

Lake Mendocino and Lake Sonoma Water Accounting Weekly Report (Term 12, Dec 2021 TUCO)

Report Date: 3/18/2022

Units are cfs unless noted otherwise

	3/11/2022	3/12/2022	3/13/2022	3/14/2022	3/15/2022	3/16/2022	3/17/2022
I. Upper East Fork Reach							
Potter Valley Project							
Tunnel Diversion	45.0	45.0	45.0	45.0	45.0	49.0	61.0
PVID Requested Delivery	5.0	5.0	5.0	5.0	11.2	20.0	20.0
PVID Canals Actual Delivery	2.0	2.0	2.0	2.0	1.0	4.0	10.0
East Fork Release	43.0	43.0	43.0	43.0	44.0	44.0	51.0
PVID E Fork Diversions	3.0	3.0	3.0	3.0	10.2	16.0	10.0
PVID Water Use - PG&E Contract	5.0	5.0	5.0	5.0	11.2	20.0	20.0
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)	40.0	40.0	40.0	40.0	33.8	28.0	41.0
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	54.6	55.2	55.5	55.3	58.1	53.5	54.1
Net Reach Loss(-)/Gain(+)	+9.6	+10.2	+10.5	+10.3	+13.1	+4.5	-6.9
Unimpaired Natural Flow @ Calpella (est.)	14.6	15.2	15.5	15.3	24.3	24.5	13.1
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 (neg. value is return flow)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
II. Lake Mendocino							
	3.22						
Reservoir Operations							
Calculated Inflow (ac-ft)	143	141	86	144	142	98	141
(cfs)	72	71	44	73	72	49	71
Natural Flow	32	31	16	33	38	25	30
Import	40	40	28	40	34	25	41
Storage Change (ac-ft)	+71.0	+71.0	+14.0	+71.0	+71.0	+28.0	+72.0
(cfs)	+36	+36	+7	+36	+36	+14	+36
Stored Natural Flow (cfs)	32	31	7	33	36	14	30
Stored Import Water (cfs)	4	5	0	3	0	0	6
Evaporation (ac-ft)	12.8	11.2	12.0	12.8	11.2	9.6	11.2
RVCWD Diversion (ac-ft)	0	0	0	0	0	0	0
CVD Release Gage	30	30	31	30	30	30	29
Storage (Project Water)	0	0	0	0	0	0	0
Natural Flow	0	0	5	0	0	8	0
Import Water	30	29	25	30	30	22	29
East Fork Min Instream Flow Requirement	25	25	25	25	25	25	25
Compliance Gage	<i>Rvr mi.</i>						
CVD Release	99.9	30	30	31	30	30	29
CVD Project Water Release to Meet Min Flow Requirement							
Total Pass-through Water	30	29	30	30	30	30	29
Project Water Release Required	No	No	No	No	No	No	No
III. Upper Russian River Reach							
Minimum Instream Flow Requirement	25	25	25	25	25	25	25
Controlling Compliance Gage							
Min Gage Flow	44	43	43	41	42	43	40
Controlling Gage	Talmage	Talmage	Talmage	Talmage	Talmage	Talmage	Talmage
All Compliance Gages							
	<i>Rvr mi.</i>						
Forks (CVD + USGS 11461000)	99.0	45	44	46	45	47	44
Talmage (USGS 11462080)	96.1	44	43	43	41	42	40
Hopland (USGS 11462500)	84.8	48	50	55	47	44	49
Cloverdale (USGS 11463000)	70.9	82	75	66	78	69	74
Geyserville (USGS 11463500)	54.4	108	98	97	94	97	91
Jimtown (USGS 11463682)	48.5	110	103	100	98	101	98
Digger Bend (USGS 11463980)	38.2	130	125	121	119	122	118
Healdsburg (USGS 11464000)	35.6	107	102	98	94	95	91
Net Reach Loss(-)/Gain(+)							
Forks - Talmage	-2	-1	-2	-5	-4	-4	-4
Talmage - Hopland	+3	+7	+12	+6	+3	+10	+8
Hopland - Cloverdale	+31	+28	+14	+23	+27	+21	+23
Cloverdale - Jimtown	+21	+23	+29	+28	+25	+30	+25
Jimtown - Digger Bend	+18	+21	+21	+21	+21	+21	+20
Digger Bend - Healdsburg	-24	-25	-24	-26	-25	-28	-28
Upper Russian Net Reach Loss/Gain	+48	+52	+49	+47	+47	+50	+44
CVD Project Water Release to Meet Min Flow Requirement							
Net Reach Loss(-)/Gain(+) to Controlling Gage	-2	-1	-2	-5	-4	-4	-4
Storage (Project Water)	-0	-0	-0	-0	-0	-0	-0
Pass-through Water (Nat. + Imp.) + Natural	-2	-1	-2	-5	-4	-4	-4
Total Pass-through Water	28	28	28	26	26	26	25
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).

