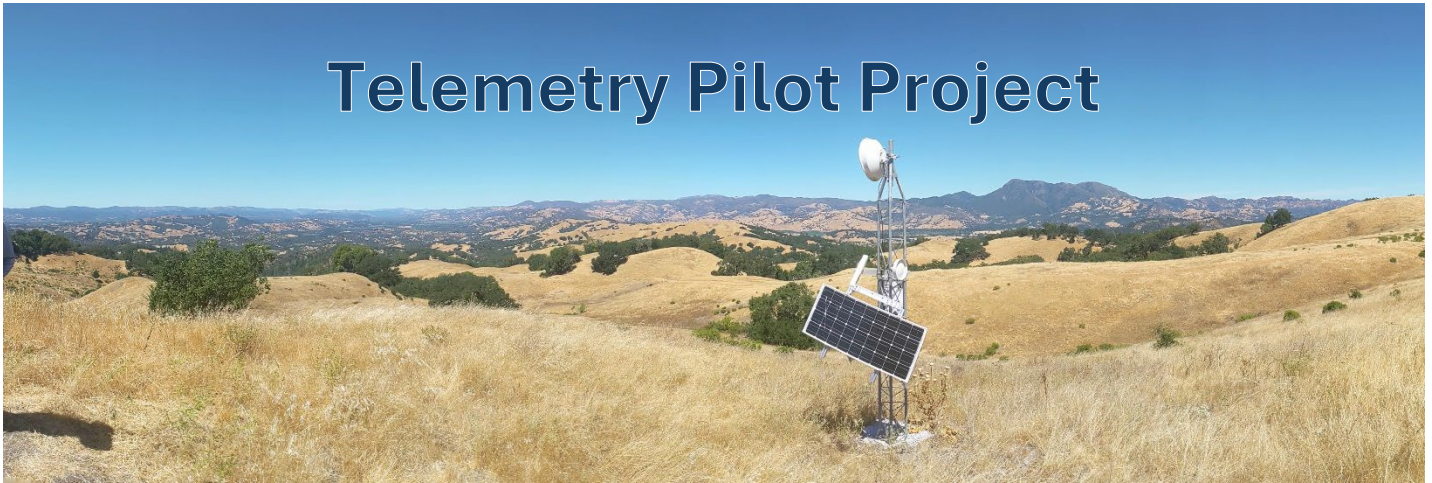


Telemetry Pilot Project



Frequently Asked Questions

General Questions

Q1: What is the Telemetry Pilot Project?

The Telemetry Pilot Project is a research initiative by the California State Water Board to explore and refine water monitoring practices using telemetered devices. It has two components:

- 2023-2025: The California Water Data Consortium is conducting the “Telemetered Water Monitoring Project”. This project involves research and outreach to understand best practices and make recommendations for field studies and statewide applications for water telemetry.
- 2025-2027: The State Water Board’s Telemetry Research Unit is conducting the “Russian River Telemetry Study”. This field study involves telemetered water monitoring in and near the Russian River watershed to understand costs, logistics, and data governance (see next section for more information). Other field studies are planned after completion of the Russian River Telemetry Study.

Q2: Is there a regulatory or enforcement component for the Telemetry Pilot Project?

No. The project focuses solely on research and does not involve regulations or enforcement.

Q3: What is telemetry?

Telemetry is a data collection technique that involves automatic site monitoring and automatic data transmission. The monitoring data is collected in a standardized format and then transmitted to another site (usually a data system).

Q4: What are telemetered water monitoring devices?

These devices automatically collect and transmit water data in real-time to understand water availability, usage, and streamflow. A typical setup includes a water sensor, a data logger to receive measurements, an antenna to transmit data, and a solar panel or battery.



Figure 1. Pipeline for diverted surface water. An in-line water sensor and data logger are circled in orange.

Q5: Why is telemetry important for water monitoring?

Telemetry has many benefits, including:

- Reduces delays and errors from manual reporting
- Provides real-time, standardized data for better water management
- Enhances compliance with water rights regulations and ecological requirements

Q6: Who can participate in the Telemetry Pilot Project?

