Lake Mendocino and Lake Sonoma Water Accounting Weekly Report (Term 14, June 2022 TUCO)

Report Date: 2/4/2023

Units are cfs unless noted otherwise

	1/28/2023	1/29/2023	1/30/2023	1/31/2023	2/1/2023	2/2/2023	2/3/2023
I. Upper East Fork Reach							
Potter Valley Project							
Tunnel Diversion	45.0	45.0	45.0	44.0	44.0	45.0	45.0
PVID Requested Delivery	10.0	10.0	10.0	10.0	10.0	10.0	10.0
PVID Canals Actual Delivery	2.3	3.5	3.2	1.1	1.1	1.2	1.3
East Fork Release	43.0	42.0	42.0	43.0	43.0	44.0	44.0
PVID E Fork Diversions	7.7	6.5	6.8	8.9	8.9	8.8	8.8
PVID Water Use - PG&E Contract	10.0	10.0	10.0	10.0	10.0	10.0	10.0
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)	35.3	35.5	35.2	34.1	34.1	35.2	35.3
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	126.6	121.2	113.8	107.6	104.3	101.5	118.9
Net Reach Loss(-)/Gain(+)	+81.6	+76.2	+68.8	+63.6	+60.3	+56.5	+73.9
Unimpaired Natural Flow @ Calpella (est.)	39.7	36.7	34.9	32.7	30.5	28.3	27.2
Non-PVID East Fork Net Reach Losses (est.)	91.6	86.2	78.8	73.6	70.3	66.5	83.9
Natural Flow	56.3	50.8	43.6	39.5	36.2	31.3	48.7
Import (neg. value is return flow)	35.3	35.5	35.2	34.1	34.1	35.2	35.3
II. Lake Mendocino							
Reservoir Operations							
Calculated Inflow (ac-ft)	253	228	243	249	161	195	263
(cfs)	128	115	122	126	81	98	133
Natural Flow	92	79	87	91	47	63	97
Import	35	35	35	34	34	35	35
Storage Change (ac-ft)	-121.0	-103.0	-35.0	+0.0	-86.0	-52.0	+17.0
(cfs)	-61	-52	-18	+0	-43	-26	+9
Stored Natural Flow (cfs)	0	0	0	0	0	0	9
Stored Import Water (cfs)	0	0	0	0	0	0	0
Evaporation (ac-ft)	8.0	9.1	9.1	9.1	7.0	7.0	6.0
RVCWD Diversion (ac-ft)	0	0	0	0	0	0	0
CVD Release Gage	185	162	135	121	121	121	121
Storage (Project Water)	57	47	13	0	40	23	0
Natural Flow	92	79	87	89	47	63	87
Import Water	35	35	35	32	34	35	34
East Fork Min Instream Flow Requirement	25	25	25	25	25	25	25
Compliance Gage *Rvr mi.*							
CVD Release *99.9*	185	162	135	121	121	121	121
CVD Project Water Release to Meet Min Flow Requirement							
Total Pass-through Water	128	115	122	121	81	98	121
Project Water Release Required	No	No	No	No	No	No	No
III. Upper Russian River Reach							
Minimum Instream Flow Requirement	150	150	150	150	150	150	150
Controlling Compliance Gage							
Min Gage Flow	282	252	218	198	193	189	198
Controlling Gage	Forks	Forks	Forks	Forks	Forks	Forks	Forks
All Compliance Gages *Rvr mi.*							
Forks (CVD + USGS 11461000) *99.0*	282	252	218	198	193	189	198
Talmage (USGS 11462080) *96.1*	441	414	372	335	306	287	300
Hopland (USGS 11462500) *84.8*	539	499	452	411	389	372	396
Cloverdale (USGS 11463000) *70.9*	798	734	675	619	585	555	585
Geyserville (USGS 11463500) *54.4*	1,164	1,062	971	883	821	774	803
Jimtown (USGS 11463682) *48.5*	1,391	1,266	1,146	1,025	949	885	903
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*	1,249	1,163	1,088	1,021	965	923	928
Net Reach Loss(-)/Gain(+)							
Forks - Talmage	+154	+158	+150	+137	+112	+97	+103
Talmage - Hopland	+95	+78	+73	+70	+79	+83	+98
Hopland - Cloverdale	+246	+227	+210	+201	+191	+179	+197
Cloverdale - Jimtown	+566	+513	+451	+389	+353	+321	+335
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*	*-185*	*-146*	*-94*	*-43*	*-4*	*+17*	*+49*
Upper Russian Net Reach Loss/Gain	+876	+829	+790	+754	+730	+697	+783
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	128	115	122	121	81	98	121
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).

