Lake Mendocino and Lake Sonoma Water Accounting Weekly Report (Term 7, December 2022 TUCO)

Report Date: 4/21/2023

Units are cfs unless noted otherwise

	4/14/2023	4/15/2023	4/16/2023	4/17/2023	4/18/2023	4/19/2023	4/20/2023
I. Upper East Fork Reach							
Potter Valley Project							
Tunnel Diversion	45.0	90.0	89.0	89.0	90.0	91.0	91.0
PVID Requested Delivery	5.0	50.0	50.0	50.0	50.0	50.0	50.0
PVID Canals Actual Delivery	0.6	4.5	6.2	3.4	0.7	2.2	5.6
East Fork Release	44.0	85.0	83.0	86.0	89.0	89.0	85.0
PVID E Fork Diversions	4.4	45.5	43.8	46.6	49.4	47.8	44.4
PVID Water Use - PG&E Contract	5.0	50.0	50.0	50.0	50.0	50.0	50.0
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)	39.6	39.5	39.2	39.4	39.7	41.2	40.6
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	115.0	134.6	157.3	162.1	165.1	149.7	141.3
Net Reach Loss(-)/Gain(+)	+70.0	+44.6	+68.3	+73.1	+75.1	+58.7	+50.3
Unimpaired Natural Flow @ Calpella (est.)	38.2	34.6	31.6	28.7	28.7	27.2	25.0
Non-PVID East Fork Net Reach Losses (est.)	75.0	94.6	118.3	123.1	125.1	108.7	100.3
Natural Flow	35.3	55.1	79.1	83.7	85.5	67.5	59.8
Import (neg. value is return flow)	39.6	39.5	39.2	39.4	39.7	41.2	40.6
II. Lake Mendocino							
Reservoir Operations							
Calculated Inflow (ac-ft)	280	314	357	425	355	370	324
(cfs)	141	158	180	214	179	186	163
Natural Flow	102	119	141	175	139	145	123
Import	40	40	39	39	40	41	41
Storage Change (ac-ft)	+54.0	+53.0	+89.0	+143.0	+72.0	+89.0	+18.0
(cfs)	+27	+27	+45	+72	+36	+45	+9
Stored Natural Flow (cfs)	27	27	45	72	36	45	9
Stored Import Water (cfs)	0	0	0	0	0	0	0
Evaporation (ac-ft)	18.0	19.0	18.0	13.0	15.0	17.0	19.0
RVCWD Diversion (ac-ft)	0	0	0	0	0	0	0
CVD Release Gage	105	122	126	135	135	133	145
Storage (Project Water)	0	0	0	0	0	0	0
Natural Flow	70	87	91	99	99	96	109
Import Water	35	35	35	36	36	37	36
East Fork Min Instream Flow Requirement	25	25	25	25	25	25	25
Compliance Gage *Rvr mi.*							
CVD Release *99.9*	105	122	126	135	135	133	145
CVD Project Water Release to Meet Min Flow Requirement							
Total Pass-through Water	105	122	126	135	135	133	145
Project Water Release Required	No	No	No	No	No	No	No
III. Upper Russian River Reach							
Minimum Instream Flow Requirement	185	185	185	185	185	185	185
Controlling Compliance Gage							
Min Gage Flow	196	204	200	205	210	195	199
Controlling Gage	Forks	Forks	Forks	Forks	Forks	Forks	Forks
All Compliance Gages *Rvr mi.*							
Forks (CVD + USGS 11461000) *99.0*	196	204	200	205	210	195	199
Talmage (USGS 11462080) *96.1*	276	273	267	264	270	256	251
Hopland (USGS 11462500) *84.8*	422	409	400	392	403	378	362
Cloverdale (USGS 11463000) *70.9*	585	556	535	518	527	497	469
Geyserville (USGS 11463500) *54.4*	887	827	783	747	743	706	660
Jimtown (USGS 11463682) *48.5*	999	953	919	878	864	836	778
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*	1,068	1,005	959	922	901	876	832
Net Reach Loss(-)/Gain(+)							
Forks - Talmage	+79	+70	+66	+60	+60	+59	+55
Talmage - Hopland	+144	+136	+132	+129	+132	+119	+111
Hopland - Cloverdale	+158	+145	+132	+125	+125	+112	+105
Cloverdale - Jimtown	+400	+387	+376	+356	+340	+324	+299
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*	*+53*	*+39*	*+33*	*+30*	*+36*	*+27*	*+36*
Upper Russian Net Reach Loss/Gain	+834	+777	+738	+700	+694	+643	+605
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	105	122	126	135	135	133	145
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).

