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

Report Date: 2/10/2023

Units are cfs unless noted otherwise

	2/3/2023	2/4/2023	2/5/2023	2/6/2023	2/7/2023	2/8/2023	2/9/2023
I. Upper East Fork Reach							
Potter Valley Project							
Tunnel Diversion	45.0	45.0	45.0	45.0	45.0	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	1.3	1.3	1.6	1.4	1.3	1.3	1.3
East Fork Release	44.0	44.0	43.0	44.0	44.0	44.0	44.0
PVID E Fork Diversions	8.8	8.7	8.4	8.6	8.7	8.7	8.7
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	35.3	34.6	35.4	35.3	35.3	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	118.9	109.9	427.1	256.8	174.3	148.6	134.7
Net Reach Loss(-)/Gain(+)	+73.9	+64.9	+382.1	+211.8	+129.3	+103.6	+89.7
Unimpaired Natural Flow @ Calpella (est.)	#N/A	30.5	37.8	185.2	77.3	57.2	46.6
Non-PVID East Fork Net Reach Losses (est.)	83.9	74.9	392.1	221.8	139.3	113.6	99.7
Natural Flow	48.7	39.7	357.5	186.4	104.0	78.3	64.4
Import (neg. value is return flow)	35.3	35.3	34.6	35.4	35.3	35.3	35.3

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II. Lake Mendocino									
Reservoir Operations									
Calculated Inflow (ac-ft)			263	278	917	565	230	302	302
(cfs)			133	140	462	285	116	152	152
Natural Flow			97	105	428	249	81	117	117
Import			35	35	35	35	35	35	35
Storage Change (ac-ft)			+17.0	+35.0	+673.0	+207.0	-225.0	-155.0	-155.0
(cfs)			+9	+18	+339	+104	-113	-78	-78
Stored Natural Flow (cfs)			9	18	339	104	0	0	0
Stored Import Water (cfs)			0	0	0	0	0	0	0
Evaporation (ac-ft)			6.0	3.0	4.0	7.0	7.0	9.0	9.0
RVCWD Diversion (ac-ft)			0	0	0	0	0	0	0
CVD Release Gage			121	121	121	177	226	226	226
Storage (Project Water)			0	0	0	0	110	74	74
Natural Flow			87	86	87	143	81	117	117
Import Water			34	35	34	34	35	35	35
East Fork Min Instream Flow Requirement			25	25	25	25	25	25	25
Compliance Gage		*Rvr mi.*							
CVD Release		*99.9*	121	121	121	177	226	226	226
CVD Project Water Release to Meet Min Flow Requirement									
Total Pass-through Water			121	121	121	177	116	152	152
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			200	193	498	477	0	0	0
Controlling Gage			Forks	Forks	Forks	Forks	Digger Bend	Digger Bend	Digger Bend
All Compliance Gages		*Rvr mi.*							
Forks	(CVD + USGS 11461000)	*99.0*	200	193	498	477	398	359	339
Talmage	(USGS 11462080)	*96.1*	300	290	726	660	509	457	416
Hopland	(USGS 11462500)	*84.8*	396	377	844	930	668	600	554
Cloverdale	(USGS 11463000)	*70.9*	622	612	1,169	1,543	1,050	909	832
Geyserville	(USGS 11463500)	*54.4*	969	939	1,522	1,964	1,575	1,408	1,305
Jimtown	(USGS 11463682)	*48.5*	988	996	1,462	2,098	1,648	1,417	1,285
Digger Bend	(USGS 11463980)	*38.2*	>400 cfs	>400 cfs	>400 cfs	>400 cfs	0	0	0
Healdsburg	(USGS 11464000)	*35.6*	928	932	1,173	1,640	1,389	1,212	1,120
Net Reach Loss(-)/Gain(+)									
Forks - Talmage			+19	+99	+289	+150	+104	+94	+75
Talmage - Hopland			+98	+90	+218	+201	+149	+139	+132
Hopland - Cloverdale			+232	+236	+552	+460	+358	+298	+265
Cloverdale - Jimtown			+385	+385	+616	+424	+521	+472	+430
Jimtown - Digger Bend			n/d	n/d	n/d	n/d	-1,695	-1,440	-1,297
Digger Bend - Healdsburg **when Digger Bend > 400 cfs, next u/s gage (Jimtown) used*			*-33*	*-81*	*-21*	*-395*	*-401*	*-269*	*-200*
Upper Russian Net Reach Loss/Gain			+701	+729	+1,653	+840	-965	-705	-594
CVD Project Water Release to Meet Min Flow Requirement									
Net Reach Loss(-)/Gain(+) to Controlling Gage			+0	+0	+0	+0	-564	-437	-394
Storage (Project Water)			0	0	0	0	-110	-74	-74
Pass-through Water (Nat. + Imp.) + Natural			0	0	0	0	-454	-363	-320
Total Pass-through Water			121	121	121	177	0	0	0
Project Water Release Required			#N/A	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).

