Response to Written Comments
Draft Waste Discharge Requirements
Order No. R1-2021-0002
National Pollutant Discharge Elimination System (NPDES)
for the
Russian River County Sanitation District and Sonoma Water

Russian River Wastewater Treatment Facility
Regional Water Quality Control Board, North Coast Region
June 17, 2021

Comments Received

The deadline for submittal of public comments regarding draft Waste Discharge Requirements for Order No. R1-2021-0002, National Pollutant Discharge Elimination System Permit (Draft Permit) for the Russian River County Sanitation District (Permittee or District) Russian River Wastewater Treatment Facility (Facility) was April 14, 2021. Regional Water Board staff received comments from the Permittee, Russian River Watershed Protection Committee, Guerneville Forest Coalition, and the U.S. Environmental Protection Agency (U.S. EPA). This Response to Comments document includes the comments received from these commenters, Regional Water Board staff responses, and staff-initiated changes.

Regional Water Board staff (Staff) met with the Permittee during the public comment permit to discuss their comments regarding the Draft Permit and after the public comment period to discuss proposed changes to the Proposed Permit that are described in this Response to Comments document. The Permittee is satisfied with Staff's responses. Staff also met with Russian River Watershed Protection Committee and Guerneville Forest Coalition after the public comment to discuss their comments on the Draft Permit.

This document summarizes each comment received, followed by the Staff response. Text added to the Proposed Permit is identified by <u>underline</u> and text to be deleted from the Proposed Permit is identified by ~~strike-through~~ in this document. The term "Draft Permit" refers to the version of the permit that was sent out for public comment. The term "Proposed Permit" refers to the version of the permit that has been modified in response to comments and is being presented to the North Coast Regional Water Quality Control Board (Regional Water Board) for consideration.

A. Permittee Comments

Comment A.1: The Permittee is concerned that reasonable potential for aluminum was based on the 1988 U.S. EPA Aluminum Criteria which has been superseded by the 2018 U.S. EPA Aluminum Criteria. The Permittee proposes that the secondary drinking water maximum contaminant level (SMCL) of 200 ug/L be used as a currently defensible criteria to derive effluent limitations until there is sufficient receiving water data to calculate limits using the 2018 criteria.

Staff Response A.1: Effluent limitations in the Draft Permit were derived based on the 1988 U.S. EPA Aluminum Criteria because insufficient receiving water data for dissolved oxygen, pH, and dissolved organic carbon is available to calculate limits using the 2018 criteria. Staff agrees that the 1988 criteria is no longer applicable. Since the 303(d) listing for aluminum in the Lower Russian River is based on a comparison of existing data to the California Department of Public Health SMCL, Staff agrees with the Permittee's request that the reasonable potential analysis for aluminum also be based on the SMCL. Therefore, the reasonable potential analysis for aluminum has been reevaluated using the SMCL, resulting in a finding of reasonable potential, and effluent limitations have been recalculated using the SMCL.

The Proposed Permit has been modified in response to this comment as follows:

Section 4.1.2.1, Table 3 has been modified to remove the aluminum effluent limitations that were based on the 1988 U.S. EPA criteria and to include aluminum effluent limitations that were calculated based on the SMCL, as follows:

Table 3. Effluent Limitations – Discharge Points 002 and 005 (Monitoring Locations EFF-002 and EFF-005)

Parameter[1]	Units	Average Monthly[2]	Maximum Daily[2]	Instantaneous Minimum[2]	Instantaneous Maximum[2]
pH	standard units	--	--	6.5	8.5
Aluminum, Total Recover-able	µg/L	~~58~~200	~~160~~555	--	--

Table Notes:

1. In the event of a direct discharge to the Russian River, BOD_5 and TSS effluent limitations in Table 2 and total coliform effluent limitations in section 4.1.1.3 apply at Discharge Point 002.
2. See Definitions in Attachment A and Compliance Determination discussion in section 7 of this Order.

Fact Sheet section 4.3.3.1.5 (paragraphs 2, 3, and 4) has been modified as follows:

"*The 2018 Aluminum Criteria reflect the latest science and allow for development of criteria reflecting the impact of local receiving water chemistry on aluminum toxicity to aquatic life. The updated criteria account for the site-specific bioavailability of aluminum in receiving waters, which is dependent on pH, dissolved organic carbon, and hardness. Due to a lack of sufficient receiving water information (pH, dissolved organic carbon, and hardness) for calculating criteria, the 2018 NAWQC criteria has not been implemented in this permit. Instead, the MRP includes requirements to monitor effluent for aluminum and receiving water for aluminum, pH, dissolved organic carbon, and hardness in order to have sufficient data to evaluate ~~and~~ for aluminum toxicity ~~has been evaluated~~ based on the ~~1988~~ 2018 NAWQC.*

Since the Russian River 303(d) list identifies the Lower Russian River as impaired for aluminum based on the California Division of Drinking Water secondary maximum contaminant level (SMCL) of 200 µg/L, effluent limitations for aluminum have been established in this Order based on the SMCL.

The Permittee sampled its discharge monthly during the discharge season between October 2014 and May 2020. Monitoring results ranged from non-detect to 120 µg/L based on 55 samples. The Permittee sampled the receiving water monthly during the discharge season between October 2014 and October 2015. Monitoring results ranged from 27 µg/L to 580 µg/L based on 11 samples. Because aluminum levels in the ~~effluent and~~ upstream receiving water have been measured above ~~87~~ 200 µg/L, the Regional Water Board concludes that discharges from the Facility have a reasonable potential to cause or contribute to exceedances of applicable water quality criteria for the receiving water for aluminum. In order to protect water quality, an AMEL of ~~58~~200 µg/L and an MDEL of ~~160~~ 555 µg/L for aluminum have been established."

Fact Sheet section 4.3.4 has been modified as follows:

"***Step 2:*** *For each ECA based on an aquatic life criterion/objective ~~(aluminum)~~, the long-term average discharge condition (LTA) is determined by multiplying the ECA by a factor (multiplier), which adjusts the ECA to account for effluent variability. The multiplier depends on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the values of the CV. When the data set contains less than 10 sample results, or when 80 percent or more of the data set is reported as ND, the CV is set equal to 0.6. Derivation of the multipliers is presented in section 1.4 of the SIP.*

The reasonable potential analysis did not identify the need to calculate effluent limitations for any pollutants with aquatic life criteria, therefore Steps 2 and 3 are included to describe the procedure that would be used in the future if reasonable potential is found for any pollutant(s) with aquatic life criteria.

~~*From Table 1 in the SIP, the ECA multipliers for calculating LTAs at the 99th percentile occurrence probability for aluminum are 0.161 (acute multiplier) and 0.298 (chronic mulitiplier). The LTAs are determined as follows in Table F-6.*~~

~~**Table F-6. Determination of Long-Term Averages**~~

~~Pollutant~~	~~Units~~	~~ECA Acute~~	~~ECA Chronic 4-Day~~	~~ECA Multiplier Acute~~	~~ECA Multiplier Chronic 4-Day~~	~~LTA Acute~~	~~LTA Chronic 4-Day~~
~~Aluminum~~	~~µg/L~~	~~750~~	~~87~~	~~0.161~~	~~0.298~~	~~121~~	~~25.9~~

Step 3: *WQBELs, including an AMEL and MDEL, are calculated using the most limiting (lowest) LTA. The LTA is multiplied by a factor that accounts for averaging periods and exceedance frequencies of the effluent limitations, and for the AMEL, the effluent monitoring frequency. The CV is set equal to 1.3 for aluminum. The sampling frequency is set equal to 4 (n = 4) for the acute criterion and chronic 4-day criterion. The 99th percentile occurrence probability was used to determine the MDEL multiplier and a 95th percentile occurrence probability was used to determine the AMEL multiplier.* ~~*From Table 2 of the SIP, the MDEL multiplier for aluminum is 6.21 and the AMEL multiplier is 2.24. Final WQBELs for aluminum are determined as follows.*~~ *Since reasonable potential was not found for any pollutants with human health criterion/objectives, no effluent limitations were calculated for this permit.*

~~**Table F-7. Determination of Final WQBELs Based on Aquatic Life Criteria**~~

~~Pollutant~~	~~Units~~	~~LTA~~	~~MDEL Multiplier~~	~~AMEL Multiplier~~	~~MDEL~~	~~AMEL~~
~~Aluminum~~	~~µg/L~~	~~25.9~~	~~6.21~~	~~2.24~~	~~160~~	~~58~~

Step 4: *When the most stringent water quality criterion/objective is a human health criterion/objective (aluminum), the AMEL is set equal to the ECA. For a limited data set (less than 10 data points) the coefficient of variation (CV) is set equal to 0.6.* ~~*Since reasonable potential was not found for any pollutants with human health criterion/objectives, no effluent limitations were calculated for this permit.*~~ *From Table 2 of the SIP, when CV = 1.31 and n = 4, the MDEL multiplier at the 99th percentile occurrence probability equals 6.2, and the AMEL multiplier at the 95th percentile occurrence probability equals 2. 2. The MDEL for protection of human health is calculated by multiplying the ECA by the ratio of the MDEL multiplier to the AMEL multiplier. Final WQBELs for aluminum are determined as follows:"*

Table F-6. Determination of Long-Term Averages

Pollutant	Units	ECA	MDEL/AMEL	MDEL	AMEL
Aluminum	µg/L	200	2.78	555	200

Comment A.2: The Permittee requests a modification to the acute toxicity language in section 4.1.2.2.2 of the Draft Permit to be consistent with the compliance determination language in section 7.9 which states "*Compliance with the three-sample median acute toxicity effluent limitation shall be determined when there is a discharge, by calculating the median percent survival of the three most recent consecutive samples meeting all test acceptability criteria collected from Monitoring Location EFF 002*."

