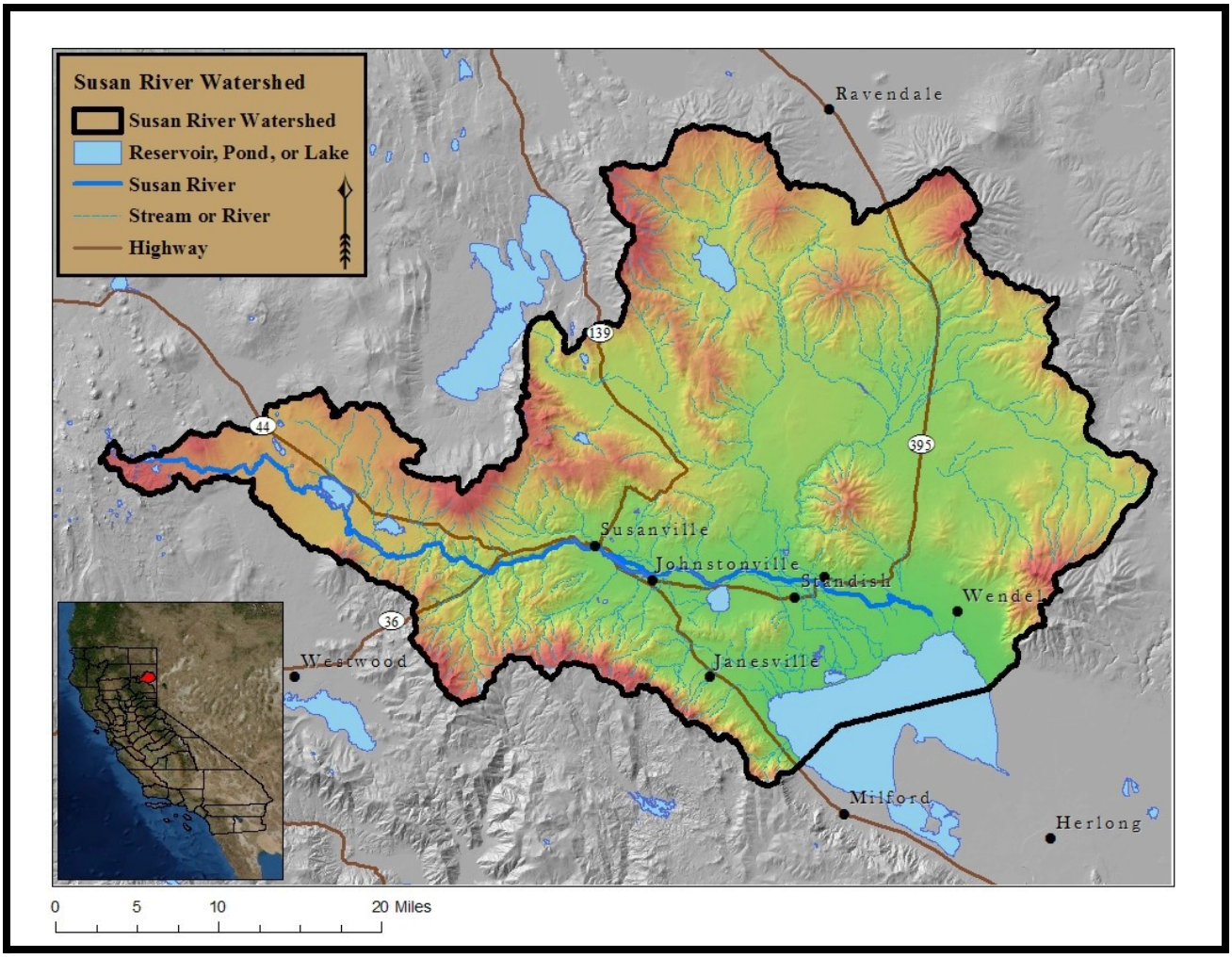
HONEY LAKE VALLEY RESOURCE CONSERVATION DISTRICT

SUSAN RIVER

WATERMASTER SERVICE AREA



ANNUAL USE REPORT - 2022/2023

Susan River
Watermaster Service Area

Annual Use Report- 2022/2023
Fiscal Year: July 1, 2022 - June 30, 2023
Irrigation Season: March 1, 2023 - October 31, 2023
Storage Season: November 1, 2023 - February 29, 2024

Lassen County, California
Decree No.'s 4573, 8174 and 8175
Submitted by December 31, 2023 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

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 2023-2024

The National Ocean and Atmospheric Administration (NOAA) has predicted as of September 21 2023 there is an equal chance of above average precipitation this fall with a 95 % chance occurring late fall November -December and January in the Susan River through January 2024. With this information, there is confidence that the Honey Lake Valley can look forward to another year with adequate precipitation.

