North Coast Regional Water Quality Control Board

Response to Written Comments
Draft Resolution
Order No. R1-2026-0005

Project Criteria for an Exception to the Enclosed Bays and Estuaries Policy Prohibiting Waste Discharges to Humboldt Bay

Regional Water Quality Control Board, North Coast Region
February 18 - 19, 2026

Comments Received

The deadline for submittal of public comments regarding draft Resolution No. R1-2026-0005 (Draft Resolution) for Project Criteria for an Exception to the Enclosed Bays and Estuaries Policy Prohibiting Waste Discharges to Humboldt Bay was December 8, 2025. Upon request from the Humboldt Community Services District, the North Coast Water Board extended the public comment period through December 15, 2025. North Coast Water Board staff (Staff) received written comments from the City of Eureka, the Humboldt Community Services District, the Humboldt Baykeeper, and the Ecological Rights Foundation.

This Response to Comments document includes the comments received from each of these commenters, followed by North Coast Water Board staff response to each comment. Additionally, this Response to Comments document includes a summary of staff-initiated changes made to the Resolution. Text added to the Proposed Resolution is identified by underline and text to be deleted from the Proposed Resolution is identified by strike-through in this document. The term “Draft Resolution” refers to the version of the Resolution that was sent out for public comment. The term “Proposed Resolution” refers to the version of the Resolution that has been modified in response to comments received and is being presented to the North Coast Regional Water Quality Control Board (North Coast Water Board) for consideration.

A. City of Eureka Comments

Comment No. A1: The City would like to offer additional context regarding the statement in Section 5, paragraph 2, noting that “under certain conditions up to 90% of the effluent remains in Humboldt Bay.” Since the 2014 study referenced in that paragraph, the City has completed a more current technical analysis—Humboldt Bay Effluent Modeling (November 2021)—which more accurately reflects present conditions

of the City's effluent discharge into Humboldt Bay. This study was submitted to Regional Board staff on December 3, 2021.

The study found that the three-dimensional hydrodynamic modeling of the effluent discharge during both wet and dry seasons did not predict any build-up or accumulation of effluent within the waters of Humboldt Bay. The very high flushing rate of the bay at the City's outfall location is adequate to reduce effluent proportions to near-zero following each discharge cycle. The operational regime of discharging during outgoing tides is effective in maintaining a low proportion of effluent within the bay. This context and the 2021 study are important for the general understanding of how the EBEP applies to Humboldt Bay in general and to the City's discharge in particular. This context underscores how the conditions in Humboldt Bay are unique and how the City's discharge is also unique. Reference to the 2021 study and its findings would be appropriate.

Response to Comment No. A1: The following language has been added to Finding 5 of the Draft Resolution:

In 2021, the City of Eureka submitted a Humboldt Bay Effluent Modeling report (Report). The City of Eureka developed a model of Humboldt Bay and surrounding coastal waters to determine effluent transport in the bay and demonstrate the zone of toxicity for ammonia in the area of the outfall.

The modeling showed no evidence of long-term accumulation of effluent in Humboldt Bay, with simulated effluent proportions remaining very low at all assessed locations: less than 0.65% during the wet season at higher discharge rates (13.6 MGD) and less than 0.25% during the dry season at lower discharge rates (5 MGD). The results indicate that bay flushing is sufficient to reduce effluent concentrations to near-zero (<0.2%) following each discharge cycle, and that the practice of discharging during outgoing tides effectively limits effluent retention and confines potential ammonia toxicity to the immediate vicinity of the diffuser.

North Coast Water Board staff are currently reviewing each report to evaluate the conflicting conclusions between the two reports. Staff will make recommendations on next steps upon completing an evaluation of the conflicting conclusions in the two reports.

Comment No. A2 (Finding 11): It should be clarified that this previous 2021 study regarding the possibility of an Ocean Outfall will be updated with the Feasibility Study required by Order R1-2023-2016 section 6.3.6.3. This update will reflect current conditions, which have changed since the 2021 study, and current cost estimates. While we understand that this paragraph is summarizing the 2021 study, it is important for the Regional Board and stakeholders to know that the 2021 study was based on conditions at the time which have changed, but which will be updated in the new study.

