



North Coast Regional Water Quality Control Board

June 27, 2024

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD NORTH COAST REGION MONITORING AND REPORTING PROGRAM ORDER No. R1-2024-0031

FOR THE MARSHALL RANCH, LLC AND STILLWATER SCIENCES MARSHALL RANCH FLOW ENHANCEMENT PROJECT WDID NO. 1B24082NHUM HUMBOLDT COUNTY

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ATTACHMENT

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MONITORING AND REPORTING PROGRAM (MRP)
Order No. R1-2024-0031

The Marshall Ranch Flow Enhancement Project, operated by Stillwater Sciences (Permittee) shall be subject to the following monitoring and reporting requirements unless such requirements are further modified by the Executive Officer. The Code of Federal Regulations (40 C.F.R. § 122.48) requires that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. California Water Code section 13267 and 13383 also authorizes the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement federal and California regulations. Any person failing to furnish technical or monitoring reports or falsifying any information therein is guilty of a misdemeanor and may be subject to civil liability. (California Water Code section 13268).

The Permittee is enrolled for coverage under Order No. R1-2020-0006, General NPDES Permit for Low Threat Discharges to Surface Waters of the North Coast Region (General Order). The use authorized under the General Order is the release of impounded water from off-channel water storage ponds and tanks to augment Redwood Creek's summertime streamflow.

The General Order allows the Regional Water Board Executive Officer to modify the monitoring and reporting program for a specific permittee to reduce monitoring frequency and/or eliminate a monitoring parameter if it can be demonstrated that any reduction in monitoring requirements will not compromise water quality. The Executive Officer may also stipulate conditions and requirements in addition to those established by the MRP for all authorized discharges, including monitoring and reporting requirements, for each specific discharge to assess compliance with requirements of the General Order and/or characterize the discharge and/or receiving water quality. This monitoring and reporting program (MRP) replaces the MRP contained within the General Order.

1. GENERAL MONITORING PROVISIONS

1.1. Representative Monitoring Provision

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified in Table E-1, below, and further described in the Permittee's Notice of Intent (NOI) and Executive Officer's Notice of Applicability (NOA), and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of the Regional Water Board.

Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained

prior to mixing with the receiving waters. Samples shall be collected at such point and in such manner to assure a representative sample of the discharge.

1.2. Supplemental Monitoring Provision

If the Permittee monitors any pollutant more frequently than required by this MRP, using test procedures approved by 40 C.F.R. part 136 or as specified in this MRP or the General Order, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the annual self-monitoring report.

1.3. Data Quality Assurance Provision

Laboratories analyzing monitoring samples shall be certified by the State Water Resources Control Board (State Water Board) in accordance with the provisions of Water Code section 13176 and must include quality assurance/quality control data with their analytical reports. The Permittee may analyze pollutants with short hold times (e.g., pH, chlorine residual, etc.) with field equipment or an on-site laboratory provided that the Permittee has standard operating procedures (SOPs) that identify quality assurance/quality control procedures to be followed to ensure accurate results.

The Permittee shall keep a manual onsite containing the steps followed in this program and must demonstrate sufficient capability to adequately perform these field tests (e.g., qualified, and trained employees, properly calibrated and maintained field instruments). The program shall conform to U.S. EPA guidelines or other approved procedures.

1.4. Instrumental and Calibration Provision

All monitoring instruments and devices used by the Permittee to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated no less than the manufacturer's recommended intervals or one-year intervals (whichever comes first) to ensure continued accuracy of the devices.

