

# ATTACHMENT 1

## **Response to Comments and Staff Changes** **Forestville Water District Wastewater Treatment, Reclamation** **and Disposal Facility, WDID No. 1B831000SON** **Order No. R1-2012-0012**

*Three comment letters were received regarding the February 4, 2010 draft Waste Discharge Requirements/NPDES permit for Forestville Water District Wastewater Treatment, Reclamation and Disposal Facility. All of the letters were received from entities representing Forestville Water District as follows:*

- 1. Forestville Water District, April 1, 2011 letter signed by Ronald Walker, General Manager/Chief Plant Operator*
- 2. Brelje and Race Consulting Civil Engineers, April 1, 2011 letter signed by David F. Long, P.E., Senior Principal*
- 3. Law Offices of Perry, Johnson, Anderson, Miller & Moskowitz LLP, March 31, 2011 letter signed by Malcolm T. Manwell*

*This document provides Regional Water Board staff responses to the District's comments. The responses indicate whether or not changes were made to the permit in response to the comment.*

### **A. Forestville Water District**

**Comment 1:** Forestville Water District is requesting a monthly monitoring requirement for dissolved oxygen, pH, turbidity, and temperature rather than a weekly monitoring requirement as proposed in the draft Order.

**Response:** The proposed monitoring and reporting program includes weekly effluent monitoring during periods of discharge to Jones Creek for dissolved oxygen and temperature and daily monitoring for pH. In addition, the proposed monitoring and reporting program includes weekly monitoring of the receiving water (Jones Creek) for dissolved oxygen, temperature, and turbidity and daily monitoring for pH. Monitoring for these constituents is necessary to assess compliance with Basin Plan receiving water limitations for these constituents. Weekly monitoring frequencies are necessary due to the fact that the levels of these constituents can vary based on operating conditions in the plant as well as fluctuations in creek flow that are dependent on weather conditions. In addition, these are parameters that are tested by the operator and do not take a lot of time to perform. Dissolved oxygen, temperature, and pH are tests that can be done by Forestville's operator using simple, low cost instruments that Forestville owns. Turbidity is a low cost laboratory analysis that Forestville must send to its contract laboratory. It is not at all unreasonable to require weekly monitoring for these low cost parameters as a means to ensure that receiving water limitations are being met and beneficial uses are being protected.

No changes were made to the draft permit in response to this comment.

**Comment 2:** Forestville Water District is requesting that the monitoring location for Total Coliform Bacteria be changed to a location following the Pall microfiltration process and preceding the chlorine contact chamber. The reason for this request is that Coliform Bacteria

sampling from the end of the chlorine contact chamber (Monitoring Location EFF-001) presents the possibility of contamination because the chlorine contact chamber is open to the environment, while the microfiltration process is a closed system and Coliform Bacteria samples collected at the proposed sampling location have shown that the microfilters remove Total Coliform Bacteria.

**Response:** Regional Water Board staff discussed Forestville's request with staff at the California Department of Public Health (CDPH). CDPH staff stated that Section 60301.230(b) specifically states that **disinfected effluent** must meet the specified coliform effluent limitations and that sampling at a location prior to the disinfection system would not meet this requirement.

No changes were made to the draft permit in response to this comment.

## **B. Brelje and Race**

**Comment 1:** "The last sentence towards the bottom of page F-55 states, 'The Discharger did not submit any evidence regarding whether the waste discharge requirements for reclamation discharges would interfere with the development of needed housing within the region or the costs of compliance, particularly anything to show that the costs of compliance with the Order would be unmanageable.' This is not true. The overall message of the letter submitted with the Report of Waste Discharge (ROWD) was to draw attention to costs viewed as excessive relative to benefit that would result from potential new permit requirements. The introductory letter makes several specific references to the costs and financial hardships associated with elevated levels of testing and monitoring, some of which in fact, are included in the draft Permit."

**Response:** The cover letter that came with the ROWD includes an analysis of the financial and resource impacts associated with additional monitoring requirements in the permit. The draft permit language identified in this comment is in a permit section that is focused on reclamation (land discharge) requirements (section IV.G of the Fact Sheet). Regional Water Board staff recognizes that the financial/resource analysis in the ROWD cover letter should be included in the proposed permit and considered in its evaluation of permit requirements. Fact Sheet Section IV.D.3, 5<sup>th</sup> paragraph has been modified to include the following language in place of the language quoted in this comment.

