

Lake Mendocino and Lake Sonoma Water Accounting Weekly Report (Terms 12 & 13 June 2021 TUCO)

Report Date: 10/29/2021

Units are cfs unless noted otherwise

	10/22/2021	10/23/2021	10/24/2021	10/25/2021	10/26/2021	10/27/2021	10/28/2021
I. Upper East Fork Reach							
Potter Valley Project							
Tunnel Diversion	10.0	10.0	10.0	28.0	45.0	45.0	45.0
PVID Requested Delivery	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PVID Canals Actual Delivery	0.7	0.6	3.0	2.6	2.4	0.6	0.7
East Fork Release	9.3	9.5	7.0	25.0	43.0	44.0	44.0
PVID E Fork Diversions	4.3	4.5	2.0	2.4	2.6	4.4	4.3
PVID Water Use - PG&E Contract	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PVID Water Use - License 5264	0.0	0.0	0.0	0.0	0.0	0.0	0.0
East Fork Downstream of PVID	5.0	5.0	n/d	n/d	n/d	n/d	n/d
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	20.3	17.0	1,864.1	487.6	105.2	74.2	56.1
Net Reach Loss(-)/Gain(+)	+10.3	+7.0	+1,854.1	+459.6	+60.2	+29.2	+11.1
Unimpaired Natural Flow @ Calpella (est.)	15.3	12.0	1,859.1	464.6	65.2	34.2	16.1
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

Reservoir Operations

Calculated Inflow (ac-ft)	71	227	2,411	1,870	361	193	163
(cfs)	36	114	1,215	943	182	97	82
Natural Flow	15	12	1,210	465	65	34	16
Import	20	102	5	478	117	63	66
Storage Change (ac-ft)	-16.0	+153.0	+2,346.0	+1,801.0	+295.0	+124.0	+93.0
(cfs)	-8	+77	+1,183	+908	+149	+63	+47
Stored Natural Flow (cfs)	0	0	1,178	430	32	0	0
Stored Import Water (cfs)	0	77	5	478	117	63	47
Evaporation (ac-ft)	4.0	1.5	0.5	4.6	2.3	5.2	6.4
RVCWD Diversion (ac-ft)	0	0	0	0	0	0	0
CVD Release Gage	42	36	32	33	32	32	32
Storage (Project Water)	6	0	0	0	0	0	0
Natural Flow	15	12	33	35	33	34	16
Import Water	20	25	0	0	0	0	19
East Fork Min Instream Flow Requirement	25	25	25	25	25	25	25
Compliance Gage	<i>Rvr mi.</i>						
CVD Release	99.9	42	36	32	33	32	32
CVD Project Water Release to Meet Min Flow Requirement							
Total Pass-through Water	36	37	33	35	33	35	35
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	42	31	3,292	760	294	228	185
Controlling Gage	Forks	Hopland	Forks	Forks	Forks	Forks	Forks
All Compliance Gages							
	<i>Rvr mi.</i>						
Forks (CVD + USGS 11461000)	99.0	42	37	3,292	760	294	185
Talmage (USGS 11462080)	96.1	54	35	4,140	1,310	400	210
Hopland (USGS 11462500)	84.8	59	31	4,270	2,550	504	229
Cloverdale (USGS 11463000)	70.9	58	54	4,329	5,408	1,123	425
Geyserville (USGS 11463500)	54.4	94	136	6,030	7,600	2,210	788
Jimtown (USGS 11463682)	48.5	63	141	4,880	8,770	2,110	792
Digger Bend (USGS 11463980)	38.2	56	79	>400 cfs	>400 cfs	>400 cfs	>400 cfs
Healdsburg (USGS 11464000)	35.6	50	68	6,720	11,800	3,240	1,160
Net Reach Loss(-)/Gain(+)							
Forks - Talmage	+10	-2	+963	+484	+88	+38	+19
Talmage - Hopland	+4	-3	+644	+785	+69	+26	+13
Hopland - Cloverdale	-2	+19	+2,663	+503	+464	+245	+177
Cloverdale - Jimtown	+6	+80	+1,903	+2,273	+675	+500	+349
Jimtown - Digger Bend	-4	-55	n/d	n/d	n/d	n/d	n/d
Digger Bend - Healdsburg * shift to next u/s gage (Jimtown) when >400 cfs @ Digger Bend	-5	+0	+3,243	+2,211	+848	+419	+341
Upper Russian Net Reach Loss/Gain	+9	+40	+9,415	+6,255	+2,144	+1,227	+900
CVD Project Water Release to Meet Min Flow Requirement							
Net Reach Loss(-)/Gain(+) to Controlling Gage	+0	-5	+0	+0	+0	+0	+0
Storage (Project Water)	0	0	0	0	0	0	0
Pass-through Water (Natural + Import)	0	-5	0	0	0	0	0
Total Pass-through Water	36	32	33	35	33	35	35
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).

