

**COMMENT LETTER 5 - U.S. NOAA, GULF OF THE FARALLONES, EDWARD UEBER
(OCTOBER 7, 1996), RECEIVED OCTOBER 7, 1996**

Response to Comment 5-1

Comment Summary: The comment provides a description of the US Department of Commerce National Oceanic and Atmospheric Administration's (NOAA) involvement in the Project addressed by the Draft EIR/EIS. The comment letter also states that NOAA has reviewed the Draft EIR/EIS and has provided a list of questions, information needs, or variances in interpretation associated with the West County Alternatives that must be addressed in the Final EIR.

The EIR/EIS authors appreciate NOAA's review of the Draft EIR/EIS. Each comment is addressed below.

Response to Comment 5-2

Comment Summary: The comment states that the Draft EIR/EIS is easier to understand and better organized than previous efforts, but insufficient time was provided to review the Draft EIR/EIS.

As a cooperating agency, NOAA was provided with an Administrative Draft of the EIR/EIS, including appendices, 84 days prior to publishing the Draft, providing considerable time for review. Also, refer to Master Response 4, located in Section 6.2 of this document, which describes the 65 day time-period for review of the Draft EIR/EIS.

Response to Comment 5-3

Comment Summary: The comment states that the West County Alternatives will result in detrimental impacts to resources in the Gulf of the Farallones National Marine Sanctuary.

Given the Sanctuary's long-standing opposition to a West County Alternative, the EIR/EIS authors understand the sensitivity concerning Sanctuary resources expressed in this and succeeding comments. Based on the EIR/EIS authors understanding of Sanctuary policy and input from Sanctuary staff, the Draft EIR/EIS has used an extremely rigorous criterion, and has identified any change in the environment within the Sanctuary as a significant impact, and this will be considered by the City during project selection. However, the EIR/EIS authors do not agree that impacts would extend to Tomales Bay. Refer to Response to Comment 3-6.

Response to Comment 5-4

Comment Summary: The comment states that neither long- nor short-term impacts on Sanctuary resources are discussed. The comment also states that impacts of reclaimed water constituents on “mariculture in Tomales Bay and at the mouth of Estero Americano” have not been evaluated. The comment also states that a rapid drawdown of any West County storage reservoir “would completely destroy the Estero habitat.”

Long-term impacts such as bioaccumulation and habitat changes are discussed in Appendices K-4 (Ecological Risk Assessment), I-16 (Water Quality Impact Analysis Report Volume I - Text) and L-7 (Aquatic Biological Resources Impacts Analysis Report) of the Draft EIR/EIS. Short-term impacts such as water quality impacts are discussed in Appendix I-16. The results of these studies are summarized in the Draft EIR/EIS.

The West County Alternative will slightly decrease the springtime flow into the esteros and slightly increase the summertime flow into the esteros. These flow changes will affect the salinity distribution in the esteros. With implementation of Irrigation and Conservation Management Plans (refer to Measures 2.2.1 through 2.2.6 starting on page 2-21 of the Draft EIR/EIS), and resultant improvements in agricultural practices (especially manure management), the Project will also decrease the quantity of manure reaching the esteros, which will result in increased dissolved oxygen concentrations and reduced algae concentrations.

Evaluation of the impact on Tomales Bay is discussed in Response to Comment 3-6. The mariculture operation at the mouth of Estero Americano did not identify specific issues during the scoping process nor did it offer comments on the Draft EIR/EIS. Nonetheless, in Appendix K-4 (Ecological Risk Assessment), the Draft EIR/EIS considered impact on marine life like the bivalves being grown at the mariculture facility. Bivalves exposed to reclaimed water in the receiving water environment did not show a pattern of bioaccumulation that was different from bivalves not exposed to reclaimed water.

The authors agree that emergency events associated with the storage reservoirs will have a significant impact on the Sanctuary, and such events are considered in Section 4.19 of the Draft EIR/EIS. The analysis there depicts the most catastrophic event, a sudden failure of the dam. While rapid drawdown will have less drastic effects, there will still be substantial impacts to the esteros. The Project includes extensive safety measures in dam design which will minimize the risk of either catastrophic dam failure, or a slower failure even requiring rapid drawdown. For this reason, the risk of failure was determined not to be significant.

Response to Comment 5-5

Comment Summary: The comment states that the Estero Americano is not a stream and should be categorized separately to avoid confusion.

The EIR/EIS authors recognize that the Estero Americano is not a stream.

To provide clarification, the following changes are made to the Draft EIR/EIS:

Page 2-30. The first sentence of the ninth paragraph is modified as follows:

The following stream and estero crossings will use jack and bore (crossings are identified by stream or estero name and approximate location of pipeline crossing).

Response to Comment 5-6

Comment Summary: The comment states that increases in particulate matter, pesticide residues, heavy metals, fresh water flows, nutrients and decreased quality of runoff or percolated water would not be possible given the congressional mandate and regulatory structure of the Sanctuary.

Federal regulations concerning the Sanctuary apply within the Sanctuary boundaries and not to adjacent lands. However, the Draft EIR/EIS has recognized Sanctuary policy by considering any change to water quality in the Sanctuary to be significant (refer to Table 4.6-27, Special site criteria, on page 4.6-63). Specific water quality changes are also described in Response to Comment 5-4.

Response to Comment 5-7

Comment Summary: The comment states that the Draft EIR/EIS identifies 136 impacts that will occur with implementation of the West County Alternatives that are significant and for which no feasible mitigation has been identified.

The number referenced in the comment apparently reflects all of the “black dots” in the table (indicating a significant impact before and after mitigation) for any of the West County Alternatives, so each impact has been counted five times if the same impact would occur for each of the five subalternatives under consideration for the West County Alternative. Table 5.4-1 on page 5-14 actually identifies 31 significant and unavoidable impacts that will occur with implementation of the West County Alternatives and not all of these impacts will occur with each West County Alternative. In addition, feasible mitigation has been proposed to reduce the magnitude of 17 of these impacts, but the mitigation will not reduce the magnitude of the impacts to below the Point of Significance and the impact therefore remains significant. No feasible mitigation has been identified for 14 of the 31 significant unavoidable impacts.

Response to Comment 5-8

Comment Summary: The comment states that not all significant impacts have been identified for which there is no feasible mitigation.

The comment does not identify what these impacts are or how they are not addressed by the Draft EIR/EIS. The EIR/EIS authors believe that reasonably foreseeable impacts have been identified. Specific concerns identified in other comments are addressed below, but a more specific response to this comment is not possible

Response to Comment 5-9

Comment Summary: The comment states because of the 136 impacts identified above, and for additional reasons presented in the addendum, the West County Alternatives should not be considered as viable alternatives and the alternatives should be removed from the EIR/EIS.

The list of alternatives to be evaluated in the Draft EIR/EIS was developed through a rigorous screening process that was designed to meet Corps requirements for alternatives evaluation under Section 404 of the Clean Water Act. Infeasible alternatives were removed from the process at that time, but alternatives could not be removed due to perceived environmental constraints. The identification of those environmental concerns is properly done subject to the analysis presented in the Draft EIR/EIS. Although it was acknowledged that there were a number of environmental concerns regarding the West County Alternative, it was not determined to be infeasible, and thus is evaluated in the Draft EIR/EIS.

Concerning the impacts which would occur with implementation of a West County Alternative, refer to Response to Comment 5-7. In response to the suggestion that the West County Alternatives should be removed from the EIR/EIS, the analysis associated with the West County Alternatives cannot be removed from the Draft EIR/EIS since this information is now part of the public record. It is not the role of the Draft EIR/EIS to remove alternatives from consideration, but to provide information about impacts of alternatives to the public, agencies and decision makers to enable an informed selection of a Project. Section 15126 (d) of the State CEQA Guidelines states that an EIR must describe a range of reasonable alternatives that could feasibly attain the basic Project objectives. An alternative may be considered reasonable even if it results in significant environmental effects.

Section 1502.14 (a) of the NEPA Regulations states that an EIS must “Rigorously explore and objectively evaluate all reasonable alternatives...” NEPA regulations do not require that an alternative be dropped from consideration based on potentially significant impacts.

Decisions about alternatives to be eliminated from consideration will not be made until the selection process. Should any Project with significant impacts be selected, the decision makers would have to make findings of overriding considerations regarding any significant unavoidable impacts, explaining why the selected Project should be implemented despite those impacts.

