



Sierra Valley Surface Water Monitoring (Ongoing and Historical)



Balance
Hydrologics

Sierra Valley GSP

8 March 2021

Outline

- 01 Definitions
- 02 Continuous Streamflow Gaging
- 03 Instantaneous Streamflow Measurements
- 04 Decree Maps – Irrigated Acres, Diversions and Ditches

Terminology

Continuous

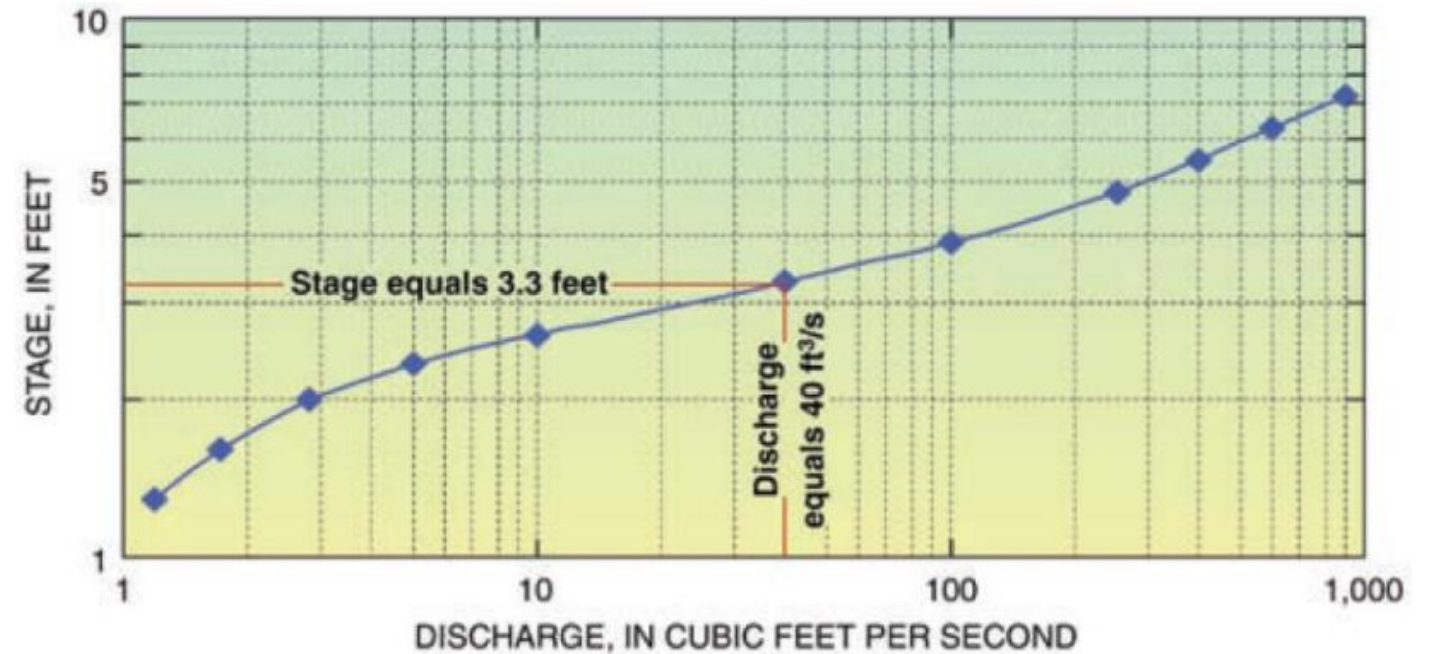
- Stage Gaging
