

COMMENT LETTER 1 - U.S. DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, NATIONAL MARINE FISHERIES SERVICE , JAMES R. BYBEE (OCTOBER 7, 1996), RECEIVED OCTOBER 7, 1996

Response to Comment 1-1

Comment Summary: The letter states that its comments are limited to issues regarding anadromous fishes, and that some comments may be fully evaluated in the report, but were too difficult to locate because of the size, complexity, and organization of the EIR/EIS.

Refer to Master Response 1, located in Section 6.2 of this document, which deals with the complexity and organization of the document.

Response to Comment 1-2

Comment Summary: The comment states that the Draft EIR/EIS cannot easily be reviewed, is inconsistent with the spirit of NEPA, and that even longer review periods would not resolve the problems created by the size and complexity of the document .

Refer to Master Response 1, located in Section 6.2 of this document, which deals with the size, complexity, and organization of the document.

Response to Comment 1-3

Comment Summary: The comment states that insufficient time was provided to review the Draft EIR/EIS.

Refer to Master Response 4, located in Section 6.2 of this document, which deals with time for review of the document.

Response to Comment 1-4

Comment Summary: The comment suggests that the City should keep options for reuse open rather than allocating large amount of resources to agricultural irrigation.

The Draft EIR/EIS evaluates a large range of options in addition to agriculture, including stream discharges, urban irrigation and geysers recharge. Decision makers can combine these components to create a Project with a diverse set of reuse options. One of the City's overall Project objectives includes promotion of wise use of water resources. Regarding the comment's recommendation for selection of a Project which does not commit the City solely to agricultural reuse, refer to Master Response 2, located in Section 6.2 of this document.

Response to Comment 1-5

Comment Summary: The comment states that “the Draft EIR/EIS fails to address agricultural returnflows of water laden with pesticides, herbicides and fertilizers.” The comment also states that if the nature of agriculture changes because water is available, the use of agricultural chemicals will increase. Further, the comment states that impacts from non-point sources should be addressed.

Impacts of irrigation on water quality are evaluated starting on page 4.6-85 of the Draft EIR/EIS. With mitigation incorporated in project design, only impacts on copper levels have a potential to exceed water quality criteria, and thus cause a significant impact. With implementation of Mitigation Measure 2.5.2: Control Program for Dissolved Copper, on page 2-123 even these impacts could be reduced to meet water quality criteria.

Pesticides are addressed in Appendices I-1 (Estimation of Nitrogen, Salt and Herbicide/Pesticide Concentrations, in Surface Water), and K-4 (Ecological Risk Assessment). Fertilizers are addressed in Appendix I-16 (Water Quality Impact Analysis Report), in Section 6.1. Measure 2.2.1 on page 2-21 limits pesticide use to reduce impacts and requires that fertilizer including manure be managed appropriately. Measure 2.2.1 will result in a reduction in the amount of manure affecting the esteros.

Response to Comment 1-6

Comment Summary: The comment states that the Draft EIR/EIS does not consider the proposed listing of steelhead and coho salmon and recommends that these status changes be fully considered in the Final EIR/EIS.

Refer to Master Response 12, located in Section 6.2 of this document regarding the change in status for steelhead trout. The coho salmon was analyzed as a federally proposed threatened species in the Draft EIR/EIS. Federally proposed species were assessed in the same manner (i.e., using the same points of significance) as federally-listed species in the Draft EIR/EIS. Therefore, the current change in status would not affect the impact analysis conducted for coho salmon. However, Table 4.9-1 on page 4.9-10 should be changed to reflect the change in status for coho salmon.

Therefore, the following change is made to the Draft EIR/EIS.