			2/3/2023	2/4/2023	2/5/2023	2/6/2023	2/7/2023	2/8/2023	2/9/2023
IV. Lake Sonoma									
Lake Sonoma									
Storage Change (ac-ft)			+362.0	+441.0	+1,300.0	+626.0	+444.0	+340.0	+314.0
(cfs)			+183	+222	+655	+316	+224	+171	+158
Evaporation (ac-ft)			4.5	3.0	6.0	7.6	7.6	9.1	9.1
Inflow (Natural Flow)			277	316	751	405	308	256	243
WSD Release Gage			92	92	92	85	80	80	80
Storage (Project Water)			0	0	0	0	0	0	0
Natural Flow			92	92	92	85	80	80	80
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	85	80	80	80
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	85	80	80	80
Yoakim	(USGS 11465200)	*11.1*	140	138	182	166	144	134	129
Lambert	(USGS 11465240)	*6.8*	174	170	212	173	145	136	131
Dry Crk Mouth	(USGS 11465350)	*0.1*	247	237	320	351	300	287	266
WSD to Russian River Confluence Reach Analysis									
Total Pass-through Water			92	92	92	85	80	80	80
Net Reach Loss(-)/Gain(+)									
WSD - Yoakim			+16	+47	+89	+79	+64	+54	+49
Yoakim - Lambert			+8	+33	+33	+4	-0	+2	+2
