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

Report Date: 7/21/2023

Units are cfs unless noted otherwise

	7/14/2023	7/15/2023	7/16/2023	7/17/2023	7/18/2023	7/19/2023	7/20/2023
I. Upper East Fork Reach							
Potter Valley Project							
Tunnel Diversion	100.0	100.0	100.0	100.0	103.0	105.0	106.0
PVID Requested Delivery	20.0	20.0	20.0	20.0	23.3	25.0	25.0
PVID Canals Actual Delivery	20.6	20.6	20.6	20.6	23.5	25.2	25.2
East Fork Release	79.0	79.0	79.0	79.0	79.0	80.0	81.0
PVID E Fork Diversions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PVID Water Use - PG&E Contract	20.6	20.6	20.6	20.6	23.5	25.2	25.2
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)	79.0	79.0	79.0	79.0	79.0	80.0	81.0
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	82.6	76.4	85.5	81.4	80.9	81.7	79.5
Net Reach Loss(-)/Gain(+)	-17.4	-23.6	-14.5	-18.6	-22.1	-23.3	-26.5
Unimpaired Natural Flow @ Calpella (est.)	4.6	4.6	4.6	4.2	4.2	0.0	0.0
Non-PVID East Fork Net Reach Losses (est.)	-1.5	-7.6	0.0	-2.3	-2.8	0.0	-1.2
Natural Flow	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Import	-1.5	-7.6	0.0	-2.3	-2.8	0.0	-1.2
II. Lake Mendocino							
Reservoir Operations							
Calculated Inflow (ac-ft)	153	189	152	188	117	170	144
(cfs)	77	95	77	95	59	86	73
Natural Flow	5	8	5	13	4	6	0
Import	73	87	72	82	55	80	73
Storage Change (ac-ft)	-212.0	-177.0	-213.0	-177.0	-248.0	-194.0	-230.0
(cfs)	-107	-89	-107	-89	-125	-98	-116
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)	38.0	39.1	38.0	38.0	38.0	36.8	36.8
RVCWD Diversion (ac-ft)	0	0	0	0	0	0	0
CVD Release Gage	165	165	165	165	165	165	170
Storage (Project Water)	88	70	88	70	106	79	97
Natural Flow	5	8	5	13	4	6	0
Import Water	73	87	72	82	55	80	73
East Fork Min Instream Flow Requirement	25	25	25	25	25	25	25
Compliance Gage *Rvr mi.*							
CVD Release *99.9*	165	165	165	165	165	165	170
CVD Project Water Release to Meet Min Flow Requirement							
Total Pass-through Water	77	95	77	95	59	86	73
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	124	128	127	128	126	126	123
Controlling Gage	Geyserville	Geyserville	Geyserville	Geyserville	Geyserville	Geyserville	Geyserville
All Compliance Gages *Rvr mi.*							
Forks (CVD + USGS 11461000) *99.0*	169	169	169	168	168	168	172
Talmage (USGS 11462080) *96.1*	148	146	146	147	145	145	153
Hopland (USGS 11462500) *84.8*	139	136	138	138	135	134	141
Cloverdale (USGS 11463000) *70.9*	130	130	131	131	131	129	131
Geyserville (USGS 11463500) *54.4*	124	128	127	128	126	126	123
Jimtown (USGS 11463682) *48.5*	134	137	138	137	136	136	133
Digger Bend (USGS 11463980) *38.2*	167	168	170	170	168	168	166
Healdsburg (USGS 11464000) *35.6*	163	163	165	166	164	164	164
Net Reach Loss(-)/Gain(+)							
Forks - Talmage	-22	-23	-22	-22	-22	-23	-18
Talmage - Hopland	-9	-10	-8	-8	-11	-10	-9
Hopland - Cloverdale	-9	-7	-6	-8	-5	-5	-5
Cloverdale - Jimtown	+9	+6	+8	+5	+5	+5	+5
Jimtown - Digger Bend	+33	+31	+32	+33	+32	+32	+32
Digger Bend - Healdsburg **when Digger Bend > 400 cfs, next u/s gage (Jimtown) used*	-5	-4	-5	-5	-4	-4	-4
Upper Russian Net Reach Loss/Gain	-3	-7	-1	-4	-5	-5	+2
CVD Project Water Release to Meet Min Flow Requirement							
Net Reach Loss(-)/Gain(+) to Controlling Gage	-31	-34	-29	-33	-33	-33	-27
Storage (Project Water)	-31	-34	-29	-33	-33	-33	-27
Pass-through Water (Nat. + Imp.) + Natural	0	0	0	0	0	0	0
Total Pass-through Water	77	95	77	95	59	86	73
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).