			1/28/2023	1/29/2023	1/30/2023	1/31/2023	2/1/2023	2/2/2023	2/3/2023
IV. Lake Sonoma									
Lake Sonoma									
Storage Change (ac-ft)			+233.0	+155.0	+129.0	+52.0	+104.0	+26.0	+362.0
(cfs)			+117	+78	+65	+26	+52	+13	+183
Evaporation (ac-ft)			8.5	8.5	10.2	8.5	7.5	6.0	4.5
Inflow (Natural Flow)			214	174	162	123	148	108	277
WSD Release Gage			92	92	92	92	92	92	92
Storage (Project Water)			0	0	0	0	0	0	0
Natural Flow			92	92	92	92	92	92	92
V. Lower Dry Creek Reach									
Minimum Instream Flow Requirement			75	75	75	75	75	75	75
Controlling Compliance Gage									
Min Gage Flow			92	92	92	92	92	92	92
Controlling Gage			WSD Release	WSD Release	WSD Release	WSD Release	WSD Release	WSD Release	WSD Release
All Compliance Gages		*Crk mi.*							
WSD Release		*14.3*	92	92	92	92	92	92	92
Yoakim	(USGS 11465200)	*11.1*	154	147	138	135	134	130	143
Lambert	(USGS 11465240)	*6.8*	196	190	182	176	171	167	174
Dry Crk Mouth	(USGS 11465350)	*0.1*	242	206	189	176	154	162	183
WSD to Russian River Confluence Reach Analysis									
Total Pass-through Water			92	92	92	92	92	92	92
Net Reach Loss(-)/Gain(+)									
WSD - Yoakim			+62	+56	+46	+43	+42	+38	+51
Yoakim - Lambert			+42	+41	+43	+41	+37	+37	+32
Lambert - Dry Crk Mouth			+44	+14	+6	-0	-19	-6	+9
WSD - Dry Crk Mouth			+148	+111	+96	+84	+60	+69	+93
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			No	No	No	No	No	No	No
VI. Russian River - Dry Creek Confluence									
Upper Russian River Flow (Healdsburg Gage)									
L. Mendocino Project Water + Import Water			92	83	48	32	74	58	34
Natural Flow			968	909	877	843	778	760	871
Dry Creek Flow (Mouth Gage)									
L. Sonoma Project Water			0	0	0	0	0	0	0
Natural Flow			242	206	189	176	154	162	183
Russian River d/s of Confluence Flow			1,491	1,368	1,277	1,197	1,119	1,085	1,111
L. Mendocino Project Water + Import Water			92	83	48	32	74	58	34
L. Sonoma Project Water			0	0	0	0	0	0	0
Natural Flow			1,210	1,114	1,067	1,019	931	922	1,054
VII. Lower Russian River Reach									
Minimum Instream Flow Requirement			125	125	125	125	125	125	125
Controlling Compliance Gage									
Min Gage Flow			2,410	2,200	2,000	1,830	1,680	1,550	1,760
Controlling Gage			Hacienda	Hacienda	Hacienda	Hacienda	Hacienda	Hacienda	Hacienda
All Compliance Gages		*Rvr mi.*							
Windsor	(USGS 11465390)	*26.6*	*n/d*	*n/d*	*n/d*	*n/d*	*n/d*	*n/d*	*n/d*
Hacienda	(USGS 11467000)	*21.8*	2,410	2,200	2,000	1,830	1,680	1,550	1,760
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			2,453	2,252	2,043	1,862	1,730	1,593	1,805
Net Reach Loss(-)/Gain(+)			+963	+884	+766	+665	+611	+508	+694
L. Mendocino Project Water + Import Water			92	83	48	32	74	58	34
L. Sonoma Project Water			0	0	0	0	0	0	0
Natural Flow			2,172	1,998	1,832	1,683	1,542	1,430	1,748
Confluence to Hacienda (Guerneville) Reach Analysis									
Net Reach Loss(-)/Gain(+)			+920	+832	+723	+633	+561	+465	+649
L. Mendocino Project Water + Import Water			92	83	48	32	74	58	34
L. Sonoma Project Water			0	0	0	0	0	0	0
Natural Flow			2,129	1,946	1,789	1,652	1,493	1,387	1,703
VIII. Water Production under Sonoma Water Water Rights (ac-ft)									
Lower Russian River									
Sonoma Water Total			85.3	102.7	85.1	62.9	98.8	85.3	89.8
Wohler			38.1	55.5	38.8	16.9	51.3	38.7	41.7
Mirabel			47.2	47.2	46.3	46.1	47.6	46.6	48.1
Town of Windsor River Wellfield			4.3	4.9	5.3	5.3	4.6	4.6	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).