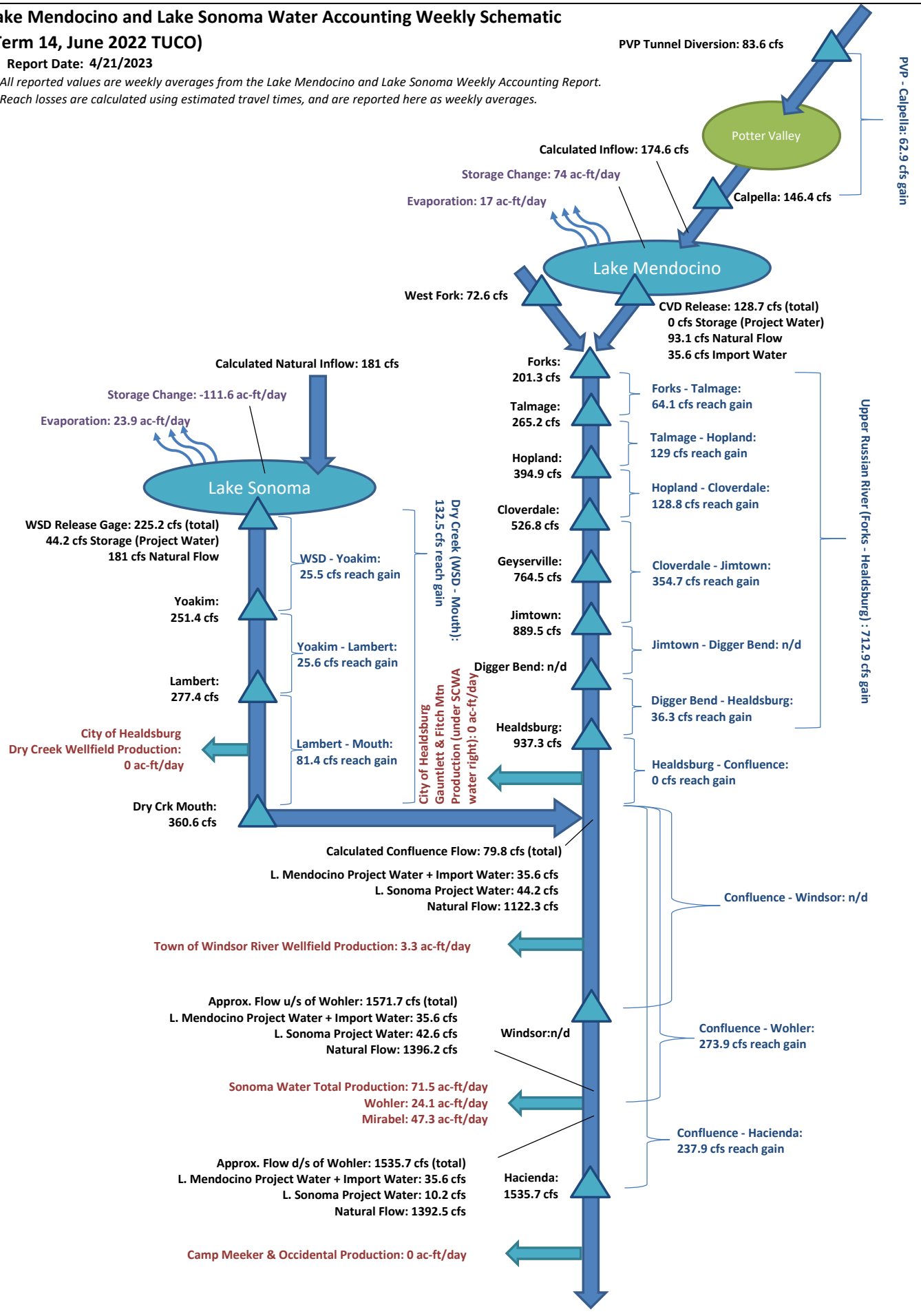
			4/14/2023	4/15/2023	4/16/2023	4/17/2023	4/18/2023	4/19/2023	4/20/2023
IV. Lake Sonoma									
Lake Sonoma									
Storage Change (ac-ft)			-111.0	-84.0	-84.0	-56.0	-111.0	-167.0	-168.0
(cfs)			-56	-42	-42	-28	-56	-84	-85
Evaporation (ac-ft)			23.4	21.9	25.0	20.3	21.9	25.0	29.6
Inflow (Natural Flow)			196	193	194	206	177	150	151
WSD Release Gage			240	224	224	224	222	222	220
Storage (Project Water)			44	31	30	18	45	72	70
Natural Flow			196	193	194	206	177	150	151
V. Lower Dry Creek Reach									