	<u>3/11/2022</u>	<u>3/12/2022</u>	<u>3/13/2022</u>	<u>3/14/2022</u>	<u>3/15/2022</u>	<u>3/16/2022</u>	<u>3/17/2022</u>
IV. Lake Sonoma							
Lake Sonoma							
Storage Change (ac-ft)	-150.0	-131.0	-132.0	-131.0	-75.0	-131.0	-112.0
(cfs)	-76	-66	-67	-66	-38	-66	-56
Evaporation (ac-ft)	12.6	9.5	9.5	10.5	8.4	11.5	10.5
Inflow (Natural Flow)	9	17	16	17	43	17	26
WSD Release Gage	78	78	78	78	77	77	77
Storage (Project Water)	69	61	62	61	34	60	51
Natural Flow	9	17	16	17	43	17	26
V. Lower Dry Creek Reach							
Minimum Instream Flow Requirement	75	75	75	75	75	75	75
Controlling Compliance Gage							
Min Gage Flow	77	72	78	78	77	77	77
Controlling Gage	Dry Crk Mouth	Dry Crk Mouth	WSD Release	WSD Release	WSD Release	WSD Release	WSD Release
All Compliance Gages							
	<i>Crk mi.</i>						
WSD Release	14.3	78	78	78	77	77	77
Yoakim (USGS 11465200)	11.1	101	102	103	101	103	103
Lambert (USGS 11465240)	6.8	92	91	94	94	94	93
Dry Crk Mouth (USGS 11465350)	0.1	77	72	78	79	82	79
WSD to Russian River Confluence Reach Analysis							
Total Pass-through Water	9	17	16	17	43	17	26
Net Reach Loss(-)/Gain(+)							
WSD - Yoakim	+23	+24	+25	+24	+26	+26	+26
Yoakim - Lambert	-9	-11	-9	-8	-8	-9	-10
Lambert - Dry Crk Mouth	-16	-18	-16	-15	-12	-14	-14
WSD - Dry Crk Mouth	-2	-6	+0	+1	+5	+3	+2
WSD Project Water Release to Meet Min Flow Requirement							
Net Reach Loss/Gain to Controlling Gage	-2	-6	+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	30	30	25	30	30	22	29
Natural Flow	48	52	55	47	47	58	44
Dry Creek Flow (Mouth Gage)							
L. Sonoma Project Water	69	61	62	61	34	60	51
Natural Flow	8	11	17	18	49	20	28
Russian River d/s of Confluence Flow							
L. Mendocino Project Water + Import Water	30	30	25	30	30	22	29
L. Sonoma Project Water	69	61	62	61	34	60	51
Natural Flow	56	63	71	65	96	78	72
VII. Lower Russian River Reach							
Minimum Instream Flow Requirement	35	35	35	35	35	35	35
Controlling Compliance Gage							
Min Gage Flow	187	173	170	170	180	187	178
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>
Hacienda (USGS 11467000)	21.8	187	173	170	170	180	178
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	250	236	239	234	254	248	242
Net Reach Loss(-)/Gain(+)	+66	+62	+63	+62	+77	+74	+72
L. Mendocino Project Water + Import Water	30	30	25	30	30	22	29
L. Sonoma Project Water	67	59	60	58	31	58	49
Natural Flow	122	125	134	127	173	153	145
Confluence to Hacienda (Guerneville) Reach Analysis							
Net Reach Loss(-)/Gain(+)	+3	-2	-6	-3	+2	+13	+8
L. Mendocino Project Water + Import Water	30	30	25	30	30	22	29
L. Sonoma Project Water	3	0	0	0	0	0	0
Natural Flow	122	121	125	121	130	150	130
VIII. Water Production under Sonoma Water Rights (ac-ft)							
Lower Russian River							
Sonoma Water Total	125.9	125.2	136.3	127.9	147.5	121.2	127.2
Wohler	81.0	79.0	54.7	45.3	75.5	81.1	68.8
Mirabel	44.8	46.2	81.6	82.6	72.0	40.1	58.4
Town of Windsor River Wellfield	4.7	4.2	3.8	4.5	4.4	3.9	4.6
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

