

Response to Comments and Staff Changes **City of Healdsburg Tentative Order No. R1-2010-0034**

Comment letters on the August 16, 2010 draft NPDES permit (Order No. R1-2010-0034) for the City of Healdsburg Wastewater Treatment Facility were received from:

- A. City of Healdsburg (letter signed by Jim Flugum), September 17, 2010
- B. Town of Windsor (letter signed by Richard Burt), September 15, 2010
- C. Russian River Watershed Association (letter signed by Jake Mackenzie), September 16, 2010
- D. Sonoma County Water Agency (letter signed by Kevin Booker), September 20, 2010
- E. Clean Water Coalition of Northern Sonoma County (letter signed by Fred Corson), September 17, 2010
- F. Russian Riverkeeper (letter signed by Don McEnhill), September 17, 2010
- G. Westside Association to Save Agriculture (letter signed by Judith Olney), September 17, 2010
- H. Russian River Watershed Protection Committee (letter signed by Brenda Adelman), September 17, 2010 email

*This document provides Regional Water Board staff responses to comments provided by each commenter. The responses indicate whether or not changes were made to the permit in response to the comment. **Regional Water Board staff made several additional changes to the Proposed Permit that were not in response to specific comments. Additional changes proposed by Regional Water Board staff are identified at the end of this document (following responses to comments submitted by the Russian River Watershed Protection Committee).***

City of Healdsburg

The following are responses to comments submitted by the City of Healdsburg to the Regional Water Board in a letter dated September 17, 2010.

Comment 1: The Discharger appreciates the Regional Water Board staff's efforts to address issues raised by the City during the preparation of the Draft Permit that have made the language in the Draft Permit somewhat more workable for the City.

Response: Comment noted. No changes were made to the Proposed Permit in response to this comment.

Comment 2: Since the June 10, 2010 Board hearing, the City provided the Regional Water Board with a "water balance study" report using the consultant (Gus Yates) and specific scope of work suggested by the Clean Water Coalition (CWC), to address CWC's concerns on the City's proposed Syar Irrigation Project (hereafter referred to as the "Gus Yates report"). The Gus Yates report concluded that none of the potential ground water or surface water quality issues addressed in the study would present significant impacts.

Response: The Discharger submitted a revised Gus Yates report dated September 28, 2010 that provides an expanded analysis that addresses the uncertainties in the impact evaluations and identifies conditions under which no significant impacts are expected. Regional Water Board staff reviewed both reports and generally agrees with the conclusions that recycled water can be applied to valley floor vineyards in a manner that does not pose a threat to water quality. However, this report was based on several assumptions regarding application rates and effluent quality that must still be verified in the final technical report.

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

Comment 3: The Discharger states that modifications to the recycled water requirements for agricultural irrigation uses are an improvement over requirements in the March 22 draft permit, but believes that these requirements will become a significant impediment to attracting new agricultural users.

Response: The following response is taken from the May 27, 2010 Response to Comments document (response to Comment K.7, Healdsburg heading).

It is not the Regional Water Board's intent to create obstacles to water recycling. The expanded requirements are intended to protect water quality and will also assure the public that water quality and public health will be protected.

The Recycled Water Policy and the Landscape General Permit support the need for requiring additional technical information to demonstrate that reclamation will result in minimal degradation to surface water or groundwater. The expanded requirements and provisions in Attachment G, including requirements for technical information, public noticing, and monitoring and oversight of reclamation areas are based on the Recycled Water Policy and the Landscape General Permit. These provisions and requirements are not intended to be a disincentive to the voluntary use of recycled water. Requirements for hydraulic and nutrient agronomic rate determinations and oversight of reclamation uses have become a well-established standard, particularly in agricultural areas of the State. Although the preparation of an irrigation plan for each application site does require some initial effort, this approach allows for the Discharger to avoid significant expenditures associated with groundwater monitoring, site-specific antidegradation analyses and the preparation of a detailed groundwater basin salt and nutrient management plan.

Regional Water Board staff anticipates that once the Discharger works through the process with its first recycled water use site, it will be able to easily replicate the process with following sites. It will be important that the Discharger provide sufficient information prior to the start of reclamation to demonstrate that each recycled water use site is utilizing hydraulic and agronomic rates, that sufficient best management practices will be employed, and that monitoring and inspections will be conducted to demonstrate that incidental runoff is minimized and water quality is protected.

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

Comment 4a: The Discharger requests removal of total dissolved solids (TDS) and specific conductance (SC) receiving water limitations. The Discharger remains concerned with the application of the tributary rule to assign to Basalt Pond all the beneficial uses and accompanying discharge prohibitions applicable to the Russian River. The Discharger appreciates the fact that the draft permit recognizes the problems associated with determining compliance with TDS and SC receiving water limits in Basalt Pond, but believes that the special study approach does not resolve the issue. The Discharger is concerned about the potential for citizen lawsuits for alleged violations of TDS and SC that may not be tied to any beneficial uses.

Response: Reference to the specific numerical receiving water limits for TDS and SC has been removed from the Proposed Permit. These limits were included as Receiving Water Limitations V.A.3 and V.A.4 in the August 16, 2010 public review draft of the Proposed Permit. These limits are addressed by the general narrative limit, Receiving Water Limitation V.A.15 in the Proposed Permit. In removing the specific receiving water limits for TDS and SC, the receiving water language in the Proposed Permit is the same as that in the Discharger's current permit.

The Regional Water Board recognizes that the water quality objectives for TDS and SC in Table 3-1 of the Basin Plan are very strict limits and may not provide for assimilative capacity to recognize urban and agricultural development. If it is identified as a basin planning priority, staff could study the possibility of amending the Basin Plan to provide water quality objectives that are protective of beneficial uses and allows for additional assimilative capacity for salts.

Section VI.F.1.c of the Fact Sheet was modified to remove the following language to be consistent with removal of the TDS and SC receiving water limitations, "The receiving water monitoring program does not currently include monitoring requirements for total dissolved solids (TDS) or specific conductance (SC), even though the permit contains receiving water limitations for these two constituents. These receiving water limitations are based on TDS and SC water quality objectives in Table 3-1 of the Basin Plan. Some existing data suggests that current conditions in Basalt Pond and the Russian River do not meet the Table 3-1 limits. The special study set forth in Provision VI.C.2.c will help determine natural background concentrations of TDS and SC." The special study requirements are discussed in section VI.F.1 of the Fact Sheet, therefore this language is not needed in section VI.F.1.c of the Fact Sheet

Comment 4b: As an alternative to removal of receiving water limitations for TDS and SC, the Discharger requests that the permit include a compliance schedule allowing the Discharger to achieve performance-based receiving water limitations for TDS and SC until the Basin Plan is amended.

Response: See response to Comment 4a.

Comment 4c: The Discharger further requests that the Regional Water Board amend the Basin Plan to establish water quality objectives for TDS and SC that are tied to beneficial uses.

Response: This comment has been forwarded to staff in the Basin Planning unit for consideration and prioritization in the next Triennial Review of the Basin Plan. The Discharger is encouraged to provide any new or detailed information regarding the water quality objectives necessary to protect the existing and potential beneficial uses of Basalt Pond and the Russian River to the Regional Water Board Basin Planning staff. See also response to Comment 4.a.

Comment 5: The pH effluent limitations of 6.5 to 8.5 in Table 6 should be replaced with the applicable technology-based effluent limitations of 6.0 to 9.0 as described in the Fact Sheet on page F-36.

Response: Table 6 identifies effluent limitations for discharges to surface waters and properly identifies water quality-based effluent limitations for pH of 6.5 to 8.5. The Fact Sheet identifies the technology-based pH effluent limitations as a minimum treatment standard and further identifies the need to establish water quality-based effluent limitations for discharges to surface waters to meet Basin Plan water quality standards.

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

Comment 6: Footnote 8 in the draft permit is not consistent with requirements in Attachment G.

Response: Footnote 8 has been modified to be consistent with requirements in Attachment G. The second sentence of Footnote 8 now says, "In addition, new recycled water use sites must ~~submit a Report of Waste Discharge for review and approval as required by~~ meet requirements identified in section C.5 of Attachment G to this Order."

Comment 7: The Discharger supports agronomic rate language similar to that in Reclamation Specification IV.C.2.b and other sections of the permit (Fact Sheet and Attachment G). The Discharger would oppose any requirements similar to those included in the March 22 draft permit, which would make recycled water providers responsible for all nutrients applied on recycled water use sites managed by others.

