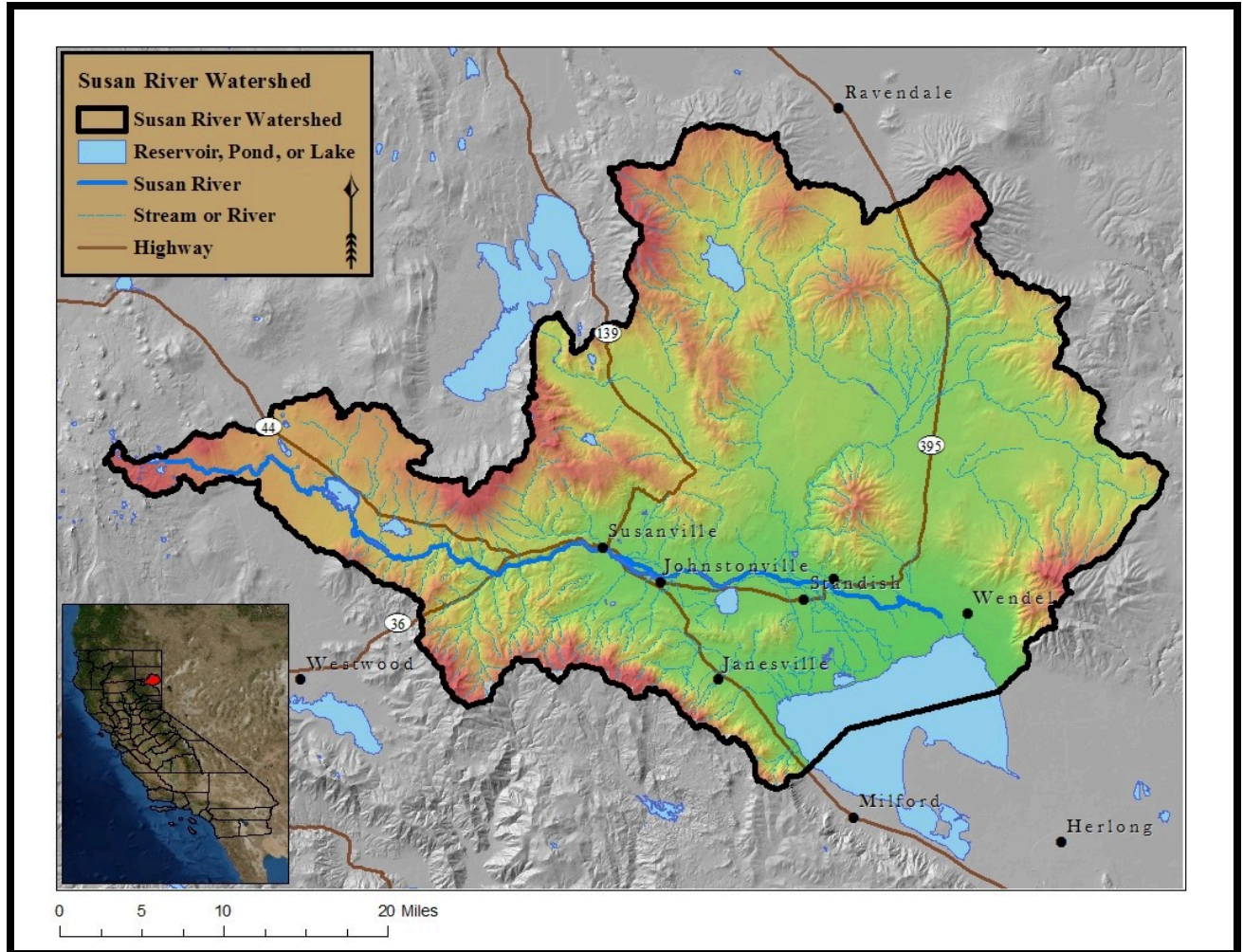




HONEY LAKE VALLEY
RESOURCE
CONSERVATION
DISTRICT

2023-2024 SUSAN RIVER WATERMASTER SERVICE AREA



ANNUAL USE REPORT - 2023/2024

Susan River

Watermaster Service Area

Annual Use Report- 2023/2024

Fiscal Year: July 1, 2023 - June 30, 2024
Irrigation Season: March 1, 2024 - October 31, 2024
Storage Season: November 1, 2024 - February 29, 2025