Minimum Instream Flow Requirement			75	75	75	75	75	75	75
Controlling Compliance Gage									
Min Gage Flow			240	224	224	224	222	222	220
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*	240	224	224	224	222	222	220
Yoakim	(USGS 11465200)	*11.1*	270	251	252	247	244	245	251
Lambert	(USGS 11465240)	*6.8*	312	286	278	273	269	263	260
Dry Crk Mouth	(USGS 11465350)	*0.1*	384	361	357	364	364	351	343
WSD to Russian River Confluence Reach Analysis									
Total Pass-through Water			196	193	194	206	177	150	151
Net Reach Loss(-)/Gain(+)									
WSD - Yoakim			+26	+27	+28	+23	+23	+23	+30
Yoakim - Lambert			+40	+35	+26	+27	+24	+18	+10
Lambert - Dry Crk Mouth			+66	+74	+77	+90	+94	+87	+82
WSD - Dry Crk Mouth			+132	+136	+131	+140	+141	+128	+122
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			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			35	35	35	36	36	37	36
Natural Flow			903	864	830	799	793	739	714
Dry Creek Flow (Mouth Gage)									
L. Sonoma Project Water			44	31	30	18	45	72	70
Natural Flow			340	330	327	346	319	279	273
Russian River d/s of Confluence Flow			1,452	1,366	1,316	1,285	1,265	1,227	1,174
L. Mendocino Project Water + Import Water			35	35	35	36	36	37	36