Response: Comment noted. See also response to Comment 35 under the Healdsburg heading.

Comment 8: The Discharger points out that references and approaches to the problematic receiving water limitations (temperature, pH, DO, TDS, conductivity, and ammonia) are inconsistent and confusing throughout the Draft Permit, the monitoring and reporting program (MRP) and the Fact Sheet and requests modifications to provide consistency. Requested changes include:

- a. Removal of monitoring requirements for temperature, pH, DO, and ammonia from Table E-8.
- b. Recognition of the special study requirements in the introductory paragraph of Receiving Water Limitation V.A.

Response: The introductory paragraph in Receiving Water Limitation V.A. has been modified to read as follows: “With the exception of constituents subject to the special study requirements in Provision VI.C.2.c, compliance with receiving water limitations shall be measured at monitoring locations described in the MRP (Attachment E).” In addition, monitoring requirements for temperature, pH, DO and ammonia have been removed from Table E-8 (monitoring requirements for receiving water) in light of the fact that these constituents must be monitored as part of the special study requirements specified in Provisions VI.C.2.b and VI.C.2.c of the Proposed Permit.

Comment 9: The Discharger supports the proposed change to Groundwater Limitation V.B.1 of the Draft Permit.

Response: Comment noted. No changes were made to the Proposed Permit in response to this comment.

Comment 10: The Discharger wants to clarify that effluent flow measurements are taken at a point that is downstream of the membrane filters and upstream of the UV disinfection system, while effluent samples are collected at the EFF-001 site located at the downstream end of the UV disinfection system. The Discharger notes that effluent flow must be calculated by subtracting pumping to the wastewater treatment plant non-potable water system (NPW) that occurs downstream of the UV disinfection system. The NPW system is separately metered.

Response: Comment noted. A new footnote (Footnote 6) has been added to Table E-4 to clarify that the flow monitoring location is different from the effluent quality monitoring location. The new footnote reads as follows: “Effluent flow is measured at a point that is downstream of the membrane filters and upstream of the UV disinfection system.”

Comment 11: The Discharger requests that both the chronic and static/acute toxicity monitoring requirements be changed from composite to grab to provide consistency with requirements adopted in other recent permits, notably Windsor and Russian River County Sanitation District.

Response: USEPA recommends the use of 24-hour composite samples for whole effluent toxicity testing in order to capture any possible toxicity spikes over the course of a day. The sampling duration of a grab sample is so short that full characterization of an effluent with regard to toxicity cannot be achieved. In the recent past, Regional Water Board staff allowed the use of grab samples for dischargers that store effluent in storage ponds prior to discharge, assuming that the storage pond would provide adequate compositing. This option would not apply to Healdsburg due to the fact that effluent is discharged directly to the receiving water without intermediate storage. In

addition, Regional Water Board staff is reviewing this issue to determine whether composite samples for acute and chronic toxicity testing should be required for all dischargers.

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

Comment 12: The Discharger requests clarification regarding monitoring requirements for Title 22 pollutants (currently specified in Tables E-4 and E-6) and requests that monitoring be limited to a single monitoring event during the five year term of the permit.

Response: Regional Water Board staff believes that a requirement for two sample sets for Title 22 pollutants during the five year term of the permit is not unreasonable. The requirement for monitoring during the discharge season and the reclamation season is akin to the California Toxics Rule requirement for a minimum of two sample sets with one taken during a wet-weather period and the other taken in a dry-weather period.

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

Comment 13: Monitoring for chloride, TDS, and fluoride is no longer required and should be removed from Footnote 16.

Response: Footnote 18 in the Proposed Permit (formerly Footnote 16) has been modified to remove reference to chloride, fluoride and total dissolved solids and reads as follows: “Monitoring for ~~aluminum, chloride, fluoride, and total dissolved solids~~ shall be conducted quarterly for the first year of the permit term. If sample results from the first year of the permit term indicate that aluminum concentrations ~~of a pollutant~~ in the effluent are below the applicable MCLs and do not pose a threat to water quality, then specific monitoring requirements for aluminum may be discontinued. If sample results indicate that aluminum concentrations ~~of a pollutant~~ are greater than the applicable MCL or may pose a threat to water quality, then the Discharger shall continue quarterly monitoring for ~~that pollutant~~ aluminum.”

Comment 14: The chronic toxicity test requirements should be revised to clarify that the City need only use one of the three species listed for routine testing (see Fact Sheet, page F-51). The Discharger also points out that there is a typographical error in this paragraph. The words “shall be” are included twice.

Response: Chronic Toxicity Testing requirement V.B.3 (Test Species) of the MRP already states that monitoring is to be conducted annually using the most sensitive species, based on the results of the initial two suites of chronic WET testing is completed using all three species. The MRP and Fact Sheet are consistent with regard to this requirement.

Section V.B.3 of the MRP has been modified to remove the unnecessarily duplicated words “shall be”.

Comment 15: The Discharger does not understand the intention of Footnote 17 in Table E-5 of the draft permit and is concerned that if the language in Footnote 17 means that the City must track the volume of recycled water that is delivered to each use site on a daily basis, that this would be exceedingly expensive and notes that this has never been required of any other recycled water provider in the North Coast Region.

Response: Footnote 17 in the draft permit was used for two different flow monitoring requirements (Table E-5 discharges of recycled water to the recycled water storage pond and Table E-6 discharges of recycled water from the recycled water storage pond to the recycled water distribution system) and staff agrees that it was not clear how to interpret this footnote. The Proposed Permit has been modified to include two separate footnotes, one that applies to Table E-5 and one that applied to Table E-6. Footnote 19 in the Proposed Permit applies to discharges of recycled water to the recycled water storage pond and reads as follows: “Each month, the Discharger shall report ~~the number of days that treated wastewater was used for reclamation at all authorized reclamation sites, as well as the average and maximum daily flow rate~~ discharged to the recycled water storage pond.” Footnote 21 in the Proposed Permit applies to discharges from the recycled water storage pond to the recycled water distribution system and reads as follows: “Each month, the Discharger shall report the volume of recycled water delivered to each recycled water use site. In addition, the Discharger shall report the number of days that treated wastewater was used for reclamation at authorized reclamation sites.” Thus the Discharger must report the volume of recycled water on a site-by-site basis and the total number of days that recycled water was delivered from the plant during the month, without having to identify which site the water went to each day.

Comment 16: The footnote reference for flow measurement is incorrect. The footnote number should be “17” rather than “16”.

Response: This typographical error has been corrected. Due to the addition of several new footnotes in the MRP the footnote numbers have changed, thus the footnote identified in this comment is now Footnotes 19 and 21 (discussed in Comment 15 above).

Comment 17: The rainfall monitoring requirement in Table E-7 should be revised to clarify that rainfall will be recorded only at the production site and not at every recycled water use site. There is little or no variability within the overall area that City expects to irrigate, thus monitoring more than one rainfall gauge would not provide useful information.

Response: The intent of the rainfall monitoring requirement in Table E-7 is for rainfall to be recorded at the wastewater treatment plant as is currently done. Table E-7 has been modified to include a footnote (Footnote 28) clarifying that rainfall need only be recorded at the wastewater treatment facility.

Comment 18: Table E-8, Footnote 28 (of the August 16, 2010 draft permit), should be deleted because there is no monitoring required for specific conductance.

Response: The footnote has been deleted from the MRP. (Note the footnote number changed due to new footnotes being added to the MRP.)

Comment 19: Section X.D.2.a.iii of the MRP has an incorrect reference to Attachment G in regard to new use site reporting.

Response: Section X.D.2.a.iii has been corrected to include the correct reference to Attachment G. The language now correctly refers to section C.1.a.iii rather than section C.5.

Comment 20: Section II.D.3 of the Fact Sheet has an incorrect reference to Attachment G in regard to engineering report requirements.

Response: Section II.D.3 of the Fact sheet has been corrected to include the correct reference to Attachment G. The language now correctly refers to Water Reclamation Provision D.2.

Comment 21: The Discharger suggests removing the task of submitting the Title 22 recycled water engineering report from Table F-4 since the engineering report was submitted to the California Department of Health Services and Regional Water Board on August 24, 2010 and August 25, 2010, respectively.

Response: Table F-4 has not been modified to remove tasks that have been completed. Instead, the order of the tasks in Table F-4 have been rearranged to place them in chronological date order and the paragraph preceding Table F-4 has been modified to include the following statement. "The first two tasks have been completed by the Discharger."