Page 4.9-10. Table 4.9-1 is changed as follows:

Table 4.9-1

Special-Status Species Associated with Aquatic Habitats

Species	Status				Management Concerns	
	State ¹	Federal ¹	CNPS ¹	Source	Habitat	Potential Threats
<i>Lavinia symmetricus navarroensis</i> Navarro roach	SSC	--	--	2,5	Slower, warmer reaches of streams in the Russian and Navarro River drainages.	Degradation of water quality, changes in flow regimes, and competition from introduced species.
<i>Mylopharodon conocephalus</i> Hardhead	SSC	--	--	1	Large pools with little silt in the Sacramento-San Joaquin and Russian River systems.	Competition from introduced centrarchids and habitat loss.
<i>Oncorhynchus kisutch</i> Coho salmon (California Coast population)	SSC	FPT	--	7.9	Most coastal streams and rivers from San Lorenzo Creek in Santa Cruz County north.	Damming, agricultural development, logging, overfishing, and improper watershed management.
<i>Pogonichthys macrolepidotus</i> Splittail	SE	FPT	--	2,5	Backwater slough areas in the lower Delta, San Pablo Bay, and Petaluma River.	Habitat loss, degradation of water quality, and changes in flow regimes.
<i>Spirinchus thaleichthys</i> Longfin smelt	SSC	--	--	2,5	Prefers moderately saline waters in major bays and estuaries from San Francisco Bay northward.	Degradation of water quality and changes in flow regimes.
AMPHIBIANS						
<i>Ambystoma californiense</i> California tiger salamander	SSC	FC	--	2,4,5	Oak savannah, valley-foothill grasslands, and vernal pools.	Habitat destruction due to agricultural and urban development.

Response to Comment 1-7

Comment Summary: The comment states that the Draft EIR/EIS would benefit from including detailed maps and schematic diagrams of the existing wastewater treatment system since it is difficult for readers who are unfamiliar with the system to visualize the system components and how they relate to each other.

Figures showing the existing reclamation system (i.e., Figure 3.1-3) and the interim improvements (i.e., Figure 3.1-4) are provided on pages 3.1-22 and 3.1-23 of the Draft EIR/EIS. In addition, Appendix D-32 (Alternative Projects Facilities Plan) of the Draft EIR/EIS contains maps of the existing system and proposed alternatives. These figures are sufficient to show the geographic relationship of the wastewater treatment system components to each other.

Response to Comment 1-8

Comment Summary: In reference to Alternatives 2C and 3B, the comment states that, while the Draft EIR/EIS recognizes the conflict between these alternatives and the Sonoma County Aggregate Resource Management (ARM) Plan due to loss of a designated quarry site under either alternative, the EIR/EIS should address the probable impact to the Russian River ecosystem resulting from prolonged in-river gravel extraction due to the loss of quarry resources.

The loss of either of the two quarry sites identified in the ARM Plan would not result in increased or prolonged in-river gravel extraction. The total projected demand according to the ARM Plan (page 7-3) for construction grade aggregate from all sources, including in-river sources and quarries, is 75 million tons through the plan period (until 2010). Of this total the Plan expects 47 million tons to come from quarries. According to the ARM Plan (Table 5-1 on page 5-81), the amount of the total resource judged to be construction grade aggregate for all 26 of the quarry sites designated in the Plan is a minimum of 108.16 million tons and a maximum of 133.98 million tons. The Two Rock site (referred to as the Walker Road site in the ARM Plan), which would be unavailable for aggregate extraction under Alternative 3B, was judged to have between 15 and 20 million tons of construction grade aggregate, or approximately 15% of the total for all the sites. Even if the remaining 26 sites had the minimum amount judged available (93.16 million tons of the total of 108.16 million tons), this total amount of available construction aggregate would be nearly double the 47 millions tons expected to come from quarry sources under the ARM Plan.

Because the Adobe Road site (referred to as the Ielmorini site in the ARM Plan), does not contain any construction grade aggregate according to the ARM Plan (Table 5-1 on page 5-78), its loss due to Alternative 2C would not increase the demand for in-river gravel extraction.

Response to Comment 1-9

Comment Summary: The comment states that the Draft EIR/EIS does not discuss erosion and landslide potential at the edges of reservoirs adequately.

As indicated on page 4.3-70 of the Draft EIR/EIS, reservoir construction and operation will increase the occurrence of landsliding and erosion and sedimentation. These effects will be confined to the side slopes of the reservoir within the reservoir subbasin. The primary adverse impact of slope instability will be on siltation of the reservoir. Maintenance dredging will be required at the Adobe Road and Lakeville Hillside reservoir sites. Groundwater mounding outside the reservoir itself is evaluated on page 4.5-48 of the Draft EIR/EIS. Mounding is extremely localized, and will not affect erosion.

