

6.5 REVISIONS BY THE EIR/EIS AUTHORS

The following changes to the Draft EIR/EIS were generated by the EIR/EIS authors because of typographical errors, clarification of wording, correction of references, or minor additions to expand or amplify existing text. None of these changes constitute new information leading to new significant impacts or substantial increases in the severity of significant impacts.

Page 1-I of the Draft EIR/EIS. The following change is added to the List of Tables in the Table of Contents:

Table 1-3 [Index - with key issues](#)~~Key Issues to Be Resolved~~.....1-28

Page 1-19 of the Draft EIR/EIS. The following change is added after the Description of Alternatives heading at the top of the left-hand column:

(Refer to Chapter [3.13.4](#) in the Draft EIR/EIS.)

Page 1-23 of the Draft EIR/EIS. The following change is added after the Description of Components heading at the top of the left-hand column:

(Refer to Chapter [3.33.5](#) in the Draft EIR/EIS.)

Page 1-25 of the Draft EIR/EIS. The following change is added to the end of the last paragraph in the right-hand column:

This component includes two 500,000 gallon storage tanks at the end of the transmission pipeline, distribution pipelines to convey water from the storage tanks to the Geysers injection wells, and conversion of 10 ~~to 15~~ existing geothermal wells to injection wells.

Page 1-26 of the Draft EIR/EIS. The following change is added after the Cost Estimates heading in the right-hand column:

(Refer to Chapter [3.43.6](#) in the Draft EIR/EIS.)

Page 1-26 of the Draft EIR/EIS. The following change is added after the Cumulative Projects heading in the right-hand column:

(Refer to Chapter [3.53.7](#) in the Draft EIR/EIS.)

Page 1-27 of the Draft EIR/EIS. The following change is added after the Required Permits and Approvals heading in the right-hand column:

(Refer to Chapter [3.63.8](#) in the Draft EIR/EIS.)

Page 1-28 of the Draft EIR/EIS. The following change is added to the heading at the top of the page:

~~1.7 AREAS OF CONTROVERSY AND INDEX OF KEY ISSUES TO BE RESOLVED~~ **1.7 INDEX -- INCLUDING AREAS OF CONTROVERSY AND KEY ISSUES TO BE RESOLVED**

Page 1-32 of the Draft EIR/EIS. The following sentence is added to the first paragraph in the left-hand column after the reference to Table 1-4:

There is no mitigation available to reduce impacts from cancellation of Williamson Act lands to less than significant.

Page 1-32 of the Draft EIR/EIS. The following sentence is added to the end of the second paragraph in the left-hand column:

There is no mitigation available to reduce these impacts to less than significant.

Page 1-32 of the Draft EIR/EIS. The following change is added to the last sentence of the third paragraph in the left-hand column.

There is no mitigation available to reduce impacts from loss of prime farmland ~~or cancellation of Williamson Act contracts~~ to less than significant.

Page 1-38 of the Draft EIR/EIS. The following changes are made to the Loss of Wetlands at Reservoir Sites table at the top of the left-hand column:

Loss of Wetlands at Reservoir Sites	
	(acres)
Tolay Extended	248
Adobe Road	30
Tolay Confined	87
Lakeville Hillside	24 22
Sears Point	53
Two Rock	64 62
Bloomfield	57
Carroll Road	69
Valley Ford	102
Huntley	48

Pages 1-53 and 1-54, Table 1-13 of the Draft EIR/EIS. The following changes are added to the table under Impacts 14.5.3 and 14.6.2:

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	
Visual Resources														
14.4.1. The pipeline component may be inconsistent with the Sonoma County General Plan Open Space Element regarding Community Separator Areas.		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙			2.3.10. Limit construction disturbance.
14.4.2. The pipeline component may be inconsistent with the Sonoma County General Plan Open Space Element regarding Scenic Landscape Units.		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		2.3.9. Adjust pipeline alignments. 2.3.10. Limit construction disturbance.
14.4.3. The pipeline component may be inconsistent with the Sonoma County or city General Plans regarding designated Scenic Corridors.		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		2.3.9. Adjust pipeline alignments. 2.3.10. Limit construction disturbance.
14.4.5. The pipeline component may cause adverse effects on foreground or middleground views from a high volume travelway, recreation use area, or other public use area.		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	●	⊙		2.3.9. Adjust pipeline alignments. 2.3.10. Limit construction disturbance.
14.4.6. The pipeline component may cause an adverse effect on foreground or middleground views from one or more private residence.		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		2.3.9. Adjust pipeline alignments. 2.3.10. Limit construction disturbance.
14.5.2. The storage reservoir component may be inconsistent with the Sonoma County General Plan Open Space Element regarding Scenic Landscape Units.			⊙											2.4.6. Screen concrete diversion channels, pump stations, and other facilities. 2.4.7. Establish tree screening. 2.4.8. Revegetate face of reservoir dam.

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	
14.5.3. The storage reservoir component may be inconsistent with the County Open Space Element regarding Scenic Corridors.		●	●	●	●		●	●	●					2.4.6. Screen concrete diversion channels, pump stations, and other facilities. 2.4.7. Establish tree screening. 2.4.8. Revegetate face of reservoir dam.
14.5.5. The storage reservoir component may cause adverse effects on foreground or middleground views from a high volume travelway, recreation use area, or other public use area.			⊙		●		⊙			⊙				2.4.6. Screen concrete diversion channels, pump stations, and other facilities. 2.4.7. Establish tree screening. 2.4.8. Revegetate face of reservoir dam.
14.5.6. The Storage reservoir component may cause an adverse effect on foreground or middleground views from one or more private residences.		●	●	●	●	●	●	●	●	⊙				2.4.6. Screen concrete diversion channels, pump stations, and other facilities. 2.4.7. Establish tree screening. 2.4.8. Revegetate face of reservoir dam.
14.6.2. The pump station component may be inconsistent with the Sonoma County General Plan Open Space Element regarding Scenic Landscape Units.		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	●			2.4.6. Screen concrete diversion channels, pump stations, and other facilities.
14.6.3. The pump station component may be inconsistent with the County Open Space Element regarding Scenic Corridors.		●	●	●	●	●	●	●	●	●	●			2.4.6. Screen concrete diversion channels, pump stations, and other facilities.
14.6.4. The pump station component may be inconsistent with minimum building setbacks for structures along Sonoma County designated scenic corridors.		●	●	●	●	●	●	●	●	●	●			2.4.6. Screen concrete diversion channels, pump stations, and other facilities.

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	
14.6.5. The pump station component may cause adverse effects on foreground or middleground views from a high volume travelway, recreation use area, or other public use area.		●	●	●	●	●	●	●	●	●	●			2.4.6. Screen concrete diversion channels, pump stations, and other facilities.
14.6.6. The pump station component may cause an adverse effect on foreground or middleground views from one or more private residences.		●	●	●	●	●	●	●	●	●	●			2.4.6. Screen concrete diversion channels, pump stations, and other facilities.

Page 2-38 of the Draft EIR/EIS. The following text is added to the first sentence after Monitoring:

1. Revegetated areas shall be monitored annually for a minimum of five years following construction.

Page 2-53 of the Draft EIR/EIS. The following change is added to the beginning of the first paragraph under Impact 2.2.21 Repair Road Damage:

Prior to construction, the City of Santa Rosa will consult with the County of Sonoma Department of Transportation and Public Works (DTPW) staff and other affected agencies regarding site-specific details of the alternative selected prior to the preliminary design stage including construction drawings.
~~Prior to construction, the City of Santa Rosa will survey and videotape the condition of all roads scheduled to have construction on or adjacent to them.~~

Page 2-82 of the Draft EIR/EIS. The following changes are added to the Level of Significance After Mitigation for Impacts 9.5.1, 9.5.3, and 9.5.5:

9.5.1 The storage reservoir component may cause loss of individuals or occupied habitat of federally listed, proposed, or candidate aquatic wildlife or plant species.	Alts 2a, <u>2b, 2c, 2d, and 3c</u> 3a, 3d and 3e - Less than Significant
9.5.3 The storage reservoir component may cause loss of potential or occupied habitat of aquatic species of concern.	Alts 2a, and 2c, <u>3a, 3b, 3d, and 3e</u> - Less than Significant
9.5.5 The storage reservoir component may result in loss of aquatic habitat.	Alts 2 and 3 <u>a</u> - Less than Significant

Page 2-83, Table 2.3-3 of the Draft EIR/EIS. The following note and text is added to the Red-legged Frog Habitat column and at the end of the table:

Table 2.3-3

Sensitive Biological Resources Identified at Storage Reservoir Sites

Storage Reservoir Site	Oak Woodland Habitat (acres)	Native Grassland (acres)	Mixed Riparian (acres)	Willow Riparian (acres)	Non-wooded Riparian (acres)	Red-legged Frog Habitat ¹ (acres)	Jurisdictional Wetlands (acres)	Cool-water Habitat (linear feet)	Warm-water Habitat A (linear feet)	Warm-water Habitat B (linear feet)	Pond (acres)
West County											
Bloomfield	0.6	0.0	1.0	8.7	13.6	2.7	57.4	0.0	0	14,500	1
Carroll Road	0.0	1.0	0.0	17.4	1.1	0.0	68.9	2700	3,400	6,900	3
Huntley	0.0	2.0	1.1	3.5	2.6	1.5	48.3	0	4,100	7,000	>1
Two Rock	58.3	1.3	8.3	7.4	3.0	8.7	61.8	350	6,000	7,700	3
Valley Ford	1.0	0.0	0.0	9.0	3.2	3.4	101.5	0	5,300	4,000	3
South County											
Adobe Road	16.9	0.0	60.2	0.0	3.9	0.0	30.3	0	0	7000	3
Lakeville Hillside	0.0	0.6	0.0	10.6	8.0	1.4	21.6	0	0	10,100	1
Sears Point	6.2	0.0	43.7	15.4	6.4	1.6	52.6	0	5,200	13,100	<1
Tolay Extended	0.0	25.0	4.4	2.4	19	4.8	247.6	0	1,850	27,300	1
Tolay Confined	0.0	23.9	4.4	2.6	18.9	4.8	86.9	0	1,850	12,500	1

Source: Harland Bartholomew & Associates, 1996

Notes:

1 = Either California red-legged frog or northern red-legged frog depending upon geographic location.

Page 2-102 of the Draft EIR/EIS. The following change is added to the text under Level of Significance After Mitigation:

<p>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.</p>	<p>Alt 2, 3a, 3b, 3d, and 3e - Less than Significant (with Measure 2.3.11)</p>
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Page 2-102 of the Draft EIR/EIS. The following change is added to the Alternatives/Component text:

Alternatives/Component: Alternatives ~~2~~ and ~~3~~

Page 2-102 of the Draft EIR/EIS. The following change is added to the Timing text:

Timing:	<p>Start: California rRed-legged frog capture and relocation should occur during the active season (i.e., March-May; Mark Jennings, herpetologist, personal communication) prior to storage reservoir construction in the year of construction. First annual report should be submitted at the end of the year of storage reservoir construction.</p> <p>Complete: California rRed-legged frog capture and relocation should be completed in March through May prior to storage reservoir construction in the year of construction. Measure will continue for a period of five years.</p>
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Page 2-141, Table 2.6-1 of the Draft EIR/EIS. The following changes are added to the table:

Table 2.6-1

Summary of Mitigation Measures by Alternative

Mitigation Measure		Alternative											
		2a	2b	2c	2d	3a	3b	3c	3d	3e	4	5a	5b
2.4 Construction Measures													
2.4.2	Remove Weak Surficial Deposits from Reservoir Footprint	X	X	X	X								
2.4.3	Standard Engineering Methods for Expansive Soils	X	X	X	X	X	X	X	X	X	X		

Table 2.6-1

Summary of Mitigation Measures by Alternative

Mitigation Measure	Alternative											
	2a	2b	2c	2d	3a	3b	3c	3d	3e	4	5a	5b
2.4.4 California Red-legged Frog Capture and Relocation Program	X	X	X	X	X	X		X	X			
2.4.5 Active Raptor Nest Location and Monitoring Program	X	X	X	X	X	X	X	X	X			
2.4.6 Screen Concrete Diversion Channels, Pump Stations and Other Facilities	X	X	X	X	X	X	X	X	X	X		
2.4.7 Establish Tree Screening	X	X		X	X	X	X	X	X			
2.4.8 Revegetate Face of the Reservoir Dam	X	X		X	X	X	X	X	X			
2.4.9 Construction Noise Control Measures	X	X	X	X	X	X	X	X	X	X	X	
2.4.10 Vehicle and Equipment Exhaust Control Program	X	X	X	X	X	X	X	X	X	X		
2.4.11 Dust Control Program	X	X	X	X	X	X	X	X	X	X		
2.4.12 Protect Undiscovered Cultural Resource Sites	X	X	X	X	X	X	X	X	X	X	X	
2.4.13 Protect Vertebrate Paleontologic Resources	X	X	X	X	X	X	X	X	X	X	X	
2.4.14 Coordinate Alternative Fire Response Service	X	X	X	X	X	X	X	X	X	X		
2.4.15 Sensitive Plant Relocation Program					X	X	X	X	X			
2.4.16 Ecological Risk Monitoring and Source Control Program											X	X

Page 4.3-74, Table 4.3-10 of the Draft EIR/EIS. The following change is added to Evaluation Criteria 3.6.3:

Pump Station Component

Table 4.3-10

Geology Impacts by Component - Pump Stations

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
3.6.1. Will the pump station component be located within an area of unstable slope conditions?	Overall rating of Moderate to High	Low	P	○
3.6.2. Will the pump station component be subject to ground rupture due to location near a surface trace of an active fault?	Any portion of facilities within the Alquist-Priolo earthquake fault zones	No	P	==
3.6.3. Will the pump station component be located in areas with soils and groundwater conditions that are susceptible to liquefaction during an earthquake?	A rating of High for liquefaction			
• S, BUS, FGS, SEB, <u>G-1</u>		High	P	⊙
• All other pump stations		Moderate to Low	P	○
3.6.4. Will the pump station component induce seismicity?	Effects of Modified Mercalli V or greater decreasing in recurrence interval by 50% or more for earthquakes with existing recurrences intervals of greater than one year	None	P	==
3.6.5. Will earthquake-induced strong ground shaking damage pump station components?	Construction not in conformance with requirements of the Division of Safety of Dams or applicable building code.	None	P	==

Table 4.3-10

Geology Impacts by Component - Pump Stations

Evaluation Criteria	Point of Significance	Impact	Type of Impact¹	Level of Significance²
3.6.6. Will construction of the pump station component cause off-site water-related soil erosion?	Construction activities not in compliance with requirements of the project NPDES permit, Division of Safety of Dams regulations or building and grading codes.	None	C	==

Page 4.6-9 of the Draft EIR/EIS. The following changes are added to the table:

Table 4.6-2

Biological Constituents of Reclaimed Water

Biological Constituent	Units	Concentration Range	Mean Concentration	Reporting Limits	Number of Detects	Number of Samples	Point of Significance
BOD	mg/L	1.5 - 19	3.4		49 ¹	49 ¹	none
Total Coliform	MPN ² /100 ml	ND - 170	2.2	2.2	49 ¹	49 ¹	none
Enteric Viruses	PFU ³ /#L	ND	N/A	1/~150 mL	0	7	none
<i>Giardia lamblia</i>	#cysts/#L	ND - 28/203	10/223	1/~200 mL	2	4	none
<i>Cryptosporidium</i>	#oocysts/#L	ND	N/A	1/~200 mL	0	4	none
<i>Legionella</i> sp.	MPN ² /100 mL	ND	N/A	7840	0	4	none
<i>Salmonella</i> sp.	MPN ² /100 mL	ND	N/A	2.2	0	4	none
Shigella	MPN ² /100 mL	ND	N/A	2.2	0	4	none
Heterotrophic Bacteria Plate Count	CFU ⁴ /mL	ND - 2	1.25	2	1	4	none

Source: *Reclaimed Water Quality*, Merritt Smith Consulting
1996k

Period of record: 1991 - Jan 1995.