Comment 22: The findings in section II.D.3 of the Fact Sheet include the conclusions of the report titled "Syar Property Recycled Wastewater Agricultural Irrigation Project – Additional Analysis of Potential Groundwater and Russian River Impacts" dated June 28, 2010 ("Gus Yates report") which was submitted to the Regional Water Board on July 21, 2010. The City supports the Regional Water Board's incorporation of the Gus Yates report conclusions in the Fact Sheet. The City believes that these conclusions are a worst-case projection of the potential ground water and surface water quality impacts of irrigating vineyards with recycled water.

Response: The Gus Yates report was modified on September 21, 2010 to provide a discussion of uncertainties in the assumptions used in the impact evaluations, and to identify those ranges below which no significant impacts are expected. Regional Water Board staff generally agrees that, for the specific hydraulic application rates and recycled water nutrient concentrations identified in the report, vineyard irrigation with drip at agronomic rates should not result in degradation of groundwater that exceeds water quality objectives for protection of drinking water or agriculture and that any

degradation that does occur should be minimal. This conclusion is based on recycled water nutrient and salt concentrations being well below water quality objectives as well as assumed application rates. The Discharger is also subject to technical report requirements and must submit the specific data required by the technical report requirements in order to receive final Executive Officer approval for each recycled water use site. However, application rates in excess of the rates analyzed in this study (non-agronomic application) would result in additional groundwater degradation and, therefore, would constitute a worse condition than that studied in the report.

Section II.D.3 of the Fact Sheet has been modified to acknowledge the July 21, 2010 Gus Yates report.

Comment 23: The Discharger is concerned that the Draft Permit explicitly states that recycled water will not be used for frost protection of vineyards and requests that the statement in section III.B.3 of the Fact Sheet be deleted. Although the City does not have current plans to contract with recycled water users to use recycled water for frost protection, frost control is an allowable use under Title 22 and proposed regulation changes may limit the use of frost protection water diversions in the Russian River watershed.

Response: The Proposed Permit has been modified to remove the statement that recycled water will not be used for frost protection of vineyards from the discussion of CEQA mitigations in section III.B.3 of the Fact Sheet because this was not identified explicitly as a mitigation measure in the FEIR. Because the Proposed Permit has been structured to exclude the use of recycled water for frost protection, a new finding (Water Reclamation Finding A.10) has been added to Attachment G that reads as follows: “This Order does not authorize the use of recycled water for frost control of vineyards.” If a potential frost protection project is proposed during the term of the Proposed Order that includes measures that protect water quality, that project could be considered under waste discharge requirements or a waiver of waste discharge requirements.

Comment 24: Section III.E.4 of the Fact Sheet includes an incorrect reference regarding salt and nutrient management plan compliance. The third paragraph of section E.4 of the Fact Sheet should reference Water Reclamation Requirement B.26 of Attachment G, rather than B.27.

Response: This typographical error has been corrected.

Comment 25: The Discharger supports the antidegradation discussion regarding the use of recycled water in section IV.D.2 of the Fact Sheet.

Response: Comment noted. No changes were made to the Proposed Permit in response to this comment.

Comment 26: The Discharger recommends changing the qualifying statement in section IV.D.2.d.ii of the Fact Sheet to read “whichever is limiting” rather than “whichever is lowest”.

Response: Section IV.D.2.d.ii of the Fact Sheet has been modified to use the term "whichever is limiting" in place of the term "whichever is lowest".

Comment 27: The Discharger identifies an inconsistency between the MRP (Table E-4, Footnote 11 in the August 16, 2010 draft permit) and the Fact Sheet (section VI.B.6) regarding the threshold for reducing acute toxicity monitoring requirements. The MRP identifies a threshold of "80% survival" and the Fact Sheet identifies a threshold of "90% survival".

Response: The acute toxicity effluent limitation in section IV.A.1.d of the Proposed Permit requires that the median for any three or more consecutive samples be at least 90 percent survival, thus Footnote 12 of the MRP in the Proposed Permit has been modified to correctly state the threshold of 90% survival for reducing acute toxicity monitoring requirements.

Comment 28: The Discharger requests that Attachment G, Water Reclamation Findings A.3.a.iii and A.3.b be modified as follows: "This Order includes a requirement that the Discharger must comply with any future salt and nutrient management plan ~~developed~~ adopted by the Regional Water Board."

Response: Findings A.3.a.iii and A.3.b have been modified as requested. In addition, Water Reclamation Requirement B.26 has been modified to replace the word "developed" with "adopted by the Regional Water Board."

Comment 29: Findings A.4 and A.10 of Attachment G incorrectly refer to the Draft Permit as Order No. R1-2010-0035.

Response: Findings A.4 and A.10 of Attachment G have been corrected to include the proper order number, R1-2010-0034.

Comment 30: The Discharger believes that monthly reporting to users on the nutrient levels in the City's recycled water is excessive since variation in the quality of the City's effluent is demonstrably minor relative to crop demand (as noted in the "water balance study report"), and the information cannot be used to alter real-time crop management. The Discharger suggests that this requirement be replaced with a requirement to make the information available on the city's website and to update it monthly.

Response: The City has submitted data that demonstrates that there is little variability in nitrate and ammonia concentrations in the effluent. No information has been provided on total nitrogen concentrations. In order to verify that total nitrogen concentrations have little variability, Table E-4 of the MRP has been modified to require monthly monitoring for nitrite and organic nitrogen. A new footnote, Footnote 17, has been added to Table E-4 to identify the purpose of this monitoring data and to provide a sunset clause. Footnote 17 to Table E-4 reads as follows: "Monitoring data for nitrite and organic nitrogen is needed in combination with monitoring data for nitrate and ammonia to determine the total nitrogen content of the effluent in advance of it being

used for reclamation. If monitoring during the first year of the permit shows that total nitrogen is less than 10 mg/L and has little variability, monitoring for nitrite and organic nitrogen may be eliminated for discharges to Basalt Pond. Note that upon completion of the reclamation system, the Discharger will be required to monitor for nitrogen constituents for discharges to the reclamation system. "

Regional Water Board staff is concerned that if the Discharger posts the data on their website, not all recycled water users will check for the data on the website. It would be acceptable to provide the monthly nutrient concentration to each recycled water user by email. Due to the fact that the recycled water users will need to use the Discharger's nutrient data to calculate any fertilizer applications, it appears to Regional Water Board staff that the recycled water users would need to know about variations in the recycled water on a regular basis. If the Discharger requests a reduction in the nutrient reporting frequency, the request would need to demonstrate that the expected variability in the recycled water would not affect the recycled water users' ability to properly calculate their supplemental nutrient applications.

Comment 31: Water Reclamation Requirement B.10 of Attachment G should be changed to: "Recycled water shall not be applied on water-saturated or frozen ground or during periods of precipitation such that runoff ~~is induced~~ cannot be controlled and contained." to allow for the future possibility of frost protection use of recycled water.

Response: Based on information submitted in the permit application, the permit is structured to allow for crop irrigation based on the agronomic needs of the crop. Agronomic rate determination is an attempt to meet both the water and nutrient demands of the crop. Frost protection use of recycled water is not currently authorized by the Proposed Permit. However, staff is willing to consider this type of application in the future. See response to Comment 23 and new Water Reclamation Finding A.10 in Attachment G.

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

Comment 32a: The Discharger requests that Water Reclamation Finding A.8 of Attachment G be changed to include accidental breakage of a sprinkler head on a properly maintained irrigation system in the definition of incidental runoff that would not be a violation of the Order.

Response: Water Reclamation Finding A.8 has been modified to include the example of accidental breakage of a sprinkler head on a properly maintained irrigation system in the definition of incidental runoff.

Comment 32b: The Discharger is concerned that the list of practices and strategies to prevent the occurrence of runoff identified in Water Reclamation Requirement 11 are presented as if they are all required, yet they are not all applicable to all irrigation scenarios. For example, the Discharger believes that item h. requiring the use of repeat start and stop times and multiple water days to increase irrigation efficiency and reduce runoff potential, may not apply to drip irrigation systems. The Discharger requests that

Water Reclamation Requirement B.11 be modified to read as follows: “Practices and strategies to prevent the occurrence of runoff shall include, ~~but not be limited to~~ where appropriate.”

Response: Regional Water Board staff disagree with the Discharger’s statement that repeat start and stop times and multiple water days to increase irrigation efficiency are not applicable on drip irrigation systems. Regional Water Board staff do agree that some practices may not apply to all irrigation situations and has modified the permit language in Water Reclamation Requirement B.11 of Attachment G to read “Practices and strategies to prevent the occurrence of runoff shall include, where appropriate, but not be limited to:...”