Response to Comment 1-10

Comment Summary: The comment states that erosion caused by loss of the capacity of land to absorb water from winter rains could affect aquatic habitat and was not adequately addressed.

Measures to avoid and minimize potential erosion impacts from irrigation with reclaimed water have been adopted as part of the Project description. Refer specifically to Measure 2.2.4, Restrict Soil Erosion and Sediment Movement (Irrigation Sites) on page 2-26. These measures, including best management practices, will ensure that no net increase in sediment movement of soil erosion will occur over existing conditions. In some instances erosion can be reduced as compared to present conditions. Additional discussion of the methods for evaluating potential erosion are contained in Appendix E-7 (Evaluation of Soil Erosion Impacts for the West and South County Reclamation Alternatives).

Response to Comment 1-11

Comment Summary: The comment states that surveys of reservoir sites were “perfunctory” and that the Draft EIR/EIS does not take into account the special status of the steelhead trout. Also, the comment questions the finding in the Draft EIR/EIS that a major migration corridor does not exist at the Carroll Road reservoir site; the comment asserts that the importance of the Carroll Road trout habitat cannot be assessed because of the limited scope of the surveys.

Aquatic surveys conducted at the reservoir sites were adequate to provide impact analysis for the EIR/EIS. Survey methodologies employed to collect data for the impact analysis were developed with input from the USFWS and CDFG. The methodologies were published and distributed to agencies (including NMFS) in the Final Scoping Report (Appendix U-1 through U-3) on August 7, 1995. Methodologies were amended where appropriate to address comments received at that time. NMFS did not provide comment.

Aquatic surveys were conducted to determine presence of sensitive species either through visual documentation of occurrence or habitat assessment. The aquatic life impact assessments presented in the Draft EIR/EIS are based on the results of two separate aquatic life surveys conducted for each storage reservoir site, as well as consultation with local resource agencies. The aquatic life study methodology is discussed in Section 4.9 of the Draft EIR/EIS (pages 4.9-40 and 4.9-41).

In conducting aquatic habitat assessments, the aquatic resource was mapped as a stream, pond, or estuary. Habitats were classified into one of six categories, four that apply to streams, one to ponds, and one to estuaries. The four stream categories are coolwater A, coolwater B, warmwater A, and warmwater B. The pond category includes perennial standing water bodies of any size, including irrigation and stock ponds, as well as existing municipal reservoirs. The Estero Americano and Estero de San Antonio were included under the estuary category. Each of these habitat categories is described in detail and depicted on maps in *Aquatic Habitat Survey Results* (Merritt Smith Consulting 1996b).

Streams associated with the storage reservoirs were assessed to determine the quality of aquatic habitat and to sample the existing aquatic fauna (Merritt Smith Consulting 1996d). These surveys were conducted from May 1994 through August 1995. The aquatic habitat found at each survey site was examined and sampled, but particular emphasis was placed on the least degraded sections of the streams (i.e., habitat most likely to support special-status species and high faunal diversity of native species). In areas where access was not permitted, stream habitat assessments usually consisted of observations made from bridges at public road crossings. In accessible areas, more extensive stream habitat surveys were conducted. These latter surveys consisted of visual descriptions (including photographs of each site) and estimates of important habitat elements including stream flow (in cubic feet per second, based on professional judgment), substrate, vegetation, and level of disturbance (Merritt Smith Consulting 1996b). While traversing the stream, the habitat features associated with each surveyed stream segment were recorded on a standard inventory form. Careful visual searches for special-status aquatic animal species and an assessment of suitable habitat for these species were also conducted concurrently with the general habitat surveys. Observations were recorded on standardized data sheets. Maps of the habitats observed can be found in *Aquatic Habitat Survey Results* (Merritt Smith Consulting 1996b).

Streams associated with the storage reservoirs were intensively sampled for aquatic wildlife species during May 1995 (Merritt Smith Consulting 1996d). The stream habitat types found at each survey site were sampled for invertebrates and vertebrates. This sampling was conducted by two fisheries biologists using either a seine (a large fishing net with floats along the top and weights along the bottom) or dipnet. The majority of captured organisms were quickly identified and released at the capture site. Voucher specimens were collected in some cases for later microscopic examination and identification in the laboratory. Vertebrate and invertebrate aquatic species captured were catalogued. Surveys to determine the presence of special-status species at sampling locations and the likelihood of special-status species occurring downstream of sampling

locations were conducted (Merritt Smith Consulting 1996d). This information was recorded on standardized field inventory forms.

