

Lake Mendocino and Lake Sonoma Water Accounting Weekly Report (Term 7, December 2022 TUCO)

Report Date: 4/28/2023

Units are cfs unless noted otherwise

	4/21/2023	4/22/2023	4/23/2023	4/24/2023	4/25/2023	4/26/2023	4/27/2023
I. Upper East Fork Reach							
Potter Valley Project							
Tunnel Diversion	90.0	90.0	90.0	90.0	90.0	90.0	90.0
PVID Requested Delivery	50.0	50.0	50.0	50.0	50.0	50.0	50.0
PVID Canals Actual Delivery	5.6	5.6	5.6	5.6	5.6	5.6	5.6
East Fork Release	84.0	84.0	84.0	84.0	84.0	84.0	84.0
PVID E Fork Diversions	44.4	44.4	44.4	44.4	44.5	44.4	44.5
PVID Water Use - PG&E Contract	50.0	50.0	50.0	50.0	50.0	50.0	50.0
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)	39.6	39.6	39.6	39.6	39.6	39.6	39.6
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	146.9	146.5	143.7	139.8	136.0	134.9	133.3
Net Reach Loss(-)/Gain(+)	+56.9	+56.5	+53.7	+49.8	+46.0	+44.9	+43.3
Unimpaired Natural Flow @ Calpella (est.)	22.5	21.8	20.7	19.9	18.5	17.7	17.0
Non-PVID East Fork Net Reach Losses (est.)	106.9	106.5	103.7	99.8	96.0	94.9	93.3
Natural Flow	67.3	66.9	64.0	60.3	56.5	55.3	53.7
Import (neg. value is return flow)	39.6	39.6	39.6	39.6	39.6	39.6	39.6

II. Lake Mendocino

Reservoir Operations

Calculated Inflow (ac-ft)	341	376	357	358	318	295	294
(cfs)	172	189	180	180	160	149	148
Natural Flow	132	150	140	141	121	109	108
Import	40	40	40	40	40	40	40
Storage Change (ac-ft)	+17.0	+54.0	+36.0	+35.0	+0.0	-17.0	-18.0
(cfs)	+9	+27	+18	+18	+0	-9	-9
Stored Natural Flow (cfs)	9	27	18	18	0	0	0
Stored Import Water (cfs)	0	0	0	0	0	0	0
Evaporation (ac-ft)	21.0	22.0	21.0	21.0	25.0	26.0	26.0
RVCWD Diversion (ac-ft)	0	0	0	0	0	0	0
CVD Release Gage	153	151	151	152	148	144	144
Storage (Project Water)	0	0	0	0	0	0	0
Natural Flow	118	117	117	118	115	109	108
Import Water	34	34	34	34	33	40	40
East Fork Min Instream Flow Requirement	25	25	25	25	25	25	25
Compliance Gage	<i>Rvr mi.</i>						
CVD Release	99.9	153	151	151	152	148	144
CVD Project Water Release to Meet Min Flow Requirement							
Total Pass-through Water	152	151	151	152	148	149	148
Project Water Release Required	No	No	No	No	No	No	No

III. Upper Russian River Reach

Minimum Instream Flow Requirement

	185	185	185	185	185	185	185
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Controlling Compliance Gage

Min Gage Flow	205	201	198	197	190	183	186
Controlling Gage	Forks	Forks	Forks	Forks	Forks	Forks	Forks

All Compliance Gages

	<i>Rvr mi.</i>						
Forks (CVD + USGS 11461000)	99.0	205	201	198	197	190	183
Talmage (USGS 11462080)	96.1	250	244	239	236	237	231
Hopland (USGS 11462500)	84.8	360	350	343	335	334	327
Cloverdale (USGS 11463000)	70.9	458	447	436	423	415	402
Geyserville (USGS 11463500)	54.4	632	614	596	573	562	539
Jimtown (USGS 11463682)	48.5	732	711	684	662	645	611
Digger Bend (USGS 11463980)	38.2	>400 cfs	>400 cfs	>400 cfs	>400 cfs	>400 cfs	>400 cfs
Healdsburg (USGS 11464000)	35.6	798	776	756	730	705	672

Net Reach Loss(-)/Gain(+)

Forks - Talmage	+45	+43	+41	+39	+45	+53	+48
Talmage - Hopland	+109	+106	+103	+99	+98	+100	+96
Hopland - Cloverdale	+96	+94	+91	+87	+81	+74	+73
Cloverdale - Jimtown	+270	+259	+244	+233	+227	+220	+205
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	+57	+58	+64	+63	+55	+53	+50
Upper Russian Net Reach Loss/Gain	+577	+560	+542	+521	+507	+500	+470

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	152	151	151	152	148	149	148
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).