Staff Response A.2: Staff agrees with the Permittee's requested change to the Proposed Permit so that language in Order section 4.1.2.2.2 is consistent with language in section 7.9

The Proposed Permit has been modified in response to this comment as follows:

Section 4.1.2.2.2 has been modified to read: "*Median for ~~any~~ the three ~~or more~~ most recent consecutive bioassays: at least 90 percent survival.*"

Comment A.3: The Permittee requests that the basis for the sodium land discharge specification in Order section 4.2.1.1, Table 4 be properly addressed in the Fact Sheet. Fact Sheet states that it is based on the secondary MCL, yet there is no secondary MCL for sodium.

Staff Response A.3: The Permittee is correct that there currently is no secondary MCL for sodium. This limit has been in the last two permits for the Permittee adopted in 2009 and 2014. The discharge specification for sodium of 60 mg/L is based on a U.S. EPA Drinking Water Advisory Taste and Odor Threshold.

The Proposed Permit has been modified in response to this comment as follows:

Fact Sheet section 4.6.3.1.4 has been added to read: "***Sodium.*** *Consistent with Order No. R1-2014-0002, this Order includes an effluent limitation for sodium of 60 mg/L, based on the U.S. EPA Drinking Water Advisory Taste and Odor Threshold.*"

Fact Sheet section 7.4.2 has been modified to read as follows: "*Effluent monitoring for sodium has been reduced to annual because monitoring data since 2016 has demonstrated that sodium concentrations have been reduced below the ~~MCL~~ U.S. EPA Drinking Water Advisory Taste and Odor Threshold of 60 mg/L."*

Fact Sheet section 7.5.3 has been modified to read as follow: "*Recycled water monitoring requirements at Monitoring Location REC-001 for sodium have been retained from Order No. R1-2014-0002, but the monitoring frequency has been reduced to annual because monitoring data since 2016 has demonstrated that sodium concentrations have been reduced below the ~~MCL~~ U.S. EPA Drinking Water Advisory Taste and Odor Threshold of 60 mg/L."*

Comment A.4: The Permittee requests that the Draft Permit be modified so that the toxicity permit reopener includes a process for establishing a representative instream waste concentration for evaluating compliance with acute and chronic toxicity limits.

Staff Response A.4: The Toxicity Provisions recently adopted by the State Water Board allow the Permitting Authority to grant mixing zones and dilution credits which would then form the basis for establishing an instream waste concentration. The State Implementation Policy for Toxics Control (SIP) provides the direction for determining when a mixing zone might be allowed and the requirements for developing a mixing zone. The SIP mixing zone requirements for an incompletely mixed discharge such as that at the Russian River CSD WWTF allows "*dilution credits and mixing zones to be considered by the RWQCB only after the discharger has completed an independent mixing zone study and demonstrated to the satisfaction of the RWQCB that a dilution credit is appropriate*."..

Section 6.3.1.3 of the Proposed Permit has been modified as follows: "***Whole Effluent Toxicity.*** *As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a narrative or numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric acute or chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric acute or chronic toxicity effluent limitation based on that objective. This Order may also be reopened to establish an alternative representative instream waste concentration for evaluating compliance with acute and chronic toxicity limits.*"

Comment 5: The Permittee notes that there are multiple report requirements related to managing the land discharge and water recycling systems. The Permittee requests that those requirements be combined into a single Comprehensive Land Discharge/Recycled Water Operations and Management Plan to be developed by May 1, 2022.

Staff Response A.5: Staff finds this to be a reasonable request given that land disposal and water recycling operations have many similarities and the two systems are typically being operated by the Permittee at the same time. However, it is important that land disposal and water recycling be addressed in separate sections of such a comprehensive report to ensure that the unique issues and management approaches of each are addressed properly.

The Proposed Permit has been modified in response to this comment as follows:

Section 4.2.2 of the Order has been modified as follows:

4.2.2. **Land Discharge Requirements**

~~4.2.2.1 Irrigation Discharge Management~~

~~"4.2.2.1.1.~~4.2.2.1.~~By March 1, 2022 t~~The Permittee shall submit a Land ~~Irrigation~~ Discharge/Recycled Water Operations and Management Plan as required by section 6.3.2.1 of this Order.~~for Executive Officer review and approval describing the measures and practices that the Permittee implements and proposes to implement to ensure that the forest irrigation system is operated in compliance with the requirements of this Order, including the requirements specified in sections 4.2.2.2 through 4.2.2.11. The Permittee shall implement the approved Plan.~~

~~4.2.2.1.2.The Irrigation Discharge Management Plan shall be reviewed annually and revised as needed to address any issues of non-compliance with this Order (i.e., persistent or excessive ponding, surface water runoff, if groundwater monitoring demonstrates increases in pollutants in groundwater beneath the lower Burch property). Revised Plans shall identify modified or new irrigation discharge practices to bring the discharge into compliance with this Order and an implementation plan. All revisions of the Plan shall be submitted for Executive Officer review and approval and implemented upon approval."~~

Section 6.3.2.1 of the Proposed Permit has been modified as follows:

6.3.2.1. "***Land Discharge/Recycled Water ~~BMP~~/Operations and Management Plan.*** *~~The Permittee shall review its Recycled Water BMP/Operations and Management Plan for consistency with the requirements of this Order, including the BMPs identified in the Recycled Water Technical Report Requirement 4.5 of Attachment G and the Permittee's procedures.~~*

6.3.2.1.1. *By **May 1, 2022** the Permittee shall ~~update~~ prepare and submit for Executive Officer Approval a ~~the~~ Land Discharge/Recycled Water ~~BMP/~~Operations and Management Plan[5] as necessary in order to remain current and applicable to the discharge and requirements of this Order. ~~and shall submit the updated Plan to the Regional Water Board.~~ The Land Discharge/Recycled Water Operations and Management Plan shall include (1) an update of the Permittee's September 2014 Recycled Water BMP/Operations and Management Plan to achieve consistency with the Water Recycling requirements of this Order, including the BMPs identified in the Recycled Water Technical Report Requirement 4.5 of Attachment G and the Water Recycling Administrative Report Requirement 4.6 of Attachment G; (2) a Land Discharge Management Plan describing the measures and practices that the Permittee implements and proposes to implement to ensure that the forest irrigation system is operated in compliance with the requirements of this*

Order, including the requirements specified in sections 4.2.2.2 through 4.2.2.11 of this Order[56]. The Permittee shall implement the approved Plan. Prior to and after approval of the Plan, the Permittee shall maintain records, including but not limited to inspection reports, photographs, and monitoring data to demonstrate compliance with all land discharge and water recycling requirements in this Order.

Footnote 5 to section 6.3.2.1.1: "*The Land Discharge/Recycled Water Operations and Management Plan should address land disposal and water recycling in separate sections, as necessary so that the unique issues and management approaches of each are clearly addressed*."

~~6.3.2.1.1.~~*6.3.2.1.2.The Land Discharge/Recycled Water Operations and Management Plan shall be reviewed annually and revised as needed to address any issues of non-compliance with this Order (i.e., persistent or excessive ponding, surface water runoff, if groundwater monitoring demonstrates increases in pollutants in groundwater beneath the lower Burch property). Revised Plans shall identify modified or new irrigation management practices and an implementation plan to achieve compliance with this Order. All revisions of the Plan shall be submitted for Executive Officer review and approval and implemented upon approval."*

Section 10.4.1, Table E-13 of the MRP has been modified as follows:

Table E-13. Reporting Requirements for Special Provisions Reports

Order Section	Special Provision Requirement	Reporting Requirement
~~Land Discharge Specifications and Requirements 4.2.2.1~~	~~Irrigation Discharge Management Plan~~	**~~March 1, 2022,~~** ~~and revise as necessary~~
Special Provision 6.3.2.1.1	Land Discharge/Recycled Water ~~BMP/~~Operations and Management Plan preparation and submittal ~~review, update, and submit (as necessary)~~	**May 1, 2022**
Special Provision 6.3.2.1.2	Land Discharge/Recycled Water Operations and Management Plan review, update and submit	**As necessary**

Fact Sheet section 4.6.3.2.1 has been modified as follows:

4.6.3.2.1. *"~~Irrigation~~ Land* ***Discharge Management. (Land Discharge Requirement 4.2.2.1)****. ~~A written Discharge Management Plan is necessary to ensure that irrigation on the Burch Property is conducted in a manner that ensures compliance with Land Discharge Requirements 4.2.2.2 through 4.2.2.14. Since site-specific evapotranspiration (ET) rates in the spray disposal area is unknown, it is essential that an Irrigation Discharge Management Plan be prepared, implemented, and modified as necessary to ensure that spray irrigation rates do not result in ponding, flow in surface water drainages and ephemeral watercourses, and/or adverse impacts to groundwater.~~ At the Permittee's request, this requirement has been combined with the Recycled Water Management Plan requirement in section 6.3.2.1.1 of this Order to provide a comprehensive report that address land discharge and recycled water management practices. See Fact Sheet section 6.3.2.1."*

Fact Sheet section 6.3.2.1 has been modified as follows:

6.3.2.1. "***Land Discharge/Recycled Water ~~BMP~~/Operations and Management Plan (Special Provision 6.3.2.1).*** *This ~~Plan~~ requirement is retained in part from Order No. R1-2014-0002 and expanded to include land discharge management. The Land Discharge/Recycled Water Operations and Management Plan is necessary to ensure that the recycled water irrigation system is operated at appropriate hydraulic and nutrient agronomic rates, utilizing appropriate BMPs and operations practices. The Land Discharge section of the Management Plan is necessary to ensure that irrigation on the Burch Property is conducted in a manner that ensures compliance with Land Discharge Requirements 4.2.2.2 through 4.2.2.11. Since site-specific evapotranspiration (ET) rates in the spray disposal area are unknown, it is essential that a Land Discharge Management Plan be prepared, implemented, and modified as necessary to ensure that spray irrigation rates minimize ponding, flow in surface water drainages and ephemeral watercourses, and/or adverse impacts to groundwater."*

Comment A.6: The Permittee requests that monitoring reports be required to be submitted monthly rather than quarterly. Due to the extensive monitoring requirements, it is more efficient for the Permittee to upload data once per month and prepare monthly compliance summaries.