			7/14/2023	7/15/2023	7/16/2023	7/17/2023	7/18/2023	7/19/2023	7/20/2023
IV. Lake Sonoma									
Lake Sonoma									
Storage Change (ac-ft)			-241.0	-188.0	-215.0	-241.0	-268.0	-241.0	-187.0
(cfs)			-122	-95	-108	-122	-135	-122	-94
Evaporation (ac-ft)			45.7	47.3	45.6	45.6	45.6	45.5	43.8
Inflow (Natural Flow)			0	22	8	0	0	0	21
WSD Release Gage			93	93	93	93	93	93	93
Storage (Project Water)			93	71	85	93	93	93	72
Natural Flow			0	22	8	0	0	0	21
V. Lower Dry Creek Reach									
Minimum Instream Flow Requirement			80	80	80	80	80	80	80
Controlling Compliance Gage									
Min Gage Flow			85	85	85	85	84	84	83
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		*Crk mi.*							
WSD Release		*14.3*	93	93	93	93	93	93	93
Yoakim	(USGS 11465200)	*11.1*	95	95	95	93	93	94	94
Lambert	(USGS 11465240)	*6.8*	98	98	98	98	98	97	97
Dry Crk Mouth	(USGS 11465350)	*0.1*	85	85	85	85	84	84	83
WSD to Russian River Confluence Reach Analysis									
Total Pass-through Water			0	22	8	0	0	0	21
Net Reach Loss(-)/Gain(+)									
WSD - Yoakim			+2	+2	+2	+0	+0	+1	+0
Yoakim - Lambert			+3	+3	+4	+5	+4	+4	+3
Lambert - Dry Crk Mouth			-14	-13	-13	-14	-14	-13	-14
WSD - Dry Crk Mouth			-8	-8	-8	-9	-9	-9	-10
WSD Project Water Release to Meet Min Flow Requirement									
Net Reach Loss/Gain to Controlling Gage			-8	-8	-8	-9	-9	-9	-10
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			160	157	160	152	161	159	163
Natural Flow			2	2	3	9	0	1	2
Dry Creek Flow (Mouth Gage)									
L. Sonoma Project Water			93	71	85	93	93	93	72
Natural Flow			0	14	0	0	0	0	11
Russian River d/s of Confluence Flow			248	247	250	251	248	248	248
L. Mendocino Project Water + Import Water			160	157	160	152	161	159	163
L. Sonoma Project Water			93	71	85	93	93	93	72
Natural Flow			2	16	3	9	0	1	13
