
North Coast Regional Water Quality Control Board

Response to Written Comments
Draft Monitoring and Reporting Program
Order No. R1-2020-0031
for the
Windsor Water District, Recycled Water Program
Regional Water Quality Control Board, North Coast Region
September 29, 2020

Comment Letter Received

The deadline for submittal of public comments regarding Monitoring and Reporting Program (MRP), Order No. R1-2020-0031, for the Windsor Water District (District or permittee) Recycled Water Program was September 4, 2020. Timely comments were received only from the Windsor Water District.

In this document, comments from the District are summarized, followed by the Regional Water Board staff response. Text added to the Proposed MRP is identified by underline and text to be deleted from the Proposed MRP is identified by ~~strike through~~ in this document. The term “Draft MRP” refers to the version of the Monitoring and Reporting Program (MRP) that was sent out for public comment. The term “Proposed MRP” refers to the version of the MRP that has been modified in response to comments and is being presented to the North Coast Regional Water Quality Control Board’s Executive Officer for consideration.

Permittee Comments – Windsor Water District

Comment 1: The District requests modification of the annual calibration requirement (Section 1.4 of the MRP) for all flow measuring devices to specify that this is not applicable to customer water meters assigned to each user.

The MRP requires annual calibration of “all flow measurement devices,” which is a standard requirement in NPDES permits that applies to flow monitoring at wastewater treatment plants. The MRP should clearly state that this requirement should not be applicable to customer meters serving individual use areas. Industry standard practice for customer meters is to replace them when they are expected to be at the end of their useful life (typically 20 years or more), rather than to calibrate the meters.

The District asks for this permit section to be amended with text to exclude customer meters.

Response 1:

The District's request to exclude customer meters from the annual calibration requirement is reasonable, provided that these meters are inspected annually to document that they are in proper operational condition. Regional Water Board staff propose to update section 1.4 of the MRP to say:

"All monitoring instruments and devices used by the Administrator to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices (except customer meters) shall be calibrated no less than the manufacturer's recommended intervals or one year intervals, (whichever comes first) to ensure continued accuracy of the devices. Customer meters not requiring periodic calibration per the manufacturer, at a minimum, shall be visually inspected and documented to be in proper operational condition on an annual basis."

Comment 2a: The District requests that the sampling frequency for salts and nutrients be reduced from monthly to twice per year.

The District indicates that the sampling of nutrients is provided to track long-term trends and to determine nutrient loading to the groundwater basin. They indicate that little benefit is provided by monthly monitoring and that these costs should not be passed to ratepayers.

Response 2a:

Regional Water Board staff have reviewed historic salt and nutrient data to determine how much potential error may be present under various sampling frequencies. Review of the associated operational data indicates that nearly all recycled water irrigation occurs during second and third quarter of the calendar year. Biannual sampling with sampling events occurring in the second and third quarter was determined to provide adequate representation of the recycled water salt and nutrient concentrations and did not result in a significant increase in the potential error for this data. Table E-2 of the MRP has been modified as follows:

Table E-2. Recycled Water Monitoring Requirements – Monitoring Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method ⁽²⁾
Recycled Water Flow ⁽¹⁾	mgd	Meter	Continuous	---
Ammonia Nitrogen (as N)	mg/L	Grab	<u>Monthly</u> <u>Biannual</u> ⁽⁵⁾	Part 136
Nitrate Nitrogen (as N)	mg/L	Grab	<u>Monthly</u> <u>Biannual</u> ⁽⁵⁾	Part 136
Nitrite Nitrogen (as N)	mg/L	Grab	<u>Monthly</u> <u>Biannual</u> ⁽⁵⁾	Part 136
Organic Nitrogen (as N)	mg/L	Grab	<u>Monthly</u> <u>Biannual</u> ⁽⁵⁾	Part 136
Total Nitrogen (as N)	mg/L	Calculation ⁽³⁾	<u>Monthly</u> <u>Biannual</u> ⁽⁵⁾	Part 136
Total Dissolved Solids (TDS)	mg/L	Grab	<u>Monthly</u> <u>Biannual</u> ^(4,5)	Part 136
Sodium	mg/L	Grab	<u>Monthly</u> <u>Biannual</u> ^(4,5)	Part 136
Chloride	mg/L	Grab	<u>Monthly</u> <u>Biannual</u> ^(4,5)	Part 136
Boron	mg/L	Grab	<u>Monthly</u> <u>Biannual</u> ^(4,5)	Part 136

