

Order R1-2026-0035

**General Waste Discharge Requirements for Commercial Lily Bulb Operations in
the Smith River Plain**

Attachment A: Monitoring and Reporting Program

Attachment A: Monitoring and Reporting Program

Table of Contents

I. Summary	1
II. Master Schedule	2
III. Monitoring Requirements	4
A. Surface Water Monitoring	4
B. Groundwater Monitoring	13
IV. Reporting Requirements	17
A. Annual Compliance Report	17
V. Modifications to the MRP	24
VII. MRP Endnotes	25

Attachment A: Monitoring and Reporting Program

I. Summary

This Monitoring and Reporting Program (MRP) is issued pursuant to California Water Code section 13267, which authorizes the North Coast Water Board to require the preparation and submittal of technical and monitoring reports. The Executive Officer may modify this MRP as necessary or appropriate. This MRP establishes monitoring and reporting requirements for both Individual Enrollees and Coalitions acting on behalf of their enrolled members to evaluate compliance with the provisions of the General Order and to determine whether state waters receiving discharges from enrolled parcels are achieving applicable water quality goals. See Section I.E of the Order for additional Findings regarding this MRP.

This MRP establishes specific monitoring, reporting, and electronic data deliverable requirements for Coalition Members and Individual Enrollees. This Monitoring and Reporting Program (MRP) consists of the following elements: (1) Surface Water Monitoring; (2) Groundwater Trend Monitoring; (3) Drinking Water Supply Well Monitoring; and (4) Reporting.

- 1) Surface Water Monitoring: The objectives of the Surface Water Monitoring program are to: (1) monitor synthetic pesticide and dissolved copper concentrations in surface waters downstream from Commercial Lily Bulb Operations; (2) evaluate if discharges from Commercial Lily Bulb Operations are causing or contributing to exceedances of Water Quality Benchmarks in surface waters receiving those discharges or otherwise adversely affecting beneficial uses; and (3) support improvement of on-farm management practices through an iterative Adaptive Management Program (see Section II.H of this Order) designed to achieve the Receiving Water Limitations and conditions of this Order.
- 2) Groundwater Trend Monitoring: The objectives of Groundwater Trend Monitoring are to: (1) determine current water quality conditions of groundwater relevant to Commercial Lily Bulb Operations, (2) develop long-term groundwater quality information with respect to the pollutants of concern that can be used to evaluate the regional impacts of lily bulb farming and its practices on groundwater quality and beneficial uses, and (3) support improvement of on-farm management practices through an iterative Adaptive Management Program (see Section II.H of this Order) designed to achieve the Receiving Water Limitations and conditions of this Order.
- 3) Drinking Water Supply Well Monitoring: The purpose of the Drinking Water Supply Well Monitoring Program is to identify potential human health impacts from nitrate and pesticides and notify groundwater well users of nitrate or pesticides concentrations above a Maximum Contaminant Level (MCL) or human health level for drinking water wells located on parcels commercially farmed for lily bulbs.

- 4) Reporting: Reporting requirements consist of an Annual Compliance Report submitted to the North Coast Water Board by either the Individual Enrollee or the Coalition on behalf of its members. Annual Compliance Reports include an inventory of management practices implemented by Enrollees, Enrollee education event attendance, CEQA Mitigation Monitoring, water quality monitoring results. , and actions taken to meet Receiving Water Limitations and Order conditions, including but not limited to, revised or additional management practices implemented along with an evaluation of monitoring data to identify spatial trends and patterns.

II. Master Schedule

- 1) A schedule of Monitoring and Reporting is provided in Table A.1 below. All Enrollees shall participate in the monitoring requirements, below. The Coalition may perform Surface Water Monitoring and Groundwater Trend Monitoring on behalf of its enrolled Members.
- 2) Enrollees or the Coalition may request an extension of a deadline in this MRP by submitting a Request for Extension to the Executive Officer 60 days prior to the deadline. The request shall include an explanation of the anticipated inability to meet the deadline and a proposed time schedule to come into compliance with this MRP.

Table A.1: Water Quality Monitoring Master Schedule

Requirement	Frequency	Parameters	Where to Report
Surface Water Monitoring (see Section III.A)	3 times per year during the storm season	Dissolved copper and pesticides	Annual Compliance Report
Groundwater Trend Monitoring (see Section III.B)	Annually or once every three years in October	Nitrate and pesticides	Annual Compliance Report
Drinking Water Well Sampling (See Section III.B)	Annually or once every three years	Nitrate and pesticides	Submitted to GeoTracker

Table A.2: Reporting Master Schedule

Requirement	Elements of Report	Submittal deadline to North Coast Water Board and Frequency
Annual Compliance Report (see Section IV.A)	Farm Evaluation, annual water quality monitoring results and adaptive management reporting, compliance education event attendance, and CEQA Mitigation Measures	By <u>March 1, 2028</u> , and by <u>March 1st</u> annually thereafter.

