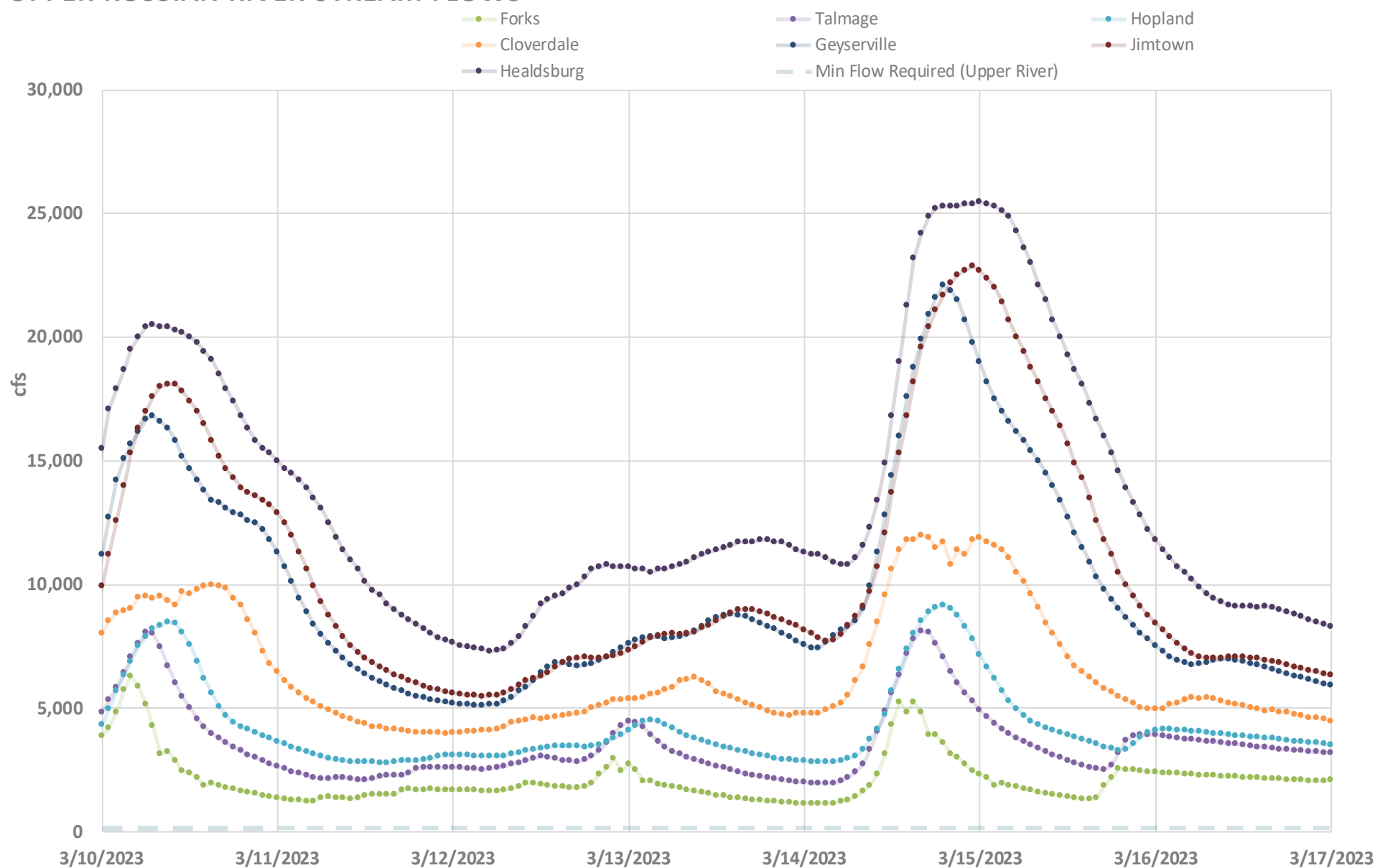
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UPPER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



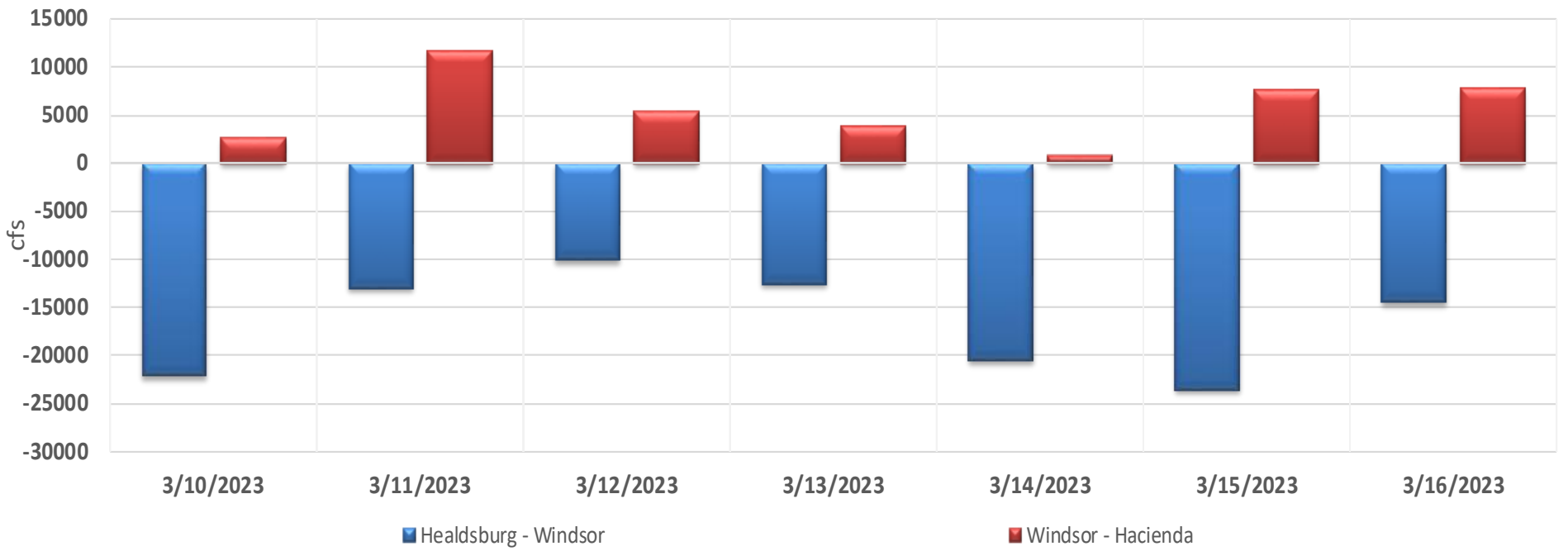