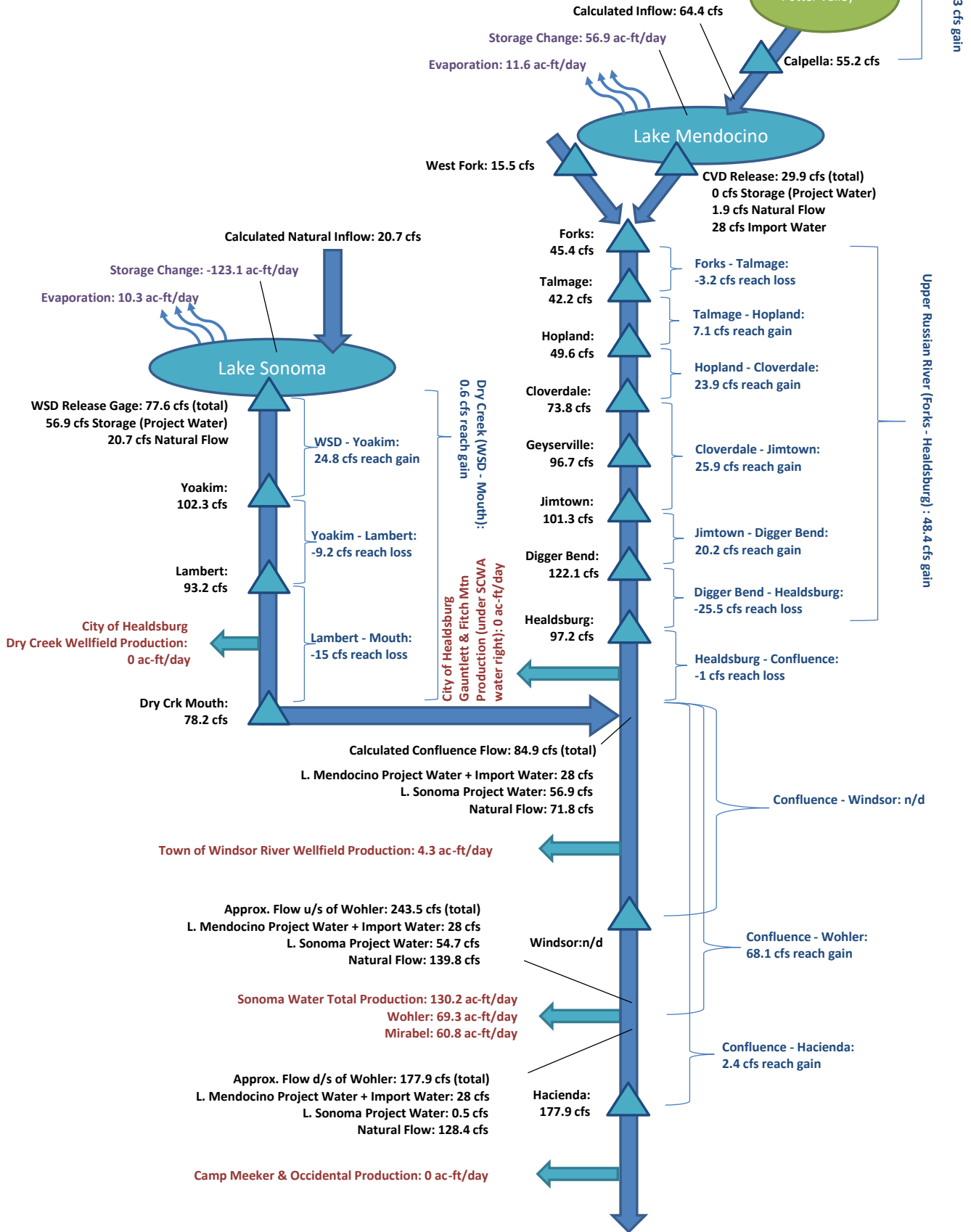
Notes:

- 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 12, Dec 2021 TUCO)

