

# Susan River

## Watermaster Service Area

### Annual Use Report- 2019/2020

Fiscal Year: July 1, 2019- June 30, 2020

Irrigation Season: March 1, 2020- October 31, 2020

Storage Season: November 1, 2019- February 29, 2020

Lassen County, California

Decree No.'s 4573, 8174 and 8175

Submitted by December 31, 2020 to

The Presiding Judge, Lassen County Superior Court



Prepared By:

*Honey Lake Valley Resource Conservation District*

170 Russell Ave.

Susanville, CA 96130

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## 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 is comprised 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 of 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.

## 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 FY 2019/2020 Watermaster Service budget was adopted on May 23, 2019 in the amount of \$180,000; remaining the same as the previous 2018/2019 Fiscal Year total assessment amount. Notification regarding the budget, apportionment and individual assessments were mailed to the users and filed with the Court before June 15, 2019. 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, 2019.

An audit for Fiscal Year starting July 1, 2018 thru June 30, 2019, has been completed and is available on the Honey Lake Valley RCD website.

## 2019/2020 Water Allocation and Distribution:

The Susan River Watermaster Service Area experienced extremely light precipitation compared to the area's average. Based on California Cooperative Snow Surveys for the Susanville area, October 2019 through September 2020, the area received only 53% of the average precipitation amount. The general availability of water for the various stream systems are described below.

**Parker Creek:** First priority water rights were served through the early Spring.

**Baxter/Elysian Creek:** Users of both Baxter Creek and Elysian Creek could divert at prorated rates through early to mid-June.

**Paiute Creek:** The water supply in Paiute Creek was dry for most of year, with low flows in April and again in October.

**Lassen Creek:** There was sufficient water in Lassen Creek to meet the allocated water use until late May, at which time it began to taper off.

**Hills Creek:** The water supply in Hills Creek continued into mid-May.

**Gold Run Creek:** The water supply in Gold Run Creek fulfilled the water rights through mid-May, at which time it began to diminish.

**Upper Susan River:** At the start of Irrigation Season, March 1, the Upper Susan was at approximately 35% water availability of the full allocated water rights. From the start of April to mid-May, the river was flashy, only occasionally meeting full allocations, otherwise sustaining prorated allocations in the upper quartile. Users were prorated until the start of July, where only stockwater became available. Stockwater availability through the irrigation season and into the storage season was very limited; this caused farther downstream users to rely on well pumping, the majority of users to supplement with well pumping, and neighboring users to rotate the water use.

**Lower Susan River Below the Confluence of Willow Creek:** The Lower Susan started off the season at approximately 25% of the Schedule 5, 3<sup>rd</sup> priority water rights. Full allocations were available for a short period of time during late March. Users were prorated early April and throughout the season. Due to low flow, stock water was only available to those higher upstream, or closer to the channel, from early June until late November. Users relied on well pumping either completely or as supplement.

**Willow Creek:** Prorated allocations were available through early June. Flows were sufficient enough for stockwater.

**Bankhead/Sloss Creek:** Irrigation water was available until early May.

**Lassen Irrigation Company Storage Reservoirs:** By the start of irrigation season, McCoy Flat stored to a stage height of 3.65 feet, equaling approximately 1,758 acre-feet of water. LIC began diverting water from McCoy on June 15, 2020, utilizing completely on July 6, 2020. Hog Flat reserved to a stage height of 4.58 feet, equaling approximately 1,350 acre-feet of water.

This water was utilized starting on May 13, 2020 and was completely drained by approximately June 19, 2020.