Response to Comment 5-10

Comment Summary: This comment critiques the erosion analysis for its use of the Universal Soil Loss Equation on non-cultivated lands and its failure to address other hill slope processes such as gullying and landslides. Information is requested on how these processes may affect sedimentation in the sanctuary.

The U.S. Department of Agriculture routinely utilizes the Universal Soil Loss Equation (USLE) to evaluate soil erosion on non-cultivated pasture and range lands. The analysis beginning on page 14 in Appendix E-7 of the Draft EIR/EIS shows such soil loss will be reduced relative to existing conditions. The comment is correct that the USLE method does not address gullying, landsliding, and other types of mass wasting erosional processes. As described on page 4.3-80 of the Draft EIR/EIS, erosion and sediment transport from Project-caused mass wasting due to irrigation of sloping lands will be avoided by implementation of Measures 2.2.3 and 2.2.4. Measure 2.2.4: Restrict Soil Erosion and Sediment Movement on page 2-26 of the Draft EIR/EIS, requires appropriate management of irrigation, including correction of existing erosion problems; and compliance with this measure will be enforced by the City. Potential mass wasting problems from well managed irrigation applications are most apt to occur and are most severe on slopes much steeper than 15%; irrigated areas with slopes over 10% would generally be in a no-till permanent cover crop. Areas of severe gullying will be avoided (not irrigated) and gullies within and adjacent to irrigation areas will generally be stabilized. Any gully or land stability problems that are initiated following irrigation will be observed during Project monitoring and corrected. There will generally be a net reduction in sediment yields if dry-farmed hay lands or grazing lands are converted to permanent pasture, or crop systems which employ a winter cover, and if existing erosion problem areas are healed. Also refer to Response to Comments 109-2 and 109- 4.

Response to Comment 5-11

Comment Summary: The comment states that a monitoring plan that includes specific scientifically measurable criteria, an enforcement plan, a penalty schedule, and contingency plan must be presented as part of the Draft EIR/EIS and provided for public review.

A mitigation and monitoring plan that is consistent with the requirements of both NEPA and CEQA has been prepared and circulated for public review as part of the Draft EIR/EIS. In fact, the United States Environmental Protection Agency specifically commended the Corps' and the City of Santa Rosa's "commitment to the detailed mitigation and monitoring program (Chapter 2) which provides validation and implementation monitoring with a focus on compensatory mitigation on an ecosystem basis." (Refer to Comment Letter 2). This mitigation and monitoring plan, including the legal basis for such a plan, is provided in Chapter 2 of the Draft EIR/EIS and includes each of the above components other than a penalty schedule. Possible penalties are not laid out because most would be determined by other agencies. For example, water quality violations would be reviewed by the North Coast Regional Water Quality Control Board,

and the Board would determine whether there would be any penalties. The City has, however, determined that the delivery of Project water would cease if individual users do not comply with provisions of their Irrigation Conservation and Management Program (refer to page 2-27 of the Draft EIR/EIS). Also refer to Master Response 11, located in Section 6.2 of this document, regarding feasibility of mitigation of wetlands impacts.

Response to Comment 5-12

Comment Summary: The comment states the Draft EIR/EIS is improved and indicates that further comments in the letter make it clear why Alternative 3 should be removed from consideration.

The further comments in Comment Letter 5 are answered below in Responses to Comments 5-13 through 5-91. Refer to Response to Comment 5-9, regarding removing Alternative 3 from consideration.

Response to Comment 5-13

Comment Summary: The comment questions why there is a difference between figures given for reclaimed water flows from the Laguna plant of 8,220 MGY (million gallons per year) and 21 MGD (million gallons per day) which is equal to 7,665 MGY.

The figure given of 21 MGD for projected reclaimed water flow through the Laguna plant is for daily average dry weather flow, as stated in Section 1 of the Draft EIR/EIS. This number is used as a basis for plant design capacity. The figure of 8,220 MG is an annual average flow, also as stated in Section 1, and therefore includes wet weather as well as dry weather flow.

Response to Comment 5-14

Comment Summary: The comment asks why Stemple Creek and Americano Creek are being considered for any augmentation since the Basin Plan calls for no augmentation.

The term “augmentation” has been used in the Long-Term Wastewater Project to refer to the controlled discharge of reclaimed water to a stream for habitat enhancement purposes. Although considered in the Santa Rosa Long-Term Wastewater Screening Report, augmentation of streamflows in Stemple and Americano Creeks was not carried forward and is not part of any of the alternatives analyzed in the Draft EIR/EIS. Nonetheless, the Project would affect flow in Stemple and Americano Creeks, as is reflected in Impact 9.7 described in Appendix L-7 (Aquatic Biological Resources Impacts Analysis Report).

Response to Comment 5-15

Comment Summary: The comment asks why, for Alternative 4 (Geysers), irrigated lands will be reduced by attrition while similar land in West County will become a positive economic producer.

As indicated on page 3.1-27 of the Draft EIR/EIS, the reduction of existing agricultural irrigation acreage for Alternative 4 would occur under existing procedures for the Reclamation System. This reduction, or attrition, will result from the non-renewal of contracts. Santa Rosa will not replace those contracts that are not renewed and will not seek to obtain new contracts. This non-renewal was not evaluated as part of the Draft EIR/EIS since it is a current procedure. Attrition of existing irrigation areas is only projected as part of the Geysers Alternative because they need as much water as they can receive, especially during the summer months. For Alternatives 2 and 3, existing lands could be replaced within the existing irrigation area as they are now, or if additional lands are needed these could be provided by lands evaluated in Alternatives 2 and 3, which provide substantially more than the actual land area needed for irrigation for either Alternative.

Response to Comment 5-16

Comment Summary: The comment asks how will sufficient West County acreage for agricultural irrigation be maintained if farmers have their water rights removed because of over watering, improper use of pesticides, nutrients, salt buildup or other reasons.

If farmers lose their contracts to use reclaimed water on specific irrigated lands, the City of Santa Rosa will need to dispose of or reuse the reclaimed water elsewhere. Reclaimed water could be diverted to other suitable agricultural acreage to meet the maximum 6,200-acre West County requirement at buildout (assuming 1% Russian River design discharge rate, which has the largest requirement for irrigation land). Approximately 19,400 acres in the West County were evaluated for irrigation suitability, and the results indicate that there are 9,750 acres of land within the West County suitable for irrigation. The City of Santa Rosa could also discharge the reclaimed water to the Russian River. Regardless of which option, or combination of options, is preferred by the City to address loss of West County irrigation contracts, the transition will be subject to environmental documentation and permitting requirements. Also refer to Master Response 6, located in Section 6.2 of this document, regarding feasibility of West County irrigation.

Response to Comment 5-17

Comment Summary: The comment asks how cyanide and other unspecified constituents will be removed prior to reaching the esteros.

The cyanide impacts referred to in the comment are associated with discharge to the Laguna under the No Action Alternative. The fate of cyanide in West County is addressed in the Draft EIR/EIS on page 184 of Appendix I-16 (Water Quality Impact Analysis Report Volume I - Text) and no cyanide impact on the esteros was identified. As discussed there, during irrigation “most free cyanide will be volatilized. Additionally volatilization of hydrogen cyanide from surface soils is expected to be a primary removal mechanism for soils having a pH of 9.2 or less. Leaching to groundwaters is not expected to be significant due to the probability of cyanide fixation by trace metals found in soils, or transformation of cyanide via microbial action.” Not all substances will be removed

prior to reaching the esteros, as described in detail in Section 6.1 of Appendix I-16, starting on page 176.

Response to Comment 5-18

Comment Summary: The comment asks why adverse bioaccumulation will not occur in the Sanctuary.

The comment refers to a general discussion of water quality terminology contained in Section 1 of the Draft EIR/EIS. No statement is made in the Draft EIR/EIS that there will be no occurrence of bioaccumulation in the Sanctuary. Bioaccumulation is evaluated in Appendix K-4 (Ecological Risk Assessment), and summarized in Section 4.9, Aquatic Biological Resources. As discussed on pages 4.9-73 and 4.9-80, the ecological quotients calculated in the Ecological Risk Assessment are below the point of significance. Significant water quality impacts in the Sanctuary are identified on page 4.6-89 of the Draft EIR/EIS.

Response to Comment 5-19

Comment Summary: The comment states that reclaimed water, even at drinkable standards is toxic to marine organisms. The comment also asks how reclaimed water will be kept out of the Estero Americano and Estero de San Antonio without independent monitoring and enforcement of irrigation management activities by a party other than the City of Santa Rosa or the farmers.

