

Response to Written Comments

In Consideration of Waste Discharge Requirements Order No. R1-2015-0002, Adoption of Waste Discharge Requirements (WDRs) Permit for the City of Tulelake Wastewater Treatment Facility

Regional Water Quality Control Board, North Coast Region
March 12, 2015

Comment Letters Received

One comment letter from the City of Tulelake was received timely regarding the draft Waste Discharge Requirements for the City of Tulelake wastewater treatment facility (the Facility). The correspondence is attached to this response as Attachment A. Some comments resulted in clerical edits or clarifications. All other comments and clarifications received are summarized and followed by staff response in this document.

A. Comments – City of Tulelake

Comment 1: Clarify Discharge Prohibition of Industrial Flows

The general provision referenced in this discharge prohibition (which is actually Section IX.F) requires the City to notify the Executive Officer 90 days prior to connection and startup of any new Categorical Industrial User (CIU) or Significant Industrial User (SIU) generating non-domestic wastewater. The City requests that Discharge Prohibition III.B be revised to clarify that discharges specifically of non-domestic wastewater from a CIU and SIU are prohibited, consistent with the language of the referenced general provision. The specific revisions requested are as follows (including typographical corrections):

B. The discharge of non-domestic wastewater from a CIU or SIU into the collection system or the Facility is prohibited unless a notification meeting the requirements of Section IX. GENERAL PROVISION F, has been submitted to and has concurrence from the Executive Officer.

Response 1: Regional Water Board staff concurs with the suggested revisions because they are consistent with the intent of the draft Order to limit the prohibition of industrial wastewater to CIUs and SIUs. Discharge Prohibition III.B and Fact Sheet I.B Page C-1 have been revised in the proposed Order accordingly.

Discharge Prohibition III.B, Page 4

III. DISCHARGE PROHIBITIONS

- A. The average daily dry weather flow (ADWF) of waste through the ~~treatment plant~~ Facility shall not exceed ~~in excess of~~ 0.18 mgd ~~is prohibited, over three consecutive dry weather months each year.~~ Compliance with this prohibition shall be ~~determined as defined in section X.A and~~ measured at Monitoring Location INF-001 as described in the Monitoring and Reporting Program (MRP).
- B. The discharge of ~~non-domestic~~ wastewater from ~~a Categorical Industrial User¹ (CIU) or Significant Industrial User² (SIU) industrial facilities~~ into the collection system or the ~~WWTF Facility~~ is prohibited unless a notification meeting the requirements of Section ~~IXVIII. GENERAL PROVISION F,~~ has been submitted to and has concurrence from the Executive Officer.

¹ A Categorical Industrial User is an industrial user subject to national categorical pretreatment standards.

² A Significant Industrial User [40 CFR 403.3(v)] includes "(1) All users subject to categorical pretreatment standards under 40 CFR 403.6 and 40 CFR chapter I, subchapter N, except those designates as [Nonsignificant Categorical Industrial Users]... ; and (2) any other industrial user that discharges an average of 25,000 gpd or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blowdown wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry-weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the POTW on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement [in accordance with 40 CFR 403.8 (f)(6)]." (USEPA June 2011, Introduction to the National Pretreatment Program).

Limitations and Discharge Requirements

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Fact Sheet I.B Page C-1

B. General Facility Information

The Permittee owns and operates a wastewater collection, treatment, and recycling facility that provides sewerage service to the City. The wastewater system serves a population of approximately 1,010 and has 439 connections, of which 46 are commercial connections including a supermarket and agricultural potato storage facilities. There are no industrial users. The Permittee has historically accepted septage from commercial haulers, but the receiving facility was closed by March 4, 2013, to enhance compliance with effluent limits. ~~This Order prohibits the Permittee from accepting septage to be discharged into the wastewater treatment facility.~~

-This Order authorizes the discharge of municipal wastewater, ~~including from~~ domestic, and commercial, ~~and industrial~~ users ~~and of municipal biosolids to an irrigation site owned by the Permittee.~~ To assess the potential for impacts to groundwaters, the Permittee sampled the effluent and groundwaters for all constituents with associated title 22 MCLs and water quality objectives in the Basin Plan.

Comment 2: Revise pH Effluent Limitations

The Draft WDRs (pg. 5) include instantaneous minimum and maximum pH effluent limitations of 7.0 and 8.5, respectively. The Fact Sheet (Attachment C) of the Draft WDRs does not clarify how these effluent limitations were determined.

In wastewater treatment ponds, pH is controlled through the carbonate buffering system, which is affected by the rate of algae photosynthesis. In photosynthetic metabolism, carbon dioxide is removed from the dissolved phase, decreasing the total alkalinity and increasing the pH. Because of the close relationship between pH and photosynthetic activity, the pH in wastewater ponds can vary significantly throughout the day. Therefore, a wider range of allowable effluent pH levels is appropriate for pond-based system.