## Miscellaneous notable events:

1. The District Manager, Kayla Meyer, left the organization on June 26, 2020. Andrea Stuemky was hired as District Manager, starting on August 17, 2020. Andrea possesses a Bachelor's of Science in Biology, and a Master's of Science in Horticulture, Specialty Crops. She resides here in Susanville, and previously worked for the local Bureau of Land Management Eagle Lake Field Office, on the Botany team.
2. The June 3, 2019 Lassen County Superior Court decision, denying the motion of the Dow-Bonomini 2013 Family Trust regarding a 2018 Irrigation Season complaint, was appealed by the Trust on July 22, 2019. Numerous extensions were filed by the Dow party. In May, both parties filed briefs and the case is waiting to be assigned a hearing date in the California Appellate Court.
3. The two Watermaster complaints from the 2019 Irrigation Season filed by Jay Dow on behalf of the Dow-Bonomini 2013 Family Trust, to: 1- not allow the transfer of the user's Schedule 4- Gold Run Creek, and Schedule 5- Upper Susan River water rights, for use below the confluence of the Susan River and Willow Creek; and, 2- the complaint of the Watermaster's decision to not allow the 2019 use of 740 acre-feet of water described in the Barham Kelly 3037 Judgment; were brought to the Lassen County Superior Court on February 14, 2020 and signed on March 6, 2020. The travelling Judge upheld Dow's Appeal of the Watermaster's decision. This ruling was appealed by the RCD as Watermaster. This case is waiting for a scheduled hearing date in the California Appellate Court.
4. The District received two Public Records Requests from the Dow party. The first was filed on March 31, 2020, regarding a letter and all responses, that the Watermaster sent out, which notified all water users of the current litigation, and provided the opportunity for input. The other request was submitted on May 26, 2020 requiring all correspondence between the RCD and LIC, for Watermaster topics or otherwise. Both requests were fulfilled in a timely manner.
5. In late May 2020, the WAC Upper Susan River Representative resigned from his position. No one has submitted an application for this position.



6. The RCD Board Vacancy was filled by Robin Hanson, taking the Oath of Office on October 22, 2020. Robin is a part of the local Lassen County Cattlemen's Association and previously served on the Yolo County RCD Board. This position is a 4-year term.
7. The RCD as Watermaster, changed legal representation from William P. Curley of Harper & Burns, LLP. and Mark Waterman of Lozano Smith, to Gene Tanaka and Steven M. Anderson of Best, Best, and Krieger LLP. This was filed with the California Court of Appeal, Third Appellate District in early December 2020.

## Appendices A-E

Numerical values are in cubic feet per second (cfs)

- = No Reading

## Appendix A: Department of Water Resources, Digital Gauge Data

### SUSAN RIVER at SUSANVILLE (SSU)

DAY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
1	25	141	87	42	37	6	6	7
2	24	93	81	41	35	6	7	7
3	24	77	76	39	32	6	6	7
4	24	72	70	38	20	6	6	7
5	25	83	67	36	14	6	6	7
6	26	83	66	39	11	6	6	8
7	27	82	63	42	10	5	6	7
8	27	87	60	40	10	5	6	7
9	27	102	59	38	10	5	6	8
10	27	111	56	37	9	6	6	8
11	26	116	56	34	9	6	6	8
12	27	120	56	34	9	5	6	8
13	26	98	59	33	9	6	6	8
14	28	85	77	31	9	6	7	8
15	30	84	83	28	8	6	6	9
16	31	83	79	37	8	6	7	9
17	31	78	107	49	8	7	7	9
18	30	75	112	50	8	7	7	9
19	29	78	99	47	8	7	7	9
20	31	76	89	45	8	7	7	9
21	35	71	86	44	8	7	7	9
22	49	71	83	43	9	7	7	9
23	65	76	84	42	8	7	7	9
24	69	73	82	41	8	7	7	10
25	60	72	81	41	7	7	7	10
26	52	71	79	40	6	7	7	10
27	52	70	76	39	8	7	7	11
28	57	69	58	39	7	7	7	10
29	64	72	43	38	6	6	7	10
30	80	82	43	38	6	6	7	10
31	137		43		6	6		10

Note: The green box border marks LIC's utilization of Hog Flat Reservoir. The blue box border marks LIC's utilization of McCoy Flat Reservoir. 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. The water being released from Hog and McCoy Flat Reservoirs are included in these figures.