Response to Comment No. A2: Finding 11 has been updated as follows:

Costs and environmental impacts will be updated and included in the Feasibility Study Report that is due on October 1, 2026, as a requirement of the compliance schedule in the Permit. The 2026 Feasibility Study will reflect current conditions and cost estimates.

Comment No. A3: We recommend revising the heading and associated references in this section and throughout the Resolution from "Protection and the Fuller Realization of Beneficial Uses" to "Protection or the Fuller Realization of Beneficial Uses." The City believes that some projects may focus solely on protecting existing beneficial uses without enhancing them, while others may enhance or fully realize beneficial uses without necessarily providing protection for those currently in place. The City also sees value in projects that achieve both protection and fuller realization of beneficial uses.

Response to Comment No. A3: Per Order 79-20 and Finding 3 of the Draft Resolution, as specifically applied to Humboldt Bay, the Board interprets the enhancement provision of the Bays and Estuaries Policy to require: (1) full secondary treatment, with disinfection and dechlorination, of sewage discharges; (2) compliance with any additional NPDES permit requirements issued by the North Coast Board to protect beneficial uses; and (3) the fuller realization of existing beneficial uses or the creation of new beneficial uses either by or in conjunction with a wastewater treatment project.

North Coast Water Board staff has concluded that the State Water Board interpreted enhancement in Order WQ-79-20 as requiring: 1) protection and 2) further realization, or creation of new beneficial uses. No changes have been made as a result of this comment.

B. Humboldt Community Services District (HCSD) Comments

Comment No. B1: HCSD submitted a letter in support of the adoption of the draft Resolution, "as it provides clarity and documents consensus from the Regional Water Board regarding criteria for projects that would be eligible as part of an exception to the Enclosed Bays and Estuaries Policy (EBEP) as applied to Humboldt Bay".

"Of particular interest to the District is item 14.11 regarding projects that sewer unsewered areas around Humboldt Bay. The District serves approximately 8,000 water connections and 6,500 sewer connections. This criterion creates an opportunity for the District to directly collaborate on the project to establish an exception to the EBEP for the Elk River Wastewater Treatment Facility discharge while also seeking environmentally sustainable solutions for progress toward the long-term District goal of providing services to all District residents".

Response to Comment No. B1: Comment noted.

C. Humboldt Baykeeper Comments

Comment No. C1: Our members rely on Humboldt Bay for water-based recreation such as surfing, swimming, and paddling, as well as recreational, subsistence, and commercial harvesting of shellfish. These beneficial uses (REC-1, REC-2, SHELL, and AQUA) depend on the level of treatment of the City of Eureka's wastewater facility effluent, which is discharged into Humboldt Bay near the popular winter surf spot known as Stinky's. The Elk River Spit is also frequented by recreational, tribal and subsistence clam harvesters. Horseneck, littleneck, and Martha Washington clams are just a few examples of the edible species that are harvested in the bay. Other beneficial uses identified in the North Coast Basin Plan may also be impacted by the City's discharge, including Commercial and Sport Fishing (COMM), Subsistence Fishing (SUBS), Native American Culture (CUL), Preservation of Rare, Threatened, and Endangered Species (RARE), and many others as enumerated in the draft Resolution.

To protect the beneficial uses of Humboldt Bay, we strongly oppose the adoption of exceptions to the Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Policy) that do not enhance the quality of receiving waters above that which would occur in the absence of the discharge.

Salt marsh restoration, removal of creosote piles, relocation of infrastructure vulnerable to sea levels rise, and many other potential projects under consideration in Resolution No. R1-2026-005 are certainly worthwhile endeavors, but are not likely to meet the standard as adopted in the Policy, which as amended in 1995 (Resolution No. 95-84) states:

"It is the policy of the State Board that the discharge of municipal wastewaters and industrial process waters (exclusive of cooling waste discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a Regional Board only when the Regional Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge."