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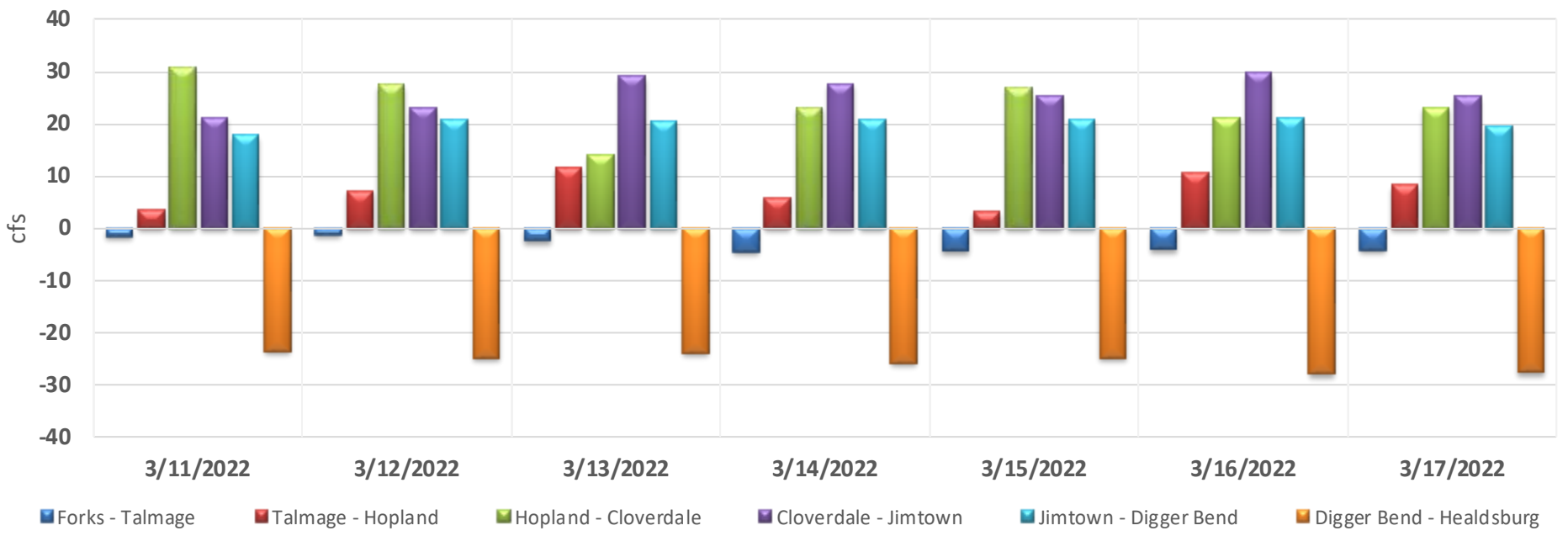
All reported values are weekly averages from the Lake Mendocino and Lake Sonoma Weekly Accounting Report.
Reach losses are calculated using estimated travel times, and are reported here as weekly averages.