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 2022/2023 Watermaster Service Budget was adopted on May 27th, 2022 in the amount of $274,162,00.00. The Fiscal Year 2023/2024 Watermaster Service budget was adopted on June 22nd, 2023 in the amount of $290,350.51. FY 22/23 and 23/24 Budgets saw an increase from the FY 2021/2022 assessment of $225,000. This increase was to cover three active water right litigation cases. 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, 2022. 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, 2022.

2022/2023 Water Allocation and Distribution:

The Susan River Watermaster Service Area experienced high precipitation compared to the area's average. Based on California Cooperative Snow Surveys for the Northern California

area, October 2022 through September 2023, the area held at its peak over 100% of the average annual snow water content of April 1st, the date of highest average annual snowpack depth. The general availability of water for the various stream systems are described below.

Lassen Creek: No Data Available

Hills Creek: Recent fires have improved waterflow. Hills Creek has a prorated supply throughout the year.

Gold Run Creek:. Water was available in prorated amounts for irrigation until August where it ceased temporarily. Prorate flows returned by September.

Upper Susan River: Flows for the Upper Susan met the full requirements of the Schedule 5, 2nd priority water right allotments up until early May. Stock water was available to most users through the irrigation season.

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 May. Stock water was available to most users until mid-June. Past this point, only users upstream were able to exercise stock watering rights.

Willow Creek: Prorated allocations were available through late May. Flows were sufficient for regular stock watering of the second priority until late June. Conveyance of stock water to downstream users developed issues from June to September.

Bankhead/Sloss Creek: No data available.

Lassen Irrigation Company Storage Reservoirs: LIC began diverting water from McCoy Flat on June 1st, 2023.

Miscellaneous Notable Events:

1. Kelsey Siemer was welcomed as the new District Manager in July 2023. She brings with her an extensive background in conservation and agriculture accompanied by degrees in Animal Science and Creative Writing.
2. Tonya Clark started as the new Deputy Watermaster August 21, 2023. Tonya has an extensive background in ranching, farming, and irrigating.
3. The Old Channel Realignment and Piping Project is moving forward with a proposed groundbreaking date of 11/15/2023.
4. The new vehicle purchased in the last fiscal year is being utilized by the Watermaster.
5. The water rights litigation initiated in 2022 was resolved and affirmatively decided in the Appellate Courts in favor of the HLV RCD.

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	106	250	801	364	56	72	66
2	113	327	690	393	52	72	76
3	96	294	590	282	58	71	79
4	98	294	535	232	60	71	75
5	93	252	548	229	57	71	69
6	93	280	499	231	54	71	66
7	93	367	442	257	52	70	65
8	93	433	419	230	51	69	64
9	91	551	391	203	71	69	63
10	211	800	394	178	90	68	63
11	204	1106	398	189	89	68	61
12	206	970	468	169	87	67	62
13	498	758	561	166	86	66	62
14	796	637	638	165	85	66	62
15	844	624	740	144	84	66	40
16	519	683	816	131	83	65	40
17	425	668	840	120	82	66	26
18	387	585	818	112	81	66	25
19	382	477	867	105	80	69	24
20	392	456	820	103	80	69	23
21	360	533	864	94	79	73	22
22	314	641	824	88	79	73	21
23	314	747	700	83	77	69	21
24	299	772	704	79	73	67	21
25	268	747	706	74	73	65	20
26	248	718	649	71	73	64	20
27	238	768	604	77	72	63	21
28	243	833	590	70	72	63	21
29	222	893	524	64	71	62	21
30	211	889	441	59	71	62	29
31	218		415		72	62	

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, 2023 to October 31st, 2023.

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

Day	March	April	May	June	July	August	September	October
1	0	24	29	30	27	12	9	12
2	0	37	36	37	26	11	13	13
3	0	25	22	67	23	11	16	12
4	22	29	31	82	22	10	15	12
5	28	22	33	81	19	9	10	12
6	23	26	39	79	19	9	8	12
7	29	43	42	39	19	11	7	12
8	28	24	31	77	23	11	8	12
9	28	20	24	80	16	10	11	12
10	27	24	20	74	22	6	11	12
11	22	31	23	75	22	4	11	12
12	32	27	23	78	19	4	11	12
13	34	19	27	72	16	4	10	12
14	35	20	28	75	15	4	6	12
15	24	20	25	63	14	4	6	12
16	20	24	24	60	12	3	9	12
17	25	26	26	55	12	4	10	11
18	23	30	26	47	11	5	11	11
19	30	23	25	41	12	5	11	11
20	23	25	17	34	9	6	11	11
21	20	34	21	31	8	7	10	11
22	21	24	27	31	8	8	10	11
23	31	26	31	29	12	7	8	11
24	33	25	28	41	12	7	9	11
25	28	25	37	23	10	5	9	11
26	22	24	33	23	10	7	9	7
27	27	24	27	24	9	8	10	6
28	22	23	26	26	10	8	9	6
29	25	25	21	25	10	7	11	7
30	22	25	28	26	10	8	16	7
31	25		25		11	9		7