- Streamflow Gaging

Instantaneous

- Stage Reading
- Streamflow Measurement

Streamflow Gaging Station Types

- Open Channel
- Flume



Terminology

Continuous

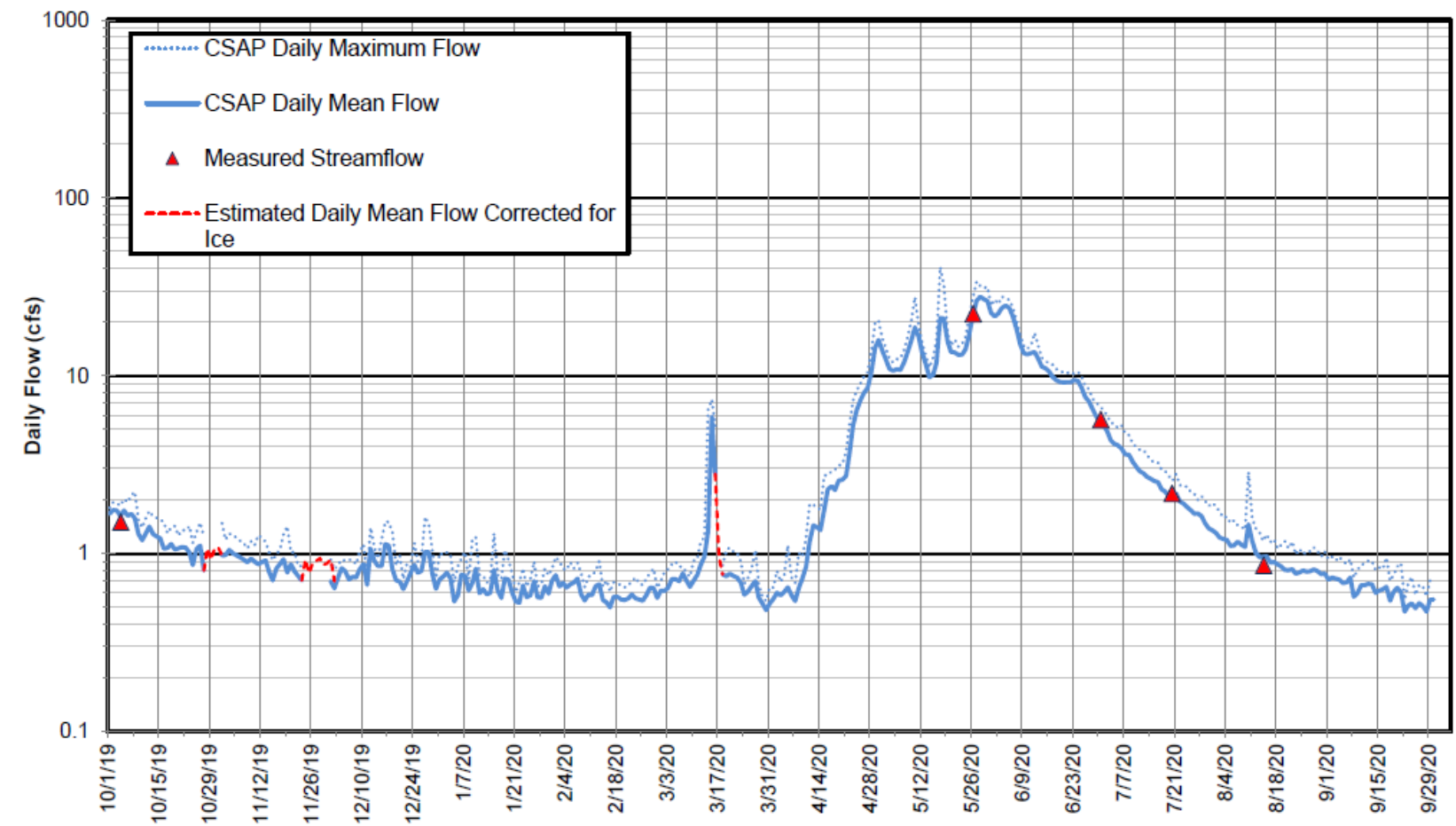
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Instantaneous

- Stage Reading
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Streamflow Gaging Station Types