Lassen County, California
Decree No.'s 4573, 8174 and 8175
Submitted by December 31, 2024 to
The Presiding Judge, Lassen County Superior Court



Prepared By:
Honey Lake Valley Resource Conservation District
170 Russell Ave.
Susanville, CA 96130

Contents

General Description	4
Water Supply	5
Precipitation Outlook for 2024-2025	5
Methods of Distribution:	6
Watermaster Service Fiscal Information:	6
2023/2024 Water Allocation and Distribution:	6
Appendices A-C	
Appendix A: Department of Water Resources, Digital Gauge Data	10
Appendix B: Susan River Flow Graph	12
Appendix C: Various Points of Diversion Measurements	15

General Description

The Susan River service area is located in the southern part of Lassen County in the vicinity of the town of Susanville. There are approximately 246 water right owners in the service area with total continuous allotments of 351.922 cubic feet per second in addition to storage rights held by several users. The source of supply consists of three stream systems as follows: Susan River, Baxter Creek, Parker Creek and their associated tributaries.

Susan River has its sources on the east slope of the Sierra Nevada Mountains in the southwesterly portion of Lassen County immediately east of Lassen National Park at an elevation of about 7,900 feet. Its channel runs easterly from Silver Lake through McCoy Flat Reservoir, through Susanville, and easterly on to Honey Lake.

Susan River has four major tributaries: Paiute Creek (entering from the north at Susanville), Gold Run and Lassen Creeks (entering from the south between Susanville and Johnstonville), and Willow Creek (entering from the north above Standish). Gold Run Creek and Lassen Creek rise on the north slope of Diamond Mountain at an elevation of about 7,600 feet. The watersheds of Paiute Creek and Willow Creek are lower and they rise on the south slopes of Round Valley Mountains.

A short distance below the confluence of Willow Creek and Susan River the river channel divides into three branches known as Tanner Slough Channel on the north, Old Channel in the middle, and Dill Slough Channel on the south. Two channels which take off Dill Slough on the south are known as Hartson Slough and Whitehead Slough.

The Baxter Creek stream system is situated in Honey Lake Valley on the east slope of the Sierra Nevada about 10 miles southeast of Susanville in the southern portion of Lassen County. The principal streams in the Baxter Creek stream system are Baxter Creek (which rises in the extreme western portion of the basin and flows in an easterly direction), Elysian Creek, Sloss Creek, and Bankhead Creek (a tributary to Baxter Creek from the south). Elysian Creek has three tributaries: North Fork Elysian Creek, South Fork Elysian Creek, and Kanavel Creek.

Parker Creek is situated in Honey Lake Valley on the east slope of the Sierra Nevada about 15 miles southeast of Susanville in the southern portion of Lassen County. Its source is on the east slope of Diamond Mountain and flows in an easterly direction for about 5 miles into Honey Lake. The primary area of water use in the Susan River service area is in Honey Lake Valley between Susanville and the northwest shore of Honey Lake, 25 miles in length. The valley floor is at an elevation of about 4,000 feet.

Water Supply

The water supply in the Susan River service area comes from two major sources: snowmelt runoff and springs. The snowpack on the Willow Creek Valley and Paiute Creek watersheds, which embrace more than half of the Susan River stream system, melts early in the spring and usually is entirely depleted by the first of May. The irrigation requirements from this portion of the stream system after the first of May are almost entirely dependent upon the flow of perennial springs which remain constant throughout the year. Under normal conditions, the flows of Lassen Creek, Gold Run Creek, Baxter Creek, Parker Creek, and the Susan River above Susanville are well sustained by melting snows until early June. The flow from perennial springs in this portion of the water system is comparatively small. The Lassen Irrigation Company stores supplemental water in Hog Flat Reservoir and McCoy Flat Reservoir, located on the headwaters of the Susan River. This stored water is released into the Susan River, which is used as a conveyance and commingled with the natural flow usually during June and July. It is then diverted into the A and B Canal leading to Lake Leavitt for further distribution by the irrigation district.

Precipitation Outlook for 2024-2025

The National Ocean and Atmospheric Administration (NOAA) has predicted as of September 9, 2024 average precipitation in the Susan River basin this fall, possibly slightly lower than last year. No large increase or decrease in amounts of rain or snow are forecast. As no long term forecast can be 100 percent accurate, this outlook could be only used as a guide.