Participation is completely voluntary and open to everyone. There are three ways to participate:

- Volunteer for the Russian River Telemetry Study: If you own land, operate water monitoring equipment, or collect water monitoring data in or near the Russian River watershed, you may volunteer to have a telemetered water monitoring station installed at your site, have your equipment upgraded, or have your data ingested to the study data system. Contact Laurel Dodgen (Laurel.Dodgen@waterboards.ca.gov) for more information.
- Volunteer for the Statewide Technical Advisory Committee: Individuals with experience in water monitoring may contribute to the development of technical recommendations for telemetry systems. Contact Sonya Milonova (smilonova@cawaterdata.org) for more information.
- Stay Informed: Subscribe to the Telemetry Research Unit email list and learn more at the [Telemetry Research Unit website](https://www.waterboards.ca.gov/telemetry/) (<https://www.waterboards.ca.gov/telemetry/>).



Russian River Telemetry Study

Q7: Where and when will the Russian River Telemetry Study be conducted?

Telemetry Research Unit staff will conduct water monitoring in and near the Russian River watershed from 2025 to 2027 to test telemetered water monitoring in a real-world setting. Volunteers in and near the Russian River watershed will provide access to their land, equipment, and/or data for the Telemetry Research Unit to install telemetered water monitoring equipment and evaluate transmitted data. Exact locations will be selected based on volunteer participation.

Q8: Why does the Russian River Telemetry Study need volunteers?

Because the study has no enforcement or regulatory component, the Water Board is depending on volunteers to provide access to their land, equipment, or data in order to perform this study.

Q9: What is the timeline for the Russian River Telemetry Study?

- 2025: Staff sign agreements with volunteers and select a field contractor, contractor installs and operates telemetered water monitoring equipment
- 2026-2027: Staff manage and analyze telemetered data
- 2028-2029: Staff report to the State Water Board

Q10: Why was the Russian River watershed selected for a field study?

The California Water Data Consortium evaluated watersheds and recommended the Russian River watershed based on several key factors:

- Existing Collaboration: The region has a history of successful collaborations between the State Water Board and community members.
- Hydrologic Complexity: The region features diverse water sources, hydrology, and terrain, providing a complex environment for testing telemetered systems.

- **Regulatory Alignment:** The watershed aligns with state priorities under Senate Bill 88, Senate Bill 19, and the California Water Action Plan, which identify it as a critical area for ecological and water management improvements.
- **Community Interest:** Local parties, including farmers and nongovernmental organizations, have shown strong interest in participating in and supporting the project.

Q11: What are the planned outcomes from the Russian River Telemetry Study?

The study will deliver equipment and training to community members and develop a formal report for the State Water Board with results and recommendations for future water reporting, management practices, and policies.

Q12: What are the benefits of the Russian River Telemetry Study?

Benefits to Russian River watershed:

- Collect new water monitoring data to support water management.
- Increase the equipment and knowledge of local and regional entities.
- Empower local and regional entities to meet their water monitoring goals.

Benefits to the State Water Board:

- Receive data-driven recommendations to improve water reporting, management practices, and policy.
- Support development of CalWATRS' telemetry features with real-world knowledge.

Benefits to California:

- Test and refine advanced water monitoring and transmission in a complex watershed as a foundation for further water telemetry applications across the state.
- Support standardized formats to monitor and transmit water data.
- Demonstrate the value of telemetered water data for faster response to extreme and changing weather conditions, adaptive management for evolving flood and drought conditions, and support for ecological flow requirements.

Q13: Who can volunteer for the Russian River Telemetry Study?

Individuals, businesses, or agencies who own land, operate water monitoring equipment, or collect water monitoring data in or near the Russian River watershed may volunteer. Volunteers may choose to have a telemetered water monitoring station installed at their site, have their equipment upgraded, and/or have their data ingested to the study data system. Contact Laurel Dodgen (Laurel.Dodgen@waterboards.ca.gov) for more information.

Q14: What are the benefits of volunteering for the Russian River Telemetry Study?

Volunteers may receive:

- Free telemetered water monitoring equipment installed at their site. Equipment may be completely new or upgrades may be provided to existing equipment. Volunteers will have the option to keep the equipment at the end of the study.
- Free maintenance and operation of the equipment during the study.
- Ability to view and download their site's data during the study and to control the privacy of their site's data (see more on data privacy below).
- Training and technical support for equipment and data transmission.
- Extended reporting deadlines and modified compliance for Senate Bill 88 (SB88) requirements during the study.
- Contribute to shaping future water reporting, management practices, and policies.



Figure 2. Pole with solar panel, antenna, and data logger for receiving and telemetering data.