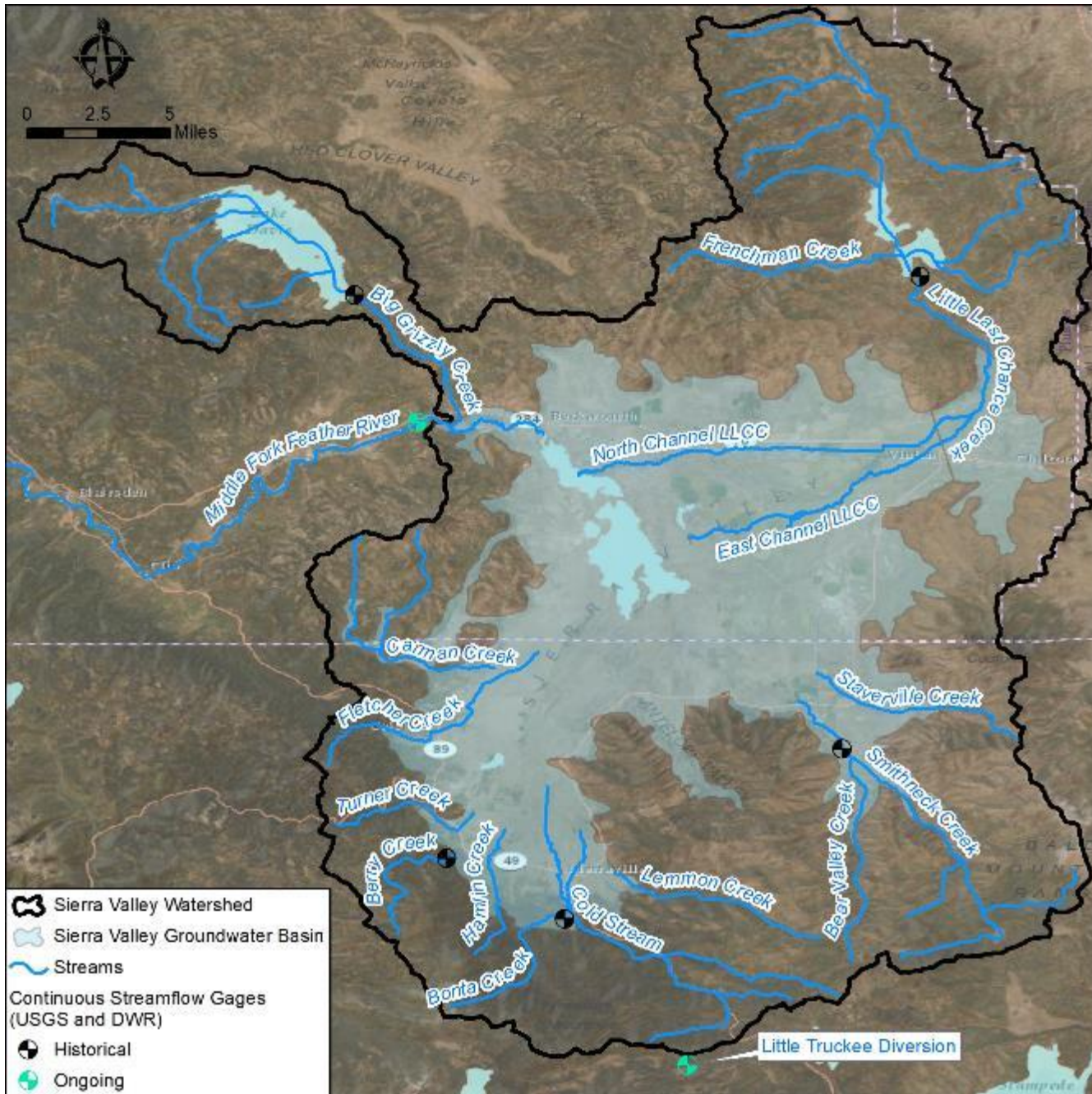
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01