L. Sonoma Project Water			44	31	30	18	45	72	70
Natural Flow			1,244	1,194	1,157	1,145	1,112	1,018	987
VII. Lower Russian River Reach									
Minimum Instream Flow Requirement			125	125	125	125	125	125	125
Controlling Compliance Gage									
Min Gage Flow			1,860	1,710	1,580	1,500	1,420	1,370	1,310
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*	1,860	1,710	1,580	1,500	1,420	1,370	1,310
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			1,887	1,734	1,608	1,540	1,466	1,414	1,354
Net Reach Loss(-)/Gain(+)			+435	+368	+292	+255	+201	+187	+179
L. Mendocino Project Water + Import Water			35	35	35	36	36	37	36
L. Sonoma Project Water			42	30	28	16	43	70	68
Natural Flow			1,679	1,562	1,449	1,400	1,313	1,205	1,166
Confluence to Hacienda (Guerneville) Reach Analysis									
Net Reach Loss(-)/Gain(+)			+408	+344	+264	+215	+155	+143	+136
L. Mendocino Project Water + Import Water			35	35	35	36	36	37	36
L. Sonoma Project Water			15	6	0	0	0	26	24
Natural Flow			1,679	1,562	1,449	1,376	1,311	1,205	1,166
VIII. Water Production under Sonoma Water Water Rights (ac-ft)									
Lower Russian River									
