

Lake Mendocino and Lake Sonoma Water Accounting Weekly Report (Term 11, May 2023 TUCO)

Report Date: 8/11/2023

Units are cfs unless noted otherwise

	<u>8/4/2023</u>	<u>8/5/2023</u>	<u>8/6/2023</u>	<u>8/7/2023</u>	<u>8/8/2023</u>	<u>8/9/2023</u>	<u>8/10/2023</u>
I. Upper East Fork Reach							
Potter Valley Project							
Tunnel Diversion	105.0	105.0	105.0	105.0	105.0	105.0	105.0
PVID Requested Delivery	25.0	25.0	25.0	25.0	25.0	25.0	25.0
PVID Canals Actual Delivery	24.5	24.5	24.6	24.7	24.6	24.6	24.6
East Fork Release	81.0	80.0	80.0	80.0	80.0	80.0	80.0
PVID E Fork Diversions	0.5	0.5	0.4	0.3	0.4	0.4	0.4
PVID Water Use - PG&E Contract	25.0	25.0	25.0	25.0	25.0	25.0	25.0
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)	80.5	79.5	79.6	79.7	79.6	79.6	79.6
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	82.3	81.1	82.9	88.0	90.5	89.1	81.1
Net Reach Loss(-)/Gain(+)	-22.7	-23.9	-22.1	-17.0	-14.5	-15.9	-23.9
Unimpaired Natural Flow @ Calpella (est.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-PVID East Fork Net Reach Losses (est.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Natural Flow	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Import	0.0	0.0	0.0	0.0	0.0	0.0	0.0
II. Lake Mendocino							
Reservoir Operations							
Calculated Inflow (ac-ft)	157	150	176	193	173	180	198
(cfs)	79	76	89	97	87	91	100
Natural Flow	0	0	9	17	7	11	20
Import	79	76	80	80	80	80	80
Storage Change (ac-ft)	-228.0	-246.0	-229.0	-210.0	-229.0	-237.0	-236.0
(cfs)	-115	-124	-115	-106	-115	-119	-119
Stored Natural Flow (cfs)	0	0	0	0	0	0	0
Stored Import Water (cfs)	0	0	0	0	0	0	0
Evaporation (ac-ft)	33.5	34.7	38.3	35.9	34.7	34.7	33.4
RVCWD Diversion (ac-ft)	0	0	0	0	0	0	0
CVD Release Gage	177	182	185	185	185	193	202
Storage (Project Water)	98	107	96	88	98	102	102
Natural Flow	0	0	9	17	7	11	20
Import Water	79	76	80	80	80	80	80
East Fork Min Instream Flow Requirement	25	25	25	25	25	25	25
Compliance Gage	<i>Rvr mi.</i>						
CVD Release	<i>99.9</i>	177	182	185	185	193	202
CVD Project Water Release to Meet Min Flow Requirement							
Total Pass-through Water	79	76	89	97	87	91	100
Project Water Release Required	No	No	No	No	No	No	No
III. Upper Russian River Reach							
Minimum Instream Flow Requirement	110	110	110	110	110	110	110
Controlling Compliance Gage							
Min Gage Flow	121	121	122	126	123	119	119
Controlling Gage	Healdsburg	Healdsburg	Healdsburg	Healdsburg	Healdsburg	Healdsburg	Healdsburg
All Compliance Gages							
	<i>Rvr mi.</i>						
Forks (CVD + USGS 11461000)	<i>99.0</i>	177	182	185	185	193	202
Talmage (USGS 11462080)	<i>96.1</i>	159	160	161	159	161	164
Hopland (USGS 11462500)	<i>84.8</i>	153	153	155	151	147	158
Cloverdale (USGS 11463000)	<i>70.9</i>	146	144	147	144	137	148
Geyserville (USGS 11463500)	<i>54.4</i>	136	135	137	135	130	133
Jimtown (USGS 11463682)	<i>48.5</i>	127	128	128	128	126	126
Digger Bend (USGS 11463980)	<i>38.2</i>	128	127	128	129	127	125
Healdsburg (USGS 11464000)	<i>35.6</i>	121	121	122	126	123	119
Net Reach Loss(-)/Gain(+)							
Forks - Talmage	-19	-21	-24	-26	-29	-30	-37
Talmage - Hopland	-6	-6	-7	-10	-9	-6	-8
Hopland - Cloverdale	-5	-8	-7	-9	-10	-7	-8
Cloverdale - Jimtown	-15	-19	-17	-19	-17	-14	-17
Jimtown - Digger Bend	+0	-1	-0	+0	+0	+2	-0
Digger Bend - Healdsburg <i>*when Digger Bend > 400 cfs, next u/s gage (Jimtown) used</i>	-7	-6	-6	-3	-4	-7	-6
Upper Russian Net Reach Loss/Gain	-52	-61	-60	-67	-68	-61	-76
CVD Project Water Release to Meet Min Flow Requirement							
Net Reach Loss(-)/Gain(+) to Controlling Gage	-52	-61	-60	-67	-68	-61	-76
Storage (Project Water)	-52	-61	-60	-67	-68	-61	-76
Pass-through Water (Nat. + Imp.) + Natural	0	0	0	0	0	0	0
Total Pass-through Water	79	76	89	97	87	91	100
Project Water Release Required	Yes	Yes	Yes	Yes	Yes	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).