Methods of Distribution:

Irrigation in the Susan River service area is accomplished by placing diversion dams in the main channel of the stream system, to raise the water to the level required to divert into the canals, sloughs and ditches. These dams for diversion are relatively large on the Susan River compared to those on the smaller tributaries. Various methods of irrigation are practiced; the most common approach is by flooding. With this technique, water is transported by a main conveyance channel along the high point of the lands to be irrigated. It is then dispersed by laterals along the higher ridges of the tract from which it can be distributed over the area to be irrigated by the smaller laterals of the ditch system. Sub-irrigation occurs in some areas incidental to surface irrigation or because of seepage from ditches or creek channels. During the past several years, numerous users have increased the usage of sprinkler irrigation by wheel lines to improve the efficiency of their irrigation systems.

Watermaster Service Fiscal Information:

The Fiscal Year 2023/2024 Watermaster Service Budget was adopted on June 22nd, 2023 in the amount of \$290,350.51. The Fiscal Year 2024/2025 Watermaster Service budget was adopted on May 23rd, 2024 in the amount of \$290,350.51. Fiscal Year 23/24 and 24/25 budgets saw no increase between them as there was a savings in the personnel cost from the prior budget year. The required notification regarding the budget, apportionment, and individual assessments were mailed to the users and filed with the Lassen County Superior Court before June 15, 2023. There were no filed objections to the budget or apportionment within 15 days or thereafter; and thus, deemed approved by the Court without further hearing. The approved budget, apportionment, and individual assessments were certified to the Lassen County Auditor and the Lassen County Board of Supervisors prior to August 10, 2023.

2023/2024 Water Allocation and Distribution:

The Susan River Watermaster Service Area experienced above average precipitation compared to the area's average. Based on California Cooperative Snow Surveys for the Northern California area, the year started out with above average snowfall. With above 100 percent

Susan River Watermaster Service Area - Annual Use Report
2023/2024

average snowfall, the water available to users lasted longer than normal. The general availability of water for the various stream systems is described below.

Lassen Creek: No diversion data available, but Lassen Creek provided water through August of 2024 before drying up.

Hills Creek: Hills Creek has a prorated supply throughout the year, adding a small amount of flow to Gold Run Creek. No diversion data available.

Gold Run Creek: Water was available in prorated amounts for irrigation until the time of this report. Two to three cubic feet per second still flowing into the month of September 2024, providing a percentage of water rights to users on Gold Run Creek.

Upper Susan River: Flows for the Upper Susan met the full requirements of the Schedule 5, 2nd priority water right allotments up until early August. Stock water was available to most users through September. Flows decreased in September, providing percentages of water right at the time of this report.

Lower Susan River Below the Confluence of Willow Creek: The Lower Susan had irrigation water for Schedule 3, 3rd priority users until late April and was nearly sufficient for Schedule 3, 2nd priority users until mid-late June. Stock water was available to most users until mid-August. Past this point, users were able to exercise stock watering rights at a percent of water rights depending on the flow at Colony Dam.

Willow Creek: Prorated allocations were available through late August. Flows were sufficient for regular stock watering of the second priority until September. Conveyance of stock water to downstream users continues at the time of this report.

Bankhead/Sloss Creek: No diversion data available. At the time of this report, these creeks are dry. No water flow is expected to return till after the season ends.

Lassen Irrigation Company Storage Reservoirs: LIC began diverting water from McCoy Flat on June 20, 2024. Water release from McCoy flat reservoir ended on August 27, 2024.

Baxter Creek: Upper Baxter Creek has had consistent flow during the summer months, with water available at a percentage of right. The lower end of Baxter Creek flows fell off during the month of June, and will not supply water again till after the season ends.

Miscellaneous Notable Events:

1. Brian Burvant started as the new Watermaster May 28, 2024. Brian has previously been employed by the Lassen Irrigation Company, the Lassen County Agriculture Department, and has an extensive background in farming, irrigating, and construction.
2. The Old Channel Realignment and Piping Project was substantially completed on August 12th, 2024. This project will conserve over 400 acre-feet of water per year for the Old Channel and Jensen Slough users.

Appendices A-C

Numerical values are in cubic feet per second (cfs)
A blank space or "0" indicates no reading.