N/A - not available

N.D. - not detected

BOD - Biological Oxygen Demand

¹ Numbers shown are the number of monthly averages; these constituents are routinely measured several times per month.

² MPN - Most Probable Number

³ PFU - Plaque-Forming Units

⁴ Colony-Forming Units

Page 4.6-45 of the Draft EIR/EIS. The following text is added to the second sentence in the third paragraph:

Manipulation of the Americano bar by the fish farm operators no longer occurs, but [local residents have reported that](#) both bars have been opened by local land owners to relieve flooding.

Page 4.6-66 of the Draft EIR/EIS. The following change is added to the first sentence of the first paragraph:

The Management Plan of the Gulf of the Farallones National Marine Sanctuary and the regulations (15 CFR [936 Part 922, Subpart H](#)) indicate that the Sanctuary was created to protect an unusual site.

Page 4.6-88 of the Draft EIR/EIS. The following change is added to the fourth sentence in the second paragraph under the After Mitigation heading:

The concentration of copper in reclaimed water since September 1995 is 0.[008](#) mg/L (n=2 samples) indicating a potential long-term reduction in dissolved copper (Merritt Smith Consulting 1996l).

Page 4.6-143 of the Draft EIR/EIS. The number for the table on this page is changed from Table 4.9-53 to Table 4.6-53 as follows:

Table 4.6-53

Page 4.7-33 of the Draft EIR/EIS. The following text is added to the first sentence of the second paragraph:

The analysis of risk from the detected biological components in the Laguna Plant effluent is evaluated by comparing the data to a known infective does (*Giardia*), to background concentrations (total coliform, [Cryptosporidium and Giardia](#), and heterotrophic bacteria), and to regulatory standards (total coliform).

Page 4.7-62 of the Draft EIR/EIS. The following changes are added to the fourth and fifth sentences in the last paragraph:

While *Giardia* [and Cryptosporidium](#) ~~*lamblia*~~ cysts were detected in the Laguna Plant effluent, [the discharge will not cause the existing concentration of cysts to increase. they do not present an unacceptable risk based on the EPA's risk criterion as stated in the Surface Water Treatment Rule and calculated in the human health risk assessment. In addition, Giardia cysts have been detected in the Russian River.](#) No other pathogenic microorganisms ([Cryptosporidium](#), *Legionella*, *Salmonella*, *Shigella*, or enteric viruses) were detected in the Laguna Plant effluent.

Page 4.8-28, Table 4.8-2 of the Draft EIR/EIS. The following change is added to the Potential Threats column of the table:

Table 4.8-2

Special-Status Animal Species

Species	STATUS				MANAGEMENT CONCERNS	
	State	Federal	Other	Source	Habitat	Potential Threats
<i>Dendroica petechia</i> Yellow warbler	SSC	--	--	1,4	Coastal and valley riparian forests and woodlands.	Habitat degradation and loss, and brood parasitism.
<i>Elanus leucurus</i> White-tailed kite	CFP	--	--	1,4	Grasslands, agricultural lands, meadows, and marshes for foraging. Nests and perches in dense topped trees.	Habitat destruction due to agricultural and urban development.
<i>Falco columbarius</i> Merlin	SSC			1	Foraging habitat includes brackish and freshwater marsh, salt ponds, grassland, oak woodland, and agricultural land.	Habitat degradation and loss.
<i>Falco mexicanus</i> Prairie falcon	SSC			1	Foraging habitat includes freshwater marsh, grassland, and agricultural land.	Loss of foraging habitat, human disturbance at eyries, and shooting.
<i>Geothlypis trichas sinuosa</i> Salt marsh common yellowthroat	SSC	--	--	1,2,3,4,5	Fresh and saltwater marshes; needs thick continuous cover down to the water surface for foraging.	Habitat degradation and loss.

Notes and sources are at the end of the table.

Page 4.8-44 of the Draft EIR/EIS. The following change is added to the first sentence of the last paragraph:

Chaparral also offers valuable foraging habitat and cover for wild pig (*Sus scrofa*), black-tailed deer (*Odocoileus ~~hemionus~~*), bobcat (*Felis rufus*), coyote (*Canis latrans*), brush rabbit (*Sylvilagus bachmani*), black-tailed jackrabbit (*Lepus californicus*), and California kangaroo rat (*Dipodomys californicus*).

Page 4.8-46 of the Draft EIR/EIS. The following sentence is added to the end of the first paragraph:

Coastal oak woodland is also important to neotropical migrant songbirds (i.e., warblers, vireos, grosbeaks) in terms of providing feeding, resting, and nesting habitat.

Page 4.8-72, Table 4.8-6 of the Draft EIR/EIS. The following text is added under Point of Significance for Evaluation Criteria 4:

Table 4.8-6

Evaluation Criteria and Point of Significance - Terrestrial Biological Resources

Evaluation Criteria	As Measured By	Point of Significance	Justification
1. Will the Project cause loss of individuals or occupied habitat of endangered, threatened, or rare terrestrial wildlife or plant species ¹ ?	<p>a. Number of individuals of a plant or wildlife species that would be lost</p> <p>b. Acres of occupied or designated critical habitat</p>	<p>a. Greater than 0 individuals</p> <p>b. Greater than 0 acres</p>	FESA, CESA (Sections 2062 and 2067), CEQA (Article 5, Section 15065), and California Native Plant Protection Act (CDFG Code Sections 1900-1913)
2. Will the Project cause loss of individuals of CNPS List 2, 3, or 4 terrestrial plant species?	Number of plant species or populations that would experience a loss of individuals	Greater than 15 percent of known occurrences or populations in Sonoma and Marin counties	California Native Plant Protection Act (CDFG Code Sections 1900-1913), CEQA (Article 5, Section 15065)
3. Will the Project cause loss of active raptor nest sites?	Number of active nesting sites	Greater than 0 active nest sites	CEQA (Article 5, Section 15065), CDFG Wildlife Habitat Relationships model - (Version 5.2), Fish and Game Code - (Section 3503.5)

Table 4.8-6

Evaluation Criteria and Point of Significance - Terrestrial Biological Resources

Evaluation Criteria	As Measured By	Point of Significance	Justification
4. Will the Project cause permanent loss of sensitive terrestrial wildlife habitat ² ?	Acres of sensitive terrestrial wildlife habitat	Greater than 25 percent of each habitat type in Sonoma and Marin counties	CEQA (Article 5, Section 15065), CDFG Wildlife Habitat Relationships model - (Version 5.2)
5. Will the Project cause permanent loss of sensitive native terrestrial plant communities?	Acres of sensitive native terrestrial plant community lost	Greater than 0 acres	CEQA (Article 5, Section 15065), California Native Plant Protection Act (Fish and Game Code, Sections 1900-1913), CDFG Interim Wildlife/Hardwood Management Guidelines (February 1, 1989), CDFG (CNDDDB 1994, 1995), Sonoma County Tree Ordinance 4014 (June 13, 1989)

Page 4.8-79, Table 4.8-7 of the Draft EIR/EIS. The following changes are added to the Point of Significance column for Evaluation Criteria 8.1.2 and 8.1.4:

Table 4.8-7

Terrestrial Biological Resources Impacts by Component - No Action Alternative

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
8.1.1. Will the No Action Alternative cause loss of individuals or occupied habitat of endangered, threatened, or rare terrestrial wildlife or plant species?	a. Greater than 0 individuals b. Greater than 0 acres	None	C	==
8.1.2. Will the No Action Alternative cause loss of individuals of CNPS List 2, 3, or 4 terrestrial plant species?	Greater than 15 percent of known occurrences or populations in Sonoma and Marin countiesCounty	None	C	==
8.1.3. Will the No Action Alternative cause loss of active raptor nest sites?	Greater than 0 active nest sites	None	C	==
8.1.4. Will the No Action Alternative permanent loss of sensitive terrestrial wildlife habitat?	Greater than 25 percent of each habitat type in Sonoma and Marin countiesCounty	None	C	==
8.1.5. Will the No Action Alternative cause permanent loss of sensitive native terrestrial plant communities?	Greater than 0 acres	None	C	==
8.1.6. Will the No Action Alternative substantially block or disrupt major terrestrial wildlife migration or travel corridors?	Greater than 0 corridors	None	C	==

Page 4.8-82, Table 4.8-8 of the Draft EIR/EIS. The following changes are added to the Point of Significance column for Evaluation Criteria 8.4.2 and 8.4.4 and the Impact column for Evaluation Criteria 8.4.4:

Table 4.8-8

Terrestrial Biological Resources Impacts by Component - Pipelines

Evaluation Criteria	Point of Significance	Impact	Type of Impact¹	Level of Significance²
8.4.1. Will the pipeline component cause loss of individuals or occupied habitat of endangered, threatened, or rare terrestrial wildlife or plant species?	a. Greater than 0 individuals b. Greater than 0 acres	None	C	==
8.4.2. Will the pipeline component cause loss of individuals of CNPS List 2, 3, or 4 terrestrial plant species?	Greater than 15 percent of known occurrences or populations in Sonoma and Marin counties County	None	C	==
8.4.3. Will the pipeline component cause loss of active raptor nest sites?	Greater than 0 active nest sites	None	C	==
8.4.4. Will the pipeline component cause permanent loss of sensitive terrestrial wildlife habitat?	Greater than 25 percent of each habitat type in Sonoma and Marin counties County	Less than 1 percent None	C	==
8.4.5. Will the pipeline component cause permanent loss of sensitive native terrestrial plant communities?	Greater than 0 acres	None	C	==
8.4.6. Will the pipeline component substantially block or disrupt major terrestrial wildlife migration or travel corridors?	Greater than 0 corridors	None	C	==
8.4.7. Will the pipeline component result in ecological risk to terrestrial plant and wildlife populations (i.e., acute or chronic toxicity and bioaccumulation)?	Ecological Quotient (EQ) greater than 10	None	O&M	==

Source: Harland Bartholomew & Associates, Inc., 1996

<p>Notes: 1. Type of Impact:</p> <p>C Construction</p> <p>O&M Operation and Maintenance</p>	<p>2. Level of Significance:</p> <p>○ Less than significant impact; no mitigation proposed</p> <p>== No impact</p>
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Page 4.8-84 of the Draft EIR/EIS. The following change is added to the Analysis section under Impact 8.4.4:

Analysis: Less than Significant~~No Impact~~; All Alternatives

Page 4.8-84, Table 4.8-9 of the Draft EIR/EIS. The following changes are added to the Geysers Recharge row in the table:

Table 4.8-9

Sensitive Wildlife Habitats in Pipeline Corridors to Be Avoided

Alternative	(acres)		
	Coastal Oak Woodland	Montane Hardwood	Valley Foothill Riparian
Tolay Extended	1.72	0.34	5.16
Adobe Road/Lakeville	1.72	0.34	5.16
Tolay Confined	1.72	0.34	5.18
Sears Point/Lakeville	1.72	0.34	5.19
Two Rock	1.72	0.34	8.08
Bloomfield	1.72	0.34	8.12
Carroll Road	1.72	0.34	8.08
Valley Ford	1.72	0.34	8.08
Huntley	1.72	0.34	8.08
Geysers Recharge	17.60	29.80	1.93
Russian River Discharge	1.38	6.50	1.62

Source: Harland Bartholomew & Associates, Inc. 1996

Page 4.8-86, Table 4.8-10 of the Draft EIR/EIS. The following changes are added to the Geysers Recharge row of the table:

Table 4.8-10

Sensitive Plant Communities in Pipeline Corridors to Be Avoided
(acres)

Alternative	Mixed Riparian	Willow Riparian	Oak Woodland	Oak-Bay- Madrone Woodland
Tolay Extended	4.82	0.35	1.72	0.34
Adobe Road/Lakeville	4.82	0.35	1.72	0.34
Tolay Confined	4.82	0.38	1.72	0.34
Sears Point/Lakeville	4.82	0.39	1.72	0.34
Two Rock	4.46	3.67	1.72	0.34
Bloomfield	4.46	3.72	1.72	0.34
Carroll Road	4.46	3.67	1.72	0.34
Valley Ford	4.46	3.67	1.72	0.34
Huntley	4.46	3.67	1.72	0.34
Geysers Recharge	1.090.45	0.850.50	17.60.00	29.80.00
Russian River Discharge	1.45	1.21	1.38	6.54

Source: Harland Bartholomew & Associates, Inc. 1996

Page 4.8-87, Table 4.8-11 of the Draft EIR/EIS. The following changes are added to the Point of Significance and Impact columns for Evaluation Criteria 8.5.3:

Table 4.8-11

Terrestrial Biological Resources Impacts by Component - Storage Reservoirs

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
8.5.1. Will the storage reservoir component cause loss of individuals or occupied habitat of endangered, threatened, or rare terrestrial wildlife or plant species?	a. Greater than 0 individuals	None	C, P	==
	b. Greater than 0 acres			
8.5.2. Will the storage reservoir component cause loss of individuals of CNPS List 2, 3, or 4 terrestrial plant species?	Greater than 15 % of known occurrences in populations in Sonoma and Marin counties			
• Two Rock		10%	P	○
• Huntley		5%	P	○
• All other reservoirs		None	P	==
8.5.3. Will the storage reservoir component cause loss of active raptor nest sites?	Greater than 0 <u>active nest sites</u> <u>acres of suitable nesting habitat</u> ³	Greater than 0 <u>active nests</u> <u>acres</u>	C, P	⊙
8.5.4. Will the storage reservoir component cause permanent loss of sensitive terrestrial wildlife habitat?	Greater than 25% of each habitat type in Marin and Sonoma counties ³			
• Tolay Extended		3%	P	○
• Adobe Road		15%	P	○
• Tolay Confined		3%	P	○
• Lakeville Hillside		3%	P	○
• Sears Point		14%	P	○
• Two Rock		4%	P	○
• Bloomfield		2%	P	○
• Carroll Road		4%	P	○
• Valley Ford		4%	P	○

Table 4.8-11

Terrestrial Biological Resources Impacts by Component - Storage Reservoirs

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
• Huntley		2%	P	○
8.5.5. Will the storage reservoir component cause permanent loss of sensitive native terrestrial plant communities?	Greater than 0 acres ⁴			
• Tolay Extended		32	P	⊙
• Adobe Road		77	P	⊙
• Tolay Confined		32	P	⊙
• Lakeville Hillside		12	P	⊙

Page 4.8-89 of the Draft EIR/EIS. The following changes are added to the fifth and sixth sentences in the first paragraph in the Analysis section:

Review of the records of the U.C. Berkeley Herbarium determined that twenty populations or occurrences of hayfield tarplant have been identified in Sonoma and Marin counties (eight in Marin County and ~~twelve~~ ten in Sonoma County). An additional 15 populations were identified during surveys undertaken in support of this document (five in Marin County and ~~10~~ 12 in Sonoma County).

Page 4.8-92 of the Draft EIR/EIS. The following change is added to the first sentence of the first paragraph:

Valley foothill riparian habitat is especially important for resting, foraging, and nesting neotropical migrant songbirds (birds that breed in North America and migrate to Mexico, Central and South America to spend the winter).

