

**Response to Written Comments
and
Staff Initiated Changes**

**Draft Waste Discharge Requirements Order No. R1-2018-0002
National Pollutant Discharge Elimination System (NPDES)
for the Forestville Water District
Wastewater Treatment, Recycling and Disposal Facility**

**Regional Water Quality Control Board, North Coast Region
July 11, 2018**

Comments Received:

The deadline for submission of public comments regarding draft Waste Discharge Requirements Order No. R1-2018-0002, National Pollutant Discharge Elimination System Permit (Draft Permit) for the Forestville Water District Wastewater Treatment, Recycling and Disposal Facility was November 27, 2017. The Forestville Water District (Permittee) provided timely comments on the Draft Permit by submitting a compliance schedule request letter to Regional Water Board staff on November 3, 2017, and general comments by e-mail on November 27, 2017. The content of these written comments are summarized below followed by the Regional Water Board staff responses. The term “Draft Permit” refers to the draft that was sent out for public comment. The term “Proposed Order” refers to the version of the permit that has been modified in response to comments and is being presented to the Regional Water Board for consideration.

Forestville Water District General Comments:

The Permittee submitted general comments by email on November 27, 2017, that include broad statements about permit requirements that increase the District’s cost of compliance, the difficulty of understanding the permit due to its length, poor organization, and use of cross-referencing, and the burden this places on the District and its rate-payers. The comments do not provide any references to specific permit requirements; therefore, this response to comments is likewise general and broad. The Regional Water Board staff responses are intended to provide clarification regarding the areas of concern expressed in the Permittee’s comment email.

Regional Water Board Response:

NPDES permits are lengthy because they contain many requirements that are needed to implement requirements of the Clean Water Act, Code of Federal Regulations, and the California Water Code. In addition, many NPDES permits also include Waste Discharge Requirements applicable to the discharge of waste to land or waters of the state and water recycling requirements. This adds the need to include requirements to ensure compliance with the California Code of Regulation (e.g., Title 22 for water recycling and Title 27 for land disposal) and other State requirements. These requirements result in the need for monitoring and reporting to demonstrate compliance. The requirements are complex, and the State Water Board developed the existing NPDES permit template as a means to ensure

statewide consistency in NPDES permits. State and Regional Water Board staff has modified the permit template in recent years to reduce unnecessary redundancy, place prohibitions and effluent limitations within the first few pages of the permits, and to place most findings and explanatory information in the fact sheets of the permits.

Regional Water Board staff considered the cost of compliance during development of the Draft Permit and communicated with the Permittee about new and changing requirements during permit development. Where the regulations provide flexibility, Regional Water Board staff looked for opportunities to eliminate or reduce requirements. Regional Water Board staff modified or eliminated several requirements from the previous permit to decrease the cost of compliance. This includes the removal of mass based limits for BOD and TSS, application of a water effect ratio that resulted in higher effluent limitations for copper, reduction of monitoring frequencies for acute toxicity (from monthly to annual), and removal of monitoring requirements for Title 22 Pollutants in the effluent, copper and cyanide in receiving water, and chloride and boron in recycled water. Regional Water Board staff also believe that the reduction in the reporting frequency for monitoring reports (reduced from monthly to annual) will result in time and cost savings for the Permittee.

In addition, Regional Water Board staff contacted the Permittee and proposed extending the compliance schedule in Cease and Desist Order No. R1-2012-0011 to extend the term of the interim effluent limitations and compliance schedule for copper to June 30, 2018, due to delays in adoption of the Permittee's new NPDES permit.

New requirements added to the Draft Permit (and retained in the Proposed Permit) were deemed necessary to ensure compliance with existing regulations, and all are standard permit requirements that are applied to all publicly owned treatment works (POTWs) as necessary, including:

1. New ammonia effluent limitations were added because monitoring conducted during the term of the previous permit, Order No. R1-2012-0012, demonstrated that the Permittee's discharge contains ammonia at concentrations that are toxic to aquatic life. The Proposed Order also retains effluent limitations for nitrate from the previous permit because monitoring also showed that the discharge occasionally has nitrate at concentrations that exceed water quality objectives for the protection of drinking water. The Permittee's request for an exception to the Basin Plan one percent discharge rate limitation has been denied, primarily due to the presence of ammonia and nitrate that exceed water quality objectives and the potential presence of cyanide in the discharge. Regional Water Board staff have developed a time schedule order in response to the Permittee's request for a compliance schedule to achieve compliance with ammonia, nitrate, and cyanide effluent limitations and the discharge rate limitation. The time schedule order includes interim effluent limitations for ammonia, nitrate, and cyanide, and an interim discharge rate limitation. The time schedule order also provides protection from

mandatory minimum penalties provided that the Permittee meet the interim limitations that are based on the Permittee's performance during the term of the previous Order.