Appendix A: Department of Water Resources, Digital Gauge Data

FLOW OF SUSAN RIVER at SUSANVILLE (SSU) ($\frac{ft^3 s^{-1}}{CFS}$)

Day	March	April	May	June	July	August	September
1	270	292	240	66	79	60	8
2	220	258	219	64	78	60	6
3	209	292	217	61	76	59	6
4	189	440	211	62	75	62	6
5	170	340	276	56	74	60	6
6	189	292	225	52	72	58	6
7	253	251	225	47	72	56	6
8	258	222	195	42	71	56	6
9	234	234	175	42	71	55	5
10	253	249	170	40	70	55	5
11	279	326	176	38	70	55	5
12	256	416	175	35	69	55	6
13	286	448	181	33	67	54	6
14	246	380	190	31	69	55	7
15	224	328	184	30	71	54	6
16	225	318	176	29	70	39	6
17	237	338	173	29	67	38	8
18	260	418	165	29	66	37	9
19	311	382	155	28	66	38	
20	354	433	163	27	66	38	
21	388	468	156	26	66	37	
22	422	462	150	85	64	37	
23	471	457	141	85	64	37	
24	390	431	105	85	62	38	
25	320	401	96	83	65	46	
26	292	399	90	86	64	41	
27	268	322	85	82	66	39	
28	283	294	80	83	66	36	
29	260	279	78	79	67	16	
30	260	256	72	78	61	10	
31	305		69		62	9	

Note: These daily values were averaged from the gauge's 'Real Time' 15-minute interval data. Throughout the beginning of the season, the River commonly had dramatic increases and decreases in flow, in the span of 8-48 hours. Because of this, some of the above daily averages may be skewed. Values measured in CFS for the irrigation season from March 1st, 2024 to October 31st, 2024.

Susan River Watermaster Service Area - Annual Use Report
 2023/2024

FLOW OF SUSAN RIVER at the CONFLUENCE of WILLOW CREEK (SSD) ($ft^3 s^{-1}/CFS$)

Day	March	April	May	June	July	August	September
1	34	67	52	56	14	6	6
2	22	79	56	53	19	6	4
3	25	0	69	43	18	4	4
4	22	0	69	35	15	3	5
5	20	68	41	36	14	4	4
6	31	48	51	35	14	3	3
7	28	49	54	33	9	4	0
8	15	64	49	28	5	0	0
9	23	71	44	28	4	0	0
10	21	0	32	32	3	0	0
11	23	0	27	24	3	3	0
12	34	0	28	24	5	5	0
13	26	0	28	29	4	5	0
14	20	82	29	26	4	6	0
15	58	90	34	21	4	4	0
16	80	97	36	22	4	4	0
17	79	0	31	21	5	5	0
18	82	0	32	19	5	5	0
19	85	0	29	19	4	5	
20	0	0	33	15	4	7	
21	0	0	27	14	4	6	
22	0	0	24	17	8	5	
23	0	0	21	20	8	4	
24	70	0	70	15	9	4	
25	61	0	67	14	8	7	
26	86	0	65	17	9	8	
27	0	42	64	15	9	5	
28	89	69	62	16	11	3	
29	80	57	56	14	17	4	
30	0	50	55	14	12	4	
31	79		57		8	5	

Note: These daily values were averaged from the gauge's 'Real Time' 15-minute interval data. The '0' represents known extremely high flows, overtopping the gauge sensor and reading as zeros or an error in the system. Values measured in CFS for the irrigation season from March 1st, 2024 to October 31st, 2024.