VII. Lower Russian River Reach									
Minimum Instream Flow Requirement			60	60	60	60	60	60	60
Controlling Compliance Gage									
Min Gage Flow			128	124	122	122	121	118	119
Controlling Gage			Hacienda	Hacienda	Hacienda	Hacienda	Hacienda	Hacienda	Hacienda
All Compliance Gages		*Rvr mi.*							
Windsor	(USGS 11465390)	*26.6*	*276*	*275*	*276*	*278*	*276*	*275*	*274*
Hacienda	(USGS 11467000)	*21.8*	128	124	122	122	121	118	119
Confluence to Windsor Reach Analysis									
Net Reach Loss/Gain to Windsor Gage			+29	+28	+27	+26	+27	+27	+25
L. Mendocino Project Water + Import Water			160	157	160	152	161	159	163
L. Sonoma Project Water			88	66	81	88	88	88	67
Natural Flow			31	43	31	35	27	28	38
Confluence to SCWA Wohler Production Facility Reach Analysis									
Approx. Flow u/s of Wohler			216	217	220	206	213	201	212
Net Reach Loss(-)/Gain(+)			-32	-30	-30	-45	-36	-48	-35
L. Mendocino Project Water + Import Water			160	157	160	152	161	159	163
L. Sonoma Project Water			88	66	81	88	88	88	67
Natural Flow			0	0	0	0	0	0	0
Confluence to Hacienda (Guerneville) Reach Analysis									
Net Reach Loss(-)/Gain(+)			-120	-123	-128	-129	-127	-130	-129
L. Mendocino Project Water + Import Water			160	129	143	152	157	159	137
L. Sonoma Project Water			0	0	0	3	0	5	0
Natural Flow			0	0	0	0	0	0	0
VIII. Water Production under Sonoma Water Water Rights (ac-ft)									
Lower Russian River									
Sonoma Water Total			174.0	185.4	194.0	167.3	181.7	164.0	184.9
Wohler			74.5	78.8	78.9	68.0	70.0	77.0	81.8
Mirabel			99.6	106.6	115.1	99.3	111.7	87.0	103.1
Town of Windsor River Wellfield			10.1	10.6	9.5	10.6	9.9	10.6	9.7
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

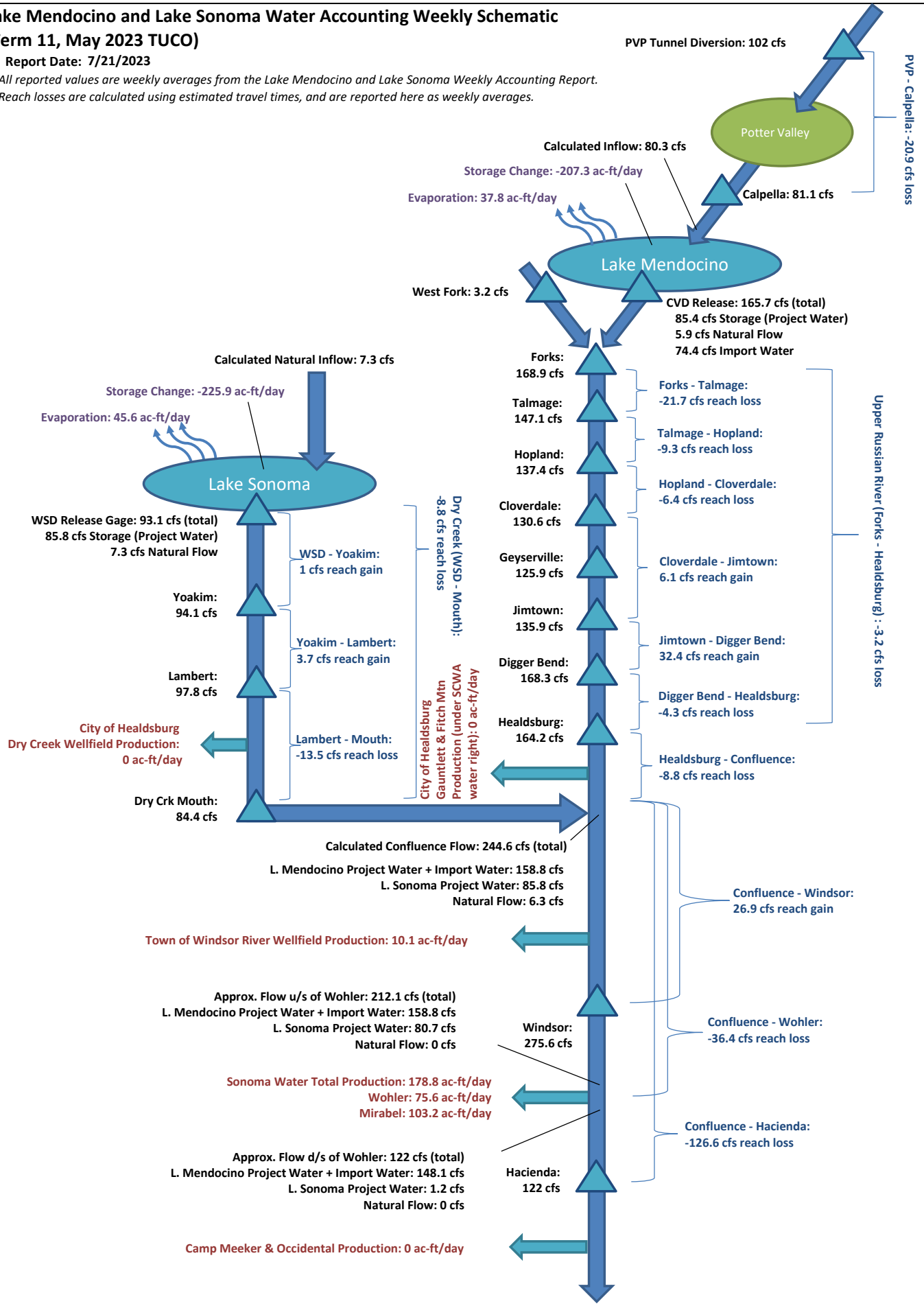
Notes:

- 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).

