

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

Report Date: 5/12/2023

Units are cfs unless noted otherwise

	<u>5/5/2023</u>	<u>5/6/2023</u>	<u>5/7/2023</u>	<u>5/8/2023</u>	<u>5/9/2023</u>	<u>5/10/2023</u>	<u>5/11/2023</u>
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	0.6	0.6	0.6	0.6	0.6	0.6	0.6
East Fork Release	89.0	89.0	89.0	89.0	89.0	89.0	89.0
PVID E Fork Diversions	49.4	49.4	49.4	49.4	49.4	49.4	49.4
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	135.5	151.1	135.9	137.6	135.0	131.2	128.8
Net Reach Loss(-)/Gain(+)	+45.5	+61.1	+45.9	+47.6	+45.0	+41.2	+38.8
Unimpaired Natural Flow @ Calpella (est.)	17.7	18.8	23.2	17.7	21.0	17.7	15.5
Non-PVID East Fork Net Reach Losses (est.)	95.5	111.1	95.9	97.6	95.0	91.2	88.8
Natural Flow	55.9	71.5	56.3	58.0	55.4	51.6	49.3
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)	306	332	303	312	303	266	279
(cfs)	154	167	153	157	153	134	141
Natural Flow	115	128	113	118	113	95	101
Import	40	40	40	40	40	40	40
Storage Change (ac-ft)	+0.0	+18.0	+0.0	+0.0	-18.0	-54.0	-53.0
(cfs)	+0	+9	+0	+0	-9	-27	-27
Stored Natural Flow (cfs)	0	9	0	0	0	0	0
Stored Import Water (cfs)	0	0	0	0	0	0	0
Evaporation (ac-ft)	7.3	19.7	15.6	12.4	21.8	20.7	23.8
RVCWD Diversion (ac-ft)	0	0	0	0	0	0	0
CVD Release Gage	151	148	145	151	151	151	156
Storage (Project Water)	0	0	0	0	0	17	15
Natural Flow	113	114	109	115	113	95	101
Import Water	38	35	36	36	40	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	151	148	145	151	151	156
CVD Project Water Release to Meet Min Flow Requirement							
Total Pass-through Water	151	148	145	151	153	134	141
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
Controlling Compliance Gage								
Min Gage Flow		190	206	190	198	196	188	188
Controlling Gage		Forks	Forks	Forks	Forks	Forks	Forks	Forks
All Compliance Gages								
	<i>Rvr mi.</i>							
Forks (CVD + USGS 11461000)	99.0	190	206	190	198	196	188	188
Talmage (USGS 11462080)	96.1	211	223	206	211	207	200	199
Hopland (USGS 11462500)	84.8	312	332	313	313	311	302	297
Cloverdale (USGS 11463000)	70.9	376	409	395	380	376	361	351
Geyserville (USGS 11463500)	54.4	493	542	561	508	504	481	465
Jimtown (USGS 11463682)	48.5	536	572	615	554	548	522	497
Digger Bend (USGS 11463980)	38.2	>400 cfs	>400 cfs	>400 cfs	>400 cfs	>400 cfs	>400 cfs	>400 cfs
Healdsburg (USGS 11464000)	35.6	609	659	710	640	620	597	573
Net Reach Loss(-)/Gain(+)								
Forks - Talmage		+22	+19	+13	+16	+9	+11	+11
Talmage - Hopland		+102	+110	+104	+105	+102	+100	+99
Hopland - Cloverdale		+63	+85	+72	+70	+62	+57	+54
Cloverdale - Jimtown		+155	+189	+197	+176	+166	+154	+142
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		+70	+111	+84	+77	+70	+67	+70
Upper Russian Net Reach Loss/Gain		+411	+513	+470	+443	+409	+389	+376
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		151	148	145	151	153	134	141
Project Water Release Required		No	No	No	No	No	Yes	Yes

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).