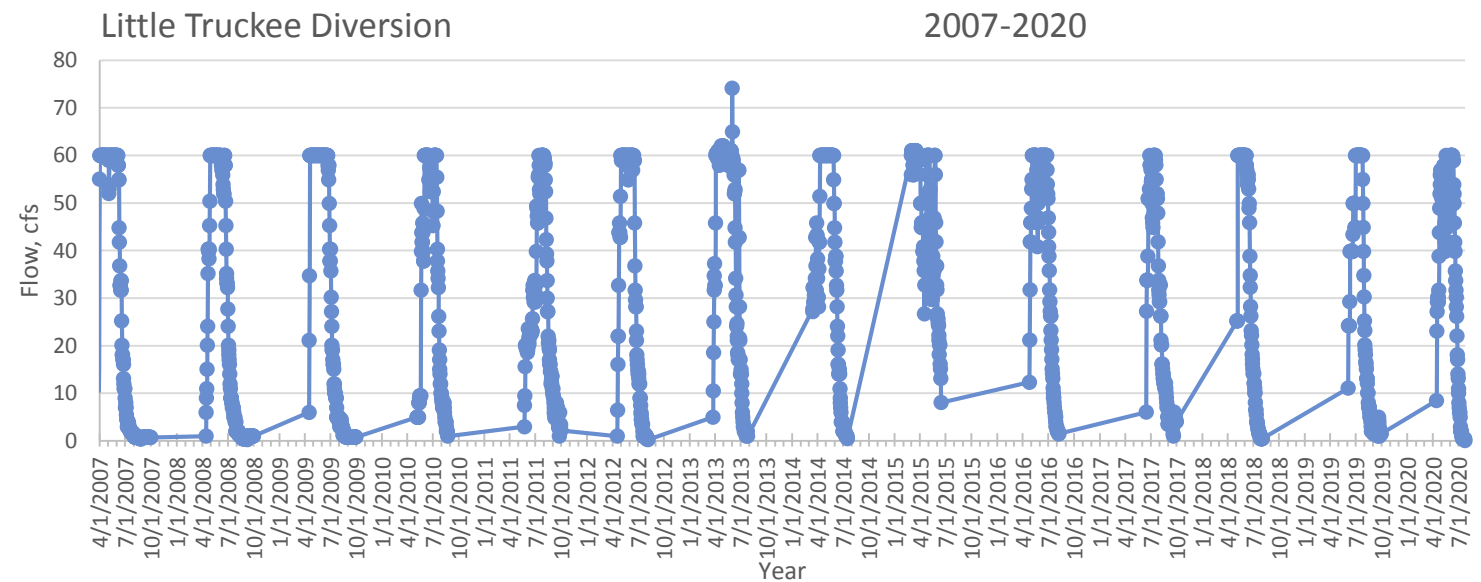
Continuous Streamflow Gaging in Sierra Valley

Continuous Streamflow Gaging in Sierra Valley



Stream Name	Average Flow (CFS)	Average Discharge (AF / Year)	Period of Record	Monitoring Agency	Percent of Feather R.
Smithneck Creek	11.1	8,076	1937 – 1966	DWR	4.5%
Bonta Creek ¹	39.0	28,224	1940 – 1959	DWR	16%
Berry Creek	11.3	7,838	1940 – 1967 1971 – 1983	DWR USGS	4.4%
Little Truckee Diversion ²	19.4	7,039	1937 – 1966	DWR	4.0%
Little Last Chance Creek	26.8	19,400	1959 – 1979	USGS	11%
Big Grizzly Creek	34.7	25,100	1926 – 1931 1951 – 1952 1955 - 1979	USGS	14%
Middle Fork Feather River	246	177,800	1969 – 1979 2007 – Present ³	USGS	100%

