

RRCSD Response to Comments

Comment letters on the draft NPDES permit (Order No. R1-2009-0003) for the Russian River County Sanitation District (RRCSD) and the Sonoma County Water Agency Municipal Wastewater Treatment Facility were received from:

- A. The Sonoma County Water Agency, on behalf of the RRCSD, by letter dated December 1, 2008.
- B. Brenda Adelman representing the Russian River Watershed Protection Committee, by letter dated December 1, 2008
- C. Mr. Ken Berry, by emails dated November 25 and 26, 2008
- D. Janice Oakley, California Department of Public Health, by emails dated December 8 and 9, 2008

The majority of the comments identified errata, requested clarification, or requested minor changes to the draft Order.

Russian River County Sanitation District

The following are Regional Water Board staff responses to comments provided by the Russian River CSD. The responses indicate whether or not changes were made to the permit in response to the comment:

Comment A1: Request that Sonoma County Water Agency be removed as a co-permittee. The Sonoma County Water Agency requests to be removed as a co-permittee from the permit or that the Permit be modified to state that (1) RRCSD and SCWA would be jointly held accountable for permit violations caused by operator error, (2) that the RRCSD would be solely responsible for all other permit violations, including those found to be the result of inadequate WWTF design, and (3) that the RRCSD assumes it is solely responsible for financing the operation, maintenance, tests or studies required by the permit, and capital improvements.

Response: Staff acknowledges that the Russian River County Sanitation District (RRCSD) and Sonoma County Water Agency (SCWA) are separate legal entities. However, they jointly have operation and control over the Wastewater Treatment Facility (WWTF) and they are therefore properly treated as co-permittees. Section I.A. of the Permit Fact Sheet recognizes the different roles and responsibilities played by SCWA and RRCSD.

No changes were made to the proposed Order in response to this comment.

Comment A2: Request to change the identity of the 3.5 million gallon storage pond. The Discharger requests that the name of the 3.5 million gallon storage pond used for holding tertiary effluent to the name used by District Operations, which is "Holding Pond".

Response: The permit will retain the use of the term effluent storage pond because it is explicitly descriptive of the pond's use. The Fact Sheet has been modified to identify the name used by District Operations.

Comment A3: Clarifications regarding “Facility Description”. The Discharger requests that changes be made to the “Facility Description” in Finding II.B of the Order to correctly identify the existing facilities and describe the operating procedures.

Response: The requested changes are minor clarifications of the existing facilities and operating procedures. Changes were made to Finding II.B of the proposed Order, and the detailed changes were made to section II.B. of the Fact Sheet.

Comment A4: Typographical error in Table 5 regarding Discharge Point. The Discharger correctly points out that the Discharge Point identified in Table 5. Basin Plan Beneficial Uses should be “002” rather than “001”.

Response: The proposed Order was modified to correctly identify Discharge Point 002 in Table 5. .

Comment A5a: Clarifications regarding implementation of State Law. The Discharger requests that Finding II.S be modified to state that sections of Attachments D and E implement State law only and for a minor modification to Standard Provision I.A.1.

Response: Finding II.S has been modified to identify portions of Attachment E (Monitoring and Reporting Program) that implement State law only. Finding II.S has also been modified to remove the citation to section IV.D of the permit, as this section applies to all manner of discharges, including those that are subject to federal requirements. Attachment D (Standard Provisions) was not added to the list of permit provision that implement State law only, as most of Attachment D implements federal law.

Standard Provision I.A.1 of Attachment D has been modified as requested.

Comment A6: Analysis of Water Code sections 13263 and 13241 factors referred to in Finding II.M. The Discharger requests additional information on how the factors in Water Code section 13263, including the provision of Water Code section 13241, were considered in establishing requirements for individual pollutants in Finding II.M.

Response: Water Code section 13263 requires that waste discharge requirements “implement any relevant water quality control plans that have been adopted and take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance and the provisions of section 13241.” These requirements, however, only apply to those portions of the permit that exceed the requirements of the federal Clean Water Act, and not to those requirements that are necessary to meet the technology-based effluent limits or the water quality-based effluent limits necessary to protect water quality objectives for surface waters set out in the Water Quality Control Plan for the

North Coast Region (Basin Plan). (City of Burbank v. State Water Resources Control Board, 35 Cal. 4th 613, 627.) In this permit, those requirements that exceed the requirements of the federal Clean Water Act are those that solely apply to the land discharge. Nonetheless, the Regional Water Board considered the factors in Water Code section 13263 and 13241 in establishing the requirements for discharges to surface waters and land, and concluded that the factors did not merit any change to the proposed effluent limits, discharge prohibitions, or receiving water limitations.

The Regional Water Board considered the factors set forth in section 13263 and 13241 throughout various portions of the permit, including Attachment F, which contains background information and rationale for the requirements set forth in the permit. The permit, in section II.H., and section III.C. of Attachment F, identifies the beneficial uses identified in the Basin Plan. Section IV of Attachment F sets forth the rationale for the effluent limits, particularly the beneficial uses to be protected and water quality objectives required for that purpose. Section IV.F. of Attachment F sets out a discussion of the factors set forth in 13263 and 13241 considered for the effluent limits on the land discharge. The Regional Water Board also considered upgrades to the WWTF proposed by RRCSD, along with other waste discharges in the watershed, and concluded that coordinated control of other discharges would not eliminate the need for the requirements on this discharge, particularly given the continued growth in the region and the past, present and probable future uses of the receiving waters and the environmental characteristics, including water quality, of the Guerneville hydrologic subarea of the Russian River. (See Attachment F, Section III (D), (E), and Sections IV and V.) The Regional Water Board also considered the need to develop and use recycled water, and the potential for increased reclamation opportunities within the area proposed by the Discharger. The Regional Water Board also considered the need to prevent nuisance, and incorporated discharge prohibitions to protect against nuisance caused by the discharge or use for reclamation of untreated or partially treated waste from anywhere within the collection, treatment or disposal system or from sanitary sewer overflows. Because other dischargers throughout the Russian River watershed have achieved compliance with similar limits, and the Discharger did not submit any evidence regarding the cost of compliance or its effect on the development of housing within the region, the Regional Water Board did not specifically address the issue of the Order's effects on housing or economic considerations.

The text of this response has been added to section IV.D.3 of the Fact Sheet. No other changes were made to the proposed Order in response to this comment.

Comment A7: Prohibition of sanitary sewer overflows affecting groundwater in Finding III.E. The Discharger requests clarification of Prohibition III.E which prohibits the discharge of untreated or partially treated wastewater to groundwater. The Discharger states its understanding that the prohibition only applies to an underground line break and when the RRCSD has knowledge of the situation.

Response: Page F-18 of the Fact Sheet states that the prohibition “prohibits SSO discharges that create nuisance or pollution to waters of the State, groundwater, and

land for a more complete protection of human health [than what is provided in State Water Board Order No. 2006-003-DWQ, Statewide General WDRs for Sanitary Sewer Systems].” The prohibition applies to above ground or underground SSO discharges that impact waters of the state. The permit requires the Discharger to provide notification of any such discharge, whether above ground or underground, as soon as the Discharger has knowledge of the discharge. In addition, the proposed Order and State Water Board Order No. 2006-003-DWQ require the Discharger to maintain its collection system in order to preclude leakage from the collection system into groundwater or surface waters.

No changes were made to the proposed Order in response to this comment.

Comment A8: Modification of Prohibition III.J, ADWF prohibition. The Discharger requests that the permit be modified to allow an increase in the dry-weather flow to reflect the Discharger’s recycled water capacity, up to the WWTF design flow of 0.71 mgd based on the Executive Officer’s approval of the recycled water use sites and volume of recycled water to be used.

Response: The Discharger’s request cannot be accommodated at this time. Although the Discharger’s Environmental Impact Report, upon finalization and certification, will likely provide some technical information for the Regional Water Board to make appropriate findings to address whether increases in reclamation would be consistent with the state’s antidegradation policy, additional information would be required to address antidegradation concerns for discharges to the Russian River. Increases in the ADWF capacity would provide the capacity for increases in new connections and an increase in wintertime flows, which would result in increases in the volume of treated effluent discharged to the Russian River during the winter discharge season. The potential for increased discharges to the Russian River would require a complete antidegradation analysis before the Regional Water Board could consider providing these increases. A request for capacity increases would be a modification, pursuant to 40 CFR §122.62. Staff would be willing to meet with District staff in order to discuss the information necessary to consider an increase in the permitted discharge.

No changes were made to the proposed Order in response to this comment.

Comment A9: Modification of Prohibition III.K regarding flow monitoring. The Discharger requests changes to Prohibition III.K of the permit to accurately reflect the method of recording flows and suggests changing the manner in which the 24-hour period for daily flow reading is specified.