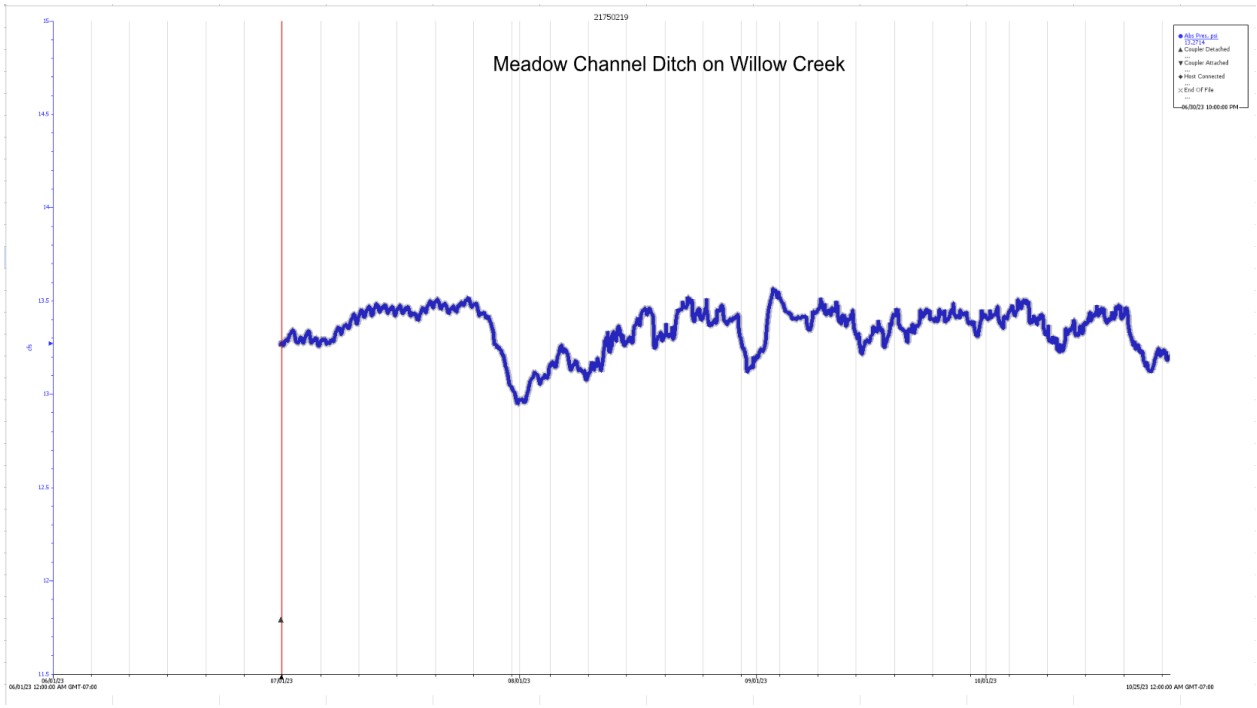
Note: These daily values were averaged from the gauge's 'Real Time' 15-minute interval data. Values measured in CFS for the irrigation season from March 1st, 2023 to October 31st, 2023.

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

Day	March	April	May	June	July	August	September	October
1	49	0	0	0	14	8	8	14
2	44	0	0	0	13	8	10	14
3	47	0	0	0	13	8	12	13
4	60	0	0	0	13	9	10	13
5	62	0	0	0	12	8	9	13
6	57	0	0	0	12	8	8	13
7	53	0	0	0	13	7	8	13
8	57	0	0	0	14	7	8	13
9	61	0	0	12	11	7	9	14
10	31	0	0	91	12	7	9	14
11	0	0	0	84	12	7	9	14
12	0	0	0	83	12	7	10	14
13	0	0	0	64	11	7	10	14
14	0	0	0	66	11	7	9	14
15	0	0	0	45	10	7	9	15
16	0	0	0	36	10	7	9	14
17	0	0	0	27	8	7	9	12
18	0	0	0	20	8	7	11	8
19	0	0	0	17	8	7	11	9
20	0	0	0	16	8	7	11	9
21	0	0	0	14	8	8	11	9
22	0	0	0	14	8	8	11	9
23	0	0	0	15	9	8	11	9
24	0	0	0	22	9	8	11	9
25	0	0	0	14	8	7	11	9
26	0	0	0	17	9	7	11	9
27	0	0	0	15	9	7	11	8
28	0	0	0	14	9	7	11	9
29	0	0	0	14	8	7	12	9
30	0	0	0	13	8	8	14	9
31	0	[redacted]	0	[redacted]	8	7	[redacted]	9