Lambert - Dry Crk Mouth			+73	+69	+112	+169	+154	+150	+133
WSD - Dry Crk Mouth			+96	+148	+234	+252	+217	+205	+184
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			34	35	34	34	145	109	109
Natural Flow			788	815	1,741	983	0	0	0
Dry Creek Flow (Mouth Gage)									
L. Sonoma Project Water			0	0	0	0	0	0	0
Natural Flow			247	237	320	351	300	287	266
Russian River d/s of Confluence Flow			1,175	1,169	1,493	1,990	1,688	1,499	1,386
L. Mendocino Project Water + Import Water			34	35	34	34	145	109	109
L. Sonoma Project Water			0	0	0	0	0	0	0
Natural Flow			1,035	1,052	2,061	1,334	300	287	266
VII. Lower Russian River Reach									
Minimum Instream Flow Requirement			125	125	125	125	125	125	125
Controlling Compliance Gage									
Min Gage Flow			1,760	1,850	2,480	3,170	3,040	2,520	2,190
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*	1,760	1,850	2,480	3,170	3,040	2,520	2,190
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			1,805	1,891	2,522	3,227	3,084	2,563	2,227
Net Reach Loss(-)/Gain(+)			+631	+723	+1,029	+1,237	+1,395	+1,064	+842