2. New narrative effluent limitation for chronic toxicity due to a finding of reasonable potential for chronic toxicity. The narrative chronic toxicity effluent limitation is required by the Basin Plan and the State Policy for Implementation Policy of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California.
3. New Discharge Specifications for nitrate and total dissolved solids for recycled water and associated groundwater monitoring requirements. The State Recycled Water Policy requires the development of salt and nutrient management plans (SNMPs) for groundwater basins in the State. In the absence of a regional or sub-regional SNMP effort, the regional water boards have the discretion to require groundwater monitoring and/or detailed antidegradation analyses to determine whether groundwater is being or has the potential of being impacted by the storage and use of recycled water. The Fact Sheet to the Proposed Order provides a detailed discussion to justify the need for groundwater monitoring.
4. New monitoring requirements for Haloacetic Acids. This monitoring requirement is being required for all POTWs that use chlorine for disinfection to determine whether the discharge contains Haloacetic Acids at concentrations that exceed the Title 22 drinking water objective of 60 µg/L. Monitoring is required in October and March during the first year of the permit term. If this monitoring demonstrates that there is no reasonable potential for Haloacetic Acids, the Permittee will not be required to conduct further monitoring.

Forestville Water District – November 3, 2017, Letter

The Permittee submitted a letter to the Regional Water Board staff on November 3, 2017, that contains an analysis of the Permittee's inability to immediately comply with ammonia, nitrate, and cyanide effluent limitations in the Draft Permit and a request for compliance schedules for ammonia, nitrate, cyanide and the one percent discharge limitation in the Draft Permit, establishment of interim effluent limitations, and protection from mandatory minimum penalties. The letter also includes a schedule of proposed actions and time frames to achieve compliance with ammonia, nitrate, and cyanide effluent limitations, and the one percent discharge limitation.

Regional Water Board Response:

Regional Water Board staff has evaluated the Permittee's request and respond as follows:

1. ***Request for compliance schedule for compliance with ammonia and nitrate effluent limitations in Effluent Limitations section IV.A.2.a of the Proposed***

Order. Since final effluent limitations for ammonia established in the Proposed Order are more stringent than effluent limitations established in the previous Order (Order No. R1-2012-0012), the California Water Code allows for protection from MMPs when a time schedule order is issued that specifies actions that the Permittee is required to take in order to correct the violations that would otherwise be subject to MMPs. Since treatment for ammonia and nitrate is an intricately linked process, the compliance schedule must also include nitrate. Regional Water Board staff have developed a time schedule order as allowed by the California Water Code.

2. ***Request for compliance schedule for compliance with the discharge rate limitation in Discharge Prohibition III.J of the Proposed Order.*** The Permittee proposes to request authorization for a higher discharge rate once it is able to demonstrate compliance with ammonia, nitrate, and cyanide effluent limitations. The Permittee's proposed plan is also included in the time schedule order.
3. ***Request for modified cyanide effluent limitation and cyanide monitoring requirements.*** The Permittee's letter requested that cyanide monitoring requirements in the Proposed Order be based on free cyanide, rather than total cyanide. In response to this request, Regional Water Board staff reviewed the available scientific literature regarding analytical methods for detecting cyanide in municipal wastewater and found that U.S. EPA revised 40 C.F.R. part 136 in 2012 to include additional methods to analyze for the forms of cyanide that are toxic to aquatic life, including weak acid dissociable cyanide. Regional Board staff have modified the Proposed Order to allow compliance monitoring using an approved analytical protocol for total or weak acid dissociable cyanide.

The following sections of the Proposed Order have been modified to reflect this change:

Order section IV.A.2.a, Table 5, Effluent Limitations – Discharge Point 002 – Monitoring Location EFF-002. Added Table Note 3 to read, "The Permittee may, at its option, analyze for cyanide as total or weak acid dissociable cyanide using protocols specified in 40 C.F.R. Part 136 (i.e., Standard Method Part 4500-CN-I, U.S. EPA Method OIA 1677, American Society of Testing and Materials (ASTM) Method D203), or an equivalent method in the latest Standard Method edition."