Source: Bachand & Associates, 2020



02

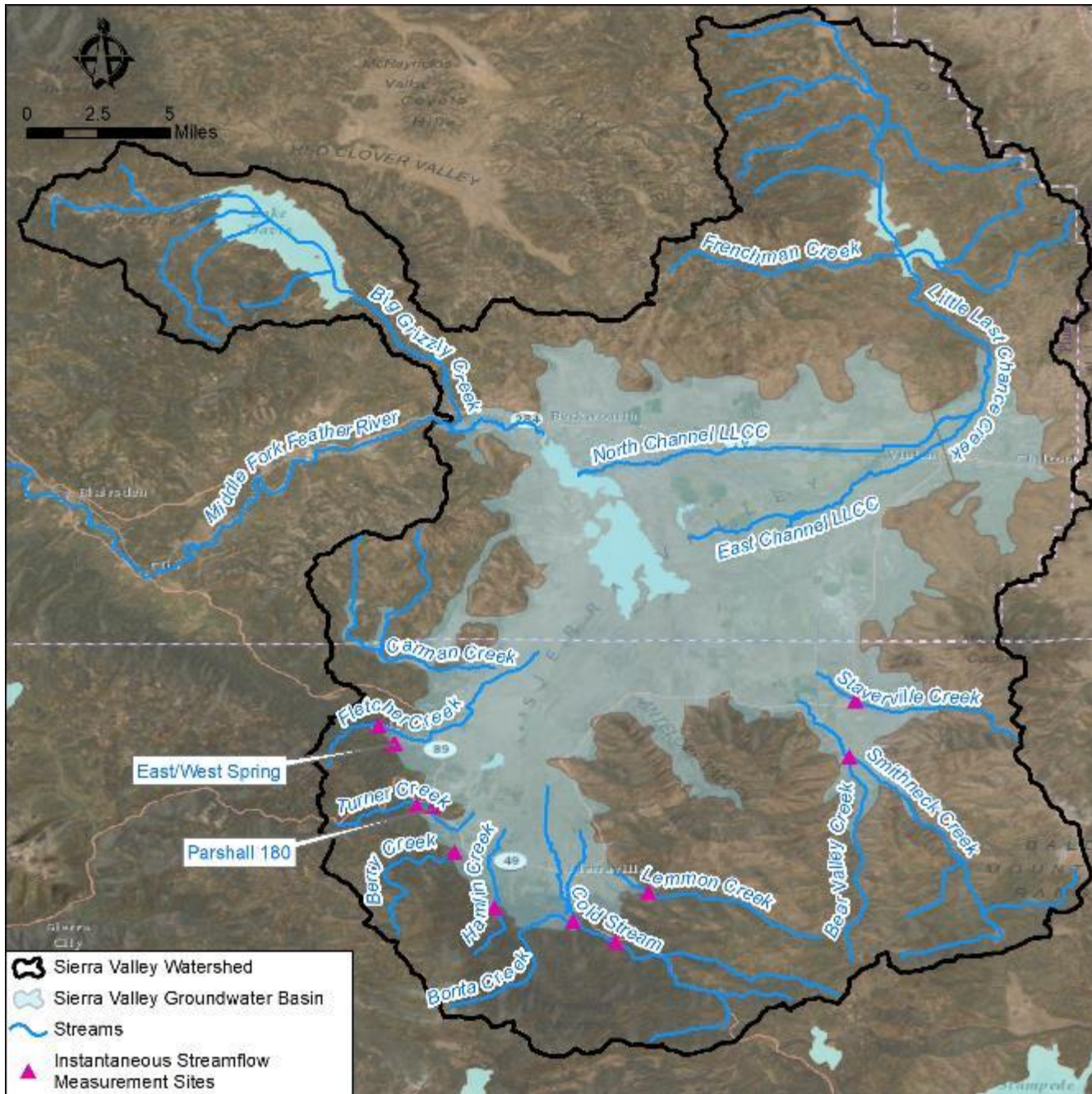
Instantaneous Streamflow Measurements in Sierra Valley