"The Discharger submitted an economic analysis with its ROWD that described the financial impacts of increased monitoring and technical report requirements. The Discharger stated that the residents in Forestville currently pay monthly sewer charges of \$100.82 per month per equivalent single-family dwelling (ESD) which will increase to \$105.92 per month beginning July 1, 2011 and that only one other community in Sonoma County pays higher rates than Forestville. As of July 1, 2011 Forestville Water District sewer rates will be 2.1 percent of median household income (MHI) of \$62,000 per year (\$5166.67 per month) based on the 2010 census report. The financial analysis provided with the ROWD indicates that additional monitoring, data entry and reporting requirements would add costs that would require Forestville to increase monthly rates further. The analysis stated that a document prepared by the State Water Board Small Community Wastewater Strategy staff indicates that a rate of 1.5 to 2 percent of MHI is generally an affordable baseline for evaluating sewer rate affordability. The financial analysis further states that Forestville is prepared to increase its rates in a moderate and incremental process, however, given that rates are already at the level considered affordable by the State Water Board, Forestville Water District requested that the Regional

Water Board consider cost and true value in writing additional requirements into the renewed permit.

Regional Water Board staff considered Forestville's economic analysis in establishing new permit requirements and carefully considered the cost and need for additional monitoring requirements. Although new permit requirements for reclamation and surface water discharges have been added to the proposed permit that were not in the prior permit, Regional Water Board staff carefully considered the priority and timing of new requirements. New requirements related to surface water discharges are discussed in the following paragraphs while new requirements related to reclamation are discussed in section IV.G Reclamation Specifications.

As noted in the Discharger's consultant's comment letter dated April 1, 2011, the permit does not include addition of many of the monitoring requirements that the Discharger was concerned about. Monitoring frequencies for many constituents were retained at the same level as the previous permit. Some monitoring requirements that were included in Monitoring and Reporting Program No. R1-2004-0027 were eliminated, such as effluent monitoring for settleable solids, zinc, and lead, and receiving water monitoring for biochemical oxygen demand and zinc. Monitoring requirements were only increased where necessary. For example, effluent discharge and receiving water monitoring requirements were increased for dissolved oxygen, temperature, pH, and turbidity due to the need to better assess impacts of the discharge on the small receiving water stream. Three of these parameters can be monitored at the treatment plant, thus saving costs of more expensive laboratory analyses. In addition, effluent and receiving water nutrient monitoring was also added to assess whether the nutrient levels in the discharge have the potential to impact receiving water beneficial uses. The Discharger may request modification of the receiving water monitoring requirements after sufficient data is collected to assess whether or not there is evidence that the discharge is impacting the receiving water."

In addition, Fact Sheet Section IV.G, end of second paragraph has been modified as follows:

~~"The Discharger did not submit any evidence regarding whether the waste discharge requirements for reclamation discharges would interfere with the development of needed housing within the region or the costs of compliance, particularly anything to show that the costs of compliance with the Order would be unmanageable~~ submitted an economic analysis with its ROWD describing the financial implications of increased monitoring and technical report requirements related to reclamation as discussed in detail in Fact Sheet section IV.D.3, paragraph 5.

As stated in section IV.D.3, Regional Water Board staff considered Forestville's economic analysis in establishing new permit requirements and carefully considered the cost and need for additional monitoring requirements. New requirements were added only as necessary.

New technical report requirements, including VI.C.2.b (Technical Report(s) Regarding Existing Recycled Water Use Sites) and IV.C.2.c (Storage Pond Technical Report) are needed to assess compliance with new requirements that recycled water be applied at agronomic rates. The Order gives the Discharger most of the permit term to complete the technical report for existing recycled water use sites and the Storage Pond Technical Report only requires the gathering of existing information, postponing potential requirements for exploratory groundwater monitoring or corrective action to a future permit term. Effluent monitoring requirements were added for

nutrients and salts due to the need to assess nitrogen and salt application rates for recycled water. The monitoring and reporting program allows for a potential reduction of some of these monitoring requirements if monitoring demonstrates no reasonable potential.

In response to this comment, Regional Water Board staff also recommends the removal of the CTR Pollutant monitoring requirement in Table E-9 (Receiving Water Monitoring Requirements). This is a costly monitoring requirement and since the majority of CTR pollutants have not been detected in past effluent and receiving water scans, it is unnecessary to include a full CTR scan on the receiving water. Instead, the proposed MRP has been modified to require monthly monitoring of the upstream receiving water station for copper and cyanide during periods of effluent discharge to Jones Creek.

See also response to Comment B.4 below, recommending removal of the monitoring requirement for lead.