Refer to Responses 1-12 and 1-13 for detail on the impact analysis for blockage of major migration corridors.

Please see Master Response 12 located in Section 6.2 of this document for explanation of steelhead trout status and the Draft EIR/EIS analysis.

Response to Comment 1-12

Comment Summary: The comment states that the term “major corridors” is not adequately defined in the Draft EIR/EIS.

The EIR/EIS authors concur that the Draft EIR/EIS should contain a definition of the term “major corridors”.

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

Page 4.9-38. The following is added as footnote #5 to Table 4.9-3:

5 In terms of aquatic habitats, a “major corridor”, is defined as any waterway that supports a viable population of anadromous fish and/or acts as a movement corridor for entire populations of a given species, and is essential to completion of their life cycle.

Page 4.9-37. Evaluation criterion #7 in Table 4.9-3, is modified as follows:

7. Will the Project substantially block or disrupt major fish or aquatic wildlife migration corridors⁵?

Response to Comment 1-13

Comment Summary: The comment states that the Draft EIR/EIS conclusion that there will be no impacts associated with loss of major migration corridors at reservoir sites other than Carroll Road cannot be made without intensive fish surveys.

Species surveys, habitat evaluations and historic record searches yielded no evidence of current migratory fish use in any reservoir sites other than Carroll Road. Also, refer to Response to Comment 1-11.

Response to Comment 1-14

Comment Summary: The comment states that the Draft EIR/EIS discounts the occurrence of three steelhead trout as an anomaly.

This is not the intent of the Draft EIR/EIS analysis. Refer to Master Response 12, located in Section 6.2 of this document concerning the analysis of steelhead trout.

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

Page 4.9-69. The first paragraph of the Analysis for Impact 9.5.7. is modified as follows:

During aquatic habitat assessments, three ~~one individual~~ steelhead trout ~~were~~ as found in the Carroll Road storage reservoir site. The steelhead trout may exhibit anadromy or fresh water residency. Anadromous strains migrate as juveniles from fresh water tributaries to the ocean then return to these tributaries to spawn. Fresh water residency means that steelhead live out their entire life cycle in fresh water. Though presence of three individuals ~~an individual~~ of a migratory ~~presence of an individual of a migratory~~ species may indicate a migration corridor in the vicinity, ~~no other evidence of migration was present.~~ the steelhead trout observed at the Carroll Road site are considered fresh water residents because of the lack of suitable spawning habitat. The Carroll Road tributary does possess gravel beds which were historically suitable spawning areas for salmonid species. However, these gravel beds have become overlain with muddy sediment from upstream erosion. These areas are now too laden with silt to provide for successful spawning habitat (page 11 in Appendix L-4, of the Draft EIR/EIS) and there are no known corridors or breeding sites known in this tributary. The origin of this specimen is unknown. If a migration corridor is present in this stream system, it is not a major corridor. Therefore, this impact is considered less than significant.

Response to Comment 1-15

Comment Summary: The comment states that many populations of anadromous fish are in decline and no longer occur in large numbers. As such, a single sighting should be considered significant.

Based on the recent listing of the steelhead trout (Central California Coast Evolutionarily Significant Unit) as federally-proposed endangered, and the EIR/EIS authors' interpretation of Appendix G of the CEQA Guidelines, any loss of individuals, that is, a single sighting, is considered significant in this analysis because it indicates that suitable habitat would be lost. However, with implementation of Mitigation Measure 2.3.11:, Sensitive Resource Conservation Program, on page 2-76 this impact would be reduced to less than significant. Also refer to Master Response 12, located in Section 6.2 of this document, for a discussion of the change in status of steelhead trout.

To reflect this change in status, the following changes are made to the Draft EIR/EIS.