All applications of reclaimed water on irrigated lands will be subject to waste discharge requirements adopted by the North Coast Regional Water Quality Control Board. Refer to pages 9 and 32 in Appendix D-5 (Permitting Report) of the Draft EIR/EIS. The waste discharge requirements will prohibit discharges of reclaimed water to the Esteros. Regional Water Quality Control Board (RWQCB) staff will independently determine compliance with those requirements through review of self monitoring reports submitted by the reclaimed water users and field surveillance of reclaimed water irrigation practices by RWQCB staff. However, there will still be some subsurface flow that will affect the esteros, and as stated on page 1-35 of the Draft EIR/EIS, “impacts of storage and irrigation on the esteros will remain significant.” In addition, the impact of infrequent irrigation system malfunction is also evaluated in the Draft EIR/EIS, and was found to have additional significant effects (refer to pages 4.4-29 and 4.6-85). Refer also to Responses to Comments 5-65 and 5-77.

Response to Comment 5-20

Comment Summary: The comment indicates that all species which are currently designated as federally endangered or threatened, or proposed for such listing are not identified in the Draft EIR/EIS.

The EIR/EIS authors believe that all species in the Project area that are currently designated as federally endangered or threatened, or proposed for such listing are identified in the Draft EIR/EIS. The comment provides no additional information on which species, if any, have been omitted from analysis in the Draft EIR/EIS. Therefore, a more specific response cannot be provided. Refer to Response to Comment 1-6 concerning coho salmon. Refer to Master Response 12, located in Section 6.2 of this document, concerning steelhead trout.

Response to Comment 5-21

Comment Summary: The comment suggests that the analysis of visual impact (both in Section 1 and in Section 4.14) does not consider the visual changes as seen from the Esteros resulting from changes in agricultural activities due to the availability and use of reclaimed water for irrigation.

The discussion of Impact 14.7.5, contained on page 4.14-98 of Section 4.14, addresses visual impacts on the Esteros. Section 1 summarizes significant impacts, and notes on Page 1-39 that irrigation will not result in significant visual impacts. The discussion of Impact 14.7.5, addresses impacts on foreground and middleground views from high volumes travelways and public areas, which as defined in the evaluation criteria would include waterways such as the Esteros, which are managed for recreational use. The analysis of this impact, also contained on page 4.14-98, indicates that for Alternatives 2 and 3 “Agricultural irrigation facilities may result in changes in cropping patterns and visible irrigation lines, which may cause some visual contrast, but would not be considered a strong visual contrast because they would be consistent with the mosaic of different cultivation types associated with agricultural activity.” According to the evaluation criteria for visual contrast, as described on page 4.14-21 and Table 4.14-8 on page 4.14-97, this slight contrast was deemed a less than significant impact.

It should also be noted that under Measure 2.2.4 on page 2-26 of the Draft EIR/EIS, reclaimed water could not be used for irrigation of row crops on hillsides with slopes over 5%; and that under Measure 2.2.5 on page 2-28 a non-agricultural buffer zone would be required along all waterways for parcels receiving reclaimed water for irrigation. These measures will limit the potential changes in foreground and middleground views from the Esteros.

Response to Comment 5-22

Comment Summary: The comment asks how will the “Point Reyes Park Expansion” affect the West County Options.

For a discussion of the proposed Point Reyes National Seashore Expansion, refer to Response to Comment 3-8.

Response to Comment 5-23

Comment Summary: With respect to a statement in Section 1.9 of the Draft EIR/EIS (page 1-41) that the value of local dairy forage will go beyond the values shown in the Draft EIR/EIS if the ability to grow forage ensures long-term survival of the dairy industry in Sonoma and Marin Counties, the comment asks what happens if it doesn't.

If the reclaimed water is not used for irrigated pasture and forage, it will be available for other crops, which as noted in Section 4.18 (page 4.18-40), are higher value than pasture and forage.

Response to Comment 5-24

Comment Summary: The comment states that increased forage crops resulting from agricultural irrigation will result in larger dairy herds, and questions how increases in manure resulting from larger dairy herds will be controlled.

It is not anticipated that there will be a substantial increase in dairy herds resulting from agricultural irrigation. As stated in Section 4.18 of the Draft EIR/EIS (page 4.18-42), milk production is not likely to increase, although the costs of production will go down because of the lower cost of locally grown forage in relation to the present cost of imported alfalfa hay. Any increase in manure will be controlled through the Irrigation Conservation and Management Programs (ICMP) as described in Section 2.2 (page 2-21) which is one of the measures included in the Project. As stated in the description of the ICMPs, they will be developed for every new irrigation site prior to the delivery of reclaimed water, and will require conformance as part of the contract for reclaimed water.

Response to Comment 5-25

Comment Summary: The comment questions whether the 28,200 housing units referred to in Section 1.9 (page 1-43) of the Draft EIR/EIS would be "lost" as indicated in the Draft EIR/EIS or just located in another area of California.

The loss of housing units in Section 1.9 refers to the loss of housing units to Sonoma County and the impact upon the local economy. The question of whether this loss of units may result in an increase in units elsewhere in California is not relevant to a discussion of impacts on the local economy.

Response to Comment 5-26

Comment Summary: The comment asks what legal law enforcement criteria will be imposed on the Irrigation Conservation and Management Program, mitigation measure 2.2.1, and questions if condemnation will have to be used to maintain minimum acreage requirements.

The Irrigation Conservation and Management Programs measure is a commitment of the City and is included as a part of the Project Description. The legal basis is discussed on

Page 2-1 of the Draft EIR/EIS. Mitigation program implementation and monitoring is discussed beginning on Page 2-3 of the Draft EIR/EIS. The City is required to implement the selected Project in compliance with the Project Description and adopted mitigation program. There are some agencies with legal oversight responsibilities, and these are discussed in Chapter 2 of the Draft EIR/EIS, and in Appendix D-5 (Permitting Report). For example, any water quality violations would be reviewed by the North Coast Regional Water Quality Control Board, and the Board would determine whether there would be any penalties. No additional law enforcement criteria are being imposed. Also refer to Response to Comment 5-28

If an agricultural Project is selected, the City can maintain the necessary acreage through a variety of methods, including contracts with land owners, rental, or purchase. Acquisition options are discussed in Section 4-18 of the Draft EIR/EIS on Page 4-18-1 and in Appendix S-1 (Acquisition Options Report). The City does not propose to condemn land for irrigation. Also refer to Master Response 6, located in Section 6.2 of this document, concerning feasibility of West County irrigation.

Response to Comment 5-27

Comment Summary: The comment asks for the hydrologists' evaluation of irrigation impacts on runoff and streamflow.

The hydrologists' evaluation is provided in Appendices E-5, E-7, H-1, H-5, I-1, I-2 and I-10 of the Draft EIR/EIS. Project irrigation will not cause saturated soil conditions. Measure 2.2.3 identifies specific irrigation practices that will prevent creation of saturated soil conditions. Comparison of Tables B3S and B6S in Appendix I-10 (Baseline Hydrology and Irrigation Drainage Evaluation for West and South County Reclamation Alternatives) shows that the amount of runoff during a wet year under existing and Project conditions is 50,211 and 46,821 acre-feet per year, respectively. The reason for the decrease in runoff as explained on page 19 of Appendix I-10, is the result of improved soil and riparian corridor conditions that are expected to result from the Project.

Response to Comment 5-28

Comment Summary: The comment asks how the City of Santa Rosa will enforce the water restrictions, what is the penalty schedule, and who will receive the fine.

The City of Santa Rosa will control usage of reclaimed water for agricultural irrigation through individual contracts between the City and each landowner of lands receiving reclaimed water. The contract terms will require that the landowner agree to conform with the Irrigation Conservation and Management Program (ICMP) prepared by the City for each agricultural irrigation site (Page 2-21 of the Draft EIR/EIS). The contract terms will also enable the City to correct violations of the ICMP through ceasing deliveries of reclaimed water (Pages 2-23 through 2-25 of the Draft EIR/EIS). No penalty schedule is currently proposed.

Response to Comment 5-29

Comment Summary: The comment questions why the word “may” rather than “must” is used frequently in the descriptions of Best Management Practices that can be utilized to meet the surface and subsurface water runoff performance criteria.