Table Notes

1. Each month, the Administrator shall report the daily average and monthly average flows.
2. Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Regional Water Board or State Water Board, such as with the current edition of Standard Methods for Examination of Waters and Wastewater (American Public Health Administration).
3. Total Nitrogen shall be calculated as the sum of the results for Ammonia Nitrogen, Nitrate Nitrogen, Nitrite Nitrogen, and Organic Nitrogen.
4. The monitoring frequency for TDS, Sodium, Chloride, and Boron may be reduced or eliminated by the Regional Water Board Executive Officer through the modification of this MRP if monitoring data demonstrates that concentrations of these constituents are consistently lower than water quality objectives for protecting groundwater.
5. Biannual sampling to occur in second and third quarter of each calendar year.

Comment 2b: The District requests that the agronomic rate requirements in Table E-4 be changed from monthly to annual.

The District requests that the MRP be modified so that the District may continue to use their current practice of assessing compliance with agronomic loading through annual calculations, rather than the proposed monthly basis, specifically using the annual average of these parameters.

Response 2b:

The District's request is reasonable and the requested change has been made. This comment and resulting change is covered in more detail within comment 4.

Comment 3: Storage Pond Monitoring reference correction.

Under Section 5.1 there is a reference to table E-4. We believe this is an error and should be referencing E-3.

Response 3:

This correction has been made to the MRP.

Comment 4: The District requests that the agronomic rate requirements in Table E-4 be changed from monthly to annual.

The District requests that the MRP be modified so that the District may continue to use their current practice of assessing compliance with agronomic loading through annual calculations, rather than the proposed monthly basis, specifically using the annual average of these parameters. The District indicates that because the nitrogen content of the recycled water does not vary substantially, that monthly flow meter data can adequately identify concerns with over-application without making monthly calculations of nitrogen application. They further express that this change would be consistent with the default MRP in the General Order. The District further requests that the monitoring frequency for soil saturation/ponding, discharge off-site, nuisance odors/vectors, and notification signs be changed from monthly to quarterly as this has not been a historical issue for the district.

Response 4:

The District's request to change the observation frequency for acreage applied, application rate, and total nitrogen application rate is reasonable. The indicated frequency for these parameters was mistakenly listed as monthly in the draft MRP and was intended to be listed as Annually.

The Regional Water Board further agrees with the District that there is not a history of issues regarding soil saturation, ponding, discharge off-site, nuisance odors, vectors, or a lack of the required recycled water notification signs. Therefore, a quarterly

observation frequency is reasonable. Quarterly visual monitoring of these parameters is the standard observation frequency specified in the General Order and will be maintained for the District's requirements.

Table E-4 has been modified as below to reflect the requested Minimum Sampling/Observation Frequencies.

Table E-4. Recycled Water Use Area Requirements ⁽¹⁾

Parameter	Units	Sample Type	Minimum Sampling/Observation Frequency ⁽²⁾
Recycled Water User	---	---	---
Recycled Water Flow ⁽³⁾	gpd ⁽⁴⁾	Meter ⁽⁵⁾	Monthly
Acreage Applied ⁽⁶⁾	Acres	Calculated	Monthly <u>Annually</u>
Application Rate (hydraulic)	Inches/acre/year	Calculated	Monthly <u>Annually</u>
Total Nitrogen Application Rate ^(7,8)	Lbs/acre/month	Calculated	Monthly <u>Annually</u>
Soil Saturation/Ponding	---	Observation	Monthly <u>Quarterly</u>
Discharge off-Site	---	Observation	Monthly <u>Quarterly</u>
Nuisance Odors/Vectors	---	Observation	Monthly <u>Quarterly</u>
Notification Signs ⁽⁹⁾	---	Observation	Monthly <u>Quarterly</u>
Rainfall	Inches	Gage	Daily
ETo/ETc ⁽¹⁰⁾	Inches	Gage/Calculation	Daily
Maximum Allowable Hydraulic Agronomic Rate ⁽¹⁰⁾	Inches	Calculation	Annually

Table Notes

1. Recycled water production and use area monitoring shall be reported with the annual report (section V.B of this MRP). Non-compliance incidents shall be reported as specified in section V.C of this MRP.
2. Or less frequently if approved by the Regional Water Board Executive Office through the modification of this MRP.
3. Estimation of recycled water shall not include other potable or non-potable "make-up" water used in conjunction with recycled water use.
4. gpd denotes gallons per day.