**Comment 2:** Forestville Water District's consultant requests that the draft Permit be revised to delete monitoring, testing, reporting, studying and work plan preparation requirements that are in addition to those found in the current permit (Order No. R1-2004-0027) and that do not directly address a violation of the current permit.

**Response:** Regulatory requirements change over time and it is not unusual for new requirements to be added during a permit renewal that are not directly related to a known violation. Regional Water Board staff attempt to prioritize issues and not add an excessive number of new requirements during any given permit term. When Forestville's permit was renewed in 2004, the most pressing issue was to incorporate new requirements pursuant to the California Toxics Rule and the State Implementation Policy. The most pressing issues for this current permit renewal are to ensure that recycled water is addressed consistent with recently adopted statewide policies for recycled water, to initiate requirements that are needed to demonstrate that storage and irrigation of recycled water are being done in a manner that is protective of groundwater, and to ensure that Forestville is in compliance with all Basin Plan requirements.

To achieve these goals, the two most significant technical report requirements in Forestville's draft permit are as follows:

*(1) Prepare and submit a workplan within 120 days of the permit effective date describing the Discharger's plan and time schedule to assess existing recycled water use sites to demonstrate whether or not recycled water is being applied at nutrient and hydraulic agronomic rates, evaluate BMPs being implemented at each existing recycled water site, and propose new BMPs, if needed, to ensure protection of groundwater and surface water quality.*

This technical report requirement allows the Discharger to set its own time schedule for completing the evaluation of existing recycled water sites. Regional Water Board staff met with the Forestville's wastewater treatment plant operator and consultant prior to completing the draft permit and discussed this requirement in detail with them. In response to these discussions, Regional Water Board staff intentionally built flexibility into this requirement so that the Discharger would have time to plan ahead for the financial and staff resources needed to complete this task.

*(2) Prepare and submit a Storage Pond Technical Report within four years of the permit effective date. The Technical Report shall utilize existing information to provide a description of each recycled water storage pond used by the Discharger in order for Regional Water Board staff to assess whether the storage ponds are adequately designed to minimize the potential for recycled water to cause adverse impacts to areal groundwater and beneficial uses. The Technical Report shall include, but not be limited to construction date (or estimate if actual date is not known), construction details (thickness of any clay liner, impermeability, construction details, etc.), and operation and maintenance procedures that are used (e.g., berm and liner inspections, etc.).*

Regional Water Board staff has required other dischargers to implement tasks designed to demonstrate that recycled water storage is not adversely impacting groundwater. The requirement in Forestville's proposed permit requires them to provide any existing information as a first step to determine whether or not Forestville should be required to conduct further evaluations, which could include groundwater monitoring in the vicinity of the ponds. The approach taken in Forestville's permit provides them with almost the entire permit term to collect existing data, postponing any potential need to evaluate groundwater to a future permit term.

In addition to these two technical report requirements, the proposed permit requires Forestville Water District to collect additional monitoring data to help assess the impacts of its discharge on Jones Creek. An analysis of existing effluent and receiving water data that was submitted with the Report of Waste Discharge left some uncertainty regarding impacts to Jones Creek. Forestville currently discharges to Jones Creek at a rate that exceeds one percent of the flow of the creek. The Basin Plan requires that dischargers provide a formal request to discharge to a stream at greater than one-percent of the receiving stream flow. Historically, some dischargers were allowed to calculate discharge flows based on the flow of a larger downstream creek or river without providing this analysis. Regional Water Board staff has systematically required dischargers to complete this analysis starting with the largest discharger (Santa Rosa) and working toward the smaller dischargers like Forestville. Regional Water Board staff will work with Forestville separately from the permit regarding the need for a formal request to discharge to Jones Creek at greater than one percent of the receiving water flow.

No changes were made in response to this comment.

**Comment 3:** The draft Permit uses a new format that is repetitive, but not consistently so, making it challenging for the Permittee to accurately determine the various studies, reports and work plans associated with the draft Permit. Forestville Water District's consultant is requesting that a categorized table be developed in the draft Permit that lists all studies, reports and work plans required, with page number location references and due dates or trigger mechanisms.

Forestville's consultant also requests that the review and comment period for the draft Permit be extended to 14 days following the addition of the above requested table, due to the level of difficulty with conducting a thorough and thoughtful review of the draft Permit without the above requested table.

**Response:** Regional Water Board staff understands that the statewide template for NPDES permits can be challenging to review due to its size and the use of some repetitive language in the permit and the fact sheet, however it is not that difficult to identify requirements that include due dates. Regional Water Board staff believes that Forestville was provided with more than

adequate time to review the draft permit. Forestville was initially given a standard 30-day comment period. When Forestville requested an additional two weeks to complete its review of the draft permit, Regional Water Board staff provided 25 additional days.