Pages 4.9-55 and 4.9-56. Table 4.9-10 is modified as follows:

Table 4.9-10

**Aquatic Biological Resources Impacts by Component - Storage Reservoirs,
Criterion #1**

Evaluation Criteria	Point of Significance	Impact ¹		Type of Impact ²	Level of Significance ³
9.5.1. Will the storage reservoir component may cause loss of individuals or occupied habitat of endangered, threatened, or rare aquatic wildlife or plant species?	a) Greater than 0 individuals b) Greater than 0 acres of occupied habitat				
California red-legged frog		Individuals	Acres		
• Tolay Extended		2	4.1	C, P	⊙
• Adobe Road		0	0	C, P	==
• Tolay Confined		2	4.1	C, P	⊙
• Lakeville Hillside		4	1.7	C, P	⊙
• Sears Point		2	2.1	C, P	⊙
• Two Rock		11	8.4	C, P	⊙
• Bloomfield		1	3.6	C, P	⊙
• Carroll Road		0	0	C, P	==
• Valley Ford		2	8.4	C, P	⊙
• Huntley		8	1.2	C, P	⊙
<u>Steelhead Trout</u>		<u>Individuals</u>	<u>Linear Feet</u>		
• <u>Carroll Road</u>		<u>3</u>	<u>2,700³</u>	<u>C, P</u>	<u>⊙</u>
• <u>All other reservoirs</u>		<u>0</u>	<u>0</u>	<u>C, P</u>	<u>==</u>

Source: Harland Bartholomew & Associates, Inc., 1996

Notes:

1. See note at end of analysis.

2. Type of Impact:

C Construction

P Permanent

3. Level of Significance codes:

⊙ Significant impact before mitigation; less than significant impact after mitigation

== No impact

4. The loss of steelhead trout habitat is addressed in Impact 9.5.5 (loss of Coolwater B aquatic habitat).
or-occupied-habitat of endangered, threatened, or rare aquatic wildlife or plant species?

Pages 4.9-56 through 4.9-58. The discussion of Impact 9.5.1 is modified as follows:

Analysis: *Significant; Alternatives 2, 3A, 3B, 3C, 3D, and 3E.*

Tolay Extended, Tolay Confined, Lakeville Hillside, Sears Point, Two Rock, Bloomfield, Valley Ford, and Huntley Reservoirs and associated facilities (including dams, access roads, pump stations, and diversion channels) will result in the loss of at least one California red-legged frog and greater than zero acres of occupied California red-legged frog habitat. Maps B-1 through B-7 of the *Biological Resources, Volume 4B* illustrate the California red-legged frog occurrences identified for each storage reservoir site (Harland Bartholomew & Associates, Inc. 1996d). Impacts of the Adobe Road site are discussed under No Impact below.

Carroll Road and associated facilities will result in the loss of at least three steelhead trout. The loss of steelhead habitat is addressed under Impact 9.5.5. Map B-6 of the *Biological Resources Technical Memorandum, Volume 4B* illustrates the steelhead occurrences identified at the Carroll Road reservoir site (Harland Bartholomew & Associates, Inc. 1996d).

No other endangered, rare, or threatened species or their habitat was found.

No Impact; Alternatives 1, ~~3C~~, 4, and 5.

The Adobe Road ~~and Carroll Road~~ reservoirs and associated facilities will not result in the loss of individuals or occupied habitat of federally proposed or listed or federal candidate aquatic wildlife or plant species and therefore there is no impact.

Note: There are two closely related subspecies of red-legged frog in the Project area: California and northern. The identity of the species within any one alternative is unclear. Northern red-legged frogs are a California Department of Fish and Game species of special concern. The California red-legged frog is federally-threatened.

The recent federal ruling establishing the final status of California red-legged frog as federally-threatened provided the geographic range of the species. Red-legged frogs in the Walker Creek, Sonoma Creek, Petaluma River, and Tolay Creek watersheds are identified as the California subspecies and are considered federally-threatened (Miller 1996.) All other red-legged frogs in the Project area appear to be the northern subspecies, although final confirmation has not been received.

In the current analysis, all red-legged frogs in the Project area are considered to be the California subspecies though the status will be confirmed prior to the Final EIR/EIS. All red-legged frogs not determined to be the California subspecies will be evaluated as a species of special concern. Findings of significance and proposed mitigation are not expected to change.

No other endangered, rare, or threatened species or their habitat was found.