The use of the word “may” is used because paragraphs 7 and 8 on page 2-23 and paragraphs 1 through 5 on page 2-24 provide measures that are only suggested for meeting the surface and subsurface water runoff performance criteria. Use of the word “must” would require each irrigation land manager to use these measures when other more appropriate measures could be utilized to achieve the same results (i.e., meet the surface and subsurface water runoff performance criteria). The measures that are listed are provided to demonstrate that there are measures that can be utilized to achieve these results, but are not intended to be inclusive of all measures that are available to meet the performance criteria.

Response to Comment 5-30

Comment Summary: The comment refers to Measure 2.2.4 on page 2-26 of the Draft EIR/EIS, states that sediment removal “must be 100% effective,” and asks for the effectiveness of filter strips in similar areas.

Measure 2.2.4: Restrict Soil Erosion and Sediment Movement (Irrigation Sites), on page 2-26 of the Draft EIR/EIS states that agricultural practices will be restricted as a condition of receiving reclaimed water to restrict soil erosion and transport from irrigation sites to waterways. The analysis beginning on page 14 in Appendix E-7 (Evaluation of Soil Erosion Impacts for the West County and South County Reclamation Alternatives) of the Draft EIR/EIS shows that Measure 2.2.4 will reduce transport from irrigation site to waterways relative to existing conditions. The conclusion of reduced sediment transport is based solely on the implementation of agricultural practices and is not dependent on filter strips for intercepting sediment. Measure 2.2.4 (which is modified in Response to Comment 128-32) includes filter strips for locations “where sediment has the potential to reach a stream or other water body” as a means to further reduce transport from irrigation sites to waterways beyond that calculated beginning on page 14 in Appendix E-7. Thus, filter strips do not need to be 100% effective to avoid sediment impacts. The effectiveness of filter strips is described in the reference cited in the description of Measure 2.2.4, (the U.S. Department of Agriculture Conservation Reserve Program).

Response to Comment 5-31

Comment Summary: The comment asks whether the City of Santa Rosa or the farmer will be legally responsible for fines or mitigation costs if irrigation problems occur.

The applicable Regional Water Quality Control Board will determine legal responsibility for fines imposed because of irrigation activities that violate the California Water Code or adopted waste discharge requirements as discussed on pages 9 and 32 in Appendix D-5

(Permitting Report) of the Draft EIR/EIS. Through individual contracts between the City of Santa Rosa and each landowner of agricultural lands receiving reclaimed water, the landowner will be required to conform with the Irrigation Conservation and Management Program (ICMP) prepared by the City for each agricultural irrigation site (Page 2-21 in the Draft EIR/EIS). Accordingly, the landowner will be responsible for any mitigation costs required to correct irrigation problems due to the landowner's failure to conform to the ICMP.

Response to Comment 5-32

Comment Summary: The comment expresses concern about any of the less toxic, less persistent pesticides specified in Measures 2.2.1 and 2.2.3 on pages 2-21 and 2-23 might enter the Sanctuary, and that such an occurrence would be unsafe and inappropriate.

The impact of two pesticides (a common herbicide and a common insecticide) was evaluated to provide an indication of the impacts that could be expected from proper use of a broad range of pesticides. Measure 2.2.6 requires that any pesticide be applied according to particular guidelines to "minimize offsite movement of pesticides." Adherence of the pesticide applicator to the restrictions established and enforced by USEPA and the State of California for each pesticide will minimize offsite impacts, which are characterized in Appendix I-1 and K-4 for a common herbicide and a common insecticide. The Draft EIR/EIS identifies pesticide impacts on the Sanctuary in Section 4.6, Section 4.9, Appendix I-16 (Water Quality Impact Analyses Report), Appendix K-4 (Ecological Resource Assessment) and Appendix L-7 (Aquatic Biological Resources Impact Analysis Report). The bioaccumulation and toxicity of pesticides is less than threshold levels, and therefore, impacts are considered to be less than significant. Nonetheless, irrigation associated with Alternative 3 is considered to have a significant impact on water quality (Impact 6.5.3) and aquatic habitat (Impact 9.5.6) in the Sanctuary.

Response to Comment 5-33

Comment Summary: The comment asks when will the manure management component of the ICMP be prepared and available for evaluation. The comment letter also states that the manure management component of the ICMP must be part of the Draft EIR/EIS.

An ICMP and its associated manure management component cannot be prepared until the irrigation sites are selected. This information was not provided in the Draft EIR/EIS because it is currently unknown which specific irrigation sites will ultimately be selected as appropriate sites and the ICMP for each site will be site-specific and likely to contain measures that are unique to that site only. The Draft EIR/EIS contains performance standards, and typical measures, including use of buffers for riparian areas. Refer to Measure 2.2.6: Agrochemical and Fertilizer Best Management Practices, on page 2-34 of the Draft EIR/EIS.

Response to Comment 5-34

Comment Summary: The comment asks why all plantings are not being done with native species.

The proposed mitigation measure currently states that revegetation will consist of plants collected “as near to the stream crossing as possible”, which may not be native. The purpose of Measure 2.2.8 on page 2-37: Revegetate Temporarily Disturbed Sites, is to ensure that temporarily disturbed sites are returned to pre-Project conditions, while reducing the potential for erosion and consequent sedimentation into aquatic sites. Use of native seeds and plantings are recommended unless erosion concerns dictate the use of other soil stabilizing plant materials. To clarify this point, Measure 2.2.8 will be revised.

The following changes are made to the Draft EIR/EIS:

Page 2-37. The fourth paragraph under the heading “Streams and Waters of the U.S.” is revised as follows:

4. Collect [native](#) plant seed stock or cuttings for any riparian revegetation...

Response to Comment 5-35

Comment Summary: The comment refers to monitoring associated with the Storm Water Pollution and Prevention Plan, states that monitoring is only the first step, and asks what procedures, methods, and compliance mechanisms will be implemented.

The Storm Water Pollution Prevention Plan provided on pages 2-40 and 2-41 of the Draft EIR/EIS provides procedures, methods and compliance mechanisms, including the minimum measures that must be implemented, the lead and implementing agencies, the timing of mitigation implementation, and specifies approval of the plan by the appropriate Regional Water Quality Control Board, and compliance monitoring by the City of Santa Rosa. If there are other procedures, methods, and compliance mechanisms that should be provided by the plan, they are not identified in the comment. Therefore, no further response can be provided.

Response to Comment 5-36

Comment Summary: The comment asks if water from the Estero Americano, Estero de San Antonio, and Stemple or Americano Creeks will be used for construction or cleaning.

None of the alternatives include use of waters from these sources for construction or cleaning purposes.

Response to Comment 5-37

Comment Summary: The comment asks if sites with excessive erosion will continue to be irrigated if the acreage is needed for disposal of reclaimed water.

The City will work with users to implement all practical methods for erosion control before taking the step of canceling irrigation contracts. However, if users cannot meet the erosion control requirements of the Project within the first two seasons, contracts will be canceled. Also refer to Response to Comments 5-26 and 5-28.

Response to Comment 5-38

Comment Summary: Referring to a mitigation measure regarding visual impacts of pipeline construction, (Measure 2.3.9) the comment states that damaging Sanctuary resources is prohibited and asks how activities can be approved which are not allowed.

The visual impacts resulting from pipeline construction have been identified as temporary but significant impacts in the Draft EIR/EIS (Refer to Impact 14.4.5 on page 4.14-32 of the Draft EIR/EIS). The Sanctuary regulations apply within the boundaries of the Sanctuary but not outside the Sanctuary.

Response to Comment 5-39

Comment Summary: The comment asks what are the percent reductions by each conservation method identified in Section 3.2 of the Draft EIR/EIS (page 3.2-3).

Section 3.2 (page 3.2-3) refers the reader to Appendix D-4 (Wastewater Flow Projections) for additional information about water conservation in the Subregional System. Exhibit A of Appendix D-4 contains tables for each of the member entities of the Subregional System showing reductions in wastewater flow by type of conservation measure and type of user. Conservation is projected to reduce future flows from about 26 million gallons per day (mgd) average dry weather flow to about 21 mgd, an overall reduction of over 19 percent.

Response to Comment 5-40

Comment Summary: The comment asks whether the Wastewater District offers users a monetary [sic] incentive to reduce water use equal to the cost of providing that water and the wastewater removed.

Neither the Subregional System nor any of its member entities offer a monetary incentive of the type described in the comment.