	5/5/2023	5/6/2023	5/7/2023	5/8/2023	5/9/2023	5/10/2023	5/11/2023
IV. Lake Sonoma							
Lake Sonoma							
Storage Change (ac-ft)	-84.0	+56.0	-83.0	-28.0	-111.0	-138.0	-83.0
(cfs)	-42	+28	-42	-14	-56	-70	-42
Evaporation (ac-ft)	12.9	20.9	19.3	27.3	30.5	32.1	35.3
Inflow (Natural Flow)	73	148	77	109	69	57	87
WSD Release Gage	109	109	109	109	110	110	111
Storage (Project Water)	36	0	32	0	41	53	24
Natural Flow	73	109	77	109	69	57	87
V. Lower Dry Creek Reach							
Minimum Instream Flow Requirement	80	80	80	80	80	80	80
Controlling Compliance Gage							
Min Gage Flow	109	109	109	109	110	110	111
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	109	109	109	110	110	111
Yoakim (USGS 11465200)	11.1	167	169	169	167	166	163
Lambert (USGS 11465240)	6.8	155	156	152	151	148	147
Dry Crk Mouth (USGS 11465350)	0.1	163	166	166	164	160	159
WSD to Russian River Confluence Reach Analysis							
Total Pass-through Water	73	109	77	109	69	57	87
Net Reach Loss(-)/Gain(+)							
WSD - Yoakim	+58	+60	+60	+59	+57	+56	+52
Yoakim - Lambert	-13	-12	-17	-17	-17	-19	-16
Lambert - Dry Crk Mouth	+8	+10	+12	+12	+12	+12	+12
WSD - Dry Crk Mouth	+54	+58	+55	+54	+52	+49	+48
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	No	Yes	Yes	Yes	Yes	Yes
VI. Russian River - Dry Creek Confluence							
Upper Russian River Flow (Healdsburg Gage)							
L. Mendocino Project Water + Import Water	38	32	36	36	40	56	54
Natural Flow	524	627	579	558	522	484	477
Dry Creek Flow (Mouth Gage)							
L. Sonoma Project Water	36	0	32	0	41	53	24
Natural Flow	128	166	133	163	121	107	135
Russian River d/s of Confluence Flow							
L. Mendocino Project Water + Import Water	38	32	36	36	40	56	54
L. Sonoma Project Water	36	0	32	0	41	53	24
Natural Flow	652	793	713	721	643	590	613
VII. Lower Russian River Reach							
Minimum Instream Flow Requirement	125	125	125	125	125	125	125
Controlling Compliance Gage							
Min Gage Flow	685	707	774	724	689	662	636
Controlling Gage	Windsor	Windsor	Windsor	Windsor	Windsor	Windsor	Windsor
All Compliance Gages							
	<i>Rvr mi.</i>						
Windsor (USGS 11465390)	26.6	685	707	774	724	689	636
Hacienda (USGS 11467000)	21.8	856	915	956	919	895	812
Confluence to Windsor Reach Analysis							
Net Reach Loss/Gain to Windsor Gage	-88	-118	-110	-89	-98	-101	-101
L. Mendocino Project Water + Import Water	38	32	36	36	40	56	54
L. Sonoma Project Water	33	0	30	0	38	51	21
Natural Flow	564	671	602	627	545	489	512
Confluence to SCWA Wohler Production Facility Reach Analysis							
Approx. Flow u/s of Wohler	881	957	1,000	966	960	918	877
Net Reach Loss(-)/Gain(+)	+109	+132	+124	+162	+178	+160	+145
L. Mendocino Project Water + Import Water	38	32	36	36	40	56	54
L. Sonoma Project Water	33	0	30	0	38	51	21
Natural Flow	760	925	837	883	821	751	757
Confluence to Hacienda (Guerneville) Reach Analysis							
Net Reach Loss(-)/Gain(+)	+84	+89	+81	+115	+113	+96	+80
L. Mendocino Project Water + Import Water	38	32	36	36	40	56	54
L. Sonoma Project Water	8	0	0	0	0	0	0
Natural Flow	760	883	823	836	794	736	713
VIII. Water Production under Sonoma Water Water Rights (ac-ft)							
Lower Russian River							
Sonoma Water Total	49.8	84.2	86.5	92.4	129.4	128.3	129.1
Wohler	2.2	36.3	37.7	37.4	38.3	38.7	38.6
Mirabel	47.6	47.9	48.8	55.0	91.1	89.6	90.5
Town of Windsor River Wellfield	5.3	4.7	4.5	5.1	5.6	5.7	6.2
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