Response to Comment No. C1: North Coast Water Board staff acknowledge the need to protect all beneficial uses in Humboldt Bay. The Resolution as proposed does not authorize exceptions to the Policy that do not enhance the quality of the water in Humboldt Bay.

Staff anticipate that the Feasibility Study to be submitted by the City in October 2026 will evaluate several alternatives, including the feasibility of moving the treated effluent from the Elk River Wastewater Treatment Plant to an ocean discharge. Moving the discharge to an ocean outfall may not be feasible due to technical constraints, environmental impacts, and costs to rate payers. In order to evaluate the full range of alternatives,

these criteria, support potential projects suchs as restoration, habitat creation,contaminant clean-up, which could be considered in evaluating whether an exception to the Policy is warranted consistent with direction from the State Water Board.

Per Order 79-20, “As specifically applied to Humboldt Bay, the Board interprets the enhancement provision of the Bays and Estuaries Policy to require: (1) full secondary treatment, with disinfection and dechlorination, of sewage discharges; (2) compliance with any additional NPDES permit requirements issued by the Regional Board to protect beneficial uses; and (3) the fuller realization of existing beneficial uses or the creation of new beneficial uses either by or in conjunction with a wastewater treatment project.”

North Coast Water Board staff are confident that project(s) that are consistent with the criteria contained in the Draft Resolution will provide full protection of beneficial uses and provide positive water quality benefits to the Beneficial Uses in Humboldt Bay, as described in Order 79-20.

Comment No. C2: In addition, the section of the Resolution that describes the capacity of the RMTII outfall (Section 11) is outdated, since the funding for the Nordic Aquafarms project has reportedly been withdrawn by the investors, creating more capacity than previously determined by the Humboldt Bay Harbor, Recreation, and Conservation District. The City of Arcata is considering the feasibility of moving to an ocean discharge in the feasibility study for its Wastewater Treatment Facility to plan for sea level rise, which the City of Eureka will need to do as well. When weighing the potential costs of upgrading its Wastewater Treatment Facility and preparing for sea level rise, the City of Eureka would do well to consider the possibility of moving to an ocean discharge as well.

Response to Comment No. C2: North Coast Water Board staff have not received any notification regarding Nordic Aquafarms LLC no longer pursuing their plans on the Samoa Peninsula. Given that Nordic has an NPDES permit to discharge 10 million gallons per day through the Ocean Outfall, it is difficult for the City of Eureka to rely on the outfall owned by the Humboldt Bay Harbor District when the current flow is allocated to another facility.

On June 30, 2020, the City of Eureka submitted a Climate Change Readiness Study that evaluated current and future risks to City owned assets due to sea level rise. This study provided the City with an assessment of the vulnerable assets that the City will need to protect moving forward.

As part of the Feasibility Study due in October 2026, the City of Eureka is required to investigate all possibilities for a new discharge location, which includes an ocean discharge. No changes have been made to the Draft Resolution in response to this comment.

Comment No. C3: It has been nearly ten years since the Regional Board issued Cease and Desist Order No. R1-2016- 0012 prohibiting the City of Eureka from discharging waste to Humboldt Bay unless it is done in a manner which complies with the State Water Board, Water Quality Control Policy for the Enclosed Bays and Estuaries of California (1974, 1995), among other requirements. We urge the Regional Board to reconsider these project criteria for an exception to the Enclosed Bays and Estuaries Policy, and instead make every effort to bring the Elk River Wastewater Treatment Facility into compliance by improving its treated effluent. It is unclear how piling removal, salt marsh restoration, etc. would ever come close to enhancing the quality of receiving waters above that which would occur in the absence of the discharge.

It is long overdue that better solutions are developed so these cities can stop discharging wastewater into an enclosed estuary that supports raw shellfish for human consumption, numerous protected aquatic species, and water-based recreation. And with the fastest rate of sea level rise in the state due to tectonic subsidence, these wastewater treatment facilities are going to require complete overhauls in the not-so-distant future. It's high time to figure out how to end these discharges to Humboldt Bay.

