



## OLYMPIC VALLEY PUBLIC SERVICE DISTRICT



### WASHESHU CREEK STREAMFLOW GAGING IMPROVEMENT PROJECT DEPARTMENT OF WATER RESOURCES GRANT AGREEMENT

**DATE:** March 25, 2025  
**TO:** District Board Members  
**FROM:** Dave Hunt, District Engineer  
**SUBJECT:** Adopt Resolution 2025-05 Authorizing the Execution of a Grant Agreement with the California Department Of Water Resources CalSIP Program for the Washeshu Creek Streamflow Gaging Improvement Project

**BACKGROUND:** Streamflow monitoring provides critical data to assist in the management of the Olympic Valley Aquifer and is identified in Element 2: Surface Water Monitoring of the 2007 Olympic Valley Groundwater Management Plan. Element 2 includes the following action items:

1. *Continue and expand existing stream monitoring programs and participate in stream restoration projects as they relate to groundwater management.*
2. *Analyze stream gage data, precipitation data, and shallow groundwater monitoring annually.*

Further, stream gaging is identified as a High Priority Recommendation in Section 7.2.1 of the Water Years 2016-2021 Six Year Review and Report (UES, January 2023):

- *Reactivate Washeshu Creek stream gaging, at a minimum at two key locations: Western main channel below the confluence of primary tributaries, and down-stream of the basin at the bridge crossing (historical measurement location for outflow). Continuing to collect stream flow data is necessary for future assessments of basin water yield, stream function and health, and to conduct audits of the numerical flow model. It is suggested that primary stakeholders in the valley arrive at a financial agreement to fund and share the costs of gage maintenance and data collection.*

In November 2024, the District applied for a grant from the Department of Water Resources (DWR) under the California Stream Gage Improvement Project (CalSIP). California Senate Bill (SB) 19 (2019) directed the DWR and the State

Water Resources Control Board to develop a plan to deploy a network of stream gages to help address significant gaps in information needed for water management.

The intent of CalSIP is to support the activation and deployment of priority stream gages consistent with the SB 19 plan. The CalSIP grant program aims to provide funding to public agencies to implement the needed infrastructure improvements, and operations and maintenance, for stream gaging data collection that provided reliable real-time stream flow data to the public. Projects eligible for this grant funding include the installation of new gages, integration of existing gage data into public databases, reactivation of historical gages, upgrades to existing gages, purchase and installation of stream gaging equipment, and maintenance and operation of gages installed under CalSIP.

The District grant application requested funding for three (3) stream gages along Washeshu Creek:

- Gage 0442-01 North Fork Washeshu Creek – Upgrade an existing active USGS gage to include flow and telemetry. The gage is located at the end of Chamonix Pl near the Shirley Lake trailhead.
- Gage 2876-01 South Fork Washeshu Creek – Installation of new gage with telemetry to replace a historical gage that was discontinued in 2016. The gage is located near Shirley Canyon Rd. and the Granite Chief subdivision.
- Gage 2877-01 Washeshu Creek at County Bridge - Installation of a new gage with telemetry to replace a historical gage that was discontinued in 2020. The gage is located near the bridge on Olympic Valley Rd. near Winding Creek Rd.

**DISCUSSION:** On February 19, 2025, DWR notified that District that our request for grant funding was approved for all three (3) gages in the amount \$208,420.00.

The scope of work under the grant includes:

- Grant Administration
- Planning – Site Selection and Permitting
- Stream Gage Equipment Installation
- Instrumentation and Telemetry Setup
- Operations and Maintenance

A majority of the work under the grant agreement will be performed by the District's hydrogeologist, UES (Dwight Smith). District staff will provide all grant administration services, and provide necessary support to UES in the planning, permitting, equipment installation, and operations and maintenance tasks. Draft copies of DWRs Exhibit A: Scope of Work and Exhibit B: Cost Sheet are attached.

The grant agreement requires that all stream gages be fully operational by October 1, 2026, and all expenditures are invoiced for reimbursement by March

30, 2027. All work for the project will be reimbursed under the grant agreement. It is anticipated that the gages will be operational by June 1, 2025.