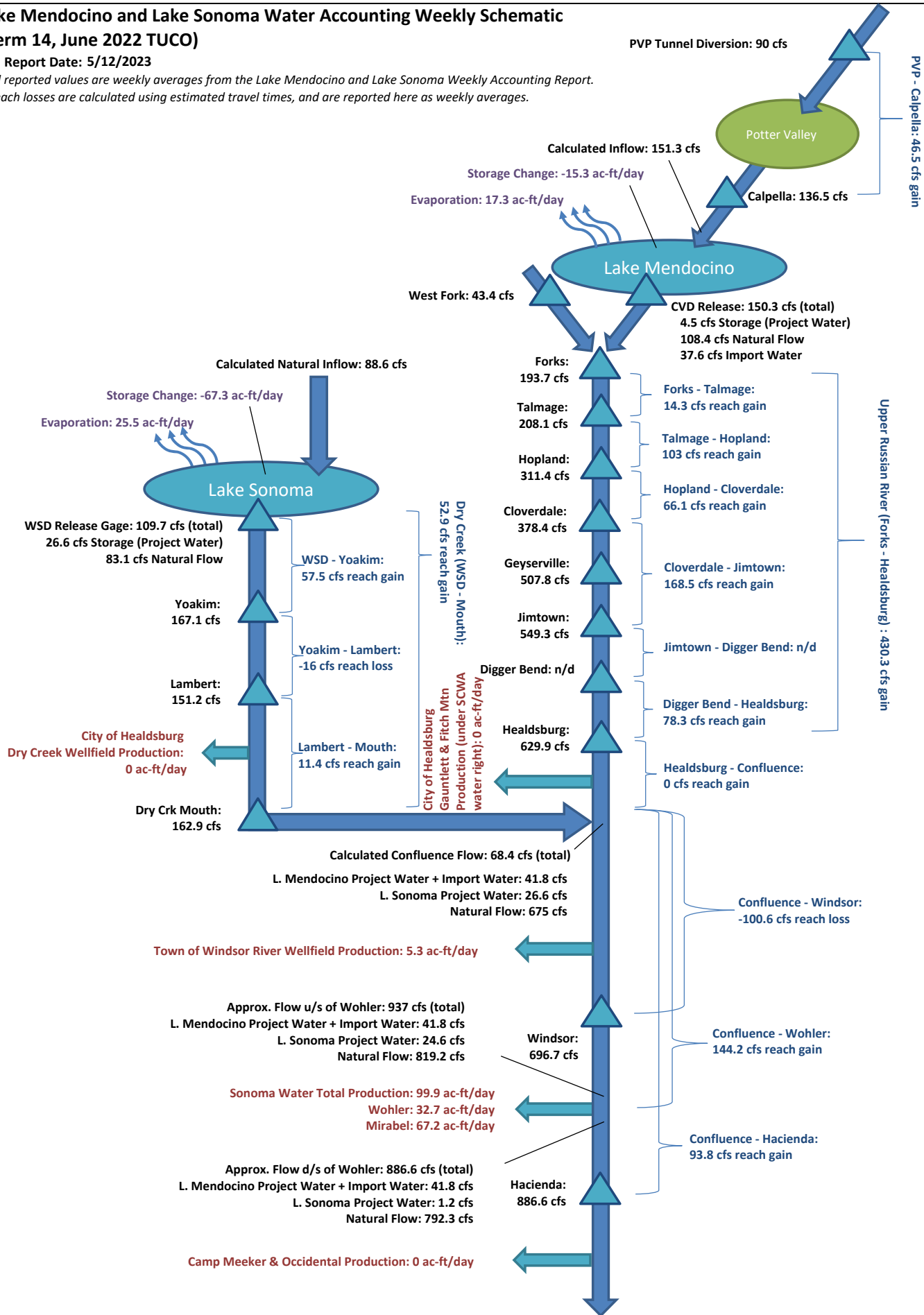
Notes:

- 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: 5/12/2023

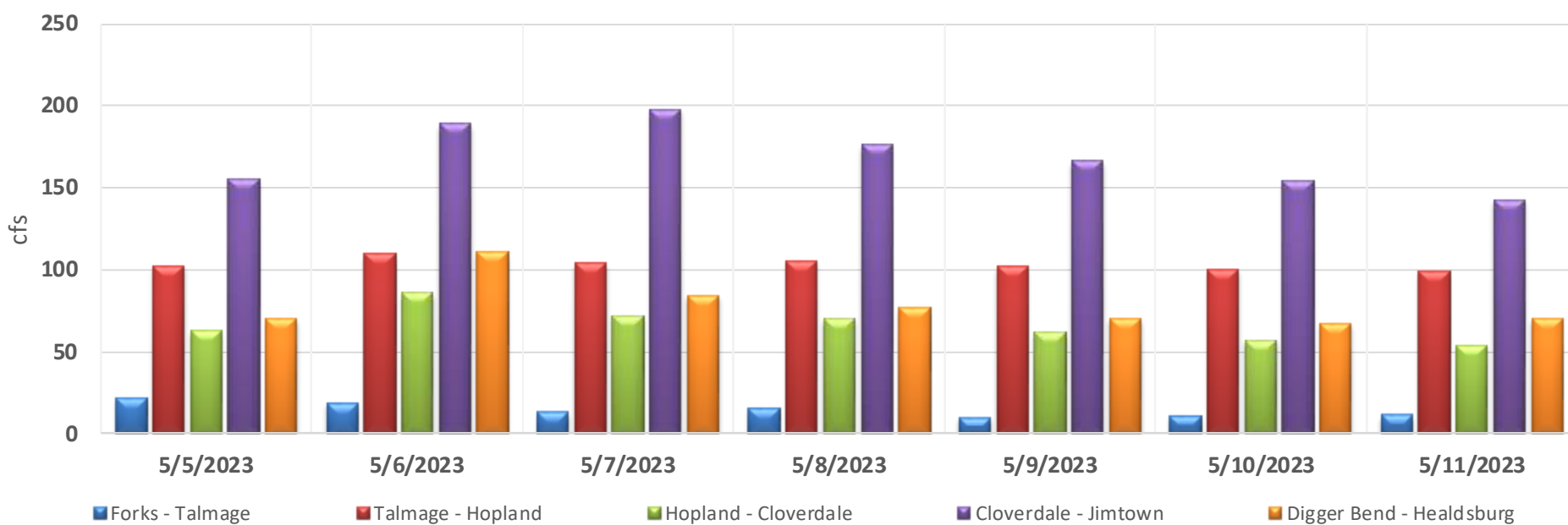
All reported values are weekly averages from the Lake Mendocino and Lake Sonoma Weekly Accounting Report.
Reach losses are calculated using estimated travel times, and are reported here as weekly averages.