Sonoma Water Total			53.7	47.8	55.7	79.0	90.6	86.9	86.5
Wohler			7.8	2.2	8.6	31.8	41.2	37.9	39.3
Mirabel			45.9	45.6	47.1	47.1	49.5	49.1	47.1
Town of Windsor River Wellfield			3.3	3.2	3.1	3.4	3.0	3.2	3.8
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 14, June 2022 TUCO)

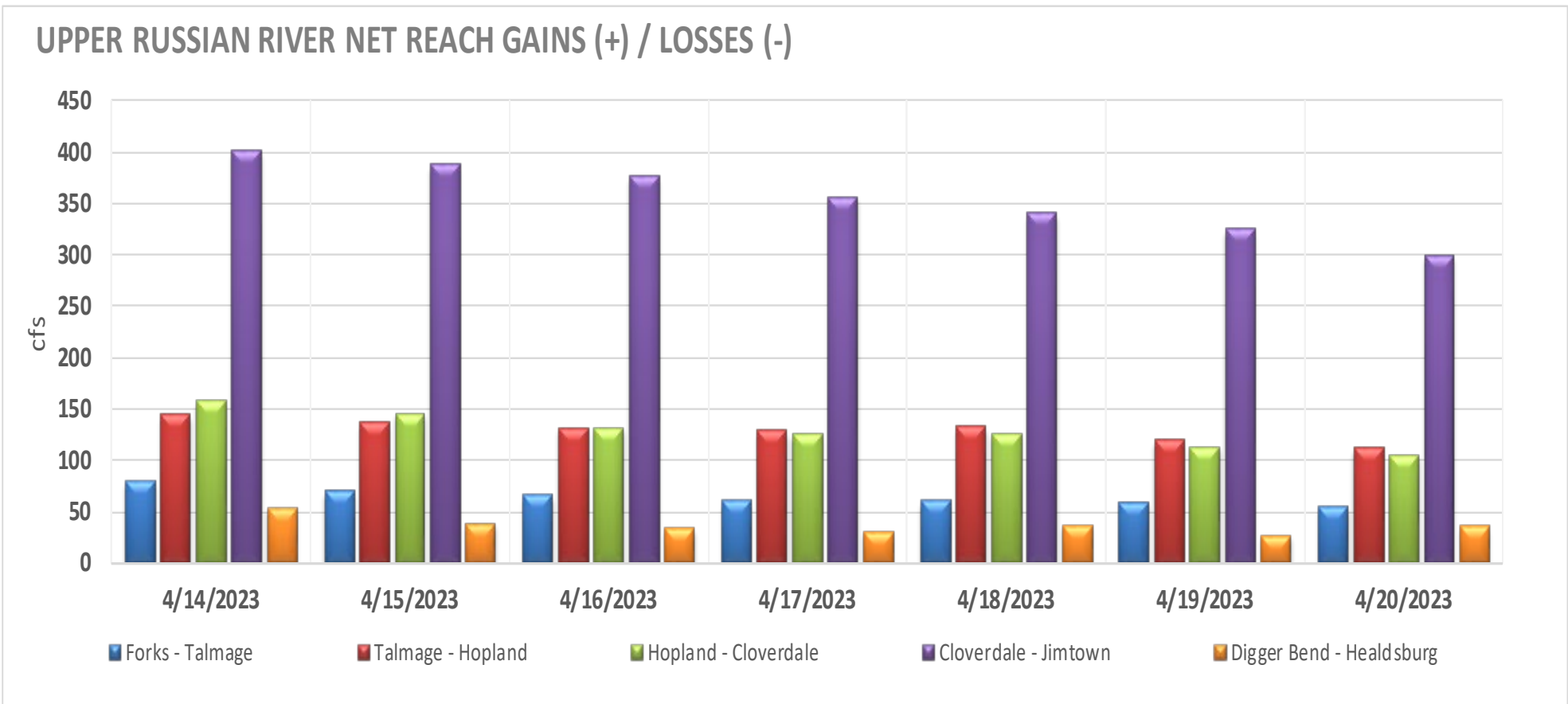
Report Date: 4/21/2023

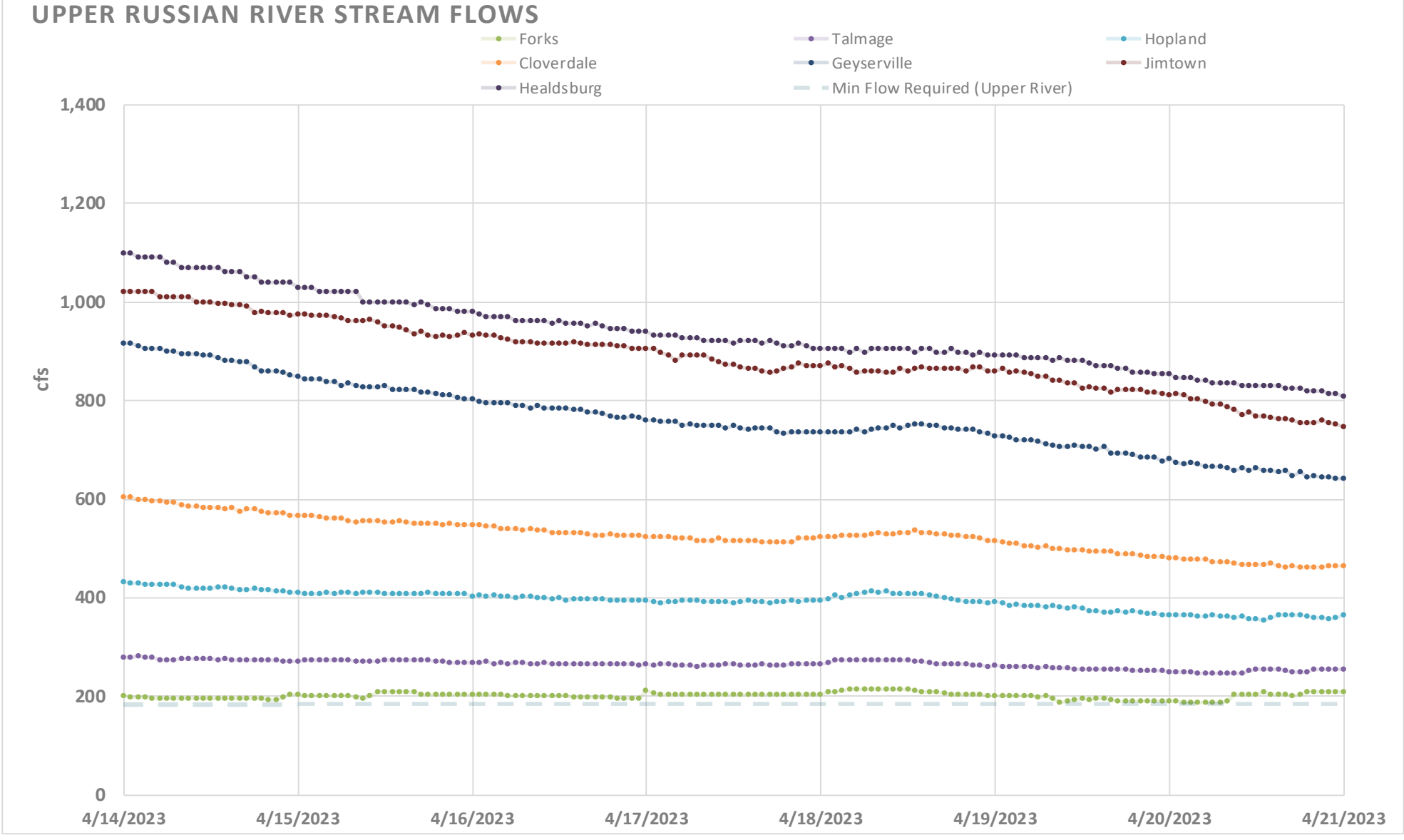
All reported values are weekly averages from the Lake Mendocino and Lake Sonoma Weekly Accounting Report.
Reach losses are calculated using estimated travel times, and are reported here as weekly averages.