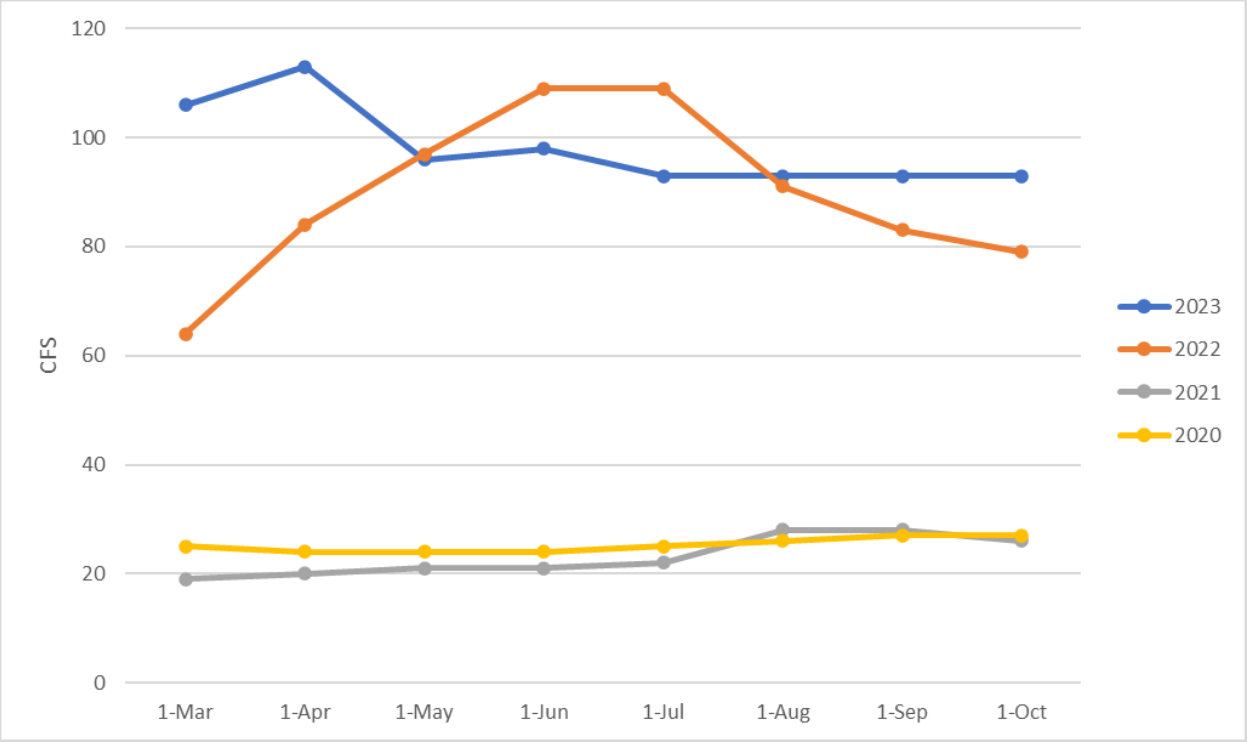
Note: These daily values were averaged from the gauge's 'Real Time' 15-minute interval data. The '0' represents known extremely high flows, overtopping the gauge sensor and reading as zeros. Values measured in CFS for the irrigation season from March 1st, 2023 to October 31st, 2023.

Appendix B: Depth of the Meadow Channel Ditch on Willow Creek



Note: Recorder was placed at the land intersection of the California Department of Fish and Wildlife and the Hanson ranch. A measure of depth is not a reflection of the flow of the system. All depth measurements are relative to a starting measurement on 7/11/2022, a negative value represents a depth below that reference measurement.

Appendix C: Susan River Flow Graph



Note: Data sourced from Department of Water Resources digital flow gauges, California Data Exchange Center (CDEC). Points represent average daily flows, connected by lines. Daily values were averaged from the gauge's 'Real Time' 15-minute interval data.