Instantaneous Streamflow Measurement Sites

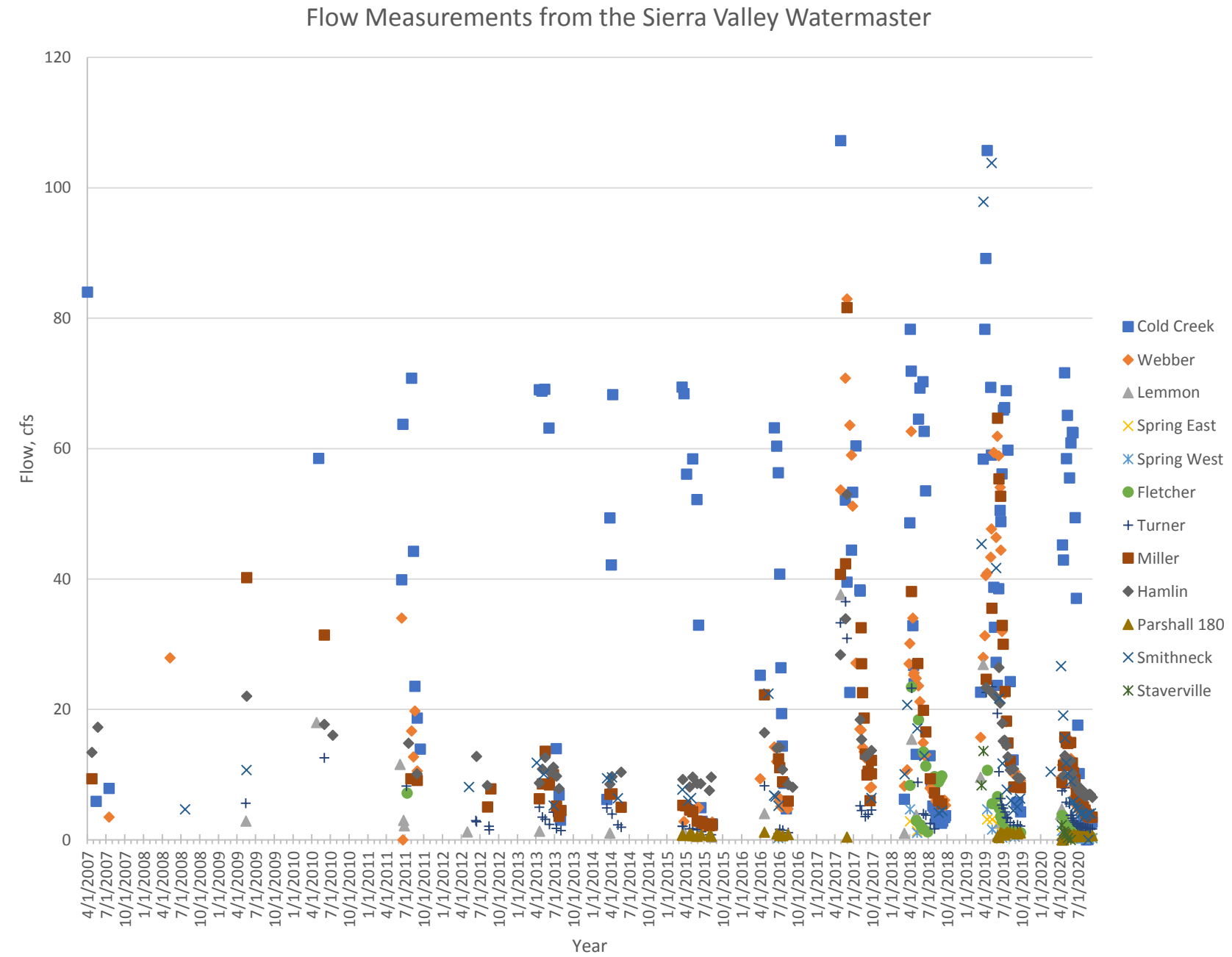