Response to Comment No. C3: The City of Eureka currently meets secondary treatment standards the majority of the time and is working on capital improvement projects to increase the treatment capacity throughout the Facility.

The compliance schedule and requirements that were included in Cease and Desist Order R1-2016-0012 (CDO) were transferred to the 2023 NPDES permit. As required by the CDO, the City (1) completed a sanitary sewer system evaluation to identify deficiencies in the system that contribute to increased flows that may contribute to bypass events, (2) submitted a wet weather improvement plan that will reduce bypass events from wet weather flow, and (3) submitted a feasibility study that required an outfall inspection report, an updated sewer use report evaluation, a climate change and readiness study, and a biological survey report. The remaining requirements of the CDO were then updated and transferred to the 2023 NPDES permit.

North Coast Water Board staff are confident that a project, or projects, developed using the criteria from the Draft Resolution can improve water quality throughout Humboldt Bay. For example, removal of creosote-soaked piles would improve water quality by removing legacy pollutants that continue to impact Humboldt Bay. Salt marsh restoration will allow habitat for beneficial uses to be increased while also providing flood mitigation and nutrient removal.

It is unknown if these projects would be funded in the absence of the City of Eureka considering requesting an exception to the Policy. Funding for projects using the proposed criteria may not be possible if not for the City of Eureka's revenue that is derived from rate payers and the discharge from the facility. No changes have been made to the Draft Resolution in response to this comment.

D. Ecological Rights Foundation (EcoRights) Comments

Comment No. D1: Humboldt Bay's Beneficial Uses Are Economically and Ecologically Indispensable

Humboldt Bay supports one of California's most important shellfish industries, including commercial oyster aquaculture and wild shellfish harvesting that directly sustain local livelihoods, food systems, and cultural practices. Shellfish are uniquely vulnerable to water quality degradation because they are filter feeders that readily accumulate pathogens, nutrients, and chemical contaminants. Even modest increases in pollutant loading can trigger harvest closures, cause lasting reputational harm to local producers, and undermine public confidence in seafood safety.

The Bay also serves as a critical rearing ground for juvenile Dungeness crab, which depend on clean sediments, eelgrass beds, and stable estuarine conditions during early life stages. Degradation of water quality—particularly from nutrient enrichment, low dissolved oxygen, and contaminated sediments—poses serious risks to recruitment and long-term fishery viability.

Response to Comment No. D1: North Coast Water Board staff acknowledge the importance of the shellfish industry in Humboldt Bay. A Biological Survey was required by NPDES Order No R1-2016-0001 to conduct a comparative evaluation of indigenous biota in the vicinity of the outfall by a qualified aquatic biologist.

This study was most recently conducted in 2019 and compared marine macroalgae (seaweeds) and invertebrate species in the immediate vicinity of the City's outfall with marine macroalgae and invertebrate species in a control site located two miles south at Buhne Point.

The study compared estimates of marine macroalgae cover and the abundance of relatively non-motile species (i.e. sea stars) between rocky intertidal habitats in selected study and control areas of Entrance Bay. The primary assumption for selecting the rocky intertidal study areas for study was that pollutants from the outfall, if present, should accumulate in these areas at a greater frequency and magnitude than at the control site and would likely result in noticeable physical or biological effects. The control site located two miles away from the outfall near the confluence of South Bay and Entrance Bay was assumed to be separate from direct influence of the discharge. The study found no evidence that suggested degradation of biota in the receiving waters from the City's effluent discharge.

No changes have been made to the Draft Resolution in response to this comment.

Comment No. D2: ERF Members Routinely Use Humboldt Bay for Fishing, Shellfish Harvesting, and Contact Recreation

ERF's members live, work, and recreate in and around Humboldt Bay and directly rely on its water quality. Members regularly fish in the Bay, harvest shellfish for personal and subsistence use, and engage in contact recreation such as kayaking, paddling, and swimming.