## SUSAN RIVER at the CONFLUENCE of WILLOW CREEK (SSD)

DAY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
1	6	28	17	5	0	1	0	0
2	6	13	15	3	0	0	0	0
3	5	13	17	2	0	0	0	0
4	5	20	12	0	0	0	0	0
5	5	20	11	2	0	0	0	0
6	5	32	12	3	0	0	0	0
7	5	23	12	4	1	0	0	0
8	8	29	11	4	0	0	0	0
9	10	22	10	4	0	0	0	0
10	8	20	11	5	0	0	0	0
11	8	27	10	5	0	0	0	0
12	4	26	10	6	2	0	0	0
13	3	22	11	5	2	0	0	0
14	3	15	12	4	0	0	0	0
15	3	18	11	4	0	0	0	0
16	4	18	8	3	0	0	0	0
17	9	26	7	2	0	1	0	0
18	12	30	19	3	0	4	0	0
19	22	25	19	7	0	3	0	0
20	38	21	12	7	0	0	0	0
21	39	14	11	6	0	2	0	0
22	50	17	12	4	0	0	0	0
23	45	29	11	4	0	0	0	2
24	33	36	10	1	0	0	0	0
25	30	34	9	0	0	0	0	0
26	27	28	11	2	0	0	0	0
27	24	27	12	1	0	0	0	0
28	22	28	11	0	0	0	0	0
29	20	24	10	0	0	0	0	0
30	19	27	9	0	3	0	0	0
31	23		8		3	0		0

Note: These daily values were averaged from the gauge's 'Real Time' 15-minute interval data.

## WILLOW CREEK at the CONFLUENCE of the SUSAN RIVER (WCD)

DAY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
1	22	45	17	8	7	3	0	3
2	23	37	16	8	7	3	0	3
3	24	36	16	8	6	3	0	3
4	25	38	15	8	7	3	0	3
5	26	37	15	7	7	2	0	3
6	25	41	15	6	7	2	0	2
7	23	40	14	8	7	2	0	2
8	21	40	14	8	7	2	0	3
9	22	37	13	8	7	0	0	3
10	21	35	13	8	7	0	0	3
11	24	37	12	8	6	0	1	3
12	24	35	12	8	6	1	3	3
13	22	30	12	7	7	2	3	3
14	18	26	12	7	6	0	3	3
15	20	25	12	7	6	2	3	3
16	23	26	11	7	5	2	3	4
17	28	27	11	6	4	3	3	4
18	32	28	13	6	4	3	3	4
19	37	27	14	8	4	3	3	4
20	44	23	13	7	4	3	3	4
21	56	21	12	7	4	3	3	4
22	74	21	12	8	4	3	3	4
23	65	23	10	8	4	3	3	5
24	88	26	10	8	4	3	3	5
25	77	27	10	8	3	3	3	5
26	68	26	10	8	4	3	3	5
27	70	26	10	8	4	3	3	5
28	65	24	10	7	3	3	3	5
29	58	19	10	7	4	3	3	6
30	50	19	9	7	4	0	3	6
31	47		9		3	0		7

Note: These daily values were averaged from the gauge's 'Real Time' 15-minute interval data.

## Appendix B: McCoy Flat Reservoir Outflow

DAY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
1	-	-	-	-	18.00	-	-	-
2	-	-	-	-	16.90	-	-	-
3	-	-	-	-	7.20	-	-	-
4	-	-	-	-	2.00	-	-	-
5	-	-	-	-	1.20	-	-	-
6	-	-	-	-	dry	-	-	-
7	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-
15	-	-	-	27.00	-	-	-	-
16	-	-	-	27.00	-	-	-	-
17	-	-	-	26.40	-	-	-	-
18	-	-	-	26.40	-	-	-	-
19	-	-	-	26.40	-	-	-	-
20	-	-	-	26.40	-	-	-	-
21	-	-	-	24.60	-	-	-	-
22	-	-	-	24.00	-	-	-	-
23	-	-	-	24.00	-	-	-	-
24	-	-	-	24.00	-	-	-	-
25	-	-	-	24.00	-	-	-	-
26	-	-	-	21.20	-	-	-	-
27	-	-	-	21.20	-	-	-	-
28	-	-	-	21.20	-	-	-	-
29	-	-	-	21.20	-	-	-	-
30	-	-	-	21.20	-	-	-	-
31	-		-		-	-		-

Note: 'Dry' indicates the complete utilization of McCoy Flat Reservoir.