	8/4/2023	8/5/2023	8/6/2023	8/7/2023	8/8/2023	8/9/2023	8/10/2023
IV. Lake Sonoma							
Lake Sonoma							
Storage Change (ac-ft)	-291.0	-212.0	-317.0	-317.0	-237.0	-264.0	-263.0
(cfs)	-147	-107	-160	-160	-119	-133	-133
Evaporation (ac-ft)	41.4	50.3	53.9	48.5	35.9	37.6	41.2
Inflow (Natural Flow)	0	24	0	0	5	0	0
WSD Release Gage	106	106	106	106	106	107	107
Storage (Project Water)	106	82	106	106	101	107	107
Natural Flow	0	24	0	0	5	0	0
V. Lower Dry Creek Reach							
Minimum Instream Flow Requirement	80	80	80	80	80	80	80
Controlling Compliance Gage							
Min Gage Flow	95	95	95	94	94	94	94
Controlling Gage	Dry Crk Mouth	Dry Crk Mouth	Dry Crk Mouth	Dry Crk Mouth	Dry Crk Mouth	Dry Crk Mouth	Dry Crk Mouth
All Compliance Gages							
	<i>Crk mi.</i>						
WSD Release	14.3	106	106	106	106	107	107
Yoakim (USGS 11465200)	11.1	110	110	109	107	108	109
Lambert (USGS 11465240)	6.8	107	107	107	107	106	107
Dry Crk Mouth (USGS 11465350)	0.1	95	95	95	94	94	94
WSD to Russian River Confluence Reach Analysis							
Total Pass-through Water	0	24	0	0	5	0	0
Net Reach Loss(-)/Gain(+)							
WSD - Yoakim	+4	+4	+3	+1	+2	+1	+2
Yoakim - Lambert	-3	-3	-2	-0	-2	-1	-2
Lambert - Dry Crk Mouth	-11	-12	-12	-13	-13	-13	-13
WSD - Dry Crk Mouth	-11	-11	-11	-12	-13	-13	-13
WSD Project Water Release to Meet Min Flow Requirement							
Net Reach Loss/Gain to Controlling Gage	-11	-11	-11	-12	-13	-13	-13
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	121	121	122	126	123	119	119
Natural Flow	0	0	0	0	0	0	0
Dry Creek Flow (Mouth Gage)							
L. Sonoma Project Water	106	82	106	106	101	107	107
Natural Flow	0	13	0	0	0	0	0
Russian River d/s of Confluence Flow							
L. Mendocino Project Water + Import Water	121	121	122	126	123	119	119
L. Sonoma Project Water	106	82	106	106	101	107	107
Natural Flow	0	13	0	0	0	0	0
VII. Lower Russian River Reach							
Minimum Instream Flow Requirement	60	60	60	60	60	60	60
Controlling Compliance Gage							
Min Gage Flow	149	145	145	148	143	140	139
Controlling Gage	Hacienda	Hacienda	Hacienda	Hacienda	Hacienda	Hacienda	Hacienda
All Compliance Gages							
	<i>Rvr mi.</i>						
Windsor (USGS 11465390)	26.6	273	271	273	272	268	267
Hacienda (USGS 11467000)	21.8	149	145	145	143	140	139
Confluence to Windsor Reach Analysis							
Net Reach Loss/Gain to Windsor Gage	+56	+56	+57	+55	+55	+53	+55
L. Mendocino Project Water + Import Water	121	121	122	126	123	119	119
L. Sonoma Project Water	101	77	101	101	96	102	102
Natural Flow	56	70	57	55	55	53	55
Confluence to SCWA Wohler Production Facility Reach Analysis							
Approx. Flow u/s of Wohler	233	236	233	234	242	225	228
Net Reach Loss(-)/Gain(+)	+17	+21	+17	+14	+25	+12	+16
L. Mendocino Project Water + Import Water	121	121	122	126	123	119	119
L. Sonoma Project Water	101	77	101	101	96	102	102
Natural Flow	17	34	17	14	25	12	16
Confluence to Hacienda (Guerneville) Reach Analysis							
Net Reach Loss(-)/Gain(+)	-68	-71	-71	-72	-74	-73	-74
L. Mendocino Project Water + Import Water	121	121	122	126	123	119	119
L. Sonoma Project Water	16	0	13	15	0	17	13
Natural Flow	17	19	17	14	23	12	16
VIII. Water Production under Sonoma Water Rights (ac-ft)							
Lower Russian River							
Sonoma Water Total	168.0	181.2	174.5	170.2	196.2	169.0	177.3
Wohler	78.4	75.7	74.9	57.2	76.3	76.8	77.1
Mirabel	89.6	105.5	99.5	112.9	119.9	92.2	100.3
Town of Windsor River Wellfield	9.9	9.9	10.3	10.4	9.9	10.3	10.2
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