Notably, ERF members also surf within Humboldt Bay, including at a well-known surf break near the mouth of the Elk River commonly referred to as "Stinky's." These uses place members in direct and repeated contact with Bay waters and sediments, often for extended periods and during varying tidal conditions that influence contaminant concentrations.

These recreational and subsistence uses are not incidental; they are core aspects of community life and are expressly protected as designated beneficial uses under applicable water quality standards. Any policy that increases the likelihood of waste discharges into the Bay necessarily increases the risk of harm to ERF members and similarly situated members of the public.

Response to Comment No. D2: North Coast Water Board staff agree that recreation and subsistence beneficial uses are important to protect. The 2023 NPDES permit established water quality based effluent limitations to protect all beneficial uses in Humboldt Bay. In addition, the 2023 NPDES permit also included disinfection requirements to protect human health beneficial uses.

North Coast Water Board staff work with the California Department of Public Health (CDPH) and the City to ensure that in the event of a sewage spill, or malfunction of wastewater treatment facilities, which result in a potential or actual discharge of raw or incompletely treated sewage to Humboldt Bay or its tributaries, the City will notify the North Coast Water Board, all of the certified shellfish harvesters immediately, and will notify CDPH/Preharvest Shellfish Unit and the Humboldt County Environmental Health Department as soon as possible thereafter.

The Resolution does not increase the likelihood of waste discharges to the Bay. The City of Eureka may only receive an exception to the Policy in a future permitting action if the wastewater treatment plant and its discharge to the Bay is found to both protect and enhance beneficial uses in the Bay.

Comment No. D3: Partially Treated Sewage Discharges Pose Direct Public Health Risks to Bay Users

The Proposed Resolution is particularly concerning because it would facilitate exceptions allowing waste discharges into Humboldt Bay, including discharges that may consist of partially treated sewage or wastewater. Such discharges present well-documented public health risks, especially in enclosed estuarine waters with limited flushing.

Exposure to partially treated sewage increases the risk of contact with pathogenic bacteria, viruses, and protozoa, as well as elevated nutrient loads that can fuel harmful algal blooms and degrade dissolved oxygen levels. For ERF members who surf, kayak, fish, and harvest shellfish in the Bay, these risks are not theoretical. Contact recreation in waters affected by sewage contamination can result in gastrointestinal illness, skin infections, respiratory illness, and ear and eye infections.

Shellfish harvesting presents an additional pathway of exposure. Pathogens and contaminants introduced through wastewater discharges can bioaccumulate in shellfish tissues, posing risks not only to those who harvest but also to anyone who consumes the catch. Even the perception of sewage contamination can lead to advisories or closures that harm subsistence users and local economies.

Allowing additional or expanded discharges under a discretionary exception framework is fundamentally incompatible with protecting water contact recreation (REC-1) and shellfish harvesting (SHELL) beneficial uses. Once exposure pathways are created, the resulting harms cannot be fully mitigated through monitoring or post-hoc management.

Response to Comment No. D3: The criteria included in the Draft Resolution apply specifically to the City of Eureka. North Coast Water Board staff do not intend the criteria in the Draft Resolution to apply to other regulated entities. The Resolution does not authorize additional or expanded discharges. The Resolution does not alter the City of Eureka's operation of its wastewater treatment plant. Effluent continues to be treated to levels that are protective of beneficial uses and discharged on the outgoing tide, in intermittent releases, to minimize the amount of effluent that stays in Humboldt Bay and any cumulative impacts to beneficial uses.

In addition, the 2023 NPDES permit includes requirements for the City of Eureka to correct potential bypass of secondary treatment that would result in the discharge of partially treated effluent due to high flows from wet weather impacts. The City of Eureka is currently retrofitting one of their facultative sludge lagoons to create a high flow storage basin. This will allow the City to store influent during wet weather events until flows through the Facility subsides and eliminate the need for bypass due to wet weather flows.