	4/21/2023	4/22/2023	4/23/2023	4/24/2023	4/25/2023	4/26/2023	4/27/2023
IV. Lake Sonoma							
Lake Sonoma							
Storage Change (ac-ft)	-167.0	-111.0	-223.0	-223.0	-222.0	-222.0	-195.0
(cfs)	-84	-56	-112	-112	-112	-112	-98
Evaporation (ac-ft)	34.3	35.9	34.3	35.8	35.8	34.2	35.8
Inflow (Natural Flow)	154	184	127	128	128	127	111
WSD Release Gage	221	222	222	222	222	222	191
Storage (Project Water)	67	38	95	94	94	95	80
Natural Flow	154	184	127	128	128	127	111

V. Lower Dry Creek Reach

Minimum Instream Flow Requirement		75	75	75	75	75	75	75
Controlling Compliance Gage								
Min Gage Flow		221	222	222	222	222	222	191
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	221	222	222	222	222	222	191
Yoakim (USGS 11465200)	11.1	228	228	228	228	228	228	228
Lambert (USGS 11465240)	6.8	257	256	254	251	249	247	234
Dry Crk Mouth (USGS 11465350)	0.1	339	346	339	344	347	343	312
WSD to Russian River Confluence Reach Analysis								
Total Pass-through Water		154	184	127	128	128	127	111
Net Reach Loss(-)/Gain(+)								
WSD - Yoakim		+7	+6	+6	+6	+6	+6	+32
Yoakim - Lambert		+29	+28	+26	+23	+21	+19	+6
Lambert - Dry Crk Mouth		+82	+90	+84	+93	+97	+95	+73
WSD - Dry Crk Mouth		+118	+124	+116	+122	+125	+120	+112
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	Yes	Yes	Yes	Yes

VI. Russian River - Dry Creek Confluence

Upper Russian River Flow (Healdsburg Gage)								
L. Mendocino Project Water + Import Water		34	34	34	34	33	40	40
Natural Flow		695	677	659	639	621	609	579
Dry Creek Flow (Mouth Gage)								
L. Sonoma Project Water		67	38	95	94	94	95	80
Natural Flow		273	308	244	249	253	248	232
Russian River d/s of Confluence Flow								
L. Mendocino Project Water + Import Water		34	34	34	34	33	40	40
L. Sonoma Project Water		67	38	95	94	94	95	80
Natural Flow		968	986	903	888	874	857	811

VII. Lower Russian River Reach

Minimum Instream Flow Requirement		125	125	125	125	125	125	125
Controlling Compliance Gage								
Min Gage Flow		1,240	1,200	1,160	1,130	1,070	1,040	1,010
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	1,240	1,200	1,160	1,130	1,070	1,040	1,010
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		1,269	1,231	1,195	1,197	1,106	1,088	1,057
Net Reach Loss(-)/Gain(+)		+132	+108	+101	+123	+54	+59	+74
L. Mendocino Project Water + Import Water		34	34	34	34	33	40	40
L. Sonoma Project Water		65	36	93	92	91	92	76
Natural Flow		1,099	1,094	1,003	1,012	928	916	884
Confluence to Hacienda (Guerneville) Reach Analysis								
Net Reach Loss(-)/Gain(+)		+102	+77	+65	+56	+18	+10	+26
L. Mendocino Project Water + Import Water		34	34	34	34	33	40	40
L. Sonoma Project Water		36	5	58	25	55	43	29
Natural Flow		1,099	1,094	1,003	1,012	928	916	884

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

Lower Russian River								
Sonoma Water Total		58.1	61.0	69.6	133.3	71.1	95.9	94.2
Wohler		11.1	13.6	21.0	54.4	20.7	57.5	54.3
Mirabel		47.0	47.4	48.6	78.9	50.5	38.5	39.9
Town of Windsor River Wellfield		4.1	4.2	4.2	4.4	5.2	5.7	8.3
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:

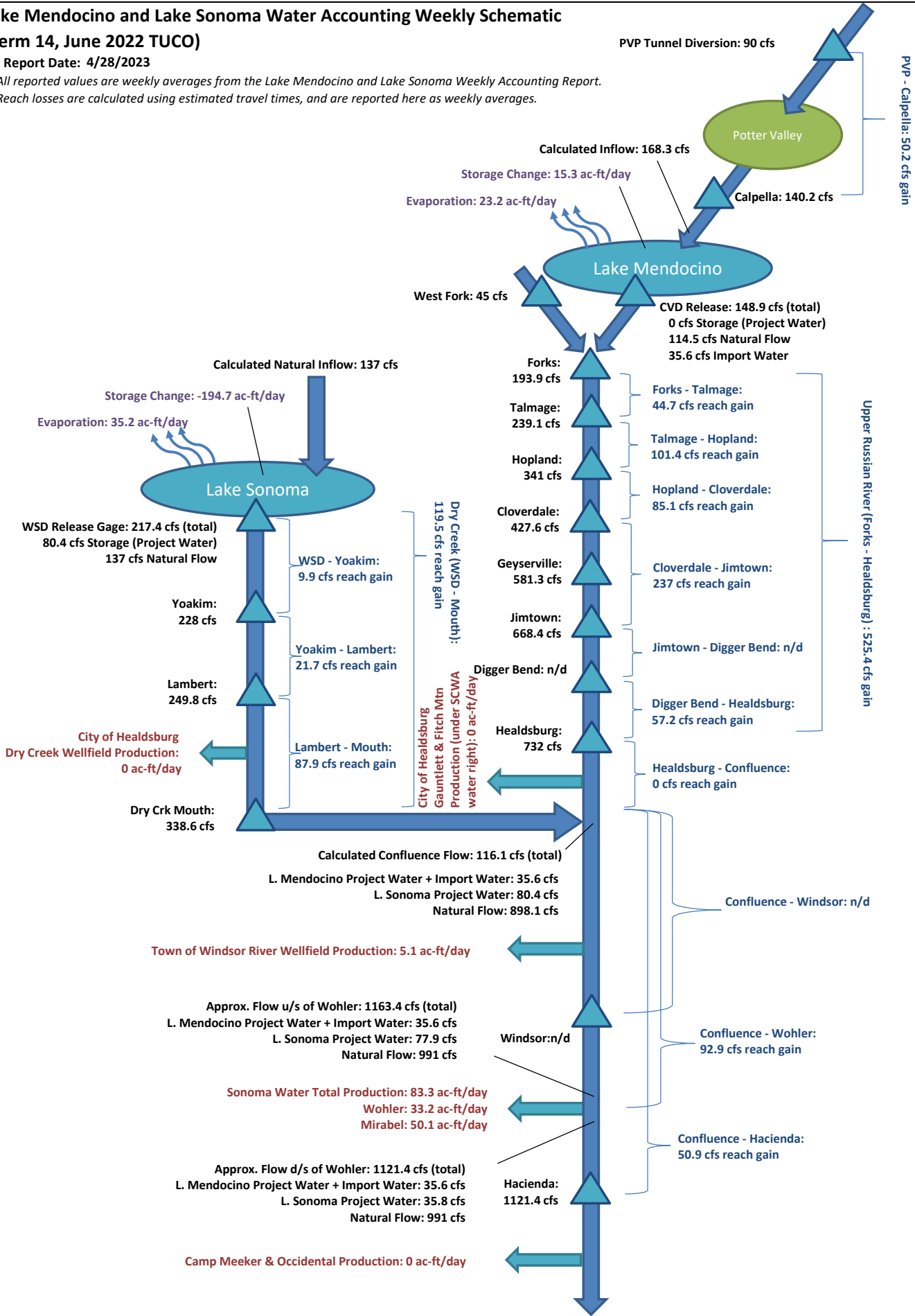
- Water Accounting for the Lower Russian River and Dry Creek is an analysis that approximates the current conditions based on the methodology in Term 12 (6/14/21 Order) report. Values listed include estimated values where measurements are not currently available (red italics).

Lake Mendocino and Lake Sonoma Water Accounting Weekly Schematic

(Term 14, June 2022 TUCO)