III. Monitoring Requirements

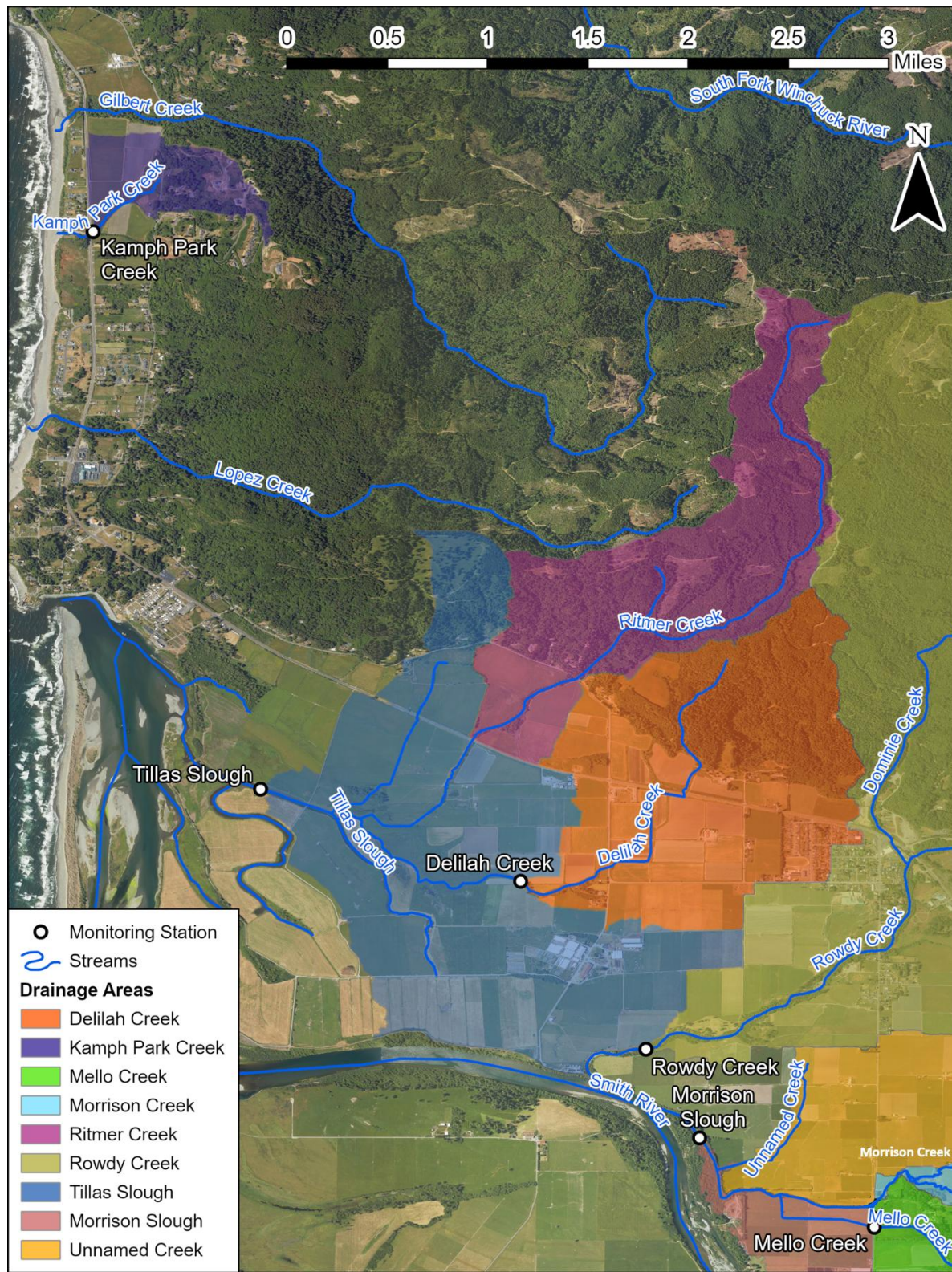
A. Surface Water Monitoring

- 1) Overview: Surface Water Monitoring must provide sufficient data to: 1) determine whether surface waters downstream of Commercial Lily Bulb Operations meet applicable Water Quality Benchmarks; 2) trigger adaptive management where existing practices are insufficient to prevent, minimize or eliminate discharges which cause or contribute to exceedances of Water Quality Benchmarks in receiving waters; and 3) track trends in surface water quality associated with discharges from lily bulb operations. Surface waters shall be monitored for the parameters and at the frequency listed in Table A.3.
- 2) Locations: Surface water monitoring stations shall be as far downstream of lily bulb operations¹ in each tributary as possible considering site accessibility. Surface water monitoring stations, including corresponding GPS coordinates and station descriptions, are identified in Table A.3 and shown on Figure A.1. Provisions that pertain to modifications to surface water monitoring locations are located in Section V of this MRP. Sampling Mello Creek is optional; if the Mello Creek monitoring station is sampled, the monitoring results shall apply to all fields tributary to that monitoring station for that year and the monitoring results must be reported to the North Coast Water Board.

Table A.3: Surface Water Monitoring Locations

Tributary	Description	GPS Coordinates
Tillas Slough	Upstream side of culvert crossing near relic irrigation pumps	41.93313°, -124.19067°
Delilah Creek	Low water ford downstream of large spruce tree	41.926645°, -124.171889°
Morrison Creek at Morrison Slough	Morrison Creek upstream of confluence with Morrison Slough	41.90809°, -124.15879°
Mello Creek* <i>*optional sampling</i>	Channel on east side of Fred Haight Drive about 300 feet south of culvert crossing	41.90132° -124.14635°
Rowdy Creek	Right bank accessed off levee road	41.91466°, -124.16284°
Kamph Park Creek	Unnamed creek at location downstream of Highway 101 near Post mile 44.69	41.973210°, --124.203566°

Figure A.1: Surface Water Monitoring Stations with Watersheds



- 3) **Sampling Schedule:** Surface water monitoring shall be conducted during a Major Storm event within each of the three annual sampling windows identified in Table A.5. The Winter Sampling Event shall occur during a Major Storm event between February 1 and March 31. The Spring Sampling Event shall occur during a Major Storm event between April 1 and June 30. The Fall Sampling Event shall occur during a Major Storm event between October 1 and December 31. Samples shall be collected after cumulative precipitation from a Major Storm event reaches one inch and before cumulative precipitation exceeds three inches within a 24-hour period. Sample collection shall occur within 24 hours after the one-inch threshold is reached. Samples collected from the Tillas Slough monitoring station shall be collected during an ebb tide. Refer to Attachment D, Section I, for procedures used to determine the occurrence of a Major Storm event.
- 4) **Parameters and Frequency:** Surface waters shall be monitored for synthetic pesticides, dissolved copper (and parameters necessary to run the BLM) according to the schedule shown in Table A.4. Analytical requirements are as follows:
- a) Dissolved copper: all three Sampling Events.
 - b) Imidacloprid: Spring and Fall Sampling Events, and the Winter Sampling Event if any Field(s) tributary to the monitoring station are in adaptive management for imidacloprid (see Section II.H of the Order).
 - c) Diuron: Winter and Spring Sampling Events.
 - d) Ethoprop: Fall Sampling Event.