Q15: What are the responsibilities of volunteering for the Russian River Telemetry Study?

Volunteers must:

- Sign a legal agreement describing each parties' responsibilities and benefits.
- Work with State Water Board staff to facilitate access to their site or data during the study.

Q16: Will volunteering for the Russian River Telemetry Study affect my water rights or lead to increased enforcement?

No. The Telemetry Pilot Project and Russian River Telemetry Study are for research purposes only and will not involve enforcement or regulation. The collected data will only be used to improve water monitoring practices and reporting processes.

Q17: What types of sites will be monitored?

Water diversions, stream flow, storage, and wells will be monitored, depending on volunteer participation.

Q18: What water features will be monitored?

Flow and volume data will be collected from each site (as appropriate). Water quality parameters, such as temperature and electrical conductivity, will be collected at some sites.

Q19: What will happen to the collected data?

All data from the study will be transmitted to a secure, private State Water Board data system specifically for this research data. It does not enter eWRIMS, RMS, CalWATRS, or any other reporting system.



Figure 3. Pipeline for underflow well. An in-line water sensor and data logger are circled in orange.

Q20: If I volunteer, can I view or download data for my monitoring location?

Volunteers may view a graph of their data, similar to how United States Geological Survey displays their data (Figure 1). Volunteers may also download their own data on the [Telemetry Research Unit website](https://waterboards.ca.gov/telemetry/) (<https://waterboards.ca.gov/telemetry/>). This data will be available in nearly real-time, although there will be an initial delay as the station is set-up by staff.

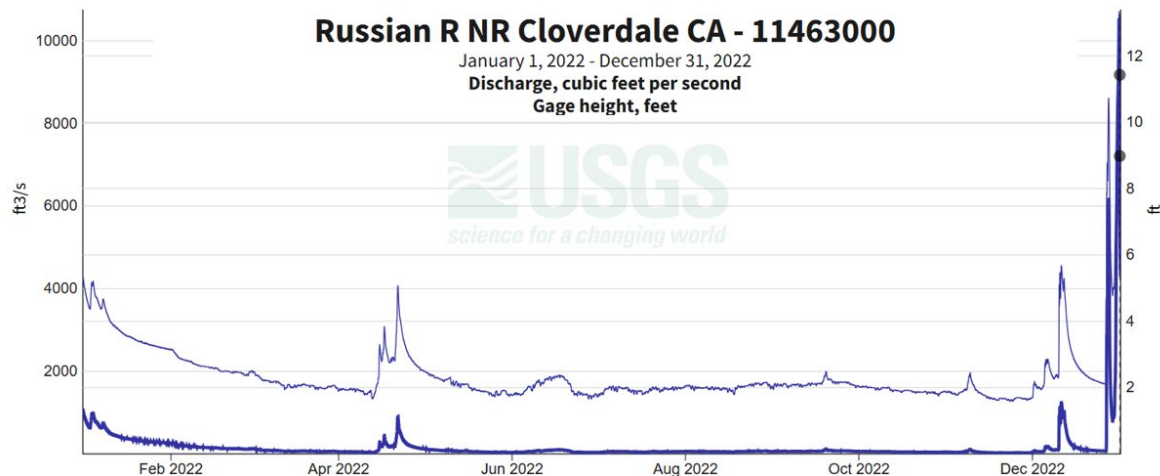


Figure 4. United States Geological Survey stream flow and gage data for the Russian River at Cloverdale for 2022. Data for the Russian River Telemetry Study will be available to view as a graph or to download on the Telemetry Research Unit website.

Q21: If I volunteer, can other people view or download data for my monitoring location?

Volunteers select the privacy level of their data during study enrollment, including what data to share about their monitoring location, installed equipment, transmission events, and water measurements. Depending on the volunteer's privacy selections, their data may be available to view as a graph on the [Telemetry Research Unit website](https://waterboards.ca.gov/telemetry/) (<https://waterboards.ca.gov/telemetry/>). Volunteers also select whether their data is available for download. A volunteer may change their privacy selections by contacting the Telemetry Research Unit at telemetry@waterboards.ca.gov.

Further Questions?

Please contact Laurel Dodgen (Laurel.Dodgen@waterboards.ca.gov) at the State Water Board Telemetry Research Unit or Sonya Milonova (smilonova@cawaterdata.org) at the California Water Data Consortium with further questions.