Report Date: 4/28/2023

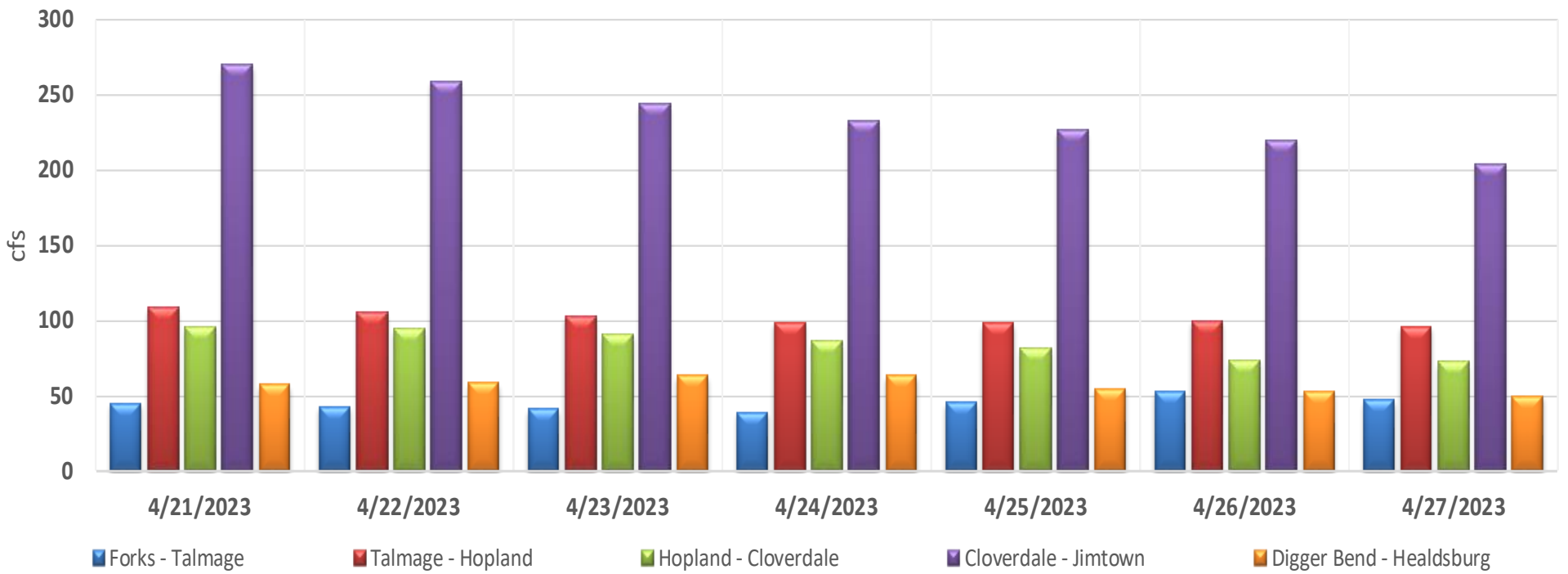
All reported values are weekly averages from the Lake Mendocino and Lake Sonoma Weekly Accounting Report.
Reach losses are calculated using estimated travel times, and are reported here as weekly averages.