Page 4.8-94, Table 4.8-14 of the Draft EIR/EIS. The following change is added to Note 2 at the bottom of the table:

Table 4.8-14

Special-Status Wildlife Species Associated with Wildlife Habitat Relationship
System Habitat Types
(High Suitability Only)

Wildlife Species	Observed During Surveys	Annual Grassland	Coastal Scrub	Coastal Oak Woodland	Montane Hardwood	Valley Foothill Riparian
Pallid bat ¹	No	F		F		
Ringtail ¹	No					F, R
White-tailed kite ²	Yes	F		R		R
Northern harrier ¹	Yes	F, R				
Ferruginous hawk ¹	No	F				
Golden eagle ¹	Yes	F		R	R	
Prairie falcon ¹	Yes	F				
Long-billed curlew ¹	No	F				
Tricolored blackbird ¹	Yes	F				
Sharp-shinned hawk ¹	Yes		F	F	F, R	F
Cooper's hawk ¹	Yes		F	F, R	F, R	F, R
Merlin ¹	Yes					F
Burrowing owl ¹	Yes	F, R				
Yellow warbler ¹	No			F		F, R
Yellow-breasted chat ¹	No			F		F

Source: Harland Bartholomew & Associates, 1996

Notes:

F = high suitability for foraging

R = high suitability for reproduction

1 Species of special concern, California Department of Fish and Game

2 Fully protected, [California Department of Fish and Game](#)

Page 4.8-97, Table 4.8-16 of the Draft EIR/EIS. The following text is added to the Point of Significance column for Evaluation Criteria 8.6.2 and 8.6.4:

Table 4.8-16

Terrestrial Biological Resources Impacts by Component - Pump Stations

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
8.6.1. Will the pump station component cause loss of individuals or occupied habitat of endangered, threatened, or rare, terrestrial wildlife or plant species?	Greater than 0 individuals and Greater than 0 acres	None	P	==
8.6.2. Will the pump station component cause loss of individuals of CNPS List 2, 3, or 4 terrestrial plant species?	Greater than 15% of known occurrences or populations in Sonoma and Marin counties County	None	P	==
8.6.3. Will the pump station component cause loss of active raptor nest sites?	Greater than 0 active nest sites	None	P	==
8.6.4. Will the pump station component cause permanent loss of sensitive terrestrial wildlife habitat?	Greater than 25% of each habitat type in Sonoma and Marin counties County	Less than 1%	C	○
8.6.5. Will the pump station component cause permanent loss of sensitive native terrestrial plant communities?	Greater than 0 acres	None	P	==
8.6.6. Will the pump station component substantially block or disrupt major terrestrial wildlife migration or travel corridors?	Greater than 0 corridors	None	P	==
8.6.7. Will the pump station component result in ecological risk to terrestrial plant and wildlife populations (i.e., acute or chronic toxicity and bioaccumulation)?	EQ Greater than 10	None	P	==

Source: Harland Bartholomew & Associates, Inc., 1996

Notes: 1. Type of Impact:
P Permanent
C Construction

2. Level of Significance codes:
== No impact
○ Less than significant impact; no mitigation proposed

Page 4.8-98 of the Draft EIR/EIS. The following changes are added to the last sentence in the Analysis section of Impact 8.6.1-3 and 6-7:

Alternatives 1, 4 and 5 does not have a pump station storage reservoir component.

Page 4.8-99 of the Draft EIR/EIS. The following changes are added to the last sentence of the first paragraph and the first sentence of the second paragraph in the Analysis section of Impact 8.6.5:

Each of these pump stations has will have an approximate construction zone boundary of one acre, which could result in the combined loss of at least two acres of oak-bay-madrone woodland.

However, Measure 2.2.5, adopted as part of the Project, provides measures to avoid sensitive plant communities near pump stations and electrical systems and establishes procedures for avoidance of construction impacts to wildlife or plant species and occupied habitats.

Page 4.8-105 of the Draft EIR/EIS. The following change is added to the second sentence in the last paragraph:

The results of this analysis are presented in Table 4.8-21. For all alternatives the maximum loss of annual grassland is less than the 25% point of significance.

Page 4.8-113, Table 4.8-23 of the Draft EIR/EIS. The following change is added to the Point of Significance column for Evaluation Criteria 8.9.4:

Table 4.8-23

Terrestrial Biological Resources Impacts by Component - Discharge

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
8.9.2. Will the discharge component cause loss of individuals of CNPS List 2, 3, or 4 terrestrial plant species?	Greater than 15 percent of known occurrences or populations in Sonoma and Marin counties	None	P, O&M	==
8.9.3. Will the discharge component cause loss of active raptor nest sites?	Greater than 0 active nest sites	None	P, O&M	==

Table 4.8-23

Terrestrial Biological Resources Impacts by Component - Discharge

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
8.9.4. Will the discharge component cause permanent loss of sensitive terrestrial wildlife habitat?	Greater than 25 percent of each habitat type in Sonoma and Marin counties County			
• Russian River		Less than 1%	P	○
• Laguna		None	P, O&M	==
8.9.5. Will the discharge component cause permanent loss of sensitive native terrestrial plant communities?	Greater than 0 acres			
Russian River		.25 acre	P	⊙
Laguna		None	P, O&M	==
8.9.6. Will the discharge component substantially block or disrupt major terrestrial wildlife migration or travel corridors?	Greater than 0 corridors	None	P, O&M	==
8.9.7. Will the discharge component result in ecological risk to terrestrial plant and wildlife populations (i.e., acute or chronic toxicity and bioaccumulation)?	EQ greater than 10	EQ less than 8.02	O&M	○

Source: Harland Bartholomew & Associates, Inc., 1996

Notes: 1. Type of Impact:
O&M Operation and Maintenance
P Permanent

2. Level of Significance:
⊙ Significant impact before mitigation; less than significant impact after mitigation
○ Less than significant impact; no mitigation proposed
== No impact

Page 4.8-115 of the Draft EIR/EIS. The following text is added to the Impact 8.9.4 statement at the top of the page:

Impact: 8.9.4 Will the discharge component [cause](#) permanent loss of sensitive terrestrial wildlife habitat?

Page 4.8-116 of the Draft EIR/EIS. The following change is added to the first sentence in the first paragraph under Analysis for Cumulative Impact 8.2C:

The loss of two populations of hayfield tarplant at the Huntley storage site represents 5 percent of the known populations in the Sonoma and Marin counties and the loss of one population of bristly linanthus represents 10 percent of the known populations in Sonoma and Marin counties.

Page 4.8-118 of the Draft EIR/EIS. The following change is added to the third sentence in the first paragraph:

The largest loss of coastal scrub will occur with implementation of Alternative 3C (less than 0.01 percent of the estimated 73,361~~249,820~~ acres in Sonoma and Marin counties).

Page 4.8-118 of the Draft EIR/EIS. The following change is added to the fifth sentence of the second paragraph:

Implementation of these projects in conjunction with the Project will not result in greater than 25 percent loss of coastal scrub (18,340~~62,455~~ acres) in the region.

Page 4.9-11, Table 4.9-1 of the Draft EIR/EIS. The following text and changes are added to the table and the notes:

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>Rana aurora aurora</i> Northern red-legged frog	SSC	--	--	7	Marshes, streams, lakes, reservoirs, and ponds in foothills and grasslands.	Habitat destruction due to agricultural and urban development, introduction of exotic predators, degradation of water quality, and changes in flow regimes.
<i>Rana aurora draytoni</i> California red-legged frog ¹⁰	SSC	FT	--	2,3,4,5, 7	Marshes, streams, lakes, reservoirs, and ponds in foothills and grasslands.	Habitat destruction due to agricultural and urban development, introduction of exotic predators, degradation of water quality, and changes in flow regimes.
<i>Rana boylei</i> Foothill yellow-legged frog	SSC	--	--	2,4,5	Fast-moving streams and rivers in chaparral, forests, and woodlands.	Habitat destruction due to agricultural and urban development, introduction of exotic predators, degradation of water quality, and changes in flow regimes.
REPTILES						
<i>Clemmys marmorata marmorata</i> Northwestern pond turtle	SSC	--	--	2,3,4	Lakes, ponds, reservoirs, and slow-moving streams and rivers, primarily in foothills and lowlands.	Habitat destruction, degradation of water quality, and changes in flow regimes.

Source: Harland Bartholomew and Associates, Inc., 1996

Notes:

1. State status data taken from California Department of Fish and Game documents, Endangered and Threatened Animals of California and Listing Dates (Revised January 1995) and Special Animals (Revised August 1994)

SE = State-listed Endangered
ST = State-listed Threatened
SSC = Species of Special Concern

Federal status and probable distribution in Marin and Sonoma counties determined by correspondence with Laurie Simons-United States Fish and Wildlife Service, 9 February 1994.

FE = Endangered
FT = Threatened
FPE = Proposed Endangered
FPT = Proposed Threatened
FC = Candidate for listing under the Endangered Species Act
CNPS 2 = California Native Plant Society List 2
CNPS3 = California Native Plant Society List 3
CNPS4 = California Native Plant Society List 4

2. CNDDDB = Natural Diversity Data Base, California Department of Fish and Game, 15 March 1995.
3. Distribution of State listed species and Species of Special Concern confirmed with California Statewide Wildlife Habitat Relationships System, California Department of Fish and Game, April 1990.
4. United States Fish and Wildlife Service letter from Cay Goude, 16 February 1995.
5. Species requested to be included by Caitlin Bean, California Department of Fish and Game Biologist, Region 3.
6. United States Fish and Wildlife Service letter from Joel Medlin, 22 June 1995.
7. Federal Register, 61 (101) 25813-25833.
8. [Federal Register, 61 \(105\) 41541-41561.](#)
9. [Federal Register, 61 \(212\) 56138-56213.](#)

Habitat Sources:

California Department of Fish and Game Natural Heritage Program, Natural Diversity Data Base, 23 December 1993.

EIP Associates. December 1990. Santa Rosa Sub-Regional Water Reclamation System "Long-Term Wastewater System Draft Environmental Impact Report/Statement."

Note: In a series of federal register notices (50 CFR Part 17, Volume 61, Number 40, 7457-74563 and 7595-7613, February 28, 1996), the United States Fish and Wildlife Service reclassified 96 candidate taxa of plants and animals. The United States Fish and Wildlife Service no longer recognizes a federal candidate category 2 status. There are now 182 plant and 89 animal taxa on a single candidate species list. These taxa are considered by the United States Fish and Wildlife Service as candidates for possible addition to the List of Endangered and Threatened Plants and Animals. As a consequence, the status of many taxa originally included in the analysis has changed, requiring that many taxa be removed from the list of species being considered in this EIR/EIS analysis. See Biological Resources, Volume 2 for further information (Harland Bartholomew & Associates 1996b).

¹⁰⁸ 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 (personal communication, Karen Miller, USFWS, July 11, 1996.) All other red-legged frogs in the Project area are considered ~~appear~~ to be the northern subspecies (Miller 1996). ~~although final confirmation as not been received.~~

In the current analysis, ~~all~~ red-legged frogs found in the Walker Creek, Sonoma Creek, Petaluma River, and Tolay Creek watersheds are identified as the California subspecies and are considered federally-threatened. Northern red-legged frogs will be evaluated as a species of special concern. ~~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.~~

Page 4.9-13, Table 4.9-2 of the Draft EIR/EIS. The following changes are added to the table and the source reference:

Table 4.9-2

Relationship of Aquatic Plant Community and Wildlife Habitat Relationship System
Habitat Type

Aquatic Plant Community	Corresponding CWHR Habitat
N/A	Estuarine
Coastal Brackish Marsh	Saline Emergent Wetland
Coastal Salt Marsh	Saline Emergent Wetland
Freshwater Marsh	Fresh Emergent Wetland
Freshwater Pond	Lacustrine (Palustrine ¹)
Freshwater Seep	Habitat element within various Wildlife Habitat Types
N/A	Riverine
Drainage	Habitat element of Annual Grassland
Seasonally Wet Vegetation	Habitat element of Annual Grassland
Vernal Pool	Habitat e Element of Annual Grassland

Source: ~~Mayer, K.E. and W. F. Laudenslayer, Jr., 1988. A Guide to Wildlife Habitats of California~~
~~Grentell, W.-E., Jr., 1988. A Guide to Wildlife Habitats of California~~

Notes:

N/A Not Applicable

CWHR California Wildlife Habitat Relationship System

- Freshwater ponds are conventionally considered palustrine habitat and will be referenced throughout this section as palustrine, though the CWHR System groups lacustrine and palustrine together under lacustrine.

Page 4.9-19 of the Draft EIR/EIS. The following text changes are added to the last sentence of the first paragraph and the first two sentences of the second paragraph under Seasonally Wet Vegetation (Element of Annual Grassland):

Seasonally ~~wet vegetation wetlands~~ supports many of the same types of species found in vernal pools and freshwater seeps.

Seasonally ~~wet vegetation wetlands~~ provides important foraging habitat for migratory waterfowl and shorebirds, and nesting habitat for mallard and cinnamon teal. Wildlife species observed utilizing ~~this habitat seasonal wetlands~~ also include black-tailed deer (*Odocoileus hemionus*), black-tailed jackrabbit (*Lepus californicus*), California ground squirrel (*Spermophilus beecheyi*), gopher snake, gray fox (*Urocyon cinereoargenteus*), and muskrat (Harvey et al. 1992).

Page 4.9-29 of the Draft EIR/EIS. The following text changes are added to the second sentence in the third paragraph:

“The most common invertebrates are mysids, ~~including~~ caridian shrimp (*Crangon* spp.), and crabs.”

Page 4.9-36, Table 4.9-3 of the Draft EIR/EIS. The following changes are made to the As Measured by column for Evaluation Criteria 2 and to the Point of Significance column for Evaluation Criteria 5:

EVALUATION CRITERIA WITH POINT OF SIGNIFICANCE

Table 4.9-3

Evaluation Criteria with Point of Significance - Aquatic Biological Resources

Evaluation Criteria	As Measured by	Point of Significance	Justification
1. Will the Project cause loss of individuals or occupied habitat of endangered, threatened, or rare aquatic wildlife or plant species ¹ ?	a) Number of individuals that will be lost b) Acres of occupied or critical habitat lost	a) Greater than 0 individuals b) Greater than 0 acres	FESA, CESA (Sections 2062 and 2067), CEQA (Article 5, Section 15065), and California Native Plant Protection Act (CDFG Code Sections 1900-1913)
2. Will the Project cause loss of individuals of CNPS List 2, 3, or 4 aquatic plant species?	Number of species that will experience a loss of individuals that will be lost	Greater than 15 percent of known occurrences in Sonoma and Marin counties	California Native Plant Protection Act (CDFG Code Sections 1900-1913), CEQA (Article 5, Section 15065), Caitlin Bean, Biologist, CDFG, Yountville, meeting January 1994.
3. Will the Project cause loss of potential or occupied habitat of aquatic species of aquatic wildlife concern?	Acres of potential or occupied habitat lost	Greater than 20 percent of potential habitat in local watershed	FESA, CESA (Sections 2062 and 2067), CEQA (Article 5, Section 15065), and California Native Plant Protection Act (CDFG Code Sections 1900-1913)

Table 4.9-3

Evaluation Criteria with Point of Significance - Aquatic Biological Resources

Evaluation Criteria	As Measured by	Point of Significance	Justification
4. Will the Project cause permanent loss of sensitive aquatic plant communities and associated wildlife habitats (i.e., freshwater marsh, brackish marsh, vernal pools)?	Acres of sensitive aquatic plant communities lost	Greater than 0 acres	CEQA (Article 5, Section 15065), California Native Plant Protection Act (Fish and Game Code, Sections 1900-1913), See Also Jurisdictional Wetlands Section 4.10, CDFG (CNDDB 1994, 1995)
5. Will the Project cause permanent loss of aquatic habitat (i.e., streams and ponds)?	a) Linear feet of coolwater Type A and coolwater Type B stream habitat permanently lost b) Linear feet of warmwater Type A stream habitat permanently lost c) Linear feet of warmwater Type B stream habitat permanently lost and d) Acres of pond habitat permanently lost	a) Greater than 0 % of <u>Coolwater A/B habitat locally-linear feet</u> b) Greater than 15% of <u>Warmwater A habitat type-in-locally watershed</u> (linear feet and acreage respectively) c and d) Greater than 25% of <u>Warmwater B or pond habitat type-in-locally watershed</u> (linear feet and acreage respectively)	CEQA (Article 5, Section 15065), with concurrence from Bill Cox (CDFG fisheries biologist, Region 3 [Yountville]) Note: See Criterion #1 of Jurisdictional Wetlands Section
6. Will the Project cause a change to the physical condition of aquatic habitat in the Estero Americano or Estero de San Antonio within the Gulf of the Farallones National Marine Sanctuary?	Change in salinity ⁴ in parts per thousand (ppt) in the Esteros	Greater than 0 ppt salinity change	National Marine Sanctuaries Act (16 U.S.C. 1436), National Oceanic and Atmospheric Administration (15 CFR 922), CEQA (Article 5, Section 15065)

Page 4.9-39 of the Draft EIR/EIS. The following text is added to the second sentence of the third paragraph:

In addition, resource agency representatives from the U.S. Fish and Wildlife Service, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, the California Department of Fish and Game, and local natural resource experts (e.g., Sierra Club - Sonoma Group, Marin Conservation League, Resource Conservation League of Sonoma, Marin and Madrone Chapters of the National Audubon Society, and the Russian River Watershed Protection Committee, California Native Plant Society) were consulted to acquire available occurrence data.