## Appendix C: Hog Flat Reservoir Outflow

DAY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
1	-	-	-	15.60	-	-	-	-
2	-	-	-	15.60	-	-	-	-
3	-	-	-	15.20	-	-	-	-
4	-	-	-	15.20	-	-	-	-
5	-	-	-	15.20	-	-	-	-
6	-	-	-	19.30	-	-	-	-
7	-	-	-	18.62	-	-	-	-
8	-	-	-	16.40	-	-	-	-
9	-	-	-	13.30	-	-	-	-
10	-	-	-	13.30	-	-	-	-
11	-	-	-	13.30	-	-	-	-
12	-	-	-	16.40	-	-	-	-
13	-	-	18.00	12.58	-	-	-	-
14	-	-	18.00	9.17	-	-	-	-
15	-	-	18.00	7.34	-	-	-	-
16	-	-	18.00	5.30	-	-	-	-
17	-	-	18.00	2.61	-	-	-	-
18	-	-	18.00	1.00	-	-	-	-
19	-	-	18.00	dry	-	-	-	-
20	-	-	16.00	-	-	-	-	-
21	-	-	16.00	-	-	-	-	-
22	-	-	16.00	-	-	-	-	-
23	-	-	20.60	-	-	-	-	-
24	-	-	20.60	-	-	-	-	-
25	-	-	20.60	-	-	-	-	-
26	-	-	18.90	-	-	-	-	-
27	-	-	18.90	-	-	-	-	-
28	-	-	17.20	-	-	-	-	-
29	-	-	15.60	-	-	-	-	-
30	-	-	15.60	-	-	-	-	-
31	-	-	15.60	-	-	-	-	-

Note: 'Dry' indicates the complete utilization of Hog Flat Reservoir.

## Appendix D: Susan River Watermaster Spot Checks

Note: Values are of a measure at one moment in time. This Irrigation Season, dam and diversion adjustments were especially frequent throughout the system, due to the flashy nature of the Susan River and its tributaries.

### OLD CHANNEL DIVERSION OFF OF SUSAN RIVER

DAY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
1	7.07	9.18	12.23	6.28	4.44	3.22	3.33	3.91
2	7.07	9.18	12.23	6.28	4.20	3.22	3.33	3.67
3	5.74	9.18	12.23	5.95	4.20	2.50	3.33	3.67
4	5.74	9.18	11.20	5.95	4.20	2.83	3.33	3.67
5	5.74	9.18	11.20	5.95	4.20	2.83	3.33	3.67
6	6.28	9.18	11.20	5.95	3.50	2.83	3.33	3.67
7	6.28	9.18	11.20	5.95	3.50	2.83	3.33	3.67
8	6.28	9.18	9.57	5.95	3.50	2.83	3.33	3.67
9	6.28	9.18	9.57	5.95	3.50	3.67	3.33	3.67
10	8.02	9.18	9.57	5.95	3.50	3.67	3.33	2.38
11	7.41	8.94	9.57	4.64	3.50	3.67	3.33	2.38
12	7.41	8.94	9.57	4.64	3.50	3.67	3.96	2.38
13	6.64	8.94	8.94	4.64	3.50	4.20	3.96	2.38
14	6.64	8.94	7.43	4.64	3.22	4.20	3.96	2.38
15	6.64	8.94	8.94	3.50	3.22	4.20	3.96	3.67
16	6.64	8.94	8.94	4.62	3.22	4.20	3.96	3.67
17	6.64	8.94	9.89	4.69	3.00	3.87	3.96	3.67
18	7.41	8.94	9.89	4.94	3.00	3.58	3.96	3.67
19	7.41	9.18	11.12	4.94	3.00	3.58	3.96	3.67
20	7.41	9.18	11.12	4.94	2.88	3.58	3.96	3.67
21	7.41	9.18	11.12	4.94	2.88	3.58	3.96	3.67
22	7.41	9.18	11.12	3.96	3.17	3.58	3.96	3.04
23	7.41	9.18	11.12	3.96	3.17	3.58	3.96	3.04
24	9.18	9.18	11.12	3.96	3.17	3.58	3.96	3.04
25	9.18	9.18	9.18	3.96	3.72	3.33	3.96	3.04
26	9.18	9.18	9.18	5.81	3.72	3.33	3.96	3.04
27	9.18	9.18	9.18	5.81	3.72	3.33	3.96	3.04
28	9.18	9.18	9.18	7.37	3.72	3.33	3.91	3.04
29	9.18	9.18	8.26	7.37	3.72	3.33	3.91	3.04
30	9.18	12.23	8.26	7.72	3.22	3.33	3.91	3.04
31	9.18		8.26		3.22	3.33		3.04

