



**FINAL ENVIRONMENTAL IMPACT REPORT
FOR GENERAL WASTE DISCHARGE REQUIREMENTS
FOR COMMERCIAL LILY BULB OPERATIONS IN THE SMITH RIVER PLAIN**

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Final Environmental Impact Report
GWDRs for Commercial Lily Bulb Operations
in the Smith River Plain

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I. Executive Summary

The California Regional Water Quality Control Board, North Coast Region (North Coast Water Board) is responsible for the protection of water quality in the North Coast Hydrologic Region, which includes the Smith River Plain Hydrologic Subarea. As of the 2024–2025 growing season, approximately 1,000 acres of agricultural land in the Smith River Plain and coastal terraces between Pyramid Point and the Oregon border are commercially farmed for easter lily bulbs in a three- to five-year rotation. Approximately 160 acres are planted in any given year. The watershed is ecologically sensitive, providing habitat for threatened and endangered species such as coho salmon, tidewater goby, and eulachon, with tributaries and estuarine areas critical for juvenile salmonid rearing and recovery.

The North Coast Water Board does not currently regulate all commodities under a singular Irrigated Lands Regulatory Program (ILRP) and intends to regulate non-point source discharges from Commercial Lily Bulb Operations through commodity-specific general waste discharge requirements (WDRs), hereafter referred to as the proposed Lily Bulb Order (or the Proposed Project) and included as Attachment A.

The North Coast Water Board prepared this Final Environmental Impact Report (FEIR) to provide a transparent and comprehensive evaluation of the environmental effects that could occur from implementing the Proposed Project. The FEIR has been prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended) and the CEQA Guidelines (Title 14, California Code of Regulations Section 15000 et seq.).

For the purpose of this FEIR and the Proposed Lily Bulb Order:

- The term “Commercial Lily Bulb Operations” includes all fields cultivated for lily bulbs or similar bulb crops anytime within a sequential five-year period, and appurtenant field roads, greenhouses, and pesticide mixing areas.
- A commercial lily bulb operation is regulated if it meets one or more of the following criteria: (1) the landowner or operator holds a current Operator Identification Number/Permit Number for pesticide use reporting; (2) the crop and/or its product is sold, including but not limited to an industry cooperative, harvest crew/company, or a direct marketing location such as Certified Farmers Markets; or (3) the federal Department of Treasury Internal Revenue Service form 1040 Schedule F Profit or Loss from Farming is used to file federal taxes.
- “Enrollee” is defined as a landowner and/or operator of a Commercial Lily Bulb Operation who has enrolled under the Lily Bulb Order.

The Proposed Lily Bulb Order would regulate discharges of waste from Commercial Lily Bulb Operations. The Proposed Lily Bulb Order would establish a regulatory mechanism, in the form of General WDRs with requirements, prohibitions, and provisions that would require: (1) enrollment and payment of fees; (2) implementation

and adaptation of Management Practices; and (3) monitoring and reporting.

The Proposed Lily Bulb Order is consistent with the State Water Resources Control Board (State Water Board) 2004 Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program (NPS Policy), which requires that all sources of nonpoint source (NPS) pollution that could affect water quality be regulated through waste discharge requirements (WDRs), waivers of WDRs, and/or prohibitions. The Lily Bulb Order will regulate discharges from Commercial Lily Bulb Operations in order to implement the plans, policies, and requirements set forth in the Water Quality Control Plan for the North Coast Basin (Basin Plan), the State Water Board Irrigated Lands Regulatory Program (ILRP) objectives and precedents, and the Total Maximum Daily Load Implementation (TMDL) Policy Statement for Sediment-Impaired Receiving Waters in the North Coast Region and the Policy for the Implementation of the Water Quality Objectives for Temperature in the North Coast Region (Temperature Policy), adopted by the North Coast Water Board on November 29, 2004, and November 20, 2012, respectively.

A. Project Objectives

Objective #1 – Protect and restore beneficial uses and achieve water quality objectives specified in the Basin Plan for areas in the Smith River Plain affected by Commercial Lily Bulb Operations by:

- Minimizing or preventing pesticide, nutrient, and sediment discharges to surface water.
- Minimizing or preventing nitrate and pesticide discharges to groundwater.
- Minimizing or preventing temperature impacts to surface water from loss of riparian shade.