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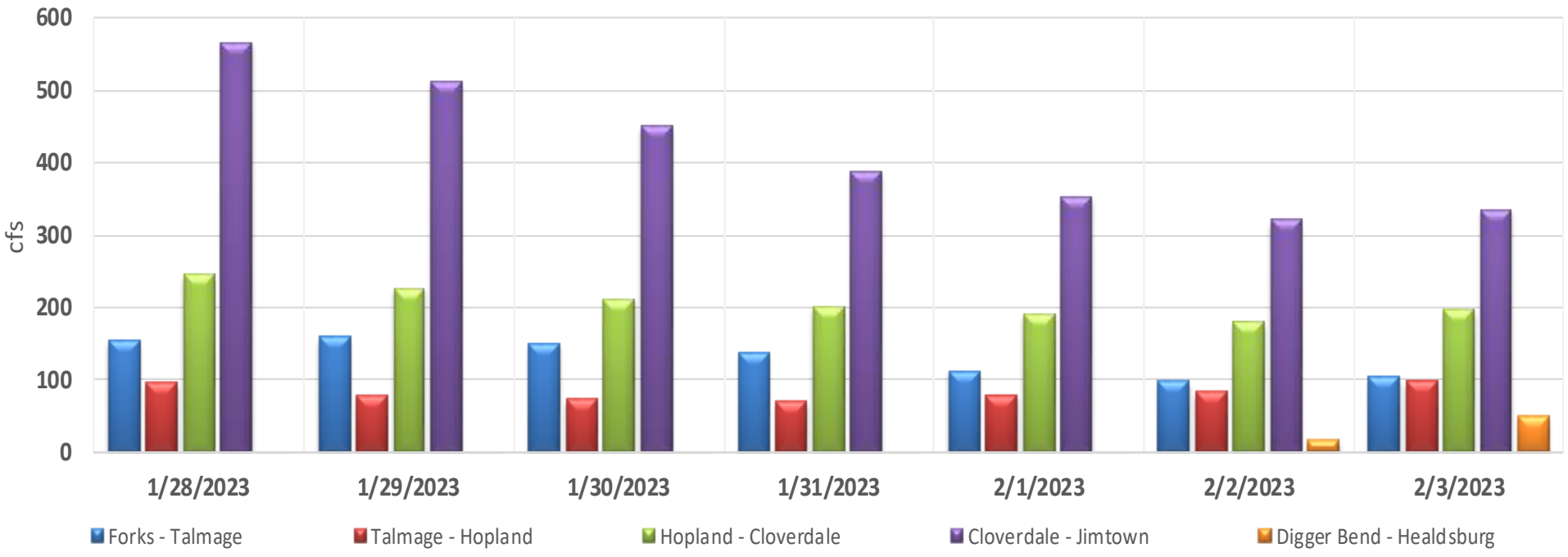
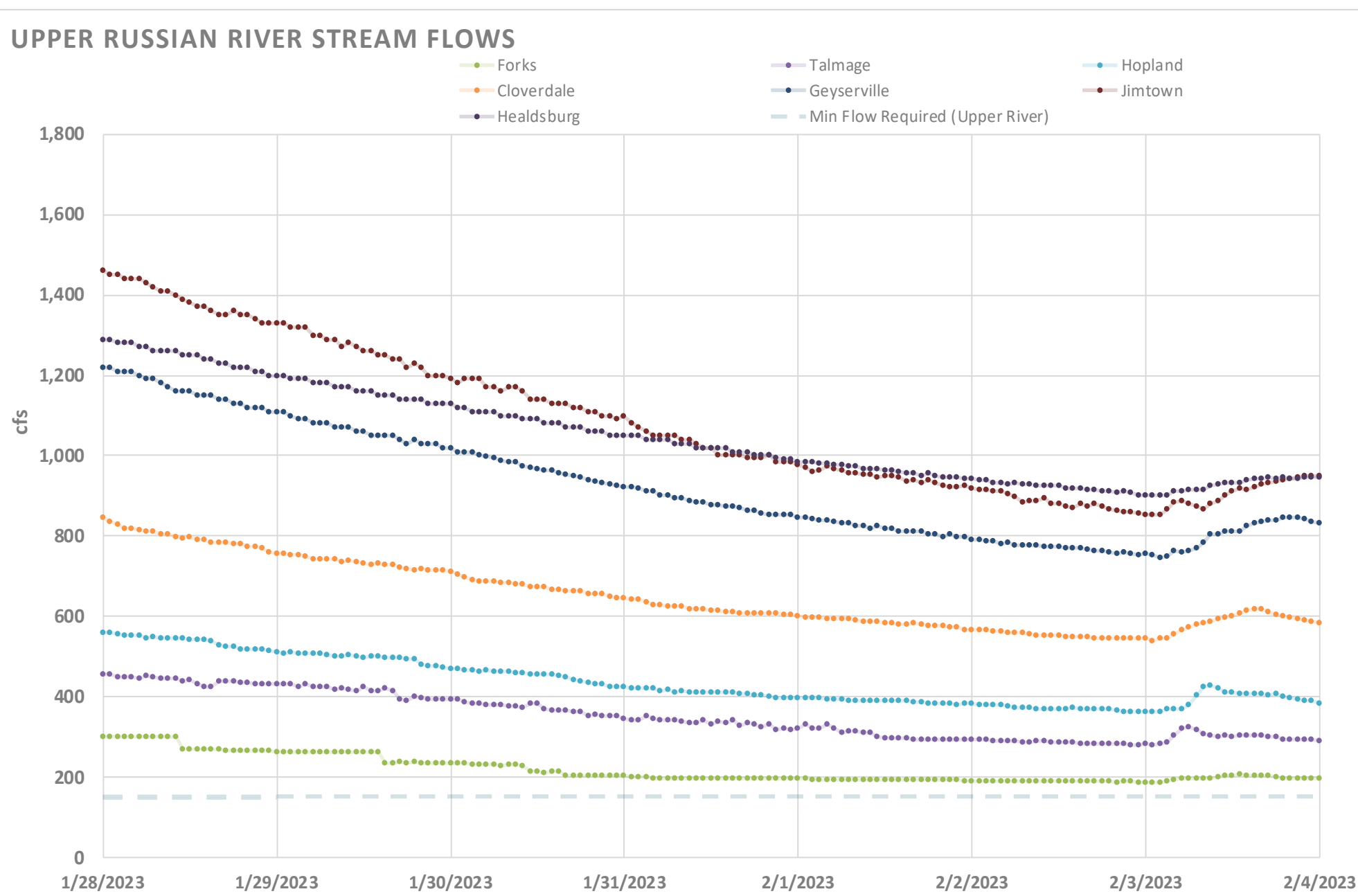