1.5. Field Test Instruments

Field test instruments (such as those used to test pH, dissolved oxygen, electrical conductivity, and turbidity) may be used provided that the samples are analyzed by a State Water Board certified laboratory, or:

- 1.5.1. The user is trained in proper use and maintenance of the instruments;
- 1.5.2. All readings are properly recorded and records maintained;
- 1.5.3. The instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer;

1.5.4. Instruments are serviced by the manufacturer or authorized representative at the recommended frequency; and

1.5.5. Field calibration reports are maintained and available for at least three years.

1.6. **Minimum Levels (ML) and Analytical Method Selection**

1.6.1. U.S. EPA published regulations for the Sufficiently Sensitive Methods Rule (SSM Rule) which became effective September 18, 2015. Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 C.F.R. 136, Guidelines Establishing Test Procedures for Analysis of Pollutants. All analyses shall be conducted using the lowest practical quantitation limit achievable using U.S. EPA approved methods. For the purposes of the NPDES program, when more than one test procedure is approved under 40 C.F.R., part 136 for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv). A U.S. EPA-approved analytical method is sufficiently sensitive where:

1.6.1.1. The Minimum Level (ML) is at or below both the level of the applicable water quality criterion/objective and the permit limitation for the measured pollutant or pollutant parameter; or

1.6.1.2. In permit applications, the ML is above the applicable water quality criterion/objective, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

1.6.1.3. The method has the lowest ML of the U.S. EPA-approved analytical methods where none of the U.S. EPA-approved analytical methods for a pollutant can achieve the MLs necessary to assess the need for effluent limitations or to monitor compliance with a permit limitation.

1.6.2. Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analysis for toxics listed by the California Toxics Rule (CTR) shall also adhere to guidance and requirements contained in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2005) (SIP). However, there may be situations when analytical methods are published with MLs that are more sensitive than the MLs for analytical methods listed in the SIP. For instance, U.S. EPA Method 1631E for mercury is not currently listed in SIP Appendix 4, but it is published with an ML of 0.5 ng/L that makes it a sufficiently sensitive analytical method. Similarly, U.S. EPA Method 245.7 for mercury is published with a ML of 5 ng/L.

2. MONITORING LOCATIONS

2.1 The Permittee shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in the General Order.

TABLE E-1. MONITORING STATION LOCATIONS

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	The point of discharge, within Western Tributary, approximately 50 feet upstream of the confluence of Redwood Creek and Western Tributary.
002	EFF-002	The point of discharge to the cooling gallery, within Western Tributary, approximately 300 feet upstream of the confluence of Redwood Creek and Western Tributary.
---	PND-001	Western Pond, near the entrance of the outlet pipe and prior to discharge to Western Tributary.
---	PND-002	Eastern Pond, near the entrance of the connection pipe that flows to Western Pond and/or Western Tributary.
---	RSW-001	Upstream receiving water monitoring location in Redwood Creek, approximately 120 feet upstream of the confluence of Redwood Creek and Western Tributary and at a location that is not influenced by the discharge.
---	RSW-002	Downstream receiving water monitoring location in Redwood Creek, in an area influenced by Discharge Point 001. This monitoring location is approximately 200 feet downstream of the confluence of Redwood Creek and Western Tributary.

3. EFFLUENT MONITORING REQUIREMENTS

3.1. Monitoring Locations EFF-001 and EFF-002

3.1.1. Effluent monitoring is required during periods of discharge of water from the Storage Ponds to Western Tributary/Redwood Creek. The Permittee shall indicate periods of no discharge in the annual self-monitoring reports.

3.1.2. While discharging to Discharge Point 001, the Permittee shall monitor the effluent at Monitoring Location EFF-001 as follows.

TABLE E-2. EFFLUENT MONITORING – MONITORING LOCATION EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Effluent Flow ⁽¹⁾	gallons	Meter ⁽²⁾	Daily ⁽³⁾
Dissolved Oxygen	mg/L	Meter	Daily
Temperature	°C	Meter	Daily
pH	S.U.	Meter	Bi-Weekly ⁽⁴⁾
Turbidity	NTU	Meter	Monthly ⁽⁴⁾

Table Notes

1. The effluent flow shall be reported as total gallons and calculated flow rate (gallons per minute).
2. Initial flow measurements may be calculated manually using cross-section and velocity measurements until an appropriate flow meter/flow sensor can be sourced.
3. Initial flow monitoring may be completed at a reduced rate until an appropriate flow meter/flow sensor can be sourced. Unit such time, the flow rate shall be recorded each time the flow release rate is changed or verified.
4. After the first year of monitoring, at the request of the Permittee the Regional Water Board may, at its Executive Officer’s discretion, and after receiving and analyzing the required water quality monitoring data, choose to reduce and/or eliminate certain monitoring requirements for constituents that have demonstrated no potential to exceed water quality objectives.