IV. Lake Sonoma

Lake Sonoma

Storage Change (ac-ft)	-30.0	-45.0	+11,470.0	+2,244.0	+423.0	+212.0	+98.0
(cfs)	-15	-23	+5,783	+1,131	+213	+107	+49
Evaporation (ac-ft)	7.0	2.3	1.3	6.3	3.8	6.4	8.9
Inflow (Natural Flow)	68	49	5,863	1,203	279	168	105
WSD Release Gage	79	71	79	68	64	58	51
Storage (Project Water)	12	22	0	0	0	0	0
Natural Flow	68	49	79	68	64	58	51

V. Lower Dry Creek Reach

Minimum Instream Flow Requirement

	25	25	25	25	25	25	25
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Controlling Compliance Gage

Min Gage Flow	79	69	79	68	64	58	51
Controlling Gage	WSD Release	Yoakim	WSD Release	WSD Release	WSD Release	WSD Release	WSD Release

All Compliance Gages

	<i>Crk mi.</i>						
WSD Release	14.3	79	71	79	68	64	58
Yoakim (USGS 11465200)	11.1	85	69	1,100	453	175	114
Lambert (USGS 11465240)	6.8	95	75	1,120	490	203	144
Dry Crk Mouth (USGS 11465350)	0.1	106	78	1,830	2,780	1,020	340

WSD to Russian River Confluence Reach Analysis

Total Pass-through Water	68	49	79	68	64	58	51
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Net Reach Loss(-)/Gain(+)

WSD - Yoakim	+5	-2	+967	+428	+118	+57	+35
Yoakim - Lambert	+8	+5	+82	-21	+18	+27	+23
Lambert - Dry Crk Mouth	+8	+1	+744	+2,179	+794	+187	+85
WSD - Dry Crk Mouth	+22	+5	+1,794	+2,587	+930	+271	+143

WSD Project Water Release to Meet Min Flow Requirement

Net Reach Loss/Gain to Controlling Gage	+5	-2	+967	+428	+118	+57	+35
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	26	16	-2,727	5,510	1,063	339	244
Natural Flow	25	52	9,447	6,290	2,177	1,261	916

Dry Creek Flow (Mouth Gage)

L. Sonoma Project Water	17	24	-43	125	26	11	5
Natural Flow	89	54	1,873	2,655	994	328	194

Russian River d/s of Confluence Flow

	156	146	8,550	14,580	4,260	1,940	1,359
L. Mendocino Project Water + Import Water	26	16	-2,727	5,510	1,063	339	244
L. Sonoma Project Water	17	24	-43	125	26	11	5
Natural Flow	114	106	11,320	8,945	3,171	1,590	1,110

VII. Lower Russian River Reach

Minimum Instream Flow Requirement

	35	35	35	35	35	35	35
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Controlling Compliance Gage

Min Gage Flow	133	184	4,561	16,913	10,072	3,058	1,631
Controlling Gage	Hacienda	Hacienda	Windsor	Windsor	Windsor	Windsor	Windsor

All Compliance Gages

	<i>Rvr mi.</i>						
Windsor (USGS 11465390)	26.6	190	211	4,561	16,913	10,072	3,058
Hacienda (USGS 11467000)	21.8	133	184	6,050	19,100	13,200	6,010

Confluence to Windsor Reach Analysis

Net Reach Loss/Gain to Windsor Gage	+34	+64	-3,989	+2,333	+5,812	+1,118	+272
L. Mendocino Project Water + Import Water	26	16	-2,727	5,510	1,063	339	244
L. Sonoma Project Water	14	22	0	122	24	8	2
Natural Flow	264	278	18,609	20,225	12,157	4,301	2,495

Confluence to SCWA Wohler Production Facility Reach Analysis

Approx. Flow u/s of Wohler	173	224	6,085	19,143	13,239	6,042	3,238
Net Reach Loss(-)/Gain(+)	+17	+78	-2,465	+4,563	+8,979	+4,102	+1,879
L. Mendocino Project Water + Import Water	-88	-90	-14,048	-3,434	-2,108	-1,251	-867
L. Sonoma Project Water	14	22	0	122	24	8	2
Natural Flow	247	292	20,132	22,455	15,324	7,285	4,102