Staff Response A.6: This is a reasonable request.

The Proposed Permit has been modified in response to this comment as follows:

MRP sections 6.1.2, 10.2.2, 10.3.1 have been modified to change the words "quarter" and "quarterly" to "monthly" or "monthly sampling period".

MRP section 10.2.5, Table E-12 has been modified as follows:

Table E-12. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following the end of each ~~quarter~~month ~~(February 1, May 1, August 1, November 1)~~
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling	First day of second calendar month following the end of each ~~quarter~~month ~~(February 1, May 1, August 1, November 1)~~
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following the end of each ~~quarter~~month ~~(February 1, May 1, August 1, November 1)~~
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	First day of calendar month through last day of calendar month	First day of second calendar month following the end of each ~~quarter~~month ~~(February 1, May 1, August 1, November 1)~~
Quarterly[1]	January 1, April 1, July 1, October 1	First day of calendar quarter through last day of calendar quarter	First day of second calendar month following the end of each quarter

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 and July 1 through December 31	September 1, each year and March 1, each year
Annually[2]	January 1 following (or on) permit effective date	January 1 through December 31	March 1, each year (with annual report)
4 Samples (1/Year)	October 1 following (or on) permit effective date	October 1 through November 30	March 1, each year (with annual report)
Twice per year	August 1 following (or on) permit effective date	May 1 through 31 and August 1 through 31	July 1 and October 1 each year (with May and August SMRs)
Once per permit term	Permit effective date	All	As stated in MRP tables or by **March 1, 2025**

Table Notes:

3. Quarterly monitoring periods are as follows: January 1 through March 31; April 1 through June 30; July 1 through September 30; and October 1 through December 31.
4. Annual samples required for discharge to receiving water (Discharge Points 002 and 005) shall be taken once per discharge season.

Comment A.7: The Permittee requests clarification and consistency on the compliance methodology language specified for *E. Coli* in order to implement the Pathogen Special Study (Section 6.3.2.2) that is required by the Russian River Watershed Pathogen TMDL Action Plan.

Staff Response A.7: The Draft Permit includes *E. coli* receiving water limits and monitoring requirements to implement both the State Water Board Bacteria Provisions adopted by the State Water Board in August 2018 and the Russian River Watershed Pathogen TMDL Action Plan. The Draft Permit states the 6-week rolling geometric mean of *E. coli* is to be determined from a "*statistically significant sufficient number of samples, which is generally not less than five samples distributed over a six-week period*." The Draft Permit defines the 6-week rolling geometric using at least five samples (Section 7.8.3), but there are inconsistent requirements at other locations that

refer to three samples. The language that the Permittee requests to be changed was carried over from a permit for a permittee that discharges very infrequently. The language is not applicable to the Permittee's discharge which is a continuous discharge from October through mid-May and therefore weekly sampling that is required in the Proposed Permit will result in the required minimum of five samples in every six-week period.

The Proposed Permit has been modified in response to this comment as follows:

Order section 7.8.3, Footnote 5 has been modified as follows: "~~*A minimum of three samples over a six-week period is necessary to calculate the geometric mean. When less than three samples are taken in a six-week period, compliance with the E. coli bacteria receiving water objective shall be determined using the Statistical Threshold Value (STV).*~~ *If the Permittee samples less than ~~three~~five times during a six-week period, compliance shall be assessed ~~by comparing the single sample results to~~ using the statistical threshold value (STV) as described in section 7.8.4.*"

MRP section 4.2.1, Table E-4, Table Note 15 has been modified as follows: "*A minimum of ~~three~~ five samples over a six-week period is necessary to calculate the geometric mean. See also Order section 7.8.3, Footnote 5."*

Comment A.8: The Draft Permit (Table 2) includes technology-based effluent limitations for pH, but there are no corresponding monitoring requirements to determine compliance. Attachment E should include monitoring requirements for EFF-001.

Federal technology-based requirements for secondary treatment specify a 30-day average percent removal of BOD_5 and TSS of not less than 85%. The Draft Permit (Section 4.1.1.2) includes the percent removal requirement as a monthly average determined from influent and effluent measurements collected at INF-001 and EFF-001. However, Attachment E (Table E-3) requires weekly calculation of BOD_5 and TSS percent removal. BOD_5 and TSS are monitored weekly in the influent and the effluent, but the percent removal calculation is performed monthly to determine compliance with the 85% minimum effluent limitation.

Staff Response A.8: Staff agrees that pH monitoring requirements should be added to the Proposed Permit and that BOD_5 and TSS requirements should be established as monthly, not weekly monitoring. The monitoring requirements identified in the Permittee's comments are necessary requirements that need to be included in the permit.

The Proposed Permit has been modified in response to this comment as follows:

MRP section 4.1.1, Table E-3 has been modified as follows:

Table E-1. Effluent Monitoring – Monitoring Location EFF-001 or EFF-005

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Effluent Flow [1, 2]	mgd	Meter	Continuous	-
BOD_5	mg/L	24-hr Composite	Weekly[3]	Part 136[4]
BOD Percent Removal	% Removal	Calculate	~~Weekly~~Monthly	-
TSS	mg/L	24-hr Composite	Weekly[3]	Part 136[4]
TSS Percent Removal	% Removal	Calculate	~~Weekly~~Monthly	-
pH	Standard Units	Grab	Daily[5]	Part 136[4]
Total Coliform Bacteria[6]	MPN/100 mL	Grab	Daily[5]	Part 136[4]

Table Notes:

1. Effluent flow may be monitored at Monitoring Location INT-001B.
2. The Permittee shall report the daily average and monthly average flows.
3. Accelerated monitoring (weekly monitoring frequency). If two consecutive weekly test results exceed an effluent limitation, the Permittee shall take two samples each of the 2 weeks following receipt of the second sample result. During the intervening period, the Permittee shall take steps to identify the cause of the exceedance and take steps needed to return to compliance.
4. 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 Water and Wastewater* (American Public Health Administration).
5. Accelerated Monitoring (daily monitoring frequency). If a test result exceeds an effluent limitation, the Permittee shall increase monitoring frequency to a minimum of twice a day for a week to evaluate whether an exceedance is persisting. If two of more samples in a week exceed an effluent limitation, the Permittee shall take steps to identify the cause of the exceedance and take steps needed to return to compliance.
6. The Permittee shall report calculated 7-day medians in addition to measured daily sampling results.

Comment A.9: The Permittee requests that the sample type for acute and chronic toxicity monitoring be changed from 24-hour composite to grab.

Staff Response A.9: The prior permits have all required grab sampling for toxicity samples as compositing is accomplished in the effluent storage pond. Therefore, it is appropriate to allow grab sampling for toxicity samples in this permit as well.

Section 4.2.1, Table E-4 has been modified as follows:

Table E-2. Effluent Monitoring – Monitoring Location EFF-002 and EFF-005

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Acute Toxicity [6,12]	% Survival, Pass or Fail, and % Effect	~~24-hr Composite~~Grab	Annually	See Section 5.1 below
Chronic Toxicity[12]	Pass or Fail, and % Effect	~~24-hr Composite~~Grab	Annually	See Section 5.2 below

Section 5.2.3 of the MRP has been modified to read: "*Sample Volume and Holding Time. The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. All toxicity tests shall be conducted as soon as possible following sample collection. For toxicity tests requiring renewals, a minimum of three ~~24-hour composite~~ daily grab samples (one sample per 24-hour period) shall be collected. The lapsed time (holding time) from sample collection to first use of each sample must not exceed 36 hours."*

Comment A.10: The Permittee requests clarification on whether accelerated monitoring requirements apply to sodium at LND-001 and if annual samples should be collected in September.

Staff Response A.10: It is appropriate for annual samples to be collected at Monitoring Location LND-001 in September to be consistent with monitoring requirements for Monitoring Location REC-001 and to add an accelerated monitoring requirement for sodium.

Section 6.1.1, Table E-5 has been modified to add Table Notes 6 and 7 that apply to the annual sodium monitoring requirement in the table.

Table Note 6 reads, "*Annual monitoring for sodium shall occur in September to reflect the time of year when salts are typically highest in the effluent based on previous monitoring.*"

Table Note 7 reads, "*Accelerated monitoring for sodium shall be implemented if an annual sodium result exceeds the sodium discharge specification of 60 mg/L. Accelerated monitoring shall consist of weekly monitoring for the remainder of the land discharge season.*"

Comment A.11: Table E-7 has the incorrect hydraulic agronomic rate formula. The Permittee requests that the correct formula be included in the table.