Ultimately the grant will allow for the installation and subsequent operation and maintenance and data collection for a 2-year period. Ongoing annual operation and maintenance after the grant period will be funded by the District and other groundwater pumpers in the Valley through a cost share agreement.

- ALTERNATIVES:**
1. Adopt Resolution 2025-05 authorizing execution of the Grant Agreement with DWR for the Washeshu Creek Stream Gagin Improvement Project.
  2. Do not adopt Resolution 2025-05.

**FISCAL/RESOURCE IMPACTS:** All work proposed for the project will be funded by the Grant Agreement. After the expiration of the Grant Agreement on March 30, 2027, additional costs for continued operation and maintenance of the gages will be necessary. These expenses will come from the Water Operations budget. It is expected that the ongoing operation and maintenance costs will be shared by the other groundwater pumpers in the Valley through a cost share agreement.

**RECOMMENDATIONS:** Staff recommends the Board adopt Resolution 2025-05 authorizing execution of the Grant Agreement with DWR for the Washeshu Creek Stream Gagin Improvement Project.

**ATTACHMENTS:**

- Resolution 2025-05
- Exhibit A: Scope of Work (Draft)
- Exhibit B: Cost Sheet (Draft)

**DATE PREPARED:** March 14, 2025

**RESOLUTION 2025-05**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
OLYMPIC VALLEY PUBLIC SERVICE DISTRICT  
AUTHORIZING THE FUNDING REQUEST, ACCEPTANCE, AND EXECUTION FOR THE  
OLYMPIC VALLEY PUBLIC SERVICE DISTRICT NEW/UPGRADE STREAM GAGE PROJECT**

**WHEREAS**, the Olympic Valley Public Service District (District) proposes to implement the Olympic Valley Public Service District New/Upgrade Stream Gage Project (Project); and,

**WHEREAS**, the Project is being implemented to support and improve the stream gage network within the State of California and is intended to: (1) provide publicly available data on natural surface waters; and (2) provide sound data that accurately informs water management decisions; and,

**WHEREAS**, the District has the legal authority and is authorized to enter into a funding agreement with the State of California; and;

**WHEREAS**, the District intends to apply for funding from the California Department of Water Resources for the Project.

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of the Olympic Valley Public Service District as follows:

1. That pursuant and subject to all of the terms and provisions of Budget Act of 2023, as amended (Stats. 2022, ch. 44, § 25), the District General Manager, or designee is hereby authorized and directed to execute the funding agreement with the Department of Water Resources and any amendments thereto.
2. The District General Manager, or designee is hereby authorized to utilize electronic signatures to execute agreements with the Department of Water Resources and any amendments thereto.
3. The District General Manager, or designee is hereby authorized and directed to submit any required documents, invoices, and reports required to obtain funding.

PASSED AND ADOPTED this 25<sup>th</sup> day of March 2025 at a regular meeting of the Board of Directors duly called and held by the following roll call vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

APPROVED:

\_\_\_\_\_  
Dale Cox, Board President

ATTEST:

\_\_\_\_\_  
Jessica Asher, Board Secretary

## EXHIBIT A SCOPE OF WORK

### I. PURPOSE

This Agreement is between the California Department of Water Resources (DWR) and the Olympic Valley Public Service District (collectively known as the "Parties"). The primary purpose of the Agreement is for DWR to provide financial funding to Olympic Valley Public Service District to improve stream gage infrastructure and data availability as part of the Stream Gage Improvement Program (CalSIP). Through the CalSIP program, DWR is actively improving California's stream gage network by funding public agencies to upgrade existing gages, reactivate historical gages, or install new gages on natural waterways across the state.

### II. BACKGROUND

Access to reliable, real-time information about the conditions and amount of water flowing into our rivers and streams is critical to better manage water resources for public safety, water supply and the conservation of freshwater species. To help better understand water resources statewide, DWR is seeking to fund public entities to improve stream gaging. Through CalSIP, public agencies can receive funding to upgrade, reactivate, or install new surface water gaging stations.

### III. LOCATION OF SERVICES

Stream gage descriptions and coordinates.