Response: Regional Water Board staff do not believe that it is necessary or appropriate to add the word “reasonably” to the requirement that daily flow comparisons occur within a 24 hour period. The Discharger must prioritize this activity along with other operation and maintenance tasks to ensure that it is done within every 24-hour period when there is a discharge to surface waters. In addition, the proposed Order has not been modified with regard to the definition of the 24-hour period for the daily flow

reading because the terminology used in the proposed Order is appropriate for defining the 24-hour day. A minor modification was made to the proposed Order to move the definition of the 24-hour day from part 2 of Discharge Prohibition III.K to part 1 of the prohibition.

Comment A10a: Clarify compliance point for WWTF performance and for calculation of mass limits.

The Discharger requests clarification to the specification of the compliance point used to evaluate WWTF performance and a correction to the footnote to Table 6. (Final Effluent Limitations for Discharge Point 001) to properly reflect the river discharge flow rate to calculate mass emission limitations.

Response: The permit has been modified to clarify the compliance point used to evaluate WWTF performance. Effluent Limitation IV.A.1 has been modified to read, “1. Final Effluent Limitations – Discharge Point 001 (Discharge from the WWTF to the Effluent Storage Pond).”

Footnote 2 of Table 6 has been modified to properly read, “During wet-weather periods, when the influent flow rate exceeds the dry-weather design flow, mass emission limitations shall be calculated using the concentration-based effluent limitations and the actual daily average influent-river discharge flow rate (not to exceed a maximum sustained peak flow rate of 1.2 mgd).”

Comment A10b: Request for removal of technology-based pH limits or time to assess compliance. The Discharger requests removal of the technology-based effluent limitation for pH, arguing that the water quality-based pH effluent limitation for discharges from the Holding (Effluent Storage) Pond to the Russian River is already protective of receiving water quality. If the technology-based pH effluent limitation must remain, The Discharger requests that additional time be provided to assess its ability to comply with this requirement and install pH adjustment equipment at the WWTF, if necessary, if the pH limit must remain.

Response: The proposed Order has been modified in response to this comment. Technology-based effluent limitations for pH of 6.0-9.0 are required by USEPA pursuant to Part 133 of the Clean Water Act. However, it is the Board's discretion as to where the compliance point is located. Water quality-based effluent limitations for pH in the proposed Order are based on the Basin Plan and are more stringent than the technology-based effluent limitations. It is therefore appropriate to retain the water quality-based effluent limitations as the sole limit for discharges to the Russian River, as was done in the previous permit. The proposed Order has been modified to remove the requirement to meet the technology-based effluent limitations of 6.0 to 9.0 at EFF-001. However, it is also important to ensure that pH levels are appropriate for protection of groundwater when discharging to land, therefore, the proposed Order has been modified to include pH limitations of 6.0 to 9.0 at monitoring location LND-001/REC-001 (Sections IV.B.1 and IV.C.2) and monitoring requirements after storage to assess compliance with the pH limitations (Sections VI.A and VII.A of the MRP). With these

modifications to the proposed Order, it is not necessary to provide additional time to comply with the permit limits because compliance with both sets of limits is determined after storage, rather than before.

Comment A11: Correct compliance point for total coliform effluent limitation. The Discharger requests correction of the compliance point for the total coliform effluent limitation.

Response: The proposed Order has been modified to correctly identify the compliance point for total coliform effluent limitations. Effluent Limitation IV.A.1.c of the permit has been corrected to read, “c. Disinfection. Disinfected effluent discharged from the wastewater treatment facility to the ~~Russian River~~ Effluent Storage Pond shall not contain coliform bacteria in excess of the following concentrations:”

Comment A12: Clarification regarding settleable solids effluent limitation. The Discharger feels that the effluent limit for settleable solids is unclear and requests additional information in order to evaluate compliance with the standard. Some Regional Water Boards have abandoned use of this standard, believing that it is not a useful parameter for assessing wastewater treatment plant performance. Other Regional Water Boards use a minimum numerical limit (e.g., 0.1 mL/L-hr AMEL, 0.2 mL/L-hr MDEL). This comment applies to permit sections: Effluent Limitation IV.A.1.d, Land Discharge Specification IV.B.3, and Reclamation Specification IV.C.4 [of the original draft of the proposed Order].

Response: The proposed Order has been modified to define the detection limit to be used to demonstrate non-detectable levels of settleable solids. The Discharger currently uses a detection limit of 0.1 mL/L, which is consistent with detection limits for settleable solids in other permits in the State. The Discharger requests consideration of using settleable solids limits that include an AMEL of 0.1 mL/L and an MDEL of 0.2 mL/L. The Discharger’s advanced wastewater treatment facility includes filtration that effectively removes all settleable solids, thus Staff believe that it is appropriate to require that the effluent not contain any measurable settleable solids at the detection limit of 0.1 mL/L. After treatment, effluent is stored in an effluent storage pond and the quality of the water changes in that pond due to exposure to the environment and resultant growth of algae and fecal inputs from ducks, other birds, and wildlife.

The proposed Order contains a receiving water limitation that states that the discharge shall not cause bottom deposits in the receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses. The proposed MRP has been modified to require monitoring of the discharge to the Russian River for settleable solids to determine whether or not reasonable potential exists for the discharge to contain settleable solids at a level that would cause bottom deposits in the receiving water that cause nuisance or adversely affect beneficial uses. If the discharge is found to contain levels of settleable solids that could cause bottom deposits that cause nuisance or adversely affect beneficial uses, the Regional Water Board would propose to develop settleable solids effluent limitations for discharges to the Russian River that would be

protective of the beneficial uses of the river. Section VI.B of the Fact Sheet has been modified to include a discussion regarding this monitoring request.

In addition, settleable solids effluent limitations have been removed for recycled water (removed Land Discharge Specification IV.B.3 of original proposed Order) and land disposal (removed Reclamation Specification IV.C.4 of original proposed Order) because settleable solids is not expected to have impacts on water quality in relation to these irrigation systems.

Comment A13: Derivation of effluent limitations for ammonia and copper. The Discharger feels that use of the upstream receiving water pH, temperature, and hardness as the basis for ammonia and copper final effluent limits is overly protective, arguing that the discharge is only allowed when the effluent is less than or equal to one percent of the river flow and the resulting effluent limits are already protecting receiving water because no dilution credits have been given. The Discharger argues that effluent pH, temperature and hardness should be used to determine ammonia and copper effluent limitations.

Response: The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (SIP) explicitly requires the use of receiving water pH and hardness values when establishing effluent limitations for constituents that require pH or hardness adjustments. State and Regional Water Board staff have consistently required that the most restrictive conditions be considered when determining whether or not reasonable potential exists for any of the priority pollutants addressed by the California Toxics Rule. This approach has been taken for all Russian River dischargers as well as other dischargers in the North Coast Region. The Discharger may monitor upstream receiving water at a location that is closer to the discharge outfall (e.g., immediately upstream of the outfall) if they are concerned that the current upstream receiving water monitoring station is not representative of conditions near the discharge outfall. This Discharger's comment also notes that no dilution credits have been given. The Discharger has not requested nor provided justification for dilution credits.

No changes were made to the proposed Order in response to this comment.

Comment A14: Consistency of terminology regarding ammonia. The Discharger requests that a consistent term be used when identifying permit limits and monitoring requirements for ammonia.

Response: Staff has corrected this oversight in the proposed Order by replacing all references to ammonia in the permit, MRP and Fact Sheet with the term "Ammonia (as N)".

Comment A15: Correction of reference regarding nitrate. The Discharger requests removal of the word "total" before "nitrate as N".

Response: The proposed Order has been modified to correct this error by removing the word “total” in reference to “nitrate as N”..

Comment A16: Expiration date for interim copper limitations/request for CDO with compliance schedule. The Discharger believes that all practical, affordable WWTF improvements and source control activities have been undertaken to control copper concentrations in effluent discharged to the Russian River. Despite these activities, compliance with final copper effluent limits will not be attainable. RRCSD appreciates that a reopener provision was provided to consider studies related to a site-specific Water Effects Ratio and dissolved-to-total metal translator (*Provision VI.C.1.e., page 27*). However, RRCSD will not be able to complete these studies before the interim copper limits expire on May 17, 2010. As a result, the RRCSD requests that the Regional Water Board issue a Cease and Desist Order beginning on May 18, 2010 that contains approval to pursue a Water Effects Ratio, translator, and/or dynamic modeling to determine actual impacts of the discharge on the receiving water. RRCSD will suggest a compliance schedule for the Cease and Desist Order (CDO) and submit it to the Regional Water Board by January 15, 2010.

Response: The proposed Order includes a compliance schedule for achieving final effluent limitations for copper by May 18, 2010 as required by the SIP, thus this compliance date cannot be changed in the permit. At this time, Regional Water Board staff cannot recommend that the Regional Water Board consider adoption of a CDO to extend the compliance schedule because the Discharger has not provided sufficient evidence to demonstrate that it has taken all reasonable steps to achieve compliance with copper effluent limitations by the SIP-required compliance date and presents the following information to support this position.