Staff Response A.11: It is appropriate to include the correct formula in Table E-7 as follows:

Table E-7. Recycled Water Production and Use[1]

Parameter	Units	Sample Type	Monitoring/ Observation Frequency[2]
Maximum Allowable Hydraulic Agronomic Rate[9]	inches	Calculation	--
Maximum Allowable Nitrogen Agronomic Rate	lbs	Calculation	--

Table Notes:

9. Maximum allowable hydraulic agronomic rates for each recycled water use site will be calculated as follows: ~~[ETo-EP] x [LFh = (LFm x 0.6)] x Total Area x CF where:~~

$$\text{Irrigation water requirement} = \frac{(ETo*Kp)-Peff}{(1-LR)*Eu}$$

Where:

ETo = Reference evapotranspiration is defined as the amount of water used by the plants (transpiration) and evaporated from the soil (evaporation) and is based on the consumptive water use of a local grass field, measured by the California Department of Water Resources, CIMIS database. It is measured in inches by Santa Rosa CIMIS weather station #83.

Kp = Crop growth coefficient for golf course turf, 0.8

Peff = Effective precipitation (amount of rainfall in inches available to golf course turf, 70% of local rainfall measured at the WWTF)

LR = Leaching Requirement, 0% (a conservative estimate) is the fraction of irrigation water (irrigation plus precipitation), required to leach the excess salt out of the root zone, to reduce salt stress on the plant root zone. LR is based on the salt concentration of the applied water and the salt tolerance of the crop.

Parameter	Units	Sample Type	Monitoring/ Observation Frequency[2]
Eu = Unit application efficiency for golf course rotary sprinklers, 80% • ~~ETo (Reference Evapotranspiration) = Evapotranspiration is defined as the amount of water used by the plants (transpiration) and evaporated from the soil (evaporation). It is measured in inches by the Santa Rosa Irrigation Management System's weather station (CIMIS Station #83). Reference evapotranspiration is a standard measurement of evapotranspiration for cool-season turf.~~ • ~~EP (Effective Precipitation) = The depth of rainfall, measured in inches by Santa Rosa CIMIS weather station #83, that offsets ETo. Effective precipitation is assumed to be a third of the actual measured precipitation.~~ • ~~LFh (Landscape fraction high) = fraction of site's landscape area consisting of high water use plants or uses. High water use plants include turfgrass, ornamental water features, annuals, plants in containers, and agricultural customers irrigating pastures, fodder crops, vegetable crops, or other high water use crops.~~ • ~~LFm (Landscape fraction medium) = fraction of site's landscape area consisting of moderate and low water use plants such as trees, shrubs, and vines. The size of these landscaped areas is multiplied by a factor of 0.6 to account for their proportionately lower water use.~~ • ~~Total Area = total size of recycled water use area, in square feet.~~ • ~~CF (Conversion Factor) = 0.623, the number that converts the volumetric unit (square feet x inches) to gallons.~~			

Comment A.12: The Draft Permit requires submittal of the Water Recycling System Annual Report by March 1 as part of the WWTF Annual Report. To relieve some of the reporting pressure associated with the March 1 deadline, the District requests approval to submit the Water Recycling System Annual Report by April 30 when the Annual Volumetric Report is due.

Staff Response A.12: Staff agree that this is a reasonable request and are aware that other regional boards are allowing Water Recycling System Annual Reports to be submitted on April 30.

The Proposed Permit has been modified as follows in response to this comment:

Table E-13 and section 10.4.4 in the MRP of the Proposed Permit has been modified to change the submittal date for the Water Recycling Annual Report from March 1 to April 30.

Comment 13: Paired Russian River pH and temperature data and the assumed presence of salmonids and mussels were used to calculate EPA 2013 Freshwater Criteria applicable to the discharge. Although reasonable potential was not demonstrated, the District is concerned about the use of criteria based on freshwater mussel species that are not found in the Russian River. Biologists from Sonoma Water and the Xerces Society have identified five species comprising three genera (*Anodonta*, *Gonidea*, and *Margaritifera*) as residents in the Russian River and Lake Mendocino. The juvenile life-stages of these species were tested in accordance with EPA recalculation procedures to develop site-specific ammonia criteria in the Central Valley. The Central Valley testing showed the resident species were "substantially less sensitive" than many of the mussels included in the EPA dataset that was used for the 2013 Freshwater Criteria. As a result, the ammonia criteria utilized to evaluate effluent quality and the assimilative capacity in the Russian River are overly protective and not representative of the discharge environment. The District encourages the Regional Water Board to adopt site-specific ammonia criteria for the Russian River watershed.

Staff Response A.13: This comment has been noted. Since reasonable potential was not found for ammonia, the Proposed Permit does not include effluent limitations for ammonia.

U.S. EPA developed the *Guidelines for Deriving Numerical Aquatic Site-Specific Water Quality Criteria by Modifying National Criteria* (EPA-600/S3-84-099 December 1984) that provides a Recalculation Procedure. U.S. EPA also developed the *Revised Deletion Process for the Site-Specific Recalculation Procedure for Aquatic Life Criteria* (EPA-823-R-13-001, April 2013) to guide the development of a site-specific toxicity dataset that is appropriate for deriving a site-specific aquatic life criterion, by modifying the national toxicity dataset for the pollutant of concern through correcting, adding, and/or deleting test results. The Permittee or other stakeholders may submit a formal request to the Regional Water Board for consideration of site-specific ammonia criteria in the Russian River following these guidance documents.

No changes were made to the Proposed Permit in response to this comment.

Comment A.14: The Permittee requests an additional year for meeting each of the three deadlines for Revised System Evaluation and Capacity Assurance Plan (SECAP).

Staff Response A.14: Staff anticipate that the revision of the System Evaluation and Capacity Assurance Plan required by Proposed Permit section 6.3.6.2.2 will be an intensive effort, therefore it is reasonable to give the Permittee an extra year for each of the three deadlines in Order section 6.3.6.2.2. The requested extensions will still result in the final work product being complete during the term of the Proposed Permit.

Section 6.3.6.2.2 has been revised to change the date for submittal of the SECAP work plan from February 1, 2022 to <u>February 1, 2023</u>.

Section 6.3.6.2.2.1 has been revised to change the date for submittal of the SECAP from August 1, 2023 to August 1, 2024.

Section 6.3.6.2.2.3 has been modified to change the date for submittal of the collection system engineering study from August 1, 2024 to August 1, 2025.

The dates have also been changed in MRP section 10.4.1, Table E-13 to reflect the date changes reflected in the three paragraphs immediately above.

B. Russian River Watershed Protection Committee

Comment B.1: Concerns about Land Discharge Management

B.1.a. Land Discharge Management Plan. RRWPC strongly supports the concept of a proposed new land discharge management plan (Plan) but (1) is concerned about how the forest irrigation area is being managed now and until the Plan is developed, and (2) believes that the Plan should be reviewed and updated every year in order for it to be an effective management tool. Reviews should focus on practices the Proposed Permit addresses such as prevention of excessive ponding, surface water runoff, potential groundwater impacts and possible exacerbation of hazards as well as to define a minimum inspection frequency. RRWPC strongly recommends that hazard related improvements be incorporated into the Plan. RRWPC also asks how it is determined that the irrigation area has dried sufficiently between irrigation and whether cameras could be installed in the irrigation area to allow routine viewing of the irrigation area.

Staff Response B.1.a.: Staff expects the Land Discharge Management Plan, now combined with the Recycled Water Operations Plan and called the Land Discharge/Recycled Water Operations and Management Plan, to be a robust document that addresses the types of issues raised by RRWPC. This plan will be reviewed by Staff to evaluate whether it contains the level of detail to ensure that the land disposal areas are and will be managed properly and that the Permittee has protocol for responding to issues of non-compliance in the field quickly and effectively.

The Land Discharge Management Plan required by the Proposed Permit will formalize and expand upon the Permittee's current management planning documents. The Proposed Permit requires review of the management plan annually, and revisions as necessary. If the initial plan is robust, the plan might not need revisions every year, rather only in response to any issues identified during a discharge season that indicate non-compliance with land discharge specifications or to large-scale changes that take place in the forest irrigation area such as any future timber harvesting.

The Permittee conducted nuisance assessments of the lower Burch land disposal area in 2015 and 2016 and described the results of the assessments in its 2015 and 2016 Nuisance Assessment Reports. Staff discussed land disposal management practices with the Permittee following the public comment period for the Draft Permit and reviewed photographs of the area submitted by the Permittee. Staff concluded that the Permittee developed and implemented a number of best practices during the term of the 2014 permit that have greatly improved the management of the land disposal areas. The Permittee will need to identify these improvements and management practices and include them in the land disposal management plan. The Permittee also has developed a draft Standard Operating Procedure for operation of the land disposal areas that includes operation and maintenance and inspection protocols. In accordance with the Permittee's protocol, the land disposal areas are inspected daily. On a weekly basis, inspection forms are filled out noting visual observations and responses to any observations of ponding or problems with irrigation infrastructure. These observations are used to make decisions such as the need to adjust or turn off irrigation to a particular area. In addition, there is known spring activity that reaches a drainage ditch that connects with the Russian River. The Permittee avoids irrigation in this area, inspects this area regularly, and keeps a plug in the culvert of this ditch to ensure that if irrigation runoff were to occur that it would be contained and managed on-site.

Modifications to Order section 6.3.2.1.1 of the Proposed Permit made in response to Sonoma Water Comment 5 also address concerns addressed by RRWPC by requiring that the Permittee to maintain records, including inspection reports, photographs, and monitoring data to demonstrate compliance with all land discharge requirements in the Proposed Permit.

B.1.b. Unclear Definition of Terms. RRWPC noted that definitions of several terms used in relation to land discharge management are too vague or contradictory, such as "ponding" (be clear about whether it is to be minimized or prevented and when ponding is excessive), "periodic inspections" (define what constitutes a reasonable number of inspections), and "reasonable" (for example, define what a reasonable BMP to prevent ponding is).