Confluence to Hacienda (Guerneville) Reach Analysis

Net Reach Loss(-)/Gain(+)	-23	+38	-2,500	+4,520	+8,940	+4,070	+1,821
L. Mendocino Project Water + Import Water	-88	-90	-14,048	-3,434	-2,108	-1,251	-867
L. Sonoma Project Water	0	0	0	79	0	0	0
Natural Flow	221	274	20,098	22,455	15,308	7,261	4,047

VIII. Water Production under Sonoma Water Water Rights (ac-ft)

Lower Russian River

Sonoma Water Total	79.7	80.1	69.1	85.1	77.6	62.8	114.3
Wohler	35.6	35.9	31.6	58.1	53.3	35.8	73.1
Mirabel	44.1	44.2	37.5	27.0	24.3	27.0	41.2
Town of Windsor River Wellfield	4.5	4.3	4.1	4.6	4.7	5.9	5.9
Camp Meeker & Occidental	0.1	0.1	0.1	0.1	0.1	0.1	0.1

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	1.8	1.8	1.8	1.8	1.8	1.7	1.7

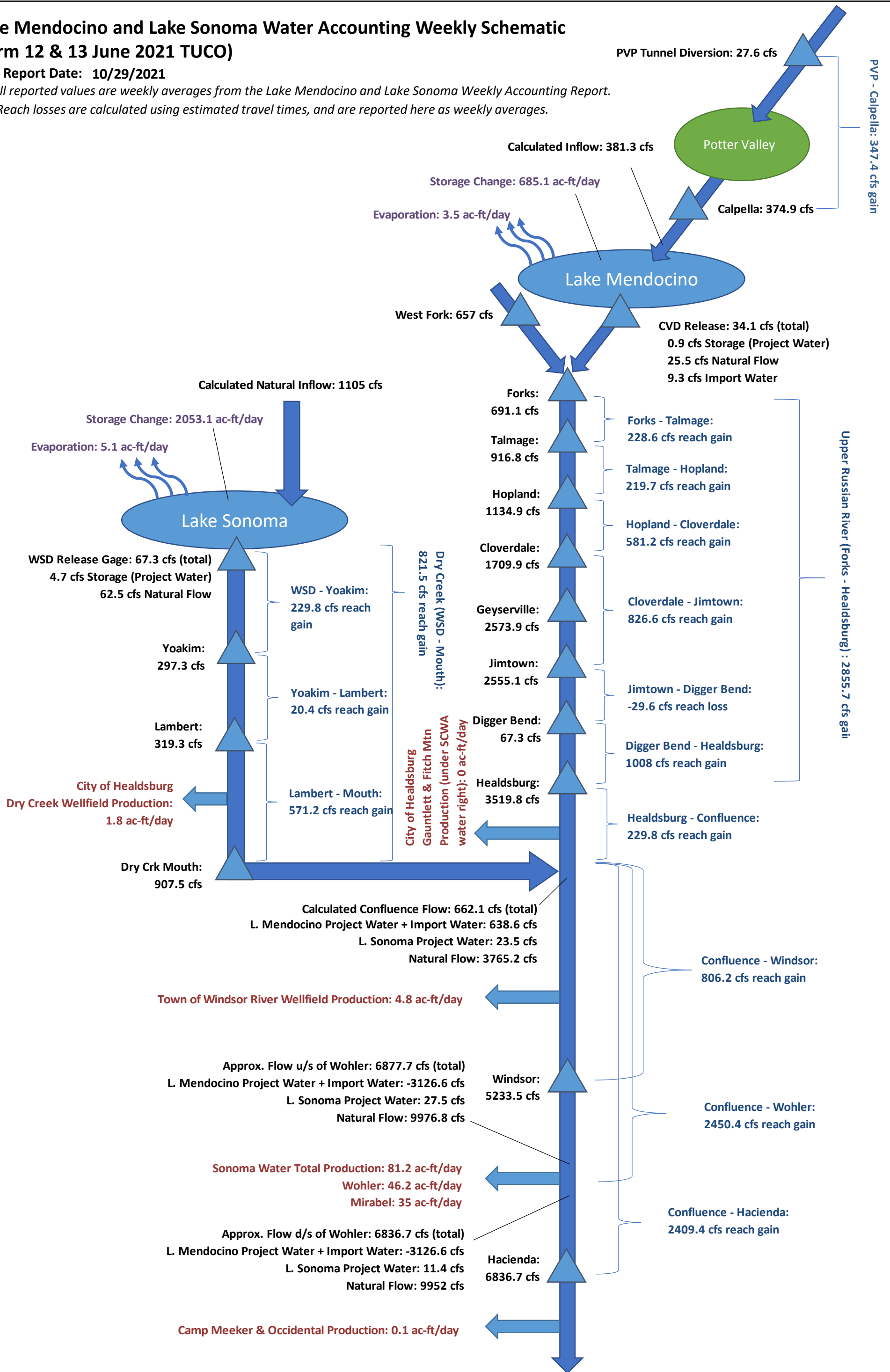
Notes:
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Lake Mendocino and Lake Sonoma Water Accounting Weekly Schematic (Term 12 & 13 June 2021 TUCO)