Table A.4: Surface Water Parameters and Annual Sampling Frequency

Parameter	Winter Sampling Event (Feb 1–Mar 31)	Spring Sampling Event (Apr 1–Jun 30)	Fall Sampling Event (Oct 1–Dec 31)	Sampling Events per Year
Dissolved Copper	●	●	●	3
Diuron	●	●		2
Imidacloprid	○	●	●	2–3
Ethoprop			●	1

● = monitored at this event.

○ = monitored only when fields tributary to the monitoring station are in Adaptive Management for that constituent.

- 5) Water Quality Benchmarks: Surface waters shall be monitored for the parameters listed in Table A.5 and evaluated against the corresponding Water Quality Benchmark.

Table A.5: Surface Water Monitoring Parameters and Water Quality Benchmarks²

Parameter	Analytical Method	Water Quality Benchmark	Water Quality Benchmark Exceedance
Dissolved Copper (and associated BLM input parameters; see Table A.6 or A.7)	EPA Method 1640	Toxicity Unit ³ <1 (Acute and Chronic)	Two exceedances of the Chronic BLM-IWQC ⁴ in a calendar year -OR- a single exceedance of the Acute BLM-IWQC.
Diuron	EPA Method 632	Acute: 87.5 ug/L Chronic: 0.83 ug/L	Two exceedances of the chronic value in a calendar year -OR- a single exceedance of the acute.
Diuron (salinity ≥ 1 ppt)	EPA Method 632	Acute: 600 ug/L Chronic: 3.08 ug/L	Two exceedances of the chronic value in a calendar year -OR- a single exceedance of the acute.
Imidacloprid	EPA Method 525	Acute: 0.385 ug/L Chronic: 0.01 ug/L	Two exceedances of the chronic value in a calendar year -OR- a single exceedance of the acute.
Imidacloprid (salinity ≥ 1 ppt)	EPA Method 525	Acute: 16.5 ug/L	A single exceedance of the acute.
Ethoprop ⁵	EPA Method 525	Acute: 22 ug/L Chronic: 0.37 ug/L	Two exceedances of the chronic value in a calendar year -OR- a single exceedance of the acute.
Ethoprop ⁶ (salinity ≥ ppt)	EPA Method 525	Acute: 3.15 ug/L Chronic: 2.0 ug/L	Two exceedances of the chronic Water Quality Benchmark in a calendar - OR- a single exceedance of the acute.

- 6) **Biotic Ligand Model:** Dissolved copper Toxicity Units shall be calculated using the Biotic Ligand Model (BLM). For a copy of the BLM software and user's guide please contact Kathryn Gallagher (gallagher.kathryn@epa.gov) and refer to guidance at the USEPA's Copper Biotic Ligand Model webpage: <https://www.epa.gov/wqs-tech/copper-biotic-ligand-model>

Enrollees and/or a Coalition have two options for calculating dissolved copper Toxicity Units when surface water salinity is less than 1 part per thousand. When surface water salinity is greater than or equal to 1 part per thousand, Option 2 below shall be used:

- a) **Option 1:** Collect only the parameters required in Table A.6 and use the tributary-specific default values provided in Table A.6 for all other parameters;
or
- b) **Option 2:** Collect all parameters listed in Table A.7 to independently run the BLM to generate instantaneous water quality criteria to determine whether the Water Quality Benchmark has been exceeded.

Table A.6: Option 1, BLM Constituent Analytes and tributary-specific default values for BLM Analysis (parameters to measure indicated with italics)

Parameter (mg/L)	Tillas Slough	Delilah Creek	Rowdy Creek	Morrison Creek at Morrison Slough	Mello Creek	Kamph Park Creek ⁷
<i>Dissolved Copper</i>	EPA Method 1640	EPA Method 1640	EPA Method 1640	EPA Method 1640	EPA Method 1640	EPA Method 1640
<i>pH, Temperature, Specific Conductivity, Salinity</i>	Field measure	Field measure	Field measure	Field measure	Field measure	Field measure
Alkalinity	50	14	43	19	17	24
Calcium	9.7	6.0	4.7	4.8	4.7	4.1
Dissolved Organic Carbon	3.6	1.7	0.8	1.3	1.5	3.1
Magnesium	14	3.7	6.2	2.3	2.5	3.4
Potassium	3.6	1.2	0.7	1.0	1.0	1.5

Parameter (mg/L)	Tillas Slough	Delilah Creek	Rowdy Creek	Morrison Creek at Morrison Slough	Mello Creek	Kamph Park Creek⁷
Sodium	46	7.0	3.9	4.9	4.6	11
Sulfate	19	3.8	2.3	2.8	3.8	2.7
Sulfide	0	0	0	0	0	0
Chloride, Total	116	9.9	3.8	5.5	5.8	17

Table A.7: Option 2, BLM Constituent Analytes to collect for BLM Analysis

Parameter	Analytical Method	Parameter	Analysis Type
Dissolved Copper	EPA Method 1640	Dissolved Organic Carbon	SM 5310B
pH	Field Measure	Magnesium	EPA Method 200.7
Temperature	Field Measure	Potassium	EPA Method 200.7
Specific Conductivity	Field Measure	Sodium	EPA Method 200.7
Salinity	Field Measure	Sulfate	EPA Method 300.0
Alkalinity	EPA Method 2320B	Sulfide	SM 4500S2
Calcium	EPA Method 200.7	Chloride, Total	EPA Method 300.0

- 7) **Results:** If a Water Quality Benchmark is exceeded for any applicable parameter in Table A.5, Enrollees shall refer to Table A.8 below to determine which Field(s) in the tributary area in the year the sample was collected are required to comply with the Adaptive Management Program in Section II.H of this Order

Table A.8: Fields Subject to Adaptive Management upon Benchmark Exceedance, by Sampling Event and Constituent

Constituent	Winter Event (February–March)	Spring Event (April–June)	Fall Event (October–December)
Dissolved Copper	Current cultivation fields	Current cultivation fields	Previous season fields (most recently harvested)
Diuron	Current cultivation fields	Current cultivation fields	Not monitored
Imidacloprid	Current cultivation fields*	Current cultivation fields	Previous season fields (most recently harvested)
Ethoprop	Not monitored	Not monitored	Current cultivation fields

* Imidacloprid is sampled at the Winter Event only when fields tributary to the monitoring station are in Adaptive Management for imidacloprid.