Objective #2 – Effectively track and quantify achievement of the stated objectives over a specific, defined time schedule.

Objective #3 – Comply with the NPS Policy, the State Antidegradation Policy, the precedential language in the State Water Resources Control Board's Eastern San Joaquin Agricultural Order, the North Coast Basin Plan, and other relevant statutes and water quality plans and policies, including the Temperature Implementation Policy, the Sediment TMDL Implementation Policy, and TMDLs in the North Coast Hydrologic Region.

B. Summary of Impacts and Mitigation Measures

The analysis provided within the DEIR considers reasonably foreseeable Management Practices as examples of how the Proposed Lily Bulb Order could be implemented and the associated potential impacts to the environment. However, the analysis does not constitute an absolute outcome or certainty in the determinations made. Some impacts

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may not be identified or mitigated through the Proposed Lily Bulb Order, because it is not possible to exactly predict who will take action in response to the Proposed Lily Bulb Order, or what action(s) they will take. Therefore, this analysis is set at a programmatic level and is more general in nature to consider impacts from implementing reasonably foreseeable Management Practices. The types of actions that would be undertaken by Commercial Lily Bulb Operations subject to the Proposed Lily Bulb Order would be consistent with Management Practices commonly employed on current commercial lily bulb operations in the Smith River Plain. In some cases, implementation of Management Practices might be subject to another regulatory process which would entail identification and mitigation of any significant environmental effects. Therefore, other regulatory mechanisms can be expected to provide additional opportunities for minimizing and avoiding significant environmental effects. In some cases, it may not be possible to mitigate impacts of the proposed Lily Bulb Order to a less-than-significant level.

The adoption of the Proposed Lily Bulb Order may result in adverse effects on the environment from the potential conversion of Prime Farmland to a non-agricultural use and may result in conflicts with existing zoning for agricultural use. These two impacts may occur as a result of Streamside Management Area setbacks (riparian buffers) which implement the Policy for Implementation of the Water Quality Objectives for Temperature. Through adoption of Resolution R1-2014-0006, the North Coast Water Board found the potential conversion of Prime Farmland to a non-agricultural use and the potential conflict with existing zoning for agricultural use from implementing riparian buffers as significant and unavoidable. The Proposed Project has the potential to significantly impact Agricultural Resources with no feasible mitigation. Impacts of the Proposed Project on Biological Resources, Cultural Resources, and Tribal Cultural Resources are less than significant with mitigation incorporated. No Impact or Less than Significant Impacts from the Proposed Project to Aesthetics, Air Quality, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Utilities and Service Systems, and Wildfire were determined. This FEIR describes changes in the design of the Proposed Project and additional analysis which reduced some impacts to Less than Significant with Mitigation or to No Impact.

II. Main Body

The California Regional Water Quality Control Board, North Coast Region (North Coast Water Board) has prepared this Final Environmental Impact Report (FEIR) to provide the public, responsible agencies, and trustee agencies with information about the potential environmental effects of the proposed General Waste Discharge Requirements for Discharges from Commercial Lily Bulb Operations in the Smith River Plain (Proposed Project or Proposed Lily Bulb Order).

The Proposed Lily Bulb Order would regulate non-point source discharges from Commercial Lily Bulb Operations. For the purposes of this document, Commercial Lily Bulb Operations includes all fields cultivated for lily bulbs or similar bulb crops anytime within a sequential five-year period, and appurtenant field roads, greenhouses, and pesticide mixing areas. The Proposed Lily Bulb Order would establish a regulatory mechanism, in the form of General WDRs with requirements, prohibitions, and provisions that would require: (1) enrollment and payment of fees; (2) implementation and adaptation of Management Practices; and (3) monitoring and reporting.

The Proposed Project involves adoption of an order governing the discharge of waste (to surface waters and groundwaters) from Commercial Lily Bulb Operations in the Smith River Plain. In accordance with North Coast Water Board authority and mandates under the California Water Code, the purpose of the Proposed Project is to improve water quality conditions and protect and restore beneficial uses in the region by preventing or minimizing discharges of waste from Commercial Lily Bulb Operations.