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

Report Date: 7/21/2023

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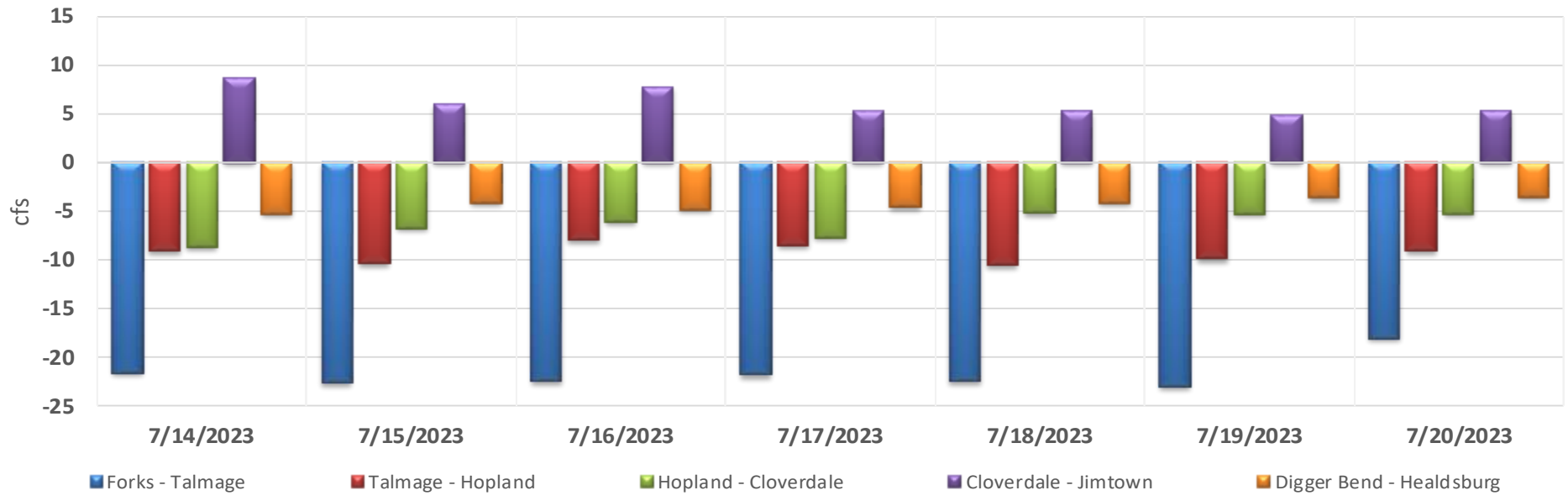