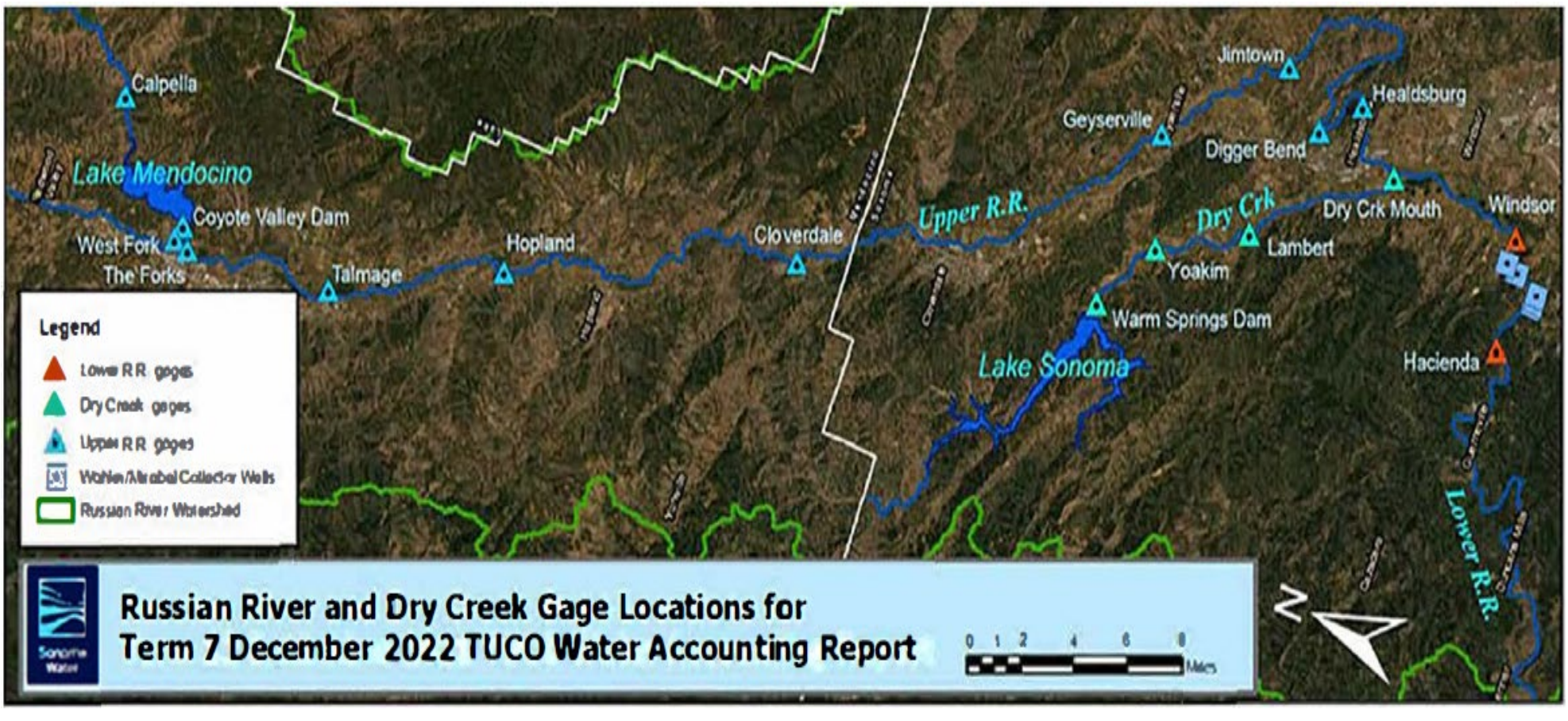


Lake Mendocino and Lake Sonoma Water Accounting Weekly Report (Term 7, December 2022 TUCO)

Report Date: 4/21/2023







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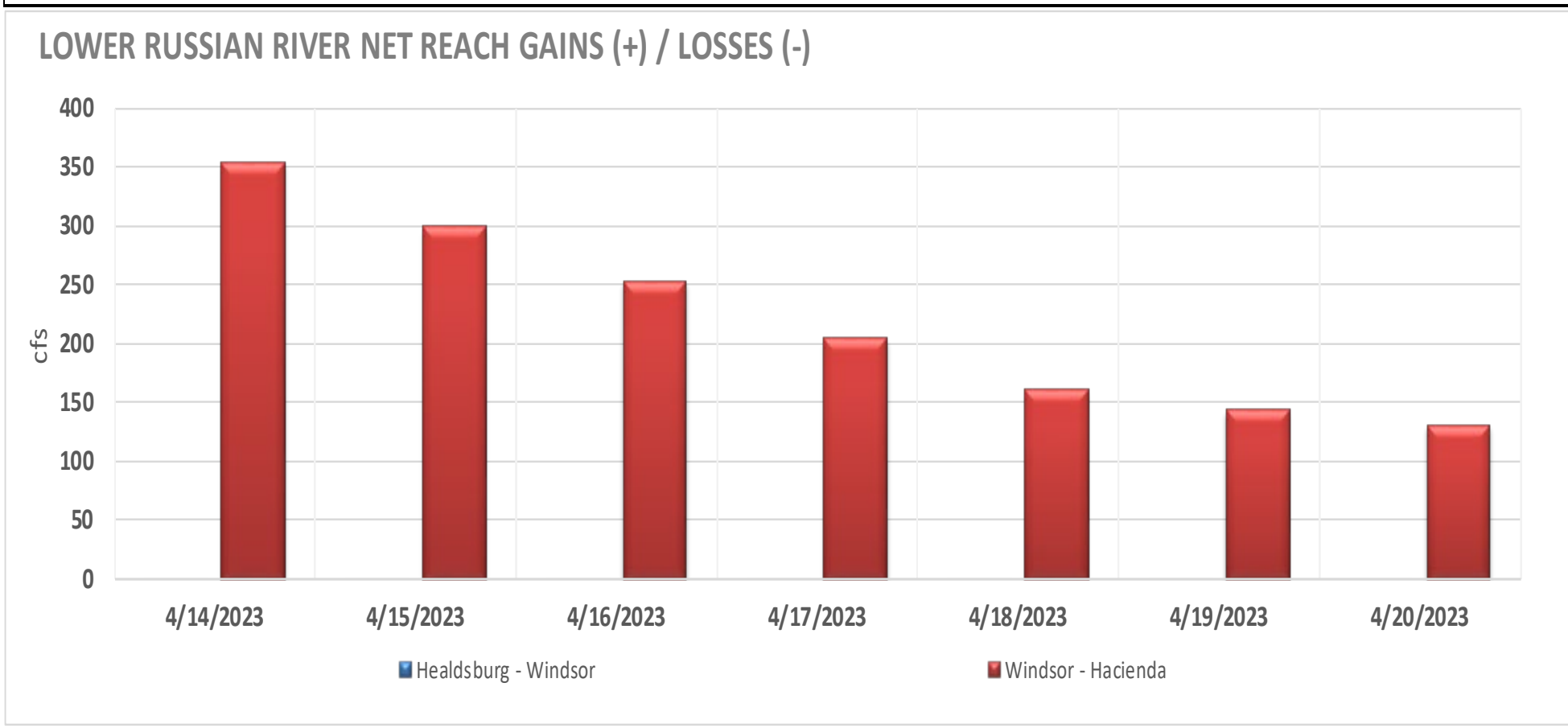
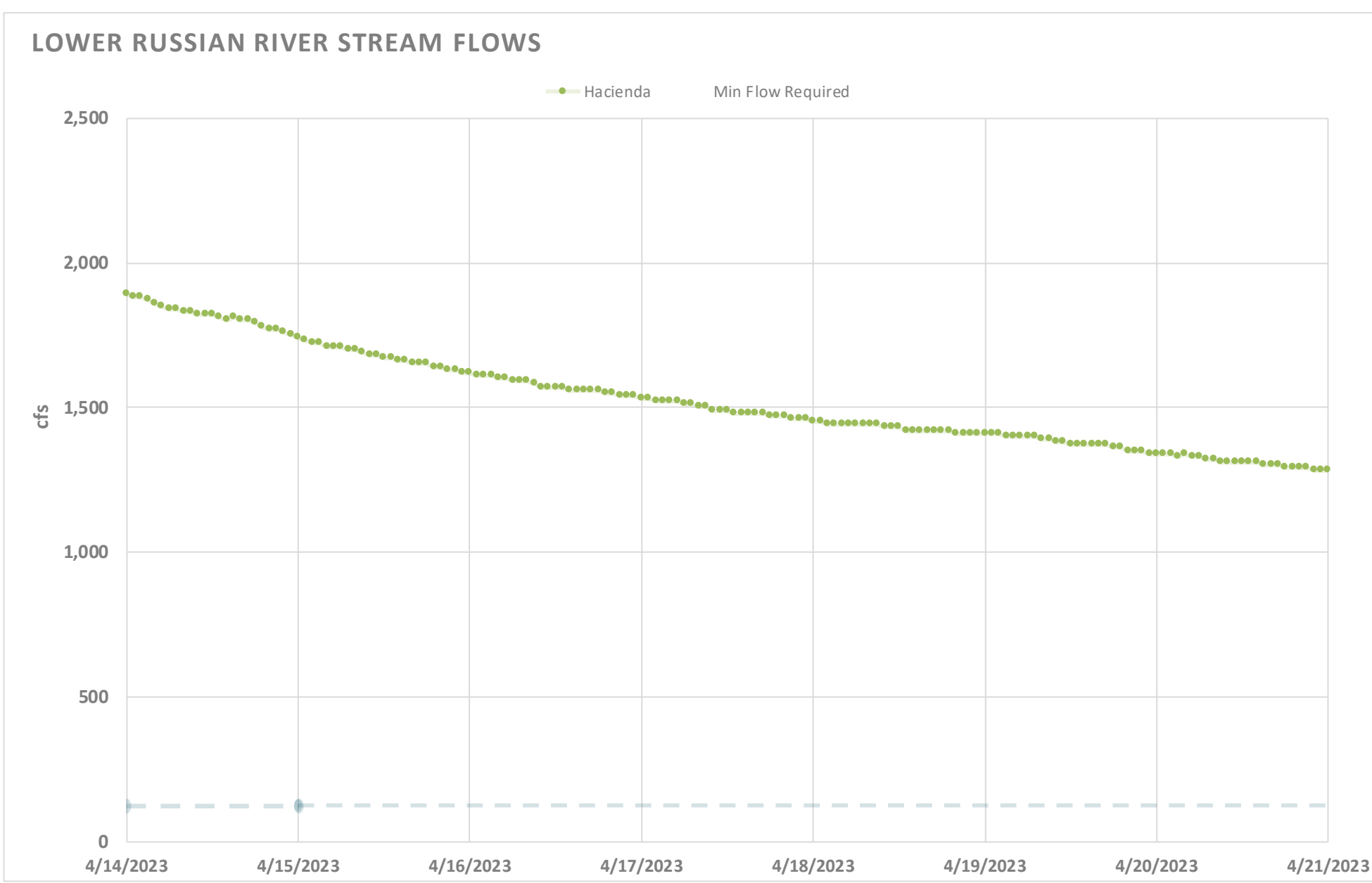
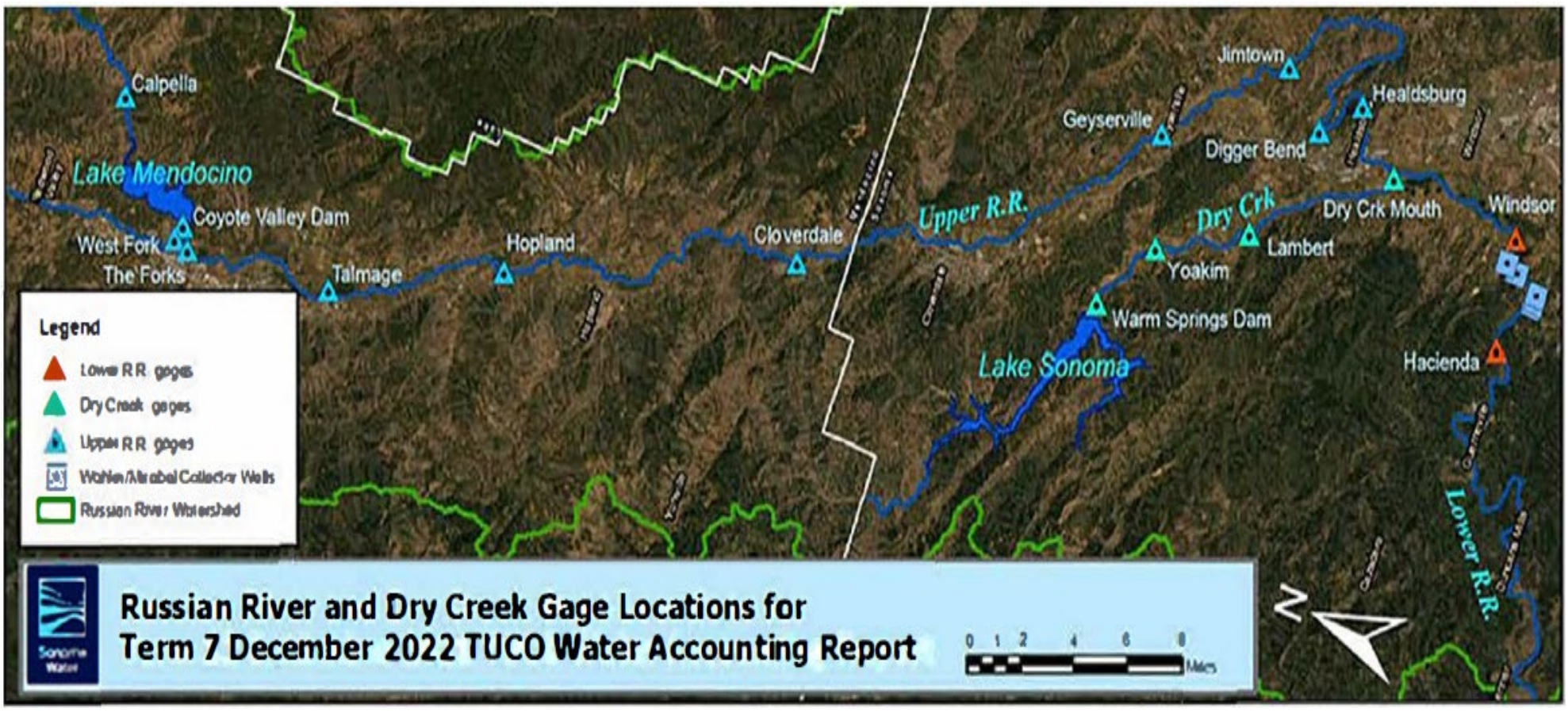




Note: Winsor gage is a seasonal gage and currently not operational. Winsor – Hacienda reach gain/loss is calculated with Healdsburg gages as the upstream gage.



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