The Proposed Project does not address site development activities associated with the establishment of new Commercial Lily Bulb Operations. Impacts associated with the development of new commercial lily bulb operations would be subject to project-specific CEQA analysis, conclusions, and development of mitigation measures by local land use authorities and other public agencies. New Commercial Lily Bulb Operations are expected to comply with conditions of the Lily Bulb Order upon enrollment, and the FEIR examines impacts that may occur related to operations in compliance with the Order.

This FEIR has been prepared in compliance with the California Environmental Quality Act of 1970 (CEQA; as amended; California Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (Cal. Code Regs. tit. 14, section 15000 et seq.). The primary purpose of this FEIR is to provide comprehensive and transparent discussion and analysis of the Proposed Project's environmental impacts.

A. General Overview

California Water Code Section 13260 requires a person discharging waste or proposing to discharge waste that could affect the quality of waters of the state to file a report of waste discharge with the North Coast Water Board. Based on review of the report of waste discharge, the North Coast Water Board prescribes waste discharge

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requirements (WDRs) for the protection of water quality (California Water Code Section 13263) that implement applicable water quality control plans (e.g., Basin Plans) and take into consideration the beneficial uses to be protected and the water quality objectives reasonably required for that purpose, and the need to prevent nuisance. In certain circumstances, a North Coast Water Board may waive the requirement to file a report of waste discharge or waive the prescription of WDRs. The State or North Coast Water Boards may issue WDRs or a waiver of WDRs to individual dischargers in an individual order.

The State or North Coast Water Boards may also adopt general orders to authorize certain types of similar discharges from many dischargers, based on the proposed discharge meeting certain criteria and conditions. The issuance of WDRs or a waiver of WDRs through either an individual or general order is considered a permit action.

The Proposed Project is necessary to protect high-quality waters and restore impaired and degraded waters in the Smith River Plain from non-point source discharges of waste from Commercial Lily Bulb Operations. Commercial lily bulb farming in the Smith River Plain involves soil disturbance and use of agricultural chemicals, both of which can generate discharges of waste (e.g., sediment, nutrients, pesticides, and temperature). Surface water monitoring conducted by the North Coast Water Board's Surface Water Ambient Monitoring Program (SWAMP) between 2013 and 2024 documented the presence of synthetic pesticides and dissolved copper in tributaries and sloughs downstream of cultivated fields, with periodic exceedances of U.S. EPA aquatic life benchmarks. In 2018, Tillas Slough and Delilah Creek were added to the Section 303(d) list of impaired water bodies for copper. These threats and impairments not only threaten human health, but also adversely affect aquatic life and achievement of beneficial uses for threatened and endangered species including coho salmon, tidewater goby, and eulachon.

B. Overview of Activities

The Proposed Project is adoption of the proposed Lily Bulb Order, which would initiate the regulatory program and establish general WDRs for Commercial Lily Bulb Operations in the Smith River Plain. Refer to Attachment A for the proposed Lily Bulb Order. Key elements of the proposed Lily Bulb Order include the following:

1. Pesticide, Sediment and Erosion Management for Surface Water Protection
2. Streamside Area Requirements for Surface Water Protection
3. Irrigation and Nutrient Management for Groundwater Protection
4. Monitoring and Reporting Requirements
5. Adaptive Management

The Proposed Project would not require specific Management Practices to protect and restore surface water and groundwater quality, but rather would allow Enrollees flexibility to implement practices that are appropriate for their specific situation to comply with requirements in accordance with the time schedules therein. For the purposes of this document, “Management Practices” refers to any number of actions, facilities, or practices that Commercial Lily Bulb Operations may undertake, construct/install, or implement to reduce their discharges. Examples include vegetated riparian buffers, filter strips, contour farming, vegetated treatment areas, grassed swales, and retention/detention basins. Refer to the Project Description Chapter for discussion of the reasonably foreseeable Management Practices that may be implemented in compliance with the Lily Bulb Order. A list of reasonably foreseeable Management Practices is part of Attachment B of the Proposed Lily Bulb Order (incorporated as Attachment A of the Final EIR).