Monitoring and Reporting Program, section IV.C, Table E-5. Effluent Monitoring – Monitoring Location EFF-002. Added Footnote 6 to read, "The Permittee may, at its option, analyze for cyanide as total or weak acid dissociable cyanide using protocols specified in 40 C.F.R. Part 136 (i.e., Standard Method Part 4500-CN-I, U.S. EPA Method OIA 1677, American Society of Testing and Materials (ASTM) Method D203), or an equivalent method in the latest Standard Method edition."

Fact Sheet section IV.C.3.c. Cyanide. Added last sentence to paragraph to read, “The Order gives the Permittee the option to analyze for cyanide as total or weak acid dissociable cyanide using protocols specified in 40 C.F.R. Part 136 (i.e., Standard Method Part 4500-CN-I, U.S. EPA Method OIA 1677, American Society of Testing and Materials (ASTM) Method D203), or an equivalent method in the latest Standard Method edition.”

Fact Sheet section VII.B.3, Rationale for Monitoring and Reporting Requirements, Effluent Monitoring, Monitoring Location EFF-002 (Table E-5). Added new subsection b. to read, “Although cyanide effluent limitations and monitoring requirements are specified as total cyanide, this Order allows the Permittee the option to analyze for cyanide as total or weak acid dissociable cyanide using protocols specified in 40 C.F.R. Part 136 (i.e., Standard Method Part 4500-CN-I, U.S. EPA Method OIA 1677, American Society of Testing and Materials (ASTM) Method D203), or an equivalent method in the latest Standard Method edition.”

4. ***Request for compliance schedule for compliance with cyanide effluent limitations in Effluent Limitations section IV.A.2.a of the Proposed Order.***
Effluent limitations for cyanide in the Proposed Order do not meet any of the conditions specified in Water Code section 13385 (j)(3)(B) (i)-(iv), thus the Water Code does not allow protection from MMPs while the Permittee works to achieve compliance with cyanide effluent limitations. The Permittee requested that the compliance schedule allow for a cyanide hold-time study to determine if the preservative that is required as part of the sampling and analytical protocol could be causing falsely elevated cyanide concentrations. U.S. EPA acknowledges that the required preservative may falsely elevate cyanide concentrations and has proposed the adoption of procedures that dischargers can use to conduct a hold-time study. A discharger may receive authorization from U.S. EPA on a case-by-case basis to perform a cyanide hold-time study.

Regional Water Board staff also found that the scientific literature documents other issues related to cyanide analytical methods, including potential interferences, as well as the potential for formation of cyanide in the chlorination process; therefore, the time schedule order includes a compliance schedule that first requires the Permittee to monitor for cyanide using the revised analytical methods. If monitoring with the new methods continues to reveal the presence of cyanide at levels that exceed final effluent limitations, the Permittee is required to submit a work plan for achieving cyanide compliance that must include tasks to evaluate whether cyanide is being formed in the chlorination process prior to conducting a hold-time study.

Staff Initiated Changes

1. **Water Recycling Requirements.** The Permittee submitted a revised Title 22 Recycled Water Engineering Report on October 31, 2017. During its review of the Report, State Water Board, Division of Drinking Water (DDW) staff identified several existing recycled water use sites as dual-plumbed systems. On February 16, 2018, the Permittee resubmitted the Title 22 Recycled Water Engineering Report, and DDW staff found that the resubmitted report does not adequately address DDW's previous comments regarding dual-plumbed use sites. Regional Water Board staff, in consultation with DDW staff, propose the addition of the following language to the Draft Permit in order to address DDW's comments. Proposed language identified in a. through c., below, is taken from State Water Resources Control Board Order No. WQ-2016-0068-DDW, Water Reclamation Requirements for Recycled Water Use.

a. Monitoring and Reporting Program (Attachment E)

- i. Add new section VII.C, as follows:

C. Dual Plumbed Recycled Water Systems

1. If dual plumbed recycled water systems are proposed, the Permittee shall consult with DDW staff for additional reporting, design, and operation requirements. The frequency of testing or cross connection and backflow prevention devices shall be as listed below or more frequently, if specified by DDW.

Requirement	Frequency	Reporting Frequency
Cross connection testing	Four Years ¹	30 days/Annually ²
Backflow Incident	--	24 hours from discovery
Backflow Prevention Device Testing and Maintenance	Annually ³	Annually

Table Notes:

1. Testing shall be performed at least every four years, or more frequently at the discretion of the State Water Board Division of Drinking Water.
2. Cross connection testing shall be reported pursuant to CCR, title 22, section 60314. The report shall be submitted to the State Water Board Division of Drinking Water within 30 days and included in the annual report to the Regional Water Board.
3. Backflow prevention device maintenance shall be tested by a qualified person as described in CCR, title 17, section 7605.