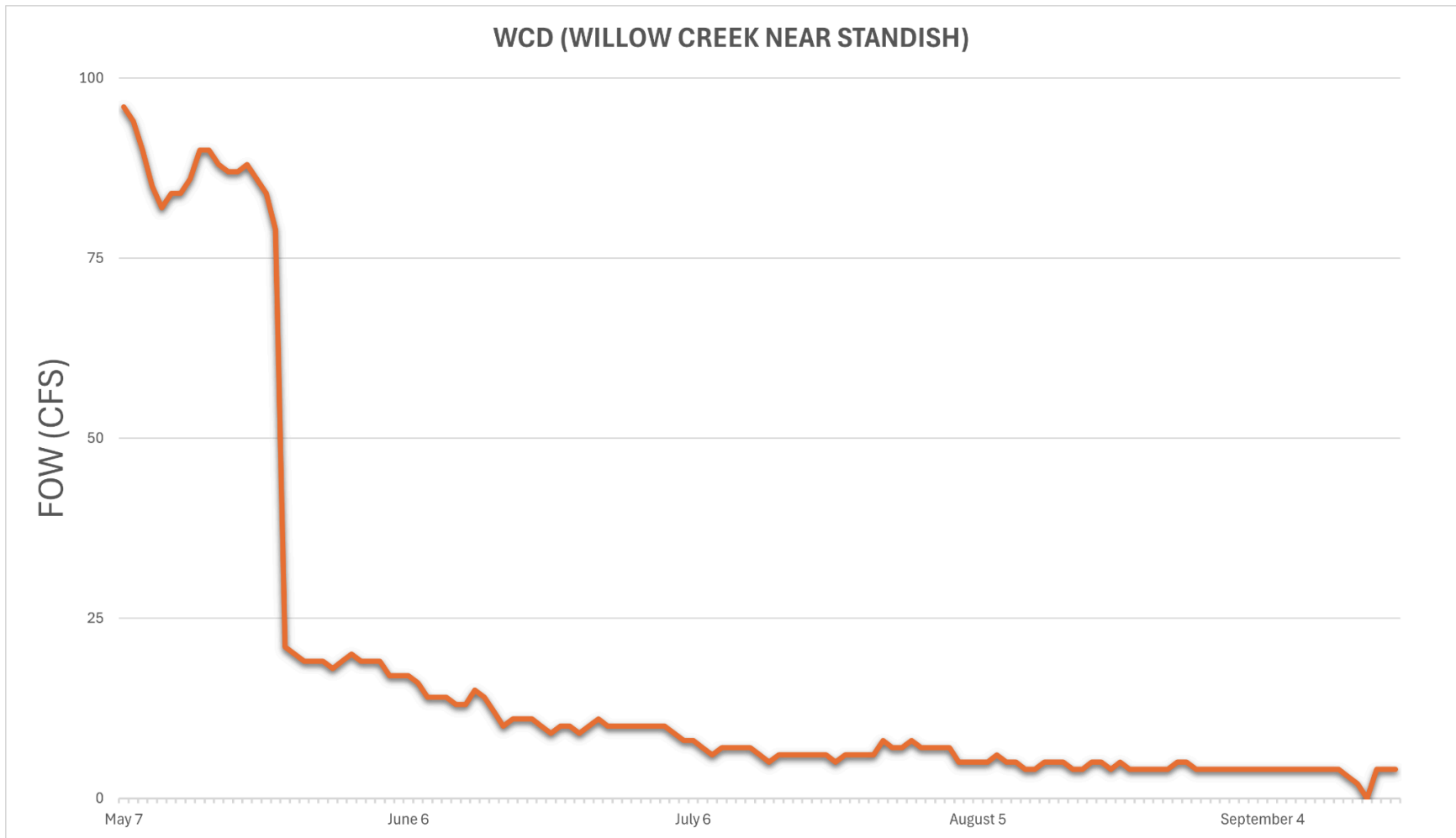
Susan River Watermaster Service Area - Annual Use Report
 2023/2024