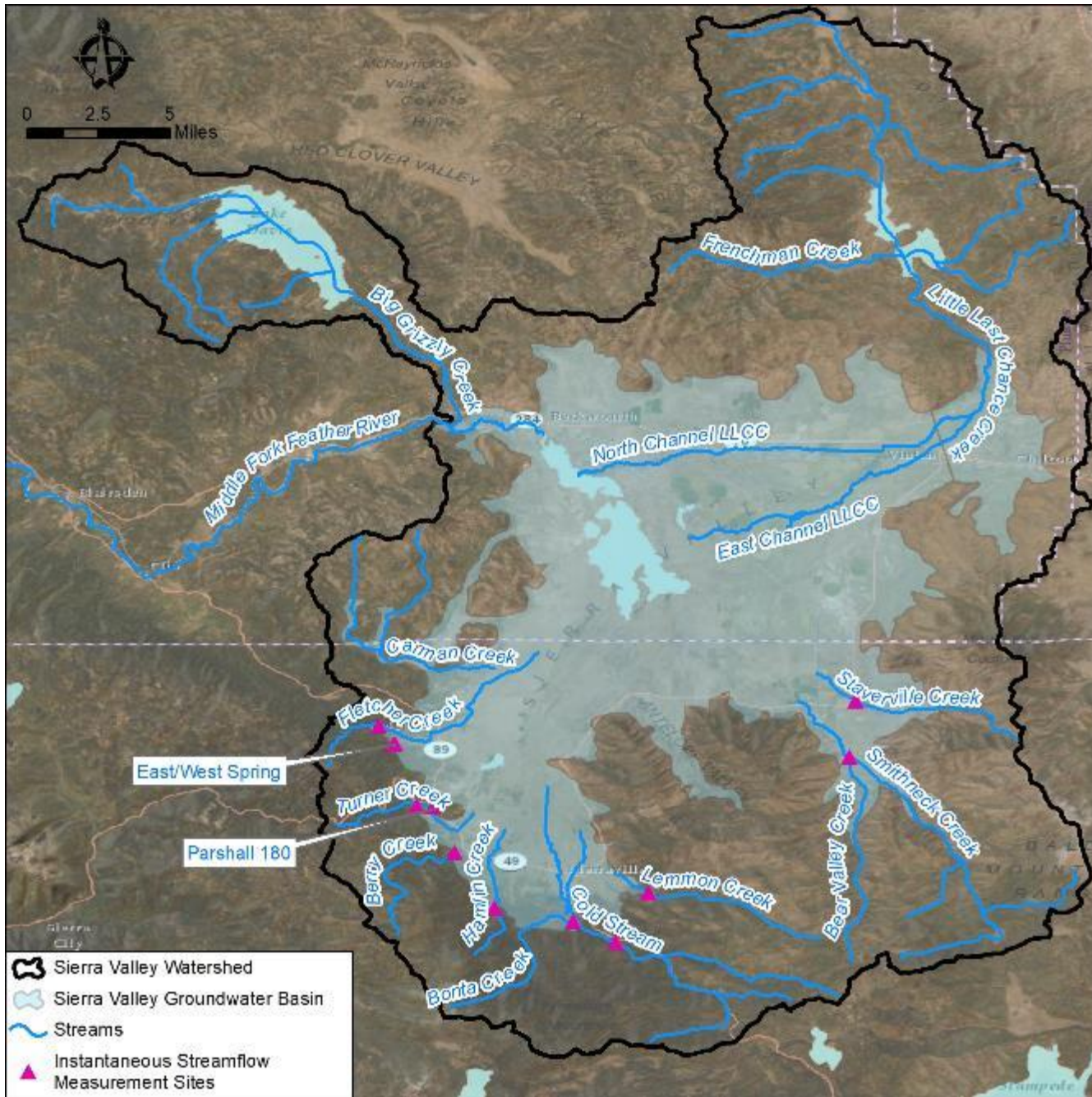
Periodic measurements provided by the Sierra Valley Watermaster