Report Date: 10/29/2021

All reported values are weekly averages from the Lake Mendocino and Lake Sonoma Weekly Accounting Report.

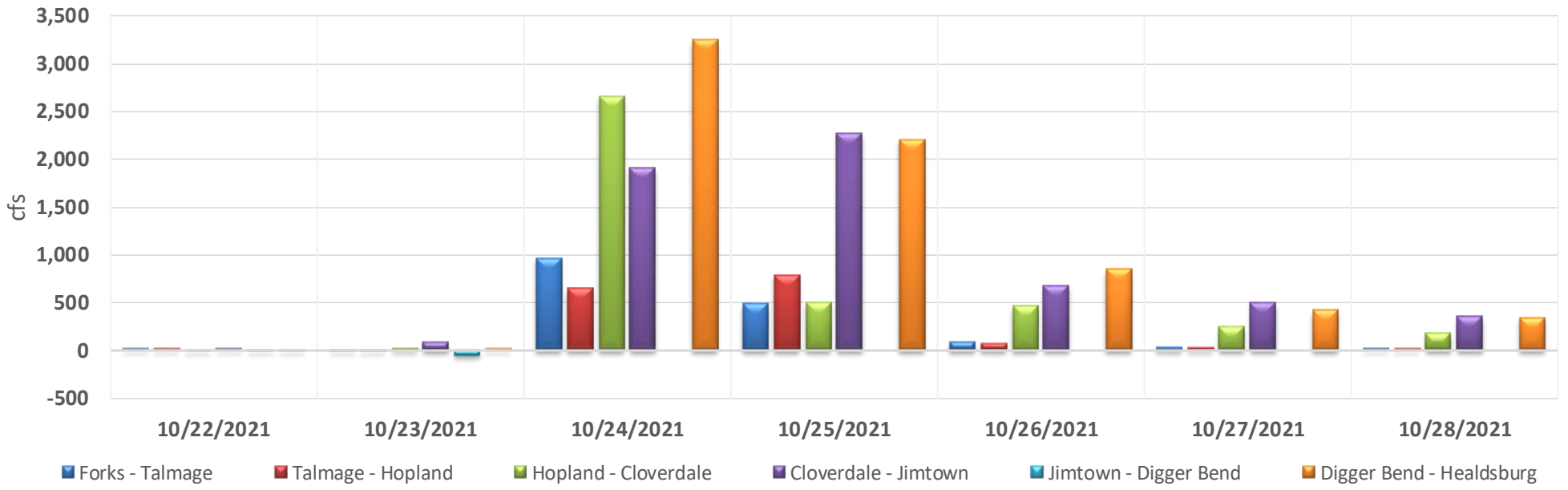
Reach losses are calculated using estimated travel times, and are reported here as weekly averages.