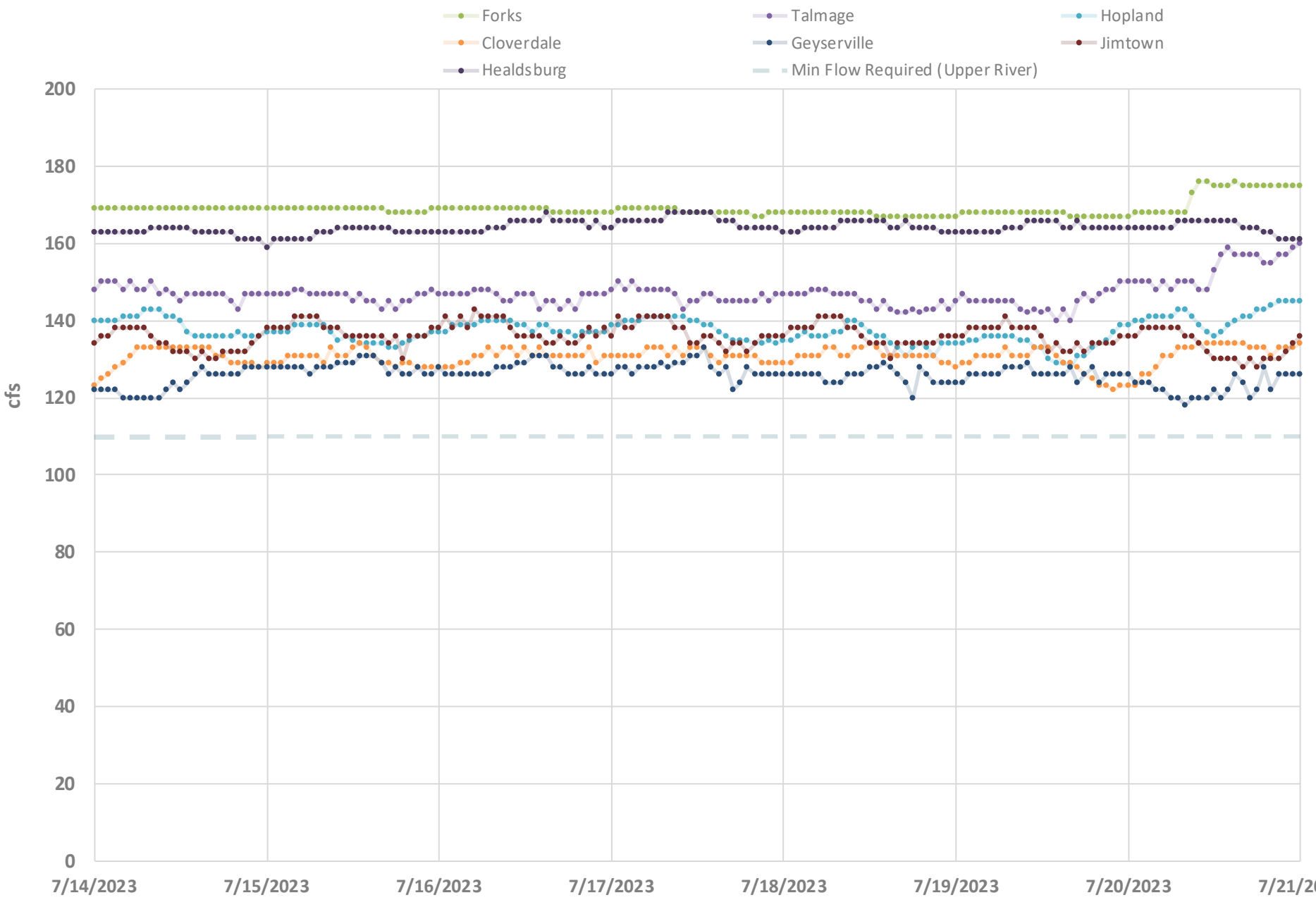
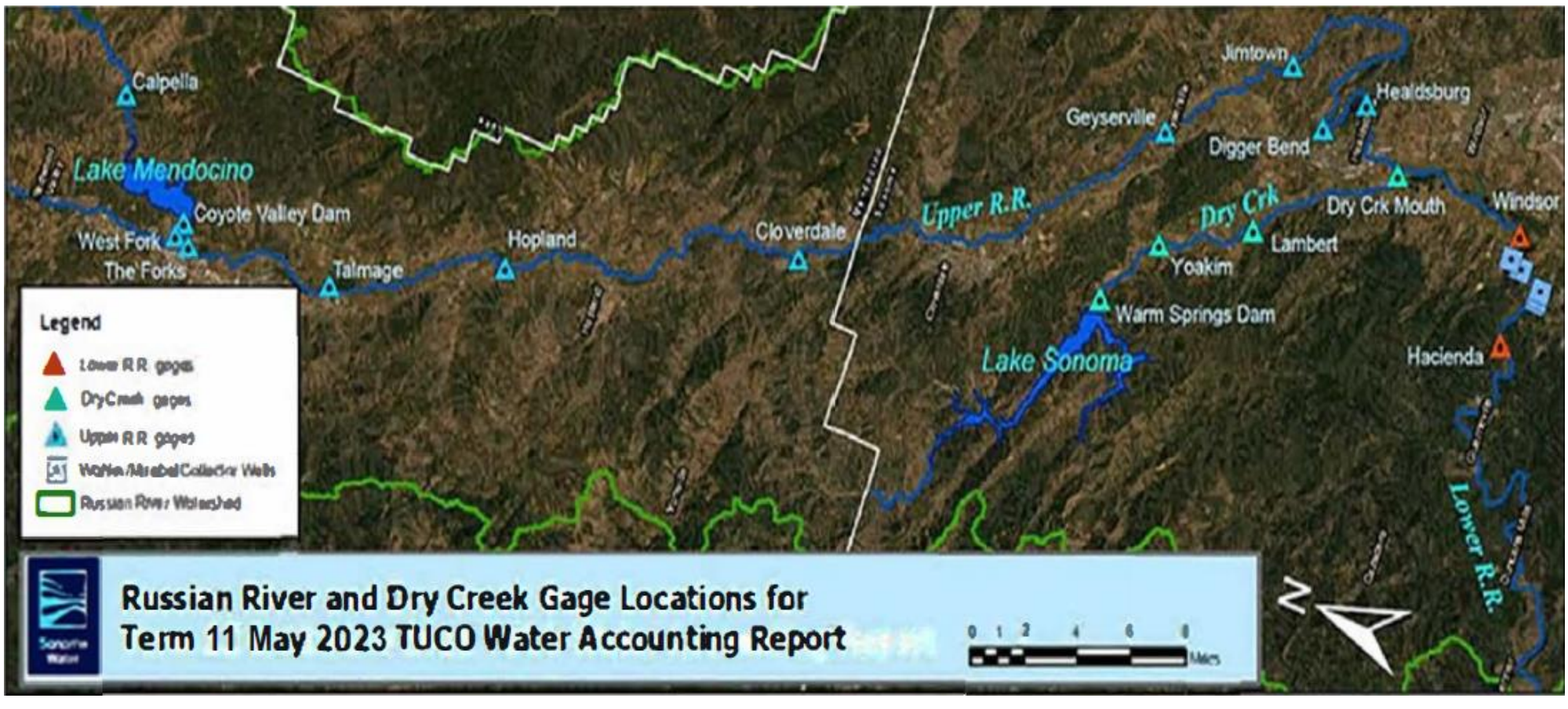
UPPER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