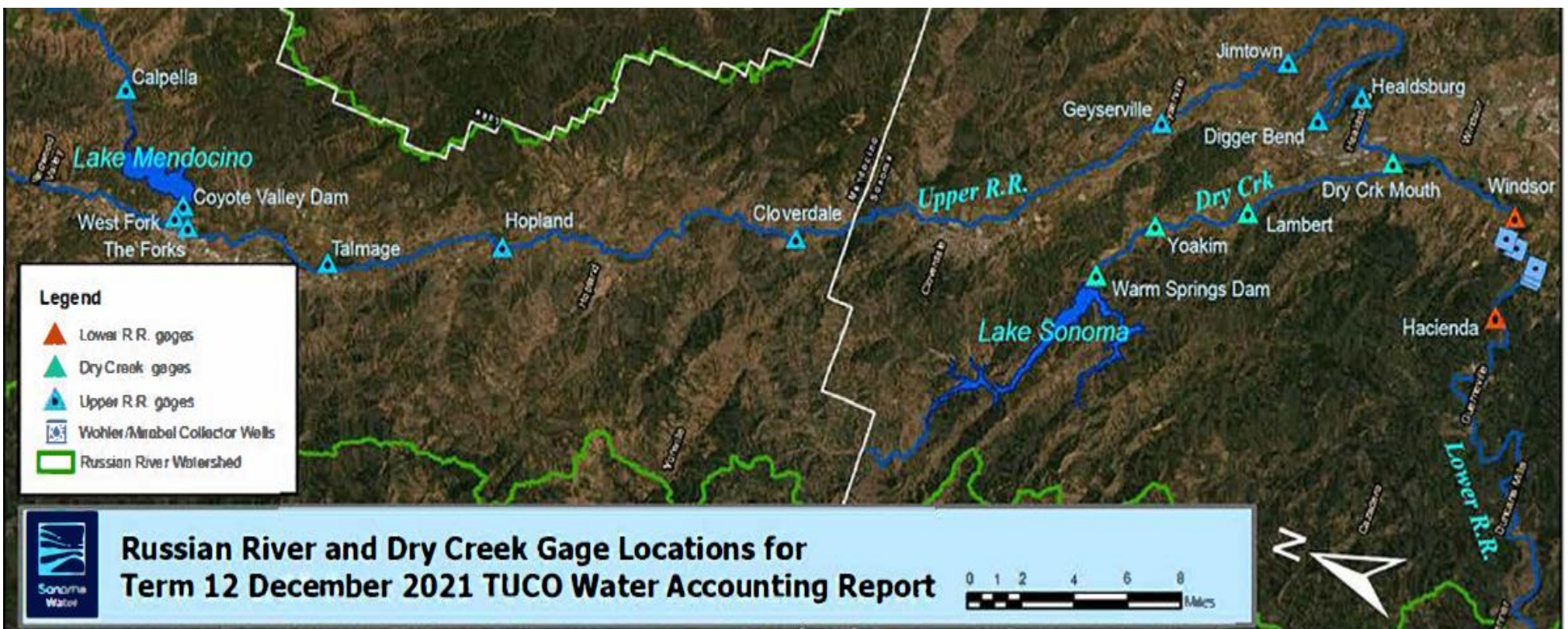
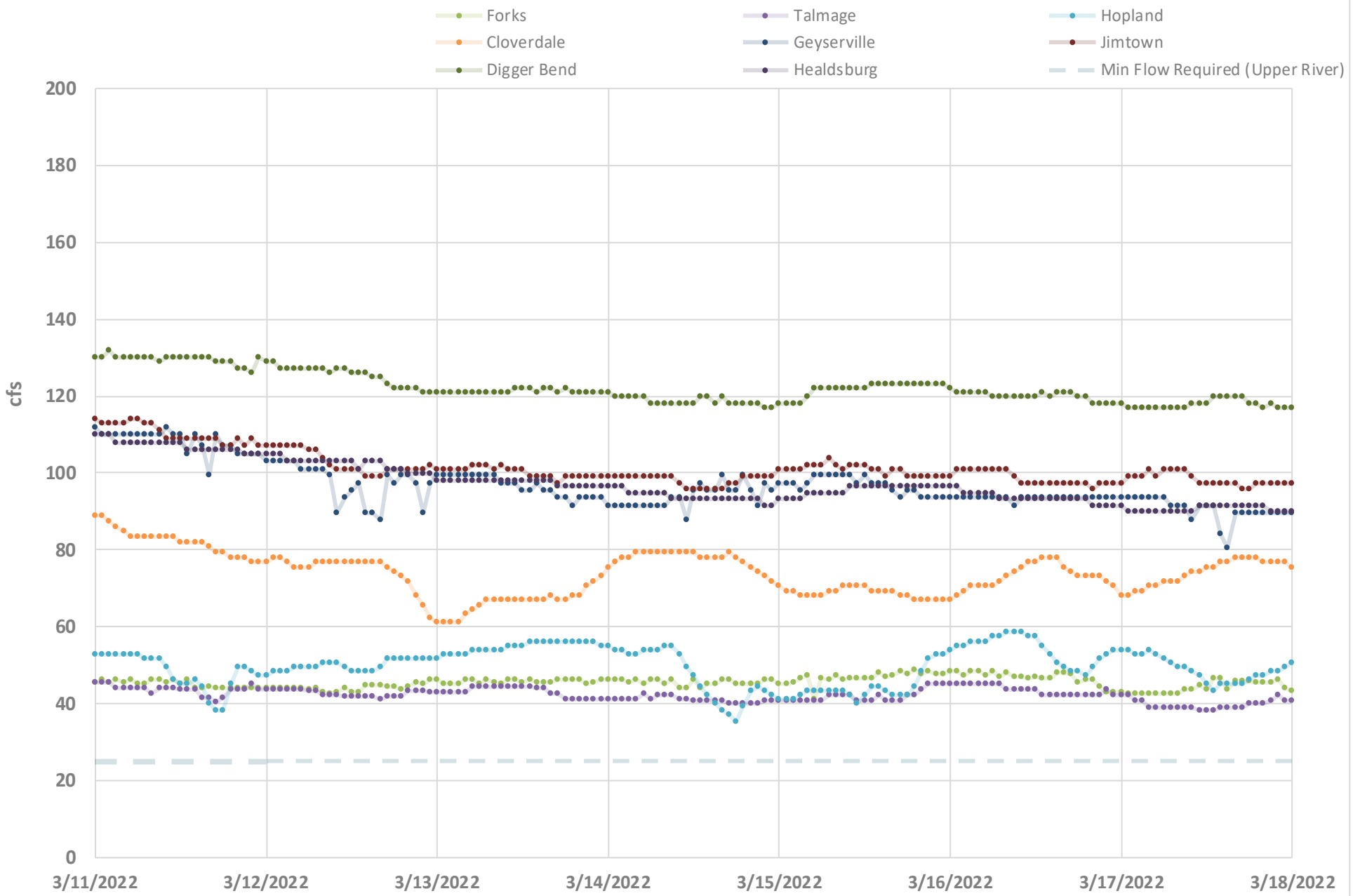
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UPPER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