The Discharger states that “all practical, affordable WWTF improvements and source control activities have been undertaken to control copper concentrations in effluent discharged to the Russian River” and indicates that it needs time to complete studies to determine how it will comply with final copper effluent limitations. Regional Water Board staff believes that the Discharger should have known that the SIP requires compliance with final effluent limitations by May 18, 2010 and should be continuing to take steps to move toward compliance with final copper effluent limitations. Since the compliance date is still 18 months away, staff believe that additional control measures are still feasible.

In addition, the Discharger started routinely collecting monthly effluent data for copper beginning in January 2004, as required by Order No. R1-2003-0026. Early data revealed reasonable potential for copper, and Regional Water Board staff conducted a reasonable potential analysis in 2005 that verified this fact. During a meeting on September 18, 2007 with Regional Water Board staff, Sonoma County Water Agency staff suggested that effluent copper data might be erroneous as a result of imprecise sampling procedures and stated plans to begin using ultra clean sampling techniques in the future. Regional Water Board staff does not know whether or not the Discharger followed through on this plan to use ultra clean sampling techniques, but supports the

use of these techniques and believes that the Discharger should begin using the ultra clean methods immediately, if it has not already done so, to determine if it can meet final effluent limitations even before the new Order is adopted. If the Discharger finds that compliance cannot be achieved using improved sampling and analytical methods, the Discharger needs to develop a plan and time schedule that identifies activities and studies that the Discharger will complete in order to move toward compliance. Staff note that the Discharger's ROWD (submitted on August 24, 2007), indicated that the Discharger wanted to evaluate copper removal methods and in its December 1, 2008 comment letter states that it wishes to pursue a Water Effects Ratio, translator, and/or dynamic model to determine the actual impacts of the discharge on the receiving water. It is unclear whether the Discharger has reevaluated its approach to copper compliance during the 15 month period between those two submittals.

The compliance schedule for final copper effluent limitations provided in the proposed Order contains requirements for the Discharger to provide reports to the Regional Water Board by June 1, 2009 (Task 1 report) and September 1, 2009 (Task 2 report). The Task 1 report is intended to result in a status report describing all activities and studies that the Discharger has conducted so far and the Task 2 report is intended to provide results of activities and studies conducted for the purpose of identifying a means to comply with final copper effluent limitations. This time schedule is intended to lead to compliance with final copper effluent limitations in the time frame required by the SIP. The Discharger is requesting a change of paths from timely compliance to consideration of a CDO. This path requires that the Discharger build a greater body of evidence to support its request. The Discharger may, and should, submit the information required by the compliance schedule sooner than required by the proposed Order in order to demonstrate that the Discharger is exploring all reasonable methods of achieving compliance, as soon as practicable and to provide all relevant information that Regional Water Board staff will need to prepare a recommendation for adoption of a CDO to the Regional Water Board. The Discharger must provide the Regional Water Board with as much information as it can, as often as needed to keep the Regional Water Board informed as to its progress. The Discharger must submit, as soon as possible, but no later than December 1, 2009, a plan and time schedule identifying activities and studies it will complete in order to move toward compliance with final copper effluent limitations. Upon receipt of this information, the Regional Water Board will evaluate whether it is appropriate to extend the time schedule for copper compliance in a cease and desist order.

No changes were made to the proposed Order in response to this comment.

Comment A17: Clarification regarding application of ammonia limitations. The RRCSD requests clarification of the time of year and/or river conditions that final effluent limits for ammonia will be applied. Will the effluent limits only be applied when salmonids or fish early life stages are present in the receiving water? Current language in the TO (*footnote [2] to Table 9*) and Fact Sheet (*IV.C.4*) indicate that effluent limits only apply during fish early life stages and presence of salmonids.

Response: Final effluent limitations for ammonia apply during the Discharger's entire discharge season, which is limited to the period of October 1 through May 14 each year. Salmonids, in various life-stages, are present in the Russian River and/or its tributaries year round, thus it is appropriate to apply the MDEL, based on the presence of salmonids, to the Discharger's entire discharge season. The selection of the appropriate AMEL for ammonia is based on whether or not fish early life stages are present. Since the Russian River is home to many species of fish with various breeding seasons, the AMEL is based on the presence of fish early life stages during the Discharger's entire discharge season.

The Fact Sheet has been modified to clarify the reasons for selecting the ammonia effluent limitations included in the permit and the applicability of these limits, as described in this response.

Comment A18: Request for CDO compliance schedule and interim limits for dichlorobromomethane. The Discharger requests that the Regional Water Board adopt a CDO with interim limitations for dichlorobromomethane (DCBM) and a compliance schedule extending the date for compliance with DCBM effluent limitations to July 1, 2011. The Discharger points out that a current ACL Order adopted by the Regional Board requires the RRCSD to complete a UV disinfection project by July 1, 2011 and that the UV system will allow the RRCSD to eliminate DCBM from the discharge and thus achieve final effluent limitations for DCBM. The Discharger argues that without a Cease and Desist Order, mandatory minimum penalties would be incurred that would be costly and could derail the UV project implementation plans.

Response: Order No. R1-2003-0026 contained interim effluent limitations for DCBM and a compliance schedule to achieve final effluent limitations for DCBM by November 5, 2008. The compliance schedule gave the Discharger five years, the longest time period allowed by the SIP, to achieve compliance with final effluent limitations. The ROWD submitted on August 24, 2007 stated that a UV disinfection system would be completed by early 2009. It is unclear why the UV disinfection system did not stay on schedule to be completed by early 2009 as stated in the ROWD. During a meeting with the Sonoma County Water Agency on September 18, 2007, Regional Water Board staff indicated that a CDO with a compliance schedule could be considered, but it cannot be considered without documentation to show that the Discharger has taken all reasonable steps, in a reasonable time frame, to achieve compliance with final DCBM effluent limitations. On December 18, 2008, the Discharger was notified verbally of the need to submit information to document why the UV disinfection system was not completed in time to achieve compliance with its DCBM effluent limitations. Staff will evaluate information submitted by the Discharger to determine if it is appropriate to recommend that the Regional Water Board consider adoption of a CDO to extend the compliance schedule for DCBM and whether the regulations provide any options for shielding the Discharger from mandatory minimum penalties during the interim time period that it takes to complete the UV disinfection system.

The Discharger's comment further states that an ACLO adopted by the Regional Water Board in June 2008 requires the RRCSD to complete a UV disinfection project by July 1, 2011. Although the UV disinfection system will allow the Discharger to achieve compliance with both coliform and DCBM effluent limitations, it must be emphasized that the ACLO was adopted to administer mandatory minimum penalties for the Discharger's violation of coliform effluent limitations in its existing Order, not for extending the time schedule for compliance with DCBM effluent limitations. Adoption of the ACLO, allowing construction of the UV system as a compliance project, did not excuse the Discharger from getting the UV system completed in the time frame required for DCBM compliance pursuant to permit requirements.

No changes were made to the proposed Order in response to this comment.

Comment A19: Additional time to meet new chlorine residual detection limitations. The Discharger requests additional time to achieve the stricter detection limits for chlorine residual. The Discharger states that an additional six months will be needed to allow time to research equipment, receive bids, and purchase and install the selected equipment. The Discharger requests that compliance be required by March 31, 2010.

Response: Regional Water Board staff recognize that the stricter chlorine residual detection limits are a new, stricter requirement that may take time to implement and therefore find it appropriate to provide a compliance schedule to provide the Discharger the time needed to comply with the new requirement. The proposed Order has been modified to provide a compliance schedule that gives the Discharger to July 1, 2011 to comply with the new chlorine residual monitoring requirement. The compliance schedule for chlorine residual is included as Special Provision VI.C.7.c of the proposed Order and Effluent Limitation IV.A.2.c has been added to specify an interim chlorine residual effluent limitation of 0.1 mg/L.

Comment A20: Compliance monitoring point for recycled water use. The Discharger requests that when discharging to the Burch Property or to the Recycled Water Use sites that EFF-001 monitoring results be used to assess compliance with effluent limitations arguing that the quality of effluent applied to land should be based on WWTF performance, and not reflective of the natural changes that could occur in a pond system.

Response: Regional Water Board staff agrees that it would be appropriate to assess compliance with effluent limitations for BOD and TSS at monitoring location EFF-001, because these are technology-based effluent limitations, and neither BOD nor TSS are as much of a concern for discharges to land as they are for discharges to surface waters. The proposed Order has been modified to allow monitoring for BOD and TSS at monitoring location EFF-001. The proposed Order also includes water quality-based specifications for land discharge (nitrate, ammonia, total dissolved solids, sodium, chloride, and aluminum) and reclamation (nitrate), thus these parameters would require monitoring after the storage pond. Thus, the monitoring location for compliance with

these effluent limitations is LND-001/REC-001. The proposed Order already contains a compliance schedule that gives the Discharger five years to achieve compliance with the water quality-based specifications for land discharges. The proposed Order has been modified to clarify that this compliance schedule also applies to the reclamation specification for nitrate.