3.1.3. While discharging to Discharge Point 002, the Permittee shall monitor the effluent at Monitoring Location EFF-002 as follows.

TABLE E-3. EFFLUENT MONITORING – MONITORING LOCATION EFF-002

Parameter	Units	Sample Type	Minimum Sampling Frequency
Effluent Flow ⁽¹⁾	gallons	Meter ⁽²⁾	Daily ⁽³⁾
Dissolved Oxygen	mg/L	Meter	Daily
Temperature	°C	Meter	Daily
pH	S.U.	Meter	Bi-Weekly ⁽⁴⁾
Turbidity	NTU	Meter	Monthly ⁽⁴⁾

Table Notes

1. The effluent flow shall be reported as total gallons and calculated flow rate (gallons per minute).
2. Initial flow measurements may be calculated manually using cross-section and velocity measurements until an appropriate flow meter/flow sensor can be sourced.
3. Initial flow monitoring may be completed at a reduced rate until an appropriate flow meter/flow sensor can be sourced. Until such time, the flow rate shall be recorded each time the flow release rate is changed or verified.
4. After the first year of monitoring, at the request of the Permittee the Regional Water Board may, at its Executive Officer’s discretion, and after receiving and analyzing the required water quality monitoring data, choose to reduce and/or eliminate certain monitoring requirements for constituents that have demonstrated no potential to exceed water quality objectives.

4. RECEIVING WATER MONITORING REQUIREMENTS

4.1. Monitoring Location RSW-001

4.1.1. The Permittee shall monitor the receiving water at Monitoring Location RSW-001 during periods of discharge to Western Tributary.

TABLE E-4. RECEIVING WATER MONITORING – MONITORING LOCATION RSW-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	GPM	Gage	Bi-Weekly
Dissolved Oxygen	mg/L	Meter	Daily
Temperature	°C	Meter	Daily
pH	S.U.	Meter	Bi-Weekly ⁽¹⁾

Parameter	Units	Sample Type	Minimum Sampling Frequency
Turbidity	NTU	Meter	Monthly ⁽¹⁾

Table Notes

1. After the first year of monitoring, at the request of the Permittee the Regional Water Board may, at its Executive Officer's discretion, and after receiving and analyzing the required water quality monitoring data, choose to reduce and/or eliminate certain monitoring requirements for constituents that have demonstrated no potential to exceed water quality objectives.

4.2. Monitoring Location RSW-002

- 4.2.1. The Permittee shall monitor the receiving water at Monitoring Location RSW-002 during periods of discharge to Western Tributary.

TABLE E-5. RECEIVING WATER MONITORING – MONITORING LOCATIONS RSW-002

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	GPM	Gage	Bi-Weekly
Dissolved Oxygen	mg/L	Meter	Daily
Temperature	°C	Meter	Daily
pH	S.U.	Meter	Bi-Weekly ⁽¹⁾
Turbidity	NTU	Meter	Monthly ⁽¹⁾

Table Notes

1. After the first year of monitoring, at the request of the Permittee the Regional Water Board may, at its Executive Officer's discretion, and after receiving and analyzing the required water quality monitoring data, choose to reduce and/or eliminate certain monitoring requirements for constituents that have demonstrated no potential to exceed water quality objectives.

