

Staff Initiated Change Sheet
Proposed Order No. R1-2020-0006
General National Pollutant Discharge Elimination System (NPDES) Permit and
Waste Discharge Requirements (WDRs)
for Low Threat Discharges to Surface Waters in The North Coast Region
Regional Water Quality Control Board, North Coast Region
April 16, 2020

The deadline for submittal of public comments for the draft Order No. R1-2020-0006 WDRs and General NPDES for Low Threat Discharges to Surface Waters in the North Coast Region was January 30, 2020. No public comments were received during the comment period. This document identifies Regional Water Board staff-initiated changes.

Text to be added is identified by underline and text to be deleted is identified by ~~strike-through~~. The term “Draft Order” refers to the version of the permit that was sent out for public comment. The term “Proposed Order” refers to the version of the permit that is being presented to the Regional Water Board for consideration. The Proposed Order has been modified by staff to address inadvertent omissions in the Draft Order associated with the revised bacteria provisions within the State Water Resources Control Board’s Water Quality Control Plans for Ocean Waters and Inland Surface Water, Enclosed Bays, and Estuaries that took effect in 2019. Additionally, minor editorial formatting corrections were made that are not reflected in this change sheet.

Staff Initiated Changes to the Proposed Order

1. Section VI.A.23 Receiving Water Limitations, Surface Water Limitations – Inland Waters, Enclosed Bays, and Estuaries (Page 18). Staff added the numeric water quality objectives for bacteria and removed the narrative bacteria objective because staff determined that compliance with these water quality objectives will ensure the protection of beneficial uses for low-threat discharges. For this General Order staff recommend determining compliance with numeric objectives, rather than narrative objectives that require determining natural background levels of bacteria and comparing those to receiving water data.

“Authorized discharges shall be consistent with the bacteria water quality objective for all waters where the salinity is equal to or less than 1 part per thousand (ppt) 95 percent or more of the time during the calendar year is: a six week rolling geometric mean of *Escherichia coli* (*E. coli*) not to exceed 100 colony forming units (cfu per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 320 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner”. ~~Authorized discharges shall not cause bacteriological water quality to be degraded beyond natural background levels.~~

2. Section VIII. Compliance Determination (Page 28). In addition to adding the numeric water quality objectives for bacteria, staff added the following compliance determination language to section VIII.H of the Proposed Order consistent with revisions to statewide bacteria provisions.

H. Bacteriological Limitations

1. **Single Sample Maximum.** All single sample results are compared to single sample maximum limitations. Single sample results are only compared to the median, geometric mean, six-week rolling geometric mean, and statistical threshold value when sampling is required at the frequency required to properly assess compliance, as further stated in 2. through 5, below. Compliance with a single annual sample is determined in comparison to single sample maximum limitations only. If single sample maximums are routinely exceeded, the Regional Water Board may require additional sampling to assess whether the Permittee's discharge is the source of the exceedance in the receiving water.
2. **Median.** The median is the central tendency concentration of the pollutant. The data set shall be ranked from low to high, ranking any ND concentrations lowest, followed by quantified values. The median value is determined based on the number of data points in the set. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, the median is the average of the two middle values, unless one or both points are ND or DNQ, in which case the median value shall be the lower of the two middle data points. DNQ is lower than a detected value, and ND is lower than DNQ.
3. **Geometric Mean (GM).** The geometric mean is a type of mean or average that indicates the central tendency or typical value of a set of numbers by using the product of their values (as opposed to the arithmetic mean which uses their sum). The geometric mean shall be calculated using the 5 most recent samples from a site using the following formula:
$$GM = \sqrt[n]{(x_1)(x_2)(x_3)...(x_n)}$$
, where x is the sample value and n is the number of samples taken.
4. **Six-week Rolling Geometric Mean.** The rolling geometric mean shall be calculated using at least 5 sample results over a 6-week period from a site using the following formula:
$$GM = \sqrt[n]{(x_1)(x_2)(x_3)...(x_n)}$$
, where x is the sample value and n is the number of samples taken.
5. **Statistical Threshold Value.** (1) The data set shall be ranked from low to high, ranking any ND concentrations lowest, followed by quantified values. (2) The number of sample results should then be multiplied by 90 percent then rounded up to the nearest whole number. (3) Count the values in the data set starting from lowest to highest until the number indicated in step (2) is reached. (4) To be compliant with the statistical threshold value in

Receiving Water Limitation VI.A.23, all sample results less than the point described in step 3 must be less than 100 MPN/100 mL.

3. Attachment-A Definitions (Page A-8). With the addition of the statistical threshold value language, staff added the following definition.

Statistical Threshold Value (STV)

For the bacteria water quality objective, the statistical threshold value is a set value that approximates the 90th percentile of the water quality distribution of a bacterial population. See page 27 of this Order for further discussion.

4. Attachment-B Notice of Intent (Page B-4). Staff added language in Section VII. Pollutants/Parameters of Concern/Discharge Sampling to ensure consistency with statewide policies. Under “Discharges to inland surface waters, enclosed bays and estuaries must submit:” staff added subsection 4).