UPPER RUSSIAN RIVER STREAM FLOWS





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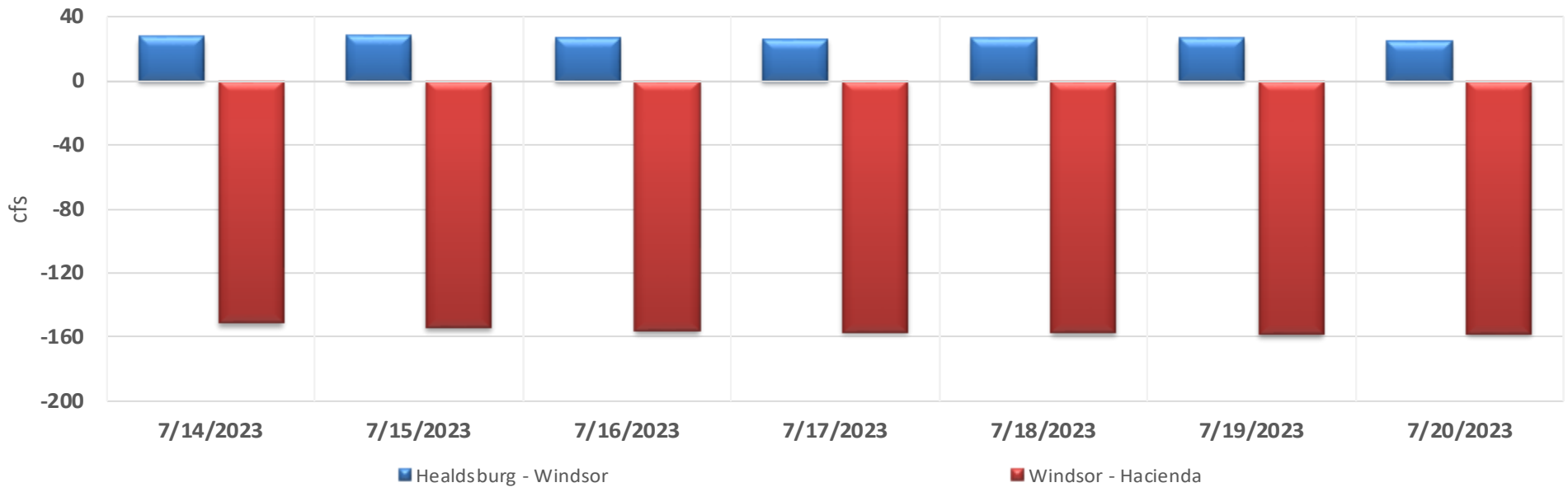
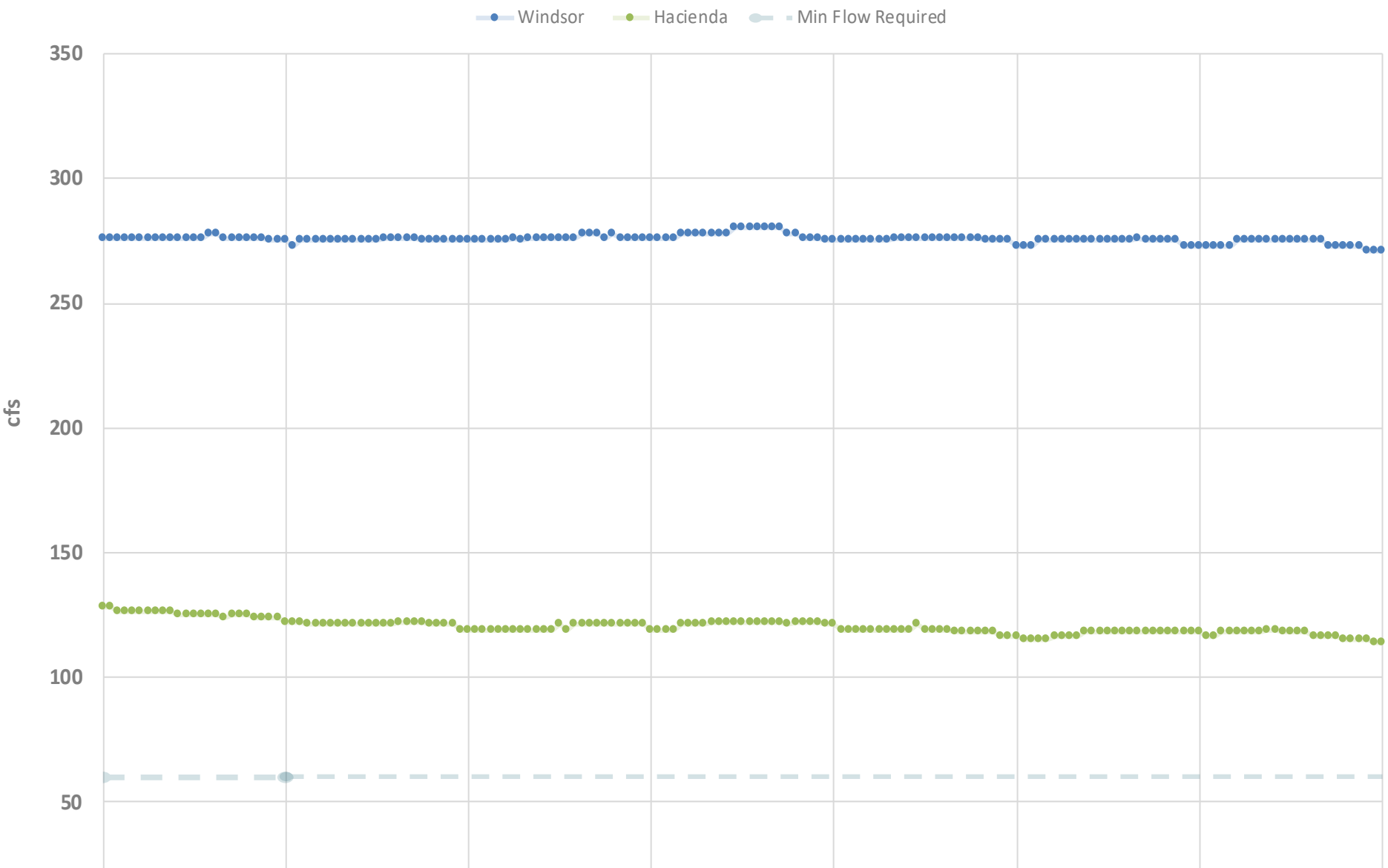