It is understood that the WDRs must protect groundwater, and the Basin Plan includes requirements for pH in groundwater. However, directly applying these pH limitations on the discharge is not appropriate considering the buffering effects of soils. In particular, natural biochemical reactions in soil drive the pH in applied waters to a neutral condition; and soils with high humic acid and clay mineral content, like the soils in the area of the WWTP, have good buffer qualities. Thus, some flexibility in the effluent pH requirements are unlikely to result in pH excursions in the groundwater.

Finally, the City notes that the Regional Board has issued recent discharge permits to other agencies with a wider range of pH effluent limitations. For instance, Order No. R1-2014-0029 for the Town of Fort Jones Wastewater Treatment Facility - which is also a small land discharge facility – includes instantaneous minimum and maximum pH effluent limitations of 6.0 and 9.0, respectively.

For the reasons stated above, therefore, the City requests that the Draft WDRs be revised to allow for a broader pH effluent range of 6.0 to 9.0. The City specifically requests the following revisions to Effluent Limitations A.1:

- 1. The instantaneous minimum and maximum pH effluent limitations are 6.0 and 9.0, respectively.*

Response 2: Staff recognizes that soils at the storage and reuse site may provide some additional buffering of the wastewater prior to reaching groundwater and that pH varies due to photosynthetic activity. Staff has, therefore, amended the effluent limitation as requested.

Comment 3: Revise Solids (Biosolids) Discharge Specifications

The City presented detailed information on plans for biosolids treatment and disposal as part of the WWTF upgrades in the City's July 2014 Report of Waste Discharge (ROWD), expecting that the WDRs would allow for biosolids reuse at the irrigation site that will be developed as part of the WWTF upgrades. However, the Draft WDRs do not appear to include information allowing the biosolids reuse detailed in the ROWD. The City would expect such information to be included in Section VII (pg. 6), which includes Solids Discharge Specifications. The City, therefore, requests that the Regional Board revise the Solids Discharge Specifications to explicitly allow for the requested biosolids reuse.

Response 3: Based on the ROWD, Staff concurs that WDRs should explicitly allow for biosolids reuse at the irrigation site if future analyses demonstrate compliance with the USEPA Part 503 Biosolids Rule (40 C.F.R. § 503). Staff considers this comment a minor editorial request for clarification since the draft Order already requires that reuse and disposal of biosolids comply with the Biosolids Rule. Additionally, the annual report requirement relating to biosolids was updated to require reporting of the amounts of biosolids placed at the irrigation site to track applications and clearly identify that this is a practice covered by this Order. In response to this comment, Staff has made the following changes in the proposed Order and the Fact Sheet:

VII. Solids Discharge Specifications

5. Onsite Reuse and disposal of biosolids shall comply with Discharge Prohibitions C, E, F, G, and H of this Order and the U.S. EPA Part 503 Biosolids Rule. (40 C.F.R. § 503)

5.6. Prior to offsite reuse or disposal, the Permittee shall obtain coverage under the Statewide General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities (Order No. 2004-0012 DWQ).

Fact Sheet Page C-1

B. General Facility Information

This Order authorizes the discharge of municipal wastewater, ~~including from~~ domestic, ~~and~~ commercial, ~~and industrial~~ users ~~and of municipal biosolids to an irrigation site owned by the Permittee~~. To assess the potential for impacts to groundwaters, the Permittee sampled the effluent and groundwaters for all constituents with associated title 22 MCLs and water quality objectives in the Basin Plan.

Monitoring and Reporting Program Page B-8

VI. BIOSOLIDS MONITORING REQUIREMENTS

A. Constituent Concentrations

Table B-5. Biosolids Monitoring Requirements

<u>Constituent</u>	<u>Concentration in Biosolids, dry weight</u>	<u>Sample Type</u>	<u>Minimum Sampling Frequency</u>
<u>Arsenic</u>	<u>mg/kg</u>	<u>Grab</u>	<u>Annually</u>
<u>Cadmium</u>	<u>mg/kg</u>	<u>Grab</u>	<u>Annually</u>
<u>Copper</u>	<u>mg/kg</u>	<u>Grab</u>	<u>Annually</u>
<u>Lead</u>	<u>mg/kg</u>	<u>Grab</u>	<u>Annually</u>
<u>Mercury</u>	<u>mg/kg</u>	<u>Grab</u>	<u>Annually</u>
<u>Molybdenum</u>	<u>mg/kg</u>	<u>Grab</u>	<u>Annually</u>
<u>Nickel</u>	<u>mg/kg</u>	<u>Grab</u>	<u>Annually</u>
<u>Selenium</u>	<u>mg/kg</u>	<u>Grab</u>	<u>Annually</u>
<u>Zinc</u>	<u>mg/kg</u>	<u>Grab</u>	<u>Annually</u>
<u>pH</u>	<u>mg/kg</u>	<u>Grab</u>	<u>Annually</u>
<u>Salinity</u>	<u>mg/kg</u>	<u>Grab</u>	<u>Annually</u>

Response 3 continued:

Monitoring and Reporting Program Pages B-5 to B-7

Table B-5 Continued

Total Solids Content	%	Grab	Annually
Total Nitrogen	mg/kg	Grab	Annually
Fecal Coliform	MPN/gram	Grab	Annually
Ammonia Nitrogen, as N	mg/kg	Grab	Annually
Total Phosphorous, as P	mg/kg	Grab	Annually
Total Potassium	mg/kg	Grab	Annually
PCB Aroclors, Aldrin/Dieldrin	mg/kg	Grab	Annually
Semi-Volatile Organics	mg/kg	Grab	Annually
Table Notes:			
<ol style="list-style-type: none"> SW 846 Method 8080: The discharger shall use the most recent version of SW 486 methods for detecting PCB constituents and list all Aroclor concentrations with the summation of total PCBs. EPA Method 8270 If PCB Aroclors and semi-volatile organics are nondetect then no further analyses need to be performed. 			

B. Application Area Information

Table B-6. Biosolids Application Area Reporting Requirements

Parameter	Units	Minimum Reporting Frequency
Quantity of Biosolids Applied	Dry tons	Annually
Nitrogen Loading	Lb. plant available nitrogen per acre	Annually
Residual Nitrogen	Lbs. per acre	Annually
Average cation exchange capacity (0-20 inches depth)	milliequivalents per 100 g	Annually
Crop	type	Annually
Amount of Crop Produced	variable	Annually
Arsenic Loading	kg/ha	Annually
Cadmium Loading	kg/ha	Annually
Copper Loading	kg/ha	Annually
Lead Loading	kg/ha	Annually
Mercury Loading	kg/ha	Annually
Molybdenum Loading	kg/ha	Annually
Nickel Loading	kg/ha	Annually
Selenium Loading	kg/ha	Annually
Zinc Loading	kg/ha	Annually
Table Notes:		
<ol style="list-style-type: none"> Reporting is only required during years of biosolids application. 		

Response 3 continued:

Monitoring and Reporting Program Pages B-5 to B-7 and B-11

VI.C

B.C. [40 CFR Part 503: 30 days prior to each land application of biosolids at the irrigation site, the Permittee shall submit a copy of the monitoring report for compliance with the 40 CFR Part 503 regulations.](#)

VII.B.2.c

c. Sludge and Biosolids. The Permittee shall report the amount of ~~sludge or~~ biosolids placed [on City-owned property at the irrigation site or sludge placed](#) in a landfill and [specify](#) the landfill(s) which received the ~~sludge or~~ biosolids.

VII.C.1

Table B-86. Reporting Requirement Summary Table

Report	Due Date(s)	Section of this Order with Requirements
Monthly SMR	1 st day of the second month after the respective reporting period (i.e. the January SMR is due March 1)	N/A
Quarterly SMR	1 st day of the second month after the respective reporting period (i.e. the first quarter SMR is due May 1)	MRP sections IV and V, VII.A
Annual SMR	By March 1 each year	MRP sections VI.A , VI.B , VII.A , and VII.B.2
Title 22 Report	Every three years after this Order becomes effective (i.e. April 1, 2018, 2021, 2024, etc.)	MRP sections IV and V, VII.A
Facility containment plan status updates	Every three years after this Order becomes effective (i.e. April 1, 2018, 2021, 2024, etc.)	WDRs section IX.P.3.b
Spill Reports	Within 5 days of becoming aware of the spill	MRP sections VII.A and VII.B.1
Biosolids 40 CFR Part 503 Monitoring Report	30 days prior to each application of biosolids at the irrigation site.	MRP section VI.C

Comment 4: Remove References to Title 27

General Provision IX.E (pg. 9) requires states:

“The Permittee shall submit design proposals for new wastewater storage ponds to the Regional Water Board Executive Officer for review prior to construction and demonstrate that the pond complies with the Water Code and title 27”

Storage and land application of recycled water are explicitly exempt from Title 27 regulations. Thus, the following revisions are requested.

The Permittee shall promptly report to the Regional Water Board any material change in the character, location, or volume of the discharge. New ponds associated with the treatment and or storage of wastewater or treated effluent shall be constructed in a manner that protects groundwater. The Permittee shall submit design proposals for new wastewater storage ponds to the Regional Water Board Executive Officer for review prior to construction. Pond design and operation plan must include features and best management practices (BMPs) to protect groundwater and prevent exceedances of groundwater quality objectives.

Response 4: This comment addresses General Provision IX.E of the draft Order, Change in Discharge, which requires the Permittee to take certain actions prior to constructing any new wastewater storage ponds. Relevant exemptions from title 27, California Code of Regulations (CCR) are as follows:

20090(a) Sewage -Discharges of domestic sewage or treated effluent which are regulated by WDRs issued pursuant to Chapter 9, Division 3, Title 23 of this code, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, provided that residual sludges or solid waste from wastewater treatment facilities shall be discharged only in accordance with the applicable SWRCB-promulgated provisions of this division.