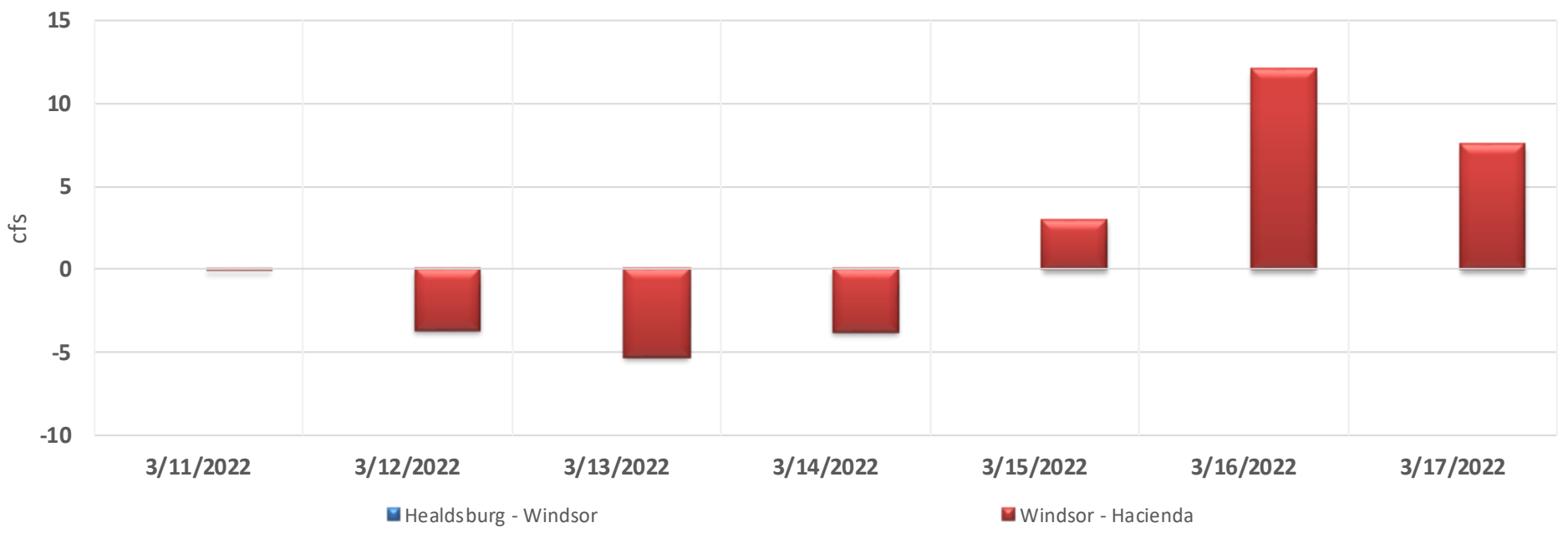
UPPER RUSSIAN RIVER STREAM FLOWS



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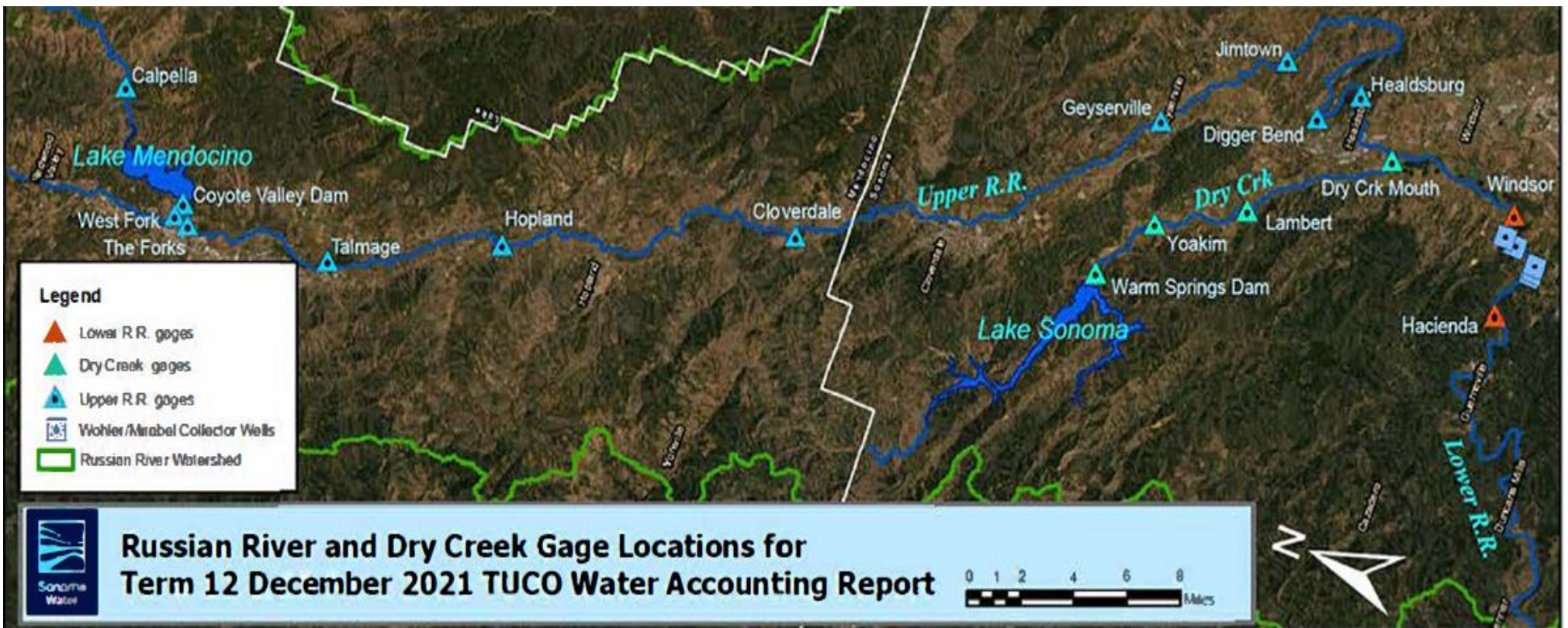