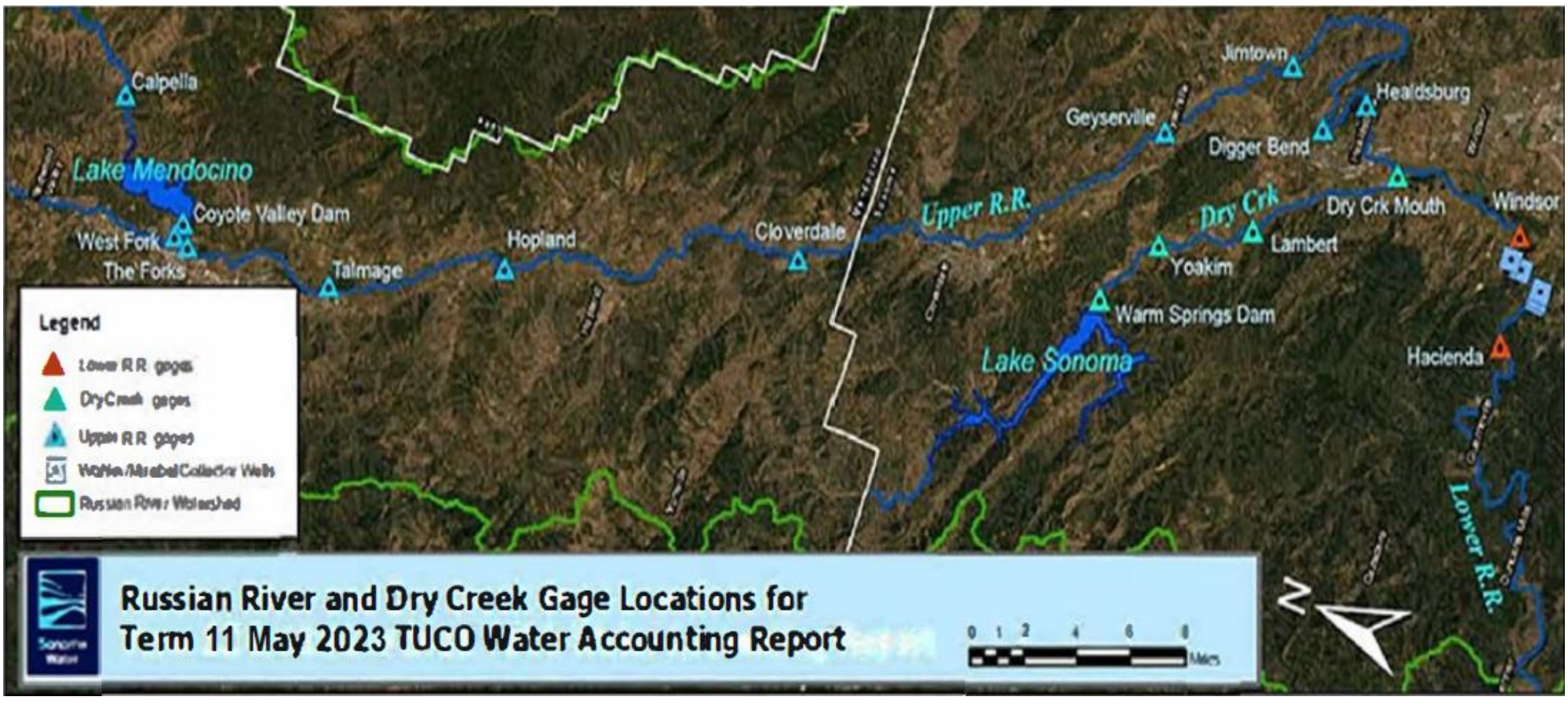
LOWER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



LOWER RUSSIAN RIVER STREAM FLOWS