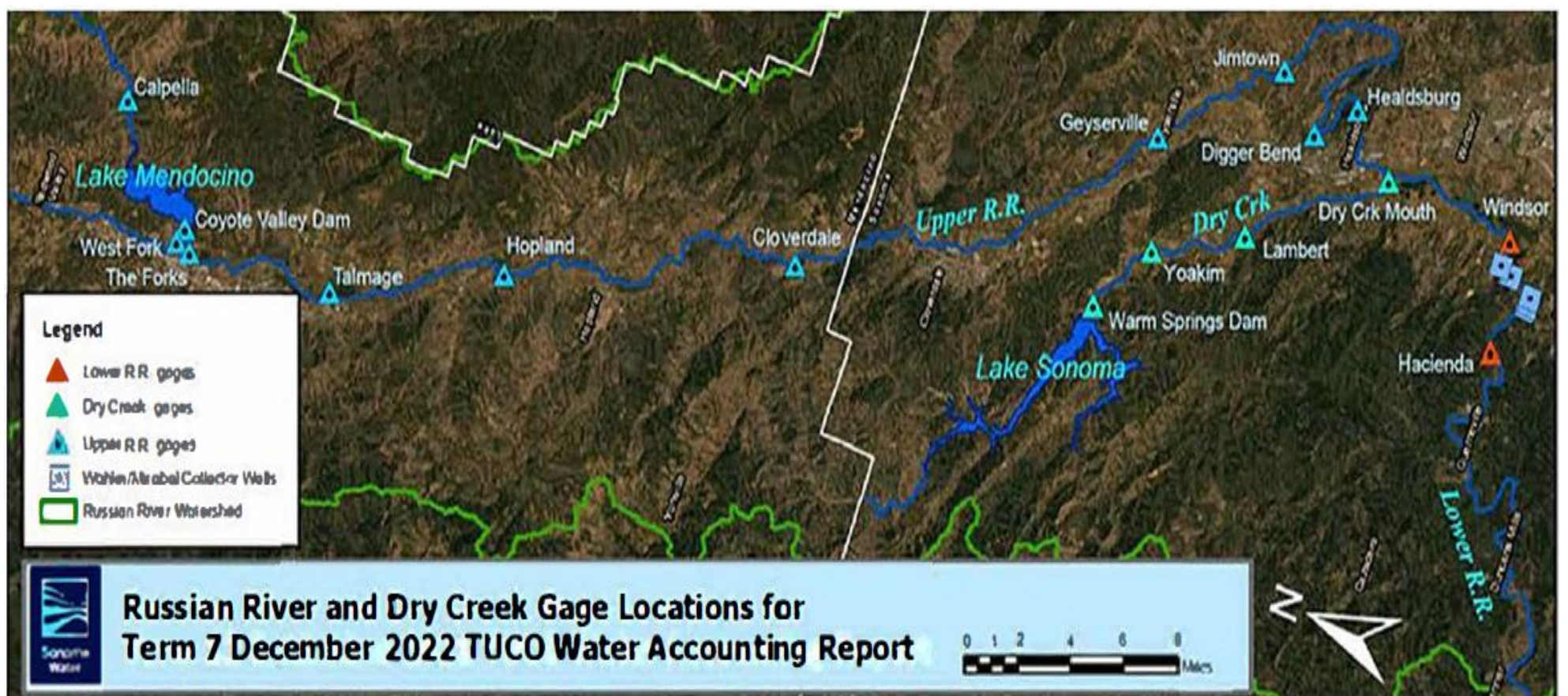
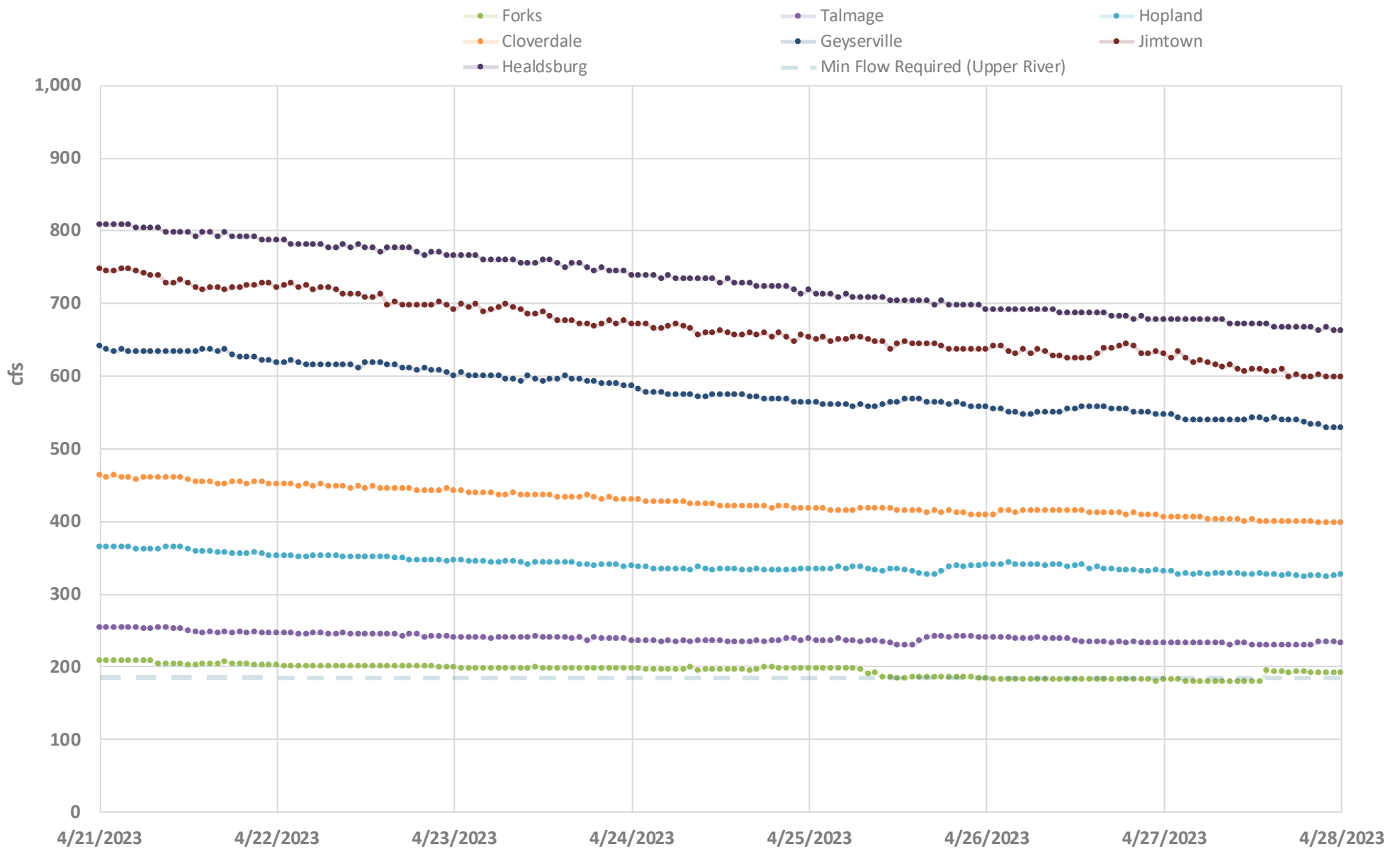
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