- ii. Revise section X.D.3., Water Recycling System Annual Report, as follows:

Subsection a.ii revised to read: “Locations of recycled water use sites, including a map. Newly permitted recycled water users and use areas shall be clearly identified and, when applicable, supplement to the title 22 Engineering Report and the State Water Board Division of Drinking Water approval letter supporting those additions shall be included;”

New subsection c. added to read: “An evaluation of the performance of the recycled water treatment facility, including discussion of capacity issues, system problems, and a forecast of the flows anticipated in the next year.”

New subsection n. added to read: “The name and contact information for the recycled water operator responsible for operation, maintenance, and system monitoring.”

New subsection o. added to read: “A transmittal letter shall accompany each annual report. The letter shall summarize the numbers and severity of violations found during the reporting period, and actions taken or planned to correct the violations and prevent future violations. The transmittal letter shall contain the following penalty of perjury statement and shall be signed by the Permittee’s authorized agent:

‘I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.’ “

b. Fact Sheet (Attachment F)

- i. Revise Section IV.G.4, Water Recycling Specifications, Recycled Water Requirements and Provisions, as follows:

“The recycled water requirements of this Order (including Attachment G and section X of the MRP) include requirements for dual-plumbed systems, including requirements for cross-connection prevention. The Permittee supplies recycled water to four dual-plumbed recycled water users at the time of permit adoption. The Regional Water Board recognizes that at the time of adoption of this Order, the Permittee has not identified any dual-plumbed recycled water uses, however, the language that related to dual-plumbed systems is included in this Order to provide for the possibility of the Permittee adding such uses, in the event that the permittee identifies any potential dual-plumbed uses during the term of this Order and completes

necessary CEQA documentation, title 22 engineering report, and other Order requirements.”

c. Recycled Water Findings, Use Requirements, Provisions, and Technical Report Requirements (Attachment G)

i. Add new Finding A.20 to read:

“State Water Board DDW requirements for completion of the title 22 Recycled Water Engineering Report were identified in letters dated December 22, 2017, and April 25, 2018, that also included recommendations and conditions of approval that are included here as requirements of this Order:

- a. Update and resubmit the title 22 Recycled Water Engineering Report addressing the comments in DDW’s December 22, 2017, letter;
- b. There shall be no delivery of recycled water to existing dual-plumbed uses until shut-down tests are conducted and no cross-connections on-site within existing dual-plumbed use areas are documented.
- c. New use areas and types of recycled water uses, other than those listed and/or described in the DDW-approved Engineering Report must be addressed by submittal of an addendum to the Engineering Report for DDW approval. The addendums must demonstrate that applicable changes to operations and management programs are in place.
- d. Future dual-plumbed use areas shall comply with the requirements specified in section C.16 of this Attachment.”

ii. Add new Recycled Water Provision C.16 to read:

“Future dual-plumbed use areas shall comply with the following requirements:

- a. Prior to the initial operation of the dual-plumbed recycled water system, the Permittee shall document that there are no cross-connections on-site within the proposed dual-plumbed use area. A description of how the initial separation (cross-connection) test will be performed (pressure, dye, or other method) shall be provided to DDW. The dual-plumbed recycled water system shall be retested for possible cross-connection at least once every four years.
- b. The Permittee shall notify DDW prior to conducting the cross-connection control test. DDW staff may witness the test.

- c. Provide documentation to describe the method for cross-connection testing (pressure, dye, or other method) and the steps to be taken during the cross-connection control test.
- d. Annually thereafter, the Permittee shall ensure that the recycled water system (indoor and outdoor) is inspected for possible cross-connection with the potable water system.
- e. The inspectors and the testing shall be performed by a cross-connection control specialist certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements. Please identify that person in a notification provided to DDW.
- f. Each dual-plumbed use area must have an adequately trained use area supervisor in order to control the on-site piping and prevent any cross-connections. The use area supervisor must keep as-built plans up to date and on the site.
- g. The use area supervisor must be adequately trained on the use of recycled water. The use area supervisor must complete the training before recycled water is delivered.
- h. Verify that appropriate backflow prevention devices are installed and have been tested annually in accordance with California Code of Regulations Title 17. Devices must be located on the potable water line, downstream of the meter.
- i. The results of the cross-connection inspections and tests must be documented and submitted to DDW.
- j. Indicate whether any proposed dual-plumbed use area will receive supplemental water and provide details of properly designed air gap.”