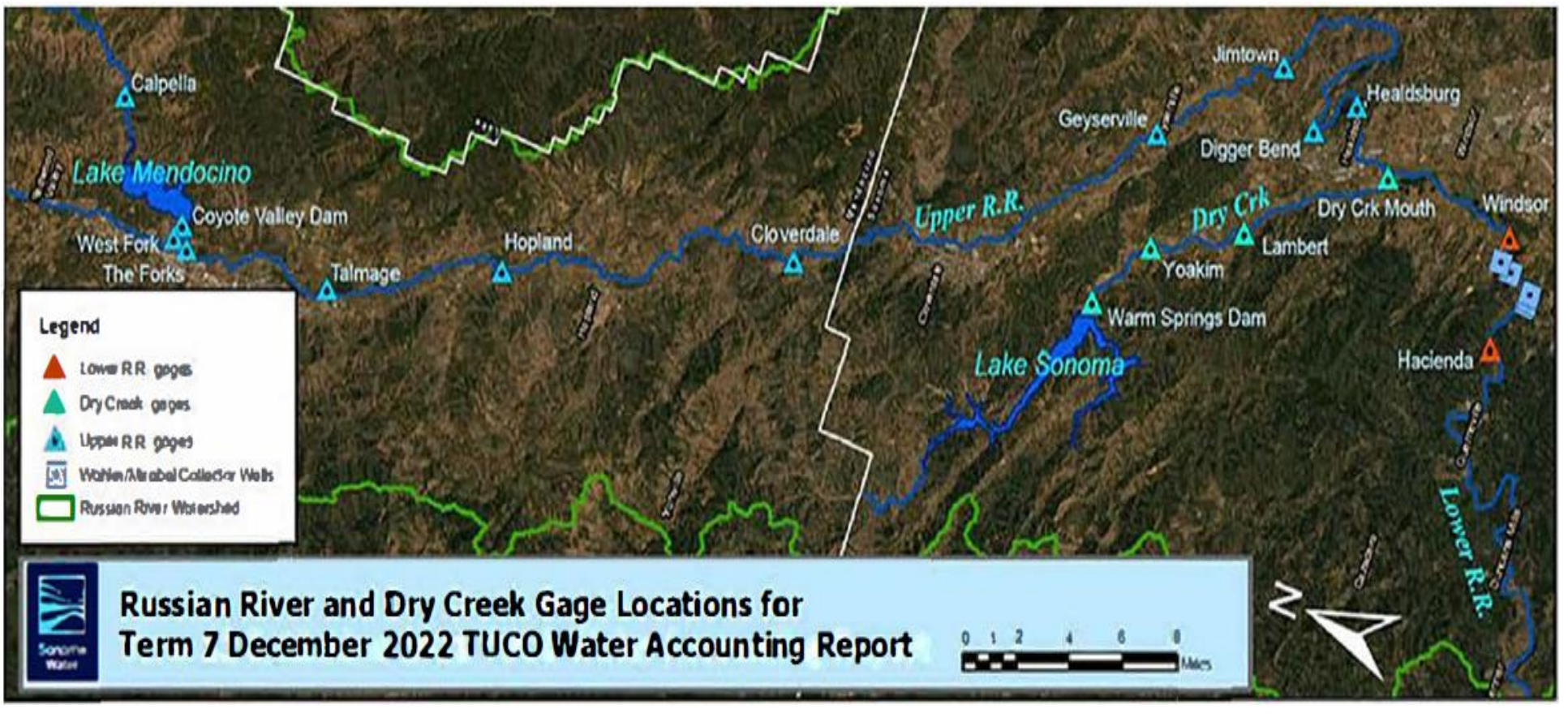
UPPER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