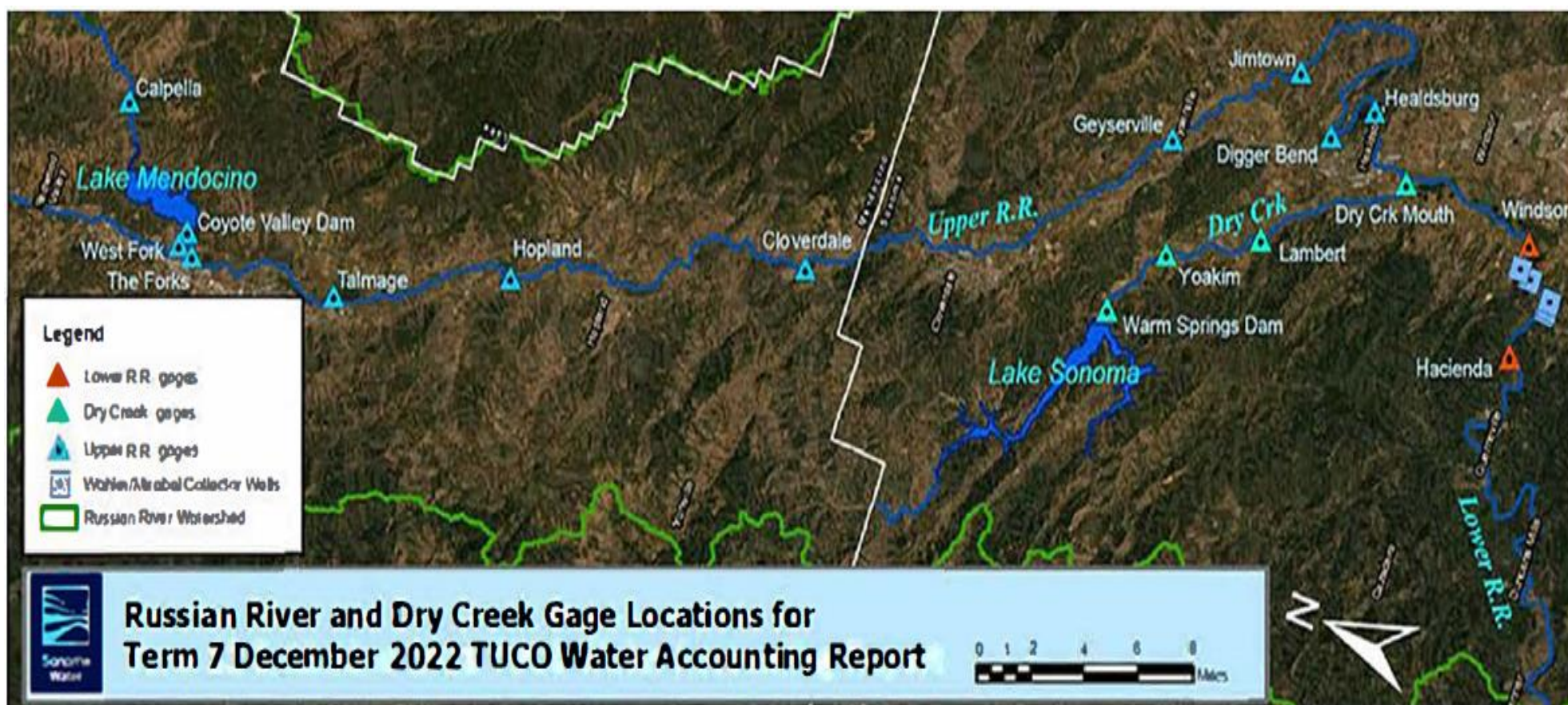
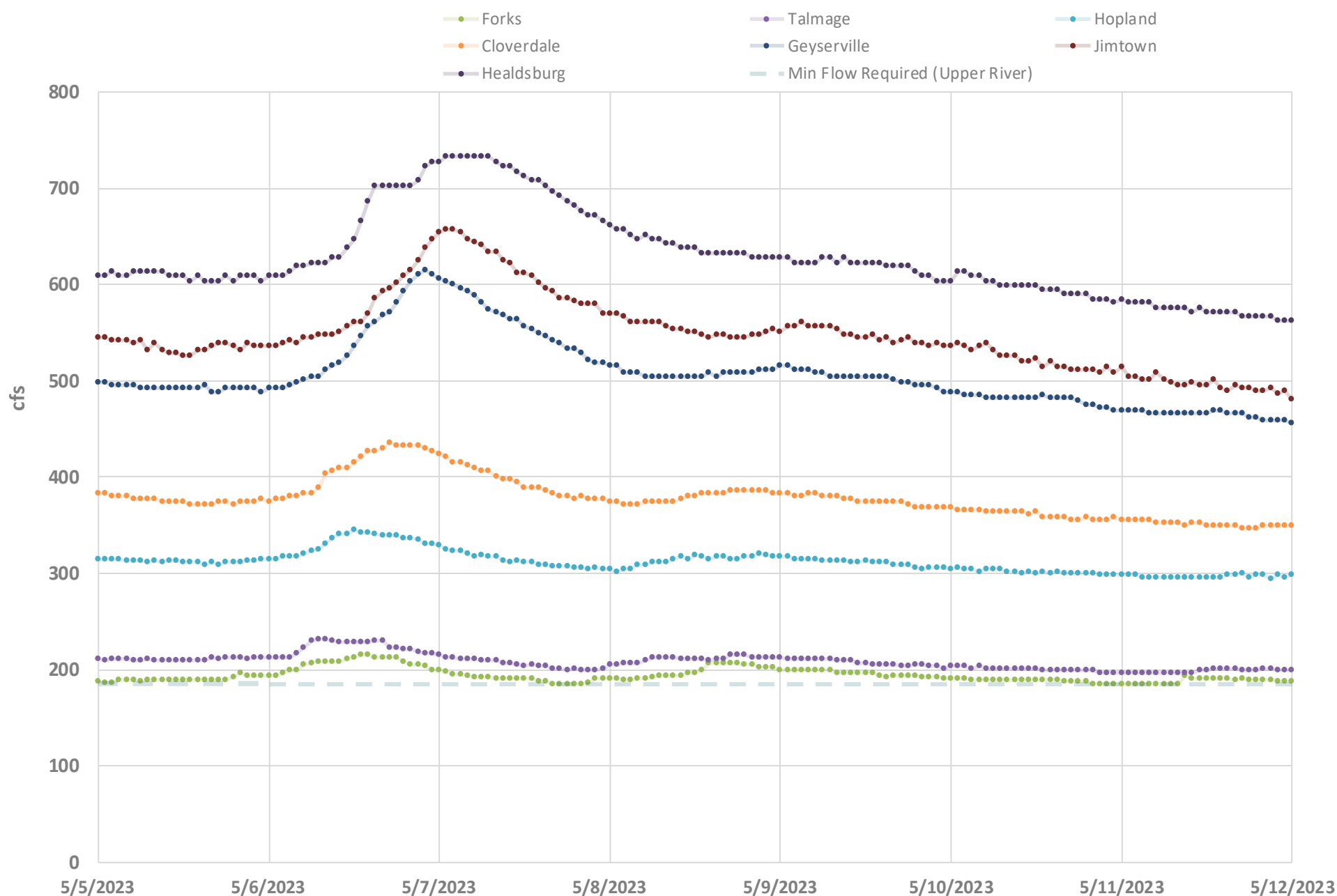
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UPPER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