Alternatives 1, 4, and 5 do not have a storage reservoir component.

Mitigation: *Alternatives 2, 3A, 3B, [3C](#), 3D, and 3E.*

2.3.11. Sensitive Resource Conservation Program

2.4.4. California Red-legged Frog Capture and Relocation Program

Alternatives 1, ~~3C~~, 4, and 5. No mitigation is needed.

After

Mitigation: *Less than Significant after Mitigation; Alternatives 2, 3A, 3B, [3C](#), 3D, and 3E.*

California red-legged frog and [steelhead trout](#) habitat will be created (one acre created to one acre impacted) or restored (two acres restored to one acre impacted) in conjunction with other associated biological resource mitigation (e.g. jurisdictional wetlands, aquatic habitat, and sensitive vegetative communities). Red-legged frogs on site will be captured and relocated to the mitigation site.

Page 4.9-91. Table 4.9-23 is revised as follows:

Table 4.9-23

Summary of Significant Impacts and Mitigation Measures -

Aquatic Biological Resources

Impact	Level of Significance	Mitigation Measure
Storage Reservoir Component		
9.5.1. The storage reservoir component may cause loss of individuals or occupied habitat of endangered, threatened, or rare aquatic wildlife or plant species.	Alt 2 - ⊙ Alt 3A - ⊙ Alt 3B - ⊙ Alt 3C - ⊙ Alt 3D - ⊙ Alt 3E - ⊙	2.3.11. Sensitive Resource Conservation Program 2.4.4. California Red-legged Frog Capture and Relocation Program
9.5.3. The storage reservoir component may cause loss of potential or occupied habitat of aquatic species of concern.	Alt 2A - ⊙ Alt 2C - ⊙	2.3.11. Sensitive Resource Conservation Program
9.5.4. The storage reservoir component may cause permanent loss of sensitive aquatic plant communities and associated wildlife	Alt 3A - ⊙	2.3.11. Sensitive Resource Conservation Program

Table 4.9-23

Summary of Significant Impacts and Mitigation Measures -
Aquatic Biological Resources

Impact	Level of Significance	Mitigation Measure
habitats.		
9.5.5. The storage reservoir component may cause permanent loss of aquatic habitat.	Alt 2 - ☉ Alt 3C - ☉	2.3.11. Sensitive Resource Conservation Program
9.5.6. The storage reservoir component may cause a change in the physical condition of aquatic habitat in the Estero Americano or the Estero de San Antonio within the Gulf of the Farallones National Marine Sanctuary.	Alt 3 - ●	No feasible mitigation has been identified.
9.5.8. The storage reservoir component may cause a change in stream flows, affecting aquatic habitat or aquatic life downstream from proposed dam sites.	Alt 2 - ☉ Alt 3B - ☉ Alt 3C - ☉ Alt 3D - ☉	2.3.11. Sensitive Resource Conservation Program
Agricultural Irrigation Component		
9.7.6. The agricultural irrigation component may cause a change in the physical condition of aquatic habitat in the Estero Americano or the Estero de San Antonio within the Gulf of the Farallones National Marine Sanctuary.	Alt 3 - ●	No feasible mitigation has been identified.
Cumulative Impacts		
9.2C. The Project plus cumulative projects may cause loss of individual of CNPS List 2, 3, Or 4 aquatic plant species.	Alt 3E - ☉	2.4.15. Sensitive Plant Relocation Program.
9.9C. The Project plus cumulative projects may result in ecological risk to aquatic plant and wildlife populations (i.e., acute or chronic toxicity and bioaccumulation).	Alt 1 - ● Alt 5 - ☉	2.4.16. Ecological Risk Monitoring and Source Control Program.