UPPER RUSSIAN RIVER STREAM FLOWS





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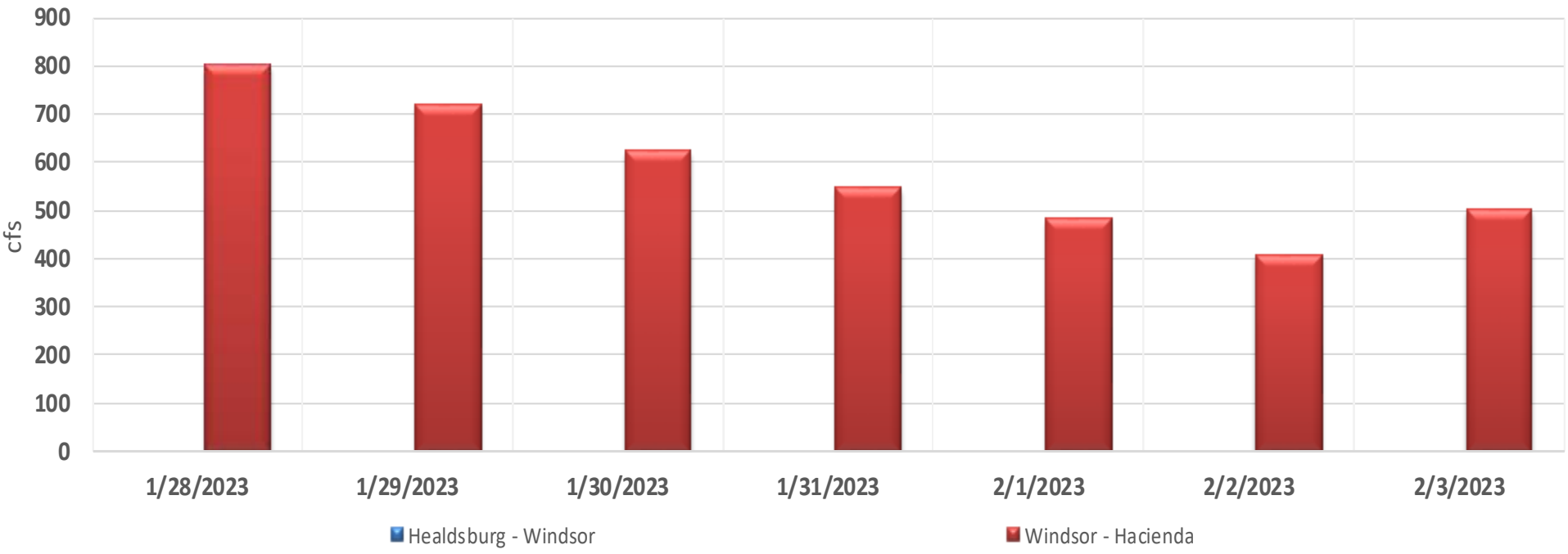