UPPER RUSSIAN RIVER STREAM FLOWS



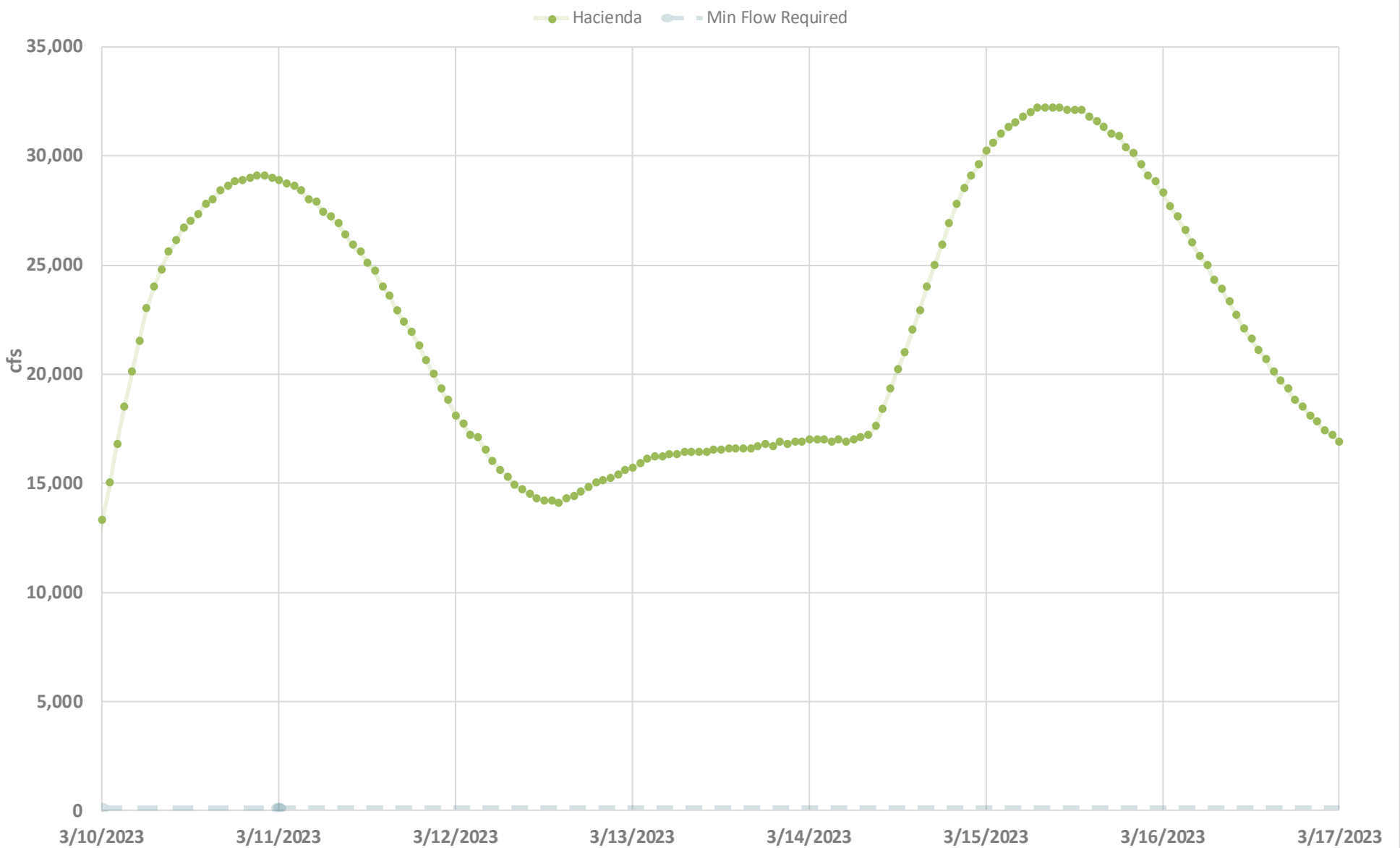
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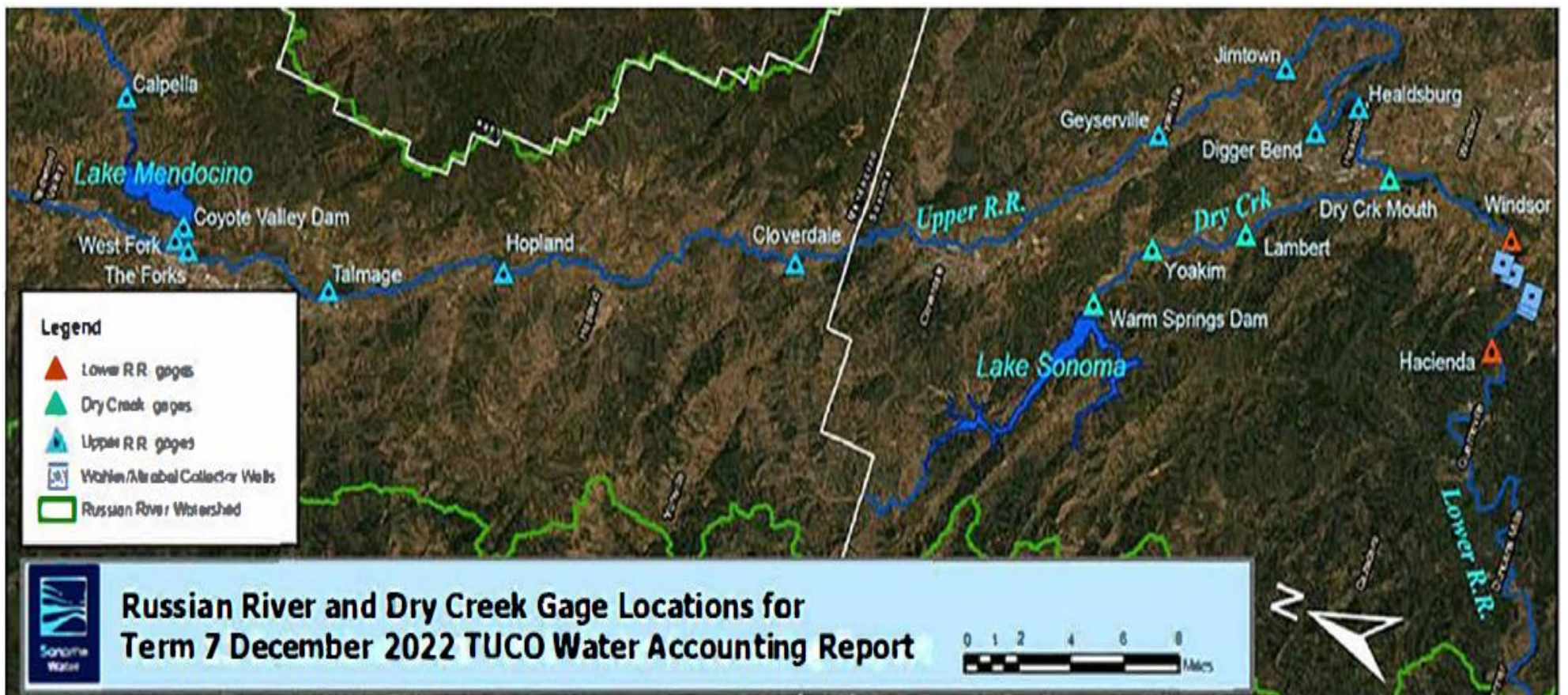