Source: Harland Bartholomew & Associates, Inc., 1996

Notes: Level of Significance:



Significant impact before mitigation; less than significant impact after mitigation

Page 1-49. Table 1-13 is revised as follows:

Table 1-13

Summary of Significant Impacts and Mitigation

Impact	No Action	South County Irrigation				West County Irrigation					Geysers	Discharge		Mitigation Measures
	1	2A	2B	2C	2D	3A	3B	3C	3D	3E	4	5A	5B	
8.7C. The Project plus cumulative projects may result in ecological risk to terrestrial plant and wildlife populations (i.e., acute or chronic toxicity and bioaccumulation).	●	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		⊙	2.4.16. Ecological Risk Monitoring and Source Control Program
Aquatic Biological Resources														
9.5.1. The storage reservoir component may cause loss of individuals or occupied habitat of endangered, threatened, or rare aquatic wildlife or plant species.		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙				2.3.11. Sensitive Resource Conservation Program 2.4.4. California Red-legged Frog Capture and Relocation Program
9.5.3. The storage reservoir component may cause loss of potential or occupied habitat of aquatic species of concern.		⊙		⊙										2.3.11. Sensitive Resource Conservation Program

Response to Comment 1-16

Comment Summary: The comment states that the Draft EIR/EIS does not evaluate the impacts of Alternative 5B on the Laguna de Santa Rosa “due to increased levels of sodium and nitrogen.”

Sodium *per se* was not evaluated, because there are no water quality objectives for sodium. The water quality criteria which are formulated to consider the impact of sodium and other salts are:

Numeric Criteria:

Total Dissolved Solids
Conductivity.

Because the impact of all salts combined (as indicated by Total Dissolved Solids and Conductivity) is less than significant, impacts for sodium by itself will also be less than significant.

Nitrogen was evaluated using several water quality criteria:

Narrative Criteria:

Biostimulatory Substances (both Adverse and Beneficial)
Waste Reduction Strategy for Total Nitrogen (both Adverse and Beneficial)
Waste Reduction Strategy for Ammonia-Nitrogen (both Adverse and Beneficial).

The Draft EIR/EIS evaluates the impacts of Alternative 5B against each of the criteria set forth above. The following table shows a summary of impacts related to sodium and nitrogen as discussed in the Draft EIR/EIS:

Response to Comment 1-16 - Table 1

Impacts of Alternative 5B on the Laguna and Russian River for Criteria Related to
Sodium and Nitrogen

Impact Number	Criteria	Level of Significance	Page Number of Impact Table	Page Number of Impact Discussion
Sodium				
6.9.1	Conductivity in the Russian River below the Laguna (not applicable to the Laguna itself)	==	4.6-95	4.6-107
6.9.1	Total Dissolved Solids	==	4.6-97	Appendix I-16, page 33

Response to Comment 1-16 - Table 1

Impacts of Alternative 5B on the Laguna and Russian River for Criteria Related to Sodium and Nitrogen

Impact Number	Criteria	Level of Significance	Page Number of Impact Table	Page Number of Impact Discussion
6.1.C	Cumulative: Conductivity	==	--	4.6-146
Nitrogen				
6.9.2	Biostimulatory Substances-Adverse	●	4.6-98	4.6-112
6.9.2	Biostimulatory Substances-Beneficial	+	4.6-98	4.6-119
6.9.2	Waste Reduction Strategy-Total Nitrogen-Adverse (not applicable to the Russian River)	⊙	4.6-101	4.6-123
6.9.2	Waste Reduction Strategy-Total Nitrogen-Beneficial	+	4.6-102	4.6-124
6.9.2	Waste Reduction Strategy-Ammonia Nitrogen-Adverse	⊙	4.6-103	4.6-125
6.9.2	Waste Reduction Strategy-Ammonia Nitrogen-Beneficial	+	4.6-103	4.6-127
6.2.C	Biostimulatory Substances - Adverse	⊙	--	4.6-147 and 148

Level of Significance:

- Significant impact before and after mitigation
- ⊙ Significant impact before mitigation; less than significant impact after mitigation
- +
- Beneficial
- == No impact

These criteria and evaluation of impacts are discussed further in the Appendices to the Draft EIR/EIS. Total dissolved solids and conductivity in the Laguna/Russian River system were considered on pages 33 and 198, respectively, in Appendix I-16 (Water Quality Impact Analysis Report Vol. I). Also refer to Response to Comment 12-48. The Project's impact on nitrogen is the focus of pages 25 and 34 in Appendix I-16.

Response to Comment 1-17

Comment Summary: The comment points out that adoption of an alternative that involves increased reclaimed water discharge could affect the frequency of sand bar breaching at the River mouth. The comment also includes the conclusion that more frequent breaching would upset ecosystem equilibrium and lowers overall habitat value. Finally, the comment requests evaluation of downstream impacts for all alternatives.