20090(b) Wastewater -Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:

- (1) the applicable RWQCB has issued WDRs, reclamation requirements, or waived such issuance;
- (2) the discharge is in compliance with the applicable water quality control plan; and
- (3) the wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

Since Provision IX.E is prospective, the exemption for recycled water is not necessarily given. For example, this draft Order allows for the discharge of industrial wastewater into the Facility, which would cause exemption 20090(a), title 27, California Code of Regulations to not be applicable. Furthermore, exemption 20090(b) depends upon compliance with the applicable water quality control plan, which would require demonstration at the future date of such change in discharge. In this context, future

demonstration that the proposed pond(s) are exempt from title 27 would qualify as demonstration of compliance with title 27.

Comment 5: Revise Containment Plan Requirements and Related Groundwater Monitoring Requirements

General Provision IX.P.3 (pgs. 11-12) requires the City, as part of a “Wastewater Treatment and Containment Plan” (Containment Plan) to submit either (1) a groundwater monitoring plan for assessing impacts of discharges from the WWTF or (2) a plan for minimizing discharges to groundwater from Lagoon No. 2.

The Monitoring and Reporting Program (MRP), which is Attachment B of the Draft WDRs, requires routine monitoring for constituents of concern. However, the City notes that monitoring at MW-2, which is intended to reflect impacts associated with the WWTP, is not included in the MRP. In lieu of submitting a monitoring plan, the City requests that the Regional Board add monitoring at MW-2 to Table B-4. Monitoring at MW-2 will allow for evaluation of impacts specific to Lagoon No. 2 and should satisfy the “monitoring plan” requirements listed above.

Moreover, the City should only be required to implement additional best practicable treatment and control (BPTC) – such as lining Lagoon No. 2 – if the routine monitoring indicates that degradation is occurring and is impacting the ability to use underlying groundwater in accordance with its designated beneficial uses. Furthermore, if additional BPTC is needed, the City should be allowed, at that time, to evaluate and identify what would be considered appropriate BPTC given any specific impacts that have occurred.

Response 5: This comment demonstrates the City’s selection of option IX.P.3.a in the draft Order to monitor discharges from the wastewater treatment facility to groundwater. As a result, General Provision IX.P.3 is no longer necessary in the Order because the addition of MW-2 in the MRP will enable the assessment of groundwater discharges from the Facility. In response to this comment, the following changes have been made to the proposed Order:

- 3. Monitoring Well Development Workplan: The Permittee shall submit a work plan, for concurrence by the Regional Water Board Executive Officer, within 90 days of the effective date of this Order including the following:** *
- a. Proposed well construction techniques, including well depth and screened intervals.** *
- a.b. Surveyed elevations and locations to the nearest 0.01 foot and 0.1 foot, respectively, of existing and proposed wells**

3. ~~Wastewater Treatment Containment and Monitoring Plan – By January 1, 2016, the Permittee shall do either of the following:~~

~~a. Submit for Executive Officer concurrence, a groundwater monitoring plan to assess the impacts of discharges from the wastewater treatment facility; or~~

~~b. Submit a plan for Executive Officer concurrence to minimize discharges to groundwater from lagoon No. 2. Implementation of the plan shall occur as soon as possible, but no later than January 1, 2025. Such a plan shall include financial estimates of all work to be performed and assurances that the Permittee will reserve the funds for the designated purpose.~~

Monitoring and Reporting Program

Table B-1. Monitoring Station Locations

Distribution Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Monitoring location at the headworks prior to treatment.
001	EFF-001	Monitoring location prior to recycled water storage ponds.
--	MW-1	Monitoring well to be located upgradient of the WWTF and irrigation site.
--	<u>MW-2</u>	<u>Monitoring well to be located at the western downgradient perimeter of Lagoon No. 2</u>
--	MW-4	Monitoring well to be located at the western downgradient perimeter of the recycled water storage ponds.

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Table B-4. Groundwater Monitoring - Wells MWs-1,2,4,5,6,7

Parameter	Units	Sample Type	Minimum Sampling Frequency
Depth to Groundwater	0.01 feet	Grab	Quarterly
pH	std units	Field Grab	Quarterly