Comment A21: Tertiary filter operation standards. The Discharger requests that the surface loading rate for operation of the tertiary filters be based on the manufacturer's design criteria rather than standard specified in the permit which is 6 gpm per square foot of surface area.

Response: The filter surface loading rate specified in the permit was recommended by the California Department of Health Services in accordance with the filter loading requirement for the AQUADisk cloth media filters specified in the State of California Division of Drinking Water and Environmental Management Treatment Technology Report for Recycled Water (September 2008). By email dated December 9, 2008, Janice Oakley of CDPH stated that the Discharger must comply with the required filter surface loading rate of 6 gpm per square foot of surface area and that it would be difficult, expensive and time-consuming for the Discharger to perform necessary studies to get authorization for a lower standard and that this type of demonstration would be more appropriately done by the manufacturer. Please be aware that under provisions of our Memorandum of Understanding with CDPH, the Regional Water Board must include applicable language into permits in response to these comments.

No changes were made to the proposed Order in response to this comment.

Comment A22: Footnote correction. A typographical error in footnote 3 in Section IV.D.2.a of the proposed Order needs correction.

Response: Footnote 3 in Section IV.D.2.a of the proposed Order has been properly identified by adding superscript to make the number stand out as a footnote.

Comment A23: UV system authorization. The Discharger requests that the permit provide for the Executive Officer to be granted the authority to approve the UV disinfection process when it comes on-line without having to reopen the permit.

Response: Regional Water Board staff discussed the Discharger's request with staff at the California Department of Public Health (CDPH) to determine language that would satisfy CDPH. The proposed Order has been modified to provide language that would allow for the UV disinfection system to be authorized without having to reopen the permit. Other Requirement IV.D.3 of the proposed Order has been modified to include language to clearly identify CDPH requirements and to identify the process for authorization of the UV system as the Discharger's disinfection process. The Town of Windsor's 2002 NPDES permit allowed a similar approach for authorizing a change from chlorination to UV disinfection during its permit term. In addition, the UV

Disinfection System Reopener language has been removed from the proposed Order (formerly section VI.C.1.i of the proposed Order).

Comment A24: Clarification of “statistically significant” in Groundwater

Limitation V.B.1. The Discharger requests clarification on what constitutes “statistically significant” as stated in *Receiving Water Limitations V.B.1. (page 24)*, “The collection, storage, and use of wastewater or recycled water shall not cause or contribute to a statistically significant degradation of groundwater quality.”

Response: The measurement of significant difference using statistical methods is well established. Measurably significant is defined in section 20164 of Title 27 as a change in the monitoring point data that, relative to the reference background value (or other approved reference value or distribution), is sufficient to indicate that a release has occurred, pursuant to the applicable data analysis method (including its corresponding trigger).

Title 27 section 20415(e)(8) prescribes the acceptable statistical methods that may be used: parametric ANOVA, nonparametric ANOVA, a tolerance interval procedure, a control chart approach, or other statistical method that can verify whether there is measurably significant evidence of a release.

No change has been made to the proposed Order in response to this comment.

Comment A25: Assessment of current receiving water locations. The Discharger is concerned with Provision VI.B.2. (page 25) that requires an assessment of the current receiving water monitoring locations. The Discharger’s comment states their belief that the Regional Water Board has already determined that the current sites are not adequate to assess the impact of WWTF discharges on the Russian River. The Discharger expresses that safety of staff is an important consideration and that if monitoring locations cannot be moved (as necessary) to a safe location, the requirement to relocate the monitoring locations should be eliminated.

Response: The existing downstream monitoring location for this facility is located a significant distance downstream and across the river from the discharge location. This location is inadequate to ensure that receiving water objectives are met. Regional Water Board staff have discussed the need for the Discharger to evaluate its receiving water monitoring locations several times over the past five years. The most recent discussion is documented in a Regional Water Board staff memorandum describing a meeting with Sonoma County Water Agency staff on September 18, 2007. That memorandum states, “RWQCB notified the SCWA that the renewed NPDES permit will require that receiving water monitoring locations be located closer to the point of discharge to demonstrate compliance [with] receiving water limitations and that RWQCB was committed to working with the discharger to find an appropriate receiving water monitoring location.” All dischargers in the North Coast Region are being required to evaluate receiving water monitoring locations and make changes as necessary to ensure that receiving water monitoring produces data that properly assesses the impact

of the discharge on the receiving water. Other dischargers in the North Coast Region have developed various means to provide improved receiving water monitoring, including moving receiving water monitoring stations closer to the discharge outfall, development of models, and proposals for installing diffusers (with provision for drawing samples off the end of the diffuser to be pumped to a safe collection point). The Discharger is expected to conduct a thorough evaluation of potential methods for improving its receiving water monitoring.

No change was made to the proposed Order in response to this comment.

Comment A26: Bypass and upset provisions. In accordance with prior approval by the Regional Water Board regarding restoration of the Bypass and Upset provisions in the permit (Attachment D, Provision I.G. and I.H), the Discharger requests that the language regarding the bypass and upset provisions in the draft permit be modified to reflect the language approved by the Regional Water Board by letter dated July 12, 2004.

Response: The proposed Order has been modified to give the Discharger the full upset/bypass provisions by removing Provision VI.C.1.h from the proposed Order and by modifying Provisions I.G. and I.H. of Attachment D as requested. This modification is not a significant change because it does not give the Discharger an automatic defense to use in the event of a bypass or upset event. Bypass and upset is still prohibited by the proposed Order in accordance with the revised Standard Provisions I.G.4. and I.H 4., and the Regional Water Board may take enforcement action against the Discharger for bypass unless the three conditions identified are met. The burden of proof is on the Discharger.

Regional Water Board staff are concerned that the collection system and the lack of a flow equalization basin are significant limitations in the Discharger's system. Regional Water Board staff will recommend that the Executive Officer issue a separate 13267 Order requesting the Discharger to conduct studies to establish the Discharger's ability to comply with its permit, including an analysis of the collection system "storage capacity" and the WWTF capacity under high flow conditions (analyze with regard to various sized storm events) and the impact of new connections on the Discharger's ability to comply with its permit. The Discharger must ensure that its collection system and wastewater treatment facility can perform during predictable flood events.

Comment A27: Additional time to implement groundwater monitoring program at Burch property. The Discharger requests additional time to implement the groundwater monitoring program for the Burch property, stating that there is uncertainty regarding the integrity of monitoring wells that were installed in 1999. The Discharger requests an additional year, to September 1, 2010, before it is required to begin groundwater monitoring.

Response: The need to monitor groundwater has been discussed with the Discharger in recent years, thus this requirement should come as no surprise to the Discharger.

The Discharger is aware that the proposed Order requires groundwater monitoring beginning no later than September 1, 2009, and Regional Water Board staff believe that this provides the Discharger more than adequate time to assess the condition of the wells. The Discharger is expected to use the existing wells for its initial monitoring beginning on September 1, 2009 unless it submits a written report by September 1, 2009 documenting that the existing wells are unusable. The proposed Order has been modified to allow for an extension of nine months, to June 1, 2010, if the Discharger demonstrates before September 1, 2009 that the existing wells are totally unusable.

Comment A28: Clarification regarding “waste survey” requirements. The Discharger requests a clarification of the requirements for the “waste survey” that must be conducted every five years to identify industrial dischargers that could discharge pollutants that pass-through the WWTF. What type of industries would be included in this survey? What are the constituents of concern? What must be submitted if no industries are identified?

Response: The permit language in section VI.C.5.b of the proposed Order was erroneously changed. The language should have been the same as that which is in the Discharger’s previous permit, Order No. R1-2003-0026. Section VI.C.5.b. of the proposed Order has been modified to read similar to the previous Order with some minor clarifications as follows:

“b. Source Control Provisions

The Discharger shall perform source control functions, to include the following.

- (1) Implement the necessary legal authorities to monitor and enforce source control standards, restrict discharges of toxic materials to the collection system and inspect facilities connected to the system.
- (2) If waste haulers are allowed to discharge to the Facility, establish a waste hauler permit system, to be reviewed by the Executive Officer, to regulate waste haulers discharging to the collection system or Facility.
- (3) Conduct a waste survey ~~once every five years, or more frequently if required by the Regional Water Board Executive Officer,~~ to identify all industrial dischargers that might discharge pollutants that could pass through or interfere with the operation or performance of the Facility.
- (4) Perform public outreach to educate industrial, commercial, and residential users about the importance of preventing discharges of industrial and toxic wastes to the wastewater treatment plant.
- (5) Perform ongoing industrial inspections and monitoring, as necessary, to ensure adequate source control.”