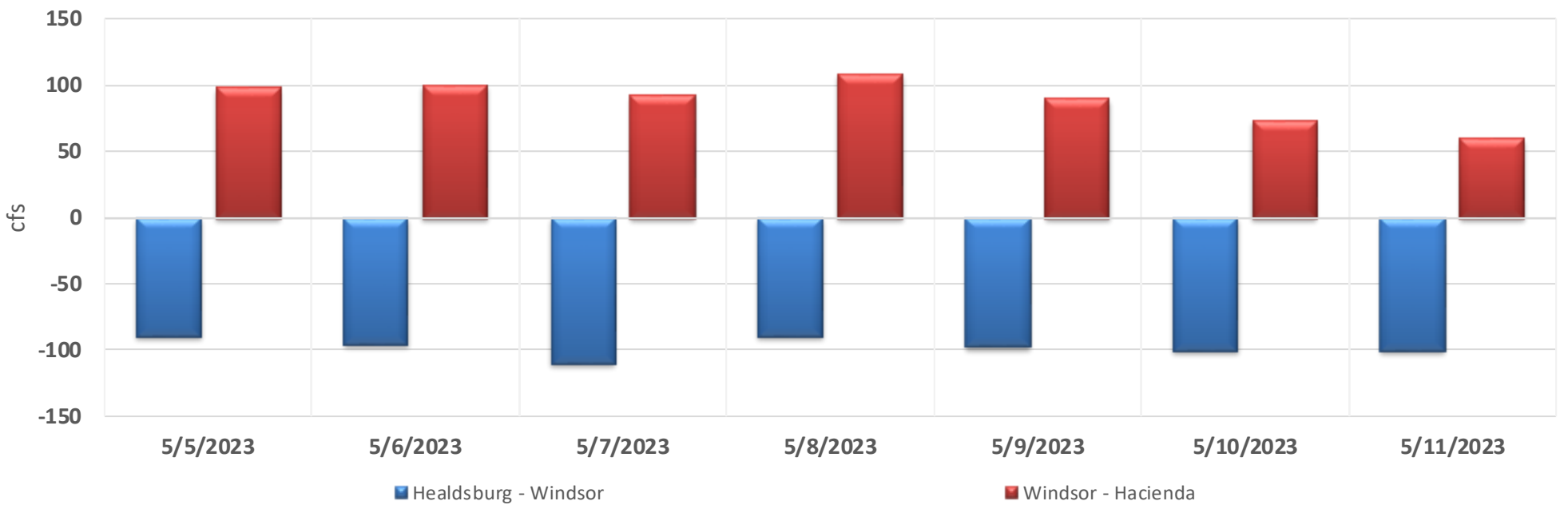
UPPER RUSSIAN RIVER STREAM FLOWS



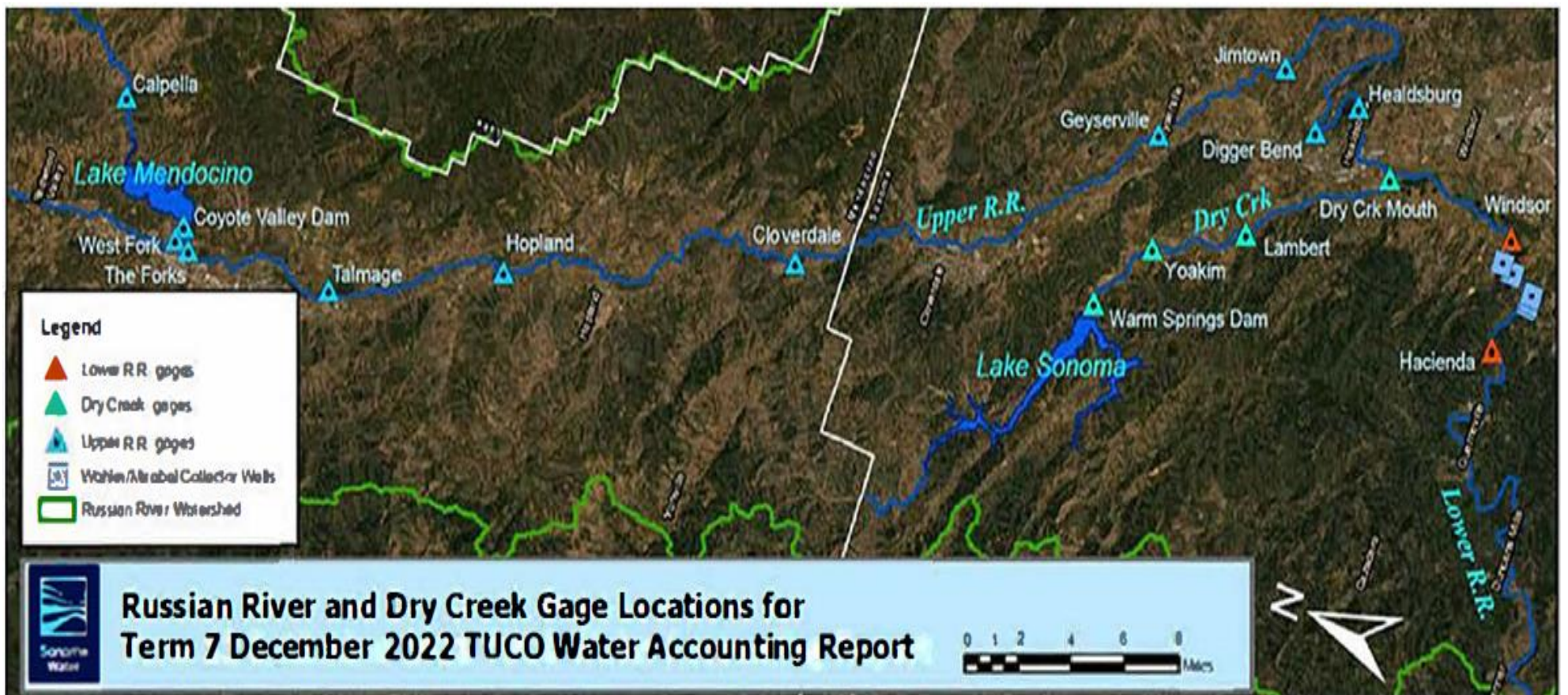