Staff Response B.1.b: The Proposed Permit requires that ponding be minimized, although there were two sections in the Draft Permit that said "prevent" rather than "minimize", thus the Proposed Permit has been revised to address this. The terms "periodic inspections" and "reasonable" are consistent with language used in the Statewide Recycled Water General Order. The Permittee's land discharge management plan must define such things as inspection frequency and BMPs and demonstrate that these are adequate to ensure that any violations of permit requirements are caught quickly and addressed.

The following modifications have been made to the Proposed Permit in response to this comment:

Order section 4.2.2.8 has been modified to read: "*Irrigation areas shall be managed to ~~prevent~~ minimize ponding …*"

Attachment G, section 2.23 has been modified to read, "*Areas irrigated with recycled water shall be managed to ~~prevent~~ minimize ponding …*"

B.1.c. Agronomic Rates. RRWPC believes that the only appropriate way to manage the land discharge area is to require application at agronomic rates in consideration of issues such as high groundwater table, reports of soggy and wetland conditions, vector problems, and runoff.

Staff Response B.1.c: The Proposed Permit requires agronomic rates for the recycled water use site, consistent with the Statewide Recycled Water Policy, while the land disposal area is regulated based on narrative specifications and BMPs which are verified through daily inspections. Staff believe that it is not necessary to require application at agronomic rates on the land disposal sites at this time as further discussed in this response.

The water reclamation capacity of the area, known as the Burch (then Silver) Property was estimated in a 1976 *Environmental Impact Report for the Russian River CSD* at approximately 0.100 mgd based on evapotranspiration rates. In 1998, the Permittee conducted a groundwater investigation to evaluate the impact of spray irrigation on the Burch property during the 1998 irrigation season. In the final report, dated August 9, 1998, the Permittee concluded that treated effluent was applied during the reclamation season at rates that exceeded the evapotranspiration rate of the lower irrigation area, but that the results of the study indicated that no significant impact to water quality and beneficial uses of areal groundwater resulted from discharges to the recycled water system.

The Proposed Permit continues to recognize this fact – that irrigation is occurring at greater than evapotranspiration rates; however, groundwater monitoring shows no significant impact to water quality of area groundwater, which has greatly improved over the term of the 2014 permit due to significant improvements to effluent quality as a result of the Permittee completing the biological nutrient removal upgrade project (BNR) in 2014 and a UV disinfection project completed in September 2012. These upgrades have reduced the concentration of nitrogen and salts in the effluent applied to the land disposal and recycled water areas, thus the corresponding improvements to groundwater quality.

The groundwater table may be high at times particularly following a wet winter, and the Proposed Permit requires that the land disposal area be managed to minimize ponding, soggy conditions, and runoff. In response to requirements in

the 2014 permit, the Permittee conducted a nuisance assessment of the lower Burch area and identified the need to implement actions to improve its irrigation management. Measures implemented by the Permittee included installation of flow-adjustable sprinkler heads; installation of valves that allow irrigation areas and even individual sprinklers to be turned on or off to better control the amount of water that is applied in particular in areas that are prone to ponding or runoff; placement of large boulders at an entrance to prevent the public from driving into the area with 4-wheel drive vehicles which was causing rutting in the roadways and damage to the irrigation risers; and purchase and use of an ATV to use in place of the Permittee's trucks to drive through the land disposal area to conduct inspections and maintenance. The Proposed Permit requires the Permittee to continue to manage irrigation of the land disposal area to minimize ponding and runoff conditions through routine inspections, adaptive management of the irrigation areas in response to observed conditions and weather, and through on-going improvements.

Further, the Proposed Permit includes new land discharge management requirements (Order section 4.2.2) and an annual land discharge report (MRP section 10.4.2.7) that were not in the prior permits. In addition, section 6.1.2.2 of the Proposed Permit retains requirements to immediately report conditions of non-compliance, such as runoff that results in a discharge off-site or to the river.

A minor change was made to section 6.1.2.2 of the Proposed Permit in response to this comment as follows: "*In the event the Permittee does not comply or will be unable to comply for any reason, with any prohibition, final effluent limitation, recycled water specification, land discharge ~~other~~ specification, receiving water limitation, or provision of this Order, that may result in significant threat to human health or the environment, such as inundation of treatment infrastructure, breach of pond containment, sanitary sewer overflow, recycled water main break or equivalent release, irrigation runoff, etc., that results in a discharge to a drainage channel or a surface water, the Permittee shall notify the Regional Water Board within 24 hours of having knowledge of such noncompliance. …*"

B.1.d. Capacity Study. RRWPC's comments on the Timber Harvest Plan that has been proposed on the Burch property and requested that a capacity study be conducted to see how removing trees in the lower field will exacerbate current problems and limit capacity of wastewater irrigation applications in the land disposal area. RRWPC believes that an interactive analysis of water uptake of trees being cut, amount of irrigation applied, average wind, heat, soil conditions, slope, evapotranspiration, etc. should be conducted. Scientific information is needed on how remaining trees and irrigation capacity will be impacted by the harvest.

Staff Response B.1.d: Regional Water Board Forest Activities Program and NPDES Staff believe that there are too many variables to adequately estimate post-harvest capacity of wastewater irrigation applications in the land disposal

area because there are many factors that could affect the capability of the remaining trees to uptake the water. These variables include: fewer trees could result in a reduction in evapotranspiration rates, while increased growth on remaining trees could result in increased evapotranspiration, and more sunlight and air movement could result in a higher rate of evaporation. It would be very difficult to predict the combined effect of these variables with the additional consideration that we don't yet know the number or location of the trees that may be harvested within the delineated Timber Harvest Plan (THP) area. The THP only states a minimum retention of trees, stated as a basal area per acre. Although it would be ideal if the post-harvest capacity and effects of irrigation could be quantified, Staff do not believe that methods to reliably quantify the potential effects of the timber harvesting are currently available. Additionally, since there is no evidence to show that there will be a change in the disposal capacity and resulting impacts to groundwater quality after the harvesting is done, Staff believe that it would be premature to require such an analysis.

Staff have concluded that the improvements in management of the land disposal area that were achieved during the term of the 2014 permit, combined with the addition of specific land discharge requirements in the Proposed Permit are adequate to ensure continued improvements in the management of the land discharge system, the permit requirements will be met, and surface and groundwater quality will be protected. The Permittee continues to explore alternatives to continue to improve the management of irrigation in the forest irrigation areas.

No changes were made to the Proposed Permit in response to this comment.

B.1.e. Potential Impacts of Timber Harvest Plan. RRWPC is concerned about potential impacts of proposed timber harvesting in the land discharge areas, including how such harvesting could contribute to problems created during past logging in the land disposal areas (i.e., damaged soil structure, tree roots, and depressions) and the impacts of pesticides and herbicides that might be used during the proposed timber harvesting.

Staff Response B.1e: Timber harvesting activities must be managed following forest practice rules and has been reviewed by Regional Water Board Forest Activities Program staff, California Department of Forestry and Fire Protection (CalFire) and other agencies such as California Department of Fish and Wildlife. The THP includes requirements and mitigations designed to protect the environment. The THP was modified in response to public comments to eliminate plans to use pesticides and herbicides.

No changes were made to the Proposed Permit in response to this comment.

B.1.f. Concerns about Geological Conditions. RRWPC is concerned about several geological issues on the upper and lower spray fields, including changes to soil characteristics from long-term irrigation, erosion, and landslide potential and how these might be affected by future timber harvesting activity. RRWPC is concerned that the Draft Permit does not require a CEQA document to evaluate the environmental impacts of years of heavy irrigation and the proposed removal of trees (such as concerns about weakening of soils or increased potential for landslides as described in an report titled "*Simple Water Balance of RRCSD Upper Zone Spray Operations Using the WEPP Model with Cligen Climate Simulator*" (authored by professional geologist Vic Madrid) that RRWPC submitted with its comments.

Staff Response B.1.f: The Permittee regularly inspects the irrigation areas for evidence of hazard conditions such as soil erosion and landslide potential. No landslides have occurred in the Upper irrigation area in the 40 years that irrigation has occurred. The Permittee's Discharge Management Plan should discuss how it inspects and evaluates the Upper Burch irrigation area for any evidence of hazards, and how it responds to any issues identified.

No changes were made to the Proposed Permit in response to this comment.

B.1.g CEQA Analysis. Is a CEQA analysis required to address proposed changes to conditions in the land disposal area?

Staff Response B.1.g: CEQA is not required for this NPDES permit since the Proposed Permit addresses an ongoing treatment and disposal system with no changes in flow. The potential changes in irrigation design discussed in response to RRWPC Comment B.1.D, above, and any minor changes related to the removal of trees within the irrigation area, would not trigger CEQA or a modification to the Proposed Permit, as addressed by the categorical exemption in title 14, section 15304 of the California Code of Regulations (CCR) which applies to minor alterations to land, water, and/or vegetation where significant impacts are not expected.

Fact Sheet section 3.2 of the Proposed Permit has been modified in response to this comment, to add a new paragraph (as the third paragraph in the section) to read: "*Any minor alterations to irrigation system design are exempt from CEQA pursuant to title 14, CCR, section 15304 which applies to minor alterations to land, water, and/or vegetation where significant impacts are not expected*."

Comment B.2: Sanitary Sewer Overflows. RRWPC questions whether the Draft Permit includes adequate requirements to address extensive sanitary sewer overflows and other spills that have occurred during high flows due to the location of the collection system in the floodplain of the Russian River. RRWPC is concerned that efforts to address serious failures in the system (i.e., aging lift station and force main that need

upgrades, rehabilitation, and/or replacement) have been delayed too long and that the Permittee has not budgeted for completing the flood control and flow mitigation tasks identified in the Draft Permit. RRWPC would also like to know if the collection system assessment project mentioned in Fact Sheet Section 2.1.1. is already being implemented. RRWPC further requests that the Permittee be required to address the problem of flood waters entering the collection system through drains and toilets in low-lying areas and to be required to warn residents when the river is toxic during high floods and the need that great care should be taken to avoid contact with its waters at that time as much as possible.