5. Meter requires meter reading, a pump run time meter, or other approved method of flow monitoring.
6. Acreage applied denotes the acreage to which recycled water is applied.
7. The source of the total nitrogen data used for the nitrogen application rate calculation shall be noted in the Administrator's annual recycled water report. The Administrator may use total nitrogen concentrations provided by the District of Santa Rosa or collect its own samples.
8. Nitrogen concentrations shall be calculated and reported "as N". For example, nitrate-nitrogen = 27 mg/l as NO₃ shall be converted and reported as nitrate-nitrogen = 6.1 mg/L as N using a conversion factor of 14.067 (N)/62.0049 (NO₃).
9. Notification signs shall be consistent with the requirements of Title 22, section 60310(g).
10. ETo is the reference evapotranspiration from the nearest operating California Irrigation Management Information System (CIMIS) station. ETc is the amount of full potential water use by a crop and is calculated as ETo times a crop coefficient that accounts for the amount of sun interception in a vineyard. The crop coefficient increases with canopy growth. The crop coefficient is calculated by applying a standard factor of 0.017 to the percent shade at solar noon. Percent shade at solar noon is a function of row spacing, vine spacing, and the width of measured shaded area between two vines at solar noon. For example, if row spacing (A) is 8 feet and vine spacing (B) is 6 feet, the area per vine (C) is 48 square feet. If the width of measured shaded area between two vines at solar noon (D) is 2.4 feet, the percent shaded area is B times D divided by C or 6 times 2.4 divided by 48 which equals 0.3 or 30 percent. The crop coefficient is 0.017 times 30 which equals 0.51.
11. Maximum allowable hydraulic agronomic rate is the lower of 75% of ETc (calculated monthly and summed for the entire irrigation season) or 9 inches per year distributed over the March through October growing season.

Comment 5: The District requests that the cross-connection testing requirement is only for dual-plumbed sites.

The District requests the additional text to clarify that all new sites receive a cross-connection test prior to initiating service, but only dual-plumbed sites receive routine testing every four years.

Response 5:

The District's request is reasonable. Note 2 of Table E-5 has been updated to provide clarification.

Table E-5. Cross-Connection and Backflow Monitoring Requirements

Parameter	Sampling Frequency	Required Frequency
Cross-connection inspection ⁽¹⁾	Annually	Annually
Cross-connection testing	Four Years ⁽²⁾	30 days/Annually ⁽³⁾
Backflow Incident	Continuous	24 hours from discovery
Backflow Prevention Device Testing and Maintenance	Annually ⁽⁴⁾	Annually

Table Notes

1. The Administrator shall ensure that the dual plumbed recycled water system (indoor and outdoor) is inspected for possible cross connection with the potable water system.
2. Testing of dual plumbed recycled water systems shall be performed prior to initiating recycled water service and at least every four years, or more frequently at the discretion of DDW. Testing results shall be maintained by the Administrator and submitted annually.
3. Cross-connection testing shall be reported pursuant to title 22 section 60314. The report shall be submitted to DDW within 30 days and included in the annual report to the Regional Water Board.
4. Backflow prevention device testing and maintenance shall be tested by a qualified person as described in title 17, section 7605.

Comment 6: The District requests that the due date for Annual Reports should be modified to April 1st.

The District requests the annual report to be submitted by April 1st of each year rather than March 1st. This request is consistent with the default MRP in the General Order.

Response 6:

The District’s request is reasonable and the annual report’s due date has been modified to April 1st. Section 6.2 of the MRP has been modified as follows:

“6.2. Annual Report

The Administrator shall submit an annual report to the Regional Water Board for each calendar year through the CIWQS Program Web site. The annual report shall be submitted by ~~March 1st~~ April 1st following the monitoring year.”

Comment 7: The District requests that duplicative reporting of Total Coliform Bacteria and Turbidity data be removed from the Annual Report.