It is possible that Alternative 5 will result in more frequent breaching of the sand bar at the mouth of the Russian River. The Sonoma County Water Agency has adopted the Russian River Estuary Management Plan for breaching and has conducted studies of breaching effects on aquatic life in the vicinity. The Sonoma County Water Agency has published two reports on breaching effects: *Russian River Estuary Study 1992-1993* and *Biological and Water Quality Monitoring in the Russian River Estuary, 1996-7*. The 1992-1993 report determined that breaching may cause anoxia in the immediate vicinity of Willow Creek which would kill mysid shrimp, and that breaching may transport immature fish to sea prematurely.

The 1996-7 study evaluated the oxygen regime in much greater detail than did the 1992-1993 study and concluded that the Willow Creek anoxia event was likely a result of a rare combination of events and that breaching replenished dissolved oxygen to the layer of seawater in the bottom of the estuary. Breaching did not eliminate stratified conditions in the estuary. Premature transport of fish was not observed in the 1996 study. The EIR/EIS authors conclude that breaching is not detrimental to the Russian River estuary, and impacts evaluated under Aquatic Life criteria 9.9.1 through 9.9.9 in Section 4.9 of the Draft EIR/EIS remain less than significant.

Response to Comment 1-18

Comment Summary: The comment recommends a study to investigate the feasibility of providing reclaimed water for vineyard irrigation and frost control.

A special study is not required, because this option is already included in the agricultural irrigation alternatives of the Project. The City of Santa Rosa is already providing reclaimed water for both vineyard irrigation and frost control. Many vineyards are within the potential Sebastopol irrigation area, which is included in both the West County and South County options.

Response to Comment 1-19

Comment Summary: The comment is an expression of support for Alternative 5A.

Refer to Master Response 2, located in Section 6.2 of this document, concerning selection of a Project.

Response to Comment 1-20

Comment Summary: The comment recommends Russian River discharge and suggests it would be more acceptable to Municipal water diverters with a pipeline to deliver water from an upstream location.

The EIR/EIS authors assume that the comment intends to suggest a new point of water diversion for the Sonoma County Water Agency, above the point of reclaimed water discharge proposed in Alternative 5A. It is correct that Municipal water users did not find discharge above their intakes to be particularly acceptable. Refer to Comment Letter 14 from the Sonoma County Water Agency, Comment Letter 18 from the North Marin Water District, and Comment Letter 19 from the Marin Municipal Water District. However, Alternative 5A was specifically requested by the public so that potential impacts on downstream drinking water diversions would be evaluated. The Public Health and Safety Section of the Draft EIR/EIS concluded that "Direct discharge of reclaimed water into the Laguna de Santa Rosa or the Russian River will not adversely affect water quality at drinking water sources and would not adversely affect human health via other potential exposure pathways" (see page 4.7-61). The Draft EIR/EIS also includes Alternative 5B, which continues discharge through the Laguna, where there are no downstream diversions. It would not make sense to build a pipeline to discharge above drinking water diversions, and then build another pipeline to move the diversion.

Response to Comment 1-21

Comment Summary: The comment states that insufficient consideration was given to anadromous fish population status and habitat needs in the Draft EIR/EIS, particularly coho salmon, steelhead trout, and chinook salmon.

Habitat requirements and status (as of July 1996) are discussed in Appendix K-2 (Biological Resources, Volume II), of the Draft EIR/EIS (pages 44 through 46; and pages 101 through 120). Also refer to Master Response 12, located in Section 6.2 of this document.

Response to Comment 1-22

Comment Summary: The comment recommends evaluation of an option to discontinue discharge to the Laguna and discharge directly to the Russian River.

This option is evaluated in the Draft EIR/EIS. Alternative 5A removes virtually all discharge from the Laguna and would construct a pipeline directly to an outfall on the Russian River.

Response to Comment 1-23

Comment Summary: The comment states the position that all West County alternatives are unsuitable.

The Draft EIR/EIS identifies a number of significant impacts for the West County Alternatives. Refer to Master Response 2, located in Section 6.2 of this document, for a discussion of Project selection.