The City is also enrolled in the State Water Board Order WQ 2022-0103-DWQ General Order for Sanitary Sewer Systems. The General Order regulates sanitary sewer systems designed to convey sewage and includes requirements for monitoring and reporting of sanitary sewer spills.

Comment No. D4: Humboldt Bay Is a Fragile Estuarine System With Limited Assimilative Capacity

Humboldt Bay is a shallow, enclosed estuary with restricted circulation relative to open coastal waters. Pollutants introduced into the Bay are not readily dispersed and can persist in sediments and biota for years or decades. Historic contamination from industrial and maritime activities demonstrates the Bay's vulnerability and the long recovery times associated with estuarine degradation.

By establishing project-level criteria for exceptions, the Proposed Resolution invites incremental and cumulative impacts that fail to account for the Bay's limited assimilative capacity. Over time, multiple "minor" exceptions can collectively result in significant degradation of water quality and public trust resources.

Response to Comment No. D4: North Coast Water Board staff understand the concerns surrounding cumulative impacts from pollutants and impacts to beneficial uses from those pollutants. The Draft Resolution only applies to potential exception projects that the City of Eureka may pursue for its Elk River WWTP. The criteria, if they are used to develop projects, will be considered in future permitting actions and may only be approved by the Board if they meet the criteria in the Enclosed Bays and Estuaries Policy and result in an improvement to water quality in Humboldt Bay.

The Resolution does not apply to any other discharger currently, or in the future. No changes were made to the Draft Resolution in response to this comment.

Comment No. D5: The Proposed Resolution Undermines the Purpose and Intent of the Enclosed Bays and Estuaries Policy

The EBEP reflects a statewide determination that enclosed bays and estuaries warrant heightened protection and a strong presumption against waste discharges. The Proposed Resolution would erode this presumption by normalizing exceptions rather than treating them as rare and extraordinary.

The EBEP is grounded in avoidance, not mitigation. Allowing new or expanded discharges based on project-specific criteria contradicts the policy's preventive purpose and shifts risk onto Bay users, including ERF members, who bear the consequences of degraded water quality.

Response to Comment No. D5: The intent of the Draft Resolution is to provide criteria for potential projects that may warrant an exception to the Policy for the City of Eureka. North Coast Water Board staff do not intend to allow new or expanded discharges to Humboldt Bay. As discussed in Response to Comment D4, any exception to the Policy will be considered in future permitting actions and will only be approved if projects protect and enhance water quality in the Bay.

Comment No. D6: For the reasons stated above, Ecological Rights Foundation urges the Regional Board to reject Proposed Resolution No. R1-2026-0005. The Resolution

threatens Humboldt Bay's fragile ecology, undermines vital economic and recreational beneficial uses, and places ERF members and the public at increased risk of exposure to pollution, including partially treated sewage.

The Regional Board should reaffirm the Enclosed Bays and Estuaries Policy's strong prohibition on waste discharges and prioritize avoidance, restoration, and long-term protection of Humboldt Bay as an irreplaceable public trust resource.

Response to Comment No. D6: The Proposed Resolution is consistent with the Policy and the guidance provided by the State Board in Order No. 79-20, and staff are confident that any project(s) that are consistent with the criteria contained in the Draft Resolution will provide full protection of and benefits to the Beneficial Uses in Humboldt Bay. No changes have been made to the Draft Resolution in response to this comment.

E. Staff Initiated Changes

Staff have included a new finding in the Proposed Resolution. Finding 14 has been added as follows:

"As stated in Finding 3 above, Order 79-20 requires the City to achieve full secondary treatment, with disinfection and dechlorination, of their effluent and compliance with any additional NPDES permit requirements issued by the North Coast Board to protect beneficial uses. The Permit includes a compliance schedule to bring the City into compliance with the Policy and to reduce wet weather flows that can lead to bypass events at the Facility. The City will need to complete the tasks from the compliance schedules in the Permit by the due dates included in Finding 8 above."