In addition, most of the requirements with established report submittal dates are in a few specific sections of the permit including section VI.C.2, Special Studies, Technical Reports and Additional Monitoring Requirements and section VI.C.7, Compliance Schedules. In addition, section X. of the monitoring and reporting program identifies other reporting requirements for monthly self-monitoring reports and other reports required by the permit.

No changes were made in response to this comment.

**Comment 4:** Forestville's consultant requests that the requirement to continue to monitor for lead be removed from the Permit based on the fact that the maximum concentration observed (1.5 ug/L) is not merely less than, but is 11.7% less than the most stringent objective (1.7 ug/L).

**Response:** Regional Water Board staff has reviewed Forestville's lead data for a second time and agree to remove the monthly monitoring requirement for lead. The following analysis is provided to justify this recommendation.

Forestville sampled lead during periods of discharge to Jones Creek a total of 26 times between October 2004 and February 2011. Lead concentrations ranged from <0.2 ug/L to 1.5 ug/L with an average concentration of 0.43 ug/L and a median concentration of 0.34 ug/L during these periods of discharge. All of these concentrations were well below the final hardness-based compliance limit for lead (based on the receiving water hardness at the time of sampling). Compliance limits ranged from 1.4 ug/L when the receiving water hardness was 60 mg/L (January 2010) to 4.0 ug/L when the receiving water hardness was 140 mg/L (December 2005). The concentration of 1.5 ug/L occurred in April 2005 during a period of no discharge. Forestville stopped discharging in March 2005 due to dry conditions created by low rainfall. During periods of low or no rainfall, Jones Creek hardness concentrations generally range close to 100 mg/L. If there had been a discharge at that time, a lead concentration of 1.5 ug/L would have been below the applicable water quality objective for lead which would have been on the order of 2.6 ug/L.

Several sections of the permit, monitoring and reporting program and fact sheet were modified to reflect this recommended change including permit section II.O., Monitoring and Reporting Program sections I.D (Table E-1) and IV.C (Table E-6); and Fact Sheet sections IV.C.4.e, IV.D.1, and VI.B. Specific changes are identified in Attachment 1.A.

### **C. Law Offices of Perry, Johnson, Anderson, Miller & Moskowitz LLP**

**Comment 1:** Forestville's attorney expressed concern that complying with all permit requirements is very costly and requests that there be a common sense balance between cost and benefit. He is concerned that facilities like Forestville's with tertiary treatment are indirectly penalized by the additional costs of running these higher technology systems and would like to have this achievement of tertiary treatment recognized by not burdening the community with unnecessary costs.

**Response:** Regional Water Board staff recognizes that the cost of regulatory compliance is generally higher for smaller treatment plants due to the fact that there is a smaller user base to spread the costs over. As also noted in the comment, tertiary treatment is more costly than secondary. Regional Water Board staff is aware that Forestville has been evaluating ways to increase the user base and/or identify other means to reduce the per user costs.

Regional Water Board staff attempt to streamline permit requirements when possible, but it is not possible to remove or reduce regulatory requirements simply because a Discharger has achieved a higher level of treatment. Tertiary treatment is required by the Water Quality Control Plan for the North Coast Region (Basin Plan) as a means to ensure protection of beneficial uses in the Russian River and its tributaries and is a statewide requirement for urban uses of recycled water pursuant to Title 22 of the California Code of Regulations. Technical report and monitoring requirements in the permit are necessary to ensure that beneficial uses are protected and to assess compliance with new statewide policies regarding recycled water and existing statewide regulations regarding protection of groundwater (e.g., Title 27 regulations for storage of recycled water). Previously, monitoring requirements for recycled water were fairly limited, but have been increased in order to assess whether recycled water is being applied at nutrient and hydraulic agronomic rates. Monitoring requirements could increase to include groundwater monitoring if it is determined that treated effluent is being applied at greater than agronomic rates in order to assess potential impacts to groundwater.

In response to this comment and Comments B.1 and B.4 above, Regional Water Board staff recommends some reduction in monitoring requirements as identified in the responses to those comments.

### **Changes Made by Regional Water Board Staff**

During the public comment period for this Order, Regional Water Board Staff identified several changes that must be made to the permit to add clarity, correct typographical errors, and to make language in the Permit, Monitoring and Reporting Program and Fact Sheet consistent. The recommended changes are summarized in the attached spreadsheet (Attachment 1.B)

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