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

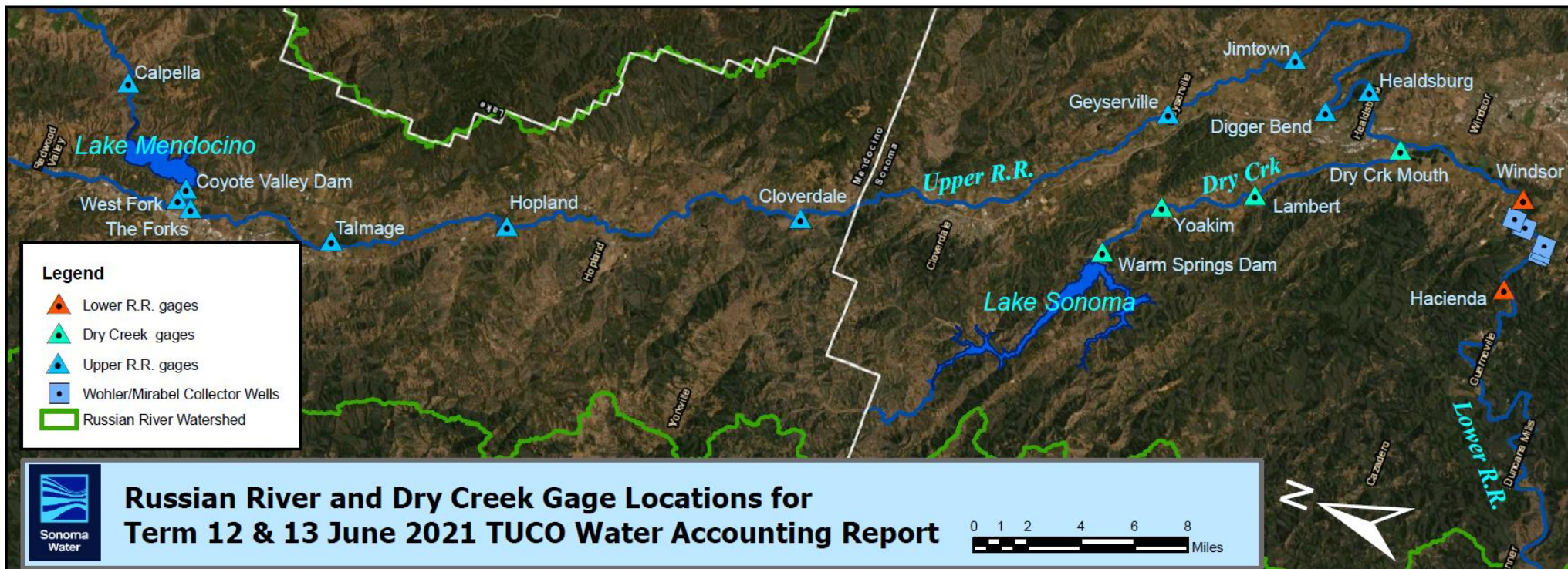
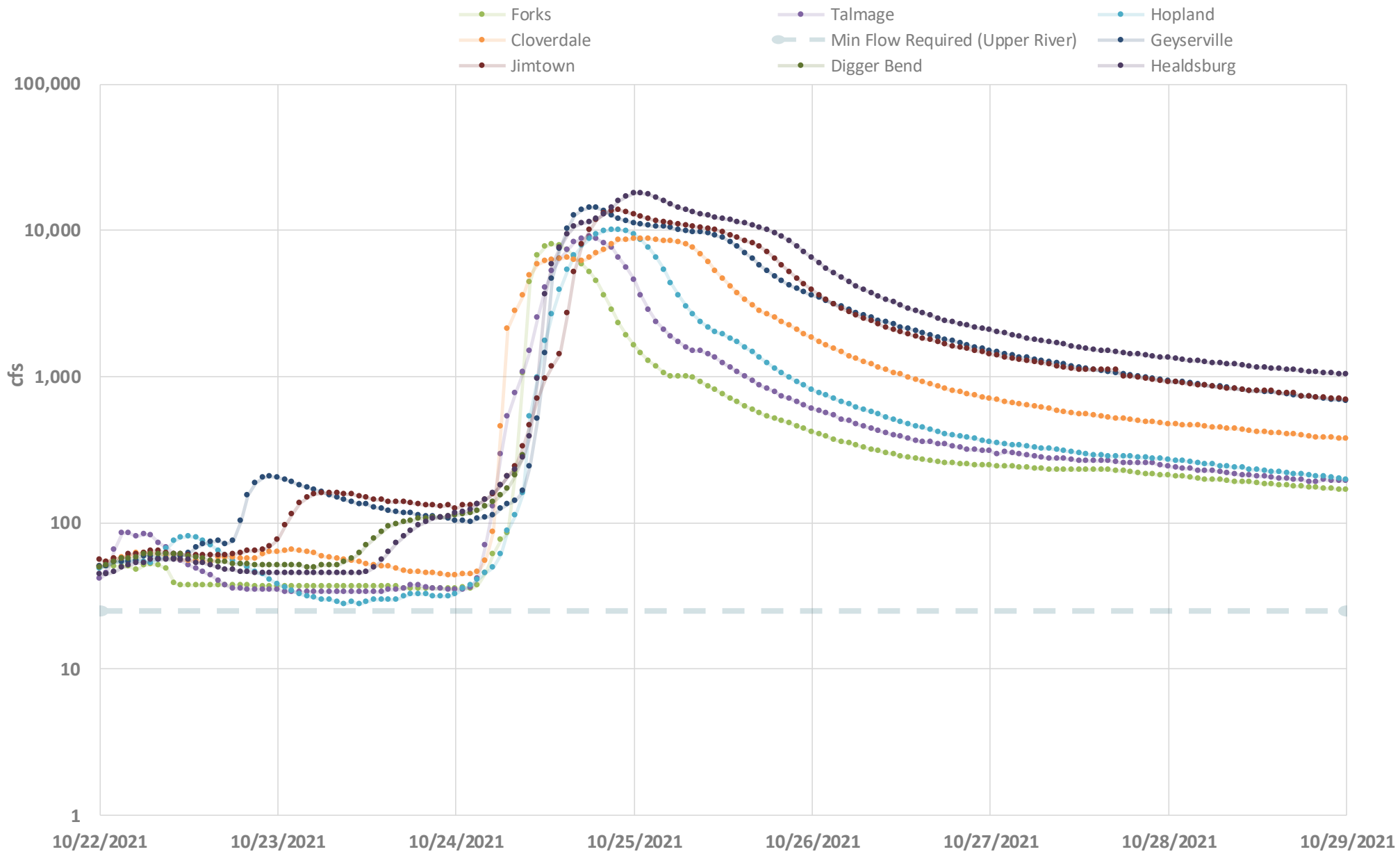
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UPPER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