Comment 33a: The Discharger strongly urges the Regional Water Board to eliminate the requirement for 100-foot setbacks between recycled water use areas and surface waters, stating that the requirement has no rationale or justification and could needlessly eliminate wide swaths of use sites and that the permit requirements should rely on the existing provisions in Title 22 to prevent recycled water runoff to surface waters.

Response: The Proposed Order does not prohibit recycled water application within 100 feet of a stream corridor, rather it requires information to demonstrate that any recycled water use that is closer than 100 feet to a stream will not result in runoff, impacts to riparian vegetation or other impacts to the stream. Reliance on Title 22 alone is insufficient to protect water quality because Title 22 requirements are intended to address impacts to public health exclusively. Our responsibility is much broader and includes protection of aquatic species as well as riparian zones. The United States Environmental Protection Agency (EPA) and the Regional Water Board suggest 100 foot setbacks to be the *minimum* setback of agricultural or urban development from any watercourse or wetland feature in order to protect all beneficial uses. In order to protect water quality, it is appropriate to require that the technical report discuss any irrigation in these sensitive areas and include additional BMPs where necessary to minimize potential impacts.

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

Comment 33b: Water Reclamation Finding 7 of Attachment G is incorrectly referenced as Water Reclamation Provision C.2. The correct reference is Water Reclamation Provision D.2.

Response: Water Reclamation Finding 7 of Attachment G has been modified to correctly reference Water Reclamation Provision D.2 rather than C.2.

Comment 34: Water Reclamation Requirement B.11.j of Attachment G specifies design of recycled water transport facilities to meet 25-year, 24-hour storm event criteria. The State Recycled Water Policy only specifies this design criterion for storage ponds.

Response: It is correct that the State Recycled Water Policy specifies protection of storage ponds from 25-year, 24-hour storm events. It is not unreasonable, however, for the Regional Water Board to expect protection of all infrastructure, given the fact that the reclamation transport facilities should not be in use during rainfall events. The Proposed Permit language has been modified to be consistent with the language in the Recycled Water Policy and reads as follows: “Adequate protection is required of all ~~facilities used to transport and store~~ recycled water reservoirs and ponds against overflow, structural damage, or a reduction in efficiency resulting from a 25-year, 24-hour storm or flood event or greater, and notification of the Regional Water Board Executive Officer, if a discharge occurs.”

Comment 35: Water Reclamation Technical Report Requirement C.1.b.i.(d) requires that the City develop a training program and that the training program provides a means of ensuring that recycled water and other supplemental nutrients (including fertilizers) are used appropriately. The Discharger is concerned that this requirement would present a significant disincentive to voluntary agricultural recycled water use and believes that the training program should instead be designed to identify the City’s agronomic rate estimates and to train users on how to calculate the nutrient application from the City’s recycled water.

Response: Regional Water Board staff recognizes the difficulty of requiring recycled water providers to oversee supplemental fertilizer use by agricultural users and realizes that supplemental fertilizer use may occur regardless of the source of irrigation water. Regional Water Board staff agrees that training users how to calculate the need for supplemental nutrient application based on knowledge of the nutrient content of the City’s recycled water is important. The training should also educate the users regarding the water quality impacts of over-application of nutrients and the benefits of proactively managing nutrient (and salt) inputs, even in advance of the Recycled Water Policy salt and nutrient management plan requirements being implemented in this groundwater basin. Furthermore, the recycled water user agreements should contain language that requires the user to agree to take reasonable steps to prevent the over-application of nutrients.

Water Reclamation Technical Report Requirement C.1.b.i.(d) of Attachment G has been modified as follows: “Means of ensuring that recycled water and other supplemental nutrients (including fertilizers) are used appropriately. This should include ~~a means for accounting for nutrient sources (including recycled water content and fertilizers) to ensure that nutrients are applied at agronomic rates~~ a plan to train recycled water users how to take reasonable steps to prevent the over-application of nutrients, including training in how to calculate the need for supplemental nutrient application based on knowledge of the nutrient content of the City’s recycled water.”

Comment 36: The word “recycled” is misspelled in the heading for Water Reclamation Technical Report Requirement C.1.d.

Response: The typographical error has been corrected.

Comment 37: Water Reclamation Technical Report Requirement C.2 limits vineyard irrigation to drip irrigation only. The Discharger states that there are sites within the areas identified in the City's 2005 EIR that are irrigated with mist or spray irrigation plumbing, and at least one site that is pasture. The Discharger requests that the requirements in Attachment G be expanded beyond "vineyards with drip irrigation" to "Agricultural Irrigation".

Response: The Proposed Permit approach of having simpler streamlined requirements for vineyard irrigation was based on this use being one that is well controlled due to the low application rates and volumes of water applied. To address the Discharger's concern regarding additional methods for agricultural irrigation, the Proposed Permit has been modified as follows:

1. A new footnote, Footnote 1, has been added to Attachment G to define micro-irrigation as follows: 'Micro-irrigation refers to low-pressure irrigation systems that spray, mist, sprinkle or drip the recycled water onto the soil surface very near the plant or below the soils surface directly into the plant root zone.'
2. All references to "vineyards with drip irrigation" have been changed to "vineyards with micro-irrigation" to recognize that there are several low-pressure methods that apply water at low application rates to the root zone of the plant.
3. Water Reclamation Technical Report Requirement C.3 has been modified to include "Other Agricultural" reclamation uses.
4. A new footnote, Footnote 4, has been added to Attachment G to define "Other Agricultural reclamation uses as follows: "Other agricultural reclamation includes irrigation on agricultural use sites that are not vineyards with micro-irrigation. Other agricultural reclamation may include, but not be limited to vineyards with spray irrigation, pastures with spray irrigation, etc."

Town of Windsor

The Town of Windsor submitted a comment letter dated September 15, 2010 with the following comments:

Comment 1a: New requirements for recycled water use site approvals in the draft permit go well beyond what has typically been required of other water recyclers regionally and statewide. It is Windsor's view that the existing Title 22 reclamation requirements, such as those issued for Santa Rosa and the Town of Windsor, are more than adequate to protect water quality. The Town is concerned that these requirements could become a significant impediment to attracting new agricultural users. The Town requests if the permit is adopted in its current form, that the Regional Water Board periodically review the impact of these new requirements to determine whether they impede development of new recycled use sites, and if so, modify the permit accordingly.

Response: The recycled water language in the Proposed Permit is supported by the State Recycled Water Policy and the State Landscape Irrigation Permit which require additional technical information to demonstrate that reclamation will result in minimal

degradation to surface water or groundwater. These requirements are not intended to be a disincentive to the voluntary use of recycled water. Requirements for hydraulic and nutrient agronomic rate determinations and oversight of reclamation uses have become a well-established standard, particularly in agricultural areas of the State. Although the technical report requirements in the Proposed Permit require some initial effort, the approach presented in the Proposed Permit allows dischargers to avoid significant expenditures associated with groundwater monitoring, site-specific antidegradation analyses and the preparation of a detailed groundwater basin salt and nutrient management plan.

Regional Water Board staff anticipates that once the Discharger works through the process with its first recycled water use site, it will be able to easily replicate the process for future use sites. It is also the Regional Water Board's hope that the recycled water purveyors will work together to develop recycled water use guides and templates.

(See also response to Comment K.7 under the Healdsburg heading of the May 27, 2010 Response to Comments document.)

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

Comment 1b: The Town is concerned with the specific requirement for quarterly reporting while the Statewide General Permit for Landscape Irrigation requires only annual reporting. The Town believes that alignment with the State accepted reporting standards will better position this region to succeed in supporting the statewide goals of utilizing the recycled water resources appropriately.

Response: The California Water Code, section 13523.1 requires that master reclamation permits contain a requirement that the discharger submit a quarterly report summarizing reclaimed water use, including the total amount of reclaimed water supplied, the total number of reclaimed water use sites, and the locations of those sites, including the names of the hydrologic areas underlying the reclaimed water use sites.

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

Comment 2a: The Town supports the proposed requirement to inform recycled water users of the nutrient content in recycled water so that irrigation managers can take this into account when they calculate agronomic rates for supplemental fertilization. The Town opposes any requirements that would make recycled water providers responsible for all nutrients applied on recycled water use sites managed by others because "this would be an intrusion into the crop management practices of private users". The Town strongly urges the Regional Water Board to retain the current permit approach where compliance is determined by the Discharger providing nutrient information to recycled water users.