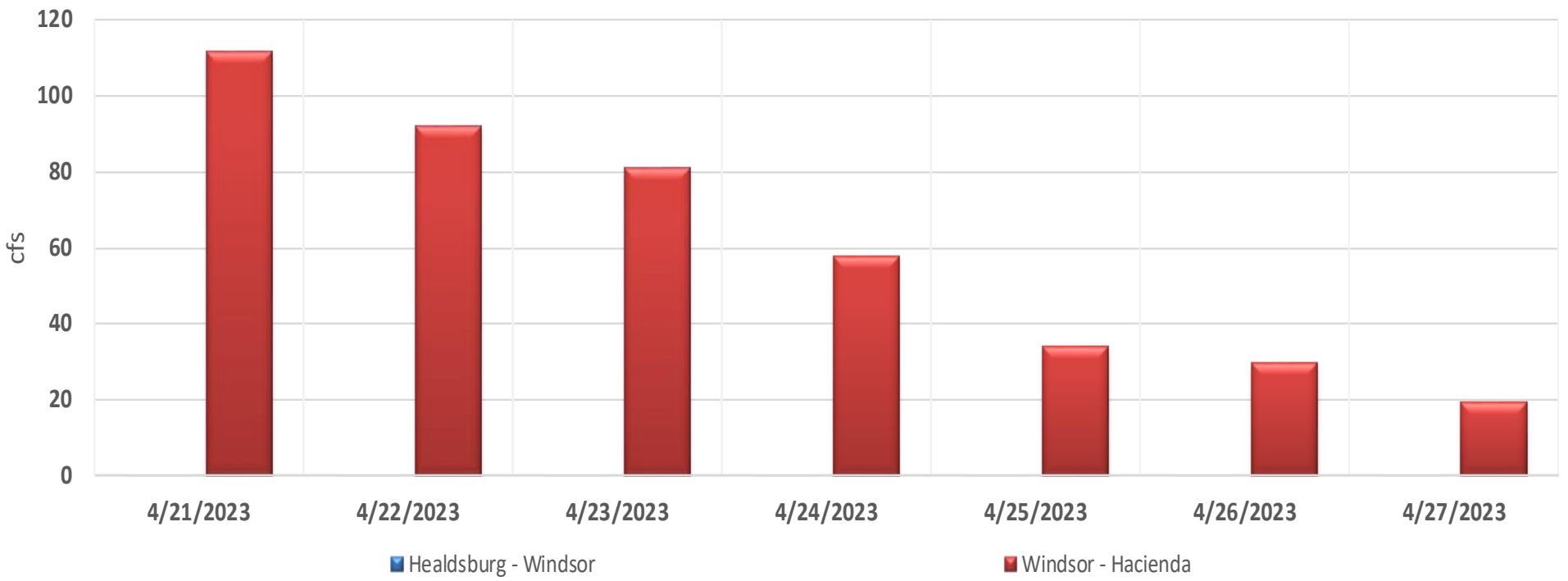
UPPER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