Page 4.9-44 of the Draft EIR/EIS. The following text is deleted from the first sentence in the third paragraph under Ecological Risk Assessment:

Monitoring data for reclaimed water of the Laguna Plant storage ponds were used as the basis for assessment of ecological risk ~~assessment~~ to aquatic organisms in ~~for~~ reclaimed water storage.

Page 4.9-45, Table 4.9-5 of the Draft EIR/EIS. The following text changes are added to the Evaluation Criteria and Point of Significance columns:

Table 4.9-5

Aquatic Biological Resources Impacts by Component - No Action Alternative

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
9.1.1. Will the <u>No Action Alternative</u> cause loss of individuals or occupied habitat of endangered, threatened or rare aquatic wildlife or plant species?	a) Greater than 0 species <u>individuals</u> and b) Greater than 0 acres	None	C	==
9.1.2. Will the <u>No Action Alternative</u> cause loss of individuals of CNPS List 2, 3, or 4 aquatic plant species?	Greater than 15% of known <u>existing</u> occurrences or populations in Sonoma and Marin counties	None	C	==
9.1.3. Will the <u>No Action Alternative</u> cause loss of potential or occupied habitat of aquatic wildlife species of concern?	Greater than 20% of potential habitat in local watershed	None	C	==
9.1.4. Will <u>No Action Alternative</u> cause a permanent loss of sensitive native aquatic plant communities?	Greater than 0 acres	None	C	==

Table 4.9-5

Aquatic Biological Resources Impacts by Component - No Action Alternative

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
9.1.5. Will No Action Alternative cause a permanent loss of aquatic habitat and associated wetlands ?	Greater than 15% of warmwater A habitat locally ; or Greater than 25% of warmwater B or pond habitat locally	None	C	==
9.1.6. Will the No Action Alternative 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?	Greater than 0 parts per thousand salinity change	None	C	==
9.1.7. Will No Action Alternative substantially block or disrupt major fish or aquatic wildlife migration or travel corridors?	Greater than 0 corridors	None	C	==
9.1.8. Will the No Action Alternative cause a decrease in streamflows, affecting aquatic habitat or aquatic life downstream from proposed dam sites?	Greater than 0 linear feet	None	C	==
9.1.9. Will the No Action Alternative result in ecological risk to terrestrial plant and wildlife populations (i.e., acute or chronic toxicity and bioaccumulation)?	Ecological Quotient (EQ) greater than 10	EQ values range from 0.0 to 4.64	O&M	○

Source: Harland Bartholomew & Associates, Inc., 1996

Notes:	1. Type of Impact:	2. Level of Significance:
	C Construction	○ Less than significant impact; no mitigation proposed
	O&M Operation and Maintenance	⊙ Significant impact before mitigation; less than significant impact after mitigation
	-- Not Applicable	== No Impact
	P Permanent	

Page 4.9-49, Table 4.9-6 of the Draft EIR/EIS. The following text changes are added to the Point of Significance column:

Table 4.9-6

Aquatic Biological Resources Impacts by Component - Pipelines

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
9.4.1. Will the pipeline component cause loss of individuals or occupied habitat of endangered, threatened or rare aquatic wildlife or plant species?	a. Greater than 0 species <u>individuals</u> and b. Greater than 0 acres	None	C	==
9.4.2. Will the pipeline component cause loss of individuals of CNPS List 2, 3, or 4 aquatic plant species?	Greater than 15% of <u>known</u> existing occurrences or populations in Sonoma and Marin counties	None	C	==
9.4.3. Will the pipeline component cause loss of potential or occupied habitat of aquatic wildlife species of concern?	Greater than 20% of potential habitat in local watershed	None	C	==
9.4.4. Will the pipeline component cause a permanent loss of sensitive native aquatic plant communities?	Greater than 0 acres	None	C	==
9.4.5. Will the pipeline component cause a permanent loss of aquatic habitat and associated wetlands?	Greater than 15% of warmwater A habitat <u>locally</u> ; or Greater than 25% of warmwater B or pond habitat <u>locally</u>	None	C	==

Table 4.9-6

Aquatic Biological Resources Impacts by Component - Pipelines

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
9.4.6. Will the pipeline component 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?	Greater than 0 parts per thousand salinity change	None	C	==

Page 4.9-51 of the Draft EIR/EIS. The following text is added to the last sentence of the fourth paragraph:

Therefore, there is no potential for pipelines to substantially block or disrupt major fish travel [corridors](#) or affect stream flows.

Page 4.9-55, Table 4.9-10 of the Draft EIR/EIS. The following text changes are added to the table:

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	4.84.1	C, P	⊙
• Adobe Road		0	0	C, P	==
• Tolay Confined		2	4.84.1	C, P	⊙

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
• Lakeville Hillside		4	<u>1.4</u> 1.7	C, P	⊙
• Sears Point		2	<u>1.6</u> 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	⊕

Page 4.9-56 of the Draft EIR/EIS. The following changes are added to the Analysis section of Impact 9.5.1:

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

Tolay Extended, Tolay Confined, Lakeville Hillside, and 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.

Page 4.9-57 of the Draft EIR/EIS. The following text change is added to the No Impact statement near the top of the page:

No Impact; Alternatives 1, 3A, 3B, 3D, 3E, ~~3C,~~ 4, and 5.

Page 4.9-57 of the Draft EIR/EIS. The following sentence is deleted from the second paragraph under the No Impact statement:

~~The identity of the species within any one alternative is unclear.~~

Page 4.9-57 of the Draft EIR/EIS. The following text changes are made to the last sentence in the third paragraph under the No Impact statement:

All other red-legged frogs in the Project area are considered ~~appear~~ to be the northern subspecies (Miller 1996). ~~although final confirmation as not been received.~~

Page 4.9-57 of the Draft EIR/EIS. The following text changes are added to the fourth paragraph under the No Impact statement:

In the current analysis, ~~all~~ red-legged frogs found in the Walker Creek, Sonoma Creek, Petaluma River, and Tolay Creek watersheds are identified as the California subspecies and are considered federally-threatened. ~~Project area are considered to be the California subspecies though the status will be confirmed prior to the Final EIR/EIS. All Northern red-legged frogs not determined to be the California subspecies will be evaluated as a species of special concern (refer to Impact 9.5.3). Findings of significance and proposed mitigation are not expected to change.~~

Page 4.9-57 of the Draft EIR/EIS. The following text changes are added to the Mitigation statement:

Mitigation: *Alternatives 2*A, 2B, 2C, 2D, and, 3C3A, 3B, 3D, and 3E.

Page 4.9-58 of the Draft EIR/EIS. The following text changes are added to the After Mitigation statement at the top of the page:

After

Mitigation: *Less than Significant after Mitigation; Alternatives 2*A, 2B, 2C, 2D, and, 3C3A, 3B, 3D, and 3E.

Page 4.9-60, Table 4.9-12 of the Draft EIR/EIS. The following text changes are added to the table:

Table 4.9-12

Aquatic Biological Resources Impacts by Component - Storage Reservoirs
Criterion #3

Northwestern pond turtle habitat		Linear Feet and Acres	% of Habitat		
• Tolay Extended		a. 15,300 lf b. 1.3 acres	29% 100%	C,P	⊙
• Adobe Road		0.0 acres	0%	C,P	==
• Tolay Confined		a. 10,600 lf b. 1.3 acres	14% 100%	C,P	⊙
• Lakeville Hillside		0.0 acres	0%	C,P	==
• Sears Point		0.0 acres	0%	C,P	==
• Two Rock		a. 3,000 lf b. 3.9 acres	4% 7%	C,P	○
• Bloomfield		a. 5,200 lf b. 0.0 acres	9% 0%	C,P	○
• Carroll Road		a. 1,500 lf b. 2.6 acres	6% 9%	C,P	○
• Valley Ford		a. 2,000 lf b. 2.0 ac	6% 12%	C,P	○
• Huntley		a. 4,000 lf b. 0.5 acres	4% 0%	C,P	○
<u>Northern red-legged frog</u>		<u>Acres</u>	<u>% of Habitat</u>		
• <u>Two Rock</u>		<u>8.7 acres</u>	<u>100%</u>	<u>C,P</u>	<u>⊙</u>
• <u>Bloomfield</u>		<u>2.7 acres</u>	<u>100%</u>	<u>C,P</u>	<u>⊙</u>
• <u>Huntley</u>		<u>1.5 acres</u>	<u>100%</u>	<u>C,P</u>	<u>⊙</u>
• <u>Valley Ford</u>		<u>3.4 acres</u>	<u>100%</u>	<u>C,P</u>	<u>⊙</u>
• <u>All other reservoirs</u>		<u>0.0 acres</u>	<u>0%</u>	<u>C,P</u>	<u>==</u>

Source: Harland Bartholomew & Associates, Inc., 1996

Notes: 1. Type of Impact:
C Construction

P Permanent

2. Level of Significance codes:
⊙ Significant impact before mitigation; less than significant impact after mitigation
○ Less than significant impact; no mitigation proposed
== No impact

Page 4.9-60 of the Draft EIR/EIS. The following text changes are added to the Analysis section after Table 4.9-12:

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

Page 4.9-61 of the Draft EIR/EIS. The following text changes are added to the second paragraph:

Construction of Two Rock, Bloomfield, Valley Ford, and Huntley reservoirs will result in the loss of less than 20 percent of potential northwestern pond turtle habitat in the local watershed of any one of the proposed storage reservoir sites (Biological Resources, Volume 4B, Maps B1, B6, and B7 [Harland Bartholomew & Associates, Inc. 1996d]). These impacts would be considered less than significant. However, each of these storage reservoir sites support northern red-legged frog, which is listed as a species of special concern by the California Department of Fish and Game. Although the species of special concern designation does not warrant any formal protection under the state Endangered Species Act, populations are monitored closely by the California Department of Fish and Game. A loss of 20 percent of potential habitat in the local watershed at any one storage reservoir site will seriously threaten the survival of the northern red-legged frog populations living there. Reservoir construction and inundation will cause a 100 percent loss of occupied northern red-legged frog habitat at Bloomfield, Huntley, Two Rock, and Valley Ford respectively. Therefore this impact is considered significant. ~~No other species of special concern were identified within the reservoir construction zones.~~

Page 4.9-61 of the Draft EIR/EIS. The following text is added after the second paragraph:

Less than Significant; Alternative 3C

Page 4.9-61 of the Draft EIR/EIS. The following sentence is added as the second paragraph after the first paragraph under *Less than Significant; Alternative 3C*:

No other species of special concern were identified within the reservoir construction zones.

Page 4.9-61 of the Draft EIR/EIS. The following sentence is added to the end of the first paragraph under *No Impact; Alternatives 1, 2B, 2D, 4, and 5*:

Note: the loss of California red-legged frog (federally-threatened) at the Lakeville Hillside and Sears Point storage reservoir sites is covered under Impact 9.5.1.

Page 4.9-61 of the Draft EIR/EIS. The following text changes are added to the Mitigation section:

Mitigation: Alternatives 2A, ~~and 2C~~, 3A, 3B, 3D, and 3E.

Alternatives 1, 2B, 2D, ~~3~~, 4, and 5. No mitigation is proposed.

Page 4.9-61 of the Draft EIR/EIS. The following text changes are added to the After Mitigation section:

After

Mitigation: Less than Significant after Mitigation; Alternatives 2A, ~~and 2C~~, 3A, 3B, 3D, and 3E.

Page 4.9-62 of the Draft EIR/EIS. The following text changes are added to the first and second sentences of the first paragraph:

Both northern red-legged frog and northwestern pond turtle habitat will be created or degraded habitat will be restored. Each linear foot or acre of northwestern pond turtle habitat or northern red-legged frog habitat will be replaced by the reclamation or creation of one linear-foot or acre.