L. Mendocino Project Water + Import Water			34	35	34	34	145	109	109
L. Sonoma Project Water			0	0	0	0	0	0	0
Natural Flow			1,666	1,775	3,090	2,570	1,695	1,351	1,107
Confluence to Hacienda (Guerneville) Reach Analysis									
Net Reach Loss(-)/Gain(+)			+586	+682	+987	+1,180	+1,352	+1,021	+804
L. Mendocino Project Water + Import Water			34	35	34	34	145	109	109
L. Sonoma Project Water			0	0	0	0	0	0	0
Natural Flow			1,620	1,734	3,047	2,514	1,651	1,308	1,070
VIII. Water Production under Sonoma Water Water Rights (ac-ft)									
Lower Russian River									
Sonoma Water Total			89.8	81.5	83.7	112.6	86.8	84.8	74.2
Wohler			41.7	35.3	37.5	65.6	40.4	37.7	27.9
Mirabel			48.1	46.3	46.1	47.0	46.3	47.1	46.4
Town of Windsor River Wellfield			4.6	4.2	4.2	4.7	4.6	4.5	4.3
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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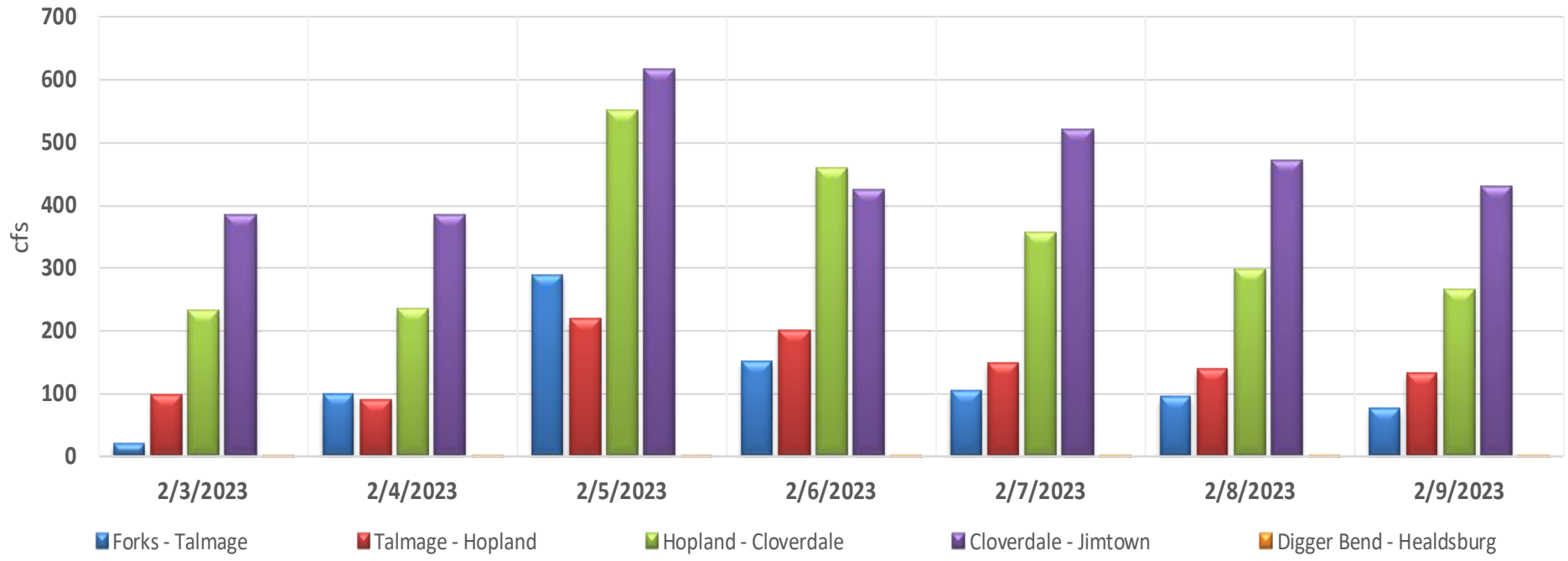
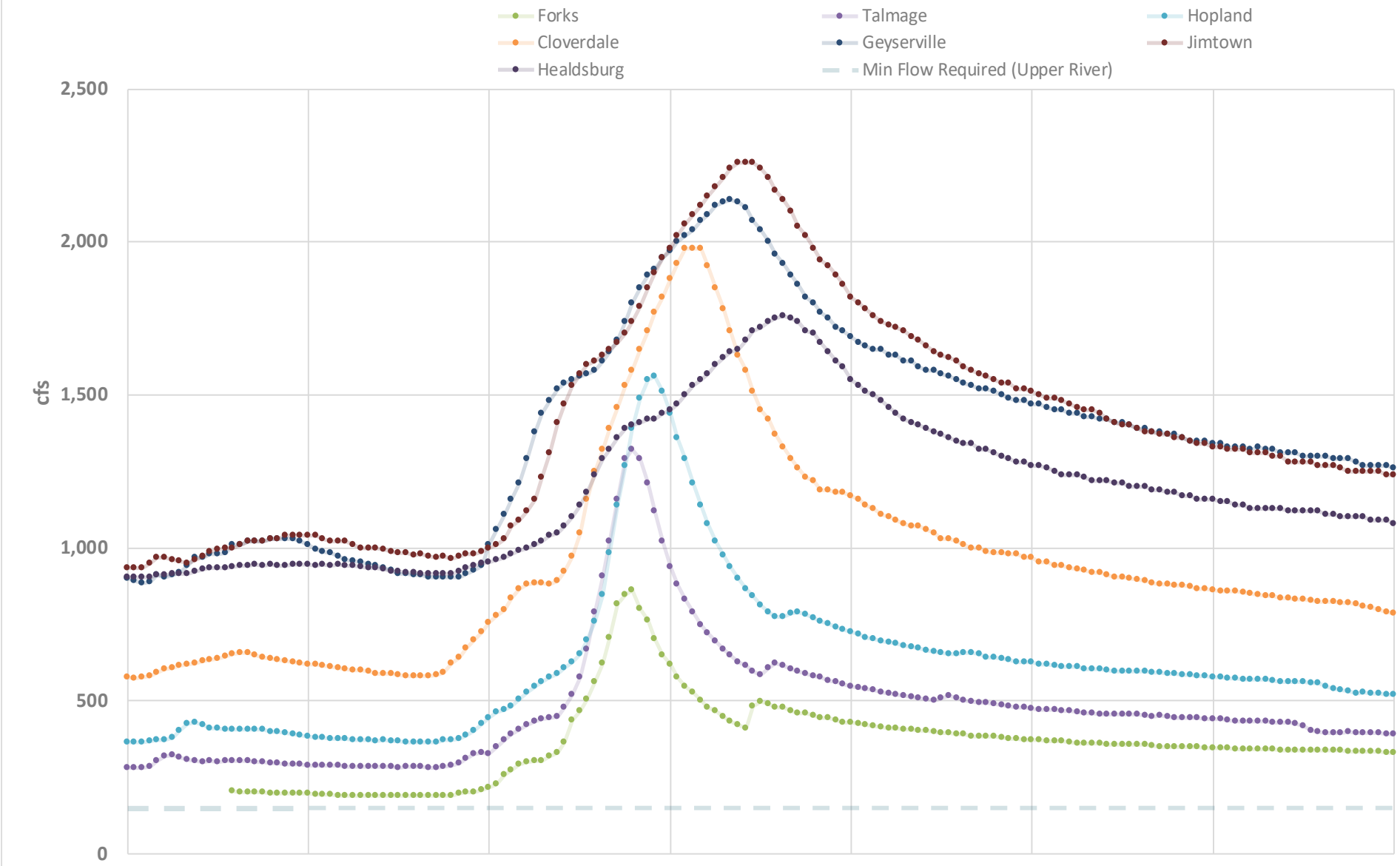
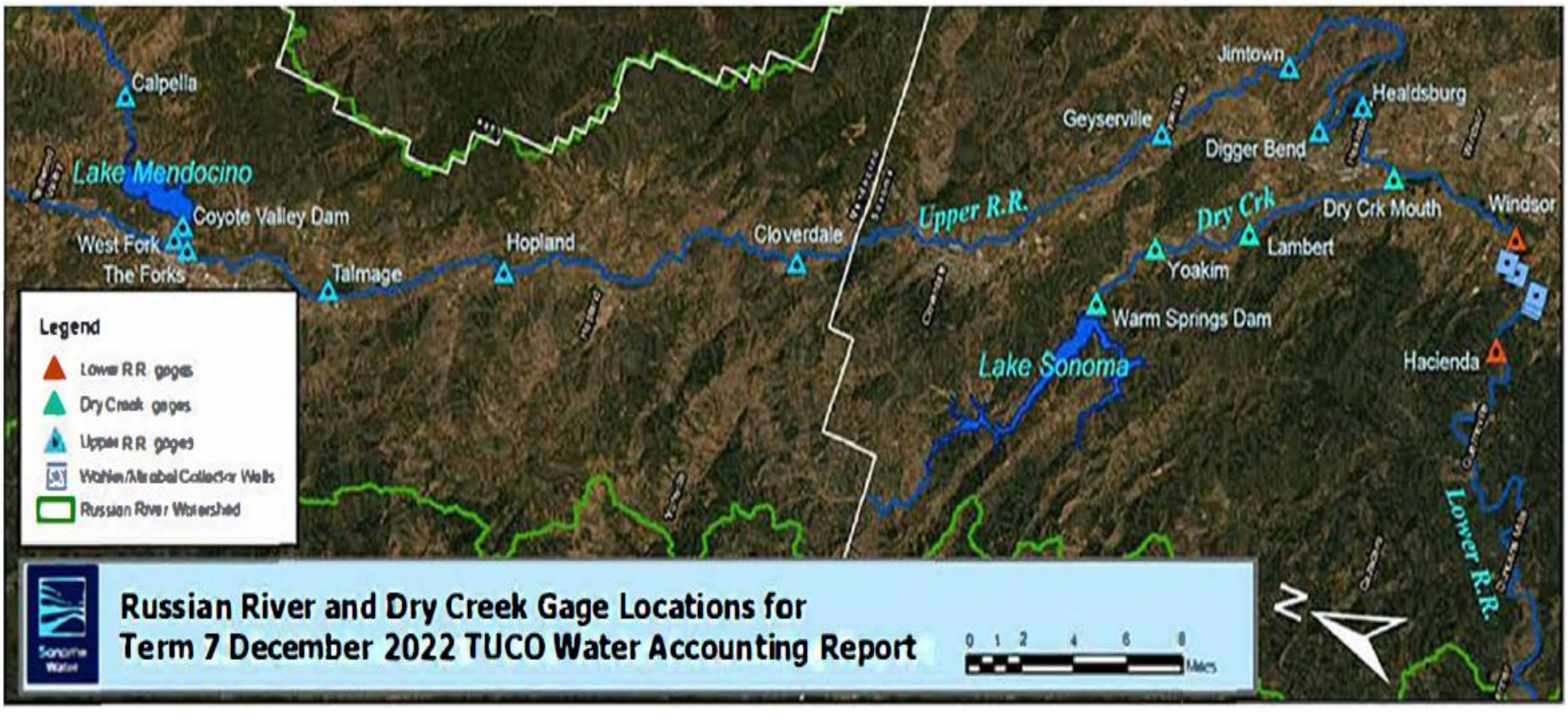