Stream Name	Total No. of Observations	Stage Readings	Flow Measurements	Period of Record	Average Flow of All Observations
Cold Stream	124	4	120	4/2007-9/2020	36.1
Webber	114	14	100	7/2007-9/2020	17.8
Lemmon	21	0	21	5/2009-9/2020	7.3
Spring East	22	11	11	6/2018-9/2020	0.9
Spring West	22	10	12	6/2018-9/2020	0.9
Fletcher	49	15	34	7/2011-9/2020	4.2
Turner	81	16	65	5/2009-9/2020	5.6
Berry (Miller)	89	0	89	4/2007-9/2020	14.6
Hamlin	74	0	74	4/2007-9/2020	13.0
Parshall 180	48	0	48	3/2015-9/2020	0.8
Smithneck	54	0	54	7/2008-9/2020	13.4
Staverville	7	0	7	3/2019-9/2020	3.9

Note: This is not continuous data and only represents flow measurements made during the irrigation season approximately April to September



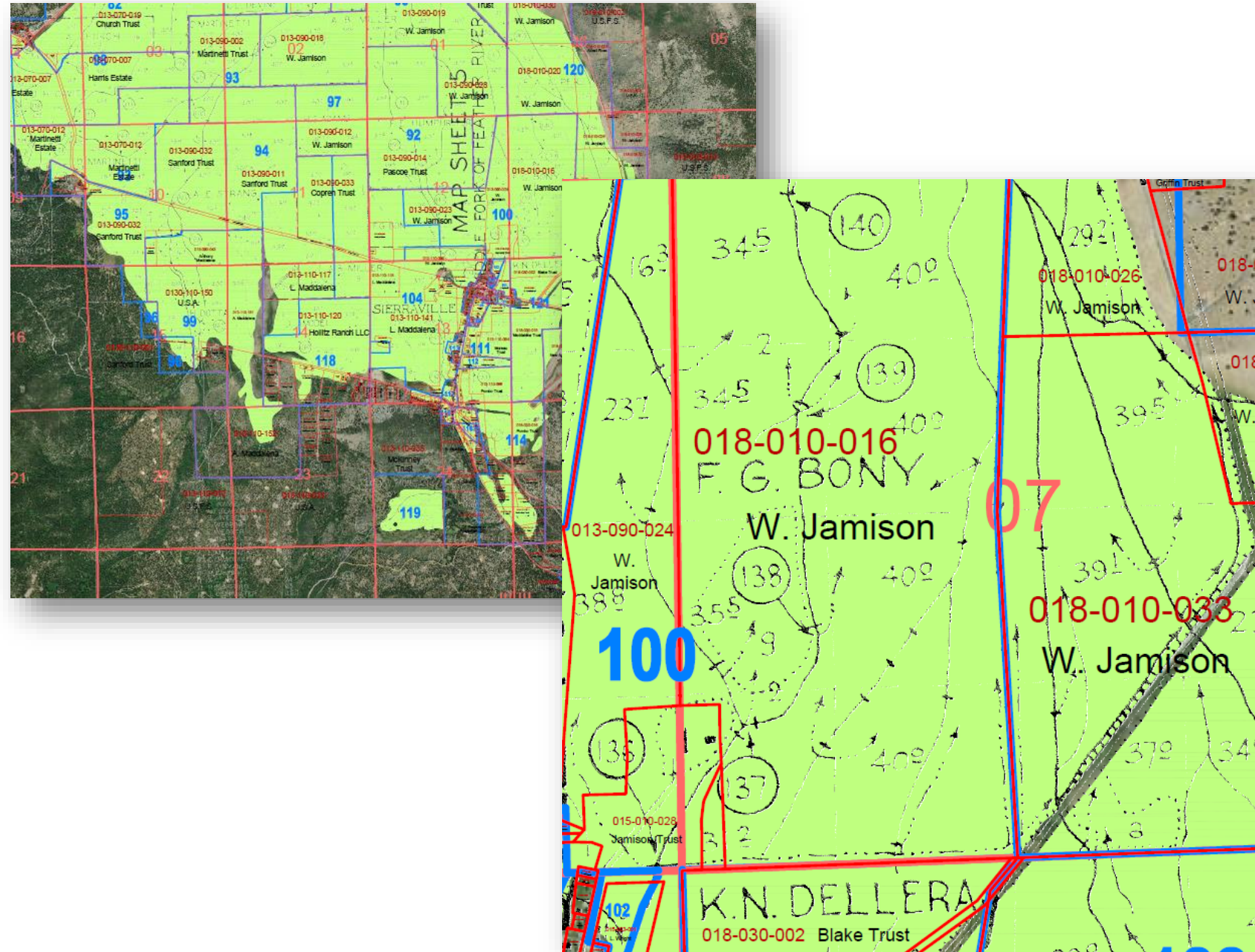
Instantaneous Streamflow Measurements Sites



03

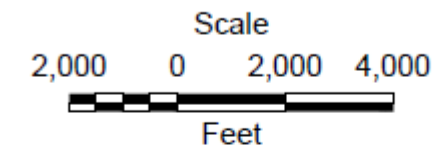
Decree Maps – Irrigated Acres, Diversions and Ditches

Decree Maps-Irrigated Areas, Diversions and Ditches



- ▣ Decreed Irrigated Acreage
- ▣ Diversions
- ▣ Ditches

May 1, 2014



LEGEND

- DWR Tract Boundary
- 01 DWR Tract Number
- Decreed Irrigated Acreage
- Ownership Parcel Line
- 031-040-037 Genasci Assessor's Parcel Number & Owner Name
- Section Line
- 17 Section Number

Summary

- ❑ Historical continuous streamflow gaging from different periods
- ❑ Ongoing continuous streamflow gaging at 2 locations
- ❑ Ongoing periodic instantaneous streamflow measurements
- ❑ Emphasis on inflows to the basin
- ❑ Limited surface water data within the groundwater basin
- ❑ Next steps: Data gaps and monitoring approach



Questions?



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