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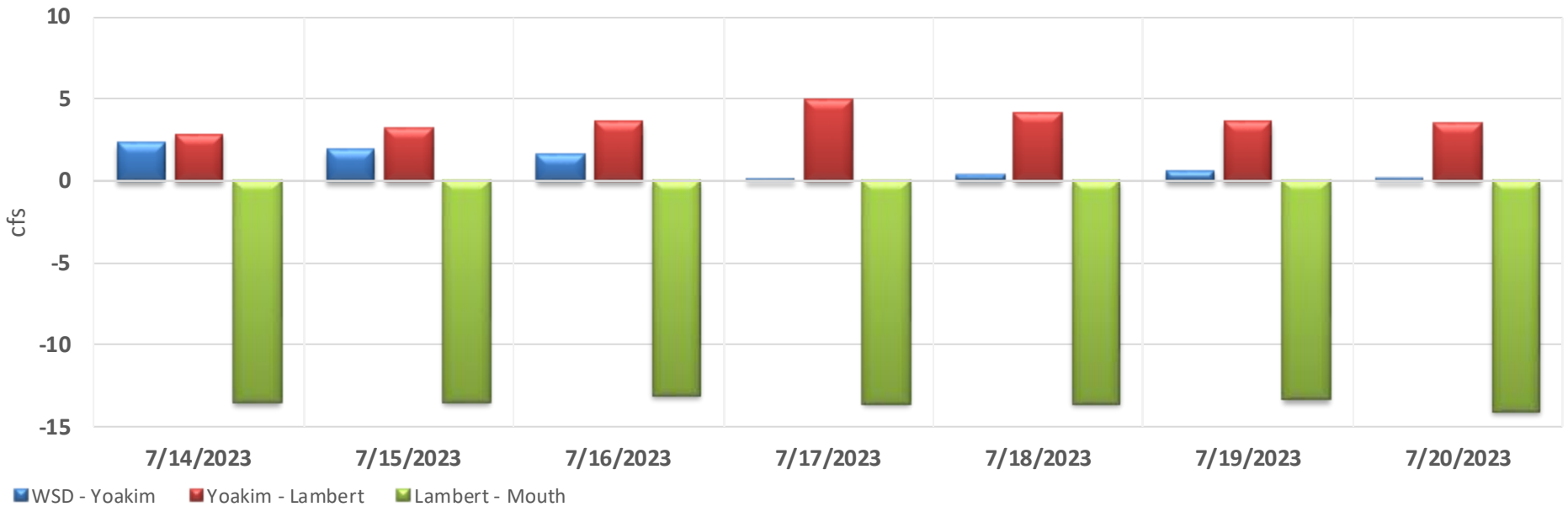
DRY CREEK NET REACH GAINS (+) / LOSSES (-)



DRY CREEK STREAM FLOWS