Response to Comment 5-41

Comment Summary: The comment asks what percentage of users have adopted the conservation fixtures described in the listing of conservation measures in Section 3.2 of the Draft EIR/EIS (page 3.2-3).

Section 3.2 (page 3.2-3) refers the reader to, Appendix D-4 (Wastewater Flow Projections) for additional information about water conservation in the Subregional System. Exhibit A of Appendix D-4 contains tables for each of the member entities of

the subregional system showing the number of users for each type of conservation fixture by type of user.

Response to Comment 5-42

Comment Summary: In reference to Section 3.2 (page 3.2-3) of the Draft EIR/EIS, the commentor asks how water use in this water district compares to other Bay area users.

Section 3.2 of the Draft EIR/EIS does not address water use but rather describes conservation measures that have been implemented by the member entities of the Subregional System contributing to a quantifiable reduction in wastewater flow. This information is used to generate wastewater flow projections for the System as a basis for determining the capacity needed for the Project. The water use of other Bay area water districts is based upon many variable factors, and is not relevant to defining the existing water conservation practices within the Subregional System.

Response to Comment 5-43

Comment Summary: The comment suggests the spacing of isolation valves on the Russian River Discharge pipeline should be reduced from the proposed 5,000 feet to "protect for washouts and safety."

Isolation valves of the size required for this pipeline are large and expensive. It is typical to minimize the use of such valves, and no particular spacing is standard. The proposed 5,000 foot spacing is approximate and average. It is expected that valves will be located at the more accessible locations to isolate the more vulnerable pipeline sections (i.e., major road crossings, creek crossings, fault crossings, and maximize their potential utility. Consequently, some valves will be spaced less than every 5,000 feet and other valves more.

Response to Comment 5-44

Comment Summary: The comment asks how much leakage would occur after the clay liner is installed in portions of some reservoirs.

The Project geotechnical evaluation identified permeable zones at some reservoir sites. The Project description includes the placement of clay blankets in areas that were identified as having coarse-grained materials (conglomerate lenses) or other permeable zones (contacts). Grout or clay will be used, as necessary, for permeability zones encountered during reservoir construction. Clay blankets installed for these purposes typically have permeabilities of 10^{-6} cm/sec or less. The amount of reclaimed water that would be transmitted through the bottom of reservoirs is presented in the Draft EIR/EIS, Appendix H-1 (Hydrogeology of Storage/Reuse Areas and Evaluation of Potential Impacts to Groundwater).

Response to Comment 5-45

Comment Summary: The comment asks for particular flow information for current monthly Stemple and Americano Creek flows in an average year, “100-year flood,” and in the third year of a drought.

Available stream flow information is provided Table 4.4-4 on page 4.4-13 of the Draft EIR/EIS and in Appendices H-1 (Hydrogeology of Storage/Reuse Areas and Evaluation of Potential Impacts to Groundwater) and L-7 (Aquatic Biological Resource Impacts Analysis Report).

Only an estimate of monthly average flow is available. The Project will increase flows into the esteros in summer about 0.5 cfs (when existing flows are about 1 cfs) and would decrease flows into the esteros in spring by about 4 cfs (when existing flows are about 50 to 100 cfs).

Response to Comment 5-46

Comment Summary: In reference to the description of the Contingency Plan in Section 3.3 (page 3.3-42), the commentor asks why the contingency discharge to the Russian River is worse than an illegal discharge that will go into the National Marine Sanctuary.

The Draft EIR/EIS does not make such a statement, nor does it make any comparison between contingency discharge and any illegal discharge. The comment does not provide any further basis or justification for the statement, and therefore no further response can be made.

Response to Comment 5-47

Comment Summary: The comment asks how many gallons and how many times over the next 100 years is “this” expected to occur. The EIR/EIS authors assume that “this” refers to contingency discharge to the Russian River.

Contingency discharges are described in Appendices D-9 (Analysis of Results from Daily and Monthly Water Balance Models) and D-10 (Water Balance Contingency Plan) of the Draft EIR/EIS. Tables 5 and 7 in Appendix D-10 indicate that the 1 percent design discharge alternative will not result in contingency discharges, and the other discharge alternatives will result in contingency discharges of up to 200 MG in a month. Because river flow data are only available for a 70-year period of record, this was the basis for calculating frequency of discharges. Depending on discharge percentage, contingency discharges are projected to happen from 2 to 7 times in the 70-year period evaluated in the model. Also refer to Figures 1 through 10 in Appendix D-10.

Response to Comment 5-48

Comment Summary: In reference to the statement of the basis for project cost estimates in Section 3.4 (pate 3.4-1) of the Draft EIR/EIS, the comment asks what are the enforcement costs and the monitoring costs of the many options, and states that without including such costs the costs presented are inaccurate and may mask significant operating costs.

As explained in the first paragraph of Section 3.4 (Page 3.4-1), the project cost estimates were prepared at a planning level of detail to identify the major costs and provide a basis for relative comparison between alternatives. The cost estimates will be further refined as a specific Project is selected. Cost estimates have been prepared for major mitigation expenses such as wetlands replacement and cultural resource recovery programs. Refer to Table 3.8 in Appendix D-30 (Alternative Projects Construction Cost Estimates). Table 20 (O&M Costs) in Appendix D-30 also includes costs for ensuring proper implementation of irrigation programs.

The Draft EIR/EIS recognizes that additional costs (including mitigation and monitoring expenses) which cannot be fully estimated at this time may be incurred by the Project. For this reason, as stated on page 1-1 in Appendix D-30 and referenced in Section 3.4 of the Draft EIR/EIS, a 25% contingency was added to the costs for all alternatives. Costs of implementing mitigation may be covered under this contingency. The EIR/EIS authors do not agree that the project cost estimates are inaccurate at the stated planning level of detail or that there is any attempt to mask significant operating costs. The basis for the cost estimates is clearly stated in Section 3.4.

Response to Comment 5-49

Comment Summary: With respect to the discussion of cumulative projects, the comment asks why isn't the Point Reyes National Seashore's Expansion bill noted and how the passage of the bill will affect the West County Alternatives.

For a discussion of the proposed Point Reyes National Seashore Expansion, refer to Response to Comment 3-8.

Response to Comment 5-50

Comment Summary: The comment questions why a change in marine waters is not an evaluation criterion for land use impacts.

Changes in marine waters are not considered a land use impact as defined in Section 4.1 (page 4.1-23); impacts to marine waters are considered and evaluated under Sections 4.6 (Surface Water Quality) and Section 4.9 (Aquatic Biological Resources).

Response to Comment 5-51

Comment Summary: The comment questions why cumulative impacts to the Esteros as well as likely impacts to Bodega and Tomales Bays are not discussed in Section 4.1 (Land Use).

There are no cumulative land use impacts to Tomales Bay discussed in Section 4.1 of the Draft EIR/EIS, because there are no cumulative land use impacts identified that would impact Tomales Bay (refer to page 4.1-39 of the Draft EIR/EIS). Because impacts on the esteros, as well as impacts on Bodega Bay as identified in the Draft EIR/EIS involve impacts on Surface Water Quality and Aquatic Biological Resources, these cumulative impacts are discussed in Sections 4.6 and 4.9 of the document. No Project impacts on Tomales Bay were identified in the Draft EIR/EIS and therefore, analysis of cumulative impacts on Tomales Bay is not required. Refer also to Response to Comment 3-6.

Response to Comment 5-52

Comment Summary: The comment asks for the slope criterion for specialty crops.

Mitigation Measure 2.3.2 on page 2-63 of the Draft EIR/EIS specifies that irrigation contracts will not be approved for specialty crops on slopes greater than 5 percent, unless special erosion control techniques can be developed and proven to be effective in a demonstration program.

Response to Comment 5-53

Comment Summary: The comment asks for more information about effect of metals loading on livestock, specifically about effects of cyanide and arsenic and asks if these metals become part of the runoff.

Cyanide is not a metal: the cyanide ion is CN, a compound of carbon and nitrogen, and it therefore does not accumulate in the soil in the same way that metals can. The National Research Council study cited on page 4.2-26 of the Draft EIR/EIS did not identify any potential adverse effects of arsenic on livestock. Trace elements can be present in runoff. Section 4.6 of the Draft EIR/EIS evaluates potential impacts of agricultural irrigation in West County. Copper is the only metal shown to have potential adverse effects associated with agricultural irrigation, and mitigation is proposed to reduce this impact to less than significant. Refer to Response to Comment 5-17 for additional discussion of cyanide.