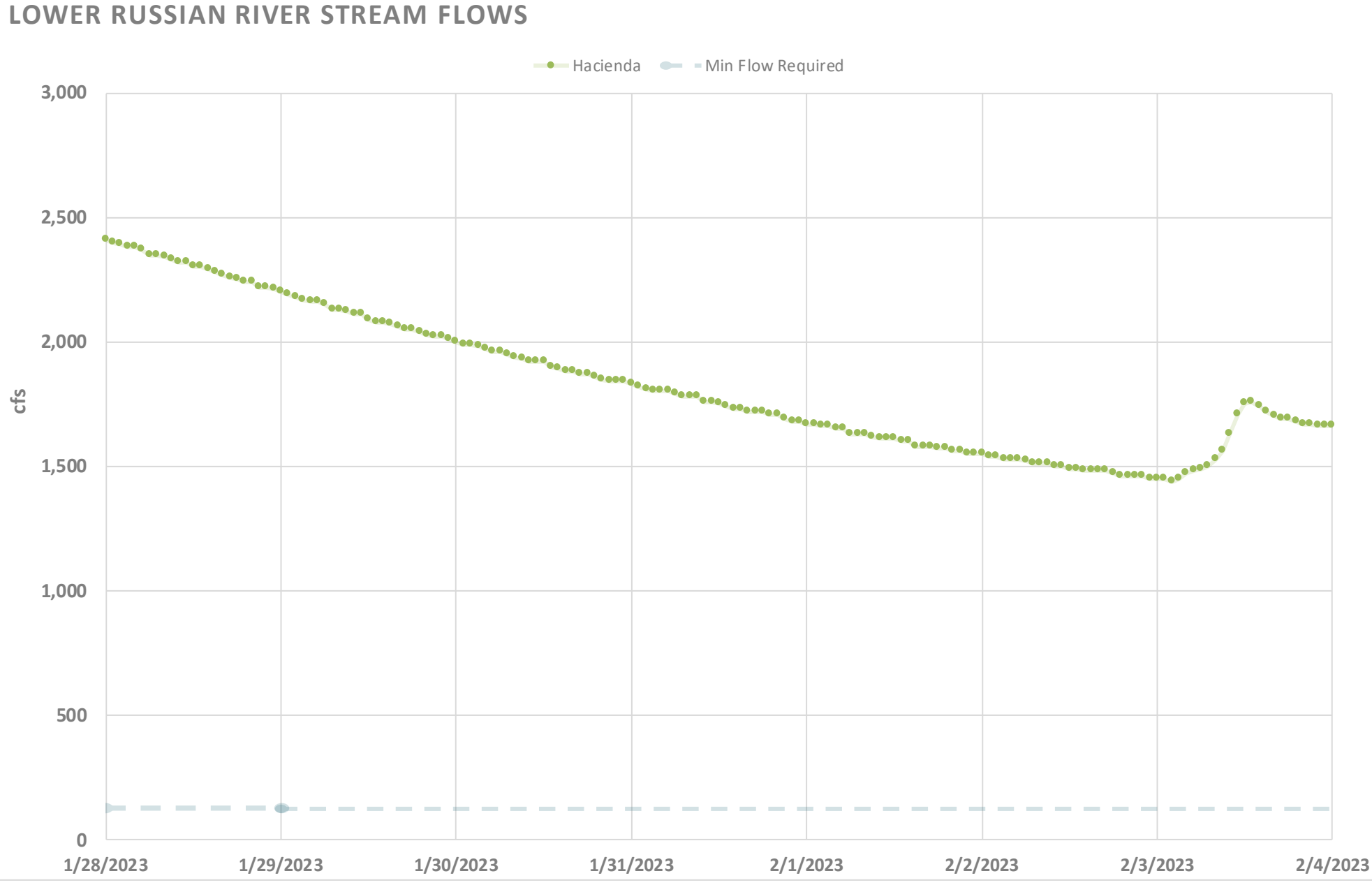
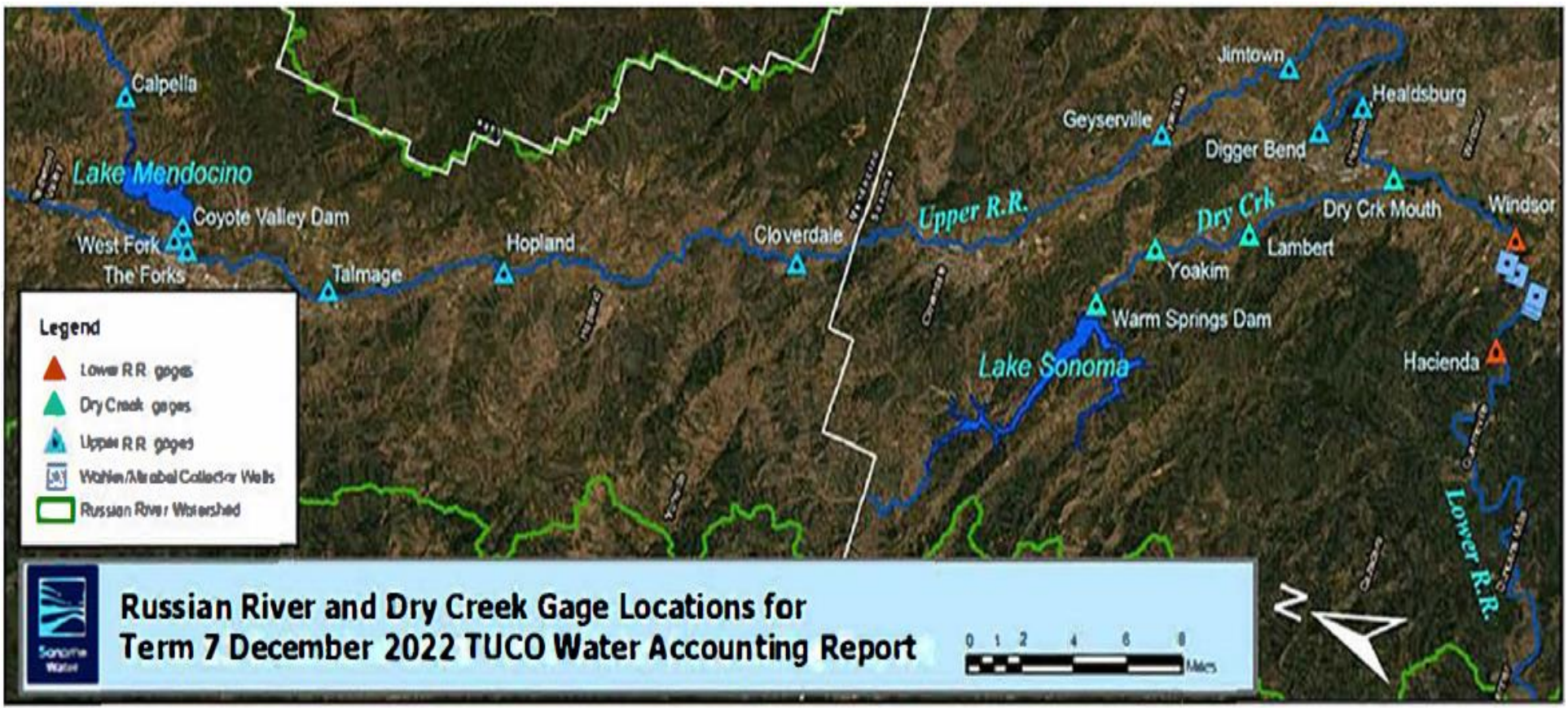
LOWER