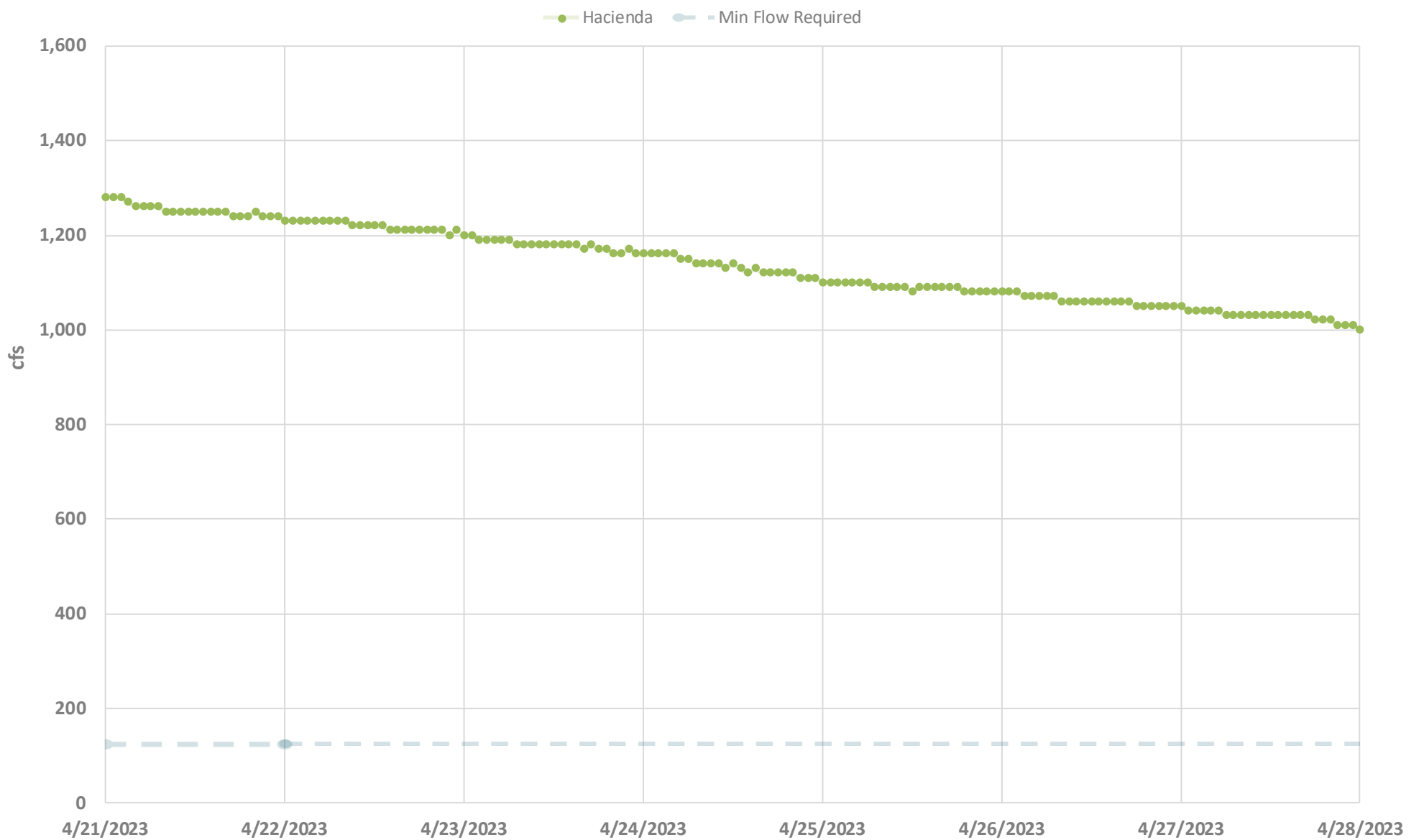
UPPER RUSSIAN RIVER STREAM FLOWS



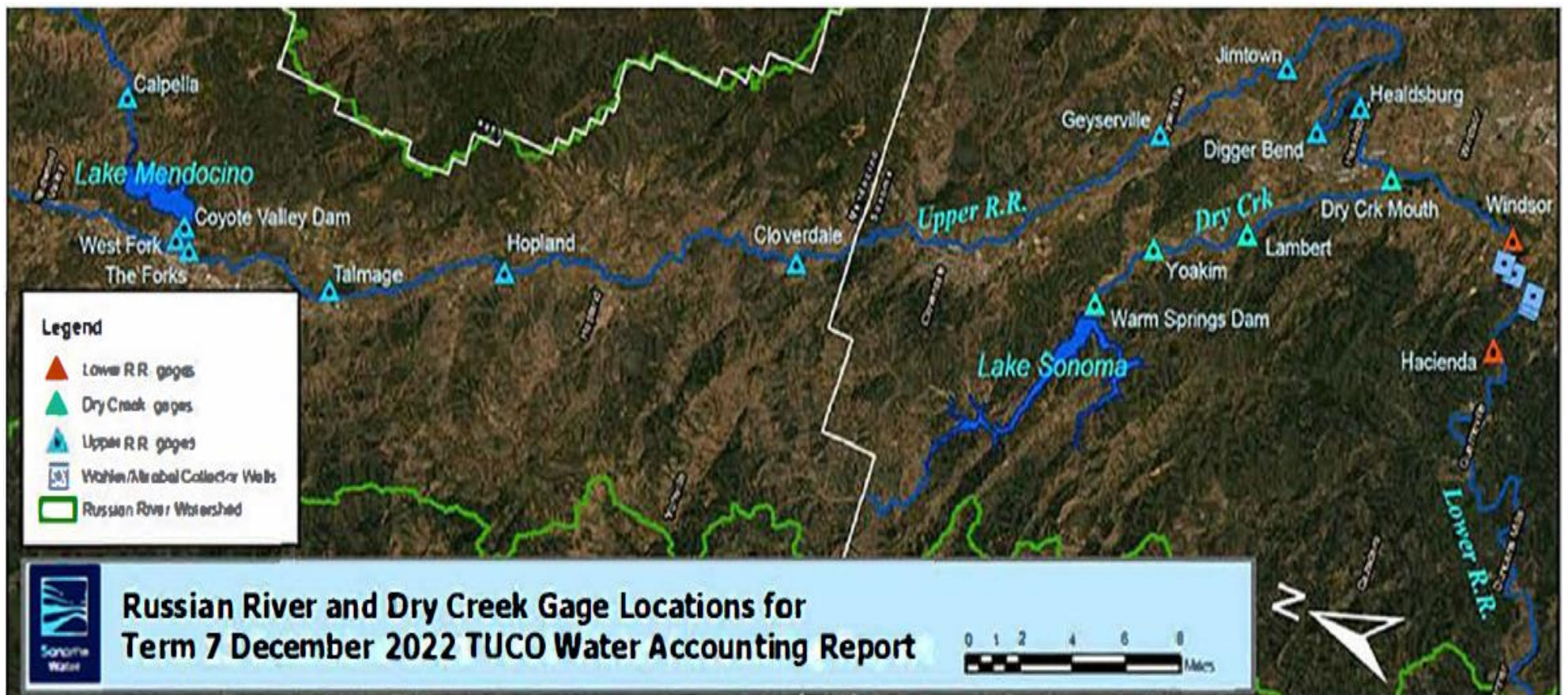
LOWER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