The intent of this requirement is to ensure that each Discharger is staying abreast of the activities of dischargers to the municipal wastewater system and to take steps to prevent the discharge of pollutants that could cause problems with the operation of the WWTF. The proposed Order language regarding the waste survey has been modified to remove the five year requirement. The Discharger should be regularly surveying discharges to its system to maintain control over the types of discharges entering the

system. As part of the waste survey requirement, the Discharger must track new connections to the system and regularly assess whether new dischargers or changes at existing facilities have the potential of discharging inappropriate pollutants to the Discharger's system. The Discharger may elect to conduct a formal written survey on occasion, or have industrial waste inspectors conduct verbal inquiries during industrial waste inspections. The Discharger should identify, in its annual report, the measures that were taken in the prior year to maintain control over discharges to its WWTF. Conducting the source control functions identified in Section VI.C.5.b of the permit is more costly than the costs associated with accelerated monitoring and potential penalties that the Discharger could incur if toxic pollutants are found to be present in the discharge.

Comment A29: Clarification requirements for biosolids disposal. The Discharger requests that language be added to the permit to clarify requirements for biosolids disposal under CFR Part 503.

Response: Special Provision VI.C.5.c of the proposed Order has been changed to read "the use and disposal of biosolids shall comply with all the land application and land disposal requirements in 40 CFR 503 ..."

Comment A30: Objection to "Collection System Operations and Maintenance Plan" requirements. The Discharger objects to *Provision C.6.b. (page 37)*, and specifically to the required implementation of measures and actions taken from the "Collection System Operations and Maintenance Plan" (September 2001). These measures were adopted as part of the settlement agreement and implementation of the Third Unit Process Project. It is not appropriate for the Regional Water Board to cite and require these activities while not allowing RRCSD full use of the bypass and upset provision (see Comment #26). When the bypass and upset provision is fully granted, RRCSD will move forward with complete implementation of the "Collection System Operations and Maintenance Plan."

Response: The proposed Order has been modified to grant the full bypass and upset provision. The Regional Water Board therefore anticipates that the Discharger will complete its implementation of the "Collection System Operations and Maintenance Plan" as indicated in the Discharger's comment.

No changes were made to the proposed Order in response to this comment.

Comment A31: Concern regarding compliance with new river and land discharge limits. The Discharger is concerned about the new limits for ammonia and nitrate for river discharge and for ammonia, nitrate, TDS, sodium, chloride, and aluminum for land discharge because there is insufficient information to know if compliance can be achieved by the permit compliance date of March 20, 2014. The Discharger requests that language be added to the permit, committing the Regional Water Board to consider setting interim limits and a compliance schedule in a future cease and desist order.

Response: Comment noted. The proposed Order has not been modified to commit the Regional Water Board to adopting a cease and desist order with a time schedule to extend the compliance date for new river and land discharge limits. The proposed Order provides five years for the Discharger to achieve compliance and the Regional Water Board expects that the Discharger will do everything reasonably possible to achieve compliance. If the Discharger has demonstrated a reasonable effort toward compliance with these limits, the Regional Water Board may consider providing additional time for the Discharger to achieve compliance closer to the permit compliance date. As noted in the response to comment 16, the Discharger must build a greater body of evidence to justify an extension of time for compliance.

Comment A32: Clarification regarding discharge locations. The Discharger requests a minor modification to the MRP to clarify that the monitoring locations for river discharge, land disposal, and recycled water application may all be the same location.

Response: Table E-1, Footnote 1 of the proposed MRP has been modified to read, "Monitoring locations EFF-002, LND-001, and REC-001 ~~currently are sampled at~~ may be the same location, the sampling tap following the on-site Effluent sStorage pPond." As noted in the response to Comment A2, the name of the Effluent Storage Pond has not been changed.

Comment A33: Request for removal of "duplicative" BOD/TSS monitoring requirements. The Discharger requests removal of duplicative BOD/TSS measurements when discharging to the Russian River by removing the monitoring requirement specified for Monitoring Location Eff-002.

Response: The proposed Order retains biochemical oxygen demand (BOD) and total suspended solids (TSS) monitoring requirements for monitoring locations EFF-001 and EFF-002. Monitoring BOD and TSS before and after storage is required of most WWTFs with surface water discharges in the Russian River. The Regional Water Board recognizes that many of the municipal WWTFs in the Russian River utilize storage of effluent prior to discharge and that effluent quality can deteriorate in the storage ponds due to algae growths and inputs from waterfowl and other birds that use the ponds.

Monitoring at EFF-001 (discharge of disinfected, dechlorinated, tertiary effluent to the effluent storage pond) provides an assessment of effluent quality to ensure that it is compliant with technology-based effluent limitations for BOD and TSS that are in the permit. Monitoring at EFF-002 (discharge of disinfected, dechlorinated effluent after storage) provides an assessment of the quality of the effluent that is being discharged to the Russian River. Monitoring at EFF-002 allows for an assessment of any changes to the effluent quality due to storage prior to discharge to the Russian River. The Russian River is on the CWA Section 303(d) list of impaired waters for sediment, and TSS is one component of sediment, along with settleable solids and turbidity. If monitoring reveals that the discharge is found to contain levels of TSS or BOD that could adversely affect beneficial uses of the Russian River, the Regional Water Board would propose to develop TSS and/or BOD effluent limitations for discharges to the Russian River that

would be protective of the beneficial uses of the river. Section VI.B of the Fact Sheet has been modified to include a discussion regarding the purpose of monitoring effluent at monitoring locations EFF-001 and EFF-002.

Comment A34. Removal of acute toxicity dilution series requirement. The Discharger requests that the dilution series for Acute Toxicity Testing be removed.

Response: The Discharger's request that the dilution series for Acute Toxicity Testing be removed has been granted. Acute toxicity testing for most dischargers in the Russian River and the North Coast Region is specified as a requirement to be conducted on 100 percent effluent. Section V.A.5 of the proposed Monitoring and Reporting Program has been corrected to read as follows: "**Test Dilutions.** ~~Acute WET tests on effluent samples collected at Monitoring Location EFF-002, shall be conducted using a series of five dilutions of 12.5, 25, 50, 75, and 100 percent effluent. Dilution and control waters shall be receiving water samples collected beyond the influence of the discharges. Standard dilution water may be used if the above source exhibits toxicity.~~ The acute toxicity test shall be conducted using 100 percent effluent collected at Monitoring Location EFF-002, when discharging to surface waters."

Comment A35. Chronic toxicity testing method. The Discharger requests that sampling for chronic toxicity be grab samples rather than 24-hour composite sampling, stating that sufficient mixing occurs in the Effluent storage pond prior to discharge to the Russian River.

Response: The Discharger's request that sampling for chronic toxicity be grab samples rather than 24-hour composite samples has been granted. It has been the policy of the Regional Water Board to allow the use of grab samples for chronic toxicity when dischargers have storage ponds that essentially provide composite samples of the effluent. Section V.B.2 of the proposed MRP has been corrected to read as follows: "~~Sample Type. For 96-hour static renewal or 96-hour static non-renewal testing,~~ eEffluent samples from Monitoring Locations EFF-002 shall be ~~24-hour composite samples that are representative of the volume and quality of the discharge from the facility.~~ grab samples. For toxicity tests requiring renewals, grab samples collected on consecutive days are required.

Comment A36. Chronic toxicity time period for retesting. The Discharger requests that the permit allow up to 14 days to initiate retesting in the event of a chronic toxicity test failure, stating that the additional time is needed for the laboratory to purchase and receive supplies to perform the test.

Response: The MRP, Section V.B.7 of the proposed Order has been modified to allow up to 14 days to initiate retesting in the event of a chronic toxicity test failure. USEPA allows up to 14 days and a review of NPDES permits for other regions reveals that it is common for permits to allow this much time.

Comment A37. Chronic toxicity calculation methods. The Discharger requests the option to report chronic toxicity test results as 100/NOEC, 100/IC25, or 100/EC25, and points out that these options were provided in several Region 1 permits.

Response: The Regional Water Board recently addressed this same comment for the Town of Windsor's NPDES permit (Order No. R1-2007-0013) when it was adopted in June 2007. At that time, Regional Water Board staff reviewed the federal requirements for calculating chronic toxicity and discussed them with Robyn Stuber of USEPA. USEPA, Region IX recommends that effluent limitations and triggers be based on the No Observed Effect Concentration (NOEC) when the permit language and chronic toxicity testing methods incorporate important safeguards that improve the reliability of the NOEC. These safeguards include the use of a dilution series (testing of a series of concentrations) to verify and quantify a dose-response relationship and a requirement to evaluate specific performance criteria in order to determine the sensitivity of each chronic toxicity test. The goal is to demonstrate that each test is sensitive enough to determine whether or not the effluent is toxic or not.

