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January 31, 2019

Montague-Grenada Weir, also called the Watermaster's Weir and USGS Weir

## Operations and Maintenance Plan

**Background:** The operation and maintenance plan for the MG Weir (called the weir) has been a key component of the SVRCD project to modify the weir for the past 10 years. The ongoing tasks required to allow the weir to function as designed require coordination and communication between all interested parties as well as funding commitments. Flow measurements are considered critical by all partners to manage the surface flows in the Shasta River. Flow measurements at this site have been used by the Watermaster since the 1930's.

**Current Situation:** At this time there are three partners working together to solidify the work they have been doing with a joint maintenance agreement. Over the past several years, many meetings between these partners and other agency representatives with an interest have taken place. Working through this expanded partnership, the SVRCD has completed a 65% design for the weir modification, permits and several key maintenance decisions.

**USGS Maintenance:** The Shasta River near Montague stream gage is visited on a six week interval by USGS personnel. During a typical visit the USGS will inspect the instrumentation for accuracy and functionality. The conditions of the control structure (the weir in this case) are noted and a measurement of discharge is made. If necessary, light debris that may be lodged on the control is removed, and any resulting change to the water surface elevation is documented and accounted for in the final computation of discharge.

The USGS generally does not undertake any large scale cleaning of the channel upstream or downstream of the weir. However, accuracy of discharge records may become compromised if the channel in the immediate vicinity of the weir becomes impacted by sediment and vegetation.

USGS staff from Redding can be asked to field check the gage more often if necessary. They also provide web services for online data which is available on their website and on CDEC.

**Landowners:** There are four landowners whose property touches the weir footprint. Two of them on the north bank are actively involved in visual observation and have an interest in the management and maintenance issues for several reasons. One is their pump station is directly downstream of the weir. Access to the weir is granted by Don Meamber and Barbara Hull with notification.

Watermaster Services: Currently oversight and direction is provided by a Board of Directors. Called the Scott Valley and Shasta Valley Watermaster District (SSWD), they are appointed by the Siskiyou County Superior Court as Watermaster for the Shasta River Watermaster Service Area to replace the Department of Water Resources effective February 1, 2012. Their staff visits the weir many times during the irrigation season and needs real-time flow data to properly execute their duties. In the future, the SSWD plans to take a more active role in keeping vegetation and sediment clear of the weir.

Shasta Valley RCD: As a special district charged with assisting local private landowners in stewardship of natural resources, the SVRCD is an interested party and has been providing grant funding and liaison to local groups regarding the weir, including irrigation districts and agencies. At this time, the SVRCD is willing to continue this role as needed. Additionally the SVRCD has a water quality monitoring station at the weir to provide data to the community documenting trends.

Next Steps: The partners will work during 2019 to improve communication between themselves and the irrigators who depend on this weir being accurate. Existing communication has been continuous during late summer in facilitated phone call-ins including Flow Transaction calls (biweekly) hosted by TNC and KPHAT (fish health) hosted by CDFW. Additional regular monthly and weekly communications may be hosted and formalized by SSWD staff.

SSWD: Obtain a LSAA to remove vegetation encroachment in the summer of 2019. A five year maintenance 1600 permit will allow this to be continued until 2024. For more information contact this organization at: [Director@sswatermaster.org](mailto:Director@sswatermaster.org).

SVRCD: Construction of the weir modification to allow improved juvenile fish passage is planned for 2019. For more information contact this organization at [shastavalleyrcd@snowcrest.net](mailto:shastavalleyrcd@snowcrest.net).

USGS: Installation of new telemetry to allow 15 minute uploads of weir readings to the website is planned. Continued more frequent site visits can be scheduled as needed. For more information contact Tim Reed at [treed@usgs.gov](mailto:treed@usgs.gov).

## **General Information about Partners**

### **Shasta Valley Resource Conservation District**

The Shasta Valley RCD is a special district serving central Siskiyou County, California. Our mission, and vision set our goals, objectives and focus our efforts with local direction from our Board of Directors.

Our mission is to work with interested landowners on a voluntary basis to enhance the management and sustainable use of natural resources in order to ensure the long term economic viability of the community. <http://svrcd.org/wordpress/>

### **Scott-Shasta Watermaster District**

Located in Siskiyou County, California this District serves water diversion owners with court-ordered watermaster service in the Scott River, Shasta River and Willow Creek watersheds. Since formation in 2012, the local public entity has been working to build capacity and address local issues. As a public entity, the SSWD has a unique opportunity to not only continue to provide a service as required by court order, but to also manage a local Watermaster Program that is available through voluntary contractual agreements with diversion owners (not a requirement or regulation).

<https://www.sswatermaster.org/>

### **United State Geological Survey**

The USGS serves the Nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

Historical and instantaneous data are available. Parameters with historical and operational instantaneous data are measured by the USGS Water Science Center (WSC) with the intent to publish and are subject to a thorough review and approval process. Typically, these data have corresponding historical daily values available for the period of record. Instantaneous data are limited to data collected since October 1, 1950. Parameters typically are collected by the USGS for the purposes of supporting short-term operational needs of the data network (for example precipitation at some locations) or parameters measured to facilitate the computation of another parameter of interest (for example, stage is used in the computations of streamflow).

With shared funding from CDWR and USGS, highly trained hydrological engineers manage gages in our valley for the benefit of all. Their expertise is invaluable in accuracy, calibration and state of the art equipment.

[https://waterdata.usgs.gov/ca/nwis/uv?site\\_no=11517000](https://waterdata.usgs.gov/ca/nwis/uv?site_no=11517000)

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