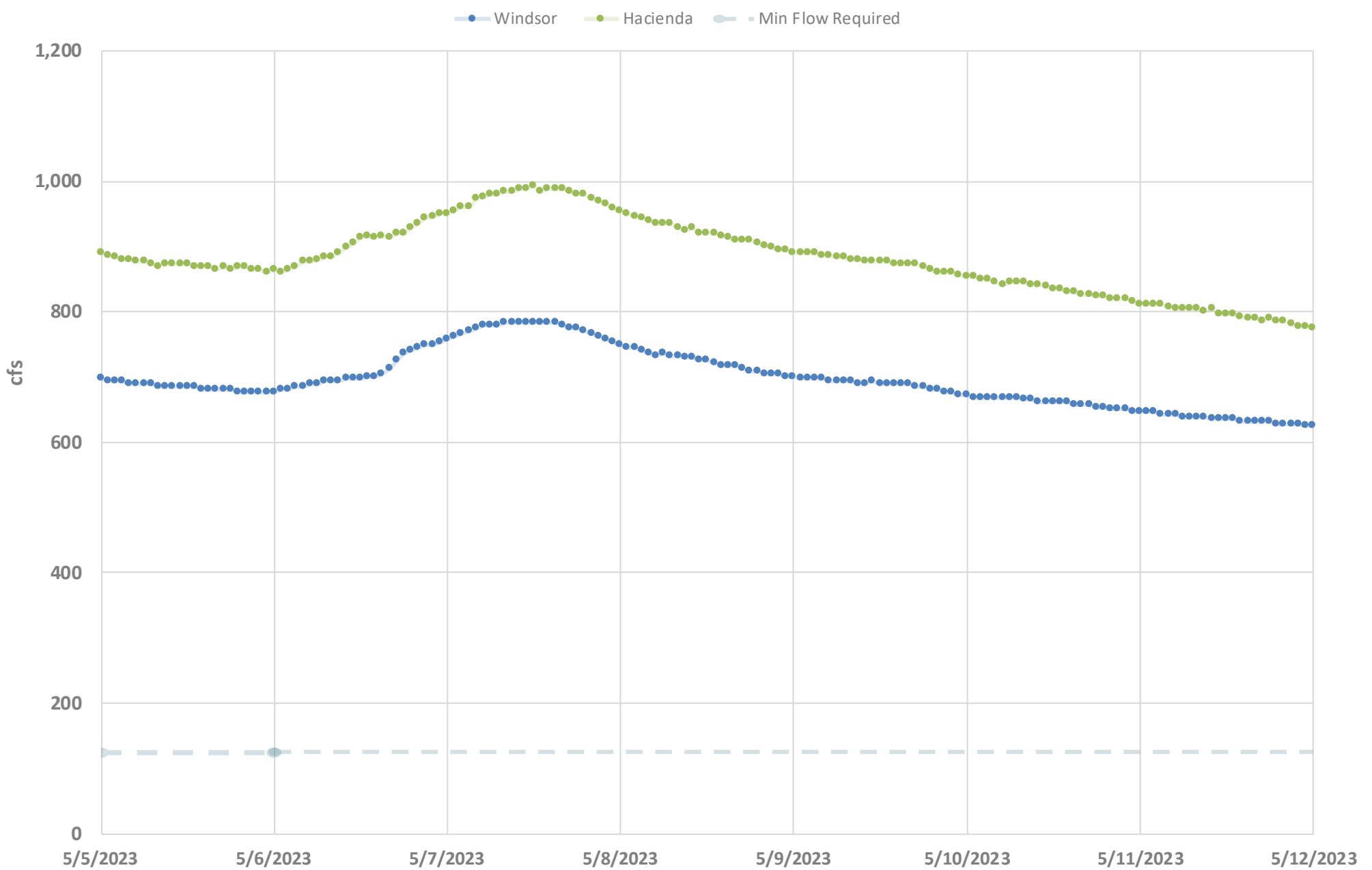
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LOWER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