Staff Response B.2: The Draft and Proposed Permit requires the Permittee to implement flood control and flow reduction mitigation tasks, including a complete revision of its Sewer Evaluation and Capacity Assurance Plan (a requirement of the Statewide Sanitary Sewer System General Order) to recognize the intense storm events that resulted in significant flooding of the collection system with resultant high volume sanitary sewer overflows that impacted human health and water quality. The Draft and Proposed Permit also requires the Permittee to conduct an engineering study that specifically evaluates how the collection system and treatment plant are impacted by the Russian River and its tributaries during flood events. This evaluation must consider low-lying portions of the collection system that become inundated during flood conditions, how these flood conditions impact the rest of the collection and treatment system and identify where SSOs and/or treatment system bypasses would occur. The evaluation will need to document conditions, including flows and flood elevations at which SSOs occur, locations, duration, and scale where these impacts occur, and identify a mitigation and response plan. This information will be used to inform preventative measures, public notification, spill response, and site management that will be implemented under those conditions. The Permittee will need to budget for completing these items in the upcoming fiscal years.

The Permittee received a $800,000 planning grant from the State Water Board that will be used to perform a condition assessment of the collection system infrastructure, including the lift stations, Facility headworks, and force main. This effort will also include identification of projects to correct deficiencies that are identified during the assessment work, as well as development of 30 percent design plans for selected projects. In association with the planning grant, the Permittee will be able to apply for construction grant funding for up to $7M and anticipates submitting its application for the construction grant by 2024. Priority projects such as lift station upgrades could begin as soon as 2025.

Staff has addressed failures of the collection system in past enforcement action, such as the 2016 administrative civil liability order (Order No. R1-2016-0022). In addition, State and Regional Water Board staff conducted an audit and inspection of the Permittee's collection system in December 2019 and issued a Notice of Violation (NOV) on April 14, 2021 identifying violations identified during that inspection. The Permittee is required to provide a written response to the NOV by June 4, 2021 describing the Permittee's intentions, plan, and schedule to correct violations and address areas of concern identified in the NOV.

The Draft and Proposed Permit also require that the Permittee develop a Public Spill Notification Plan describing the Permittee's plans and procedures for timely notification of community members that are or may be impacted by spills and unauthorized discharges that may occur within the collection system or from the treatment plant. The public spill notification plan must demonstrate that methods of communication with the public are appropriate for the type and conditions of the spill. The Permittee must engage with interested stakeholders to seek public input in the development of the Plan prior to submittal of the Plan and provide documentation of this public process in the Plan. RRWPC's request that the Permittee be required to warn residents when the river is toxic during high floods and inform the public to avoid contact with its waters at that such times is beyond the scope of this permit. The Proposed Permit requirements apply to sources within the Permittee's control (i.e., SSOs, spills from the Facility). The Permittee must notify residents regarding spills from the collection system or the treatment plant.

Issues related to sewage entering the collection system through drains and toilets in low-lying areas is best handled through the Permittee's Sewer System Management Plan that is a requirement under the Permittee's enrollment in the Statewide Sanitary Sewer System General Order.

Implementation of the project identified in section 2.1.1. of the Draft Permit has not yet started, thus the Proposed Permit has been modified as follows:

Section 2.1.1 of the Proposed Permit was modified in response to a portion of this comment as follows: "*The Permittee ~~is also~~received a grant from the State Water Board to implement~~ing~~ a project to assess the condition of the headworks and aging lift stations, and to prioritize necessary rehabilitation and/or replacement of its aging infrastructure. The assessment work is expected to begin in late 2021 and to be completed sometime in 2022, followed by initial designs and environmental permitting for identified projects in 2023. The Permittee anticipates applying to the State Water Board in 2024 for construction grant funding to rehabilitate and/or replace aging infrastructure.*"

No other changes were made to the Proposed Permit in response to this comment.

Comment B.3: Phosphorus and Nutrient-Related Issues. RRWPC is concerned that the Draft Permit doesn't give adequate attention to phosphorus and nutrient-related issues in the Russian River in light of nutrient pollution in the Lower Russian River as evidenced by excessive aquatic plant growth (algae and Azolla). RRWPC asks why the Draft Permit doesn't establish numeric limits and more rigorous monitoring for phosphorus since effluent phosphorus concentrations exceed Recommended EPA Criteria based on Aggregate Ecoregion III. Perhaps the worst nutrient pollution of the lower river in the summertime is from phosphorus. Why has there been no action by your Agency on this issue?

Staff Response B.3: The Permittee completed a biological nutrient removal (BNR) upgrade project in 2014 that has significantly reduced effluent concentrations of nitrogen and phosphorus. The Proposed Permit requires the Permittee to continue to operate the BNR system as efficiently as it has during the previous permit term to ensure that this high effluent quality continues to be maintained to ensure protection of surface water and groundwater.

The Regional Water Board is increasingly concerned about the biostimulatory characteristics of discharges to surface waters in the North Coast Region. Nutrients, such as phosphorus and nitrogen containing compounds, in treated wastewater stimulate the growth rate of photosynthetic bacteria, algae, and other aquatic plants. The overabundance of nitrogen and phosphorus compounds in surface water bodies can result in the excessive growth and decay of these organisms, thus accelerating the process of eutrophication. These phenomena cause dissolved oxygen levels to drop below concentrations needed for the survival and health of fish and aquatic life, which in turn negatively affects the aesthetic quality of water bodies and impairs beneficial uses.

The Draft and Proposed Permit includes the following Basin Plan receiving water limitation, "*The discharge shall not cause receiving waters to contain concentrations of biostimulatory substances that promote objectionable aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.*"

At present, for interpretation of the Basin Plan's narrative water quality objective for biostimulatory substances, U.S. EPA has established recommended water quality criteria for nutrients in *Nutrient Criteria Documents for Lakes and Rivers and Nutrient Criteria Documents for Rivers and Streams*. The State and Regional Water Boards continue to examine other methods of interpreting the Basin Plan's narrative water quality objective for biostimulatory substances. If evidence becomes available that demonstrates that the discharge from this Facility is causing the receiving waters to contain concentrations of biostimulatory substances that may cause or contribute to exceedances of the water quality objective, then the reasonable potential analysis will be reassessed to determine the need for water quality-based effluent limitations for nutrients such as phosphorus or nitrogen. In the meantime, the RPA for nutrients in relation to biostimulatory properties, performed for development of this Proposed Permit was inconclusive. However, no evidence has been presented to date to demonstrate that the wet season discharge from this Facility is causing the receiving waters to contain concentrations of biostimulatory substances such as nitrogen and phosphorus at levels that promote objectionable aquatic growth. In addition, the Draft and Proposed Permits prohibit discharges of waste during the period May 15 through September 30.

The biostimulatory conditions in the Lower Russian River is a broader issue than the discharge from this Facility. The aquatic growths in the Lower Russian River are likely caused by the contribution of biostimulatory substances from multiple sources and *may* also be influenced by increases in the water temperature of the Russian River due to historic reductions in tree canopy (shading) and reductions of cooler groundwater inputs to the river, as well as changes to river channel morphology and flow conditions.

The Proposed Permit retains effluent and receiving water monitoring requirements for phosphorus and nitrogen containing compounds when there are discharges from this Facility to the Russian River to allow a determination of reasonable potential once the State and Regional Water Boards select an appropriate method for interpretation of the Basin Plan's narrative objective. Staff believes that the monthly effluent and semi-annual receiving water monitoring frequencies in the Proposed Permit are adequate to determine the levels of phosphorus being discharged from the Facility and present in the Russian River upstream of the discharge point during the discharge season (October through May 14).

No changes were made to the Proposed Permit in response to this comment.

Comment B.4: WWTF Capacity/Capacity Expansion. RRWPC is concerned that the Draft Permit does not adequately define and address treatment plant capacity and capacity expansion. RRWPC expresses concern regarding potential future expansion to handle wastewater from Monte Rio/Villa Grande and/or for parcels bordering the current District boundaries as a community solution for compliance with the Russian River Pathogen TMDL. RRWPC further believes that the force main and lift station be improved before increased capacity is granted and that current ratepayers should not have to pay for accommodations for future growth outside of District boundaries.

Staff Response B.4.: Prohibition 3.8 and Table F-1 of the Proposed Permit identify the permitted flow capacity as 0.51 mgd. Prohibition 3.8 and section 7.11 of the Proposed Permit are clear that the Permittee would need to demonstrate that irrigation and storage capacity have been increased before the Regional Water Board will permit an increase in permitted capacity above 0.51 mgd up to 0.71 mgd. The flow capacities identified in the Proposed Permit are based on the 1976 EIR that was used as the original basis for permitting this Facility. If additional connections are made to the Facility within the parameters defined in the 1976 EIR, such connections cannot cause the ADWF to increase above 0.51 mgd (ADWF) unless the Permittee increases its irrigation and flow capacity and cannot increase above 0.71 mgd (ADWF).