- 8) **Reporting:** The results of Surface Water Monitoring shall be reported annually in the Annual Compliance Report.
- 9) **Noticing:** North Coast Water Board staff may observe any field sampling event or collect split or duplicate samples at any monitoring location regulated under this MRP. The Enrollee(s) or Coalition conducting the sampling shall notify North Coast Water Board staff 24 hours in advance of an anticipated sampling event, Enrollees shall cooperate with North Coast Water Board staff and provide necessary site access and information on sampling schedules when requested.

Edge-of-Field Monitoring for Adaptive Management Program (Optional)

10) Enrollees may implement an individual Sampling Plan to directly demonstrate that applicable Water Quality Benchmarks identified in Table A.5 for the exceeded parameter are being met at Edge-Of-Field Discharge Point(s) in the lily bulb Field. If Water Quality Benchmarks are being met, that Field is exempted from Adaptive Management requirements despite continued exceedances at the downstream monitoring station. If this option is selected, the Enrollee must comply with the following requirements:

- a) Sampling Plan: By **March 1st** of the year the applicable Field(s) are planted, the Enrollee shall develop and submit an individual Sampling Plan to the Executive Officer for review and approval that identifies all Edge-of-Field Discharge Point(s) for the applicable Field(s) in the Adaptive Management Program. The Sampling Plan shall include a Field description; the number and location of individual sampling points to adequately characterize the majority of the discharge from the Field based on its typical discharge patterns; a map of the Field(s) with drainage patterns and planned sampling points identified; and a QAPP section with a description of sample collection procedures and a description of how samples will be handled, transported, and received by the laboratory.
- b) Sampling Requirements: Enrollees shall refer to Tables A.4-A.7 for the list of parameters that need to be analyzed and the appropriate types of analyses. Enrollees must sample their Edge-of-Field Discharge Point(s) concurrent with the sampling at the downstream monitoring station. Enrollees shall refer to sampling and handling instructions in Attachment D: Methodologies and Procedures.
- c) Sampling Analysis: A laboratory that is certified by the State Water Board's Environmental Laboratory Accreditation Program (ELAP) shall conduct all laboratory analyses according to standard methodologies (e.g., USEPA methods and/or Standard Methods for the Examination of Water and Wastewater). Laboratory analytical methods must be included in the QAPP section. The QAPP section shall include the laboratory's Standard Operating Procedures (SOPs).
- d) Reporting: Individual Enrollees shall upload all data collected in the Edge-of-Field Sampling Plan to GeoTracker in accordance with Section IV.A of this MRP. Coalition Members may submit their Edge-of-Field Sampling data to the Coalition, which shall report data to the North Coast Water Board by watershed and Anonymous Field ID in the Annual Report.
- e) Results: If sampling indicates that Water Quality Benchmarks are being met at the edge-of-field, the Field is not subject to Adaptive Management requirements, even if the downstream monitoring station has exceeded a Water Quality Benchmark. Once this demonstration has been achieved, an

Enrollee must continue to implement their approved Edge-of-Field Sampling Plan to demonstrate compliance or an alternate method approved by the Executive Officer. If the Water Quality Benchmark is not met at the Edge-Of-Field location and the corresponding downstream surface water monitoring station also exceeds a Water Quality Benchmark for the same parameter within the same calendar year, the Field in question shall be escalated in Adaptive Management (e.g., if the Field was in Tier 1, the Field must escalate to Tier 2). The Enrollee shall select and implement the appropriate Adaptive Management requirement during the next crop production cycle.

B. Groundwater Monitoring

- 1) **Overview:** The purpose of the Groundwater Monitoring Program is to 1) characterize groundwater quality and trend in areas where lily bulbs are cultivated; 2) identify drinking water supply wells that may be impacted by Commercial Lily Bulb Operations; 3) notify users of those drinking water supply wells of Water Quality Benchmark exceedances; and 4) trigger adaptive management where existing practices are insufficient to prevent, minimize or eliminate discharges which cause or contribute to exceedances of Water Quality Benchmarks. The Program consists of two components:

- a) **Drinking Water Supply Well Monitoring:** conducted at all private Drinking Water Supply Wells located on an enrolled parcel to identify wells with nitrate or pesticide concentrations that may pose human health risks and to notify users of those risks.
- b) **Groundwater Trend Monitoring:** conducted at one representative monitoring well per Enrollee to characterize groundwater quality impacts from lily bulb agriculture.

Groundwater Trend Monitoring may be conducted by an Individual Enrollee or by a Coalition on behalf of its members. Drinking Water Supply Well Monitoring shall be conducted by the Enrollee. A monitored Drinking Water Supply Well may satisfy Groundwater Trend Monitoring requirements provided the well meets the representativeness criteria in Section B.2.b below.

- 2) **Monitoring Locations:** Enrollees shall select the following wells for monitoring:

- a) **Drinking Water Supply Wells:** Enrollees shall monitor all private Drinking Water Supply Wells located on an enrolled parcel. Sampling may cease at any well that is taken out of service or no longer provides drinking water because replacement water is being supplied. Enrollees shall keep records (for example, photographs or bottled-water receipts) establishing that the well is not used for drinking water.
- b) **Groundwater Trend Monitoring Wells:** Each Enrollee shall designate at least one representative monitoring well to characterize groundwater quality associated with all enrolled parcels. This requirement may be satisfied by an existing monitored Drinking Water Supply Well provided the well location and screen interval are representative of current groundwater quality conditions and suitable for evaluating aggregated regional impacts from Commercial Lily Bulb Operations in accordance with the Groundwater Trend Monitoring objective. Groundwater Trend Monitoring wells must be proposed to the North Coast Water Board in accordance with the following provisions:
 - i) By **July 1, 2027**, the Individual Enrollee, or the Coalition on behalf of

each of its members, shall propose a representative monitoring well that considers the following criteria for identifying areas that may be at higher risk of nitrate impacts to groundwater quality from lily bulb agriculture: (1) existing water quality data; (2) depth to groundwater with consideration given to selecting wells that best represent the groundwater zones most likely to be affected by lily bulb farming and where appropriate to evaluate potential nitrate migration to deeper aquifer; and (3) presence of wells in locations that are not influenced by other potential nitrogen sources (e.g., dairies) so that monitoring results reflect nitrate impacts associated with lily bulb farming. In addition to these criteria, the Enrollee or Coalition shall include the following information for each proposed Groundwater Trend Monitoring well:

1. Map and GPS coordinates;
2. California state well number, if known;
3. Total well depth;
4. Top and bottom depths of well casing perforations;
5. A copy of the water well driller's log, if available;
6. Depth of standing water (static water level), if available; and
7. Well seal information (type of material, length of seal).

Where complete well construction and location details are not available, the Enrollee shall provide well information to the maximum extent practicable to allow the Executive Officer to determine that the well is suitable for meeting the objectives of the Groundwater Monitoring Program.

- 3) Parameters. Each monitored well (Groundwater Trend Monitoring Wells and Drinking Water Supply Wells) shall be sampled for the parameters listed in Table A.9 and described below:

- a) Nitrate;
- b) Any pesticide listed in Table A.9 that the Enrollee has applied on any enrolled parcel in the previous five years; and
- c) The following field parameters: pH, conductivity (at 25 °C), temperature, and Total Dissolved Solids (TDS).

Table A.9: Groundwater Monitoring Parameters, Water Quality Benchmarks. Benchmark Exceedances and Analytical Methods

Parameter	Benchmark	Analytical Method
Diuron	Acute: 1,028 ug/L Chronic: 2.0 ug/L	EPA 632
Imidacloprid	Acute: 283 ug/L	EPA 632
Mefenoxam	Acute: 3,000 ug/L	EPA Method 525
Napropamide	Chronic: 710 ug/L	EPA Method 525
Nitrate	10 mg/L	SM4500-NO3-E

- 4) Frequency. Monitoring frequency is governed by the following provisions:
- a) Initial three years: Monitoring wells shall be sampled annually for three consecutive years. Annual samples for Groundwater Trend Monitoring wells shall be collected within the month of October. In lieu of one or more of the three initial annual sampling events, Enrollees may submit existing monitoring results from Drinking Water Supply Wells collected within three years prior to enrollment under this Order, provided the analyses were performed by an ELAP-certified laboratory using U.S. EPA-approved methods.
 - b) After three years of initial sampling: If the concentration of any parameter listed in Table A.9 exceeds either 5 mg/L of nitrate or a pesticide chronic Water Quality Benchmark in any annual sample, the Enrollee shall continue annual sampling for that parameter. Annual sampling shall continue until concentrations remain below 5 mg/L of nitrate and below all pesticide chronic Water Quality Benchmarks for three consecutive years, at which point the Enrollee may reduce the sampling frequency for that parameter to once every three years. If a subsequent exceedance occurs during reduced-frequency sampling, annual sampling shall resume.
 - c) Executive Officer discretion: The Executive Officer may at any time require an alternative sampling frequency for any monitored well based on evaluation of data.
- 5) Sampling methods. Samples shall be collected using proper sampling methods, chain-of-custody, and quality assurance/quality control protocols. Drinking Water Well samples shall be collected at or near the well head, before the pressure tank and prior to any well-head treatment. Where this is not possible, samples shall be

collected from a sampling point as close to the pressure tank as possible, or from a cold-water spigot located before any filters or water treatment systems.

- 6) Analytical methods. Laboratory analyses shall be conducted by an Environmental Laboratory Accreditation Program (ELAP)-certified laboratory using U.S. EPA-approved methods. Unless otherwise noted, all monitoring, sample preservation, and analyses shall be performed in accordance with the latest edition of Test Methods for Evaluating Solid Waste, SW-846, U.S. EPA, and analyzed by the methods and reporting limits identified in Table A.10. Certified laboratories are listed on the State Water Board's ELAP website (https://www.waterboards.ca.gov/drinking_water/certlic/labs/index.html).
- 7) Results. Enrollees are subject to groundwater Adaptive Management Program requirements (Section II.H of this Order) for any parameter listed in Table A.9 when either concentrations of the parameter statistically increase over three consecutive years, or there is a Water Quality Benchmark Exceedance of that parameter as specified in Table A.9. If a sample from a Drinking Water Supply Well exceeds a Water Quality Benchmark listed in Table A.9 the Enrollee must do the following:
 - a) Notice to well users: The Enrollee shall provide written notice to the drinking water well users within 10 days of learning of the exceedance and shall send a copy of the notice to the North Coast Water Board. The copy provided to the North Coast Water Board shall include a report of the number of people the well supplies.
 - b) Notice to non-Enrollee owner: If the Enrollee is not the owner of the parcel, the Enrollee may instead notify the owner within 24 hours of learning of the exceedance. The owner shall then notify the drinking water well users within nine days and send a copy of the notice to the North Coast Water Board.
 - c) Notification template and signature: Notification shall be made by providing a copy of the Drinking Water Notification Template approved by the Executive Officer in a language accessible to the well users. Enrollees may contact the North Coast Water Board for language assistance. The template shall be signed by the Enrollee or, where applicable, the non-Enrollee owner, certifying that notice has been provided. A copy of the signed template shall be sent to the North Coast Water Board and retained by the Enrollee or non-Enrollee owner.
- 8) Reporting. Results of groundwater monitoring shall be reported in accordance with the following provisions:
 - a) Drinking Water Supply Wells: All Drinking Water Supply Well monitoring data, shall be submitted electronically to the State Water Board's GeoTracker database by the testing laboratory. The data submitted shall include the Assessor's Parcel Number (APN) where the well is located and

the well's coordinates (latitude and longitude). The initial sampling event shall be completed in time to allow results to be submitted to GeoTracker by **March 1, 2028.**

- b) Groundwater Trend Monitoring Wells. Results of Groundwater Trend Monitoring shall be included annually in the Annual Compliance Report (see Section IV).