Table B-86. Reporting Requirement Summary Table

Report	Due Date(s)	Section of this Order with Requirements
Monthly SMR	1 st day of the second month after the respective reporting period (i.e. the January SMR is due March 1)	N/A
Quarterly SMR	1 st day of the second month after the respective reporting period (i.e. the first quarter SMR is due May 1)	MRP sections IV and V, VII.A
Annual SMR	By March 1 each year	MRP sections VI.A, VI.B, VII.A, and VII.B.2
Title 22 Report	Every three years after this Order becomes effective (i.e. April 1, 2018, 2021, 2024, etc.)	MRP sections IV and V, VII.A
Facility containment plan status updates	Every three years after this Order becomes effective (i.e. April 1, 2018, 2021, 2024, etc.)	WDRs section IX.P.3.b
Spill Reports	Within 5 days of becoming aware of the spill	MRP sections VII.A and VII.B.1
Biosolids 40 CFR Part 503 Monitoring Report	30 days prior to each application of biosolids at the irrigation site	MRP section VI.C
Change in Discharge Report	Promptly	WDRs section E
Notification of New Categorical or Significant Industrial Users	90 days prior to connection or discharge into the collection system	WDRs section VIII.F
Noncompliance Telephone Notification	Immediately	WDRs section VIII.L
Noncompliance Written Notification	Within 5 days of becoming aware of the noncompliance	WDRs section VIII.L
Adequate Capacity Notification	Within 4 years of reaching capacity	WDRs section VIII.O
Recycled Water Operation and Maintenance/ Irrigation Lease Agreement	90 days prior to operation of the recycled water irrigation system	WDRs section VIII.P.1
Monitoring Well Development Workplan	Within 90 days of the effective date of this Order	WDRs section VIII.P.3
Salt Source Control and Infiltration Reduction Workplan	December 1, 2015	WDRs section VIII.P.2
Wastewater Treatment Containment and Monitoring Plan	January 1, 2016	WDRs section VIII.P.3

Comment 6: Revise Calculation Requirement for Average Dry Weather Flow

Section X.A of the Draft WDRs (pg. 12), which clarifies how compliance is determined for the various effluent limitations, states that Average Dry Weather Flow (ADWF) is determined as an average of the “highest daily dry weather flow...over three consecutive dry weather months each year.” This calculation is needed to determine compliance with Discharge Prohibition III.A (pg. 4), which limits ADWF to 0.18 million gallons per day “over three consecutive dry weather months each year.” However, the reference in Section X.A to an average of a “highest daily” flow is unclear and is not consistent with the City’s current requirements for calculating ADWF. The City thus requests that this calculation requirement for ADWF be revised as follows, to require calculation based on an average of all measured flows over the three-month period:

A. Average Daily Dry Weather Flow (ADWF)

The flow of waste through the Facility measured continuously and averaged over three consecutive dry weather months each year.

Response 6: Staff concurs with the City that the ADWF compliance determination reference in the draft Order to the “highest daily dry weather flow” is unclear and inconsistent with the design calculations performed in the Report of Waste Discharge. Since the ADWF limitation in the draft Order is based on the Report of Waste Discharge design flow value of 0.18 mgd, the compliance determination should be consistent with the methodology of that calculation. As a result, Staff has made the following changes in the proposed Order in response to this comment:

III. DISCHARGE PROHIBITIONS

- A. The average daily dry weather flow (ADWF) of waste through the ~~treatment plant~~ Facility shall not exceed ~~in excess of~~ 0.18 mgd ~~is prohibited. over three consecutive dry weather months each year.~~ Compliance with this prohibition shall be ~~determined as defined in section X.A and~~ measured at Monitoring Location INF-001 as described in the Monitoring and Reporting Program (MRP).

X. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below.

A. Average Daily Dry Weather Flow (ADWF)

The ~~highest daily dry weather~~ lowest average flow of waste ~~water~~ through the ~~treatment plant~~ Facility measured continuously and averaged over three consecutive dry weather months each year.

Comment 7: Reduce Sampling Frequencies for Effluent and Groundwater Monitoring

The MRP (Attachment B) of the Draft WDRs requires a number of parameters to be monitored quarterly in the effluent and groundwater, as detailed, respectively, in Table B-3 (pgs. B-3 and B-4) and Table B-4 (pgs. B-4 and B-5). However, based on the data presented in the ROWD, many of these parameters are expected to be found at levels well below Water Quality Objectives (WQOs), with several even below detection limits (particularly in groundwater). In addition, as has been discussed extensively with the Regional Board staff, the City is a small, economically disadvantaged community and has extremely limited financial resources. Frequent, routine monitoring for parameters that do not have effluent limits or are not expected to be found above detection limits is not justified. Moreover, more frequent monitoring of constituents that are most likely to impact groundwater, like total dissolved solids and nitrate, should be adequate to assess whether the wastewater is affecting groundwater quality. Based on these reasons, the City would appreciate any relief in monitoring from what is included in the Draft WDRs.

Response 7:

This comment has multiple components, including requests to reduce monitoring frequencies and removal of individual monitoring for certain constituents in both the effluent and groundwater.

Staff concurs that individual effluent and groundwater monitoring for molybdenum, vanadium, and carbon tetrachloride are not necessary. Monitoring once every three years

as part of the title 22 pollutant monitoring should be sufficient to assess any impacts on groundwater for these constituents.