C. Overview of CEQA Requirements

The basic purposes of CEQA is to:

- 1) Inform governmental decision-makers and the public about the potential significant environmental effects of proposed activities.
- 2) Identify the ways that environmental damage can be avoided or substantially reduced.
- 3) Prevent significant, avoidable damage to the environment by requiring the implementation of feasible mitigation measures or alternatives that would substantially lessen any significant effects that a project would have on the environment.
- 4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

As described in the CEQA Guidelines (Cal. Code Regs., tit. 14, section 15121 (a)), an environmental impact report (EIR) is an informational document that assesses potential environmental effects of a proposed project and identifies mitigation measures and alternatives to the project that could reduce or avoid potentially significant environmental impacts. Other key CEQA requirements include developing a plan for implementing and monitoring the success of the identified mitigation measures and carrying out specific public notice and distribution steps to facilitate public involvement in the environmental review process. As an informational document, an EIR is not intended to recommend either approval or denial of a project. An EIR does not expand or otherwise provide independent authority for the lead agency to impose mitigation measures or avoid project-related significant environmental impacts beyond the authority already within the lead agency’s jurisdiction. The North Coast Water Board is the lead agency under CEQA for preparation of the FEIR for adopting the Lily Bulb Order that regulates discharges of waste from Commercial Lily Bulb Operations.

D. Scope and Intent of this Document

Adoption of an order constitutes a “project” subject to CEQA (see Cal. Code Regs., tit. 14, section 15378 (a)(3)). The North Coast Water Board will use the analysis presented in this FEIR, public and regulatory agency comments received on the DEIR, and the entire administrative record to evaluate the Proposed Project’s environmental impacts, as well as to inform and support North Coast Water Board modifications, approval, or denial of the Proposed Project.

E. Public Involvement Process

CEQA mandates two periods during the EIR process when public and agency comments on the environmental analysis of a proposed project are to be solicited: during the scoping comment period and during the review period for the DEIR. CEQA and the CEQA Guidelines also allow for lead agencies to hold public outreach meetings or hearings to obtain scoping comments and review both the draft and final versions of an EIR. Brief descriptions of these milestones, and other opportunities for public involvement/input afforded by the North Coast Water Board, are provided below, as they apply to this document.

The North Coast Water Board’s efforts to address potential impacts of lily bulb agricultural discharges in the Smith River Plain began in 2011 with stakeholder meetings. In 2013, the Board shifted to a commodity- and subregion-specific regulatory approach and directed staff to conduct water quality monitoring in the Smith River Plain. A Surface Water Ambient Monitoring Program (SWAMP) study conducted from 2013–2015 found pesticide concentrations, including copper fungicides, in surface waters that exceeded EPA aquatic life benchmarks.

The Smith River Plain Water Quality Management Plan (2021 Management Plan) was finalized in 2021 by a Watershed Stewardship Team composed of lily bulb growers, regulatory agencies (NOAA Fisheries, CDFW, CDPR), local stakeholders (Del Norte RCD, Agricultural Commissioner), academic partners, the Smith River Alliance, and the Tolowa Dee-ni’ Nation. The 2021 Management Plan established voluntary grower participation in annual management practice reporting, North Coast Water Board inspections, and ongoing surface water quality monitoring.

Development of the Lily Bulb Order was formally initiated in 2023 with the formation of a Technical Advisory Group (TAG). Between July 2024 and November 2025, the TAG met every other month in Del Norte County to review provisional regulatory language and provide feedback. TAG meetings were open to the public and included agendized time for public input at every meeting. TAG membership includes all Management Plan Watershed Stewardship Team members with additional environmental nonprofit groups, partnering agencies, community organizations, and interested members of the public. In addition to seven public TAG meetings, staff held three additional public meetings in Del Norte County to inform the community on the Lily Bulb Order and hear community concerns.

Staff also coordinated with NOAA Fisheries, the California Department of Fish and Wildlife, the California Coastal Commission, and the U.S. Fish and Wildlife Service through a natural resource agency workgroup to address technical questions related to Order development. Staff also worked with the California Department of Pesticide Regulation through a Management Agency Agreement established in 2019.

1. Notice of Preparation, Initial Study, and Initial Scoping Notice & Meetings

On October 10, 2024, the North Coast Water Board sent a Notice of Preparation (NOP), which included an attached Initial Study, to public agencies and persons with potential interest in the project. Copies of the NOP and Initial Study were available for review at the North Coast Water Board Santa Rosa office. Additionally, the NOP and attached Initial Study were posted at the North Coast Water Board's webpage (<https://www.waterboards.ca.gov/northcoast/>) and an announcement of its availability was sent to individuals that subscribed to electronic mailing lists relevant to the proposed Lily Bulb Order. The NOP and the attached Initial Study are available online at: <https://ceqanet.lci.ca.gov/2024100484>.