Pages 4.9-63 and 4.9-64, Table 4.9-14 of the Draft EIR/EIS. The following text changes are added to the Point of Significance column:

Table 4.9-14

Aquatic Biological Resources Impacts by Component - Storage Reservoirs
Criterion #5

Evaluation Criteria	Point of Significance	Impact		Type of Impact ¹	Level of Significance ²
9.5.5. Will the storage reservoir component cause loss of aquatic habitat?					
a) Coolwater Type A stream habitat	Greater than <u>0% of habitat locally linear feet</u>	Linear Feet	Percent		
• All reservoirs		0	0%	C, P	==
(b) Coolwater Type B stream habitat	Greater than <u>0% of habitat locally linear feet</u>	Linear Feet	Percent		
• Carroll Road		2,700	100%	C, P	⊙

Table 4.9-14

Aquatic Biological Resources Impacts by Component - Storage Reservoirs
Criterion #5

Evaluation Criteria	Point of Significance	Impact		Type of Impact ¹	Level of Significance ²
• All Other Reservoirs		0	0%	C, P	==
(c) Warmwater Type A stream habitat	Greater than 15% of <u>habitat locally</u> <u>habitat in watershed</u>	Linear Feet	Percent		
• Tolay Extended		1,850	29%	C, P	⊙
• Adobe Road		0	0%	C, P	==
• Tolay Confined		1,850	29%	C, P	⊙
• Lakeville Hillside		0	0%	C, P	==
• Sears Point		5,200	53%	C, P	⊙
• Two Rock		6,000	6%	C, P	○
• Bloomfield		0	0%	C, P	==
• Carroll Road		3,400	6%	C, P	○
• Valley Ford		5,300	9%	C, P	○
• Huntley		4,100	4%	C, P	○
d) Warmwater Type B stream habitat	Greater than 25% of <u>habitat locally</u> <u>in watershed</u>	Linear Feet	Percent		
• Tolay Extended		27,300	31%	C, P	⊙
• Adobe Road		7,000	18%	C, P	○
• Tolay Confined		12,500	17%	C, P	○
• Lakeville Hillside		10,100	54%	C, P	⊙
• Sears Point		13,100	17%	C, P	○
• Two Rock		7,700	4%	C, P	○
• Bloomfield		14,500	14%	C, P	○
• Carroll Road		6,900	7%	C, P	○
• Valley Ford		4,000	4%	C, P	○
• Huntley		7,000	3%	C, P	○

Table 4.9-14

Aquatic Biological Resources Impacts by Component - Storage Reservoirs
 Criterion #5

Evaluation Criteria	Point of Significance	Impact		Type of Impact ¹	Level of Significance ²
		Acres	Percent		
e) Pond habitat	Greater than 25% of habitat <u>locally in watershed</u>				
• Tolay Extended		1	6%	C, P	○
• Adobe Road		3	67%	C, P	⊙
• Tolay Confined		1	6%	C, P	○
• Lakeville Hillside		1	100%	C, P	⊙
• Sears Point		< 1	3%	C, P	○

Page 4.9-68 of the Draft EIR/EIS. The following text is deleted from the Mitigation section:

~~Mitigation: Alternative 3. No feasible mitigation has been identified (see Section 4.6. Surface Water Quality)~~

Pages 4.9-70, Table 4.9-17 of the Draft EIR/EIS. The following text changes are added to the Point of Significance column:

Table 4.9-17

Aquatic Biological Resources Impacts by Component - Storage Reservoirs
 Criterion #8

Evaluation Criteria	Point of Significance	Impact (percent)	Impact (linear feet)	Type of Impact	Level of Significance
9.5.8. Will the storage reservoir component cause a decrease in streamflows, affecting aquatic habitat or aquatic life downstream from dam structures?	Greater than 0 linear feet <u>of warmwater stream habitat where 50 percent decrease in wet season streamflow or</u>				

Table 4.9-17

Aquatic Biological Resources Impacts by Component - Storage Reservoirs
Criterion #8

Evaluation Criteria	Point of Significance	Impact (percent)	Impact (linear feet)	Type of Impact	Level of Significance
	any decrease in dry-season streamflow occurs;				
• Tolay Extended		53% decrease in wet season flows	38,150 lf (18,150 lf of warmwater A and 20,000 lf of warmwater B habitat)	C, P	⊙
• Adobe Road		less than 50% decrease in wet season flows	0 lf	C, P	○
• Tolay Confined		53% decrease in wet season flows;	38,150 lf (18,150 lf of warmwater A and 20,000 lf of warmwater B habitat)	C, P	⊙
• Lakeville Hillside		60-69% decrease in wet season flows	5,600 lf (all warmwater B habitat)	C, P	⊙

Pages 4.9-75 and 4.9-76, Table 4.9-19 of the Draft EIR/EIS. The following changes are added to the Point of Significance column for Evaluation Criteria 9.7.1, 9.7.2, 9.7.3, 9.7.5, and 9.7.8:

Table 4.9-19

Aquatic Biological Resources Impacts by Component - Agricultural Irrigation

Evaluation Criteria	Point of Significance	Impact	Type of Impact	Level of Significance
9.7.1. Will the agricultural irrigation component cause loss of individuals or occupied endangered threatened or rare aquatic wildlife or plant species?	a) Greater than 0 species <u>individuals</u>	None	C, O&M, O&M-CP	==
	and b) Greater than 0 acres	None	C, O&M, O&M-CP	==
9.7.2. Will the agricultural irrigation component cause loss of individuals of CNPS List 2, 3, or 4 aquatic plant species?	Greater than 15 percent of presumed-extant known occurrences or populations in Sonoma and Marin counties	None	C, O&M, O&M-CP	==
9.7.3. Will the agricultural irrigation component cause loss of potential or occupied habitat of aquatic species of concern?	Greater than 20 percent of <u>potential habitat in local watershed</u> mapped occupied habitat in all Project components	None	C, O&M, O&M-CP	==
9.7.4. Will the agricultural irrigation component cause a permanent loss of sensitive native aquatic plant communities and associated wildlife habitats.	Greater than 0 acres	None	C, O&M, O&M-CP	==
9.7.5. Will the agricultural irrigation component cause permanent loss of aquatic habitat?	Greater than 15% of Warmwater Type A <u>habitat locally in local watershed</u> , or Greater than 25% of Warmwater Type B <u>habitat</u>	None	C, O&M, O&M-CP	==

Table 4.9-19

Aquatic Biological Resources Impacts by Component - Agricultural Irrigation

Evaluation Criteria	Point of Significance	Impact	Type of Impact	Level of Significance
	locally in local watershed.			
9.7.6. Will the agricultural irrigation component cause a change to 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?	Greater than 0 ppt salinity change			
• West County irrigation areas		Greater than 0	C, O&M, O&M-CP	●
• South County irrigation areas		None	C, O&M, O&M-CP	==
9.7.7. Will the agricultural irrigation component substantially block or disrupt major fish or aquatic wildlife migration or travel corridors?	Greater than 0 corridors	None	C, O&M, O&M-CP	==
9.7.8. Will the agricultural irrigation component cause a decrease in streamflows, affecting aquatic habitat or aquatic life downstream from proposed dam sites?	Greater than 0 linear feet of affected-stream habitat	None	C, O&M, O&M-CP	==
9.7.9. Will the agricultural irrigation component result in ecological risk to aquatic plant and wildlife populations (i.e., acute or chronic toxicity and bioaccumulation)?	EQ >10	EQ values range from 0.0 to 6.90	C, O&M, O&M-CP	○

Source: Harland Bartholomew & Associates, Inc., 1996

Notes:	1. Type of Impact:	2. Level of Significance:
C	Construction	== No impact
O&M	Operation and Maintenance	○ Less than significant impact; no mitigation proposed
O&M-CP	Operation and Maintenance - Contingency Plan	● Significant impact before and after mitigation

Page 4.9-77 of the Draft EIR/EIS. The following sentence is added after the sixth sentence in the second paragraph:

Exclusionary buffers will be established around any identified waterways, including jurisdictional wetlands, streams, creeks, rivers, and ponds.

Pages 4.9-82 and 4.9-83, Table 4.9-22 of the Draft EIR/EIS. The following text changes are added to the Point of Significance column for Evaluation Criteria 9.9.1, 9.9.2, 9.9.3, and 9.9.8:

Table 4.9-22

Aquatic Biological Resources Impacts by Component - Discharge

Evaluation Criteria	Point of Significance	Impact	Type of Impact¹	Level of Significance²
9.9.1. Will the discharge component cause loss of individuals or occupied habitat of endangered, threatened, or rare candidate aquatic wildlife or plant species?	a) Greater than 0 species <u>individuals</u> b) Greater than 0 acres	None	P	==
9.9.2. Will the discharge component cause loss of individuals of CNPS List 2, 3, or 4 aquatic plant species?	Greater than 15 percent of presumed extant known <u>occurrences or populations</u> in Sonoma and Marin counties	None	P	==
9.9.3. Will the discharge component cause loss of potential or occupied habitat of aquatic species of concern?	Greater than 20 percent of potential habitat in local watershed mapped occupied habitat in all project components	None	P	==
9.9.4. Will the discharge component cause a permanent loss of sensitive native aquatic plant communities?	Greater than 0 Acres	None	P	==

Table 4.9-22

Aquatic Biological Resources Impacts by Component - Discharge

Evaluation Criteria	Point of Significance	Impact	Type of Impact ¹	Level of Significance ²
9.9.5. Will the discharge component cause a permanent loss of aquatic habitat?	Greater than 0 linear feet	None	P	==
9.9.6. Will the discharge component cause a change to the physical condition of habitat or aquatic life in the Estero Americano or the Estero de San Antonio within the Gulf of the Farallones National Marine Sanctuary?	Greater than 0 ppt salinity change	None	P	==
9.9.7. Will the discharge component substantially block or disrupt major fish or aquatic wildlife migration or travel corridors?	Greater than 0 corridors	None	P	○
9.9.8. Will the discharge component cause a decrease in streamflows, affecting aquatic habitat or aquatic life downstream from proposed dam sites?	Greater than 0 linear feet of affected stream habitat	None	--	==
9.9.9. Will the discharge component result in ecological risk to aquatic plant and wildlife populations (i.e., acute or chronic toxicity and bioaccumulation)?	EQ Greater than 10	EQ values range from 0.0 to 9.28	O&M, O&M-CP	○

Source: Harland Bartholomew & Associates, Inc., 1996

Notes:	1. Type of Impact:	2. Level of Significance:
P	Permanent	== No impact
O&M	Operation and Maintenance	○ Less than significant impact; no mitigation proposed
O&M-CP	Operation and Maintenance - Contingency Plan	

Page 4.9-84 of the Draft EIR/EIS. The following text changes are added to the Analysis section under Impact: 9.9.9:

Analysis: *Less than Significant; Alternatives 2, 3, and 5.All Alternatives*

Page 4.9-86 of the Draft EIR/EIS. The following text changes are added to the Analysis section heading and first sentence under Impact 9.1C:

Analysis: The Project impacts are to alternatives 2 and 3C, 3A, 3B, 3D, and 3E.

Construction of storage sites will result in the loss of 1.4 to 4.88.7 acres of California red-legged frog habitat associated with Lakeville Hillside, Sears Point, Tolay Confined, and Tolay Extended storage reservoirs ~~(except for Carroll Road and Adobe Road)~~.

Page 4.9-86 of the Draft EIR/EIS. The following text changes are added to the fourth sentence of the first paragraph in the Analysis section if Impact 9.1C:

Both the red-legged ~~All~~ frogs and steelhead trout were found in marginal habitats.

Page 4.9-87 of the Draft EIR/EIS. The following text changes are added to the Analysis heading and first paragraph under Impact 9.3C:

Analysis: The Project impacts are to alternatives 2A, 2C, 3A, 3B, 3D, and 3E.

Loss of northwestern pond turtle habitat exceeds 20 percent of the potential habitat present in the local watershed at Tolay Extended, and Tolay Confined and is therefore a significant Project impact. Loss of northwestern pond turtle habitat ranges from 4-14 percent on the remaining storage sites (except Adobe Road, Lakeville Hillside, and Sear Point), and is a less than significant impact. The significant impacts at the Tolay storage sites will be fully mitigated through northwestern pond turtle habitat creation, restoration, and preservation in conjunction with other elements of the Sensitive Resource Conservation Program.

Page 4.9-87 of the Draft EIR/EIS. The following paragraph is added after the first paragraph in the Analysis section for Impact 9.3C:

Loss of northern red-legged frog habitat exceeds 20 percent of the potential habitat present in the local watersheds at Two Rock, Bloomfield, Huntley, and Valley Ford and is therefore a significant Project impact. The significant impacts at the Two Rock, Bloomfield, Huntley, and Valley Ford storage reservoirs will be fully mitigated through northern red-legged frog habitat creation, restoration, and preservation in conjunction with other elements of the Sensitive Resource Conservation Program.

Page 4.9-87 of the Draft EIR/EIS. The following text is added to the first sentence of the third paragraph in the Analysis section for Impact 9.3C:

All pond turtle habitat and northern red-legged frog habitat is also identified as Corps jurisdictional wetlands.

Page 4.9-87 of the Draft EIR/EIS. The following text is added to the last sentence of the third paragraph in the Analysis section for Impact 9.3C:

Therefore there will be no net loss of northwestern pond turtle habitat or northern red-legged frog habitat function and acreage associated with the Project.

Page 4.9-87 of the Draft EIR/EIS. The following text is added to the first sentence of the fourth paragraph in the Analysis section for Impact 9.3C:

Though projects in the cumulative projects lists may affect both north western pond turtles and northern red-legged frogs, there will be no net effect from the Project.

Page 4.9-88 of the Draft EIR/EIS. The following text changes are added to the first sentence of the first paragraph in the Analysis section for Impact 9.5C:

~~All south county (Alternative 2) and The~~ Carroll Road (Alternative 3C) storage reservoir ~~sites and all South County (Alternative 2) storage reservoirs~~ will result in significant loss of aquatic habitat (greater than 25 percent loss of the habitat type in the local watershed).

Page 4.9-89 of the Draft EIR/EIS. The following text is added to the last sentence in the Analysis section for Impact 9.8C:

Significant impacts will be mitigated through restoration of existing off-site stream habitat.

Pages 4.9-91 and 4.9-92, Table 4.9-23 of the Draft EIR/EIS. The following text changes are added to the Level of Significance column for Impacts 9.5.3 and Cumulative Impacts 9.2C and 9.9C are added to the table:

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 3C - ☉	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 - ☉ Alt 3A - ☉ Alt 3B - ☉ Alt 3D - ☉ Alt 3E - ☉	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 habitats.	Alt 3A - ☉	2.3.11. Sensitive Resource Conservation Program
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

Table 4.9-23

Summary of Significant Impacts and Mitigation Measures -

Aquatic Biological Resources

Impact	Level of Significance	Mitigation Measure
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](#)
 ● [Significant impact before and after mitigation](#)

Page 4.9-95 of the Draft EIR/EIS. The following text is added to the first name presented under the Reviewers heading:

Dave Smith, [Ph.D.](#), Merritt Smith Consulting

Page 4.10-14 of the Draft EIR/EIS. The following word is added to the last sentence of the second paragraph under Mixed Riparian Woodland:

The upper edges of riparian corridors, are non-wetlands and commonly support California bay, live oak, [valley](#) oak, and buckeye which intergrade into annual grasslands.

Page 4.10-23 of the Draft EIR/EIS. The following text changes are added to the paragraph in the Watersheds section under West County:

The main watersheds in the West County area are Americano Creek([Estero de Americano](#)); and Stemple Creek([Estero de San Antonio](#)). ~~Estero de Americano, and Estero de San Antonio.~~

Page 4.10-23 of the Draft EIR/EIS. The following text is added to the fourth sentence in the first paragraph in the Jurisdictional Wetlands and Other Waters of the U.S. section under West County:

Both esteros are protected under [the National Marine Sanctuaries Act \(16 U.S.C 1436\)](#) as part of the Gulf of Farallones National Marine Sanctuary.

Page 4.10-34, Table 4.10-3 of the Draft EIR/EIS. The following text changes are added to the Evaluation Criteria column for Evaluation Criterion 10.4.1:

Table 4.10-3

Jurisdictional Wetlands and Waters of the U.S. Component Impacts - Pipelines

Evaluation Criteria	Point of Significance	Impact (acres)	Type of Impact ¹	Level of Significance ²
10.4.1. Will the pipeline component Project destroy wetlands or other waters of the U.S.?	Greater than 0 acre of permanent discharge or placement of fill			
• Alt 2A		9.4	C	⊙
• Alt 2B		8.2	C	⊙
• Alt 2C		9.6	C	⊙
• Alt 2D		8.4	C	⊙
• Alt 3A		14.8	C	⊙
• Alt 3B		16.3	C	⊙
• Alt 3C		15.8	C	⊙
• Alt 3D		14.3	C	⊙
• Alt 3E		14.5	C	⊙
• Alt 4		3.1	C	⊙
• Alt 5A		.002	C	⊙
• Alt 5B		--	C	--
• All alternatives			O&M	==

Source: Harland Bartholomew & Associates, Inc. 1996

1. Type of Impact		2. Level of Significance	
C	Construction	⊙	Significant impact before mitigation; less than significant impact after mitigation
O&M	Operation & Maintenance	==	No Impact
		--	Not applicable

Page 4.10-37, Table 4.10-5 of the Draft EIR/EIS. The following text changes are added to the Evaluation Criteria column for Evaluation Criterion 10.5.1:

Table 4.10-5

Jurisdictional Wetlands Resources Impacts - Storage Reservoirs

Evaluation Criterion	Point of Significance	Impact (acres)	Type of Impact ¹	Level of Significance ²
10.5.1. Will the <u>storage reservoir component Project</u> destroy wetlands or other waters of the U.S.?	Greater than 0 acre of permanent discharge or placement of fill			
• Tolay Extended		248	P	⊙
• Adobe Road		30	P	⊙
• Tolay Confined		87	P	⊙
• Lakeville Hillside		24	P	⊙
• Sears Point		53	P	⊙
• Two Rock		64	P	⊙
• Bloomfield		57	P	⊙
• Carroll Road		69	P	⊙
• Valley Ford		102	P	⊙
• Huntley		48	P	⊙

Source: Harland Bartholomew & Associates, Inc. 1996

Notes:

1. Type of Impact

P Permanent

2. Level of Significance Codes

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

Page 4.10-51 of the Draft EIR/EIS. The following text changes are added to the fourth sentence in the Analysis section under Impact 10.7.1:

A minimum 530-foot exclusionary buffer from irrigation application and a minimum 30-foot setback from new cultivation and construction will be established around all jurisdictional waters, including isolated wetlands, and a minimum 50-foot exclusionary buffer from agricultural irrigation application will be established around the upland riparian corridor of all linear waterways, including streams, creeks, and rivers.