Note: Digger Bend gage flows exceeded maximum rating of 400 cfs. Reach gains for Digger Bend - Healdsburg reach calculated with Jimtown as upstream gage for 10/24 – 28.

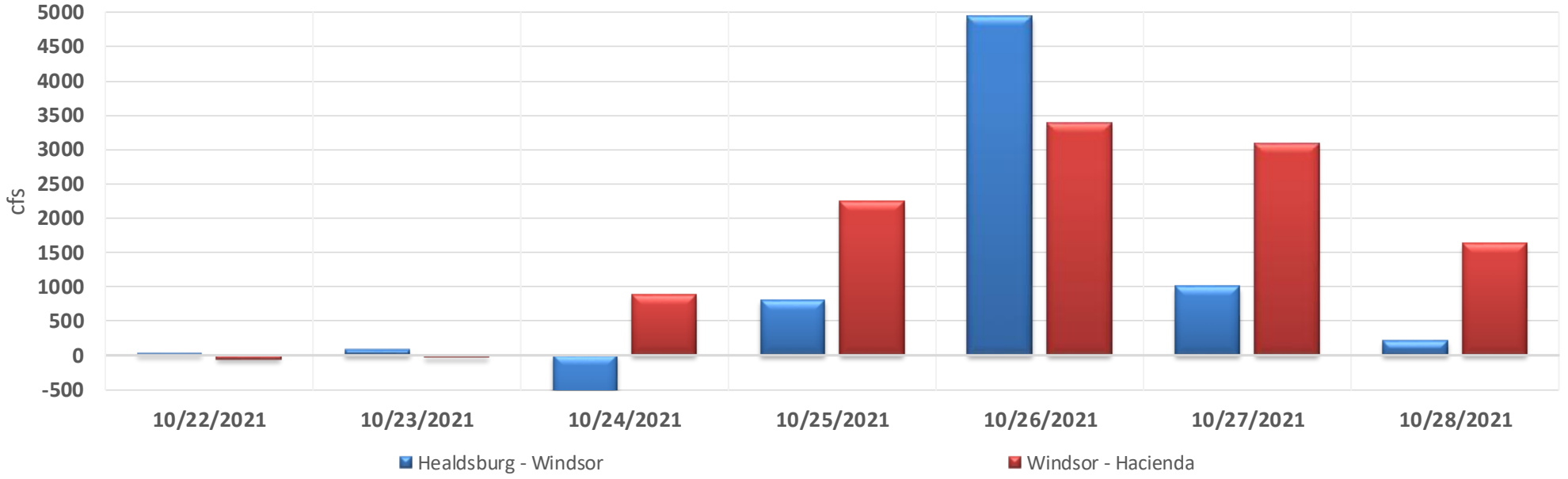