Response: See response to Comment 35 under the Healdsburg heading.

Comment 2b: The Town requests that nutrient content reporting to users should be required on a seasonal basis rather than monthly because effluent quality variation is typically minor relative to crop demand and the information cannot be used to alter real-time crop management and monthly reporting requirements would be burdensome for the provider when there are a large number of recycled water use sites. The Town suggests that nutrient concentration be reported to users monthly only when more than 65 percent of agronomic nutrient demand of plants is met with recycled water. Alternatively, the information could be made available by posting on websites operated by recycled water providers.

Response: See response to Comment 30 under the City of Healdsburg heading. The 65 percent requirement identified in the comment is arbitrary and would be difficult to implement or verify compliance.

Comment 3: The Town strongly urges the Regional Water Board to eliminate the requirement for 100-foot setbacks between recycled water use areas and surface waters, stating that the requirement has no rationale or justification and could needlessly eliminate wide swaths of use sites and that the permit requirements should rely on the existing provisions in Title 22 to prevent recycled water runoff to surface waters.

Response: See response to Comment 33a under the City of Healdsburg heading.

Comment 4: The Town, as an agency using water drawn from the Russian River well field in Windsor, finds that the Draft Permit is protective of Russian River water quality both in the surface water discharge provisions of the NPDES permit and the provisions of the reclamation requirements

Response: Comment noted. No changes were made to the Proposed Permit in response to this comment.

Comment 5: The Town is concerned about the inclusion of receiving water limitations for TDS and SC that come with compliance determination challenges and urges the Regional Water Board to formally review TDS and SC objectives for the Russian River.

Response: See response to Comments 4a and 4c under the Healdsburg heading. The Basin Plan contains TDS and SC objectives for the mainstem Russian River only, therefore these objectives do not apply to the Town of Windsor because the Town discharges to Mark West Creek.

Russian River Watershed Association

The Russian River Watershed Association (RRWA) includes nine public agencies in the Russian River watershed in Sonoma and Mendocino Counties that have come together to coordinate regional programs for clean water and watershed enhancement. Nearly all member agencies manage and operate wastewater treatment and disposal systems,

and most either have or plan to have recycled water delivery systems for the beneficial reuse of treated wastewater.

RRWA's comments are identical to comments 1a, 1b, 2a, 2b, and 3 raised in the Town of Windsor's letter, thus responses to Comments 1a, 1b, 2a, 2b, and 3 under the Town of Windsor heading also respond to RRWA's comments.

Sonoma County Water Agency

Sonoma County Water Agency's comments are identical to comments 15, 17, 23, 30, and 33a raised in the City of Healdsburg's letter.

Clean Water Coalition of Northern Sonoma County

The Clean Water Coalition of Northern Sonoma County (CWC) submitted a comment letter dated September 17, 2010 which is focused on water reclamation and groundwater protection. CWC describes itself as an organization comprised of local property owner groups and concerned individuals within the agricultural valleys in Northern Sonoma County. CWC represents citizens who live in the Alexander Valley, Dry Creek watershed or Middle Reach of the Russian River, and who depend on high-quality groundwater supplies for drinking, domestic uses, agriculture and wineries. Following is a summary of CWC's comments submitted by letter dated September 17, 2010 and Regional Water Board staff responses to those comments. CWC also resubmitted its April 23, 2010 comment letter. Regional Water Board staff previously responded to these comments in the May 27, 2010 Response to Comments document that was part of the June 10, 2010 Board Meeting package.

Comment 1: CWC reiterates its strong support of the Water Reclamation Requirements and Provisions that were included in the draft permit considered at the June 10, 2010 public hearing. CWC supports the current concept and language regarding general technical report requirements (section C.1 of Attachment G) which implement the concept of programmatic and site-specific technical reports and public notice requirements and the technical report requirements for urban reclamation (section C.3 of Attachment G). CWC has three primary criticisms of the changes made to Attachment G in the August 16, 2010 draft permit as identified in the following Comments 1a, 1b, and 1c.

Comment 1a: The specific requirements for technical reports for reclamation on vineyards with drip irrigation were drastically, inappropriately and unnecessarily reduced to generic and non-specific language that will not allow the applicant, the Board or the public to make valid judgments about the potential for these projects to cause contamination of groundwater. CWC believes that the requirements for programmatic technical reports for vineyards with drip irrigation should be the same as those for urban reclamation and strongly recommends that section C.2 of Attachment G be rewritten to contain the same very specific descriptions of required contents for an Operation Plan and Irrigation Management Plan as those in section C.3 of Attachment G.

Response: The underlying principles behind the requirements for vineyards with drip and urban reclamation are the same – application of recycled water at agronomic rates on unsaturated soils utilizing properly designed and maintained irrigation systems and with implementation of other appropriate best management practices to prevent and minimize the potential for irrigation runoff or percolation to groundwater. In addition, the Discharger’s recycled water contains low nitrogen concentrations. The differences in requirements between vineyards with drip and urban reclamation recognize that farmers and vineyard managers are accustomed to dealing with the hydraulic and nutrient needs of their crops and the low application rates associated with drip irrigation and the low likelihood of runoff problems, whereas it is more common to observe examples of over-application of water and nutrients in urban settings.

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

Comment 1b: A premature and incorrect conclusion was made that these vineyard projects with drip irrigation are eligible for streamlined permitting under the State Recycled Water Policy. CWC strongly recommends that Water Reclamation Finding A.3, Streamlined Permitting, concluding that the Discharger’s projects are eligible for streamlined permitting be removed from Attachment G and that Water Reclamation Technical Report Requirement C.1.c regarding consideration of site-specific conditions be retained and that judgments regarding a project’s eligibility should be made when information from a rigorous programmatic technical report is available.

Response: Regional Water Board staff believes that many of the recycled water use sites proposed by Healdsburg may be eligible for streamlined permitting in accordance with definitions provided in the Recycled Water Policy. The final determination regarding eligibility for streamlined permitting is contingent upon submittal of the final technical reports and approval of the technical reports by the Regional Water Board Executive Officer. The introductory paragraph of Water Reclamation Finding A.3 has been modified to read as follows: “The irrigation elements of the Discharger’s proposed reclamation project may meet the criteria for streamlined permitting”

Comment 1c: The conclusions from the Gus Yates report (also identified in Comment 22 under the Healdsburg heading) were inserted into the Fact Sheet as absolute with no discussion of the underlying assumptions and resulting ranges of possible results. CWC requests that these statements be modified to recognize the uncertainties in the underlying assumptions and the ranges of conclusions that could result. CWC strongly recommends that the programmatic technical report for any project proposed for the Middle Reach of the Russian River be required to provide much more clear and complete analysis of the potential for groundwater contamination than that in the current Gus Yates report before it receives approval.

Response: The statements in section II.D.3 of the Fact Sheet simply stated that the Discharger submitted the Gus Yates report and the conclusions made in the report without commenting on those conclusions. Regional Water Board staff acknowledges that there are uncertainties in the underlying assumptions made in the report and the ranges of conclusions that can result. In fact, the Gus Yates report has been

modified by its author to acknowledge the uncertainties and limitations. The modified Gus Yates report is useful in that it shows that even with the uncertainties, recycled water use on the valley floor vineyards should not pose a significant threat to water quality. The Discharger is still required to submit its technical report studies to validate this information for each recycled water use site.

See also response to Comment 22.

Comment 2: CWC strongly recommends that any permit place an absolute limit on the amount of water applied and require metering to validate compliance. There appears to be no provision in the current draft for such a limit and its verification. CWC bases this recommendation on the “obvious complexities of analysis of the potential for a specific reclamation project to cause groundwater contamination and because of the strong dependence of such an analysis on the amount of recycled water applied.”

Response: The Proposed Permit requires the Discharger to report the amount of flow delivered to each use site on a monthly basis. Metering of flow to each use site will be used to verify that recycled water is being delivered at the agronomic rates identified in technical reports that are submitted and approved. The Proposed Permit does not place an absolute limit on the amount of water applied at each use site because this determination will be made based on technical information submitted pursuant to requirements in Attachment G. The approved technical reports will establish the specific requirements (hydraulic and nutrient agronomic rates, best management practices, etc) that each use site will need to adhere to in order to comply with the Proposed Permit. Once a technical report containing specific application rates is approved, this will constitute the limit on the amount of recycled water to be used at the application site. The Discharger has provided some preliminary technical information regarding the Syar Property and other valley floor vineyard areas that will ultimately need to be submitted in conjunction with the other technical information required in a technical report in order to obtain final approval for the Syar Property and other specific valley floor vineyards.