However, Staff does not concur with the request for a reduction in the monitoring frequency from quarterly to annually or for the reduction in title 22 pollutant monitoring from once every three years to once every five years. The quarterly and once every three year monitoring requirements in the draft Order are intended to assess potential impacts to groundwater from the upgraded wastewater treatment facility and the new recycled water storage ponds and irrigation system. Furthermore, the average annual effluent limitations were developed assuming that multiple data points would be collected and averaged to assess seasonal variations and long-term impacts. Quarterly monitoring will enable the Regional Water Board to assess potential impacts and to observe any seasonal variations in groundwater quality. The City may request a reduction in monitoring at any time that the permit is active and, depending on the scope of the reduction, the Executive Officer or the Regional Water Board has the authority to reduce monitoring frequencies. Upon collection of sufficient information to demonstrate consistent compliance with groundwater quality objectives and effluent limitations, Staff anticipates that such a request would be appropriate. During the commencement of this new system, however, annual monitoring will not provide sufficient feedback for adaptive management.

The following changes have been made in the proposed Order in response to this comment:

-----*See Next Page*-----

Table B-3. Effluent Monitoring – Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow (Mean Daily)	mgd	Meter	Continuous
pH	std units	Field Grab	Quarterly
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	Grab	Quarterly
Total Dissolved Solids <u>(TDS)</u>	mg/L	Grab	Quarterly
Conductivity	µS/cm	Grab	Quarterly
Chloride	mg/L	Grab	Quarterly
Sodium	mg/L	Grab	Quarterly
Nitrate, as N	mg/L	Grab	Quarterly
Nitrite, as N	mg/L	Grab	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly
Bis(2-Ethylhexyl)Phthalate	µg/L	Grab	Quarterly
Carbon Tetrachloride	µg/L	Grab	Quarterly
Cyanide	µg/L	Grab	Quarterly
Bromodichloromethane	µg/L	Grab	Quarterly
Chloroform	µg/L	Grab	Quarterly
Toluene	µg/L	Grab	Quarterly
Aluminum, <u>total and</u> dissolved	µg/L	Grab	Quarterly
Antimony, <u>total and</u> dissolved	µg/L	Grab	Quarterly
Arsenic, <u>total and</u> dissolved	µg/L	Grab	Quarterly
Chromium VI, <u>total and</u> dissolved	µg/L	Grab	Quarterly
Copper, <u>total and</u> dissolved	µg/L	Grab	Quarterly
Lead, d <u>total and</u> dissolved	µg/L	Grab	Quarterly
Molybdenum, dissolved	µg/L	Grab	Quarterly
Nickel, <u>total and</u> dissolved	µg/L	Grab	Quarterly
Vanadium, dissolved	µg/L	Grab	Quarterly
Title 22 Pollutants ^{1,2,3}	µg/L	Grab	once / 3 Years
<p>1. Title 22 Pollutants refers to those constituents for which primary and secondary Maximum Contaminant Levels (MCLs) have been established in title 22, Division 4, Chapter 15, Articles 4 and 5.5 of the California Code of Regulations CCR.</p> <p>2. Any metals tested as part of Title 22 Pollutants in the effluent shall be measured as total and dissolved.</p> <p>3. Effluent monitoring for Title 22 Pollutants does not require additional monitoring for parameters that have already been sampled in a given quarter, as required in Table B-3.</p>			

Table B-4. Groundwater Monitoring – Wells MWS-1,2,4,5,6,7

Parameter	Units	Sample Type	Minimum Sampling Frequency
Depth to Groundwater	0.01 feet	Grab	Quarterly
pH	std units	Field Grab	Quarterly
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	Grab	Quarterly
Total Coliform Organisms	MPN/100mL	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly
Conductivity	µS/cm	Grab	Quarterly
Chloride	mg/L	Grab	Quarterly
Sodium	mg/L	Grab	Quarterly
Nitrate, as N	mg/L	Grab	Quarterly
Nitrite, as N	mg/L	Grab	Quarterly
Total Kjeldahl Nitrogen	mg/L	Grab	Quarterly
Bis(2-Ethylhexyl)Phthalate	µg/L	Grab	Quarterly
Carbon Tetrachloride	µg/L	Grab	Quarterly
Cyanide	µg/L	Grab	Quarterly
Bromodichloromethane	µg/L	Grab	Quarterly
Chloroform	µg/L	Grab	Quarterly
Toluene	µg/L	Grab	Quarterly
Aluminum, dissolved	µg/L	Grab	Quarterly
Antimony, dissolved	µg/L	Grab	Quarterly
Arsenic, dissolved	µg/L	Grab	Quarterly
Chromium VI, dissolved	µg/L	Grab	Quarterly
Copper, dissolved	µg/L	Grab	Quarterly
Lead, dissolved	µg/L	Grab	Quarterly
Molybdenum, dissolved	µg/L	Grab	Quarterly
Nickel, dissolved	µg/L	Grab	Quarterly
Vanadium, dissolved	µg/L	Grab	Quarterly
Title 22 Pollutants ^{1,2,3}	µg/L	Grab	once / 3 Years
<p>1. Title 22 Pollutants refers to those constituents for which primary and secondary Maximum Contaminant Levels (MCLs) have been established in title 22, Division 4, Chapter 15, Articles 4 and 5.5 of the California Code of Regulations.</p> <p>2. Any metals tested as part of Title 22 Pollutants in groundwater shall be measured as dissolved.</p> <p>3. Effluent monitoring for Title 22 Pollutants does not require additional monitoring for parameters that have already been sampled in a given quarter, as required in Table B-3.</p>			