Response to Comment 5-54

Comment Summary: The comment inquires why the EIR/EIS authors did not refer to reevaluations of the 1906 earthquake that have been published after 1908.

The report of the 1906 San Francisco earthquake, produced by the State Earthquake Investigation Commission in 1908, contains the original description of detailed accounts

of damage and geologic effects from that earthquake. Later analyses of the 1906 earthquake pertain to estimated magnitude, epicenter location, and tectonic implications. The observations of damage and earthquake effects in small communities within the Project area are relevant to the discussion of likely damage from future, similar earthquakes. The references listed starting on page 4.3-97 at the end of Section 4.3 of the Draft EIR/EIS, include numerous recent references that were used in the evaluation of the likely effects of earthquakes on local faults. These references include a number of publications by the California Division of Mines and Geology (1994, 1990, 1982, and 1974), which discuss planning scenarios for major earthquakes on the Rodgers Creek and San Andreas faults. A recent publication by the Association of Bay Area Governments (*The San Francisco Bay Area, On Shaky Ground*, 1994) was also used.

Response to Comment 5-55a

Comment Summary: The comment asks for the USGS's evaluation of this area.

USGS reports and maps were reviewed by the EIR/EIS authors and their evaluation incorporated into the Draft EIR/EIS analyses of geology, soils and seismicity in Section 4.3. Refer to the references starting on page 4.3-97 for a listing of specific reports used in this analysis.

Response to Comment 5-55b

Comment Summary: The comment asks for a description of the effect of Project-affected groundwater on the Sanctuary, specifically "the scope and occurrence of these, spatially and temporally".

The effect of irrigation and storage on flow and water quality via a groundwater pathway is evaluated in Appendices I-11 (Water Quality and Flow Model for Irrigation/Storage Area Streams), I-16 (Water Quality Impact Analysis Report Volume I - Text) and L-7 (Aquatic Biological Resources Impacts Analysis Report) of the Draft EIR/EIS. Significant impacts were identified. The estimated impact on estero inflow from surface water flows (which derive from the Project effect on groundwater in the watershed upstream of the Sanctuary) is summarized in Response to Comment 5-45. The influence of Project-affected groundwater that discharges to surface water within the Sanctuary is addressed in Responses to Comments 5-27 and 5-57.

Response to Comment 5-56

Comment Summary: The comment states that coliform bacteria and metals from the Project are not allowed in the Sanctuary, and asks how will their entry to the Sanctuary be prevented.

Federal regulations apply to areas within Sanctuary boundaries and not to adjacent lands. The Draft EIR/EIS does not identify any coliform bacteria impacts in Sanctuary. Impact 6.7.3 on page 4.6-89 includes a significant impact on metals in the Sanctuary. The impact

of the Project on metals cannot be avoided. However, the description of Alternative 3 includes many measures to reduce Project impact in the Sanctuary. Measures that reduce Project impacts on the Sanctuary include Mitigations 2.2.1 through 2.2.12 on pages 2-21 through 2-43, 2.5.1 2.5.2, and 2.5.3 on pages 2-121 through 2-125. For reasons discussed on page 225 of Appendix I-16 (Water Quality Impacts Analysis Report, Volume I - Text), these and other measures that were considered cannot completely avoid Sanctuary impacts.

Response to Comment 5-57

Comment Summary: The comment requests that specific groundwater information be provided about Project impacts within the Gulf of the Farallones National Marine Sanctuary, including monthly volume changes, water quality changes and emergencies.

The groundwater analyses provided information on flow rates and the flux of groundwater through subbasins. Results of analyses are presented in Section 5.2 of Appendix H-1 (Hydrogeology of Storage/Reuse Areas and Evaluation of Potential Impacts to Groundwater) of the Draft EIR/EIS, and are summarized in Table 4.5-6, which reports travel time from each reservoir to the closest domestic well. The Draft EIR/EIS did not provide monthly volume changes because the model is not precise enough to calculate monthly changes. The closest reservoir to the Sanctuary is Valley Ford, located about one mile upstream. Groundwater flow rates are slow (about 30 feet per year) and total volumes small (since most of the water will be withdrawn and reused); the anticipated monthly changes in volume in the groundwater will be small. Reservoir operation is not expected to result in reduced water quality in the Sanctuary because the zone with reclaimed water concentrations of 20 percent or less is located about one mile upstream. No groundwater impacts are anticipated to result from “emergency” conditions. Also refer to the surface water evaluation of emergency conditions on page 4.6-85 in Section 4.6 of the Draft EIR/EIS.

Response to Comment 5-58

Comment Summary: The comment asks which organisms in the Sanctuary will be affected by nitrate and nitrite.

A description of the organisms that will be affected is provided in Appendix I-3 (Environmental Conditions in West County Waterways) of the Draft EIR/EIS, and impacts are evaluated in Appendix L-7 (Aquatic Biological Resources Impacts Analysis Report). Nitrogen stimulates algae growth, and the Project is anticipated to reduce the quantity of nitrogen that reaches the Sanctuary. Also refer to Response to Comment 92-237.

Response to Comment 5-59

Comment Summary: The comment inquires about how nitrate levels in groundwater will be reduced downstream of the reservoir sites.

Partial lining of reservoirs is included in the Project description to reduce seepage and groundwater contamination. As reclaimed water enters the groundwater system it is diluted by background groundwater. The groundwater analysis presented in Section 4.5 of the Draft EIR/EIS identifies the area where 20 percent or more of the groundwater will consist of reclaimed water (refer to Figures 4.5-2 through 4.5-10). Downgradient of this zone the reclaimed water will continue to be diluted by groundwater inflows from other subbasins until the groundwater is indistinguishable from existing ambient conditions.

Response to Comment 5-60

Comment Summary: The comment asks if the City of Santa Rosa would ban new housing in areas to which water is supplied.

The City does not control land use and development permits in the West County, which is under the jurisdiction of Sonoma County. The City does not have the authority to ban housing. Development would be controlled by zoning and General Plan designations.

Response to Comment 5-61

Comment Summary: The comment asks how water that is in West County creeks as a result of the Project will be removed from the creek prior to discharge to the Sanctuary.

Such water will not be removed from the creek. Refer to Response to Comment 5-56.

Response to Comment 5-62

Comment Summary: The comment relates to an evaluation of impacts on groundwater and states that mitigation of groundwater impacts on drinking water does not avoid impacts on aquatic life.

Replacement water supply is intended to address impacts of increased nitrate levels on groundwater; because aquatic organisms do not occur in groundwater, impacts and mitigation for aquatic life is not discussed in Section 4.5 of the Draft EIR/EIS. Refer to Response to Comment 5-56 for a discussion of surface water quality impacts and mitigation.

Response to Comment 5-63

Comment Summary: The comment asks how accidental runoff will be prevented.

Mitigation Measure 2.2.3: Restrict Surface and Subsurface Irrigation Water Runoff, on page 2-23 of the Draft EIR/EIS, contains an extensive program for controlling runoff. However, the Draft EIR/EIS recognizes in the Project Description (page 3.3-40) that even the best managed system can have accidental runoff. Impacts of accidental runoff are thus evaluated on pages 4.4-29 and 4.6-85 of the Draft EIR/EIS.

Response to Comment 5-64

Comment Summary: The comment states “This is the problem, as stated by you, that ‘water that infiltrates past the root zone moves laterally along horizontal zones of preferential flow and discharges to ephemeral streams,’ which then discharge into the creeks and then the esteros.”

The comment refers to a discussion of groundwater mounding, which is determined to be insignificant because most water discharges to local streams. Impacts to streams are evaluated in Section 4.6, where significant impacts to the esteros are identified. Also, refer to Response to Comment 92-165.

Response to Comment 5-65

Comment Summary: The comment is that freshwater is toxic to marine life, and that this fact is not acknowledged in the Draft EIR/EIS.

The EIR/EIS authors do not consider the effect of freshwater on aquatic life in the Sanctuary to be one of toxicity. Freshwater currently flows into the Sanctuary and affects the distribution of salinity and biota in the Esteros according to a natural process that is repeated in every estero and estuary in the world. This effect of freshwater on salinity, and the effect of a changed salinity regime on Sanctuary biota is acknowledged in Appendices I-16 (Water Quality Impacts Analysis Report Volume I - Text) and L-7 (Aquatic Biological Resources Impacts Analysis Report). Changes in salinity of the esteros are identified as a significant impact on page 4.6-89 of the Draft EIR/EIS.