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

Russian Riverkeeper

The Russian Riverkeeper submitted a comment letter dated September 17, 2010. Russian Riverkeeper describes itself as an organization having 1450 members in support of the mission to work with the community to advocate, educate and uphold environmental laws to ensure the protection and restoration of the Russian River. Following is a summary of Russian Riverkeeper’s comments and Regional Water Board staff responses to those comments.

Russian Riverkeeper’s comments are the same as comments raised in the Clean Water Coalition’s letter.

Comment 1: As a current member of the Clean Water Coalition (CWC), Russian Riverkeeper fully endorses and supports the comment letter submitted by the CWC.

Response: Comment noted. Responses to the CWC letter are included in this Response to Comments document.

Westside Association to Save Agriculture

The Westside Association to Save Agriculture (WASA) submitted a comment letter dated September 17, 2010. WASA describes itself as a community organization formed to promote stewardship of the land and to protect both agricultural use and natural resources of the Middle Reach of the Russian River. CWC also resubmitted its April 23, 2010 comment letter. Regional Water Board staff previously responded to these comments in the May 27, 2010 Response to Comments document. Following is a summary of WASA's September 17, 2010 comments and Regional Water Board staff responses to those comments.

Comment 1: WASA appreciates the fact that Regional Water Board staff met with them to review drafts of the Healdsburg permit, but is discouraged that much of the public's input was omitted from the most recent draft of the permit.

Response: Regional Water Board staff modified language in the Proposed Permit in response to the Regional Water Board's direction to make a distinction between urban reclamation and the irrigation of vineyards with drip irrigation. The separation of technical report requirements for these two main components of Healdsburg's reclamation plan was based on a recognition that drip irrigation of vineyards is a specialized form of irrigation that allows for control of recycled water application through a low pressure system delivering the recycled water at low hydraulic rates directly to the root zone of the vine. The technical report requirements for vineyards with drip irrigation require submittal of technical information to substantiate the hydraulic and nutrient agronomic rates and to demonstrate that the proposed hydraulic and nutrient application rates do not exceed the agronomic rates. In addition, the technical report must identify best management practices, maintenance plan, leak detection and correction plan, training plan, monitoring, reporting and use site inspection schedules along with site-specific maps identifying the location of the irrigation system in relation to sensitive site features (e.g., surface waters, wells, property boundaries, structures and utilities, etc). See also response to Comment 1a under the Clean Water Coalition heading.

Technical Report Requirement C.2.a.i has been modified to clarify that the required Agricultural Irrigation Operations and Management Plan must not only consider, but also identify soil characteristics, land slope, depth to groundwater and proximity to surface water. The specific information used to determine the hydraulic and nutrient requirements is necessary for Regional Water Board Executive Officer to make an informed approval of the technical report. Technical Report Requirement C.2.a.i has been modified to read as follows: "Identification of the hydraulic and nutrient requirements of the grape crop and identifying soil characteristics ..."

Comment 2: WASA states that since all of the previous environmental documents point to the NPDES/Master Reclamation Permit as the controlling document, the reclamation technical reports required by the permit must provide sufficient detail to support the conclusion of no unmitigated impacts to surface or groundwater.

Response: We agree with this statement. The reclamation technical report language in the Proposed Permit requires submittal of sufficient detail to support conclusions made in each technical report. The technical reports will need to demonstrate that there are no unmitigated impacts to groundwater or surface water prior to receiving Regional Water Board Executive Officer approval.

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

Comment 3: WASA believes that wastewater irrigation in the alluvial soils of the Middle Reach of the Russian River may have a significant impact on the environment, based on substantive facts in the record for the Healdsburg Draft Mitigated Negative Declaration, the North Sonoma County Agricultural Reuse Project (NSCARP) project, and the Santa Rosa Indirect Discharger project. WASA and CWC have provided substantial evidence that Healdsburg's proposed irrigation sites located in the alluvial valley soils north and south of Healdsburg's wastewater treatment plant meet the Recycled Water Policy criteria of unique, site-specific conditions which are high transmissivity soil and shallow, high quality groundwater. WASA believes that there should be a special study requirement for the proposed agricultural discharge project to determine the appropriateness of recycled water use in various portions of the project before investing in full technical studies.

Response: The Recycled Water Policy defines unique, site-specific conditions as "irrigation over high transmissivity soils over a shallow (5' or less) high quality groundwater aquifer" with the intent that all three conditions be met for the Regional Water Board to make a finding of unusual circumstances. Regional Water Board staff found that evidence in the record shows that part of the Discharger's reclamation project is proposed in an area of high transmissivity soils over a high quality groundwater aquifer. However, evidence in the record shows that groundwater in the area ranges from about 15 to 40 feet below the ground surface.

The Proposed Permit includes technical report requirements for vineyards with drip irrigation that includes the submittal of an Agricultural Irrigation Operations and Management Plan that specifies the agronomic rates and describes a set of reasonably practicable measures to ensure compliance with the agronomic rate requirement. A preliminary study titled "Impacts of Recycled Water Irrigation on Groundwater and Surface Water Flow and Quality near Healdsburg: a Generalized Approach" (September 21, 2010) submitted by the Discharger provided an assessment of the recycled water and conditions in the vineyard irrigation areas located in alluvial areas near the Russian River and concluded, under the range of conditions evaluated, that irrigation of these vineyard areas would be less than significant provided that the quality of the recycled water with regard to nitrogen, salts and California Toxics Rule constituents does not

change in relation to assumptions used in the study and that irrigation does not exceed 9 inches per year on any irrigation block.

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

Comment 4: WASA requests that the draft permit eliminate the premature assumption that the study area meets the requirements of streamlined permitting. WASA is concerned that streamlined permitting and minimized requirements for the program level agricultural irrigation technical study appear to be based on unsubstantiated evidence – current data and analyses that have not been provided to the public, mitigations that are to be defined in future studies, and reports that are not complete or certified (e.g., engineering report, draft mitigated negative declaration).

Response: See response to Comment 1b under the Clean Water Coalition heading.

Comment 5: WASA requests that the draft permit require groundwater monitoring to validate the theoretical assumptions and models used and to assure no harm is being done to the drinking water aquifer.

Response: The Regional Water Board has the authority to require groundwater monitoring if it is deemed necessary to investigate the quality of groundwater in relation to a discharge, and section VIII.B of the MRP states “Groundwater monitoring may be established in the future if necessary to assess impacts of effluent discharge to the reclamation system.” The Regional Water Board does not have evidence that would cause it to require groundwater monitoring at this time.

In addition, the Recycled Water Policy, drafted by stakeholder interests, includes criteria for the preparation of salt and nutrient management plans for all groundwater basins in California. The Policy identifies an approach where implementation measures are used for recycled water application sites with the understanding that site-by-site groundwater monitoring is not needed. This Proposed Permit incorporates requirements that are focused on appropriate site conditions and reclaimed water irrigation practices and does not include site-specific monitoring, nor does it include requirements for the City to prepare detailed basin-wide salt and nutrient management plans. The Regional Water Board believes that this requirement is consistent with the State Water Board requirement for salt and nutrient management plans for all groundwater basins.

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

Comment 6: WASA requests that the draft permit set more specific program level study criteria, including but not limited to, requirements for analyses of the differences in soil profiles throughout the study area, and the hydrogeologic conditions created by the gravel pits.

Response: See Response to Comment 3 above.

Comment 7: WASA requests that the draft permit require fate and transport studies to ensure mitigations and best management practices address hot spots and potential contamination of residential wells. WASA is particularly concerned that the draft permit and studies and reports that its requirements are based on do not address the issue of “hot spots” where concentration of contaminants may be greater than the averages predicted in theoretical analyses.

Response: See Response to Comment 3 above.

Comment 8: WASA requests that the draft permit require the Discharger to meter the flow to each agricultural user based on the calculated agronomic rate for the characteristics of that user’s land as a means to ensure that agronomic rates are not exceeded at each use site.

Response: The Proposed Permit requires the Discharger to monitor and report the amount of recycled water delivered to each recycled water use site. This information will be used to document that agronomic rates are not being exceeded. If agronomic rates are being exceeded, adjustments will be required to prevent exceedances of the agronomic rates. Regional Water Board staff has the authority to take enforcement action for violations of the agronomic rate requirement.

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

Comment 9: WASA requests that the draft permit reinstate the requirements for an Operations and Management and Irrigation Management Plan to the drip irrigation technical study and that this further include the essential requirements for calculation of agronomic rates and protections to the degradation of groundwater.

