

**Temperature Monitoring Plan
Russian River
August - October 2004**

Background

This Temperature Monitoring Plan (Plan) is submitted in accordance with State Water Resources Control Board (State Board) Water Rights Order 2004-0035-EXEC, approving a Temporary Urgency Change in Permits 12947A, 12949, 12950, and 16596 of Sonoma County Water Agency (SCWA). Provision 7 of this Order requires SCWA to prepare a Temperature Monitoring Plan for the Russian River and Lake Mendocino and submit it to the Chief of the Water Rights Division by August 9, 2004. In compliance with the Order, SCWA has consulted the Regional Water Quality Control Board, North Coast Region (Regional Board), and the Division of Water Rights in preparing this plan.

Additional water quality parameters are addressed in the Water Quality Monitoring Plan required by Provision 8 of Order 2004-0035-EXEC.

Summary

Temperature monitoring of the Russian River will be conducted by data loggers, deployed at several locations throughout the river. The locations of these data loggers are as follows (from upstream to downstream):

- Hopland,
- Diggers Bend,
- Mirabel,
- Hacienda,
- Johnson's Beach,
- Vacation Beach,
- Monte Rio, and
- Three locations within the estuary

The locations of the data loggers are shown in Attachment A, Temperature Monitoring. Additionally, Lake Mendocino outflow temperature data is recorded by the U.S. Army Corps of Engineers (Army Corps) every 15 minutes.

SCWA Permanent Data Loggers

The SCWA Operations Division has maintained four YSI data loggers on the Russian River for several years. They are located at Hopland, Diggers Bend in Healdsburg, SCWA's river diversion facility at Mirabel, and Hacienda. An additional data logger is anticipated to be put online by mid-August 2004 at Johnson's Beach. These data loggers take readings of water temperature every 15 minutes, and transmit it to the SCWA operations center. This allows the information to be reviewed on a regular basis throughout the day. These data loggers are referred to as "permanent," as SCWA intends to maintain them indefinitely into the future, and at least until October 2005.

Weekly summaries of this data will be compiled and submitted electronically to the Regional Board and State Board. Average daily values for temperature will be calculated for each sample station and compared to historical average daily values. Historical values had not been compiled at the time that this Plan was written, but will be assembled as part of the implementation of this plan, and submitted to the Regional Board and State Board within two weeks of approval of this Plan. Average weekly trends will be noted. In the event that an average daily or average monthly value exceeds the historical value for a monitored parameter, the Regional Board will be consulted to determine if increased monitoring or surveillance is warranted. In this event, data summary transmittals will be increased to a daily basis.

SCWA Temporary Data Loggers

SCWA deployed eleven data loggers in the lower river on May 19, 2004. Data loggers are installed at Johnson's Beach in Guerneville, Vacation Beach, Monte Rio, and at three locations within the estuary. These data loggers take a temperature reading every hour. The data are stored in the unit until it can be downloaded by field personnel. SCWA personnel download the data in the field every two to three weeks. This data will be transmitted to the State and Regional Board once per month. The frequency of data transmission will be increased if the Regional Board Executive Officer indicates that water quality conditions warrant more frequent information retrieval.

U.S. Army Corps of Engineers Data Logger

The Army Corps maintains a data logger at the outflow from Lake Mendocino, which records the temperature of the water every 15 minutes. The Army Corps has agreed to transmit this data to SCWA on a weekly basis. This information will be included in the weekly data submittals to the State and Regional Board.

Data Analysis and Reporting

A summary of the information retrieved from the SCWA permanent data loggers and the Lake Mendocino outflow temperature probe will be transmitted electronically to the Regional Board and State Board on a weekly basis. These data will be transmitted in conjunction with the water quality data summary for the four additional monitored constituents at the four (five when Johnson's Beach is brought online) monitoring locations. Data submittals will be on Tuesdays, covering a one-week period from the previous Monday through Sunday. Similar summaries for data from the permanent loggers will be included in the second submittal of each month, covering the previous month's monitoring. Data will be submitted through the month of October 2004. Data submittals can be continued past this date upon request of the Regional Board Executive Officer.

Within two weeks of the approval of this Plan, SCWA will compile a historical data summary, so that current data can be compared to historical averages, highs, and lows.

Current data and data trends will be compared to historical data in the weekly summaries once this information has been compiled. If temperature data appear to be higher than in previous year, SCWA will consult with the Regional Board and State Board on a preferred course of action.

Because the data from the in-stream data collection units are "raw" and have not undergone extensive quality assurance/quality control (QA/QC), SCWA does not plan to make these data available to the public.

A final report will be prepared in January 2005, summarizing data trends recorded by the data loggers from August through October, and comparing these to trends in past years.

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