Response to Comment 5-66

Comment Summary: The comment asks that the jurisdiction of NOAA be clarified in Section 4.6.

To clarify regulations regarding the Sanctuary, a new section has been added to Section 4.6 of the Draft EIR/EIS.

The following changes are made to the Draft EIR/EIS:

Page 4.6-5. The following section is added after the Inland Water Regulation and before the Ocean Water Regulation sections:

[The Esteros and the National Marine Sanctuary](#)

[The Esteros and Bodega Bay are part of the Gulf of the Farallones National Marine Sanctuary. Sanctuary regulations are given in 15 CFR Part 922 Subpart H and 15 CFR 922.80 et. seq. The Sanctuary is administered by the National Oceanic and Atmospheric Administration \(NOAA\), which is part of the United States Department of Commerce.](#)

Response to Comment 5-67

Comment Summary: The comment asks for a correction of the term “ebb tide” and states that a potentially misleading description of the esteros is provided on pages 4.6-45 and 4.6-46.

The comment apparently believes that on pages 4.6-45 and 4.6-46 the term falling tide should be used instead of ebb tide, but is not specific about what other changes should be made. The EIR/EIS authors believe that the use of the term “ebb tide” in Section 4.6 correctly describes the effect of ebb tide flows on the sand bar. The terms ebb tide and falling tide are commonly understood to mean the same thing. Flood tide flows transport sand into the esteros and are not responsible for maintaining the bar open.

Response to Comment 5-68

Comment Summary: The comment asks for the specific times that the sand bar has been opened by unauthorized activity.

The EIR/EIS authors do not have such information.

The following changes are made to the Draft EIR/EIS to clarify this fact.

Page 4.6-45. The third paragraph is modified as follows:

The Estero Americano bar was maintained in an open condition during the 1980s by the owners of a fish farm near the Estero Americano inlet. Manipulation of the Americano bar by the fish farm operators no longer occurs, but local residents have reported that both bars ~~are occasionally~~ have been opened by local land owners to relieve flooding. No specific information about the dates of any such occurrences has been identified.

Response to Comment 5-69

Comment Summary: The comment states that the use of “average salinity is completely misleading and says nothing about the complexity and diversity of the Esteros.”

The characterization of existing conditions in the esteros in Section 4.6 and Appendix I-3 (Environmental Conditions in West County Waterways) of the Draft EIR/EIS, and the evaluation of impacts in Section 4.6, Appendix I-16 (Water Quality Impact Analysis Report Volume I - Text) and Appendix L-7 (Aquatic Biological Resources Impacts Analysis Report) include information about average salinity and the range of salinity conditions that can occur under various bar and freshwater inflow conditions.

Response to Comment 5-70

Comment Summary: The comment asks how ammonia will be prevented from getting outside the reservoirs.

Refer to Mitigation Measure 2.5.3 on page 2-125. This mitigation provides for the City to monitor for ammonia in surface and shallow groundwater downstream of storage reservoirs. If monitoring indicates the evaluation criterion for ammonia is exceeded, a system of wells will be installed by the City between the reservoir and downstream receiving waters that will be operated to intercept shallow groundwater seeping from the reservoir. The intercepted groundwater will be returned to the storage reservoir.

Response to Comment 5-71

Comment Summary: The comment questions if the West County alternative will be dropped as an alternative.

The West County Alternative is being carried forward in the EIR/EIS. Refer to Response to Comment 5-9.

Response to Comment 5-72

Comment Summary: The comment asks for numerical values of biostimulating substances.

Table 4.6-1 on page 4.6-6 of the Draft EIR/EIS provides numeric values of all detectable chemical constituents in reclaimed water. Nutrients such as nitrogen and phosphorus are the primary compounds responsible for stimulating algae growth.

Response to Comment 5-73

Comment Summary: The comment suggests that the issues of increased water supply and wastewater disposal should be addressed in the same EIR.

Presumably the comment refers to the EIR recently issued by the Sonoma County Water Agency. The two projects are separate, and are being managed by two different agencies, with the City of Santa Rosa being responsible for the Long-Term Wastewater Project and the Sonoma County Water Agency being responsible for the water project. This would make it difficult to combine the projects in one EIR, and the complexities of both projects merit separate evaluation of each project. Both projects could proceed independently without implementation of the other project, so evaluating them independently is appropriate. The Sonoma County Water Agency's projects are considered as part of the cumulative analysis.

Response to Comment 5-74

Comment Summary: The comment asks for an estimate of the cost savings for a conservation system that rewards users for not using water.

The City of Santa Rosa has an aggressive conservation program that is described in the Project Description (pages 3.2-3 and 3-2-4). The existing rate structure rewards users for lower water use with lower water bills and lower sewer bills.

Response to Comment 5-75

Comment Summary: The comment asks why October is not considered a “potential mosquito time” given the variability in weather?

The EIR/EIS authors agree that, given variability in weather, mosquito habitat could be created in reservoirs at any time.

The following change is made to the Draft EIR/EIS:

Page 4.7-50. The last sentence in the first paragraph under Impact 7.5.6 is changed as follows:

Thus, potential mosquito habitat will be created by the reservoirs at any time when water is present. ~~from the beginning of the rainy season (November) through late summer (September).~~

Response to Comment 5-76

Comment Summary: The comment questions why the Draft EIR/EIS does not list steelhead trout and birds of status.

The status of steelhead trout changed after publication of the Draft EIR/EIS. Please refer to Master Response 12, located in Section 6.2 of this document, for a discussion of the status of steelhead trout. The status of all special-status bird species within the study area is included in Table 4.8-2 on page 4.8-26 of the Draft EIR/EIS.

Response to Comment 5-77

Comment Summary: The comment asks how wading bird feeding habitat will be affected if increased runoff into the esteros occurs when the estero bars are closed?

Salinity is normally quite variable in estuarine habitats as a result of both tidal influence and variable freshwater input. As a consequence, it is not uncommon to see salinity vary from a low of less than 2 parts per thousand (ppt) during periods of high freshwater input (i.e., typically during winter precipitation and runoff) to 40 ppt or more during periods of low freshwater input and concentration of brackish waters (i.e., during the summer, freshwater input is non-existent or nominal, and concentration of salts occurs through

evaporation). Invertebrates that normally occur in estuarine habitats tend to tolerate wider ranges of salinity because of this variability. However, because each species has a preferred salinity range, the abundance of any given invertebrate species may change with a change in salinity. In addition, the geographic distribution of any given species within the estero may change slightly with a change in salinity. The Draft EIR/EIS identifies that the expected change in salinity in the esteros would be up to 2.5 ppt. The maximum magnitude of this potential change in salinity is therefore well within the normal range of change for the estero and is not expected to result in major changes in the diversity or abundance of invertebrates that are fed on by local shorebirds. No additional impacts to wading bird habitats are predicted. Additional discussion of this issue is provided in Responses to Comments 12-16, 12-22, 92-150 and 92-237.

Response to Comment 5-78

Comment Summary: The comment questions why the Draft EIR/EIS fails to mention the Shrimp Club.

The Shrimp Club is an alliance that was formed in response to the decline of the California freshwater shrimp populations. Led by concerned students and faculty at the Brookside Elementary School, the Shrimp Club has developed a successful restoration partnership among local ranchers (Stemple Creek and Americano Creek watershed areas), other concerned citizens, Americorps, and the Stemple Creek Advisory Committee. The Shrimp Club is not mentioned in the Draft EIR/EIS because the efforts of the club are not directed to areas potentially affected by Project Alternatives.

Response to Comment 5-79

Comment Summary: The comment, referring to page 4.9-30, states that “these numbers” were developed during a drought, and asks for “the numbers” for other types of years.

Page 4.9-30 of the Draft EIR/EIS provides a qualitative description of biota in the esteros and does not include data to which the term “numbers” in the comment may refer. Impacts over a wide range of hydrologic conditions were evaluated in Appendices I-11 (Water Quality and Flow Model for Irrigation/Storage Area Streams), I-16 (Water Quality Impact Analysis Report Volume 1 - Text) and L-7 (Aquatic Biological Resources Impact Analysis Report) of the Draft EIR/EIS.

Response to Comment 5-80

Comment Summary: The comment states that the rare habitats mentioned on Page 4.10-11 of the Draft EIR/EIS require special protection from human activities.