Comment 8: Remove Requirement to Monitor Groundwater for BOD

Table B-4 (pg. B-4) in the MRP (Attachment B) of the Draft WDRs requires quarterly monitoring of the City’s monitoring wells for Biochemical Oxygen Demand (BOD). Monitoring for BOD in groundwater is not typical, based on a review of recent permits issued by the Regional Board, including Order No. R1-2014-0029 for the Town of Fort Jones Wastewater Treatment Facility and Order No. R1-2012-0033 for the U.S. Coast Guard facility, which has a similar permitted flow as the City of Tulelake WWTF. In addition, groundwater monitoring for BOD would provide no valuable information. For these reasons, the City requests that the requirement to monitor groundwater for BOD be removed from Table B-4 (as indicated in Attachment 1).

Response 8: Staff concurs with the requested permit modification as this monitoring requirement was inadvertently included in the draft Order. In response to this comment, Staff removed the monitoring requirement for BOD in groundwater.

Table B-4. Groundwater Monitoring - Wells MWs-1,2,4,5,6,7

Parameter	Units	Sample Type	Minimum Sampling Frequency
Depth to Groundwater	0.01 feet	Grab	Quarterly
pH	std units	Field Grab	Quarterly
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	Grab	Quarterly
Total Coliform Organisms	MPN/100mL	Grab	Quarterly

Comment 9: Clarify Monitoring Requirements for Title 22 Pollutants

Additional clarification is needed for two items related to metals monitoring in the effluent and groundwater, as detailed in Table B-3 (pgs. B-3 and B-4) and Table B-4 (pgs. B-4 and B-5), respectively, of the Draft WDRs’ MRP (Attachment B).

First, the City requests that these tables include a footnote stating that any metals tested with “Title 22 Pollutants” should be measured in their dissolved form. Monitoring for dissolved metals would be consistent with the routine monitoring of metals with effluent limitations (e.g. arsenic and copper).

Second, the City requests that these tables include a footnote stating that redundant monitoring is not needed when testing for “Title 22 Pollutants.” The routine effluent and groundwater monitoring requirements in these tables requires monitoring for a number of metals that would also be included in the “Title 22 Pollutants.” Therefore, a clarifying footnote would ensure that the City does not expend additional resources for redundant monitoring during the quarter in which Title 22 Pollutants are monitored.

The specific changes requested to Tables B-3 and B-4 are as follows:

Table B-3. Effluent Monitoring – Location EFF-001

<i>Parameter</i>	<i>Units</i>	<i>Sample Type</i>	<i>Minimum Sampling Frequency</i>
<i>Flow (Mean Daily)</i>	<i>mgd</i>	<i>Meter</i>	<i>Continuous</i>
...
<i>Title 22 Pollutants^{1,2}</i>	<i>µg/L</i>	<i>Grab</i>	<i>once/ 3 Years³</i>
<i>1. Title 22 Pollutants refers to those constituents for which primary and secondary Maximum Contaminant Levels (MCLs) have been established in title 22, Division 4, Chapter 15, Articles 4 and 5.5 of the CCR.</i>			
<i>2. Any metals tested as part of Title 22 Pollutants should be measured as dissolved.</i>			
<i>3. Effluent monitoring for Title 22 Pollutants does not require additional monitoring for parameters that have already been sampled in a given quarter, as required in Table B-3.</i>			

...

Table B-4. Groundwater Monitoring – Wells MWS-1,4,5,6,7

<i>Parameter</i>	<i>Units</i>	<i>Sample Type</i>	<i>Minimum Sampling Frequency</i>
<i>Toluene</i>	<i>µg/L</i>	<i>Grab</i>	<i>Quarterly</i>
...
<i>Title 22 Pollutants^{1,2}</i>	<i>µg/L</i>	<i>Grab</i>	<i>once/ 3 Years³</i>
<i>1. Title 22 Pollutants refers to those constituents for which primary and secondary Maximum Contaminant Levels (MCLs) have been established in title 22, Division 4, Chapter 15, Articles 4 and 5.5 of the CCR.</i>			
<i>2. Any metals tested as part of Title 22 Pollutants should be measured as dissolved.</i>			
<i>3. Groundwater monitoring for Title 22 Pollutants does not require additional monitoring for parameters that have already been sampled in a given quarter, as required in Table B-4.</i>			

Response 9: Staff concurs that all groundwater metals analyses should be performed in the dissolved form because the water quality objectives are expressed as dissolved concentrations. Staff has amended Table B-4 of the proposed Order as suggested for clarity. Staff maintains, however, that total metals concentrations are required because metals on solid particles in the effluent have the potential to desorb in the environment and mobilize into the dissolved fraction. Dissolved concentrations in the effluent are also necessary, because the effluent limitations were made based on available dissolved metals effluent data. Staff has amended the effluent monitoring in Table B-3 for metals to include total and dissolved analyses.