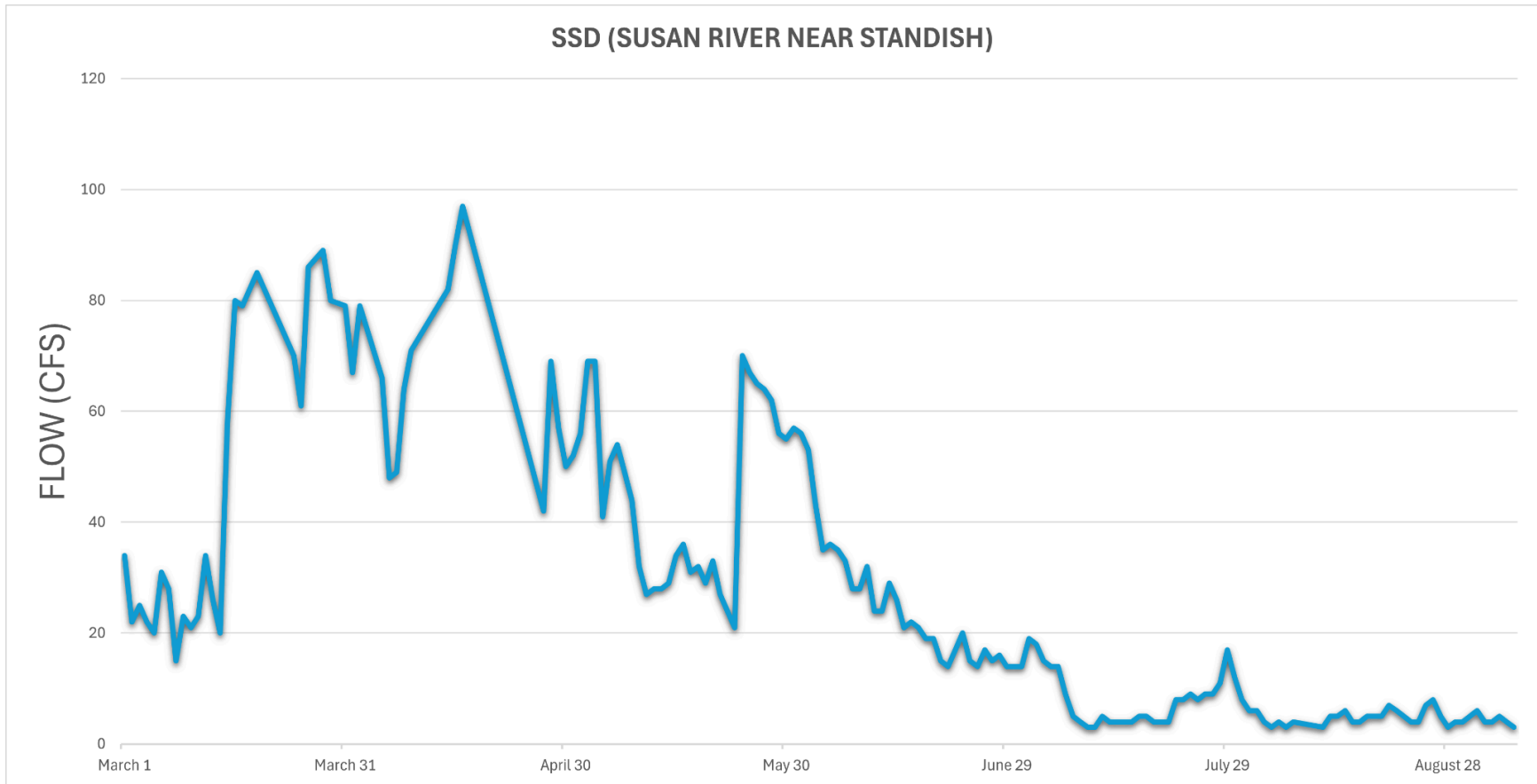
FLOW OF WILLOW CREEK at the CONFLUENCE of the SUSAN RIVER (WCD) ($ft^3 s^{-1}/CFS$)