The comment refers to habitat described in the Affected Environment under Section 4.10 of the Draft EIR/EIS. As presented in Section 4.10, the described habitats are regulated under Section 404 of the Clean Water Act as jurisdictional wetlands.

Response to Comment 5-81

Comment Summary: The comment suggests that hypersaline environments be mentioned either in Section 4.10 or elsewhere in the EIR/EIS.

The Draft EIR/EIS provides a discussion of hypersaline environments found within the Estero Americano and Estero de San Antonio. This text is located on pages 4.9-28 and 4.9-30 and on pages 4.6-45 and 4.6-46.

Response to Comment 5-82

Comment Summary: The comment states that the placement of reservoirs (Alternatives 3A-3E), irrigation, and the emergency options will destroy areas of special significance.

Impact 10.5.1 (page 4.10-37 of the Draft EIR/EIS) recognizes that storage reservoirs associated with Alternative 3 will result in significant impacts to wetlands and other waters of the U.S. (which include areas of special significance). With respect to irrigation, the EIR/EIS authors analyzed the potential impacts and determined that jurisdictional wetlands and other waters of the U.S. will not be impacted by the agricultural irrigation component due to the implementation of Measures 2.2.2, Irrigation Site Resource Maps, and 2.2.5: Avoid Sensitive Biological Resources. These measures are described on page 2-27 and page 2-28 respectively in Section 2 of the Draft EIR/EIS. The EIR/EIS authors assume that the term emergency options refers to the possibility of catastrophic dam failure, which is discussed in Section 4.19 of the Draft EIR/EIS. Measures to ensure dam safety have been incorporated in project design (see Measures 2.2.14: Dam Safety, on page 2-45 of the Draft EIR/EIS) and with implementation of these design features, the Draft EIR/EIS concludes that there is not a significant impact.

Response to Comment 5-83

Comment Summary: In reference to the analysis of visual impacts in Section 4.14 of the Draft EIR/EIS, the comment states that the experience by canoe and kayak users in the Esteros and the two feeder creeks will be affected by visual impacts of the West County Alternatives.

Refer to Response to Comment 5-21

Response to Comment 5-84

Comment Summary: In reference to the analysis in Section 4.14 of visual impacts due to pipeline construction, the comment suggests that bicyclists will also be affected.

This analysis addresses impacts on foreground and middleground views from State and County roads, as well as designated trails. There is nothing in the analysis to suggest that it is limited to particular modes of transportation, and the conclusion that pipeline construction will have significant impacts due to strong visual contrast would therefore apply to pedestrians, bicyclists and other vehicles.

Response to Comment 5-85

Comment Summary: In reference to the analysis of visual impacts in Section 4.14, the comment states that visual impacts related to agriculture changes are not noted in the Draft EIR/EIS.

Refer to Response to Comment 5-21.

Response to Comment 5-86

Comment Summary: In reference to the description of the affected environment for the Socioeconomics analysis in Section 4.18 (page 4.18-2), the comment states an opinion that mariculture in Tomales Bay will need to be considered.

No effects, and particularly no water quality effects on Tomales Bay have been identified by the EIR/EIS authors, as discussed in Response to Comments 3-5, 3-6, and 3-7, and therefore there will be no impacts on aquatic resources in the Bay.

Response to Comment 5-87

Comment Summary: The comment states that the Draft EIR/EIS indicates that dairy herds could increase. The comment also suggests that agricultural irrigation would support a 30% increase in the total Sonoma County dairy herd, and asks how the City will control the increase and the resulting manure.

The increase in dairy herds which has been occurring in Sonoma County is not a result of the Project. Discussion of the North Bay dairy industry in Section 4.18 of the Draft EIR/EIS indicates that the increases in dairy herd size per dairy, along with a decrease in the number of dairies has been occurring for several years, due to ongoing technological changes in feeding and milking practices, along with increasing cost of disposing of animal waste. Thus, it is expected that these changes would continue to affect the average size of dairy herds irrespective of whether agricultural irrigation was undertaken as part of the Project.

The potential 30% increase in the dairy herd suggested in the comment would encompass all of the 110 dairies in Sonoma County. The proposed agricultural irrigation as part of the Project could not possibly support such an increase. As stated on page 4.18-15 of the Draft EIR/EIS, there are only 18 dairies in the West County (out of a total of approximately 110 countywide) which could be served by the agricultural irrigation proposed by the Project. Also, as indicated in Table 4.18-11 on page 4.18-25 at most, approximately 4,500 acres of pasture along with 900 acres of forage crops would be irrigated. Production of dairy feed (either pasture or forage crops) on this acreage would provide for only 12% to 13% of the total demand for such feed in all of Southern Sonoma and Marin Counties.

As discussed in Response to Comment 5-24, the increase in pasture and local forage crops is not expected to lead to an increase in the total numbers in the dairy herds or in milk production. Rather, the irrigated pasture and locally grown forage crops are expected to replace sources outside the area which now provide feed for the dairy herds. Also as discussed in Response to Comment 5-24, any increase in manure will be controlled through the Irrigation Conservation and Management Programs (ICMP) as described in Section 2.2 (page 2-21) of the Draft EIR/EIS.

Response to Comment 5-88

Comment Summary: With respect to Page 4.18-18 of the Draft EIR/EIS, the comment states that “this economic analysis is based on an elasticity of demand which does change due to supply” and asks how is this possible.

Page 4.18-18 of the Draft EIR/EIS provides an overview of the existing vegetable crops grown in Sonoma County, and does not make statements about an economic analysis or about demand and supply. The page does contain a statement that “as fresh produce markets develop, it could become economical to increase production of salad greens, broccoli, green beans, onions, and swiss chard.” However, it is unclear how the comment relates to this statement. Because the reference in this comment is unclear, no further response can be provided.

Response to Comment 5-89

Comment Summary: The comment asks how the City will control increases in manure, water needs, chemicals and pesticide residues resulting from a four fold increase in animal units supported by agricultural irrigation.

The comment incorrectly assumes that an increase in animal units, which Section 4.18 (page 4.18-19) of the Draft EIR/EIS states could result from irrigation of pasture lands, equates to an increase in the number of animals which would be pastured. As discussed in Response to Comments 5-24 and 5-87, Section 4.18 of the Draft EIR/EIS also indicates that the numbers in the dairy herd would not be expected to increase, but that the irrigated pasture and local forage would replace imported feed for the existing dairy herds.

Response to Comment 5-90

Comment Summary: The comment states that gross expenditures are not an accurate method of economic viability nor area impact and that profit is a better indicator.

The comment is correct that profit may be a better indicator of agricultural economic viability. The issue of economic viability was considered as part of the agricultural economic analysis which concluded that agricultural businesses in Sonoma County have historically been and continue to be profitable and that, moreover, the availability of reclaimed water at low, or no cost, will improve potential profitability of local agricultural businesses.

However, profit is not the best indicator of economic impact on the local economy. The agricultural economic benefits in Section 4.18 of the Draft EIR/EIS uses gross value in order to calculate total direct economic benefits, income and jobs, created as a function of agricultural expenditures made in the County. Using profit as an indicator of the local economic impact would underestimate the total direct benefits of increased income and employment that will occur in the County. These direct benefits are a function of the additional agricultural expenditures made in the County, that result from the increased agricultural activity due to the availability of reclaimed water for irrigation. For example the jobs and income created for local agricultural suppliers and support services would be excluded if a net profit number were used. In addition, the use of gross agricultural expenditures allows a comparison between the Reclamation Alternatives since agricultural production costs would remain constant across the Alternatives. Furthermore, gross expenditures were used consistently across all alternatives, allowing a comparison of the economic impacts generated by each of them.

Response to Comment 5-91

Comment Summary: The comment asks why the year 2017 was used in Section 4.18 (page 4.18-32) of the Draft EIR/EIS when evaluating the projected additional service charge for wastewater, and requests that the figure be given for 2010.

As stated in Section 4.18 (page 4.18-32), the figure for 2017 was used because it represents the highest estimated service charge and therefore would have the greatest impact on users. Table 4.18-13 on page 4.18-34 gives the estimated additional service charges for each Project alternative for the years 2000, 2005 and 2010 as well as 2017.

Response to Comment 5-92

Comment Summary: The comment is the original of Comment Letter #5 (received on October 10, 1996) from the United States Department of Commerce National Oceanic and Atmospheric Administration, which was faxed to the City on October 7, 1996.

These comments have been addressed in Responses to Comments 5-1 through 5-91.