“4) The analytical results of a representative sample of the proposed effluent discharge to inland surface waters, enclosed bays, and estuaries for *E. coli* (in freshwaters) and Enterococci (in saline waters). Additionally, for all areas where shellfish may be harvested provide analytical results for total coliform.”

5. Attachment-B Notice of Intent (Page B-4). Staff added language in Section VII. Pollutants/Parameters of Concern/Discharge Sampling to ensure consistency with the numeric bacteria provisions within the Water Quality Control Plan for Ocean Waters of California. Under “Discharges to ocean waters must submit:” staff added subsection 3).

“3) The analytical results of a representative sample of the proposed effluent discharged to ocean waters for fecal coliform and *E. coli*. Additionally, for all areas where shellfish may be harvested provide analytical results for total coliform.”

6. Attachment-B Notice of Intent (Page B-5) Section VII. Pollutants/Parameter of Concern/Discharge Sampling Table Note 3 states...”Monitoring for bacteria in discharges to inland surface waters, enclosed bays, and estuaries shall include monitoring for total coliform, *E. coli*, and Enterococci.”

Based on revisions to the statewide bacteria provisions for inland surface waters, enclosed bays, and estuaries, staff removed “~~total coliform~~” and revised to the note to state: “Monitoring for bacteria in discharges to inland surface waters, enclosed bays, and estuaries shall include monitoring for *E. coli* (in freshwaters) and Enterococci (in saline waters).

7. Attachment-B Notice of Intent (B-5) Section VII. Pollutants/Parameter of Concern/Discharge Sampling Table Note 4 states “For discharges to the Russian River, monitoring for total coliform and *E. coli* is required.”

Based on revisions to the statewide bacteria provisions that apply *E. coli* to all freshwaters designated for contact recreation, staff removed Table Note 4. ~~For discharges to the Russian River, monitoring for total coliform and *E. coli* is required.~~

By removing Table Note 4, notes 5, 6, and 7 were renumbered to notes 4, 5, and 6, respectively.

8. Attachment-E Table E-2 Effluent Monitoring – Monitoring Locations EFF-001, EFF-002, etc. (Page E-5)

Based on revisions to the statewide bacteria provisions *E. coli* to Table E-2

<u><i>E. coli</i></u>	<u>cfu 100 mL</u>	<u>Grab</u>	<u>See Table E-3⁸</u>	<u>Part 136⁴</u>
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Additionally, staff revised table note 7 accordingly. “Monitoring for fecal coliform bacteria, Enterococci, and total coliform bacteria is required for ~~treated bilge water discharges~~ to ocean waters. Monitoring for *E. coli* and enterococci is required for discharges to inland surface waters, enclosed bays, and estuaries.”

9. Attachment-F Fact Sheet Section II.A.4. Notification Requirements (Page F-5).

Based on revisions to the statewide bacteria provisions that apply *E. coli* to all freshwaters designated for contact recreation, staff removed “~~Applicants discharging to the Russian River are required to analyze the proposed discharge for total coliform bacteria and *E. coli* as segments of the Russian River are 303(d) listed as impaired by pathogenic indicator bacteria.~~”

10. Attachment-F Fact Sheet Section VI.A. Rationale for Receiving Water Limitations – Surface Water – Inland Waters, Enclosed Bays, and Estuaries (Page F-37). Staff added language in the fact sheet to explain changes to the bacteria limitations.

The fecal coliform, enterococci, and *E. coli* limitations in this General Order reflect the revised bacteria provisions of the Water Quality Control Plan for Inland Surface Water, Enclosed Bays, and Estuaries adopted by the State Water Resources Control Board on August 7, 2018, and which became effective on February 4, 2019. Staff added the numeric water quality objectives for bacteria and removed the narrative bacteria objective because staff determined that compliance with the numeric water quality objectives will ensure the protection of beneficial uses for low-threat discharges. For this General Order staff prefer determining compliance with numeric objectives, rather than narrative objectives that require determining natural background levels of bacteria and comparing those to receiving water data.

11. Attachment-F Fact Sheet Section VI.B. Rationale for Receiving Water Limitations – Ocean Waters (Page F-38). Staff added language in the fact sheet to explain changes to the bacteria limitations.

The fecal coliform, total coliform, and *E. coli* limitations in this General Order reflect the revised bacteria provisions within Water Quality Control Plan for Ocean Waters adopted by the State Water Resources Control Board on August 7, 2018, and became effective on February 4, 2019.

12. Attachment-F Fact Sheet Section VIII.A.4 Rationale for Monitoring and Reporting Requirements – Effluent Monitoring (Page F-45). Staff added language to reflect new effluent monitoring requirements for *E. coli* that was inadvertently omitted from the Draft Order.

4. This General Order contains new effluent monitoring requirements, at frequencies outlined in Table E-3 of the MRP, for fecal coliform bacteria, *E. coli*, and Enterococci. These monitoring requirements are established to verify that the discharge is protective of the water contact recreation use, consistent with the bacteria objectives in the 20189 Ocean Plan.