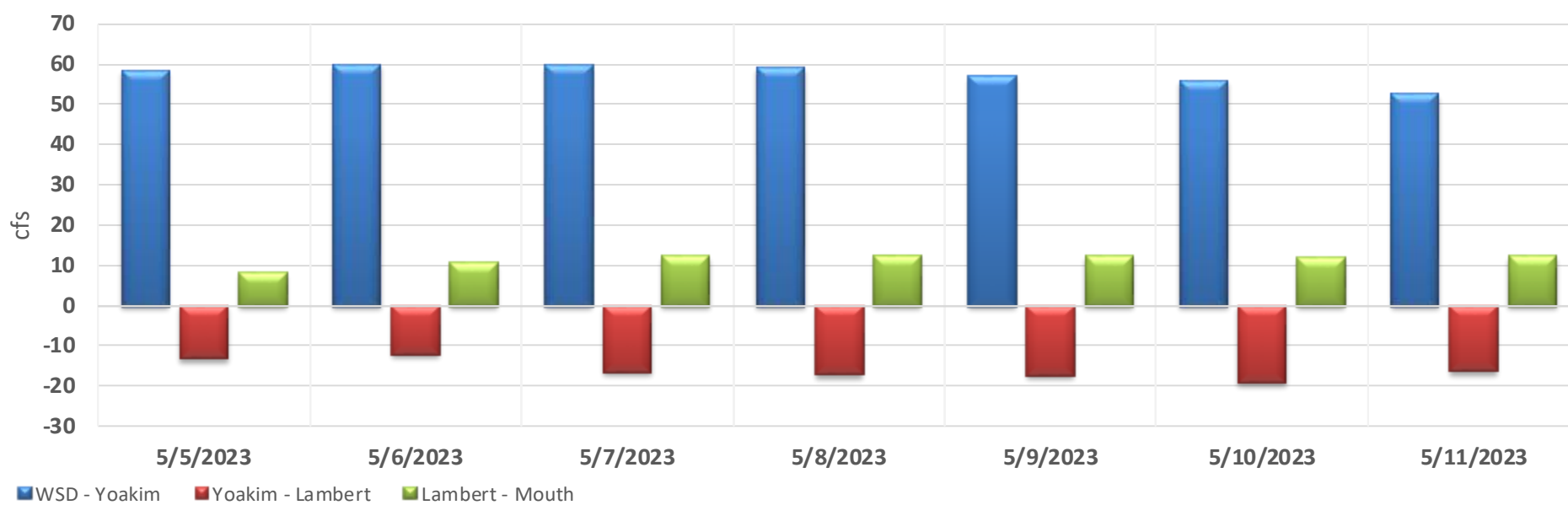
LOWER RUSSIAN RIVER STREAM FLOWS



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



DRY CREEK STREAM FLOWS