UPPER RUSSIAN RIVER STREAM FLOWS



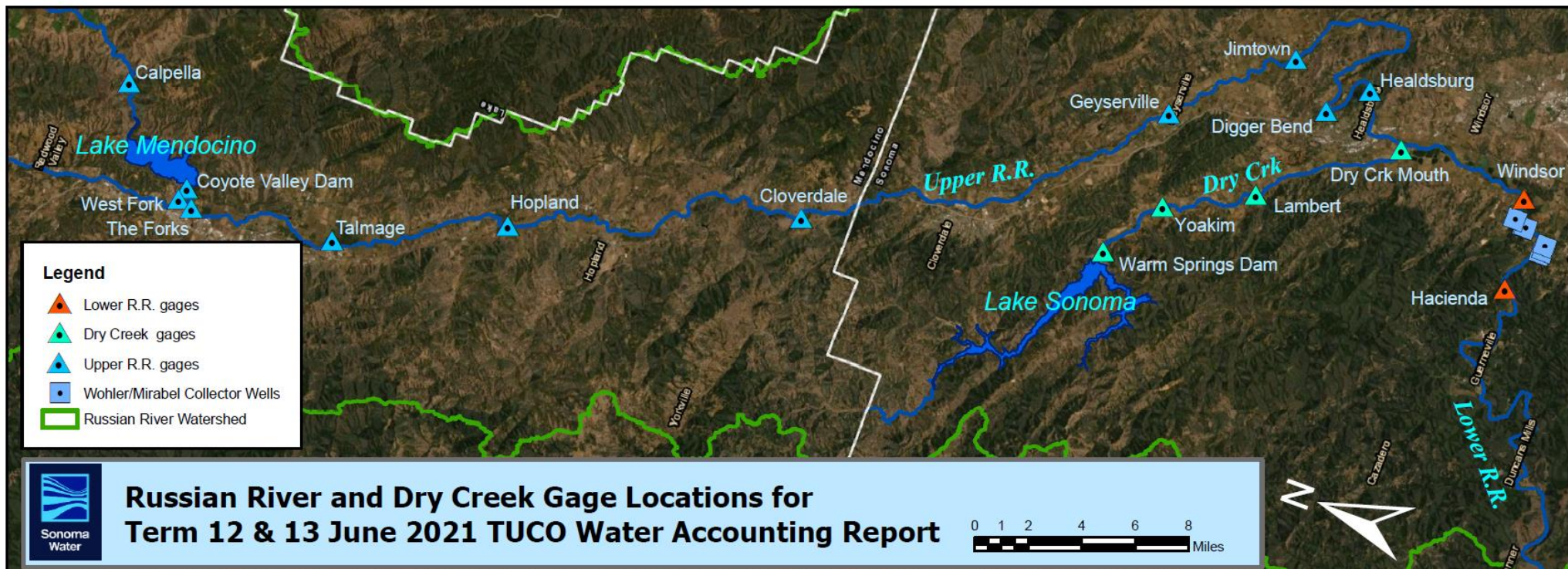
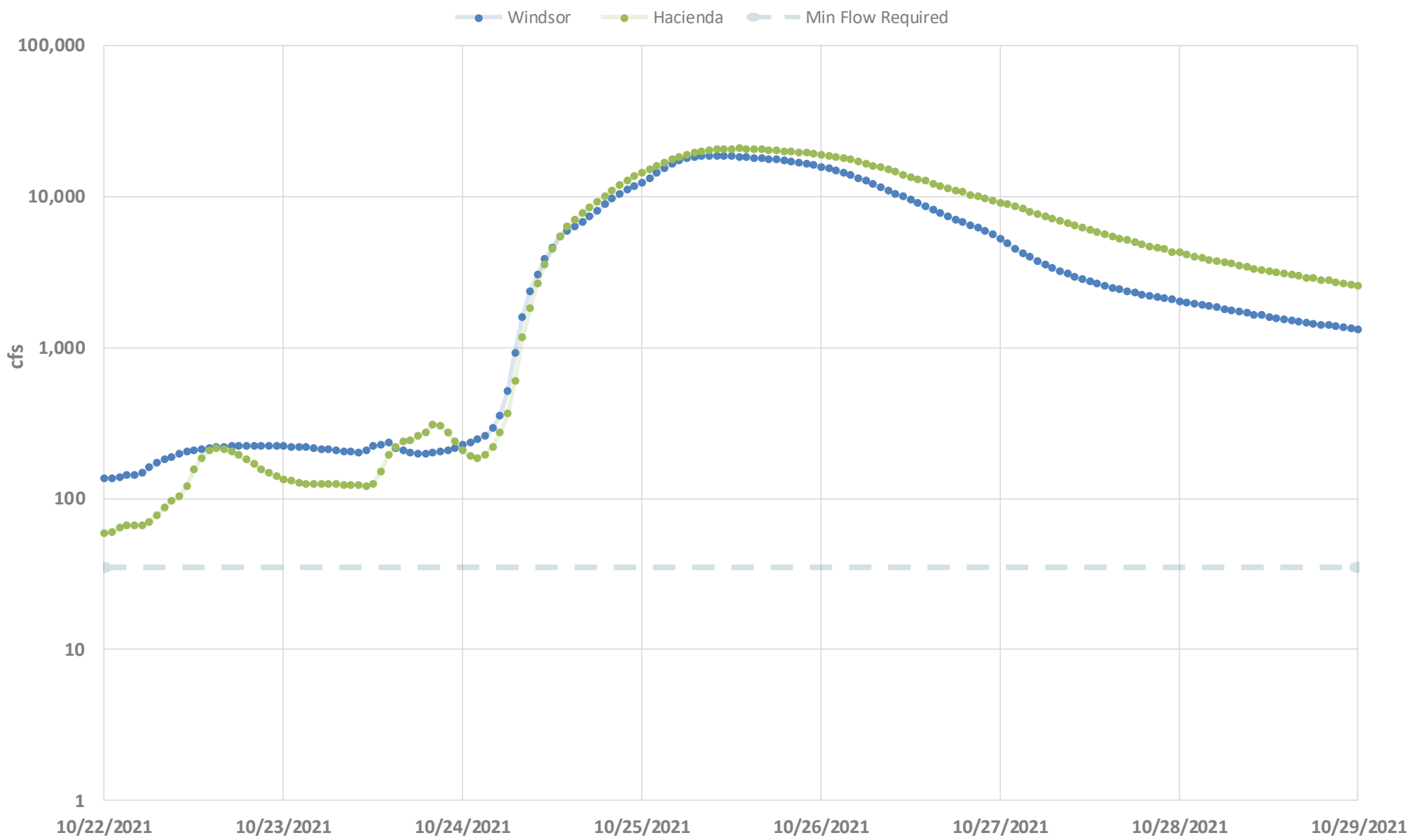
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LOWER RUSSIAN RIVER NET REACH GAINS (+) / LOSSES (-)