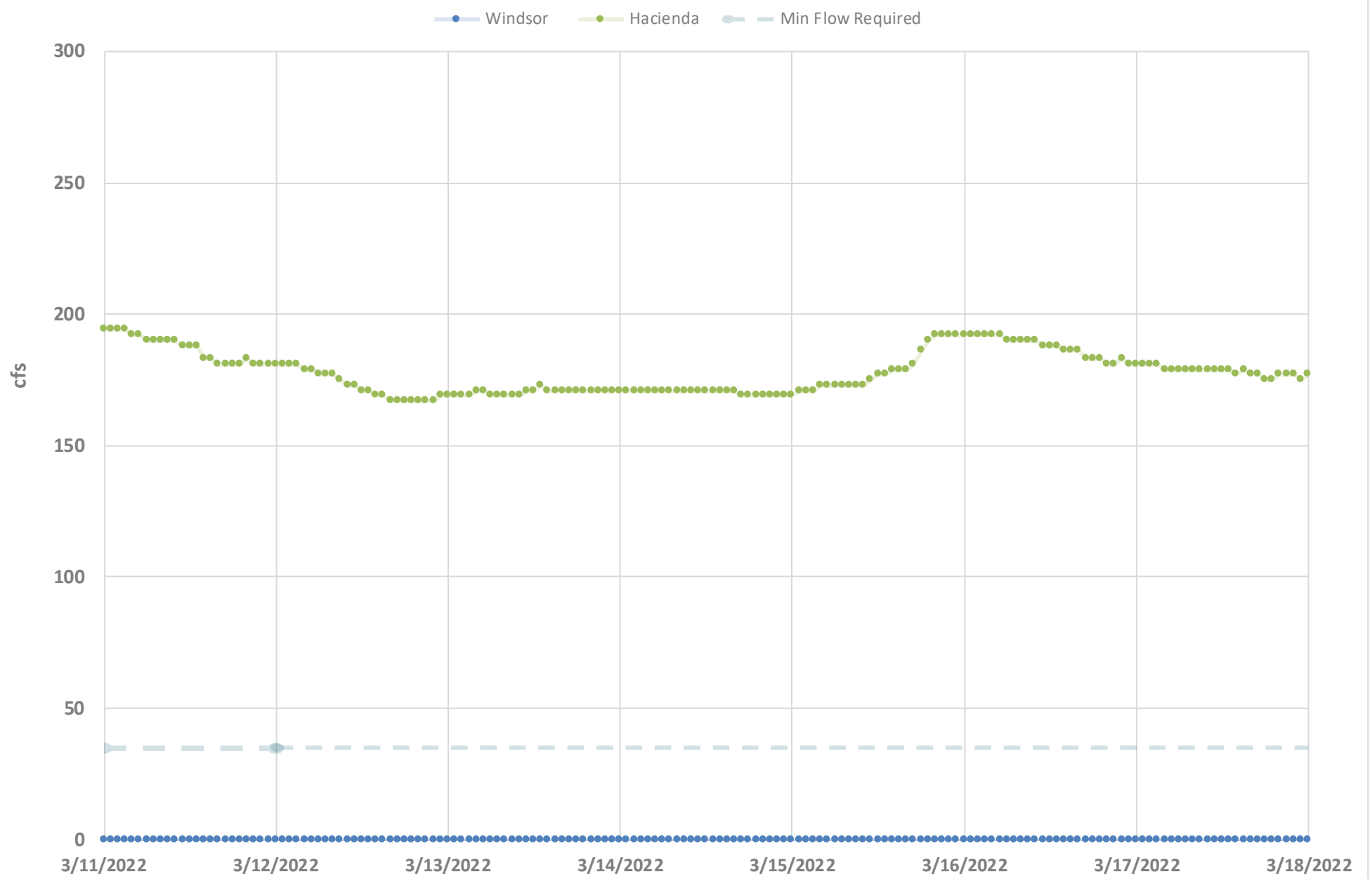
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LOWER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