LOWER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



LOWER RUSSIAN RIVER STREAM FLOWS



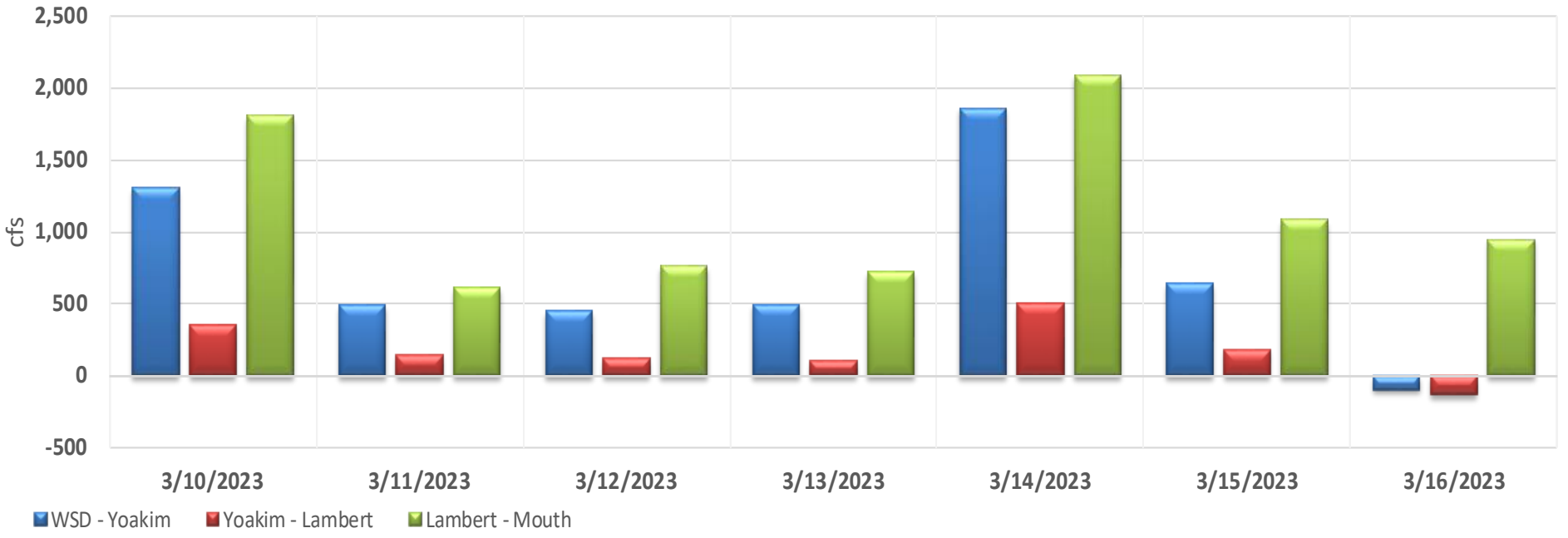
Note: Winsor gage is a seasonal gage and currently not operational. Winsor – Hacienda reach gain/loss is calculated with Healdsburg gages as the upstream gage.



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



DRY CREEK STREAM FLOWS