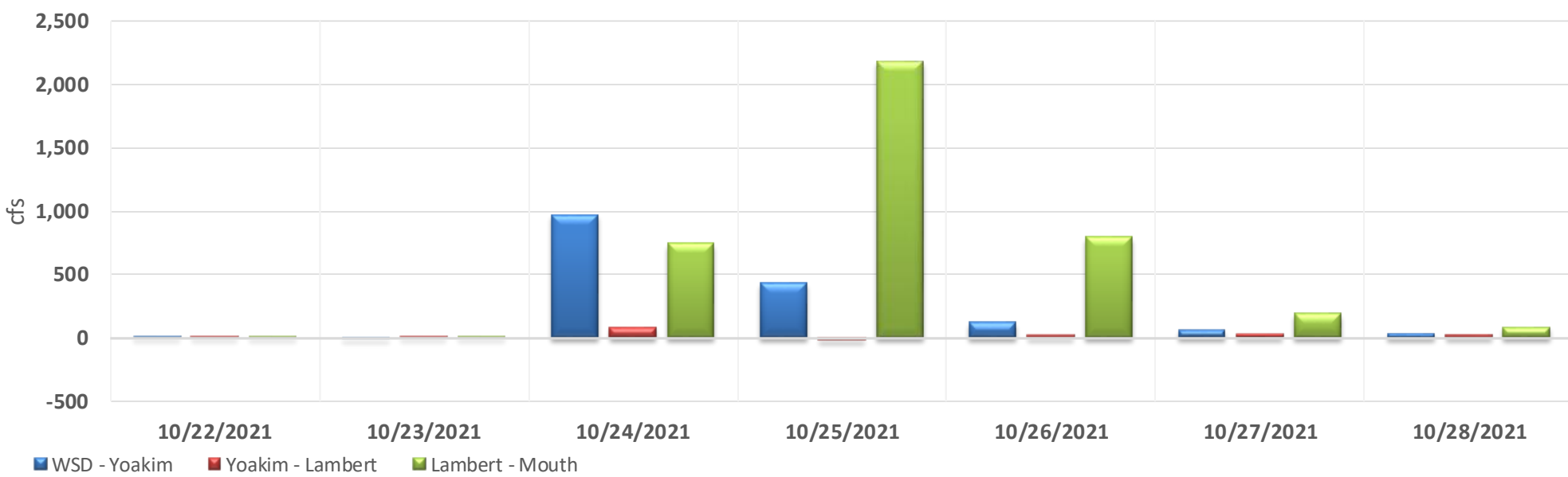
LOWER RUSSIAN RIVER STREAM FLOWS



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



DRY CREEK STREAM FLOWS