OVPSPD Gage Name	Latitude	Longitude	Type	Notes
South Fork Washeshu Creek	39°11'48.71"	120°14'20.67"	Rated Open Channel	New Stream Gage Installation – Shift downstream 250 ft from historical gage operation by FoSC.
North Fork Washeshu Creek	39°11'55.59"	120°14'26.86"	Rated Open Channel	Upgrade Stream Gage - Develop Rating Curve and Publish Q for USGS 10337810 NF WASHESHU C A OLYMPIC VALLEY CA (currently stage only)
Washeshu Creek at County Bridge	39°12'24.51"	120°12'38.17"	Rated Open Channel	New Stream Gage Installation. Same location as historical FoSC gaging. USGS 10337850 WASHESHU C A OLYMPIC VLY RD A PALISADES TAHOE CA (historical WQ location)

#### **IV. CONTRACT MANAGERS**

The Contract Managers during the term of this agreement will be:

<b>Department of Water Resources</b>	<b>OLYMPIC VALLEY PUBLIC SERVICE DISTRICT</b>
Name: Kenny Karcher Senior Engineer, Water Resources Specialist	Name: Dave Hunt District Engineer
Address: North Central Regional Office 3500 Industrial Boulevard, Suite 131 West Sacramento, CA 95691	Address: 305 Olympic Valley Road PO Box 2026 Olympic Valley, California 96146
Phone: 916-296-4529	Phone: 530-452-4644
Email: <a href="mailto:Kenneth.Karcher@water.ca.gov">Kenneth.Karcher@water.ca.gov</a>	Email: <a href="mailto:dhunt@ovpsd.org">dhunt@ovpsd.org</a>

The Contract Managers may be changed by written notice to the other party.

#### **V. RESPONSIBILITIES**

Under this Agreement, Olympic Valley Public Service District, will perform the activities described in this scope of work as summarized below in section A.

##### **A. Summary**

The scope of work for this contract organizes Olympic Valley Public Service District responsibilities into the following work categories:

##### **B. Administration – Invoices and Reporting**

This task includes project administration, invoicing, and reporting.

Project administration includes administration of the Project including overseeing the budget and schedule, installation management and inspection, making payments to engineers and contractors after inspections and/or approval of work, and other activities related to the completion of the Project. Includes attending weekly/monthly meetings (as needed) with the DWR Contract Manager.

Invoicing includes preparing and submitting invoices and appropriate backup documentation to the DWR Contract Manager describing the work completed and listing the costs incurred during the billing cycle.

Reporting includes preparing and submitting to DWR progress reports monthly.

**Deliverables:** Invoices and supporting documents, Monthly Progress Reports, Project Completion Certification.

**C. New Stream Gage:**

**1. Planning – Site Selection and Permitting**

Identify and confirm a suitable location for the new stream gage site. This involves reviewing hydrological data, consulting with local experts, and conducting field reconnaissance and surveys. Sites should have favorable hydraulic conditions for accurate streamflow measurement at various flow levels, be relatively geomorphically stable for consistent hydraulic conditions over time and be as accessible as possible.

Identify the permits, studies, and reports needed for the site. Perform all necessary biological, cultural, and other resource field investigations to support the application and development of needed regulatory environmental permits. Commence the permitting and fieldwork as appropriate. Responsible for all fieldwork, permit applications, reports, and all elements to secure permits for installation and continued measurements and maintenance of the gage. Permits may include, but are not limited to 404, 401, potentially CVFPB for those in the floodway encroachment, roadway right-of-way encroachment permits (for installation on public bridges), and cultural resources (if excavation is needed). Responsible for CEQA Requirements and compliance as applicable.

Investigate the property and properties that may require access to the site. Obtain appropriate authority and approvals for all needed access and work to sustain field operations and maintenance for the site.

**Deliverables:** Confirmation of Site Selection (for new or relocated sites), Property Access agreements (as needed), Final CEQA and other Permit Approval Documentation. Permits and access shall be completed prior to performing field installations or excavations. Provide afore mentioned documents upon request.