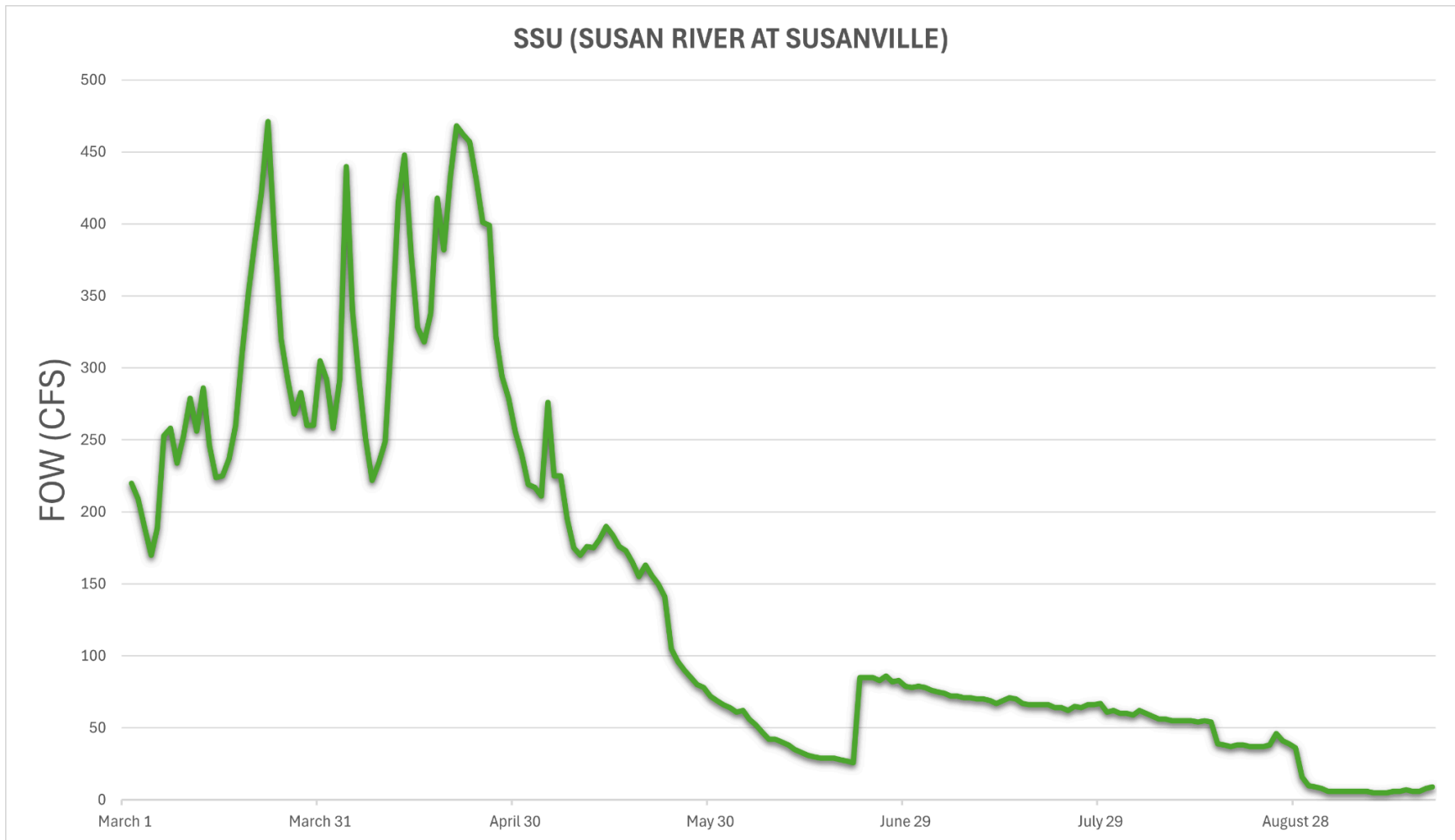
Day	May	June	July	August	September
1	0	19	10	7	4
2	0	19	10	7	4
3	0	19	10	5	4
4	96	17	9	5	4
5	0	17	8	5	4
6	0	17	8	5	4
7	96	16	7	6	4
8	94	14	6	5	4
9	90	14	7	5	4
10	85	14	7	4	4
11	82	13	7	4	4
12	84	13	7	5	4
13	84	15	6	5	3
14	86	14	5	5	2
15	90	12	6	4	0
16	90	10	6	4	4
17	88	11	6	5	4
18	87	11	6	5	4
19	87	11	6	4	
20	88	10	6	5	
21	86	9	5	4	
22	84	10	6	4	
23	79	10	6	4	
24	21	9	6	4	
25	20	10	6	4	
26	19	11	8	5	
27	19	10	7	5	
28	19	10	7	4	
29	18	10	8	4	
30	19	10	7	4	
31	20		7	4	