UPPER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



UPPER RUSSIAN RIVER STREAM FLOWS





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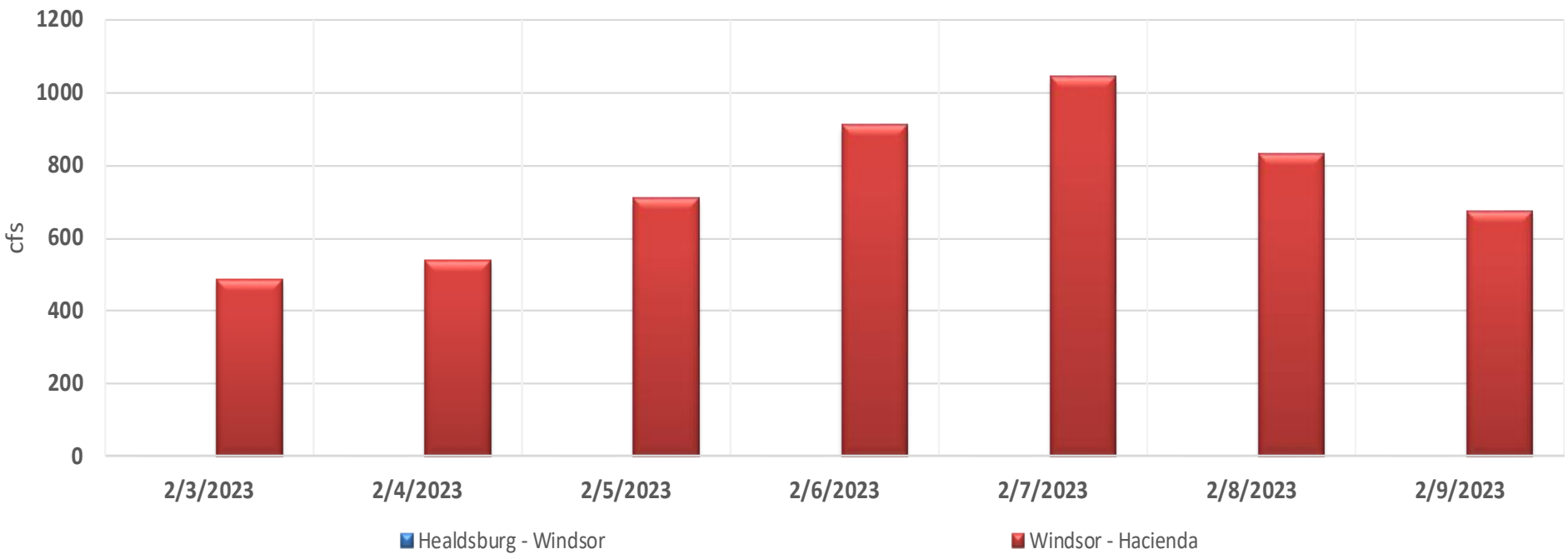
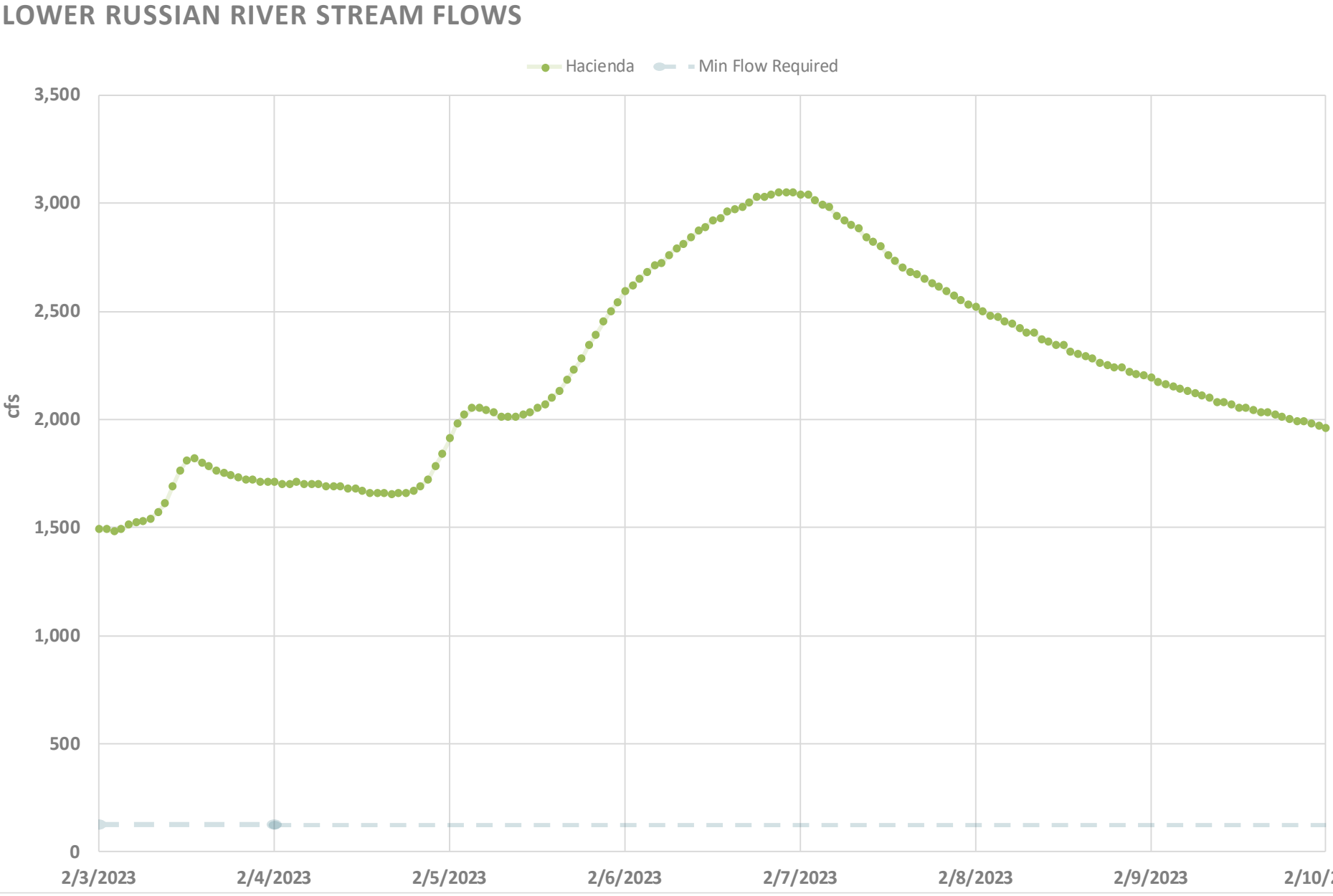
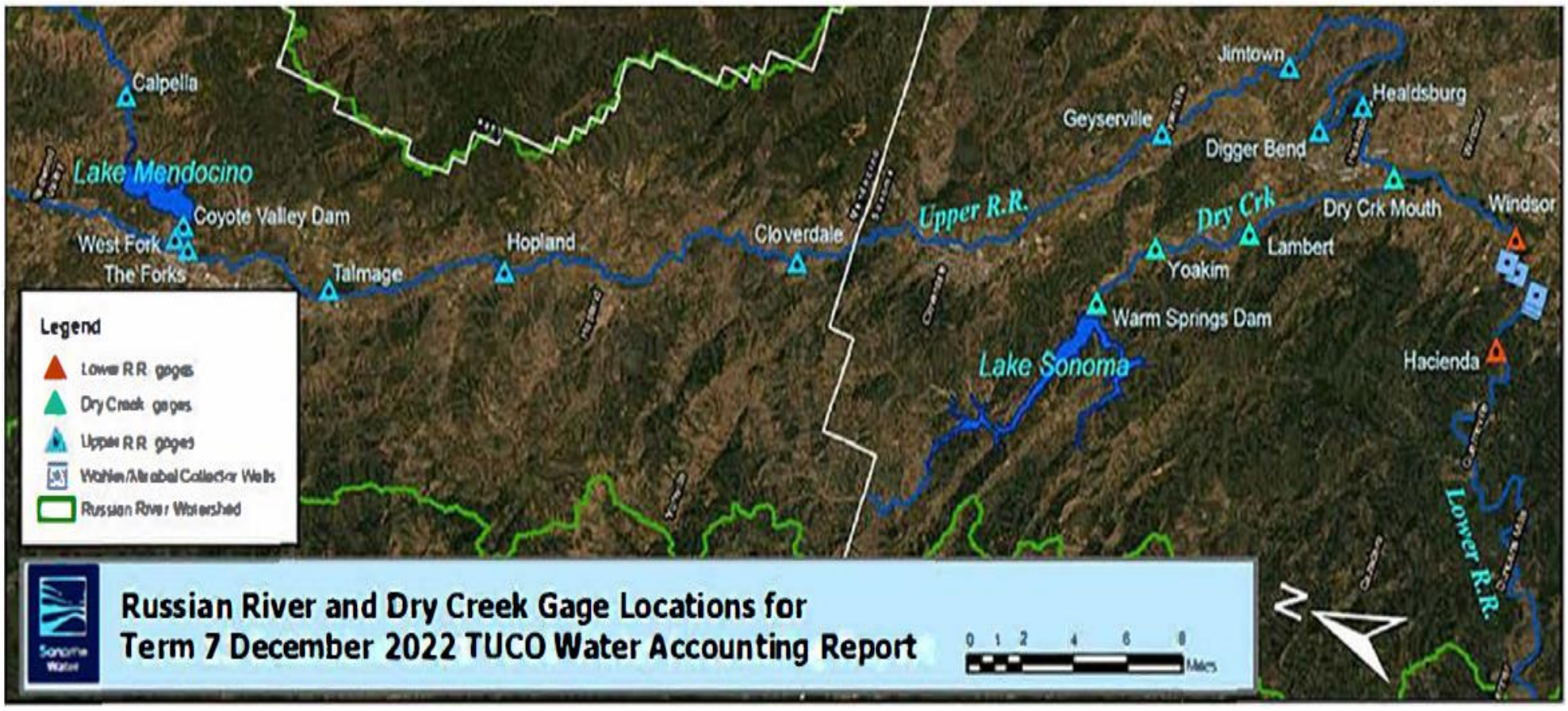
LOWER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



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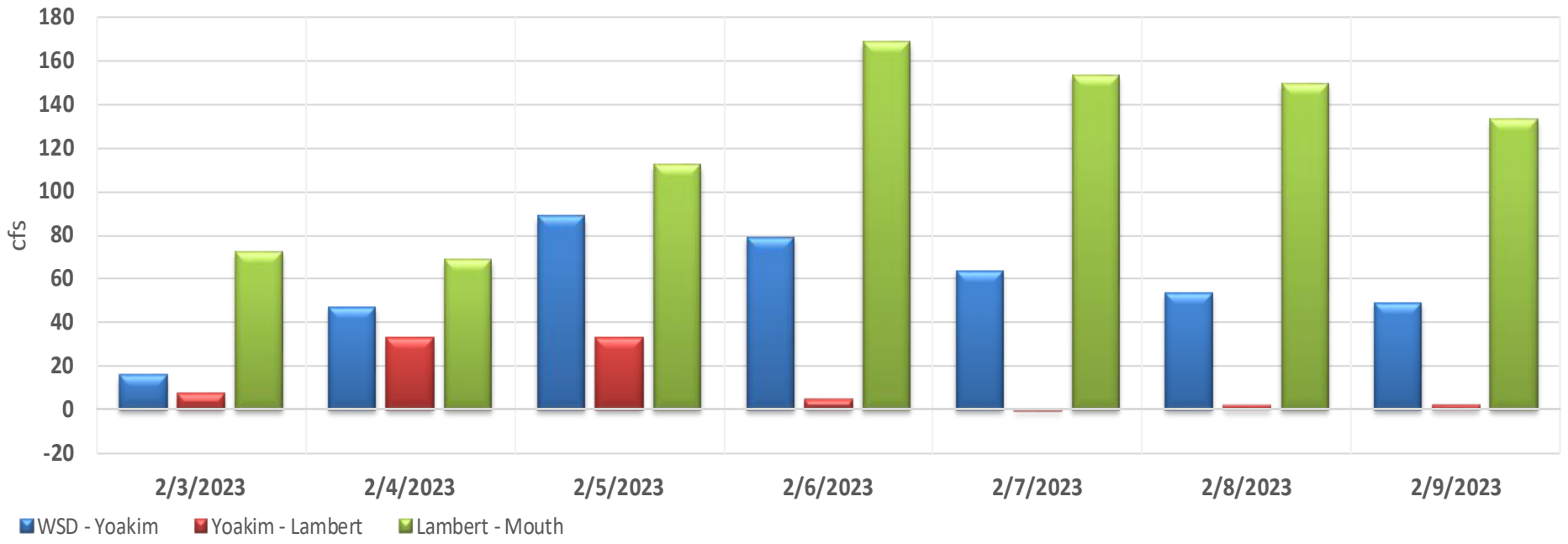
DRY CREEK NET REACH GAINS (+) / LOSSES (-)



DRY CREEK STREAM FLOWS