Response: The vineyard with drip irrigation technical report must include an Agricultural Irrigation Operations and Management Plan that will include calculations of agronomic rates and other components to ensure protection of groundwater. The Proposed Permit recognizes that some degradation of groundwater may occur and allows for this potential provided that all conditions of the antidegradation policy are met (see antidegradation analysis in section IV.D.2 of the Fact Sheet), but prohibits any degradation that results in exceedances of water quality objectives or adverse impacts to beneficial uses.

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

Comment 10: The draft permit and the Yates study do not define agronomic rates. In addition, WASA recommends that the Regional Water Board require the calculation of different scenarios or a sensitivity analysis using various assumptions relative to irrigation rates and deep percolation rate variability on different soil depths and types. The objective of this analysis would be to define what parameters lead to the cross-over in conclusion from net dilution of contaminants in groundwater to net concentration. Addressing spatial variability in irrigation application rates relative to soil depths and

slope will also help identify potential “hot spots” where concentrations of contaminants may be higher than the theoretical averages.

Response: See response to Comment 3 (second paragraph).

Comment 11: WASA comments that best practices are not defined in the NPDES permit, even though many best management practices exist to ensure that wastewater is not over-applied on any one block of vineyard land. WASA mentions that there are a number of demonstration projects in Sonoma County that utilize available technology to measure irrigation rates and soil retention. WASA further suggests that agricultural recycled water users be required to install pressurized systems with pressure sustaining valves to ensure even distribution and to avoid hot spots, flow regulators that notify the vineyard manager of leaks due to broken pipes, and filtration systems to remove organic and inorganic contaminants to avoid clogged emitters.

Response: Attachment G of the Proposed Permit identifies best management practices that should be used, where appropriate to prevent runoff. In addition, the technical reports prepared for the recycled water use sites must identify the specific BMPs that will be implemented to ensure that recycled water is applied in a manner that meets agronomic rate requirements. BMPs must implement currently accepted methods, and this may include practices such as installation of pressure sustaining valves on pressurized systems to ensure even distribution, flow regulators, or filtration systems to prevent clogging.

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

Comment 12: Mitigation measures must be clearly defined and enforceable.

Response: Section III.B of the Fact Sheet identifies mitigation measures identified in the Discharger’s FEIR to protect water quality from potential impacts related to its reclamation system. The Proposed Permit requires the Discharger to comply with effluent limitations, identify and adhere to hydraulic and nutrient agronomic rates, and implement best management practices to ensure that recycled water is not over-applied and does not result in runoff. The Regional Water Board has the authority to take enforcement action if these requirements are violated.

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

Russian River Watershed Protection Committee

Brenda Adelman, on behalf of the Russian River Watershed Protection Committee (RRWPC), submitted an email with comments on September 17, 2010. Following is a summary of RRWPC’s comments and Regional Water Board staff responses to these comments.

Comment 1: RRWPC identifies an inconsistency between the MRP (Table E-4, Footnote 11 of the August 16, 2010 draft permit) and the Fact Sheet (section VI.B.6)

regarding the threshold for reducing acute toxicity monitoring requirements. The MRP identifies a threshold of “80% survival” and the Fact Sheet identifies a threshold of “90% survival”.

Response: See response to Comment 27 under the Healdsburg heading.

Comment 2: Table E-6, Footnote 20 (of the August 16, 2010 draft permit) states that monitoring frequencies may be reduced if these constituents are present at concentrations that do not pose a threat to groundwater quality. RRWPC recommends that this footnote be modified to include surface water quality as well. RRWPC supports the concept of reducing initial monthly monitoring frequencies to annual for TDS, chloride, boron, and sodium if constituents are present in concentrations that do not threaten water quality, but is concerned about eliminating monitoring completely. If sampling is eliminated, how will anyone know if the problem resurfaces after that occurs?

Response: Footnote 23 of the Proposed Permit (formerly Footnote 20) has been modified to include surface water quality.

Comment 3: Table E-6 includes a requirement for the Discharger to monitor for Title 22 pollutants one time during the five year term of the permit. What is the monitoring frequency of Title 22 pollutants at REC-002 (recycled water delivered to reclamation system) if any of these pollutants are determined to be out of compliance?

Response: The Discharger is required to monitor for Title 22 pollutants two times during the term of the proposed permit – once in the discharge to Basalt Pond and once in the discharge to the reclamation system. If any Title 22 pollutant is detected at levels that are higher than the water quality objectives, the Discharger would be required to sample more frequently to develop an adequate data set with which to determine compliance. This could be done with a change to the MRP or by way of a 13267 (request for technical report) letter. If a pollutant or pollutants are demonstrated to exceed Title 22 water quality criteria, the Discharger would be required to submit a plan to address this issue.

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

Comment 4: RRWPC agrees with the cease and desist order requirement for Healdsburg to implement its reclamation program within five years, but is concerned that this time schedule also gives Healdsburg justification to demand a loosening of recycled water requirements in order to comply in a timely manner. RRWPC urges the Regional Water Board not to grant further concessions regarding recycled water requirements.

Response: The Regional Water Board’s goal is to provide Healdsburg with a reasonable amount of time to achieve compliance with the seasonal discharge prohibition and to establish recycled water requirements that are protective of water quality.

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

Comment 5: RRWPC is concerned that the Gus Yates report may not provide a complete and accurate assessment of the impacts of recycled water use at the Syar Property and questions if Regional Water Board staff agrees with the consultant's analysis.

Response: See response to Comment 22 under the Healdsburg heading and Comment 1c under the Clean Water Coalition heading. Effluent water quality with regard to two key potential groundwater pollutants, nutrients and salts, is below water quality objectives for these pollutants. Due to the high quality of the effluent with regard to nitrogen and the fact that salts in the recycled water are well below water quality objectives, Regional Water Board staff agree that, within the range of conditions evaluated in the expanded Gus Yates report, irrigation with recycled water is unlikely to result in exceedances of water quality objectives, but could result in minor increases in the levels of these pollutants in groundwater. The Recycled Water Policy acknowledges that the use of water for irrigation, regardless of its source, could affect groundwater over time and the Proposed Permit allows for minor degradation of groundwater provided that all conditions required by the antidegradation policy are met (see complete discussion in section IV.D.2 of the Fact Sheet).

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

Comment 6: RRWPC questions why there are two number 9's in section III.B of the Fact Sheet, with one of them crossed out.

Response: The language that is struck out in section III.B, item 9, is duplicated in item 5 in that same section. This deletion is discussed in the May 27, 2010 Staff Changes document that was part of the June 10, 2010 hearing package.

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

Comment 7: RRWPC is concerned that the statement regarding salt and nutrient management plans in section III.E.4 of the Fact Sheet does not identify the impact of aquifer drawdown on concentrating constituents in groundwater. RRWPC asks two questions regarding this topic: (1) "If the extent of the aquifer is not know, how can it be determined at what point salt intrusion is becoming a water quality problem?" and (2) "Will there be any studies to quantify the aquifer and determine how much salt intrusion is allowed to avoid harm?"

Response: The paragraph referred to in this comment simply restates language from the Recycled Water Policy. Salt and nutrient management plans developed pursuant to the Recycled Water Policy are intended to provide a means of ensuring that salts and nutrients from all sources be managed on a basin-wide or watershed-wide basis. According to the Recycled Water Policy, the degree of specificity within the plan and the length of the plans will be dependent on a variety of site-specific factors, including but

not limited to size and complexity of a basin, source water quality, stormwater recharge, hydrogeology and aquifer water quality.

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

Comment 8: RRWPC is concerned that the draft permit requires Healdsburg to move forward with its reclamation plan, prior to development of a Salt and Nutrient Management Plan and that Healdsburg's reclamation project, even with minimal incremental contribution, could have serious effects on the ecological balance. Section III.E.4 of the Fact Sheet refers extensively to the need to develop a Salt and Nutrient Management Plan and that Healdsburg must abide by the conditions of the Plan, yet the permit does not provide any specifics about when the Plan will be adopted, the time line for getting it done, what will be addressed in the Plan, or opportunities for public comment.