IV. Reporting Requirements

- 1) Enrollees shall comply with all reporting requirements and schedule outlined in Table A.2.
- 2) Individual Enrollees shall create a GeoTracker user account. Instructions for setting up an account and the process of claiming a site, formatting, and uploading data, and other technical information can be found under “ESI Overview” and “Getting Started” sections on the State Water Board’s website⁸. Drinking water well monitoring data and all analytical data required of Individual Enrollees shall be uploaded to GeoTracker in an Electronic Deliverable Format (EDF). Additionally, all monitoring reports, and correspondence shall be in searchable Portable Document Format (PDF) and shall be uploaded annually to GeoTracker.
- 3) Coalition Members shall submit all required reporting data through the Coalition except for the Certified WQMP, Groundwater Protection Plan, and the Drinking Water Well Sampling data, which shall be submitted directly to the North Coast Water Board and uploaded to GeoTracker respectively. The Coalition shall submit all required information as detailed in this section on behalf of its enrolled Members to the North Coast Water Board. Data required of Coalitions on behalf of their enrolled members shall be submitted to the North Coast Water Board in accordance with the requirements set forth in the following sections.
- 4) Information collected through the MRP shall be reported in the Annual Compliance Report as described in Section IV.A of this MRP.

A. Annual Compliance Report

- 1) Individual Enrollees shall complete and upload their Annual Compliance Report to GeoTracker by **March 1, 2028,** and by **March 1st** annually thereafter. A Coalition may submit one Annual Compliance Report on behalf of their enrolled members by **March 1, 2028,** and by **March 1st** annually thereafter.
- 2) The Annual Compliance Report for Individual Enrollees shall consist of the following elements (as also described in detail below in this section):
 - a) Farm Evaluation: Inventory of management practices to control the discharge of sediment, pesticides, and nutrients from the Farm Area and identification of wells, watercourses, and appurtenant structures. The Farm

Evaluation also includes Adaptive Management reporting.

- b) Compliance Education Event Attendance: The Enrollee shall report on the annual compliance education event attended in the previous year.
 - c) CEQA Mitigation Monitoring: The Enrollee shall report on the CEQA mitigation measures in Attachment E employed to comply with the provisions of the Order in the previous year.
 - d) Annual Water Quality Monitoring Results: Results from Surface Water Monitoring , Edge-of-Field monitoring (if applicable), and Groundwater Trend Monitoring. Drinking Water Well sampling is uploaded separately to GeoTracker and does not need to be included in the Annual Compliance Report.
- 3) The Annual Compliance Report that a Coalition may submit on behalf of its enrolled Members shall consist of:
- a) The Participant List: The Participant List shall include the Owner/Operator name, address, and total number of enrolled acres of all enrolled Members of the Coalition. The Participant List shall also identify Enrollees who are no longer Members of the Coalition and include a reason for non-participation including, but not limited to: (1) No longer farming/sold farm, or (2) Plan to enroll in the Order as an Individual Enrollee. Finally, the Participant List shall indicate which Fields are in the Adaptive Management Program as described in Section II.H of the Order, the parameters being addressed, Tier and compliance option of Adaptive Management, Fields not currently meeting Water Quality Benchmarks, and how many years each Field has been in the Adaptive Management Program for each applicable parameter.
 - b) Management practice implementation and adaptive management data from the most recently submitted Farm Evaluations: Enrollees shall submit information from their Farm Evaluations, which the Coalition shall report by an Anonymous Field ID.
 - c) Compliance Education Attendance: The Coalition shall report education event attendance for its enrolled Members by Member ID in accordance with Section II of this Order.
 - d) CEQA Mitigation Monitoring: The Coalition shall report the mitigation measures in Attachment E their members implemented to comply with the provisions of the Order. These mitigation measures shall be reported to the Coalition by the Enrollees and aggregated and submitted to the North Coast Water Board by Anonymous Field ID.
 - e) Annual Monitoring Report: Results from Surface Water Monitoring , Edge-of-Field monitoring (if applicable), and Groundwater Trend Monitoring.

Drinking Water Well sampling is uploaded separately to GeoTracker.

Farm Evaluation

- 4) All Enrollees shall complete an annual Farm Evaluation to inventory the management practices currently implemented on their Commercial Lily Bulb Operation and to identify any additional practices needed to prevent discharges that could cause or contribute to exceedances of water quality objectives or violate the Receiving Water Limitations in Section II.C. The Farm Evaluation shall include all Fields in lily bulb rotation, including fields planted to lily bulbs, fallow fields, and fields producing other crops that are part of the rotation. Fields may be exempt from Farm Evaluation reporting once they have been out of lily bulb production for five years or more.
- 5) Enrollees shall complete a Farm Evaluation each year for all enrolled Fields. Where this MRP requires reporting by Field, Enrollees may aggregate data for multiple Fields provided that the reported area has (1) the same fertilizer inputs, (2) the same irrigation management, and (3) the same management practices. Any Fields that are aggregated for reporting purposes in this way shall be referred to as a Management Unit and shall be defined, labeled and consistent across all reporting.
- 6) Enrollees may use the use the Farm Evaluation Template on the North Coast Water Board's website, or an alternative template which meets all below requirements. Individual Enrollees must report this completed template as part of their Annual Compliance Report. Enrollees in a Coalition shall report Farm Evaluation information to the Coalition and keep a copy of the completed Farm Evaluation template at their farming operations headquarters or primary place of business. At a minimum, the Farm Evaluation Template will require the following:
 - a) Owner/Operator Identification: The name, business address, mailing address, email address, phone number of the owner and operator (if different from owner).
 - b) Commercial Lily Bulb Operation Identification: Location(s) of parcel(s) that are part of the Farming operation⁹, including: (1) the address, (2) the Assessor Parcel Numbers (APNs), (3) the Drainage Area (see Figure A.1 for Drainage Areas) (4) the self-appointed Field ID¹⁰ of each enrolled APN, if applicable, and (5) the total acreage under cultivation for each APN.
 - c) Well Identification: The number of (1) irrigation wells, (2) Drinking Water Supply Wells, and (3) abandoned or inactive wells located within each enrolled APN. Each well shall be given a unique Well ID.
 - d) Farm Map: A Farm Map shall include all enrolled parcels and may be an aerial photograph, topographic map, LiDAR-derived shaded relief map, Google Earth image, or equivalent that depicts features at 1-inch = 50 feet

or larger scale. The farm base map(s) shall include a north arrow, scale bar, legend for any symbology, and labels on the following appurtenant features on all enrolled parcels:

- i) Field ID(s),
 - ii) Fields planted to lily bulbs. For all other fields, indicate land use (e.g., another crop, fallow, grazing, etc.).
 - ii) Farm buildings¹¹ and equipment yards; and
 - iii) Nutrient or pesticide handling and mixing sites, storage facilities, staging areas
- e) Compliance Education Event Attendance: At a minimum, the compliance education event attendance records shall include: date of annual event attended; type of event (e.g., in-person meeting, online video, printed materials), and brief description of topics covered.
- f) Management Practices: A list of management practices implemented within each Field to minimize and prevent erosion and the discharge of pollutants from the Farm Area, agricultural roads, and Streamside Areas. Enrollees shall report whether the minimum Streamside Area widths in Table II.1 are being met in each applicable Field and specify where minimum Streamside Area width is not being achieved, if applicable.
- g) Irrigation and Nutrient Management: (1) A list of management practices implemented within each Field to minimize or prevent discharges of nutrients to surface waters and to minimize leaching of nitrogen past the root zone, (2) Primary and secondary irrigation methods for each APN, and (3) irrigation management practices to minimize or prevent surface run-off or groundwater leaching, and (4) nitrogen applied lbs/acre in each Field either planted to lily bulbs or receiving an external source of nitrogen¹². Nitrogen applied shall be reported as follows:
- ii) Nitrogen applied via fertilizers (lbs./acre).
 - iii) Nitrogen applied via organics and compost (lbs./acre).
 - iv) Nitrogen applied via water (lbs./acre).
 - v) Total Nitrogen applied (lbs./acre) [sum of nitrogen from fertilizer, organics/compost, and all applied water].
- h) Adaptive Management Reporting (if applicable): For all Fields in the Adaptive Management Program, the Enrollee must report Adaptive Management Tier, indicate which parameter Adaptive Management is addressing and report the selected Adaptive Management Compliance

Option as specified in Section II.G of the Order.

- i) CEQA Mitigation Monitoring: The CEQA Mitigation Monitoring shall include information on the implementation of CEQA mitigation measures (as described in Attachment E of the Order), including the measure implemented, identified potential impact the measure addressed, parcel(s) where of the mitigation measure was employed, and any steps taken to monitor the ongoing success of the measure.
 - j) Certification of Maintenance: The Enrollee shall certify on their Farm Evaluation that all management practices are designed, installed, maintained, and promptly repaired in accordance with Section II of the Order.
- 7) The Coalition may submit Farm Evaluation data in the Annual Compliance Report in lieu of Enrollee submittal of their individual Farm Evaluations to the North Coast Water Board. The following data from the prior year's Farm Evaluations shall be reported to the North Coast Water Board for each Field in an Excel Workbook format and be accompanied by a quality assessment of the collected information (e.g., missing data, potentially incorrect/inaccurate reporting), and a description of corrective actions to be taken regarding any deficiencies in the quality of data submitted, if such deficiencies were identified:
- a) Anonymous Enrollee ID and Field number.
 - b) Anonymous APN Number
 - c) Drainage area Field is located (see Figure A.1)
 - d) Pesticide water quality management practices.
 - e) Sediment and erosion control management practices.
 - f) Irrigation and Nutrient Management reporting including:
 - i) Irrigation method.
 - ii) Irrigation practices.
 - iii) Nitrogen management practices and Nitrogen Applied through the following:
 - 1. Nitrogen applied via fertilizers (lbs./acre).
 - 2. Nitrogen applied via organics and compost (lbs./acre).
 - 3. Nitrogen applied via water (lbs./acre).

4. Total Nitrogen applied (lbs./acre) [sum of nitrogen from fertilizer, organics/compost, and all applied water].
- g) Number of irrigation wells (both active and inactive).
- h) Number of drinking water wells on the parcel.
- i) Compliance Education event date
- j) CEQA mitigation measure implemented on the parcel
- k) Adaptive Management Tier and Compliance Option (if applicable), and parameter for which Adaptive Management is being implemented.

Annual Water Quality Monitoring Results

- 8) The Annual Water Quality Monitoring results submittal shall include all Surface Water Monitoring, Groundwater Trend Monitoring, and Adaptive Management Program Edge-of-Field Sampling (if applicable) from the past crop year. Individual Enrollees shall upload all data into GeoTracker. The Coalition may submit data on behalf of its enrolled Members to the North Coast Water Board. Submittal deadlines are provided in the Master Schedule in Section II of this MRP.
- 9) All analytical data required of Individual Enrollees shall be uploaded to GeoTracker in an Electronic Deliverable Format (EDF). Additionally, monitoring data, monitoring reports, and correspondence shall be in searchable Portable Document Format (PDF) and shall be uploaded annually to GeoTracker. Data required of Coalitions on behalf of their enrolled Members shall be submitted to the North Coast Water Board in accordance with the requirements set forth in the following sections.