Page 4.10-60 of the Draft EIR/EIS. The following text is added to the following names in the Reviews section:

Adrian Juncosa, [Ph. D.](#), Harland Bartholomew & Associates, Inc.

Robin P. Cort, [Ph. D.](#), Parsons Engineering Science, Inc.

Pages 4.13-38 and 4.13-39, Table 4.13-18 of the Draft EIR/EIS. The following text changes are added to the table:

Table 4.13-18

Summary of Construction Noise Impacts for Pump Stations

Pump Station	Distance to Nearest Sensitive Receptor, feet ¹	Construction Noise Levels, L _{eq} (dBA)		Jurisdiction
		at 50 feet	at Nearest Sensitive Receptor	
S - Meadowlane Ponds	2,000	87	55	Santa Rosa
TASW - Tolay A Backdam	Greater than 3,000	87	51 or less	Sonoma Co.
TCSW - Tolay C Backdam	1,400	87	58	Sonoma Co.
ARSW - Adobe Road Stormwater	900	87	62	Sonoma Co.
T - Tolay Dam	Greater than 3,000	87	51 or less	Sonoma Co.
SP - Sears Point Dam	1,700	87	56	Sonoma Co.
L - Lakeville Dam	700	87	64	Sonoma Co.
AR - Adobe Road Dam	Greater than 3,000	87	51 or less	Sonoma Co.
TR - Two Rock Dam	Greater than 3,000	87	51 or less	Sonoma Co.
B - Bloomfield Dam	Greater than 3,000	87	51 or less	Sonoma Co.
CR - Carroll Road Dam	Greater than 3,000	87	51 or less	Sonoma Co.
VF - Valley Ford Dam	Greater than 3,000	87	51 or less	Sonoma Co.
H - Huntley Dam	600	87	65	Sonoma Co.
ASR-2 - Petaluma. Hill Rd at Rohnert Park Expressway	Greater than 1,000	87	61 or less	Sonoma Co.
SEB - Delta Pond	Greater than 3,000	87	51 or less	Sonoma Co.
FGS & BVS - West College Ponds	300	87	71	Santa Rosa
FGB - Redwood Hwy. North at Fountaingrove Parkway	400	87	69	Santa Rosa
BVB - Sonoma County Fairground	500	87	67	Santa Rosa
G1 - Delta Pond	Greater than 3,000	87	51 or less	Sonoma Co.
G2 - Hwy 128 at Pine Flat Road	300	87	71	Sonoma Co.
G3 & G4 - Pine Flat Rd.	Greater than 15,000	87	37 or less	Sonoma Co.
SBPS-2 - Petaluma Hill Rd.	Greater than 1,000	87	61 or less	Sonoma Co.

Table 4.13-18

Summary of Construction Noise Impacts for Pump Stations

Pump Station	Distance to Nearest Sensitive Receptor, feet ¹	Construction Noise Levels, L _{eq} (dBA)		Jurisdiction
		at 50 feet	at Nearest Sensitive Receptor	
SBPS-3 - Petaluma Hill Rd.	600	87	65	Sonoma Co.
SBPS-7 - Petaluma Hill Rd.	Greater than 1,000	87	61 or less	Sonoma Co.
SBPS-8 - Petaluma Hill Rd.	500	87	67	Sonoma Co.
SBPS-9 - E. Railroad Ave.	Greater than 1,000	87	61 or less	Sonoma Co.
SBPS-10 - Adobe Road	300	87	71	Sonoma Co.
SBPS-11 - Adobe Road	Greater than 1,000	87	61 or less	Sonoma Co.
SBPS-12 - Lakeville Road	600	87	65	Sonoma Co.
WBPS-1 - Martinoni Road	Greater than 1,000	87	61 or less	Marin Co.
WBPS-3 - Seavey Road	400	87	69	Sonoma Co.
WBPS-4 - Spring Hill Rd.	Greater than 1,000	87	61 or less	Sonoma Co.
WBPS-5 - Pepper Road	Greater than 1,000	87	61 or less	Sonoma Co.
WBPS-6 - Valley Ford Rd.	Greater than 1,000	87	61 or less	Sonoma Co.
WBPS-7 - Canfield Road	200	87	75	Sonoma Co.
WBPS-8 - Valley Ford Rd.	700	87	64	Sonoma Co.
WBPS-9 - Valley Ford Rd.	Greater than 1,000	87	61 or less	Sonoma Co.
WBPS-10 - Bloomfield Rd.	300	87	71	Sonoma Co.
WBPS-11 - Carroll Road	600	87	65	Sonoma Co.
WBPS-12 - Hwy 1	Greater than 1,000	87	61 or less	Marin Co.
WBPS-13 - Valley Ford Rd.	Greater than 1,000	87	61 or less	Sonoma Co.
WBPS-16 - Meachum Rd.	Greater than 1,000	87	61 or less	Sonoma Co.
LBPS-1 - Green Valley	Greater than 1,000	87	61 or less	Sonoma Co.
LBPS-2 - Graton Road	500	87	67	Sonoma Co.
LBPS-3 - Bodega Hwy.	400	87	69	Sonoma Co.
LBPS-4 - Burnside Road	Greater than 1,000	87	61 or less	Sonoma Co.

Source: Parsons Engineering Science, Inc., 1996

Notes:

1: The property or yard line of the affected receptor whichever is closer to the affected structure.

Page 4.14.90 of the Draft EIR/EIS. The following text changes are added before and to the first sentence of the first paragraph in the After Mitigation section under Impacts 14.6.3 and 14.6.4:

Mitigation Measure 2.3.17 would result in Pump Stations SBPS-2, SBPS-3, SBPS-11, WBPS-6, WBPS-8, LBPS-1 and LBPS-3 being placed entirely underground, and therefore all permanent visual impacts would be eliminated. Except for Pump Stations G-1, G-2, SP, and SBPS-10, ~~this Mitigation Measure~~ 2.4.6 will reduce the visual contrast of the pump stations by introducing vegetation to screen the structure from public view.

Page 4.14.92 of the Draft EIR/EIS. The following text changes are added after Measure 2.4.6 to the Mitigation section under Impact 14.6.5:

Alternatives 2 and 3.

2.3.17 Pump Station Noise Control

Page 4.14.92 of the Draft EIR/EIS. The following text changes are added before and to the first sentence in the After Mitigation section under Impact 14.6.5:

Mitigation Measure 2.3.17 would result in Pump Stations BVB, SBPS-9, WBPS-3, WBPS-7, and LBPS-4 being placed entirely underground, and therefore all permanent visual impacts would be eliminated. Except for Pump Stations G-3, G-4 and S, ~~this Mitigation Measure~~ 2.4.6 will reduce the visual contrast of the pump stations by introducing vegetation to screen the structure from public view.

Page 4.14.93 of the Draft EIR/EIS. The following text changes are added after Measure 2.4.6 to the Mitigation section under Impact 14.6.6:

Alternatives 2 and 3.

2.3.17 Pump Station Noise Control

Page 5-13 of the Draft EIR/EIS. The following text changes are added before Section 5.4 Significant and Unavoidable Adverse Impacts.

If the Project were considered growth-inducing, environmental impacts of this growth are disclosed in the EIR's for the general plans of the region.

Page 5-25 of the Draft EIR/EIS. The following references are added to the Other References section:

City of Cotati. 1990. City of Cotati General Plan 1985-2005. September.

City of Cotati. 1989. Draft EIR for the Cotati General Plan. August.

City of Rohnert Park. 1995. The General Plan for the City of Rohnert Park.

City of Rohnert Park. 1995. Final EIR for the City of Rohnert Park General Plan Amendment and Update. November.

City of Santa Rosa - Department of Community Development. 1995. Santa Rosa General Plan 2010. April.

City of Santa Rosa. 1990. Final EIR Santa Rosa 2010 General Plan. October.

City of Sebastopol. 1994. City of Sebastopol General Plan. May.

City of Sebastopol. 1994. Draft EIR, City of Sebastopol Final General Plan. May.

Sonoma County Planning Department. 1989. Sonoma County General Plan. March.

Sonoma County Planning Department. 1986. Draft EIR, Sonoma County General Plan. December.

Page 1, Appendix D-31 of the Draft EIR/EIS. The following text change is added under the Americano Creek Watershed heading:

Appendix D-31					
Cumulative Project List					
Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
AMERICANO CREEK WATERSHED					
Residential Development Projects					
3 lots for minor subdivision	Valley Ford District	Sonoma County P&RMD			X
Solid Waste Projects					
Roblar Site - closure landfill improvements	Roblar Road	Sonoma County Public Works			X
STEMPLE CREEK WATERSHED					
Habitat Restoration/Environmental Mitigation Projects					
Watershed restoration project	Stemple Creek	U.S. Department of Agriculture; Natural Resources Conservation Service		X	
Solid Waste Projects					
Central landfill composting facility	500 Meacham Road, Petaluma	Integrated Waste Management Board			X
Central landfill recycletown	500 Meacham Road, Petaluma	Integrated Waste Management Board			
Central landfill improvements	Central Landfill, Meacham Road	Sonoma County Public Works			X
TOLAY CREEK WATERSHED					
Habitat Restoration/Environmental Mitigation Projects					
Watershed restoration project	Tolay Creek	U.S. Department of Agriculture; Natural Resources Conservation Service	X		
Environmental mitigation	Route 121, Hwy. 37 to Tolay Creek Bridge	Caltrans			X
Transportation Projects					
Roadway reconstruction	Route 121 from Route 37 to Tolay Creek Bridge	Caltrans			

Page 6, Appendix D-31 of the Draft EIR/EIS. The following change is added to the Appv. and Not Under Const. column under the Russian River Watershed Annexations headings:

Appendix D-31					
Cumulative Project List					
Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
RUSSIAN RIVER WATERSHED					
Annexations					
4 lot SF minor subdivision, 2.2 acres	910 First St.	Sebastopol Planning		X	
4 parcels, 2.61 acres	6701 Montecito Blvd.	Santa Rosa Community Development			X
3 parcels	931 Middle Rincon Rd.	Santa Rosa Community Development			X
County Island, one parcel	350 Brey Rd.	Santa Rosa Community Development			X
23.6 acres	2278 Dutton Ave.	Santa Rosa Community Development			X
Navle Air Center, 17.5 acres	3842 Finley Center	Santa Rosa Community Development			X
200 acres	2853 S. Dutton Ave.	Santa Rosa Community Development			X
26 lots on 7 acres	3537 Bennett Valley	Santa Rosa Community Development			X
Annexation of Creekside Middle School	East of Snyder south of Keiser	Rohnert Park Community Development		X	
4,000 sq ft - 82 unit motel	Downtown Sebastopol	Sebastopol Planning Dept.			X
General Plan Amendments & Update					
Brooks Commercial (3.9 acres)	Los Amigos and Brooks Ave.	Windsor Planning Dept.			X
Yardbirds Center, 101,000 s. f. General Plan Amendment Rezoning	3200 Mendocino Ave.	Santa Rosa Community Development			X
Lovers Lane Specific Plan, plan outlines development of 990 to 1360 sf family, and multi family units and 2 acres of commercial development. General plan amendment and rezoning required.	North of the city of Ukiah	Mendocino Co. Planning			X
Residential development	5780 Old Redwood Hwy., Windsor District	Sonoma County P&RMD			X
17 lots for minor subdivisions	Sepastopol District	Sonoma County P&RMD			
General plan amendment for riparian setback ordinance	Russian River	Healdsburg Planning Dept.			
Agricultural zoning to commercial zoning 10 acres	South of The Forks, North State St.	County of Mendocino Planning and Building			X

Page 7, Appendix D-31 of the Draft EIR/EIS. The following text changes are added to the Project Title/Description and Location columns under the Commercial Development Projects heading:

Appendix D-31

Cumulative Project List

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
RUSSIAN RIVER WATERSHED					
Agricultural zoning to commercial zoning 24 acres	South of The Forks, North State St.	County of Mendocino Planning and Building			X
Remote residential 40 acres per unit to remote residential 20 acres per unit.	Redwood Valley	County of Mendocino Planning and Building			X
General Plan Update	City of Santa Rosa	Santa Rosa Community Development Dept.			
Update Airport Master Plan	Sonoma County Airport	Sonoma County Public Works			X
Windsor General Plan	Entire City of Windsor and expanded areas	Windsor Planning Dept.			X
Change general plan mapping from low to very low density, 12.5 acres.	3100 Chanate Rd.	Santa Rosa Community Development			X
Change residential low density to business park, one parcel.	818 Britain Lane	Santa Rosa Community Development			X
Shift residential density and establish shopping center designation	4600-4712 Sonoma Hwy.	Santa Rosa Community Development			X
Rohnert Park General Plan Update	City of Rohnert Park	Rohnert Park Planning Dept.			X
Commercial Development Projects					
Cary/Taylor Industrial Building, 10,000 Sq. Ft.	450 Aaron St.	Cotati Planning	X		
Lukens Industrial Building, 8,774 s.f.	711 Portal St.	Cotati Planning	X		
Discovery Office Systems, 36,261 s.f.	Houser St. at Redwood Dr.	Cotati Planning		X	
16 screen m Movie theater complex	80 Golf Course Dr.	Rohnert Park Community Development		X	
Allied Moving and Storage 15,500 s.f.	State Farm Dr. and Professional Dr.	Rohnert Park Community Development		X	
Next Level Communication, Electronics Manufacturing, three phases total 150,000 s.f.	State Farm Dr.	Rohnert Park Community Development		X	
Hewlett Packard, warehouse and office, 100,000 s.f.	Rohnert Park	Rohnert Park Community Development		X	
Construction of 8,765 s.f. Building	Larkfield District, 4601 Redwood Hwy.	Sonoma County P&RMD		X	
Four wholesale greenhouses	Philips Ave.	Sonoma County P&RMD		X	
25,900 s.f.	Various locations within city	Ukiah Planning Dept.			
Mendocino Brewing Company	Downtown Ukiah	City of Ukiah Planning Dept.	X		

Page 12, Appendix D-31 of the Draft EIR/EIS. The following changes are added to the Project Title/Description column under the Russian River Watershed heading:

Appendix D-31

Cumulative Project List

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
211 4 SF units, 80 56 MF units, 1,727 acres.	Various locations within the City of Santa Rosa	Santa Rosa Community Development			X
11 SF units	Various locations within the City of Cotati	Cotati Planning	X		
36 SF units	Various locations within the City of Cotati	Cotati Planning		X	
4 lots for minor subdivision	Jenner District	Sonoma County P&RMD			X
13 lots for minor subdivision	Geyserville District	Sonoma County P&RMD			X
30 lots for minor subdivision	Windsor District	Sonoma County P&RMD			X
223 lots for major subdivision	Windsor District	Sonoma County P&RMD			X
7 lots for minor subdivision	Guerneville District	Sonoma County P&RMD			X
4 lots for minor subdivision	Rio Nido District	Sonoma County P&RMD			X
39 lots for major subdivision	Larkfield District	Sonoma County P&RMD			X
19 lots for minor subdivision	Twin Hills District	Sonoma County P&RMD			
Airport Improvement Projects					
Aircraft storage hangars (2)	Sonoma County Airport	Sonoma County Public Works			X
New general aviation runway	Sonoma County Airport	Sonoma County Public Works			X
Land acquisition for runway approach protection	Sonoma County Airport	Sonoma County Public Works			X
Airfield safety and maintenance projects	Sonoma County Airport	Sonoma County Public Works			X
Resurface main runway	Sonoma County Airport	Sonoma County Public Works			X
Airport business park industrial, commercial and office	South of downtown at Airport Rd., Hwy. 101 and Talmage Rd.	Ukiah Public Works	X	X	
Drainage Projects					
Flood channel maint.	Pieta Creek Vineyards, Hopland	Mendocino Co. Planning and Building			X
Russian River breaching - obstruction removal and sandbar clearing	Jenner, Son. County	Sonoma County Public Works; Corps	X		
Retaining wall emergency repair	Healdsburg Dam	Sonoma County Water Agency; Corps			X
Big Sulphur Creek emergency watershed project	Big Sulphur Creek	Sonoma County Water Agency; Corps		X	

Page 19, Appendix D-31 of the Draft EIR/EIS. The following text changes are added to the Project Title/Description and Location columns under the Sewer System Projects heading:

Appendix D-31

Cumulative Project List

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
RUSSIAN RIVER WATERSHED					
Pleasant Oak Park improvements	Pleasant Ave.	Windsor Planning Dept.	X		
Community park	South side of City on Muscat Creek	Cloverdale Public Works		X	
Healdsburg dam fish ladder and dam modifications	Healdsburg Dam on Russian River, north of Hwy. 101	Sonoma County Water Agency			X
Sewer System Projects					
Sewer line replacement	North High St.	City of Sebastopol Public Works		X	
Pump station construction	Morris St.	City of Sebastopol Public Works		X	
Graton treatment plant and reclamation improvements	West of Ross Rd along a tributary of Atascadero Creek, Graton	Sonoma County Water Agency			X
Forestville CSD Capital Replacement Program	Various Locations	Sonoma County Water Agency			X
Mirabel Heights Wastewater Collection and Treatment Facilities	Mirabel Heights area south of River Road at Mirabel Road	Sonoma County Water Agency			X
Occidental treatment plant improvements	South of Occidental Rd, Occidental	Sonoma County Water Agency			X
Occidental transfer station	4985 Stoetz Lane, Sebastopol, CA 95472	Integrated Waste Management Board			
Russian River CSD treatment plant and reclamation improvements	Guerneville	Sonoma County Water Agency			X
Airport treatment plant, storage and irrigation system improvements	At Santa Rosa Airport	Sonoma County Water Agency			X
<u>Airport/Larkfield/Wickiup Capital replacement program - repair/replace collection system, electrical and mechanical hardware.</u>	<u>Airport/Larkfield/Wickiup Various Locations</u>	Sonoma County Water Agency			X
Camp Meeker Wastewater Collection and Treatment Facilities	Camp Meeker area along Bohemian Highway and Dutch Creek	Sonoma County Water Agency			X
Forestville CSD treatment plant improvements	South of Hwy. 116 along tributary of Green Valley Creek, Forestville	Sonoma County Water Agency			X

Page 20, Appendix D-31 of the Draft EIR/EIS. The following text changes are added to the Project Title/Description, Location, Reporting Agency, and Not Appv. columns under the Russian River Watershed heading:

Appendix D-31					
Cumulative Project List					
Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
RUSSIAN RIVER WATERSHED					
Geyserville treatment plant improvements	South of Hwy. 128 along Russian River, Geyserville	Sonoma County Water Agency			X
Geyserville capital replacement program	Various Locations	Sonoma County Water Agency			X
Russian River CSD capital replacement program	Guerneville	Sonoma County Water Agency			X
South Park CSD capital replacement program	Various Locations	Sonoma County Water Agency			X
24" sewer interceptor from Cotati to the Laguna Plant	Cotati to Laguna Treatment Plant	Cotati Public Works, Corps	X		
North trunks collector	Generally along NWP RR Tracks	Windsor Planning Dept.		X	
Southwest trunk collector	Southwest Area	Windsor Planning Dept.			X
Replace sewer main	Jefferson, Hoehl and Charles Streets	Cloverdale Public Works	X		
Sewer and water main replacement	Bonavita Heights	Santa Rosa Utilities Department		X	
Sewer and water main replacement	Burbank Gardens	Santa Rosa Utilities Department		X	
Water main installation and overlay	D St. to First St. Sonoma	Santa Rosa Utilities Department		X	
Sewer main replacement	Darla Dr.	Santa Rosa Utilities Department		X	
Sewer and water main replacement	E St., King St., 5th St., Royal St.	Santa Rosa Utilities Department	X		
Sewer and water main replacement	Julliard Park Neighborhood	Santa Rosa Utilities Department	X		
Sewer replacement	Sebastopol Rd. / Roseland Ave.	Santa Rosa Utilities Department		X	
Sewer main replacement	Clover, Wild Rose	Santa Rosa Utilities Department		X	
Sewer main replacement	5th St. Mendocino to B St.	Santa Rosa Utilities Department		X	
Sewer main replacement	Steven St. to Gordon Lane	Santa Rosa Utilities Department		X	
Sewer and water improvement	Bento St. and 13th	Santa Rosa Utilities Department		X	
Sewer and water main replacement	South A - Barham to Santa Rosa Ave.	Santa Rosa Utilities Department		X	
Water main replacement	Marlow Rd. - West Steele to Marsh	Santa Rosa Utilities Department	X		

Page 21, Appendix D-31 of the Draft EIR/EIS. The following text changes are added to the Project Title/Description, Location, and Reporting Agency columns under the Solid Waste Projects heading:

Appendix D-31

Cumulative Project List

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
RUSSIAN RIVER WATERSHED					
Water main replacement	Sullivan Crt.	Santa Rosa Utilities Department		X	
Water main replacement	Extensions - East	Santa Rosa Utilities Department		X	
Water main replacement	Extensions - West	Santa Rosa Utilities Department		X	
Sewer and water main replacement	Grahn Dr. & Siesta Lane	Santa Rosa Utilities Department		X	
Rohnert Park Water Reuse Project	Laguna de Santa Rosa and Copeland Creek	Santa Rosa Utilities Department		X	
Sewage ponds upgrade	Ukiah	Ukiah Public Works; Corps	X		
Solid Waste Projects					
Cloverdale composting program	Cloverdale	Integrated Waste Management Board		X	
Healdsburg transfer station	166 Alexander Valley Road, Healdsburg, CA 95448	Integrated Waste Management Board		X	
Guerneville transfer station	13450 Pocket Dr., Guerneville, CA 95446	Integrated Waste Management Board			
Healdsburg site - closure & landfill gas collection	Alexander Valley Road	Sonoma County Public Works			X
Reeyletown North	166 Alexander Valley Road, Healdsburg, CA 95448	Integrated Waste Management Board			
Larry's Materials recovery and drop off	7085 Gravenstein Highway, Cotati	Integrated Waste Management Board			
Recycle America - materials recovery and drop off	3400 Standish Ave., Santa Rosa	Integrated Waste Management Board			
Garbage Reincarnation drop off	3899 Santa Rosa Avenue, Santa Rosa	Integrated Waste Management Board			
Industrial Carting Materials Recovery Facility	3911 Santa Rosa Avenue, Santa Rosa	Integrated Waste Management Board			
Airport disposal site - closed landfill improvements	Airport Boulevard adjacent to Sonoma Co. Airport	Sonoma County Public Works			X
Guerneville enclosure building improvements	Pocket Drive, Guerneville	Sonoma County Public Works			X
Landfill expansion	Central City Landfill	City of Ukiah Public Works		X	

Page 28, Appendix D-31 of the Draft EIR/EIS. The following text changes are added to the Project Title/Description, Location, Reporting Agency, and Not Appv. columns under the Russian River Watershed heading:

Appendix D-31					
Cumulative Project List					
Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
RUSSIAN RIVER WATERSHED					
Early Warning System (EWS) - 3 monitoring stations to detect contaminants in the Russian River	Sta. 1 on Russian River north of Forestville; Sta 2 on Mark West Creek @ Trenton-Healdsburg Rd; Sta 3 on Russian River south of Healdsburg	Sonoma County Water Agency			X
Miscellaneous site improvements at the Mirabel site	South of Westside Road along the Russian River	Sonoma County Water Agency			X
Ozone treatment plants for emergency wells (3)	Well sites along the Russian River-Cotati Intertie	Sonoma County Water Agency			X
New Russian River well field	Between Mirabel Site and Wohler Road north of Russian River	Sonoma County Water Agency	X		X
Miscellaneous site improvements at the Wohler site	Wohler Road east of the Russian River	Sonoma County Water Agency			X
Potter Valley project	Mendocino and Lake Counties	Sonoma County Water Agency			X
Russian River Estuary Management Plan	Russian River from Duncans Mills to Jenner	Sonoma County Water Agency			X
Sweetwater Springs Water District improvement project	Hulbert Creek, Guerneville	Corps	X		
Dry Creek Wells: Municipal Water Wells, Healdsburg	Healdsburg Corporation Yard	Healdsburg Public Works			X
New wells and well rehabilitation	Bluebird Well Site	Windsor Planning Dept.		X	
New water main	Old Redwood Hwy. & Herb Rd.	Windsor Planning Dept.	X		
New water main	Russian River to Herb Rd.	Windsor Planning Dept.	X		
New water main	Starr Rd. to High School	Windsor Planning Dept.		X	
New water main	Old Redwood Hwy. to Lockwood	Windsor Planning Dept.		X	
New water main	Shiloh tanks to Fought Rd. and Pleasant Ave.	Windsor Planning Dept.		X	

Page 29, Appendix D-31 of the Draft EIR/EIS. The following Updated Cumulative Project List, March 1996 to March 1997, is added after page 29.

Updated Cumulative Project List March 1996 to March 1997

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
AMERICANO CREEK WATERSHED					
Commercial Development Projects					
Lawson Dillon Beach Resort, 29,000 sq. ft. retail space and 1,200 sq. ft. office space	1 Beach Ave Dillon Beach	Marin County Planning			X
Residential Development Projects					
Lawson Dillon Beach Resort, 53 SF units and 21 MF units	1 Beach Ave Dillon Beach	Marin County Planning			X
ATASCADERO CREEK WATERSHED					
Park Projects					
Ragle Ranch Little League park improvements	Sebastopol	Sonoma County Regional Parks		X	
STEMPLE CREEK WATERSHED					
Miscellaneous Projects					
Expansion of Point Reyes National Seashore	Southwest Sonoma County and Northwest Marin County	National Park Service			X
Creek Enhancement projects, such as water quality testing, dairy conservation plans, erosion control, community outreach and habitat restoration.	Stemple Creek Watershed	Sonoma Conservation Districts, Marin Conservation District, Goldridge Conservation District, Shrimp Club, and the Natural Resources Conservation Service.	X	X	
Habitat Restoration/Environmental Mitigation Projects					
Marin Coastal Watershed Enhancement Project	Stemple Creek/Estero de San Antonio	Environmental Protection Agency	X		

Updated Cumulative Project List March 1996 to March 1997

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
PETALUMA RIVER WATERSHED					
Commercial Development Projects					
Buck Center for Research and Aging, 355,000 sq. ft. office space	8125 Redwood Blvd., Novato	Marin County Planning	X		
Commercial/Industrial Development 154,913 sq. ft.	Various Locations throughout Petaluma	City of Petaluma	X		
Commercial/Industrial Development 71,884 sq. ft.	Various Locations throughout Petaluma	City of Petaluma		X	
Commercial/Industrial Development 119,400 sq. ft.	Various Locations throughout Petaluma	City of Petaluma			X
GPA and use permit to allow application of sludge material on agricultural lands, comprising approximately 3,042 acres.	Lakeville District - 6786 Lakeville Hwy.	Sonoma County P&RMD			X
Residential Development Projects					
4 lots for minor subdivisions	Lakeville District	Sonoma County P&RMD			X
6 lots for minor subdivisions	Penngrove District	Sonoma County P&RMD			X
9 lots for minor subdivisions	Penngrove District	Sonoma County P&RMD		X	
Cross Creek Subdivision - 200 SF Units	South Ely and Casa Grande	City of Petaluma		X	
Larry's Lollipop - 12 SF Units	Sunny Slope Rd.	City of Petaluma			X
Pamela Place 2 - 11 SF Units	Sunny Slope Rd.	City of Petaluma			X
Stone Ridge 20 SF Units	Sunny Slope Rd.	City of Petaluma			X
Tuxhorn / Gatti	Sonoma Parkway	City of Petaluma			X
Tuxhorn Estates	Windmill Lane	City of Petaluma			X
Transportation Projects					
Lynch Creek - Bike path, retaining wall, and riparian planting	Under Route 101 at Lynch Creek, Petaluma	Caltrans		X	
Lynch Creek - Bicycle and pedestrian bridge	South of Hwy. 101 at Lynch Creek, Petaluma	Caltrans		X	
Willow Brook Creek - bicycle and pedestrian underpass	Hwy. 101 at Willow Brook Creek, Petaluma	Caltrans		X	

Updated Cumulative Project List March 1996 to March 1997

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
Drainage Projects					
Street Conduit	C Street from 6th St. to Petaluma River, Petaluma	Sonoma County Water Agency			X
Street Conduit	H Street, Petaluma	Sonoma County Water Agency			X
Street Conduit	Skillman Lane, Petaluma	Sonoma County Water Agency			X
RUSSIAN RIVER WATERSHED					
Annexations					
Annexation of Roseland Area	Southwest Santa Rosa	City of Santa Rosa Community Development		X	
Doughty Annexation, 3 SF units	903, 909, 915 First Street	City of Sebastopol		X	
319 acre annexation	Northwest of Healdsburg at Digger Bend	City of Healdsburg			X
Site annexation for future commercial use, 22 acres	West side of Rohnert Park	Rohnert Park Planning			X
Commercial Development Projects					
31,000 sq. ft. Office Building	Santa Rosa District- 200 Concourse Blvd.	Sonoma County P&RMD			X
Two new industrial buildings approx., 90,000 sq. ft.	Santa Rosa District- 1755 Copperhill Pkwy.	Sonoma County P&RMD			X
6,000 sq. ft. church meeting hall, 50 car parking lot	Santa Rosa District- 2293 Fulton Rd.	Sonoma County P&RMD			X
4 pump gas station and mini mart	Guerneville District	Sonoma County P&RMD		X	
Manufacturing business - 1250 sq. ft office, 3700 sq. ft warehouse, 150 sq. ft storage and parking lot	Cloverdale District - 27705 Dutcher Creek Rd.	Sonoma County P&RMD			X
9200 sq. ft warehouse with small office	Bellevue District - 470 E Todd Rd.	Sonoma County P&RMD			X