The use of 100/IC25¹ or 100/EC25² as methods for calculating chronic toxicity are point estimates that automatically allows for a 25 percent effect before calling an effluent toxic. The Basin Plan has a narrative objective for toxicity that requires that "all waters be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life." Allowance of a possible 25 percent effect would not meet the Basin Plan's narrative toxicity requirement. In addition, California has historically used the NOEC to regulate chronic toxicity for ocean discharges thus it is appropriate that the same method be used to regulate chronic toxicity for inland surface water discharges.

This method for calculating chronic toxicity in the proposed Order is fully supported by USEPA, the State Water Board and the Basin Plan, and no change has been made to the proposed Order.

No change has been made to the proposed Order in response to this comment. However, staff added the definitions of IC25 and EC25 to Attachment A, Definitions of the proposed Order.

¹ Inhibition concentration (IC). The IC25 is typically calculated as a percentage of effluent. It is the level at which the organisms exhibit 25 percent reduction in a biological measurement such as reproduction or growth. It is calculated statistically and used in chronic toxicity testing.

² Effective Concentration (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Kärber. EC25 is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.

Comment A38. Dry season monitoring location. The Discharger requests (in accordance with Regional Water Board response to comment #20) that monitoring during the dry season (May 15 – September 30) be conducted at monitoring location EFF-001 (before Effluent Storage Pond, rather than after).

Response: See Response to Comment 20, above. As stated in that comment, Regional Water Board staff agree that it is appropriate for the Discharger to conduct effluent monitoring for BOD and TSS at monitoring location EFF-001 because these are technology-based effluent limitations. However, effluent monitoring for nitrate must be conducted after storage, at monitoring location EFF-002 because nitrate is a water quality-based effluent limitation. Section VI.B of the MRP has been modified to reflect the purpose of monitoring at monitoring locations EFF-001 and EFF-002.

Comment A39. Frequency of groundwater monitoring. The RRCSO requests that the frequency of groundwater monitoring be specified as quarterly only during the period of time that effluent is sent to the land application site, stating that land application occurs typically only during the dry season (May 15 through September 30).

Response: Groundwater monitoring frequency must be set such that meaningful data can be collected. Regional Water Board staff believe that it is necessary to require sampling after irrigation has ceased because, if pollutants are being introduced into groundwater, those pollutants could continue to move to groundwater even after irrigation is shut off. Groundwater monitoring frequency will be evaluated after the first year to determine if the frequency should be modified.

No change was made to the proposed Order in response to this comment.

Comment A40. Clarification of operational practices regarding nitrification/denitrification. The Discharger requests that the Fact Sheet language be modified to reflect actual operational practices at the RRCSO WWTF with regard to nitrification and denitrification.

Response: Section IV.C.3.a(3) of the Fact Sheet has been modified to reflect the fact that the facility is operated to achieve nitrification and denitrification.

Comment A41. Chronic toxicity monitoring results. The Discharger requests that the Fact Sheet language be modified to accurately describe the chronic toxicity monitoring results from 2004 to 2008 and the method incorporated in 2006 to assess chronic toxicity.

Response: The Fact sheet language in Section IV.C.5.b. has been modified to describe the process that the Discharger followed in response to several years of chronic toxicity tests that indicated reduced algal growth after short-term exposure to diluted effluent. Other dischargers in the North Coast Region have also had similar issues with regard to the algal chronic toxicity tests and the modified method that the Discharger currently uses is an EPA-approved method.

Comment A42. Recycled water and Burch property. The Discharger requests that the Fact Sheet language be modified to reflect the District's plans for changed operation of the land discharge site (Burch Property) after the Discharger expands its reclamation system.

Response: The Regional Water Board will evaluate future proposed changes to the irrigation system at that time. It is not appropriate to modify the fact sheet to commit to consideration of permit modifications without specific information related to the proposed changes. When the Discharger expands its irrigation system and reduces the irrigation rates on the Burch property, the Discharger will need to provide documentation to the Regional Water Board that irrigation of the Burch property can be done in a manner that protects groundwater. The Discharger's evaluation of continued use of the Burch property will need to take into consideration that the redwood trees on the land disposal site don't need the irrigation water since they naturally draw water from groundwater.

No changes were made to the proposed Order in response to this comment.

Comment A43. Incorrect listing of Title 22 sections regarding recycled water. Two of the Title 22 sections are listed incorrectly in reference to the Title 22 Engineering Report Finding in Attachment G. The Discharger requests correction of this error by removing references to sections 60313(d) and 60314 of Title 22.

Response: Sections 60313(d) and 60314 of Title 22 specify requirements that are applicable to recycled water use sites with dual plumbed systems (systems that utilize separate piping systems for recycled water and potable water within a facility and where the recycled water is used to serve plumbing fixtures, such as toilets, within a building or outdoor landscape irrigation at individual residences). Water Reclamation Finding A.4 of Attachment G of the proposed Order has been modified to recognize that these two sections of Title 22 only apply if the Discharger proposes to deliver recycled water to sites with dual plumbing. If the Discharger wants to allow for the possibility of contracting with recycled water users with dual-plumbed systems in the future, compliance with these Title 22 sections will be required.

Comment A44. Acknowledgement of user agreements and easement authorities. The Discharger requests acknowledgement that user agreements and easement authorities exist as needed for operation of the current recycled water program.

Response: Provision C.1 of Attachment G to the proposed Order has been modified to acknowledge that the Discharger has established user agreements and easement authorities for operation of the current recycled water program. Regional Water Board staff have further modified the language to state that user agreements and easements will be subject to review by the Executive Officer to ensure that the user agreements adequately implement permit requirements related to reclamation, including

requirements for setbacks and best management practices to protect against incidental runoff.

Comment A45. Acknowledgement of Title 22 Engineering Report submittal. The Discharger requests that the permit (Attachment G) acknowledge that a Title 22 Engineering Report was submitted in 2004 and subsequently approved by the California Department of Public Health and the Regional Water Board.

Response: Provision C.2 of Attachment G to the proposed Order has been modified to acknowledge that the Discharger submitted a Title 22 Engineering Report that was subsequently approved by the CDPH. The Regional Water Board did not provide an approval letter for the Title 22 report, but rather deferred to the CDPH's approval.

Russian River Watershed Protection Committee

Letter dated December 1, 2008

Comment B1. Pharmaceuticals and Personal Care Products. The commenter is concerned that the proposed Order does not acknowledge the fact that pharmaceuticals and personal care products and other unregulated chemicals are present in municipal effluent and does not include any requirements to address this issue. The commenter also wants to know if the discussion on page F-16 (section IV) of the Fact Sheet applies to unregulated chemicals such as pharmaceuticals and whether the permit prohibits the Discharger from discharging these unregulated chemicals.

Response: We acknowledge the commenter's concerns. This is an issue of statewide and national concern associated with all treated wastewater discharges. Although there is much concern over these pollutants the science is not yet available to determine the level at which these pollutants cause adverse impacts to water quality and its beneficial uses, or to start setting water quality objectives for them. As the science evolves, there are likely to be limits set for these compounds in the future. Although the proposed Order does not contain effluent limitations, it does contain provisions that require preliminary efforts to address these pollutants. Section VI.C.5.b of the proposed Order contains source control requirements. Source control efforts by many dischargers have included public outreach and education efforts to encourage the public not to discharge these types of pollutants into the sewer system and to develop drug take back programs. The Sonoma County Water Agency is sponsoring a program to safely dispose of unused or unwanted medications. In the Guerneville area three locations are designated as drop-off for unused medicines. A similar program is sponsored by the City of Santa Rosa.

No change was made to the Order in response to this Comment.

Comment B2. System Capacity and Flood Plain issues. The commenter is concerned about problems related to the fact that much of the collection system for this facility is located in a flood plain and the WWTF does not have adequate capacity to

ensure that the facility can provide full treatment of all wastewater flows during wet-weather periods. The commenter states that the proposed Order does not contain appropriate analyses to help identify the flows that the collection system and WWTF can handle (e.g., flow analysis, water balance analysis, comprehensive analysis of entire system) and does not “allow adequate planning for measures that would ensure adequate capacity for protection of public health and water quality”. The commenter is concerned that the lack of the above-mentioned analyses, combined with statements in the proposed Order that the facility has influent flows that are less than the average dry weather flow capacity, give the false impression [to County planning staff and developers] that there is plenty of capacity for future development. The commenter identifies several large development projects that are planned within the boundaries of the area served by the WWTF.