Note: When the River flow was at 100% availability, the full allotment for Old Channel could not be supplied, due to the lack of water elevation at the dam, minimal flows, and the highly vegetated channel. Additionally, late in the season, upstream beaver dam debris, water weed, and algae infringed on the water delivery; making it necessary to clean the headgate two to three times a day.



## DIVERSION # 41

DAY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
1	-	-	-	-	20.91	-	-	-
2	-	-	-	24.00	20.18	-	2.80	-
3	-	37.21	-	20.00	-	3.00	-	-
4	4.80	-	7.67	-	-	-	-	-
5	-	-	12.20	-	-	-	-	-
6	-	31.79	-	-	4.16	-	-	-
7	-	-	-	-	3.13	-	-	2.93
8	-	-	12.50	-	-	-	3.25	-
9	2.64	-	-	-	-	-	-	-
10	5.00	no weir flow	9.00	-	-	3.10	-	-
11	-	-	-	17.95	-	-	-	-
12	-	-	-	18.55	-	-	-	-
13	-	36.81	14.78	-	3.00	-	-	3.21
14	-	-	29.47	-	-	-	-	-
15	-	27.20	35.70	16.45	-	-	-	-
16	-	24.05	-	23.00	3.50	-	2.75	-
17	6.50	-	-	30.08	3.00	2.75	-	-
18	-	-	54.73	27.76	-	3.50	-	-
19	-	-	35.00	-	-	-	-	-
20	-	-	31.17	-	4.00	-	-	3.07
21	-	22.00	27.93	-	2.50	-	-	-
22	-	-	-	25.67	-	-	3.33	-
23	13.79	19.20	-	-	-	-	-	-
24	-	-	-	25.67	-	-	-	-
25	17.05	-	-	-	-	-	-	-
26	-	-	26.56	24.42	-	-	-	3.79
27	-	-	-	-	3.00	-	-	-
28	-	16.40	26.56	-	-	3.80	3.12	-
29	-	-	23.50	20.79	-	-	-	4.46
30	-	no weir flow	-	22.03	-	-	-	-
31	no weir flow		-		-	-		-

Note: The green box border marks LIC's utilization of Hog Flat Reservoir. The blue box border marks LIC's utilization of McCoy Flat Reservoir.

## DIVERSION # 47

DAY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
1	-	-	-	-	3.77	-	-	-
2	-	8.34	-	7.58	3.63	-	-	-
3	-	-	-	7.69	-	-	-	-
4	-	-	6.00	-	-	-	-	-
5	0.00	-	5.95	-	-	-	-	-
6	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-
8	-	-	0.00	-	-	-	-	-
9	-	-	-	-	-	-	-	-
10	0.00	0.00	0.00	-	0.00	-	-	-
11	-	-	-	0.00	-	-	-	-
12	-	-	5.60	-	-	-	-	-
13	-	-	5.60	-	0.00	-	-	0.00
14	-	0.00	-	-	0.00	-	-	-
15	-	-	7.86	0.00	-	-	-	-
16	-	-	-	-	-	-	0.00	-
17	-	-	-	0.00	-	-	-	-
18	-	-	7.80	-	-	0.00	-	-
19	-	-	8.69	-	-	-	-	-
20	-	6.75	-	-	-	-	-	-
21	-	-	6.48	-	-	-	-	-
22	-	6.75	-	3.79	-	-	-	-
23	-	0.00	-	-	-	-	-	-
24	-	-	-	3.97	-	-	-	-
25	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-
27	-	-	-	-	0.00	-	-	-
28	-	-	4.07	-	-	-	-	-
29	-	4.33	4.05	5.85	-	-	-	-
30	-	4.29	-	4.00	-	-	-	-
31	-		-		-	-		-