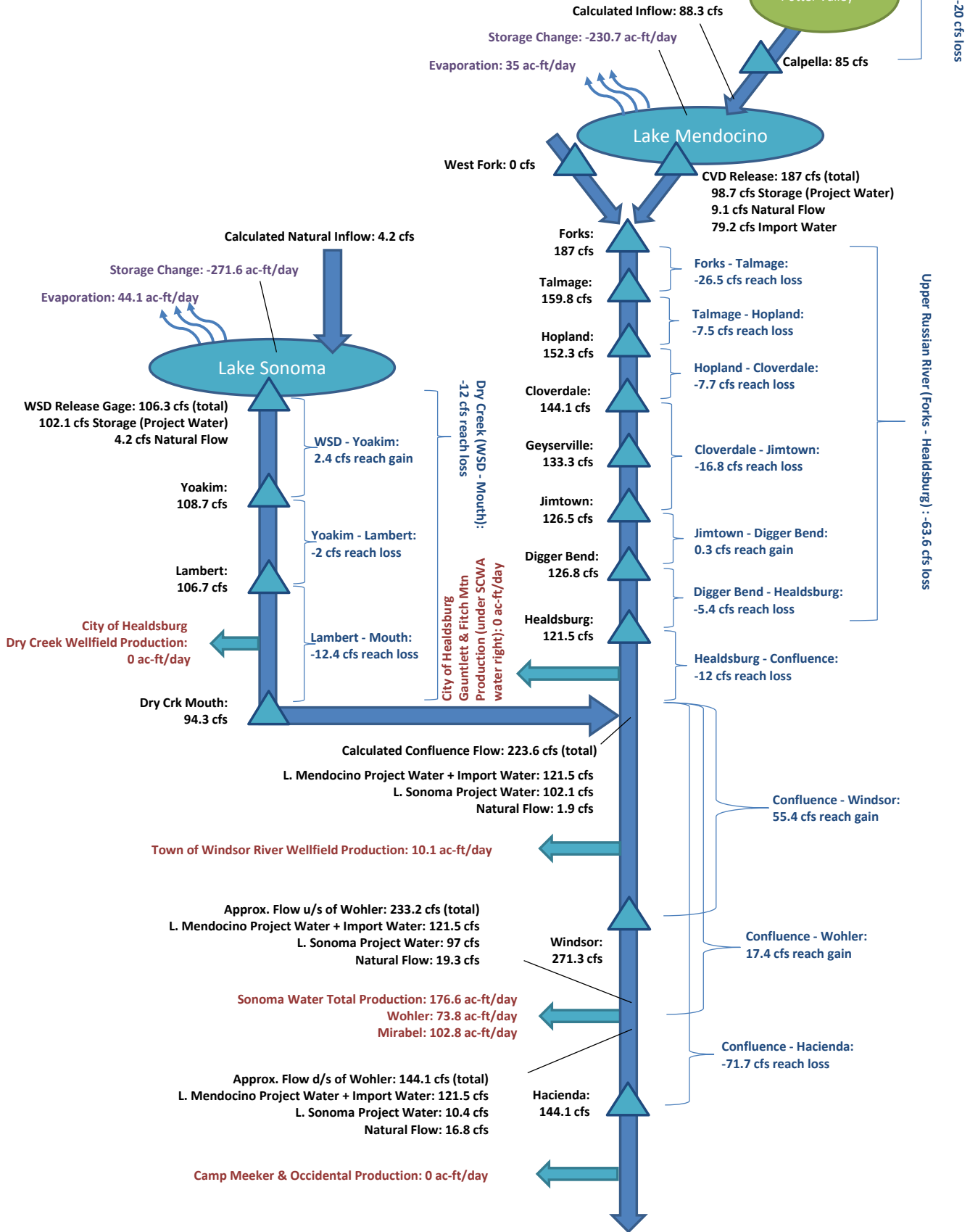
Notes:

- 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 11, May 2023 TUCO)

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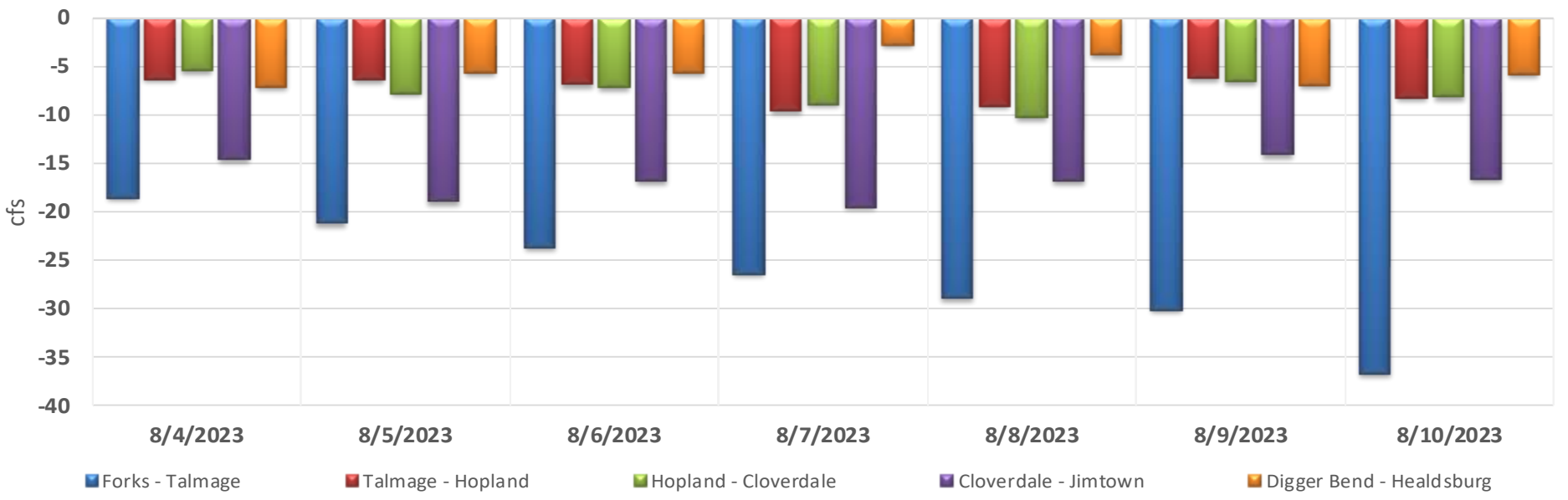
All reported values are weekly averages from the Lake Mendocino and Lake Sonoma Weekly Accounting Report.
Reach losses are calculated using estimated travel times, and are reported here as weekly averages.