**2. Installation – Equipment Installation**

Obtain, install, and make operational new stream gage equipment, including sensors, data loggers, power supply, and telemetry systems. This includes selecting appropriate equipment, ensuring compatibility with existing infrastructure, and installing it according to manufacturer specifications and industry standards. The equipment installation process will involve setting up data loggers, sensors, and telemetry systems in secure and weatherproof housing.

Installation will ensure that all components are properly connected and configured for optimal performance.

Additionally, provide equipment, labor, and materials to install equipment on-site, perform initial flow measurement, and other applicable calibration and equipment testing to transmit data to CDEC online data portal. Following initial approvals, obtaining applicable permits, real property rights, and NESDIS(GOES) IDs, procure applicable equipment, tools, and incidentals to install gage infrastructure, power supply, and sensors, adding surveyed reference gages (outside staff and wire weight) and a minimum of two nearby survey benchmark monuments with established vertical datum (NAVD88). Track equipment purchased and installed for the site. Telemetry configuration and channels for the site shall be documented. Install gage equipment in conjunction with permits and real property rights and follow best practices.

**Deliverables:** Installed and operational stream gage equipment with documentation of the equipment installed.

### **3. Installation - Instrument and Telemetry Setup**

Set up and calibrate instruments and telemetry systems, ensuring data transmission to [specify data portal e.g., CDEC]. This includes configuring data loggers, calibrating sensors, and testing telemetry systems to ensure reliable data transmission. This task will be completed within 90 days from project commencement. Calibration of instruments will be done according to the manufacturer's specifications. Telemetry systems will be configured to transmit data in real-time to the specified data portal.

**Deliverables:** Calibration and setup report detailing the configuration and calibration of instruments and telemetry systems.

### **4. Operations and Maintenance – Flow Measurements**

Conduct initial flow measurements and establish a rating curve. Perform ongoing measurements as required. This involves conducting flow measurements using standard methods, analyzing data to establish a rating curve, and scheduling regular measurements for ongoing data collection to refine and develop the stage-discharge rating curve. Initial measurements will be conducted as soon as reasonably possible (order of weeks); ongoing measurements will be conducted as needed to capture flows at different depths throughout the water year, at extreme events as possible, and to confirm prior measurements. Flow measurements will be conducted using standard techniques such as the velocity-area method or the use of flow meters. Data collected will be analyzed to develop a rating curve, which will be used to convert water levels to flow rates. Regular measurements will ensure that the rating curve remains accurate over time.



**Deliverables:** Initial flow measurement data and ongoing data reports, including analysis and interpretation. Incorporate measurement data, field records, and curve calculations as part of annual report for data validation.

## **5. Operation and Maintenance**

Operate and maintain the stream gage site to ensure continuous data collection and equipment functionality. This includes routine inspections, calibration checks, and necessary repairs to equipment. Implement protocols for data quality assurance and troubleshooting any issues that may arise with the equipment or data transmission systems. Regularly update and maintain the equipment to adhere to industry standards and manufacturer recommendations.

To provide quality control and quality assurance to the program, each gage will be required to submit annually, to DWR, for review and approval of the data, the rating curve adjustments, all field observations, and all operational information.

**Deliverables:** All station records for stage and flow measurements will be processed and submitted by December 31 of each year for the prior water year (October 1 through September 30). This process is considered the annual “certification” process that signifies the applicable prior-year data is valid and referenced to reflect all adjustments and corrections are correct. A final certification package needs to be provided as a hard copy and electronic copy and include the following elements:

- A. Site summary report.
- B. Field notes from all site visits and measurements.
- C. Flow measurement report summary to summarize when, how, and results of flow measurements.
- D. Certification (signature) from a qualified and experienced reviewer (someone who has completed a USGS, or similar course; or professional licensed civil engineer).
- E. Flow measurement sheets.
- F. Rating table documentation, PDF or Excel spreadsheet.
- G. Rating table and discrete flow measurement plots.
- H. Primary computations.
- I. Mean daily gage height summary.
- J. Mean daily flow summary.

K. Mean daily temperature summary.

L. Mean daily gage height, water year plots.

M. Mean daily gage flow, water year plots.

N. Mean daily gage water temperature, water year plots.

**D. Upgrade Stream Gage (Upgrade to Reporting of Discharge):**

Applicable to North Fork Washeshu Creek.