## DIVERSION # 51

DAY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
1	-	-	7.39	-	-	-	-	-
2	-	3.62	-	2.32	0.99	-	-	-
3	-	4.60	-	2.09	-	-	-	-
4	-	-	7.15	-	-	-	-	-
5	-	-	6.56	-	-	-	-	-
6	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-
8	-	-	5.66	-	-	-	-	-
9	-	-	-	-	-	-	-	-
10	-	2.24	4.70	-	0.93	-	-	-
11	-	-	-	2.16	-	-	-	-
12	Dam put in	-	4.10	-	-	-	-	-
13	-	5.66	4.10	-	0.99	-	-	0.00
14	-	6.22	-	-	-	-	-	-
15	-	-	3.69	1.93	-	-	-	-
16	-	-	-	-	-	-	0.00	-
17	-	-	-	1.79	-	-	-	-
18	-	-	3.91	-	-	<0.43	-	-
19	-	-	5.02	-	-	-	-	-
20	-	8.12	-	-	-	-	-	-
21	-	12.16	7.03	-	-	-	-	-
22	-	10.61	-	1.64	-	-	-	-
23	-	9.93	-	-	-	-	-	-
24	-	-	-	1.50	-	-	-	-
25	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	0.00
27	-	-	-	-	0.00	-	-	-
28	-	-	5.40	-	-	0.00	-	-
29	-	4.60	3.65	1.00	-	-	-	-
30	-	7.39	-	1.00	-	-	-	-
31	-	-	-	-	-	-	-	-

Note: 'Dam put in' refers to the Toscani Dam. The Toscani Dam is necessary to back water up for use at Diversion 51.