Response: Regional Water Board staff also are concerned about apparent limitations in the Discharger’s system, such as the lack of the flow equalization basin, and whether or not the WWTF and collection system have the capacity to handle reasonably predictable wet-weather high flow events. As stated in the response to Comment A26 (Bypass and Upset Provisions) above, Regional Water Board staff will recommend that the Executive Officer issue a separate 13267 Order requiring the Discharger to conduct studies to establish the Discharger’s ability to comply with its permit, including an analysis of the collection system “storage capacity” and the WWTF capacity under high flow conditions and an analysis of the potential impact of future new connections on the Discharger’s ability to comply with the terms of its permit.

No change was made to the Order in response to this Comment.

Comment B3. Request for posting of Reports of Waste Discharge on Regional Water Board website.

Response: It is not the practice of this Regional Water Board to post Reports of Waste Discharge on its website. The Report of Waste Discharge is made available for public review at the Regional Water Board office. No change was made to the Order in response to this Comment.

Comment B4. Storage Basin and Reclamation System EIRs - adequacy and approval. The commenter expresses concerns about the adequacy of the emergency storage basin and reclamation system EIRs and whether or not the storage basin EIR has been approved.

Response: Completion and approval of the final storage basin EIR is the responsibility of the Discharger. The storage basin EIR would need to be certified before the Discharger could construct the emergency storage basin. Finding II.E of the proposed Order and section III.B of the Fact Sheet state that the Discharger must comply with CEQA in order to expand its reclamation system. The Discharger would also be required to address antidegradation concerns for any increases in ADWF above 0.51

mgd. See Response to Comment A8. No change was made to the Order in response to this Comment.

Comment B5. Peak wet-weather capacity. The commenter would like clarification regarding the meaning and application of the terms “peak wet-weather capacity” and “maximum sustained peak wet-weather capacity”.

Response: The terms “peak wet-weather capacity” and “maximum sustained peak wet-weather capacity” are interchangeable. With the completion of the Third Unit Processes Project, the Discharger has demonstrated that it can operate its WWTF at 3.5 mgd on a sustained basis, meaning that it can handle this flow reliably day after day for as long as it needs to during periods of wet-weather flow. All components of the Discharger’s system have the capacity to handle sustained wet-weather flows of 3.5 mgd and are adequate to comply with all prohibitions, effluent limitations, receiving water limitations, discharge specifications and provisions of its permit. No change was made to the Order in response to this Comment.

Comment B6. Clarification of permit requirements that protect against discharges of untreated wastewater during flood events. The commenter would like to know what requirements in the permit protect against discharges of untreated wastewater during flood events and how much emergency storage is actually necessary to ensure compliance under all potential flow conditions.

Response: The permit contains various requirements that make it clear that discharges of untreated wastewater during flood events are prohibited and require that the Discharger provide adequate facilities and operation and maintenance to ensure that the collection system and WWTF are operated and maintained in a manner than will achieve compliance with permit requirements. These permit requirements include: Discharge Prohibition III.D (discharges of untreated or partially treated waste prohibited), III.E.(SSO prohibition), III.I.(peak daily wet-weather flow limitation), VI.C.4.a.(Operation and Maintenance Specifications), VI.C.5.e (Adequate Capacity), VI.C.6.b (Flood Control and Flow Reduction Mitigation), and Attachment D (Upset and Bypass provisions). The Regional Water Board acknowledges that the Discharger has had problems complying with permit requirements during flood events and that the Discharger has made some positive progress during the term of the current permit to address these problems, including the completion of the Third Unit Processes Project and implementation of the Discharger’s “Collection System Operations and Maintenance Plan”. As stated in response to Comments A26 and B2 above, Regional Water Board staff will also recommend that the Regional Water Board issue a 13267 order that will require the Discharger to submit additional information and analyses to address wet-weather flow concerns.

No change was made to the Order in response to this Comment.

Comment B7. Clarification regarding connection of other communities to RRCSD WWTF. The commenter would like to know why the proposed Order does not discuss

plans to connect Occidental, Camp Meeker, Monte Rio and other unsewered communities up to the RRCSD WWTF.

Response: This issue is not addressed in the proposed Order because there are currently no plans moving forward that would result in the connection of any of these communities to the RRCSD WWTF. Although there is an approved and certified EIR for a potential pipeline to convey wastewater from Occidental and Camp Meeker to the RRCSD WWTF, the Sonoma County Board of Supervisors and Sonoma County Water Agency have stated that this proposal is too expensive and they have elected not to pursue it.

No change was made to the Order in response to this Comment.

Comment B8. Third aeration basin. The commenter inquires about the use and function of the third aeration basin at the WWTF.

Response: The commenter interprets the description of the facility operation in the Fact Sheet to mean that the extra (third) aeration basin is being put to a dual use: for secondary treatment of effluent in the summer and emergency storage of raw wastewater in the winter. The third aeration basin is not currently needed for secondary treatment of effluent flow, therefore it is not currently used for this purpose. The Discharger has stated that the third aeration basin is currently used as an equalization basin for storage of influent flows (raw wastewater) during high flow events. When the Discharger needs the third aeration basin for secondary treatment of its effluent, the Discharger would need to clean the basin to prepare it for use as a secondary treatment basin. No change was made to the Order in response to this Comment.

Comment B9. Collection system “storage capacity”. The commenter has inquired about how much storage capacity the collection system can provide when used for that purpose during high winter flows.

Response: Information regarding the collection system “storage capacity” is not readily available. The Discharger will be requested to provide this information. See response to Comments A26 and B2 above.

Comment B10: Infiltration and inflow. Page F-6 of the Fact Sheet states that infiltration and inflow (I/I) is estimated at 0.195 mgd based on 2004 to 2006 flow data. The commenter states that in her review of the Discharger’s flow data, she determined that in 2006, a very wet year, the average I/I appeared to be 0.746 mgd and in 2005, a much drier year, it was 0.236 mgd.

Response: Comment noted. The estimate of I/I presented in the Fact Sheet was provided in the Discharger’s ROWD. The Fact Sheet has been modified to state the source of this estimate and to clearly identify concerns that the Discharger’s system has limitations that may reduce performance during flood events.

Comment B11. Potential impacts of settleable solids. The commenter inquired about the potential impacts of settleable solids from the RRCSD WWTF and whether settleable solids could add bacteria to sediments in the river and whether this could be the source of high bacteria numbers in lower river beaches.

Response: The Discharger chlorinates its tertiary treated effluent to reduce bacteria to very low levels and subsequently dechlorinates prior to discharge to the effluent storage pond. As noted in the response to Comment A12 above, effluent quality can change in the effluent storage pond and the proposed Order has been modified to require monitoring at monitoring location EFF-002 (Discharge to Russian River) for settleable solids in order to determine if there is reasonable potential for settleable solids to be discharged from the effluent storage pond to the Russian River at levels that could cause bottom deposits that cause nuisance or adversely affect beneficial uses. The Regional Water Board will be developing a pathogen Total Maximum Daily Load (TMDL) for the Russian River that will provide an assessment of sources of bacteria in the area of the Russian River identified in this comment. The TMDL should include an assessment of the discharge from the RRCSD and other discharges in the Russian River. At this time, Regional Board staff anticipates completing the Russian River pathogen TMDL by FY 2011-2012.

Comment B12. Clarification regarding the use of thirty-day averages for the one percent discharge limitation and average dry-weather flow limitation. The commenter is concerned about (1) defining dry-weather flow based on the lowest thirty day average each year; and (2) the allowance in Discharge Prohibition III.K that the Discharger may demonstrate compliance with the one-percent discharge limitation as a monthly average, and that there is no maximum percentage specified as to what can be discharged in a single day. The commenter expresses that these are generous limits for a discharger for which “there has been no winter since 1995 that the system has not violated some regulation.”

Response: Comment noted. The use of 30-day averages for determining average dry-weather flow and for assessing compliance with the one-percent flow limitation is the standard used for municipal dischargers throughout the North Coast Region. Several of the commenter’s other comments reflect her concern that this Discharger has unique problems associated with the fact that approximately 50% of the collection system is located in a flood plain and that this WWTF serves an area that has base flow fluctuations due to the Guerneville area being both a year round residential community and a vacation community.

Average dry-weather flow means the daily base flow to a sewage facility that occurs after an extended period of dry weather, such that the inflow and infiltration has been minimized to the greatest extent practicable. The Discharger is not allowed to exceed an average dry-weather flow any time during the irrigation season, which coincides with the dry weather season each year. Regional Water Board staff believe that the language in the proposed Order is appropriate for assessing average dry weather flows. In addition, the proposed Order contains other triggers, such as compliance with effluent

limitations, to determine if the Discharger needs to upgrade its treatment or expand its capacity.