**1. Planning – Site Confirmation**

Verify the site location using available records, physical inspection, and site mapping. If real-time stage recording at USGS Station 10337810 is discontinued, research and purchase telemetry systems and secure, weatherproof housing for existing stream gage sites. This includes selecting appropriate telemetry equipment, ensuring compatibility with existing infrastructure, and installing it according to manufacturer specifications and industry standards.

**Deliverables:** Verified Site Selection Report, Property Access agreements (as needed), Final CEQA/Permit Approval Documentation (if needed).

**2. Installation – Equipment Installation**

(This section to be required if USGS discontinues real-time stage recording at North Fork Washeshu Station 10337810)

Obtain, install, and make operational new stream gage equipment, including sensors, data loggers, power supply, and telemetry systems. This includes selecting appropriate equipment, ensuring compatibility with existing infrastructure, and installing it according to manufacturer specifications and industry standards. The equipment installation process will involve setting up data loggers, sensors, and telemetry systems in secure and weatherproof housing.

Installation will ensure that all components are properly connected and configured for optimal performance.

Additionally, provide equipment, labor, and materials to install equipment on-site, perform initial flow measurement, and other applicable calibration and equipment testing to transmit data to CDEC online data portal. Following initial approvals, obtaining applicable permits, real property rights, and NESDIS(GOES) IDs, procure applicable equipment, tools, and incidentals to install gage infrastructure, power supply, and sensors, adding surveyed reference gages (outside staff and wire weight) and a minimum of two nearby survey benchmark monuments with established vertical datum (NAVD88).

Track equipment purchased and installed for the site. Telemetry configuration and channels for the site shall be documented. Install gage equipment in conjunction with permits and real property rights and follow best practices.

**Deliverables:** Installed and operational stream gage equipment with documentation of the equipment installed.

### **Installation - Instrument and Telemetry Setup**

Set up and calibrate instruments and telemetry systems, ensuring data transmission to [specify data portal e.g., CDEC]. This includes configuring data loggers, calibrating sensors, and testing telemetry systems to ensure reliable data transmission. This task will be completed within 90 days from project commencement at [Specify location]. Calibration of instruments will be done according to the manufacturer's specifications. Telemetry systems will be configured to transmit data in real-time to the specified data portal.

Deliverables: Calibration and setup report detailing the configuration and calibration of instruments and telemetry systems.

### **Installation -Data Integration and Monitoring**

Integrate telemetry data into the specified data portal and establish protocols for ongoing data monitoring and maintenance. Ensure that the data is being transmitted accurately and reliably. Establish a monitoring schedule to verify the continuous operation of telemetry systems and address any issues that arise.

**Deliverables:** Data integration report and monitoring schedule.

## **3. Operations and Maintenance – Flow Measurements**

Conduct initial flow measurements and establish a rating curve. Perform ongoing measurements as required. This involves conducting flow measurements using standard methods, analyzing data to establish a rating curve, and scheduling regular measurements for ongoing data collection to refine and develop the stage-discharge rating curve. Initial measurements will be conducted as soon as reasonably possible (order of weeks); ongoing measurements will be conducted as needed to capture flows at different depths throughout the water year, at extreme events as possible, and to confirm prior measurements. Flow measurements will be conducted using standard techniques such as the velocity-area method or the use of flow meters. Data collected will be analyzed to develop a rating curve, which will be used to convert water levels to flow rates. Regular measurements will ensure that the rating curve remains accurate over time.

**Deliverables:** Initial flow measurement data and ongoing data reports, including analysis and interpretation. Incorporate measurement data, field records, and curve calculations as part of annual report for data validation.

#### **4. Operation and Maintenance**

Operate and maintain the stream gage site to ensure continuous data collection and equipment functionality. This includes routine inspections, calibration checks, and necessary repairs to equipment. Implement protocols for data quality assurance and troubleshooting any issues that may arise with the equipment or data transmission systems. Regularly update and maintain the equipment to adhere to industry standards and manufacturer recommendations.