On April 14, 2021 the State Water Resources Control Board approved $500,000 in funding for a feasibility study to assess wastewater disposal options for the lower Russian River communities of Monte Rio and Villa Grande, which are identified as small disadvantaged communities under the State's Financial Assistance program. The Monte Rio and Villa Grande Wastewater Disposal Project will have three phases: Phase 1) Feasibility Study Assessment and Report; Phase 2) Design and Environmental Documentation: and Phase 3) Construction. The Phase I feasibility study will evaluate potential solutions to achieve the goal of providing adequate wastewater treatment to the target communities and is expected to be completed in 2024. Project Phases 2 and 3 will proceed sequentially after recommended projects are identified in the Feasibility Report and each will include new applications for grant and loan funding assistance. If connecting these areas to the Russian River CSD Wastewater Treatment Facility is identified as the preferred project, the permit would need to be revised to address this

change, which would require a public notice comment period as well as an adoption hearing by the Board. Thus, the Proposed Permit does not address this issue.

The Permittee is working on assessments and plans to address the aging force main and lift stations. See the Staff Response to RRWPC Comment B.2 for additional details regarding the Permittee's efforts to address the force main and lift stations.

Issues related to funding growth for communities outside of District boundaries is outside the scope of this permit,

No changes were made to the Proposed Permit in response to this comment.

Comment B.5: The Draft Permit no longer includes effluent limitations for bis(2-ethylhexyl) phthalate based on a finding of no reasonable potential. It is our impression that phthalates are commonly found in wastewater discharges and that even minute amounts can have toxic impacts on humans and the environment. Can you explain basis for removing effluent limitations for bis(2-ethylhexyl) phthalate?

Staff Response B.5: Section 4.3.3.3 of the Fact Sheet explains the basis for removal of effluent limitations for bis(2-ethylhexyl) phthalate. This section of the Fact Sheet summarizes the data, then concludes "*Since bis(2-ethylhexyl)phthalate was not detected in either the 15 effluent or two receiving water samples that were analyzed with sufficiently sensitive methods, a determination of no reasonable potential has been made and effluent limitations have not been retained in this Order*."

No changes were made to the Proposed Permit in response to this comment.

Comment B.6: Pollutant Minimization Program: If they do fish tissue studies for toxins, can they be required to also include vitellogenin studies? I don't think they are expensive or complicated.

Staff Response B.6: Section 6.3.3.1 of the Draft and Proposed Permit describes the requirements of a pollutant minimization program which is a comprehensive requirement that is triggered if the Permittee exceeds effluent limitations for priority pollutants. Section 6.3.3.1.2.1 of the Proposed Permit states "… monitoring may include fish tissue monitoring and other bio-uptake sampling." It is possible that vitellogenin studies could be proposed as part of such sampling.

No changes were made to the Proposed Permit in response to this comment.

Comment B.7: Fact Sheet section 2.2.4. says: "*Between May 15 and September 30, effluent not utilized by the golf course and effluent not meeting turbidity specifications but meeting all other relevant permit requirements, is land applied at the Burch property at Discharge point 003.*" RRWPC always assumed that the same treatment plant water was going both places. Why is this legal? Why does some of the water not meet

turbidity standards? How is it that two levels of wastewater treatment are separated? If it goes to golf course first and then to the land disposal areas, how does it lose turbidity along the way?

Staff Response B.7: In ongoing discussions with the Permittee regarding the Draft Permit, Staff has learned that the Permittee can't physically send effluent directly to Discharge Point 003 without going through storage. That means that all effluent sent to the land discharge areas meets title 22 turbidity specifications.

Order Section 4.2.1.2 of the Proposed Permit has been removed, as follows: "~~*Disinfected tertiary treated effluent not meeting turbidity specifications in section 4.4.1.2 of this Order may be discharged at Discharge Point 003 provided that it meets all other relevant permit requirements.*~~"

Order Section 4.4.1.4 of the Proposed Permit has been modified as follows: "*Filtered effluent in excess of the turbidity specifications shall not enter the recycled water distribution system. Pursuant to title 22 sections 60304 and 60307, the Permittee shall have the capability and shall manage filtered effluent in excess of the turbidity specifications to automatically activate chemical addition or divert the wastewater to an upstream treatment process unit or to emergency storage.* ~~*Alternatively, disinfected advanced treated effluent not meeting turbidity specifications may be discharged at Discharge Point 003 provided that it meets all other relevant permit requirements.*~~ *The Permittee shall provide notification of non-compliance with the filtration process requirements as required in section 9.1.2.3.2 of the MRP (Attachment E).*"

Fact Sheet section 2.2.4 has been modified as follows: "*During the dry weather season from May 15 through September 30 and other periods as allowed under this Order, advanced treated effluent from the Effluent Storage Pond may be* ~~*recycled*~~ *distributed as disinfected tertiary recycled water for irrigation at the Northwood Golf Course at Discharge Point 004. Between May 15 and September 30, effluent not utilized by the golf course* ~~*and effluent not meeting turbidity specifications but meeting all other relevant permit requirements*~~*, is land applied at the Burch property at Discharge Point 003.*"

C. Guerneville Forest Coalition

Comment C.1: "*I am writing to you today about the Russian River County Sanitation District (RRCSD) spray zones and possible run-off, saturation (including ponding), and ground water infiltration associated with current activities that are potentially made worse, if the proposed Silver Estates Timber Harvest Plan 1-20-00084-SON (THP) is approved. Ultimately, I would like to make sure that these concerns are helpful to the Board and are adequately reviewed and addressed for possible inclusion within the Land Irrigation Management Plan (Plan), which I believe is scheduled for revision by March 1, 2022.*"

Guerneville Forest Coalition included as an attachment to his comments an analysis of the Upper Burch disposal area prepared by Vic Madrid, PG[1], CHg[2] that includes a rough water balance model analysis of the irrigation system. Mr. Madrid's analysis states, "*RRCSD Upper Zone spray operations most likely maintain a spray impacted area that is at or near 100% saturation for the entire season, essentially eliminating the natural wetting and drying cycles on this hill slope. The saturated soil conditions could increase landslide risk especially on hill slopes that exceed 50%.*"

Guerneville Forest Coalition requests consideration of capacity limits or a capacity analysis of the land disposal areas and is looking for certainty that ponding, runoff, and groundwater impacts will be prevented or minimized and consideration of an environmental impact report to address potential changes to the capacity of the land disposal areas if timber harvesting occurs and the potential environmental impacts.

Staff Response C.1: Many of Guerneville Forest Coalitions questions and comments are applicable to the THP and most appropriately addressed through the Timber Harvest Plan review process outside of this permit. At this time the THP has not received final approval from the CalFire Director.

The remainder of this response will address Guerneville Forest Coalition's questions and concerns related to the land disposal system that is being permitted through adoption of the Proposed Permit, particularly his concerns related to the capacity of the irrigation areas and potential impacts of timber harvesting on the capacity and functionality of the irrigation areas. Many of his questions and concerns are addressed in responses to RRWPC comments B.1.a, B.1.c, B.1.d, B.1.e, B.1.f, and B.1.g. He also asks questions about how the land disposal areas are managed to prevent ponding, runoff, and groundwater and surface water impacts. These issues are required to be addressed by the Permittee in the Land Disposal Management Plan that will be required for submittal under the Proposed Permit. Staff's discussions with the Permittee about current management practices, along with photographs provided to Staff by the Permittee indicate that land discharge management practices have greatly improved during the term of the 2014 permit and have addressed the majority of the nuisance issues (i.e., ponding and soggy conditions) that were noted in the 2015 and 2016 Nuisance Assessment reports.

In addition, Staff have discussed Guerneville Forest Coalition's concerns regarding the potential for increased erosion and landslide hazards on the Upper Burch area with Regional Water Board Forest Activities Program staff and Permittee staff.

Regional Water Board Forest Activities Program staff provided a copy of the August 18, 2020 "*Engineering Geologic Review of Timber Harvesting Plan 1-20-00084 SON*" (prepared by California Department of Conservation, California Geologic Survey to NPDES staff. This report identifies "Special Treatment Zone G10" described as a "*4-acre deep-seated landslide as underlying the southwestern THP boundary. … Best*

[1] Professional Geologist
[2] Certified Hydrogeologist

(2020) recommends establishing a special treatment zone around the spray area and restricting harvesting operations. Concern was raised that a harvesting or the placement of a group opening just downslope of the spray field may result in adverse impacts to slope stability. Extending the no harvest STZ downslope to the silviculture break will minimize the potential for adverse impacts to slope stability by retaining the existing canopy and root function." Staff believe that the establishment of this special treatment zone will minimize the potential for a change in the conditions in the upper land disposal area.

Permittee staff have reported that the Upper Burch area is currently carefully managed with daily inspections and report that the soils are not saturated and are actually minimally wet or dry throughout most of the Upper Burch area, perhaps due to a higher rate of evaporation that occurs on the western facing slopes that exist in that area and evaporation of water before it reaches the ground due to the use of adjustable sprinkler heads that apply the water in a more controlled manner than the whirly-bird type sprinklers that were used previously. Permittee staff report that there have been no landslide incidents in the many years of operation and this potential is likely reduced as Permittee staff continue to improve their methods for irrigation management.

As mentioned in the response to RRWPC Comment 1.D, the Permittee is proactively exploring and evaluating some promising new methods for increasing its disposal capacity.

No changes were made to the Proposed Permit in response to these comments, beyond those noted in Staff's responses to RRWPC Comments 1.A, 1.C, and 1.G, above.

D. U.S. EPA Comments

Comment D.1: It would be good to include a clause that the Permittee should notify Regional Water Board and U.S. EPA if they are going to change their biosolids use or disposal practices.

Staff Response D.1: Attachment D, section 5.6 (Planned Changes) of the Draft and Proposed Permit requires permittees to give notice to the Board of any planned physical alterations or additions …. When "5.6.3 *The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R. § 122.41(l)(1)(iii))*"

Staff discussed the provision in section 5.6.3 of Attachment D with U.S. EPA staff and they are satisfied that this provision addresses their concern.