Note: Windsor gage is a seasonal gage and not operational. Reach gains for Windsor – Hacienda reach calculated with Healdsburg gages as upstream gages

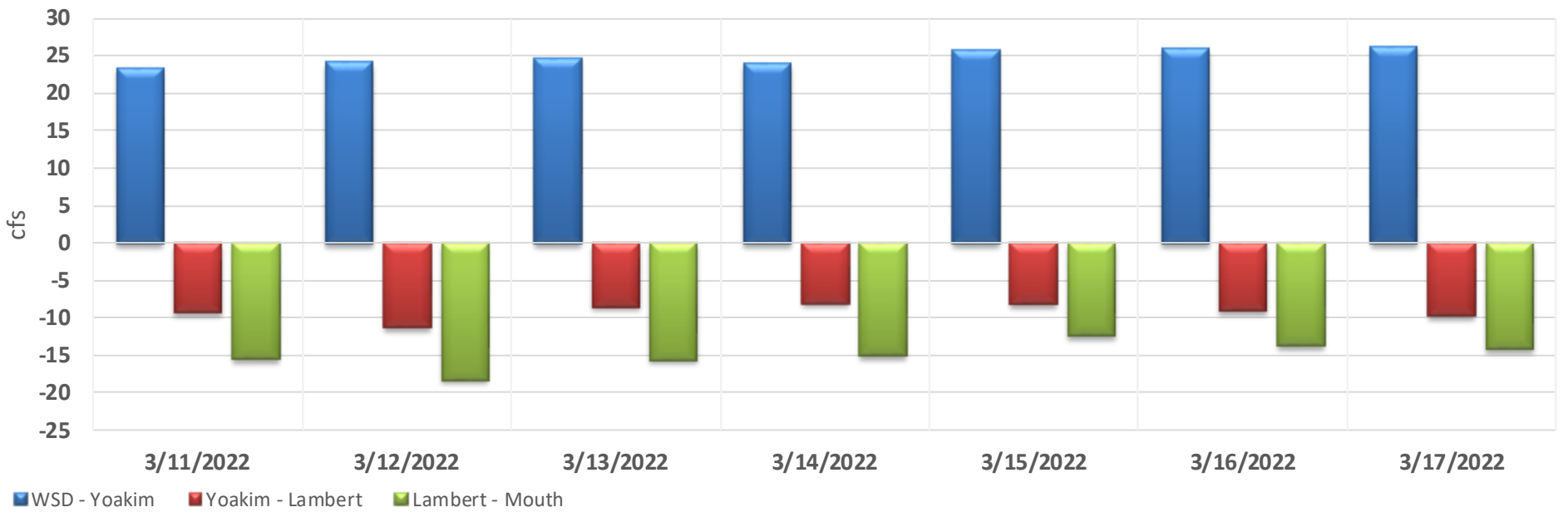
LOWER RUSSIAN RIVER STREAM FLOWS



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



DRY CREEK STREAM FLOWS