5. OTHER MONITORING REQUIREMENTS

5.1. Visual Monitoring

- 5.1.1. Visual observations of the discharge point (Monitoring Locations EFF-001 and EFF-002), the receiving water (Monitoring Locations RSW-001 and RSW-002), and from Western Pond and Eastern Pond (Monitoring Locations PND-001 and PND-002) shall be recorded prior to and at the start of each seasonal discharge. Visual monitoring of the discharge point shall include, but not be limited to,

observations for color, turbidity, floating or suspended matter or debris. Visual observations for the receiving water shall include, but not be limited to observations for the occurrence of erosion and scouring, turbidity, solids deposition, unusual aquatic growth, etc. Visual observations shall be recorded and included in the Permittee's monitoring reports submitted to the Regional Board.

- 5.1.2. The Permittee shall take photographs of the discharge point and receiving water at Monitoring Locations EFF-001, EFF-002, RSW-001, and RSW-002 at the start of each seasonal discharge. The photographs shall be labeled with a date and time and shall be included with monitoring reports submitted to the Regional Water Board.

5.2. Other Monitoring

- 5.2.1. When granting authorization to discharge under the General Order, the Executive Officer may stipulate conditions in addition to the requirements described by the General Order for all authorized discharges, including monitoring requirements, for a specific discharge. Such monitoring requirements shall become enforceable requirements of the General Order and may include effluent and/or receiving water monitoring requirements.

Low threat discharges that continue for more than one year may be required to monitor for any toxic pollutants for which water quality criteria or objectives have been established for the receiving stream. For example, this additional monitoring requirement may be applied to any discharge for which pre-project sampling revealed levels of any toxic pollutant that was below the applicable water quality criteria. This additional monitoring requirement may be stipulated in the authorization letter or may be requested at a later date if Regional Water Board staff determines that this requirement is necessary to assure water quality protection. Monitoring for the toxic pollutants will provide on-going characterization of authorized discharges and assurance that toxic pollutants are not present in the concentrations that exceed applicable water quality criteria and objectives.

6. REPORTING REQUIREMENTS

6.1. General Monitoring and Reporting Requirements

- 6.1.1. The Permittee shall comply with all Standard Provisions (Attachment D) of the General Order related to monitoring, reporting, and recordkeeping.

6.2. Annual Self-Monitoring Reports

- 6.2.1. The Permittee shall electronically submit Self-Monitoring Reports (eSMRs) using the State Water Board's [California Integrated Water Quality System \(CIWQS\)](#)

[Program Web site](http://www.waterboards.ca.gov/ciwqs/index.html) (<http://www.waterboards.ca.gov/ciwqs/index.html>). The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal. The Permittee shall maintain sufficient staffing and resources to ensure it submits eSMRs that are complete and timely. This includes provision of training and supervision of individuals (e.g., Permittee personnel or consultant) on how to prepare and submit eSMRs.

- 6.2.2. The Permittee shall report in the SMR the results for all monitoring specified in this MRP under sections 3 through 5. The Permittee shall submit **annual** SMRs including the results of all required monitoring using U.S. EPA approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Permittee monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
- 6.2.3. Self-Monitoring Reports shall include all monitoring completed for the monitoring period of **January 1 through December 31**, annually.
- 6.2.4. Self-Monitoring Reports shall be submitted by **March 31**, annually, following the preceding monitoring period.
- 6.2.5. All monitoring results reported shall be supported by the inclusion of the complete analytical report from the laboratory that conducted the analyses, when applicable.
- 6.2.6. The Permittee shall report with each laboratory sample result the applicable ML, the Reporting Level (RL), and the current Minimum Detection Level (MDL), as determined by the procedure in 40 C.F.R. part 136.
- 6.2.7. The Permittee shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:
 - 6.2.7.1. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
 - 6.2.7.2. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.
 - 6.2.7.3. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated

Concentration” (may be shortened to “Est. Conc.”). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (\pm a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- 6.2.7.4. Sample results less than the laboratory’s MDL shall be reported as “Not Detected,” or ND.
- 6.2.7.5. The Permittee is to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve
- 6.2.8. The Permittee shall submit all eSMRs in accordance with the following requirements:
 - 6.2.8.1. The Permittee shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the Facility is operating in compliance with interim and/or final effluent limitations. The reported data shall include calculations of all effluent limitations that require averaging, taking of a median, or other computation. The Permittee is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Permittee shall electronically submit the data in a tabular format as an attachment.
 - 6.2.8.2. The Permittee shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify:
 - 6.2.8.2.1. Facility/Project name and address;
 - 6.2.8.2.2. WDID number;
 - 6.2.8.2.3. Applicable period of monitoring and reporting;
 - 6.2.8.2.4. Any variations from the Notice of Intent (NOI);
 - 6.2.8.2.5. A brief evaluation of the effectiveness of all treatment methods and/or management measures implemented;
 - 6.2.8.2.6. Whether the discharge resulted in observable changes or impacts in the receiving water, including, but not limited to, discoloration or turbidity and an explanation of upstream and downstream conditions identified in the receiving water monitoring required by section 4.1 of this MRP;

6.2.8.2.7. Identification and explanation of any complaints caused by the discharge;

6.2.8.2.8. Violations of the General Order (identified violations must include a description of the requirement that was violated and a description of the violation);

6.2.8.2.9. Corrective actions taken or planned; and

6.2.8.2.10. The proposed time schedule for corrective actions.

6.2.8.3. eSMRs must be submitted to the Regional Water Board, signed, and certified as required by the Standard Provisions (Attachment D) of the General Order, to the CIWQS Program [Website](#).

6.2.8.4. In the event that an alternate method for submittal of electronic self-monitoring reports is required, the Permittee shall submit electronically via email to NorthCoast@waterboards.ca.gov or on disk (CD or DVD) in Portable Document Format (PDF) file in lieu of paper-sourced documents. The guidelines for electronic submittal of documents can be found on the Regional Water Board website at <http://waterboards.ca.gov/northcoast>.

6.3. Other Reports

6.3.1. Notice of Discharge Event

The Permittee shall provide the appropriate Regional Water Board staff person written notification by email at least three (3) days before initiating an authorized discharge, unless a shorter notification period is authorized by the Executive Officer.

6.3.2. Notice of Termination

6.3.2.1. Within 30 days following permanent termination of the authorized discharge covered under the General Order, the Permittee shall provide notice that the authorized discharge has been discontinued using the Notice of Termination (NOT) form provided as Attachment G of the General Order.

6.4. Spills Notification

6.4.1. Spills and Unauthorized Discharges

Information regarding all spills and unauthorized discharges that may endanger health, or the environment shall be provided orally and by email to the Regional Water Board as soon as possible, but no later than 24 hours from the time the Permittee becomes aware of the circumstances and a written report shall also be provided within five (5) days of the time the Permittee becomes aware of the

circumstances, in accordance with section V.E of Attachment D of the General Order.

- 6.4.1.1. Information to be provided verbally and by email to the Regional Water Board includes:
 - 6.4.1.1.1. Name and contact information of caller;
 - 6.4.1.1.2. Date, time, and location of spill or unauthorized discharge occurrence;
 - 6.4.1.1.3. Estimates of spill or unauthorized discharge volume, rate of flow, and spill duration, if available and reasonably accurate;
 - 6.4.1.1.4. Surface water bodies impacted, if any;
 - 6.4.1.1.5. Cause of spill or unauthorized discharge, if known at the time of notification;
 - 6.4.1.1.6. Cleanup actions taken or repairs made at the time of the notification; and
 - 6.4.1.1.7. Responding agencies.
- 6.4.1.2. The written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

Ordered By: _____

Valerie Quinto
Executive Officer

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ATTACHMENT A-1 MONITORING LOCATION MAP