Staff also concurs with the second element of this comment that redundant monitoring within the same quarter of title 22 pollutants is not necessary. Staff has, therefore, made the suggested changes in the proposed Order by adding two footnotes to tables B-3 and B-4.

Table B-3. Effluent Monitoring – Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Chromium VI, <u>total and dissolved</u>	µg/L	Grab	Quarterly
Copper, <u>total and dissolved</u>	µg/L	Grab	Quarterly
Lead, <u>d total and dissolved</u>	µg/L	Grab	Quarterly
<u>Molybdenum, dissolved</u>	<u>µg/L</u>	<u>Grab</u>	<u>Quarterly</u>
Nickel, <u>total and dissolved</u>	µg/L	Grab	Quarterly
<u>Vanadium, dissolved</u>	<u>µg/L</u>	<u>Grab</u>	<u>Quarterly</u>
Title 22 Pollutants ^{1,2,3}	µg/L	Grab	once / 3 Years
<p><u>1. Title 22 Pollutants refers to those constituents for which primary and secondary Maximum Contaminant Levels (MCLs) have been established in title 22, Division 4, Chapter 15, Articles 4 and 5.5 of the California Code of Regulations CCR.</u></p> <p><u>2. Any metals tested as part of Title 22 Pollutants in the effluent shall be measured as total and dissolved.</u></p> <p><u>1-3. Effluent monitoring for Title 22 Pollutants does not require additional monitoring for parameters that have already been sampled in a given quarter, as required in Table B-3.</u></p>			

Table B-4. Groundwater Monitoring – Wells MWs-1,2,4,5,6,7

Parameter	Units	Sample Type	Minimum Sampling Frequency
<u>Molybdenum, dissolved</u>	<u>µg/L</u>	<u>Grab</u>	<u>Quarterly</u>
Nickel, dissolved	µg/L	Grab	Quarterly
<u>Vanadium, dissolved</u>	<u>µg/L</u>	<u>Grab</u>	<u>Quarterly</u>
Title 22 Pollutants ^{1,2,3}	µg/L	Grab	once / 3 Years
<p><u>1. Title 22 Pollutants refers to those constituents for which primary and secondary Maximum Contaminant Levels (MCLs) have been established in title 22, Division 4, Chapter 15, Articles 4 and 5.5 of the California Code of Regulations.</u></p> <p><u>2. Any metals tested as part of Title 22 Pollutants in groundwater should be measured as dissolved.</u></p> <p><u>1-3. Effluent monitoring for Title 22 Pollutants does not require additional monitoring for parameters that have already been sampled in a given quarter, as required in Table B-3.</u></p>			

Comment 10: Revise Schematic Figure and Planned Upgrades Description

The schematic figure included in Attachment A of the Draft WDRs and the description of the planned WWTF upgrades in the Fact Sheet (pg. C-2) do not reflect the current design plans for the WWTF, which have undergone minor changes subsequent to preparation of the ROWD. The primary differences are related to improvements to the WWTF headworks that may or may not be included with the near-term WWTF improvements, depending on the costs of the other improvements.

An updated flow schematic, which is taken from the current design plans for the WWTF upgrades, is included as Attachment 2 to this letter. The City requests that the Regional Board replace the schematic in the permit with that included as Attachment 2. In addition, the City requests that the planned upgrades description (Section I.C of the Fact Sheet) be revised as follows:

This Order is established in support of a Facility upgrade to rehabilitate the headworks with new influent pumps; convert the sand filter into a treatment lagoon (No. 3); dredge lagoon No. 1 and line lagoons 1 and 3 with synthetic liners; construct two irrigation storage ponds with an irrigation pump station; and develop a recycled water irrigation field. In addition, depending on the availability of funding, the Facility upgrades could potentially include additional rehabilitation of the headworks to include fine screening.

Response 10: Staff concurs with this minor editorial change and has updated the proposed Order as requested. In addition, the following change was made to the proposed Order and the Fact Sheet for consistency:

Fact Sheet I.C Page C-1

C.Planned Upgrades

The Permittee owns and operates a wastewater treatment and disposal facility and is in the design phases of developing a new recycled water storage and irrigation system. This Order is established in support of a ~~treatment plant~~ Facility upgrade to rehabilitate the headworks with ~~a~~

~~new comminutor, bar screens, and~~ influent pumps; convert the sand filter into a treatment lagoon (No. 3); dredge lagoon No. 1 and line lagoons 1 and 3 with synthetic liners; construct two irrigation storage ponds with an irrigation pump station; and develop a recycled water irrigation field. In addition, depending on the availability of funding, the Facility upgrades may include additional rehabilitation of the headworks to include fine screening. Upon completion of the recycled water storage and reuse system, the Permittee intends to terminate its surface water discharge and associated NPDES permit, at which point this Order will control the treatment, storage, and reuse of the wastewater.

Attachment A provides a map of the area around the Facility, a site layout and schematic of the proposed upgrades.

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