Response: The Recycled Water Policy requires the development of a regional/subregional salt and nutrient management plan for each ground water basin in the State within five years of the date of the Policy as a means of ensuring that salts and nutrients from all sources be managed on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of beneficial uses. The Recycled Water Policy specifically states that the regional/subregional approach has been chosen over imposing requirements solely on individual recycled water projects. It is not the intent of the Recycled Water Policy to hold up new projects until the salt and nutrient management plans are completed. The Recycled Water Policy requires that stakeholders participate in the regional/subregional salt and nutrient management planning process in order to be exempt from preparing an individual salt and nutrient management plan. The Proposed Permit requires that the Discharger comply with any future salt and nutrient management plan adopted by the Regional Water Board. In addition, Attachment G of the Proposed Permit requires that the Discharger submit technical reports that identify agronomic rates and include a plan to ensure that irrigation projects are designed to adhere to agronomic rates and other reclamation requirements identified in Attachment G.

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

Comment 9: RRWPC is concerned that antidegradation language and the definition of incidental runoff in the Proposed Permit are not enforceable. RRWPC is particularly concerned about nutrients in Healdsburg's recycled water and possible impacts on the Russian River, particularly during periods of low flow. RRWPC further questions whether Healdsburg's treatment process includes phosphorus removal.

Response: See response to Comment 12 under the Westside Association to Save Agriculture heading.

Comment 10: RRWPC does not understand the statement about TDS and chloride in section IV.G.3.d of the Fact Sheet.

Response: Section IV.G.3.d of the Fact Sheet has been modified to provide clarification as follows: “The Discharger monitored groundwater upstream and downstream of the its discharge of disinfected secondary effluent to Basalt Pond from 2005 through 2007 for ammonia, TDS, nitrate, nitrite, chloride, and fluoride. Monitoring data for these constituents in the upstream and downstream groundwater did not indicate exceedances of applicable secondary water quality objectives established in the Basin Plan, however there were increases in TDS and chloride concentrations in the downstream wells in comparison to the upstream wells. Because discharges of secondary treated effluent did not cause exceedances of water quality objectives, and because the Discharger’s disinfected tertiary effluent meets applicable water quality objectives for nutrients and salts, discharges of tertiary treated effluent to the recycled water storage pond are not expected to cause exceedances of applicable water quality objectives in the groundwater”.

Comment 11: RRWPC identifies an inconsistency between the MRP and section V.B.4 of the Fact Sheet regarding the need for monitoring of TDS and chloride.

Response: As identified in Comment 13 under the Healdsburg heading, monitoring for TDS and chloride are not required by the MRP, thus Footnote 17 of the Proposed Permit has been modified accordingly. The permit contains a special study that requires the Discharger to assess Basalt Pond in comparison to another nearby gravel pit for specific water quality parameters, including TDS and chloride, to determine whether any increases in these constituents in Basalt Pond are the result of effluent discharges, natural causes, or both.

Comment 12: RRWPC is concerned about the details of how nutrient applications will be determined by the recycled water users.

Response: See response to Comment 30 under the Healdsburg heading.

Comment 13: Water Reclamation Requirement B.9.b allows for possible reductions in the required frequency for the Discharger to notify recycled water users regarding nutrient concentrations in the recycled water “if nutrient concentrations are low and consistent from month to month”. RRWPC would like a definition of what is low and questions whether phosphorus will be included in this determination along with nitrogen.

Response: Concentrations of total nitrogen below 10 mg/L may be considered low. Healdsburg’s effluent data shows that nitrogen concentrations are low due to nutrient removal in the wastewater treatment plant. The Proposed Permit does not require reporting of phosphorus levels to the recycled water users, however, the monitoring and reporting program requires Healdsburg to monitor for phosphorus in its discharge so that data is available to determine reasonable potential at such time as the State and Regional Water Boards select an appropriate method for interpretation of the Basin Plan’s narrative objective.

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

Comment 14: RRWPC requests clarification regarding the kinds of situations that could be excluded from the 100-foot setback required by Water Reclamation Requirement B.11.a and recommends increasing the setback to 200 feet.

Response: Examples of situations that could be excluded from the 100-foot setback requirement include flat land or land that is graded away from the stream or gutter being irrigated with drip irrigation at agronomic rates, or urban areas with best management practices to capture irrigation runoff such as berms or gated storm drains. The Proposed Permit language requires submittal of information to demonstrate that something less than a 100-foot setback is protective.

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

Comment 15: RRWPC questions why Water Reclamation Requirement B.15, which prohibits by-passing of untreated or partially treated recycled water, has been deleted.

Response: Water Reclamation Requirement B.15 was deleted because Prohibition III.D of the Proposed Permit contains a similar prohibition.

Comment 16: RRWPC questions why Water Reclamation Requirement B.25, which specified requirements for protection of recycled water ponds and storage reservoirs from erosion, washout and flooding, has been deleted.

Response: Requirements for protection of recycled water facilities from flooding were moved to Water Reclamation Requirement B.11.j.

Comment 17: RRWPC requests clarification of how the programmatic technical report requirement and public notice will be handled for new properties after the permit is approved. What will be required in the way of a programmatic technical report if a new property is added after the General Permit is approved? Will there be any public notice and/or review of new properties after the permit is issued?

Response: The concept of the programmatic technical report is to address the broad issues related to recycled water properties with similar crop, irrigation method, slope, hydrogeology, etc up front. This includes documentation of the crop needs in comparison to proposed hydraulic and nutrient application rates. The Proposed Permit identifies properties that have already been identified as potential recycled water use sites. A site-specific technical report would need to be submitted for Executive Officer approval for these use sites. Any recycled water use site not identified in Attachment G-1 of the Order, could be similarly approved, provided that the use site has been reviewed under CEQA, that an approved programmatic technical report for the particular crop, irrigation method, land slope and hydrogeology is on file, and the required site-specific report is submitted.

Comment 18: RRWPC is concerned about the adequacy of the public notice procedure of placing the public notice on the Regional Water Board's website. In order for the public to take advantage of the full 30 day for comments, it would required

checking the website daily. RRWPC requests that an email be sent out to interested parties at the beginning of the public notice period.

Response: Regional Water Board staff agrees with the idea of sending an email out to known interested parties.

Comment 19: RRWPC is concerned about comments submitted to the Regional Water Board by RRWA requesting reduction or elimination of requirements. RRWPC does not want to see requirements in the draft permit made less stringent in any way.

Response: Some minor modifications were made to the Proposed Permit in response to RRWA's comments. See Response to Comments 1a, 1b, 2a, 2b, 3 and 5 under the Town of Windsor heading above. [Note: RRWA and Town of Windsor submitted identical comments, thus responses to Windsor's comments also respond to RRWA's comments]

Regional Water Board Staff Changes

The following changes were identified as staff reviewed the Proposed Permit for consistency and accuracy.

1. Provision VI.C.1.g of the Proposed Order was modified to include a reopener for constituents of emerging concern (CECs). The Recycled Water Policy adopted by the State Water Board in 2009 recommends that Regional Water Board permits include such a reopener to be prepared for the recommendations of the "blue ribbon" advisory panel that studied how the State and Regional Water Board's should address CECs.
2. Table E-8 of the Monitoring and Reporting Program has been modified to include a requirement to monitor receiving water in Basalt Pond for Title 22 pollutants, one time during the term of the Proposed Permit. Section VI.F.1.c of the Proposed Permit already contained language identifying this need, therefore, this addition to Table E-8 is being added to correct an oversight.
3. Section VI.B (Rationale for Effluent Monitoring Requirements) has been modified to include the following language: "Effluent monitoring for settleable solids and chlorine residual that were included in the previous permit have been removed. See the discussion in section IV.D.1 (Satisfaction of Antibacksliding Requirements) of this Fact Sheet." This language is necessary to provide consistency.
4. Section VI.B.1 has been modified as follows: "Requirements to monitor total ammonia, nitrate, and total phosphorous in effluent monthly have been established ~~because effluent limitations have been established for ammonia, and because nitrogen and phosphorus ...~~" This change is needed because effluent

limitations have not been established for ammonia. Instead, the Proposed Permit contains a special study requirement with regard to ammonia.

5. Section VI.B has been further modified to include a new item 2 that reads as follows: “Requirements to monitor nitrite and organic nitrogen in the effluent discharged to Basalt Pond have been established. These monitoring requirements are necessary, in combination with monitoring for nitrate and ammonia in order to determine the total nitrogen concentration of the effluent for the purpose of knowing the nitrogen loading for future reclamation. The MRP requires monitoring for nitrite and organic nitrogen at Monitoring Location EFF-001 (Table E-4) for a period of a year in order to establish the total nitrogen concentration in the effluent. The MRP also establishes routine monthly monitoring for nitrate, nitrite, ammonia, and organic nitrogen in the discharge to the reclamation system.”