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



LOWER RUSSIAN RIVER STREAM FLOWS



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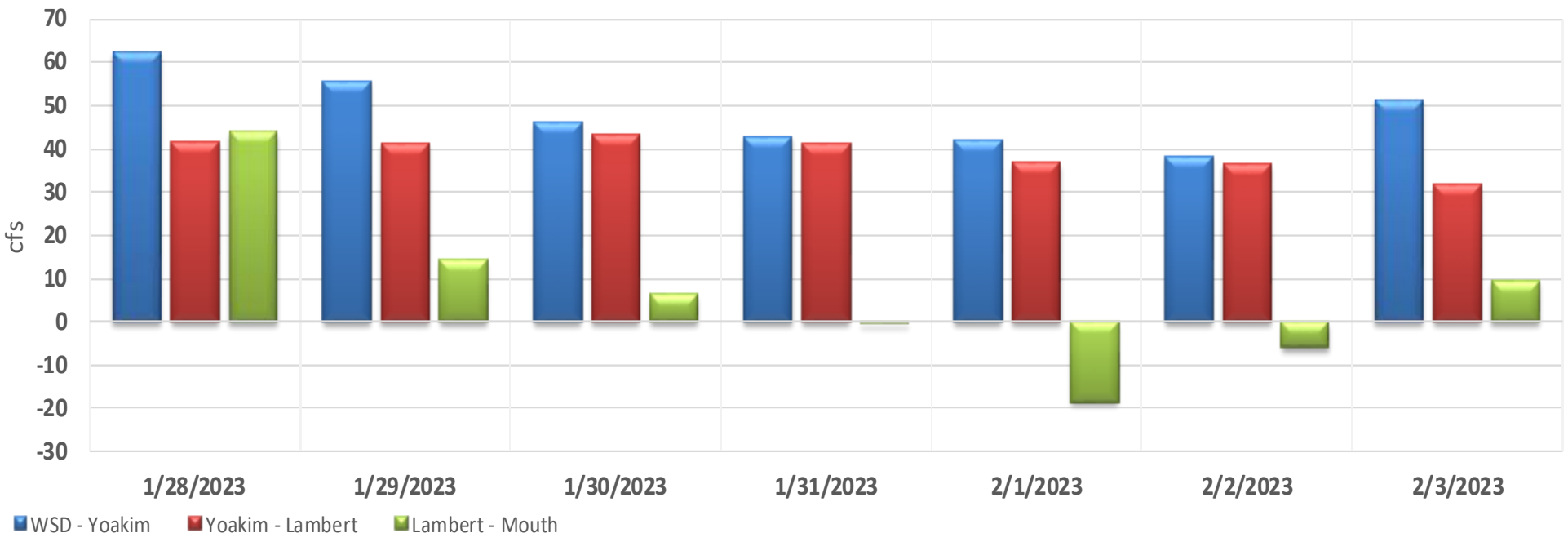
DRY CREEK NET REACH GAINS (+) / LOSSES (-)



DRY CREEK STREAM FLOWS