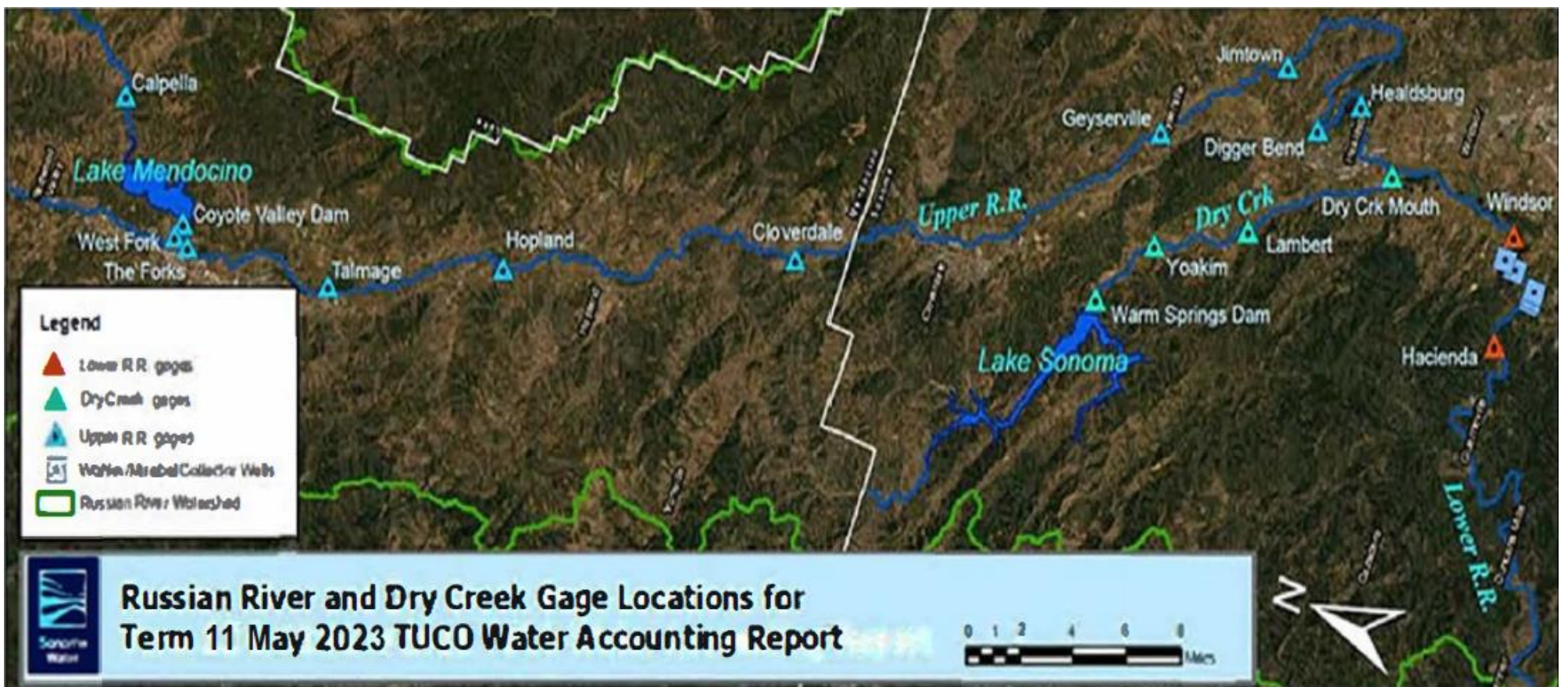
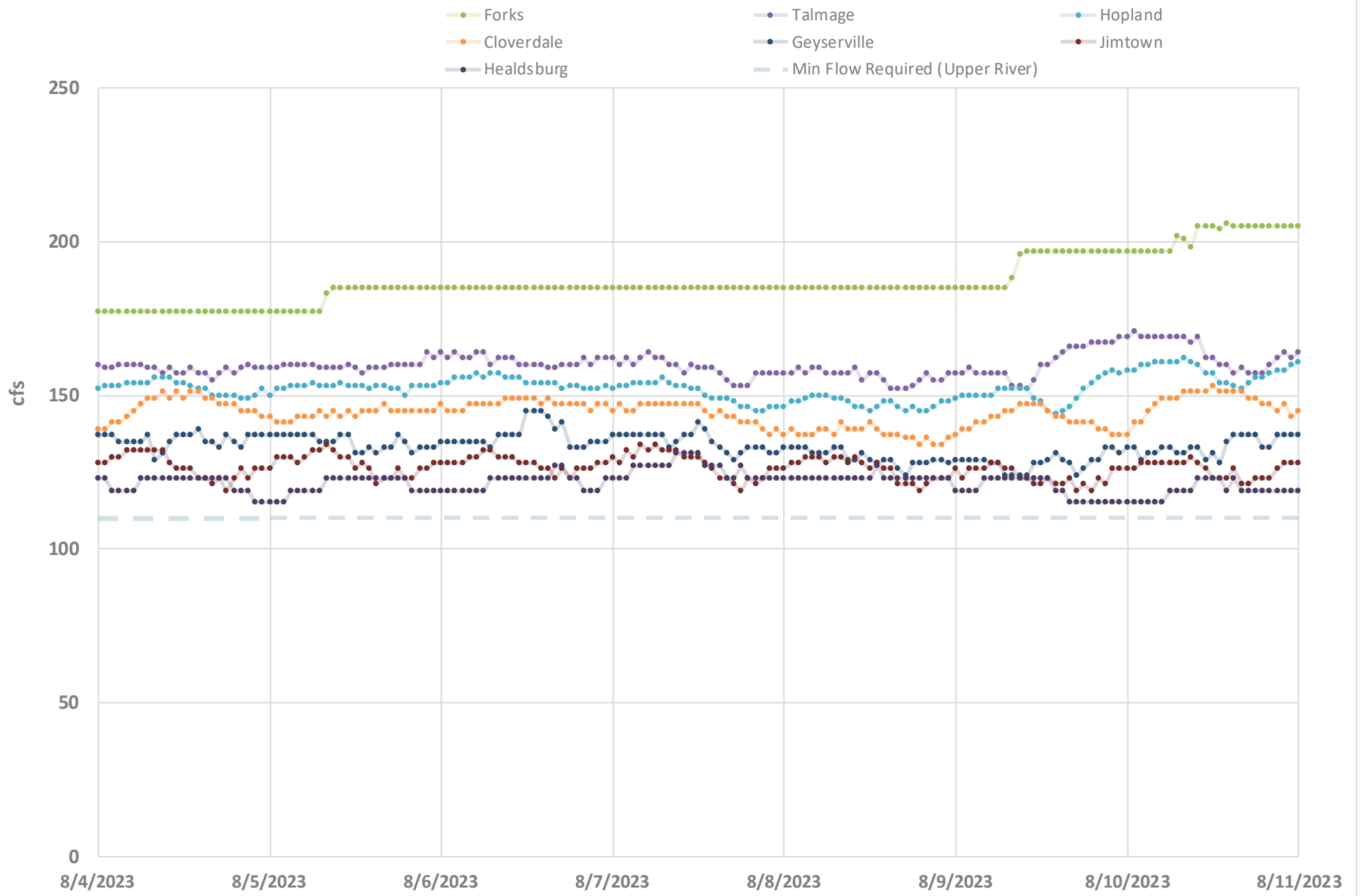
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UPPER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