Prohibition III.K. allows the Discharger to demonstrate compliance with the one percent flow limitation as a monthly average, but only if the Discharger demonstrates that it has made a reasonable effort to adjust the discharge of treated wastewater to one percent of the river flow on a daily basis. This prohibition provides for some day-to-day operational flexibility, but it does not authorize the Discharger to intentionally discharge at a rate that is more than one percent of the river flow on a daily basis. Regional Water Board staff carefully review discharger self-monitoring reports. Occasional flows that are slightly greater than one-percent of the river flow would be acceptable under this prohibition, but regular daily excursion greater than one-percent or in excess of one and a half percent would be scrutinized. The prohibition language does not explicitly state a maximum percentage that can be discharged on a daily basis because the intent is that no more than one percent of the receiving water flow be discharged on a daily basis.

No change was made to the Order in response to this Comment.

Comment B13: Clarification of permit language regarding sanitary sewer overflows (SSOs). The commenter is requesting clarification regarding Fact Sheet language (page F-55) about reporting of SSOs.

Response: The commenter appears to misunderstand what the Fact Sheet is stating. Page F-55 of the Fact Sheet describes the oral reporting limits for SSOs contained in the State Water Board General Permit (Order No. 2006-0003-DWQ) for sanitary sewer systems which requires that SSOs greater than 100 gallons must be reported orally to the Regional Water Board and all SSOs, regardless of volume, must be electronically reported pursuant to Order No. 2006-0003-DWQ. This language is not intended to imply that the smaller spills don't have any impacts. The proposed Order (section VI.C.5.a.(2)) requires oral reporting of all SSOs that reach surface waters, regardless of volume.

No change was made to the Order in response to this Comment.

Comment B14. Reclamation and irrigation runoff. The commenter (1) would like reclamation requirements in Attachment G to the proposed Order to prohibit irrigation runoff; (2) inquires about the definition of incidental runoff (e.g., is it amounts under 100 gallons?), and (3) would like enforcement of setbacks to keep recycled water from being sprayed into public roadways.

Response: (1) The commenter is concerned that Water Reclamation Finding A.4 requires the Discharger to describe measures that it will take to minimize the possibility of incidental runoff or recycled water and states her belief that this language inappropriately "jumps the gun" on the proposed low threat Basin Plan amendment. Permit language in the proposed Order considers runoff incidents, even those that meet the criteria of "incidental runoff", as permit violations. Finding A.4 of Attachment G

requires reporting of all runoff incidents and states the conditions under which enforcement will be considered. The permit language states that an enforcement action will be considered in those situations where the runoff event(s) is/are not incidental such as when there is/are: inadequate response by the Discharger to runoff incidents; repeated runoff incidents that were within the Discharger's control; exceedence of water quality objectives; incidents that create a condition of pollution or nuisance; and discharges that reach surface water in violation of the individual permits. Water leaving a reuse area due to poor facility design, excessive application, or failure to maintain infrastructure is not considered incidental.

(2) Incidental runoff is not defined in terms of a specific volume of water. Attachment G, Water Reclamation Finding A.4 defines incidental runoff as "runoff that is unintentional (e.g., accidental breakage of a sprinkler head) and not associated with negligence on the part of the Discharger or the recycled water user. These incidents are typically low volume, accidental, not due to a pattern of neglect or lack of oversight, and promptly addressed. The Regional Water Board recognizes that such minor violations are unavoidable and present a low risk to water quality. "

(3) The commenter relates that she reported an incident recently where her car was sprayed by a high power spray of wastewater on Guerneville Road and that Regional Water Board staff never responded to her complaint. It is the normal practice of this Regional Water Board to respond to the complainant and to discuss the complaint with the Discharger and to request that adjustments be made in the irrigation system.

Water Reclamation Requirement B.7 of Attachment G has been modified as follows "Direct or windblown spray, mist, or runoff from irrigation areas shall not enter dwellings, designated outdoor eating areas, ~~or~~ food handling facilities, roadways, or any other area where the public would be accidentally exposed to recycled water.

No change was made to the Order in response to this Comment.

Mr. Ken Berry

Comment C1.: CEQA Compliance. The commenter inquired about the status of CDOs identified in section II.D.2 of the Fact Sheet to determine if the RRCSD site should be listed on the Cortese list and whether a categorical exemption is appropriate for renewal of the NPDES permit. After an email exchange with Regional Water Board staff, the commenter responded that he does not believe the current project can have any significant adverse impact on the environment, but that he believes that the proposed Order erroneously uses the categorical exemption as the reason for not performing an environmental analysis.

Response: Comment noted. No change to permit necessary. The proposed Order does not authorize any change in the volume, manner, or character of the discharge from that which was authorized in the previous Order.

Ms. Janice Oakley, California Department of Public Health (CDPH)

Ms. Oakley provided comments in two emails, responding to questions posed by Regional Water Board staff.

Comment D1. Title 22 Recycled Water Engineering Report. CDPH finds that the 2004 Title 22 Recycled Water Engineering Report adequately addresses the [WWTF] project and the current use sites at the Burch Property and Northwood Golf Course to be acceptable.

Response: Comment noted.

Comment D2. AquaDisk tertiary filters and filter loading rate. The AquaDisk filter proposal was part of the 2004 Title 22 [Engineering] Report and had been addressed in my office's July 30, 2004 response letter. The unit was approved at 6 gpm/square foot and this loading rate should not be exceeded regardless of the manufacturer's design criteria. CDPH prefers that the permit limit the filter loading rate to 6 gpm/square foot without any caveat language added.

Response: The proposed Order requires that the filters be operated at a filter loading rate of no more than 6 gpm/square foot of surface area. See Response to Comment A21.

Comment D3. The proposed update to the Ultraviolet (UV) Disinfection system was not part of the Title 22 [Engineering] Report and requires CDPH approval. CDPH states that an engineering report needs to be submitted for our review explaining the proposed UV disinfection system, operations, maintenance, alarms, contingency plans, etc. and an on-site demonstration that the accepted UV equipment performs as expected. This could entail velocity profiles as described in the NWRI UV guidance, or what is commonly called a "check-point" bioassay. For either, CDPH would want to review and approve the study protocol. Either must be performed by an independent third party. The 2003 NWRI UV Guidance is a reference and should be adhered to.

CDPH further requests that the proposed Order be modified to include more specific requirements for the UV Disinfection system.

Response: The proposed Order has been modified to include the following language requested by the CDPH:

- “3. Disinfection Process Requirements for Ultraviolet (UV) Disinfection System.** Upon completion and testing of the UV disinfection system, the Discharger shall operate the UV disinfection system in accordance with the following operating protocol and technical and administrative in order to demonstrate compliance with Effluent Limitations A.1.c., B.2., and C.3 of this Order.

- a. Disinfection of tertiary treated wastewater shall be accomplished using a disinfection process that, when combined with the filtration process, has been demonstrated to inactivate and/or remove 99.999 percent of the plaque-forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration. The demonstration shall be performed on-site at the Discharger's WWTF at both maximum and minimum plant flows. At a minimum, the Discharger shall demonstrate a 99.99 percent removal and/or inactivation through the UV disinfection system only.
- b. The Discharger shall provide continuous, reliable monitoring of flow, UV transmittance, UV intensity, UV dose, UV power, and turbidity.
- c. The Discharger shall operate the UV disinfection system to provide a minimum UV dose of 100 millijoules per square centimeter (mJ/cm²) at all times, unless otherwise approved by CDPH.
- d. The UV transmittance (at 254 nanometers) in the wastewater shall not fall below 55 percent of maximum at any time, unless otherwise approved by CDPH.
- e. The quartz sleeves and cleaning system components shall be visually inspected per the manufacturer's operation manual for physical wear (scoring, solarization, seal leaks, etc.) and to check the efficacy of the cleaning system.
- f. The quartz sleeves shall be cleaned at fixed intervals to ensure the minimum required UV dose delivery is consistently achieved. Cleaning intervals shall be established based on the presence of coliform organisms.
- g. Lamps shall be replaced per the manufacturer's recommendation, or sooner, if there are indications the lamps are failing to provide adequate disinfection. Lamp age and lamp replacement records must be maintained.
- h. The Discharger shall comply with all of CDPH's acceptance conditions for the UV disinfection system.
- i. **Prior to initial discharge at Discharge Points 002, 003 or 004, the Discharger shall submit to the Executive Officer a copy of a letter from CDPH stating that all the UV disinfection system pre-operation acceptance conditions specified by CDLP have been satisfied.**

- j. **Prior to initial discharge at Discharge Points 002, 003 or 004, the Discharger shall submit to the Executive Officer and CDPH, an operations and maintenance plan (detailing how compliance with the National Water Research Institute's guidelines and CDPH's UV disinfection system acceptance conditions will be assured at all times), for approval.**
 - k. The UV disinfection system shall be operated in accordance with an approved operations and maintenance plan.
4. Upon demonstration by the Discharger that the new UV system and operating protocol have been approved by the CDPH, the change in disinfection system from chlorine to UV and the operating protocol shall be authorized by letter from the Executive Officer.