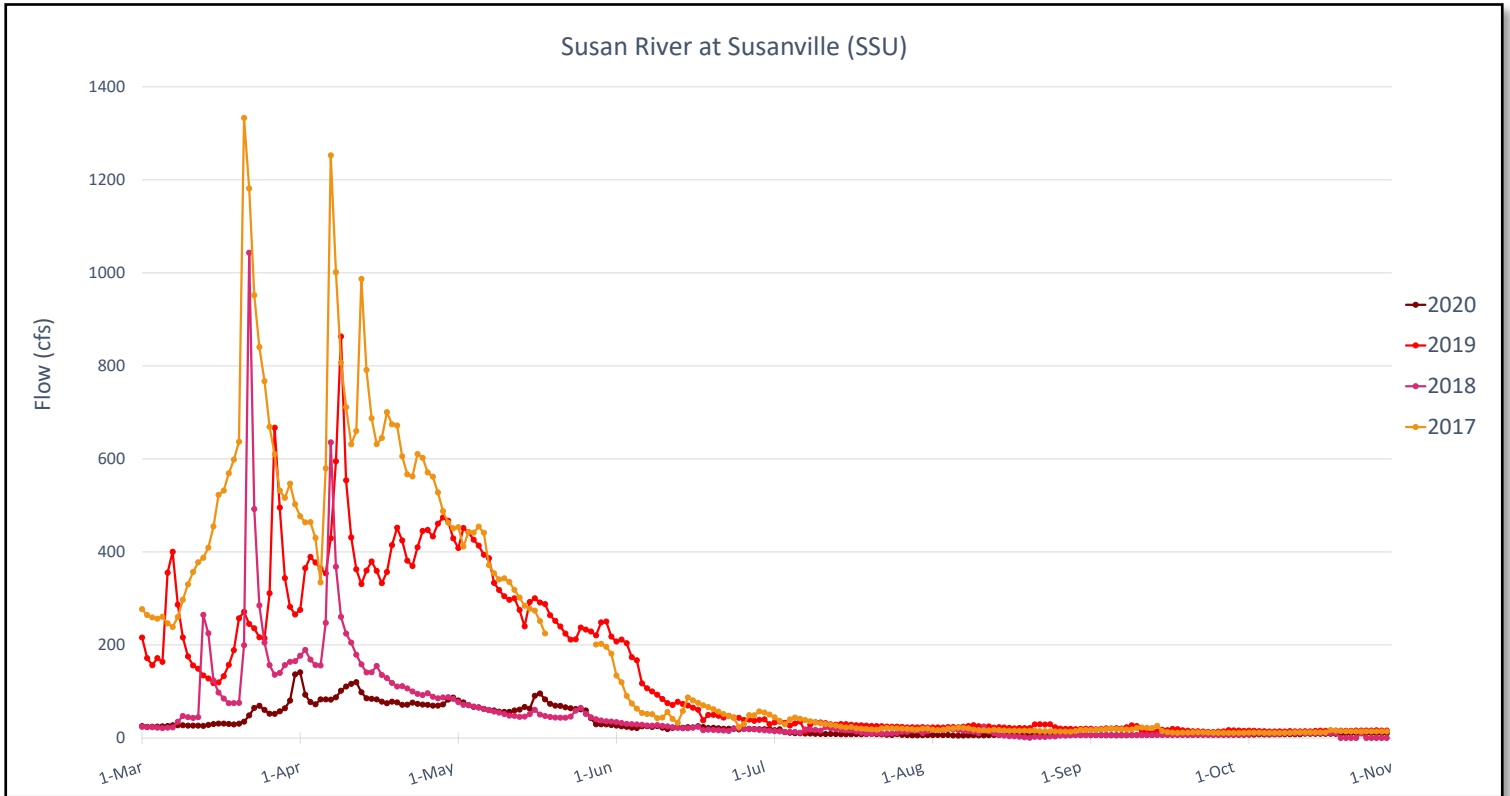
## MAHLE SPLIT- DILL SLOUGH

DAY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
1	-	-	7.00	-	-	-	-	-
2	-	10.15	-	2.13	-	-	-	-
3	5.49	-	-	-	-	-	-	-
4	4.75	-	5.45	-	-	0.80	-	-
5	5.17	-	5.76	-	-	-	-	-
6	-	-	6.00	-	-	-	-	-
7	-	-	-	-	-	-	-	-
8	-	-	4.95	-	1.85	-	-	-
9	5.80	-	-	-	-	-	-	-
10	5.20	10.25	4.70	-	-	-	-	-
11	-	-	-	1.45	-	-	-	-
12	-	-	4.40	-	-	-	-	-
13	-	-	-	-	4.60	-	-	0.00
14	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-
16	-	-	-	-	3.50	-	0.00	-
17	-	-	-	-	-	0.40	-	-
18	12.13	-	-	0.75	-	-	-	-
19	-	-	-	-	-	-	-	-
20	-	9.02	-	-	-	-	-	0.70
21	-	-	-	-	-	-	-	-
22	-	5.60	-	-	-	-	-	1.48
23	-	9.78	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	0.67
27	14.03	-	-	-	2.55	-	-	-
28	-	-	4.02	-	-	0.00	0.00	-
29	-	-	-	0.50	-	-	-	0.40
30	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-