UPPER RUSSIAN RIVER STREAM FLOWS

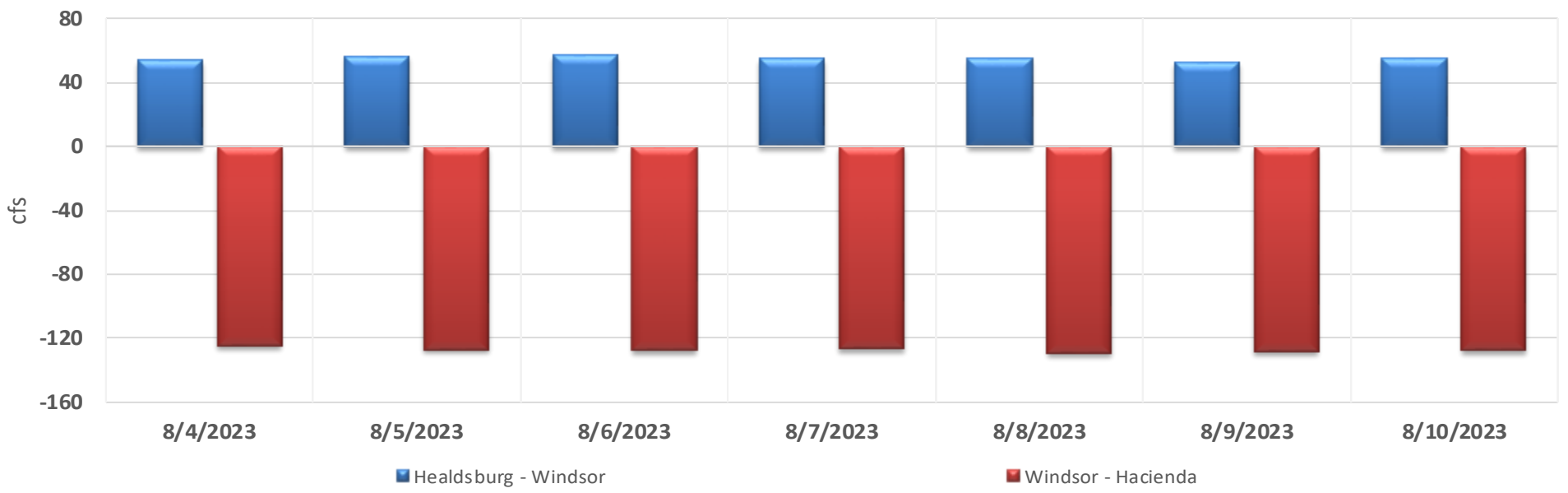


Russian River and Dry Creek Gage Locations for Term 11 May 2023 TUCO Water Accounting Report