On October 22, 2024, the North Coast Water Board held a hybrid (in-person and virtual) scoping meeting to solicit input from agencies and interested parties on issues to be addressed in the EIR. The scoping meeting included a description of the meeting purpose, proposed requirements, an overview of the environmental review process and preparation of the EIR, and included a public comment period.

During the scoping period, eleven timely written comment letters were received from the Northcoast Environmental Center, California Farm Bureau, California Department of Fish and Wildlife, California Coastal Commission, Save California Salmon, individual lily bulb growers, community members, the Native American Heritage Commission, and other interested parties. Oral comments were received from residents of Smith River, environmental organizations, tribal representatives, and agency staff. Comments addressed topics including pesticide discharges, riparian buffer requirements, community health, tribal cultural resources, and the need for independent monitoring.

2. DEIR Public Review and Comment Period

The North Coast Water Board circulated the DEIR for public review and comment on January 30, 2026. The North Coast Water Board issued a notice of availability of an EIR to provide agencies and the public with formal notification that the DEIR was available for review. The notice of availability was sent to all trustee agencies, any person or organization requesting a copy, and to the county clerk office in Del Norte County for posting. A legal notice was also published in a number of general-circulation newspapers. The North Coast Water Board also submitted the notice of availability and a notice of completion (NOC) to the State Clearinghouse.

Publication of the notice of availability initiated a 45-day public review and comment period for the DEIR. During the public review period, the North Coast Water Board received and collated public and agency comments on the Proposed Project and the

DEIR. During the public review period, North Coast Water Board staff hosted a public workshop in Crescent City, Del Norte County. The purpose of the DEIR circulation and the public outreach meetings was to provide public agencies, other stakeholders, and interested individuals with opportunities to comment on the content of the DEIR.

At the public workshop, the North Coast Water Board directed staff to extend the public comment period for the Draft Order and DEIR to a 60-day comment period closing on March 30, 2026.

3. Response to Comments on the DEIR

During the 60-day public comment period that closed March 30, 2026, the North Coast Water Board received approximately 180 written comment letters (41 distinct comment letters and 135 customized submissions of 2 different form letters) on the Draft Lily Bulb Order and Draft EIR. Additionally, the Board Chair admitted four late comment letters on the Draft Order submitted by April 1, 2026.

A list of persons, organizations, and public agencies that commented on the Draft Order and Draft EIR as well as all written comments and staff's response are included in FEIR Attachment B: Summary of Revisions and Response to Comments. Comment letters are available upon request by contacting the North Coast Water Board.

4. Outreach Post-DEIR Public Review and Comment Period

Following the close of the DEIR public comment period, North Coast Water Board staff conducted additional public outreach in response to comments received on the Draft Lily Bulb Order and DEIR. This outreach included meetings with industry representatives, tribal representatives, and agency partners such as the California Department of Pesticide Regulations.

The public hearing to consider adoption of the Proposed Lily Bulb Order and certification of this Final Environmental Impact Report was held on August 6, 2026 at a regular meeting of the North Coast Water Board.

5. Preparation of the Final Environmental Impact Report

CEQA requires the lead agency to prepare a final environmental impact report (FEIR), which addresses all substantive comments received on the DEIR, before approving a project. This FEIR includes a list of all individuals, organizations, and agencies that provided comments on the DEIR and contain copies of all comments received during the public review period along with the lead agency's responses.

This FEIR includes a responses-to-comments document for all comments received in response to the DEIR (Attachment B). This FEIR also includes a summary of staff-initiated changes to the Proposed Project as well as changes to the Proposed Project made in response to comments received (Attachment B). These changes do not result in any new significant impacts to the environment.

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If the North Coast Water Board chooses to approve the Proposed Project with the significant impacts identified in the FEIR that cannot be mitigated, a statement of overriding considerations will be included in the record of project approval and mentioned in the notice of determination (NOD). The statement of overriding considerations describes the North Coast Water Board's reasons for approving the Proposed Project despite its significant impacts. If the Proposed Project is approved, the NOD will be filed with the California Governor's Office of Planning and Research and at the offices of the relevant county clerks (Cal. Code Regs., tit. 14, section 15093 (c)).