In addition, section 6.3.5.3.9 has been added to the Proposed Permit as follows: "*The Permittee currently sends all dewatered sludge to Redwood Landfill in Novato, California. The Permittee shall notify the Regional Water Board prior to changing biosolids use or disposal practices.*"

Comment D.2: There is a requirement in the Draft Permit that the Permittee submit annual biosolids reports into EPA's CDX system by March 1st. This reporting is not automatically required, since this is a minor facility (flows less than 1 mgd), but if this requirement is included, then the due date should be February 19th of each year.

Staff Response D.2: Staff discussed this concern with U.S. EPA staff and concluded that since the Permittee is a minor facility, the requirement to report to EPA's CDX system does not apply. Biosolids reporting to the Regional Water Board is adequate.

Proposed Permit has been modified to remove MRP section 10.4.5 in response to this comment and the follow-up discussion between U.S. EPA staff and Staff, as follows:

"***Annual Biosolids Reporting.*** *The Permittee shall electronically certify and submit an annual biosolids report to U.S. EPA by February 19 each year using U.S EPA's Central Data Exchange (CDX) Web Site (https://cdx.epa.gov/). Information regarding registration and use of U.S. EPA's CDX system is also available at the Web Site.*"

E. Staff Initiated Changes

The following section describes changes made to the Proposed Permit by Staff based on on-going communication with the Permittee following the release of the Draft Permit.

E.1. Section 4.2.2 of the Fact Sheet has been modified to include the statement, "*This Order uses the terms "disinfected tertiary wastewater" and "disinfected tertiary recycled water" in place of the term "advanced treated wastewater*." The words "disinfected tertiary treated wastewater" and "advanced treated wastewater" have been replaced with "disinfected tertiary recycled water" in multiple locations throughout the Proposed Permit including the following: Table 1, Order sections 3.10, 3.10.1, 3.10.2, MRP Table E-1, Table E-6 (Table Note 1), and Fact Sheet section 2.1.4.

E.2. Statement on page 6, between Order sections 2.5 and 3 has been modified to reflect that this is also a master recycling permit as follows: "*THEREFORE, IT IS HEREBY ORDERED, that Waste Discharge Requirements (WDR) and Master Recycling Permit Order No. R1-2014-0002 and Monitoring and Reporting Program (MRP) No. R1-2014- 0002, are rescinded upon the effective date of this Order …*"

E.3. The title of Order section 4 has been corrected to read: "***EFFLUENT LIMITATIONS AND DISCHARGE ~~PROHIBITIONS~~SPECIFICATIONS***"

E.4. Order section 4.2.1.1, Table 4, Table Note 1 has been corrected to read: "*In the event of a direct discharge to the ~~Russian River~~Burch Property, BOD_5, TSS, and pH effluent limitations in Table 2 and total coliform effluent limitations in section 4.1.1.3 apply at Discharge Point 003.*"

E.5. Attachment A has been corrected in regard to the definition of "Lowest Observed Effect Concentration (LOEC)" as follows: "*~~The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).~~ The lowest concentration of an effluent or toxicant that results in adverse effects on the test organism (i.e., where the values for the observed endpoints are statistically different from the control).*"

E.6. MRP section 5.1.6.1 has been corrected by removing the following statement that does not apply to this Permittee, "*~~The IWC for the chronic toxicity test is 2 percent effluent.~~*"

E.7. Fact Sheet section 3.5.2 has been modified to add the sentence, "*Stormwater run-on enters a storm drain that diverts stormwater from the property.*"

E.8. Fact Sheet section 4.3.3.3, Table F-5 title has been corrected to read, "***Table F-5. Summary of Reasonable Potential Analysis Results for Priority Pollutants, Ammonia, and Title 22 Pollutants*** ~~– Objectives for Protection of Marine Aquatic Life~~"

E.9. Fact Sheet section 4.7.2.1 has been modified to add the AQUA and PRO potential beneficial uses for consistency with Fact Sheet section 3.3.1, Table F-4. Fact Sheet sections 4.6.2.1 and 5.2 have been modified to remove the "FRSH" beneficial use in reference to groundwater because the Basin Plan does not list "FRSH" as a groundwater beneficial use, only as a beneficial use of the Lower Russian River as reflected in Table F-4.

E.10. The date of the Division of Drinking Water Title 22 Engineering Report Acceptance Letter has been corrected in Fact Sheet sections 4.7.3.3 and 4.8.1 to reflect the date of January 22, 2021.

E.11. Attachment G, section 2.25 which addresses State regulations regarding separation criteria for pipelines carrying non-potable water from new water mains has been replace with the following new language to reflect new guidelines that are described in a December 14, 2017 DDW letter to public water system owners and operators. The letter references the California Code of

Regulations sections that establish the current criteria and describe the procedure for obtaining waivers and alternatives.

Attachment G, section 2.25 has been replaced with the following new language:

"2.25. *The California Waterworks Standards (California Code of Regulations (CCR), Title 22, Division 4, Chapter 16, Section 64572) establish criteria for the separation of new water mains from non-potable pipelines. The following distances shall be met, whenever feasible, for all new construction:*

2.25.1 New water mains and new supply lines shall not be installed in the same trench as and shall be at least 10 feet horizontally from and one foot vertically above, any parallel pipeline conveying disinfected tertiary recycled water.

2.25.2 DDW recognizes that certain conditions may call for the installation of pipelines with less separation distance than what is required by the regulations. In these situations, the water system may propose an alternative pursuant to CCR, Title 22, Section 64551.100 which states: (a) A water system that proposes to use an alternative to a requirement in this chapter shall: (1) Demonstrate to the State Board that the proposed alternative would provide at least the same level of protection to public health; and (2) Obtain written approval from the State Board prior to implementation of the alternative."

E.12. A formatting issue in Attachment G-1, table of Approved Recycled Water Use Sites has been corrected. The table now appears as follows:

~~**Map ID**~~	**Customer**	**APN**	**Type of Use/Irrigation Types**	**Total Site Acreage/Irrigated Acreage**	**Volume of Recycled Water**
~~Northwood Golf Course~~	~~094-180-016~~ Northwood Golf Course	~~Turf Irrigation~~ 094-180-016	~~Northwood Golf Course~~ Turf Irrigation	~~094-180-016~~ 26	~~Turf Irrigation~~ Varies[1]

Table Notes:

1. Average irrigation volume between 2015 and 2020. The annual recycled water volume applied ranged from 52 to 59 acre-feet.

E.13. A new map has been added to Attachment B as Figure B-3 to show the location of the recycled water use site at Northwood Golf Course and land disposal areas in relation to the wastewater treatment facility.

The following sections of the Order have been modified to reference Figure B-3:

Fact Sheet section 1.2 has been modified to read: "*The Facility discharges tertiary treated wastewater to the Russian River, a water of the United States. The Permittee was previously regulated by Order No. R1-2014-0002 and NPDES Permit No. CA0024058 adopted on March 13, 2014 with an expiration date of April 30, 2019. Attachment B includes three maps including Figure B-1, ~~provides~~ a site map of the area around the Facility,~~.~~ ~~Attachment~~ Figure B-2, ~~provides~~ a layout of the Facility, ~~.~~ and Figure B-3, a map of the recycled water use site (Northwood Golf Course) and irrigation (land disposal) locations in relation to the Facility. Attachment C provides a flow schematic of the Facility. Site visits were conducted on September 26, 2018 and November 19, 2020 to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.*"

Attachment G-1, paragraph preceding the table has been modified to read: "*The recycled water use site identified in the table below and ~~on the attached map~~ in Attachment B, Figure B-3 of the Order is an approved recycled water use site."*

E.14. Minor modifications have been made to Order sections 4.1.1.3, 4.1.2.1, 4.2.1.1, and 4.3.1.2 to clarify the meaning of these requirements, as follows:

"4.1.1.3. *Disinfection. Disinfected effluent discharged from the Facility through Discharge Point 001 during periods of discharge to the Russian River at Discharge Point 002 shall not contain total coliform bacteria exceeding the following concentrations, as measured at Monitoring Location EFF-001:*"

"4.1.2.1. *The discharge of treated wastewater shall maintain compliance with the following effluent limitations at Discharge Points 002 and 005 during periods of discharge to the Russian River, with compliance measured at Monitoring Locations EFF-002 and EFF-005 as described in the MRP (Attachment E)."*

"4.2.1.1. *The discharge of treated wastewater shall maintain compliance with the following discharge specifications at Discharge Point 003 during periods of discharge to the land disposal areas, with compliance measured at Monitoring Location LND-001 as described in the MRP (Attachment E)."*

"4.3.1.2. *Disinfection. Disinfected effluent discharged from the Facility through Discharge Point 004 during periods of discharge to the recycled water system at*

REC-001 shall not contain total coliform bacteria exceeding the following concentrations, as measured at Monitoring Location EFF-001:"

E.15. MRP section 9.3.1 has been corrected as follows: "9.3.1. Visual observations of the discharge (Monitoring Location EFF-002) and the receiving water (Monitoring Locations RSW-001, RSW-003, and RSW-004) shall be recorded monthly ~~and on the first day of each intermittent discharge~~ during periods of discharge to the Russian River. Visual monitoring shall include, but not be limited to, observations for floating materials, coloration, objectionable aquatic growths, oil and grease films, and odors. Visual observations shall be recorded and included in the Permittee's monthly SMRs.

E.16. Other minor modifications have been made to correct cross-references to other permit sections such, including:

a. MRP section 7.2.4, Table E-7, Table Note 1
b. MRP section 10.4.4
c. Fact Sheet sections 7.7.7 and 7.7.8
d. Attachment G section 2.6