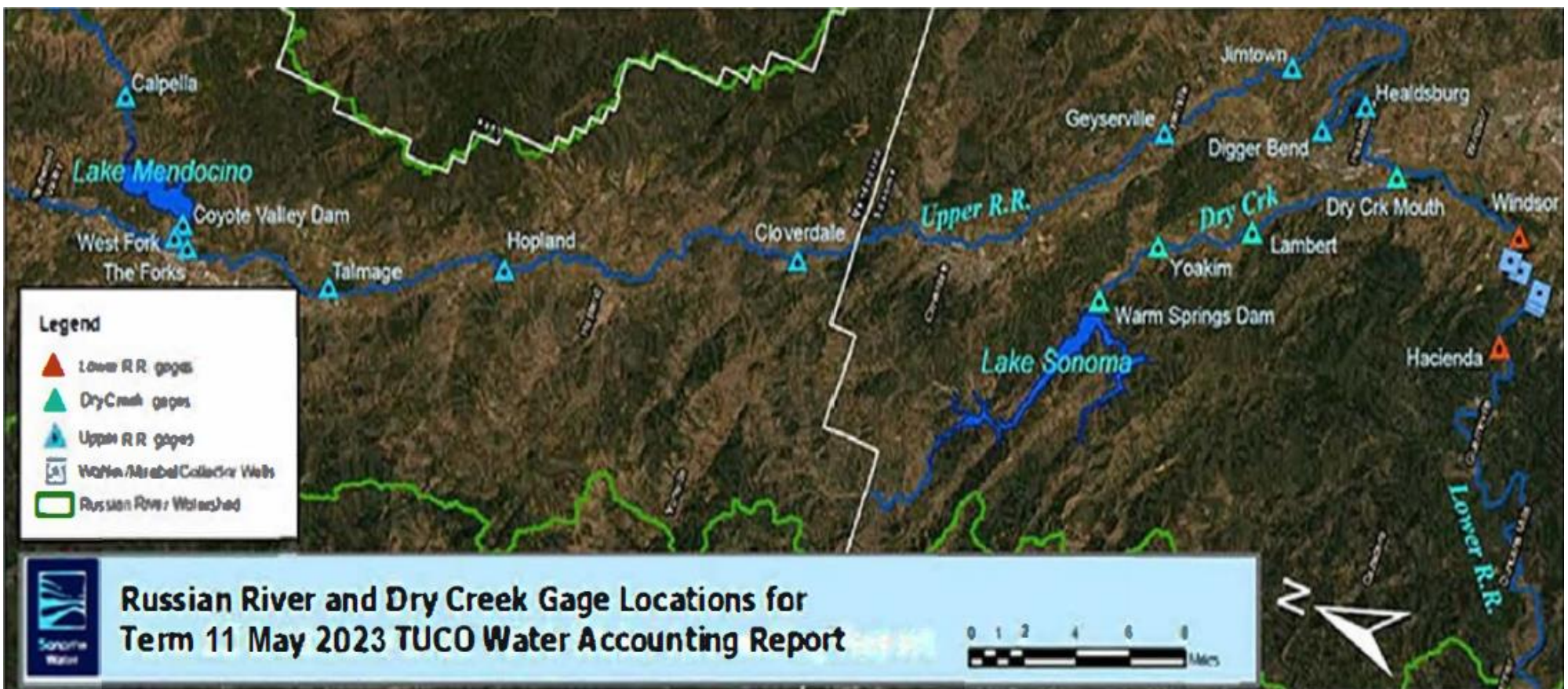
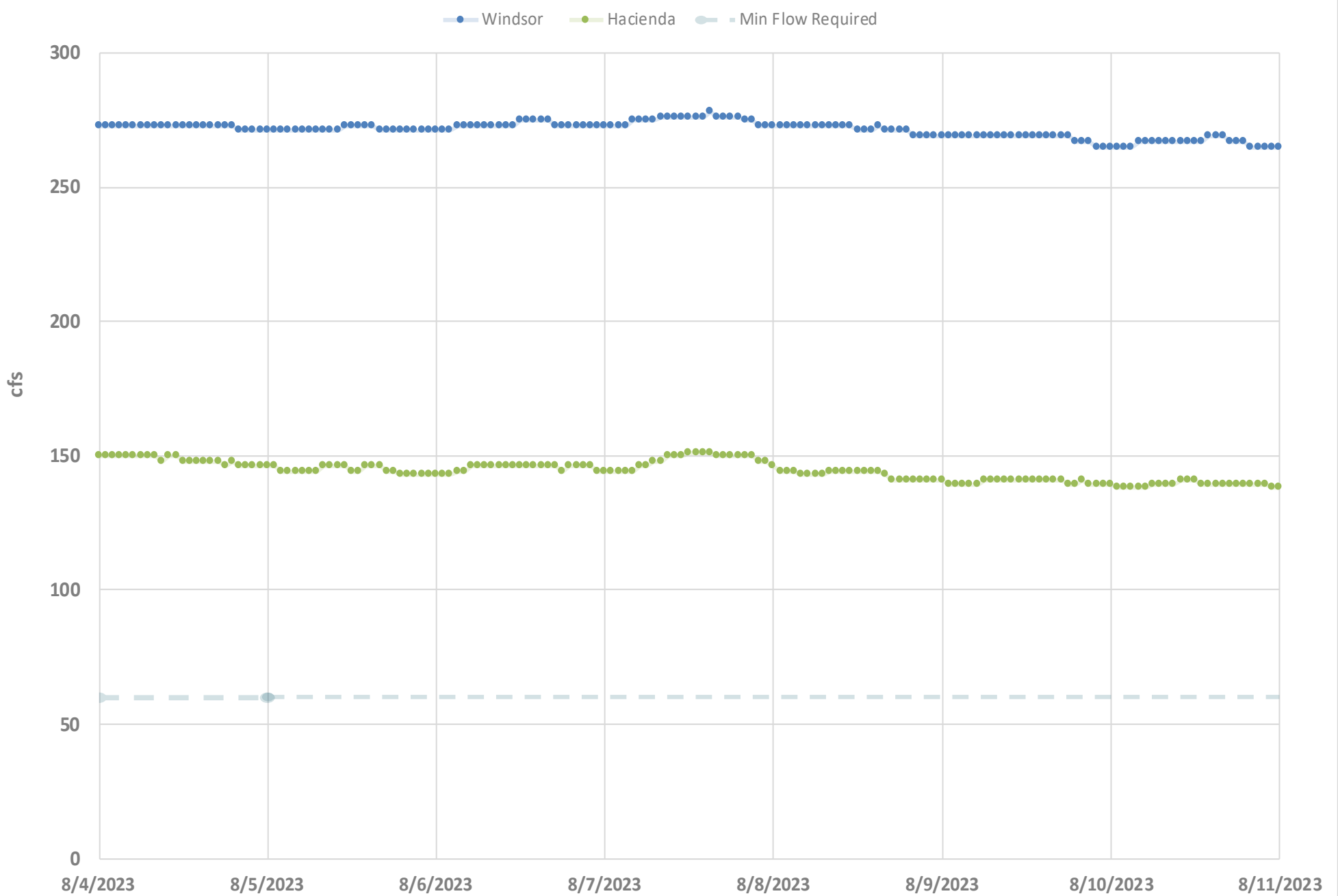
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LOWER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