LOWER RUSSIAN RIVER STREAM FLOWS



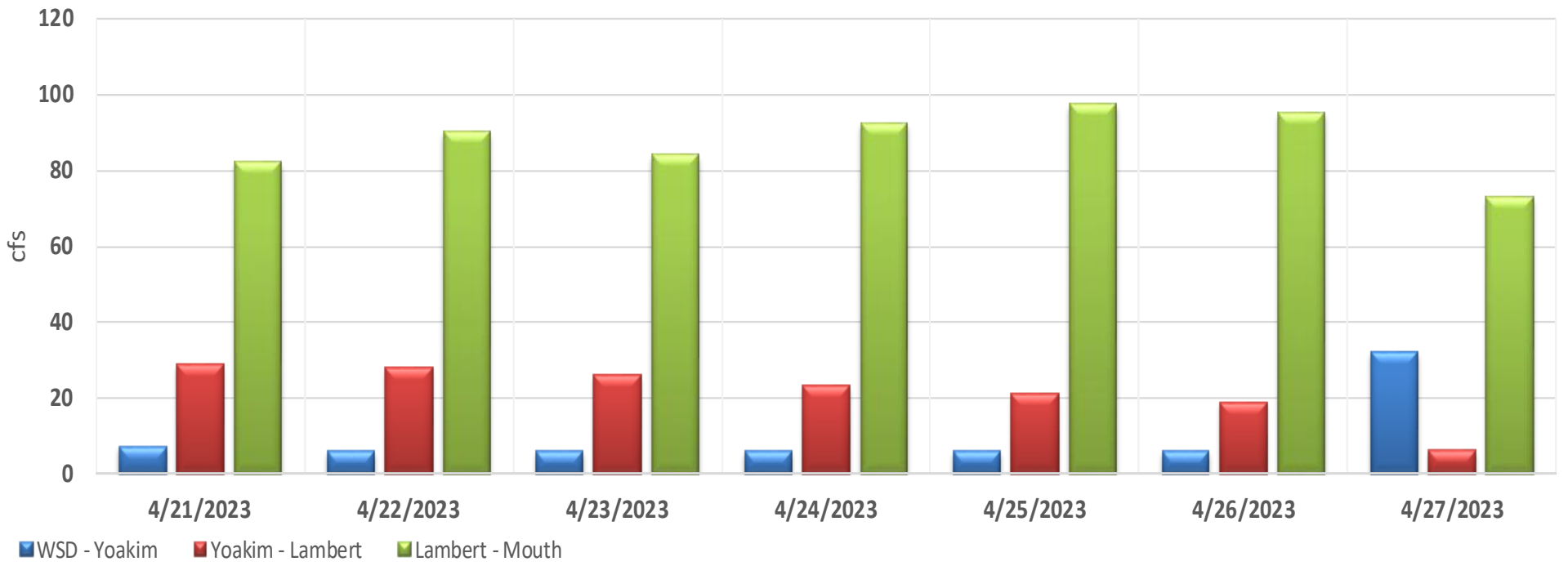
Note: Winsor gage is a seasonal gage and currently not operational. Winsor – Hacienda reach gain/loss is calculated with Healdsburg gages as the upstream gage.



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



DRY CREEK STREAM FLOWS