Surface Water Monitoring and Groundwater Trend Monitoring Data Submittal

- 10) The Enrollee or Coalition shall submit results using a template on the North Coast Water Board website or an alternate template approved by the Executive Officer. Data shall be submitted in an electronic format and include the following for the required reporting period:
 - a) Excel workbook containing all surface water data.
 - b) Excel workbook containing all groundwater monitoring data.
 - c) Electronic copies of all field sheets.
 - d) Electronic copies of all applicable laboratory analytical reports shall be submitted once per year with the Annual Compliance Report.
 - e) For chemistry data, analytical reports shall include, at a minimum, the following:

Attachment A: Monitoring and Reporting Program

- i) A lab narrative describing quality control failures.
 - ii) Analytical problems and anomalous occurrence.
 - iii) Chain of custody and sample receipt documentation.
 - iv) All sample results for contract and subcontract laboratories with units. Reporting Limits and Method Detection Limits.
 - v) Sample preparation, extraction, and analysis dates.
 - vi) Results for all quality control samples including all field and laboratory blanks, lab control spikes, matrix spikes, field and laboratory duplicates, and surrogate recoveries.
- 11) If any data is missing from the annual report, the submittal shall include a description of what data is missing and when it will be submitted to the North Coast Water Board.

Adaptive Management Program Edge-of-Field Data Submittal (if applicable)

- 12) Enrollees in the Adaptive Management Program who have elected to conduct Edge-of-Field Sampling shall submit data to the Coalition, which shall include these results in its Annual Compliance Report submittal to the North Coast Water Board. Individual Enrollees must submit Edge-of-Field sampling data directly to the North Coast Water Board.
- 13) The following information shall be reported for each applicable Field:
- a) Site description, including a map showing Field boundaries, drainage patterns, and Monitoring points
 - b) Analytical results submitted in a tabular format
 - c) Any exceedance(s) of Water Quality Benchmark
 - d) Data interpretation including assessment of compliance and/or noncompliance with Water Quality Benchmarks
 - e) Copy of chain of custody, submitted electronically
 - f) Associated laboratory and field quality control samples results, with summary of precision and accuracy
 - g) Quality control data interpretation, including assessment of data quality objectives

V. Modifications to the Monitoring and Reporting Program

- 1) The Executive Officer may revise the monitoring parameters, schedule, locations, frequencies, or protocols, and may require additional monitoring or third-party verification, as necessary to reflect changes in enrollment, trends in pesticide use, the emergence of pesticides of concern, the implementation of management practices, or to ensure the integrity and representativeness of monitoring data to meet the objectives of this MRP. For example, changes in pesticide use practices or emerging pesticides of concern may prompt modifications to monitoring parameters at the Executive Officer's discretion.
- 2) This MRP allows Enrollees or the Coalition to request modifications to monitoring schedules and/or frequencies after a sufficient amount of time has passed (e.g., 10 years) to determine that: (1) the Enrollee or Coalition has demonstrated overall compliance with requirements of the Order; and (2) monitoring data indicate that the Enrollee or group of Enrollees are not causing, contributing to, or threatening an exceedance of applicable water quality objectives or a condition or pollution or nuisance; or unreasonably affecting applicable beneficial uses. The request must be supported by applicable water quality monitoring data and applicable information to indicate Enrollee compliance with Order requirements (e.g., Farm Evaluation data, inspection reports, or information supplied by the Enrollee or Coalition).
- 3) The Executive Officer may revoke reduced monitoring frequencies and re-instate monitoring schedules indicated in the MRP for Enrollee(s) who no longer meet the conditions for which reduced monitoring was granted.
- 4) Enrollees and/or the Coalition may propose new or alternate surface water monitoring stations for approval by the Executive Officer to address changes in lily bulb operations, monitoring access constraints, or the need to differentiate monitoring locations among Enrollees within a tributary area. Proposals for alternate locations must include map(s), description, and GPS coordinates of all proposed monitoring locations. Alternate monitoring locations must also specify access routes, ingress/egress points, and potential hazards. The map(s) may be an aerial photograph(s), topographic map, LiDAR-derived shaded relief map, Google Earth image, or equivalent, that depicts features at 1-inch = 50 feet or larger scale and clearly delineates the alternate location.

VII. MRP Endnotes

- ¹ Monitoring stations shall be as far downstream of lily bulb operations that is possible, considering site accessibility.
- ² See Section G.1 in the Findings for a discussion on Water Quality Benchmarks and sources of these Benchmarks. Laboratory analyses should have the detection limit and reportable detection limit lower than corresponding numeric water quality objectives or water quality guidelines. Change of laboratory method with approval of the North Coast Water Board may be required to meet the reporting limits requirement.
- ³ The toxicity unit (TU) is a simple ratio of the measured concentration of dissolved copper to the BLM-generated criteria and is calculated by dividing the measured value by the modelled criteria.
- ⁴ The BLM Instantaneous Water Quality Criteria or BLM-IWQC is a criterion developed using a set of ten parameters to account for complex chemical reactions associated with copper in the environment: pH, Dissolved Organic Carbon (DOC), Calcium (Ca), Magnesium (Mg), Sodium (Na), Sulfate (SO₄), Potassium (K), Chlorine (Cl), Alkalinity, and Temperature. The IWQC is used as a water quality threshold for dissolved copper for that specific site and sampling event only. The model's output also includes a toxicity unit (numerical value) to represent the relative risk of copper toxicity in the waterbody at the time of sample collection.
- ⁵ At this time, the Surface Water Monitoring program requires only one Sampling Event for ethoprop per year, and therefore, only the acute Water Quality Benchmark would apply in determining exceedances. This MRP allows the Executive Officer to require additional sampling of ethoprop depending on water quality monitoring results. If additional sampling of is required, the chronic Water Quality Benchmark would also be used to determine exceedances.
- ⁶ See Endnote 5 above.
- ⁷ These values are based on one sample event.
- ⁸ [GeoTracker electronic submittal of information](https://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/)
(https://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).
- ⁹ All parcels that have been planted to lily bulbs anytime in the five years previous to enrollment are considered part of the Commercial Lily Bulb Operation for purposes of this Order. Parcels may be unenrolled after they have not been planted to lily bulbs for over five years.
- ¹⁰ Fields are defined as areas of similar agrochemical, nutrient, and irrigation management for purposes of reporting.
- ¹¹ Farm buildings include equipment storage sheds, farmworker housing, and processing buildings.
- ¹² External sources of nitrogen do not include livestock manure. For example, if a Field is planted to forage crops or irrigated pasture and only receives nitrogen through grazed livestock manure, an INMP is not required for that Field.