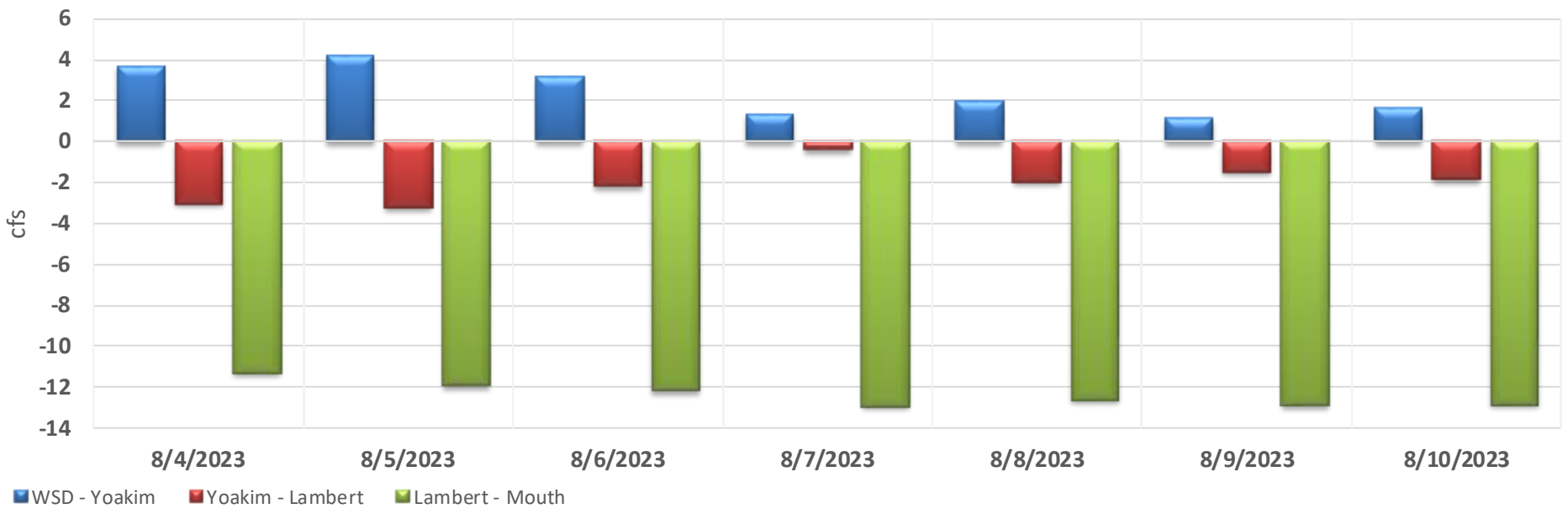
LOWER RUSSIAN RIVER STREAM FLOWS



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



DRY CREEK STREAM FLOWS