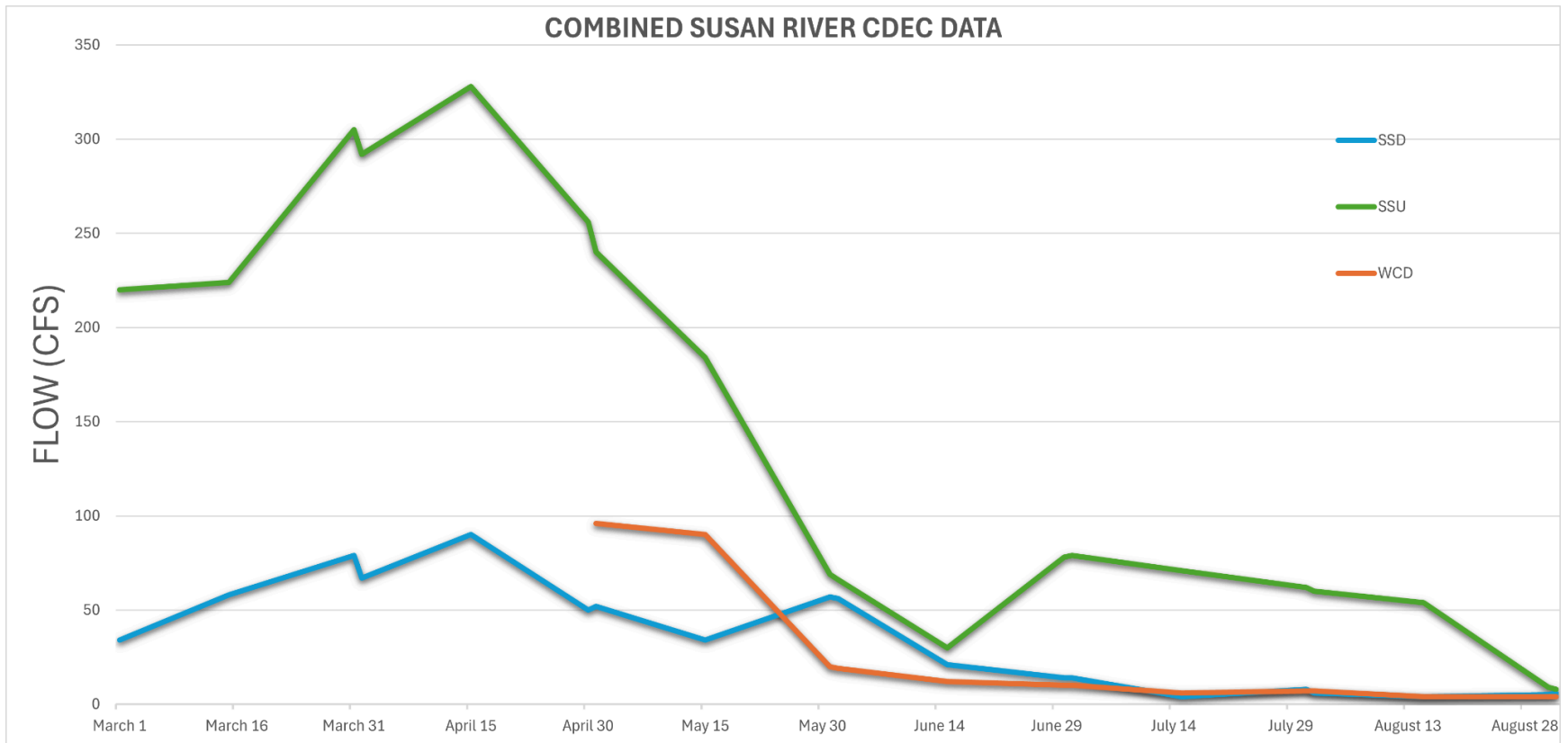
Note: These daily values were averaged from the gauge's 'Real Time' 15-minute interval data. The '0' represents known extremely high flows, overtopping the gauge sensor and reading as zeros. Data unavailable before May 1st, 2024. Values measured in CFS for the irrigation season from March 1st, 2024 to October 31st, 2024.

Appendix B: Susan River Flow Graphs









Appendix C: Various Points of Diversion Measurements

McCoy Flat Reservoir Outflow - Diversion # 6

Day	June	July	August	September	October
1					
2		59.3			
3	1.17				
4					
5					
6					
7					
8					
9			45.3		
10					
11					
12		56	45.3		
13					
14	1.17				
15					
16		54.5			
17					
18					
19			24.6		
20	61.8				
21	61.8				
22		53.7			
23			25.2		
24		52.1			
25	60.9				
26			24.9		
27			1.1		
28					
29		49			
30					
31					

Note: LIC began diverting water from McCoy Flat on June 20, 2024.
 Water release from McCoy flat reservoir ended on August 27, 2024.

Gold Run Creek - Diversion # 187

Day	July	August	September	October
1				
2				
3				
4				
5				
6		1.96		
7				
8				
9				
10				
11				
12				
13		2.01		
14				
15				
16				
17				
18				
19		2.9		
20				
21				
22				
23				
24				
25				
26				
27				
28		3		
29				
30				
31				

Willow Creek - Diversion # 118

Day	May	June	July	August	September	October
1	7.1					
2						
3						
4						
5						
6				8.26		
7						
8						
9						
10			6.44			
11						
12						
13						
14						
15						
16						
17						
18		7.14	6.72			
19				7.05		
20						
21						
22						
23						
24						
25						
26				6.82		
27						
28						
29						
30			8.56			
31						