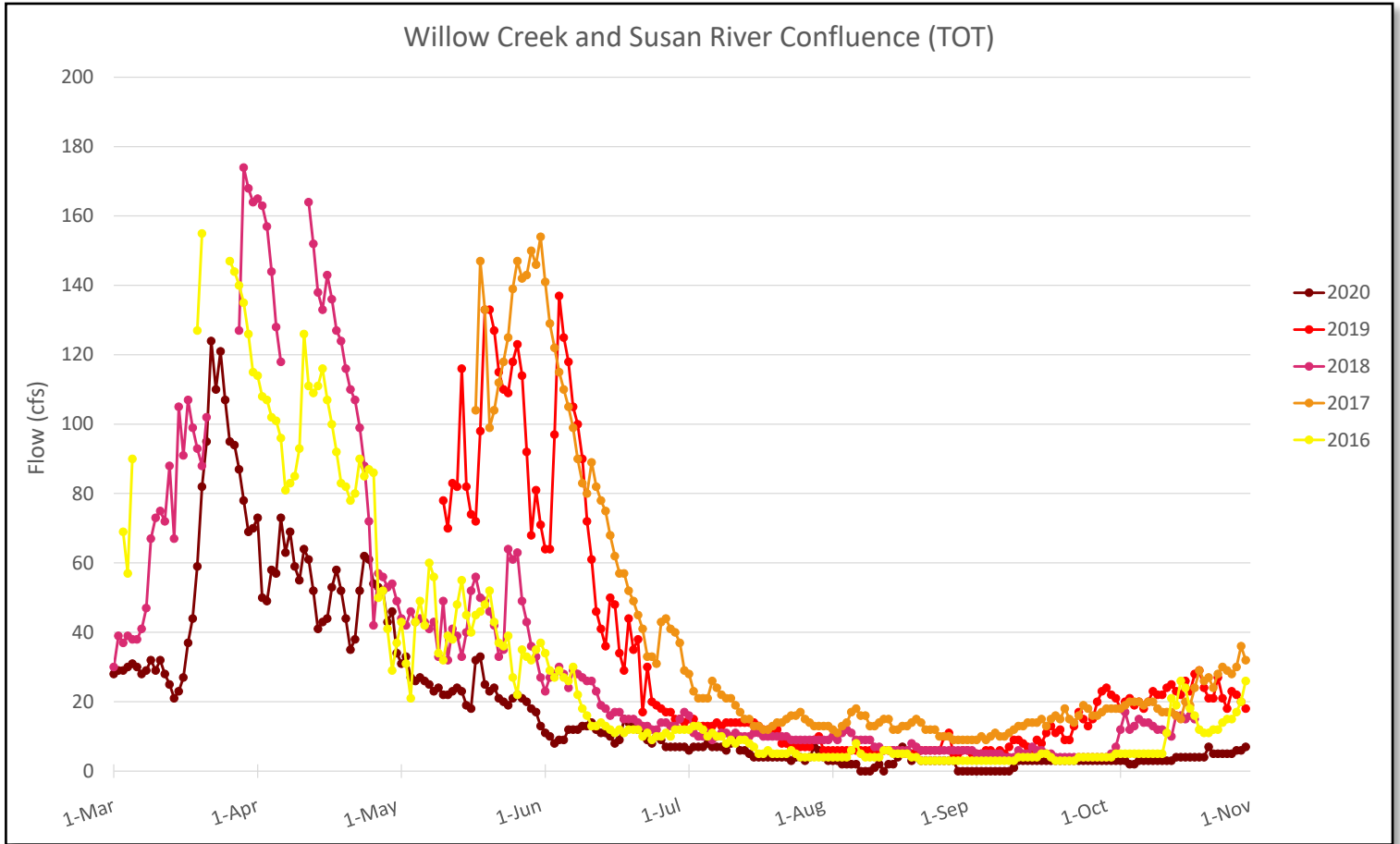
DIVERSION # 82

DAY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
1	-	-	5.70	-	-	-	-	-
2	-	-	-	2.47	-	-	-	-
3	-	-	-	-	-	-	-	-
4	-	-	-	0.50	-	-	-	-
5	-	-	-	-	-	-	-	dry
6	4.20	-	7.00	-	dry	-	-	-
7	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-
10	-	-	5.50	-	-	-	-	-
11	-	5.50	-	0.50	-	-	-	-
12	-	-	-	-	-	-	-	-
13	-	-	-	1.00	-	-	dry	-
14	-	-	-	-	-	-	-	-
15	-	-	-	1.30	-	dry	-	-
16	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-
18	-	-	-	0.50	-	-	-	-
19	-	-	3.30	-	-	-	-	-
20	-	3.30	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-
22	-	-	-	1.20	-	-	-	dry
23	-	2.50	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-
28	-	-	2.77	-	-	-	-	-
29	-	-	-	dry	-	-	-	-
30	-	-	-	-	-	-	-	-
31	-		-		-			-

## Appendix E: Susan River Flow Graphs



**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. The amount of water being released from Hog and McCoy Flat Reservoirs, subtract the standard 10%-cfs of that total value to account for confluence loss, was subtracted from the CDEC daily average gauge reading. This is so that the plotted points show, solely, the natural flow of the Susan River.



**Note:** Data sourced from Department of Water Resources digital flow gauges, California Data Exchange Center. Points represent average daily flows, connected by lines. Daily values were averaged from the gauge’s ‘Real Time’ 15-minute interval data. Any gaps in the data are attributed to digital gauge malfunction, thus leaving no reliable data. Digital gauge malfunctions at this location commonly occur when the flows overtop the gauge sensor.