To provide quality control and quality assurance to the program, each gage will be required to submit annually, to DWR, for review and approval of the data, the rating curve adjustments, all field observations, and all operational information.

**Deliverables:** All station records for stage and flow measurements will be processed and submitted by December 31 of each year for the prior water year (October 1 through September 30). This process is considered the annual “certification” process that signifies the applicable prior-year data is valid and referenced to reflect all adjustments and corrections are correct. Annual certification package needs to be provided as a hard copy and electronic copy and include the following elements:

- A. Site summary report.
- B. Field notes from all site visits and measurements.
- C. Flow measurement report summary to summarize when, how, and results of flow measurements.
- D. Certification (signature) by a qualified and experienced reviewer (someone who has completed a USGS, or similar course; or professional licensed civil engineer).
- E. Flow measurement sheets.
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- K. Mean daily temperature summary.

- L. Mean daily gage height, water year plots.
- M. Mean daily gage flow, water year plots.
- N. Mean daily gage water temperature, water year plots.

## **VI. INVOICING AND PROGRESS REPORTS**

Monthly Invoices and Progress Reports will be required. All invoices and progress reports are required to be completed on provided templates. Please review acceptable and eligible costs before starting work and submitting invoices.

## **VII. BUDGET AND TIMELINE**

All gages must be fully operational by October 1, 2026 and all expenditures invoiced for reimbursement by March 30, 2027. Final invoices must be submitted by April 15<sup>th</sup>, 2027.

DWR has established a total budget of \$208,420 for this project (Exhibit B).

**Exhibit B**  
**Attachment 2 : Cost Sheet**

## New Stream Gage

ITEM NO.	Site ID/Description	Description	Item/Personnel	Est. Quantity	Unit	Unit Price	Total
1	All Sites	Administration	2025 - 9 Months - District	36	Hr	\$ 110.00	\$ 3,960.00
		Administration	2026 - 12 Months - District	48	Hr	\$ 110.00	\$ 5,280.00
		Administration	2027 - 4 Months - District	16	Hr	\$ 110.00	\$ 1,760.00
		Planning	Site Selection - Consultant	1	LS	\$ 4,340.00	\$ 4,960.00
		Planning	Permitting- Consultant	1	LS	\$ 8,780.00	\$ 8,780.00
		Planning	Site Selection - District	10	Hr	\$ 110.00	\$ 1,100.00
		Planning	Site Selection - District Legal	1	LS	\$ 2,500.00	\$ 2,500.00
		Planning	Permitting - District	10	Hr	\$ 110.00	\$ 1,100.00
							\$ -
2	All Sites	Installation	Installation - Equipment Installation - Consultant	1	LS	\$ 26,440.00	\$ 26,440.00
		Installation	Installation - Equipment Installation - District	8	Hr	\$ 110.00	\$ 880.00
		Installation	Installation - Equipment Purchase + cellular service - District	1	LS	\$ 10,000.00	\$ 10,000.00
3	All Sites	Installation	Installation - Instrument & Telemetry Setup - Consultant	1	LS	\$ 17,040.00	\$ 17,040.00
			Installation - Instrument & Telemetry Setup - District	4	Hr	\$ 110.00	\$ 440.00
							\$ -
4/5	All Sites	Operations/Maintenance	2025 - 9 Months - Consultant	1	LS	\$ 43,714.80	\$ 43,714.80
		Operations/Maintenance	2026 - 12 Months - Consultant	1	LS	\$ 58,286.40	\$ 58,286.40
		Operations/Maintenance	2027 - 4 Months - Consultant	1	LS	\$ 19,428.80	\$ 19,428.80
		Operations/Maintenance	2025 - 9 Months - District	9	Hr	\$ 110.00	\$ 990.00
		Operations/Maintenance	2026 - 12 Months - District	12	Hr	\$ 110.00	\$ 1,320.00
		Operations/Maintenance	2027 - 4 Months - District	4	Hr	\$ 110.00	\$ 440.00
							\$ -
							\$ -
							\$ -
							\$ -
							\$ -
							\$ -
<b>Total Probable Cost:</b>							\$ 208,420.00