Monitoring data for Total Coliform Bacteria and Turbidity should not be included in the Annual Report requirement (section 6.2.3), as it will have already been submitted to CIWQS under Order R1-2020-0010. Requiring the District to submit this same data in the Annual Report merely makes the draft NOA more difficult to interpret; the draft NOA elsewhere states that duplicative monitoring is not required (Section 1.7). Section 3.1.1 similarly states that reporting requirements for Turbidity and Total Coliform bacteria may be met through submittal of data collected as required under WDR/NPDES Order No. R1-2020-0010.

~~6.2.3 All monitoring results for Total Coliform Bacteria and Turbidity pursuant to the Recycling Monitoring Requirements established in Section VII of Monitoring and Reporting Program for WDR Order No. R1-2020-0010.~~

Response 7:

The Regional Water Board disagrees with the District's assessment that Section 1.7 and Section 3.1.1 would allow the reporting requirements of Turbidity and Total Coliform Bacteria to be met through the submittal of data collected as required under WDR/NPDES Order R1-2020-0010 (NPDES permit). While these sections indicate that the monitoring requirements for this data can be met through the data collected as required under the NPDES permit, they do not relieve the District from the specified reporting requirements.

Nevertheless, the Regional Water Board recognizes that duplicate reporting of the laboratory data may be burdensome on the District, and as Section 6.2.8 already requires a "summary of any operational problems, equipment or process malfunctions, including incidents of delivering recycled water that does not meet all recycled water quality requirements as established in WDR/NPDES Permit Order No. R1-2020-0010..."; any non-compliance event within this data is already required to be reported and it is not necessary to include Section 6.2.3. The annual reporting requirement for reporting Turbidity and Total Coliform Bacteria data, Section 6.2.3 of the Draft MRP, has been removed as requested.

Comment 8: The District requests that the Annual Report require less detail about individual recycled water use permits.

Specific information about the date and term of individual user agreements is not required in the default MRP in the General Order, and past reporting by the District has not included this level of detail. The District requests removal of this requirement.

Response 8:

The Recycled Water User's Guide issued by the District contain the conditions of use for each site and the requirements for users to follow the rules and regulations set forth

under Town of Windsor's codes and the Recycled Water User's Guide. This is a critical tool for the District's recycled water program and it is appropriate for the Regional Water Board to have the District track and report the current status of each User's agreement. Section 6.2.4 of the MRP has been modified as follows:

"6.2.4 A summary table of all recycled water users, the status of the Recycled Water User Agreement or Permit for each User, date and term of recycled water user agreements, and use areas shall be provided. Maps may be included to identify use areas. Newly permitted recycled water Users and use areas shall be clearly identified. The Administrator shall maintain all Recycled Water User Agreements on file."

Comment 9: The District requests that the requirement to obtain DDW pre-approval for changes to the Recycled Water User's Guide (Section 6.5.2 of the MRP) to be removed from the MRP.

The District indicates that they are open to providing a courtesy copy of changes to the Recycled Water User's Guide, or obtaining pre-approval for certain specific portions of the Recycled Water User's Guide, but that this is not part of the Title 22 Engineering Report that requires separate authorization by the Regional Water Board or DDW. The District further indicates that they acknowledge that DDW's April 16, 2020 conditional acceptance letter noted that new types of uses must be approved by DDW, but that the letter does not indicate that DDW plans to review future versions of the User's Guide for other types of program changes.

Response 9:

DDW's April 16, 2020 conditional acceptance letter to the Windsor Water District indicates that revisions and updates to the Engineering Report and Appendices (including any updates to the Recycled Water User's Guide) be submitted to DDW and the Regional Water Board. Regional Water Board staff further discussed this comment with DDW staff who agreed that any changes to the Recycled Water User's Guide that translates to changes in operations, program management, or implementation must be reviewed and accepted by DDW and the Regional Water Board prior to the change.

In advance of making any such changes, the District may consult with the Regional Water Board and DDW to waive such review requirement for minor and non-substantive changes. This requirement is consistent with the Monitoring and Reporting Program as provided to other enrollees of the General Order.

Section 6.5.2 has been modified as follows:

“Updates to the Recycled Water User’s Guide must be reviewed by Regional Water Board and DDW staff and accepted by DDW prior to implementation by the Administrator’s program. The Administrator may consult with the Regional Water Board to waive the aforementioned requirement for minor and non-substantive changes. The Regional Water Board shall communicate with DDW when necessary to determine if a waiver request is appropriate.”