Updated Cumulative Project List March 1996 to March 1997

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
Parking for 60 vehicles, restrooms, boat launch and picnic area.	Cloverdale District - 31700 McCray Rd.	Sonoma County P&RMD			X
Construction of 20,000 sq. ft. barrel storage building	Windsor District - 4027 West side Rd.	Sonoma County P&RMD			X
12-18 person medical retreat of 119.72 acres	Rincon Valley District - 2459 Calistoga Rd.	Sonoma County P&RMD			X
American Golf Restaurant expansion, 2,000 sq. ft.	100 Golf Course Dr.	Rohnert Park Planning		X	
Church, 6,000 sq. ft.	#7 Padre Parkway	Rohnert Park Planning		X	
Car Wash Exxon Station	6301 Columbus	Rohnert Park Planning		X	
Frozen Fresh Food Distribution Center, 46,000 sq. ft.	6980 State Farm Dr.	Rohnert Park Planning	X		
Commercial Building, 20,300 sq. ft.	5600 Synder Lane	Rohnert Park Planning		X	
Motel, 60 rooms	5353 Redwood Dr.	Rohnert Park Planning			X
Speculative Industrial building, 21,000 s.f	566 and 572 Martin Ave.	Rohnert Park Planning			X
Hewlett-Packard proposed expansion	1212 Valley House Dr.	Rohnert Park Planning			X
Furber Shopping Center, 100,000 sq. ft.	South Cloverdale Blvd. & Treadway Dr.	City of Cloverdale Public Works	X		
Redwood Oil Chevron Station	S. Cloverdale Blvd. & Treadway Dr.	City of Cloverdale Public Works	X		
Cypress Hill PUD, 3,430 sq. ft. of office space	331 North Main	City of Sebastopol		X	
O'Reilly & Associates, 168,500 sq. ft. of office space	899 Gravenstein North	City of Sebastopol		X	
Woodstone Center, 82 motel units and 3,600 sq. ft. of office space	1011 Gravenstein Hwy. S.	City of Sebastopol		X	
Planned Unit Development, 4,680 sq. ft. commercial space	7580 Commerce Ave.	Cotati Planning		X	
Minatta Commercial Building, 10,080 sq. ft. commercial building	8112 Gravenstein Hwy.	Cotati Planning			X

Updated Cumulative Project List March 1996 to March 1997

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
Bianucci Office Building, 20,346 sq. ft.	605 West Sierra Ave.	Cotati Planning			X
Lucky Supermarket, 62,106 sq. ft.	Old Redwood Hwy. & St. Joseph's Way	Cotati Planning			X
Cotati Hotel, 24,435 sq. ft. hotel with retail and office space	East Cotati Ave. & La Plaza	Cotati Planning		X	
24 Hour Health Club Addition, 10,669 sq. ft. addition to an existing 21,029 sq. ft. facility	680 East Cotati Ave.	Cotati Planning			X
Wheeler/Oakville Grocery, 9,000 sq. ft. retail and office space	126 Matheson	Healdsburg Planning	X		
New City Hall, 10,000 sq. ft.	1301 Grove St.	Healdsburg Planning	X		
Nocifera gas station, 700 sq. ft.	535 Healdsburg Ave.	Healdsburg Planning	X		
Rich Ryan Subdivision, 2 commercial lots	1200 Healdsburg Ave.	Healdsburg Planning	X		
Sutter Health Medical, 6,500 sq. ft.	15620 Healdsburg Ave.	Healdsburg Planning		X	
Brant Building Expansion, addition of 4,000 sq. ft. of retail space	100 Matheson St.	Healdsburg Planning		X	
Kase Tentative Map, 5 condominiums, 1,800 sq. ft. office space	801 Healdsburg Ave.	Healdsburg Planning		X	
Foss Hill Station, Wine Bar	130 North St. (344 Center St.)	Healdsburg Planning		X	
Plaza Hotel, 60-room hotel with 9,000 sq. ft. retail space	311 Healdsburg Ave.	Healdsburg Planning		X	
Commercial Cooperage	North of Old Hopland	Mendocino County Planning Dept.			X
Staples Office Supply - 25,000 sq. ft. commercial space	Airport Park Blvd.	Ukiah Planning		X	
Furniture Outlet - 15,000 sq. ft. commercial space	Airport Park Blvd.	Ukiah Planning		X	
Novato Toyota Car Dealer, 13,000 sq. ft.	115 Vintage Way, Novato	Marin County Planning		X	

Updated Cumulative Project List March 1996 to March 1997

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
Novato Oak Inn and Restaurant, 5,000 sq. ft.	225 Alameda Del Prado, Novato	Marin County Planning		X	
Novato Community Hospital, 220,000 sq. ft.	End of Rowland Ave., Novato	Marin County Planning			X
Buddhist University Expansion, 60,000 sq. ft.	Talmage Rd.	Mendocino County Planning Dept.			X
Dewitt Sand & Gravel Quarry	Pine Flat Road	Sonoma County P&RMD			X
Movie Theater Complex	2nd St. and Santa Rosa Ave.	City of Santa Rosa Planning			X
Residential Development Projects					
3 lots for minor subdivisions	Mark West Springs District	Sonoma County P&RMD			X
12 lots for minor subdivisions	Graton District	Sonoma County P&RMD			X
3 lots for minor subdivisions	Gesyserville District	Sonoma County P&RMD			X
8 lots for minor subdivisions	Windsor District	Sonoma County P&RMD			X
A total of 84 units	Larkfield District	Sonoma County P&RMD		X	
3 lots for minor subdivisions	Cloverdale District	Sonoma County P&RMD			X
35 lots for minor subdivisions	Santa Rosa District	Sonoma County P&RMD			X
14 Residential projects totaling 121 acres	Various locations within the City of Santa Rosa	Santa Rosa Community Development Dpt.		X	
7 Residential projects totaling 29 acres	Various locations within the City of Santa Rosa	Santa Rosa Community Development Dpt.		X	
Senior Residential Community	Hot Springs Rd. and Cloverdale Blvd.	City of Cloverdale Planning Dept.			X
Vineyard Meadows West Subdivision, 75 SF units	500 Muscat Dr.	City of Cloverdale Planning Dept.	X		

Updated Cumulative Project List March 1996 to March 1997

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
Citrus Gardens Planned Development, 41 SF/MF units	432 S. Cloverdale Blvd.	City of Cloverdale Planning Dept.		X	
Swain Woods Subdivision, 3 SF units	530/561 Swain Woods & 7420 Blossomwood	City of Sebastopol		X	
Oak Grove Subdivision, 1 SF unit	7801 Stefenoni Ct.	City of Sebastopol		X	
Woodland Estates, 8 SF Units	7401-7439 Giusti	City of Sebastopol		X	
Henon Subdivision, 1 SF unit	7411 Henon Ct.	City of Sebastopol		X	
Cypress Hill PUD, 3 SF units	337 North Main	City of Sebastopol		X	
Redwood Heights, 4 SF units	Beattie Lane	City of Sebastopol		X	
Meadow Estates, 4 SF units	615, 621, 625 Du Franc, 7640 Meadow Ct.	City of Sebastopol		X	
Robinson Cohousing, 14 SF units	712 Robinson Rd.	City of Sebastopol		X	
Dennis Second, 1 SF	6943 Wallace St.	City of Sebastopol		X	
Subdivision, 6 acres, 19 units	N. State St.	Mendocino County Planning Dept.			X
Subdivision, 36 acres, 15 units	S. Lake Mendocino Dr.	Mendocino County Planning Dept.			X
Wilford Place, 4 SF units	Wilford Lane	Cotati Planning			X
Sierra Meadows, 26 lot SF subdivision	8577 Cypress	Cotati Planning	X		
Bettman Duplex	Park Ave. at Old Redwood Hwy.	Cotati Planning			X
Oak Knoll Subdivision, 24 lot SF subdivision	374 E. School Street	Cotati Planning			X
Park Meadows Subdivision, 61 lot SF subdivision	8412 & 8440 Park Ave.	Cotati Planning			X
William Victoria Subdivision, 40 units	Hillside Dr. and Jefferson St.	City of Cloverdale	X		
Garaventa Subdivision, 14 SF lots	Healdsburg	Healdsburg Planning			X
Roper Subdivision, 18 SF lots	Healdsburg	Healdsburg Planning			X
Healdsburg Convalescent Hospital	14745 Grove St.	Healdsburg Planning			X

Updated Cumulative Project List March 1996 to March 1997

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
Stebbins Bed & Breakfast, Conversion of SFD to B&B	201 Powell Ave	Healdsburg Planning			X
Two SF units	Various locations in Healdsburg	Healdsburg Planning	X		
Rich Ryan Subdivision, 6 SF lots	1200 Healdsburg Ave.	Healdsburg Planning			
Parkland Farms Subdivision, 274 SF lots, 2 MF lots	Healdsburg Ave.	Healdsburg Planning		X	
Brush Major Subdivision, 17 SF lots	16038 Healdsburg Ave.	Healdsburg Planning		X	
The Redwoods, 14 units	275 East Cotati Ave.	Cotati Planning			X
Apartments, 24 units	4020 Laguna Dr.	Rohnert Park Planning		X	
Apartments, 24 units	7012 Laguna Dr.	Rohnert Park Planning		X	
Apartment, 20 units	7060 Laguna Dr.	Rohnert Park Planning		X	
Vicky Springs, 30 lots, 23 acres (updated from first Draft EIR/EIS Cumulative List)	Vicky Springs Rd.	Mendocino County Planning Dept.			X
Drainage Projects					
Excavate sand bar channel	Mouth of Russian River, Sonoma County	California Coastal Commission			X
4th Street Drainage Project	4th Street, Cloverdale	City of Cloverdale Public Works	X		
Box Culvert	Cloverdale Blvd., Cloverdale	City of Cloverdale Public Works	X		
Inflow/Infiltration Reduction projects	Cloverdale	City of Cloverdale Public Works		X	
Cotati-Kastania Booster Pump Station	Petaluma	Sonoma County Water Agency			X
Reservoir Inlet/Outlet Modifications	Annadel, Kastania and Ralphine Reservoirs	Sonoma County Water Agency			X
Eldridge Booster Pump Station	Near Eldridge Tanks, Valley of the Moon	Sonoma County Water Agency	X		

Updated Cumulative Project List March 1996 to March 1997

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
Design and Construct 2,550 ft. storm drain	Cotati	Sonoma County Public Works		x	
Brush Creek Channel 42A Extension, 2,500'	Along Montecito Blvd. and Middle Rincon Rd., Santa Rosa	Sonoma County Water Agency			X
Wright Street Conduit Phase I	Along Wright St. from McConnell Ave. to Carr Ave., Santa Rosa	Sonoma County Water Agency			X
Wright Street Conduit Phase II	Along Pacific Ave. and Wright St., Santa Rosa	Sonoma County Water Agency			X
Moorland Ave. Conduit System Phase II, 2,350'	Along Moorland Ave. from West Robles Ave. to Todd Rd.	Sonoma County Water Agency		X	
Cotati System B, 2,500'	Along Alder Ave. and Helman Ln., Cotati	Sonoma County Water Agency			X
Standish Ave. Conduit, Phase I, 8,650'	Standish Ave	Sonoma County Water Agency			X
10th and Ripley St. Storm Drain	10th and Ripley St.	Sonoma County Water Agency			X
Cleveland/Harrison Storm Drain, 400'	Between. Harrison St. and Cleveland Ave., Sebastopol	Sonoma County Water Agency			X
College Ave. Conduit	Along College Ave. from Mendocino Ave. to Hwy.	Sonoma County Water Agency			X
Cook Creek Sediment Basin	Crane Canyon Rd. and Petaluma Hill Rd.	Sonoma County Water Agency			X
El Rancho Drive Storm Drain, 400'	Along El Rancho Dr. north of East School St., Cotati	Sonoma County Water Agency			X
South Main/Petaluma Ave./Palm Ave. Conduit, 3,800'	Along S. Main, Petaluma Ave., And Palm Ave., Sebastopol	Sonoma County Water Agency	X		
Windsor Creek at Old Oak Rd. - bypass conduit, 2,300'	Northwestern Pacific Railroad to Conde Lane	Windsor		X	

Updated Cumulative Project List March 1996 to March 1997

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
Starr Creek Tributary 6 - storm drains and/or creek improvements and a new bore and jack installation, 1,600'	Colleen Drive to Northwestern Pacific Railroad	Windsor		X	
Windsor Creek at Brooks Rd. Drainage Improvements - bypass conduits, 1,000'	Brooks Rd. to Arata Lane	Windsor		X	
Windsor Creek at Windsor Road to Treatment Plant Drainage Improvements - 2,400' of box culvert bypass and/or creek improvements	Windsor Rd. to Windsor Water District Treatment Plant	Windsor		X	
Windsor Creek at Treatment Plant to Railroad Tracks Drainage Improvements - 2,400' of modified natural creek improvements, and a new bridge	Downstream of Treatment Plant to Northwestern Pacific Railroad	Windsor		X	
Poole and Faught Creeks Drainage Improvements - 2,800' of creek improvements	Conde Lane to Hwy. 101	Windsor		X	
Animal Waste Control 319h Project - for reduction of agricultural source runoff into the Laguna de Santa Rosa	Laguna de Santa Rosa/Russian River	Environmental Protection Agency			?
Habitat Restoration/Environmental Mitigation Projects					
Zoning permit - wetland restoration on 31 acres	Bellevue District - 1030 Todd Rd.	Sonoma County P&RMD		X	
Fish Ladder	Matanzas Creek	Sonoma County Water Agency		x	
Widening and Revegetation of the Laguna de Santa Rosa	Laguna De Santa Rosa - Stony Point	Sonoma County Public Works		x	
Santa Rosa Creek Restoration Plan	From Laguna de Santa Rosa to Hwy. 12	Sonoma County Water Agency	X		
Fisheries Enhancement Program	Tributaries to the Russian River	Sonoma County Water Agency	X		

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Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
Habitat Restoration, 0.6 acres	Petaluma Blvd. North, Petaluma	Caltrans		X	
Cramer - Vernal Pools/Scenic Landscape Unit Riparian Corridor, joint project with DFG for wetland mitigation banking, 173 acres	Hwy. 12 west of Fulton	Sonoma County Agricultural Preservation and Open Space District			
Implementation of Manure Management Practices, to control on feed lot dairies and to obtain water quality objectives in the 303(d) listed Laguna de Santa Rosa.	Laguna de Santa Rosa	Environmental Protection Agency			X
Solid Waste Projects					
Closure of Landfill	Sonoma Central Landfill - Mecum Rd.	Sonoma County Public Works		x	
Compressed natural gas plant	Convert Central Landfill gas to natural gas	Sonoma County Public Works		x	
Park Projects					
Short Tail Gulch Trail construction	Bodega Bay	Sonoma County Regional Parks		X	
Soda Springs Reserve Park Improvements	Sonoma County	Sonoma County Regional Parks		X	
Bodega Community Park Improvements	Bodega Bay	Sonoma County Regional Parks		X	
Cloverdale Regional Park acquisition and improvements	City of Cloverdale	Sonoma County Regional Parks		X	
Foothill Regional Park Improvements	Town of Windsor	Sonoma County Regional Parks		X	
Porter Creek Park Improvements	Porter Creek Rd.	Sonoma County Regional Parks		X	
Windsor Riverfront Park Improvements	Sonoma County	Sonoma County Regional Parks		X	
Fitch Mountain park acquisition and improvements	City of Healdsburg	Sonoma County Regional Parks		X	

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Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
Steelhead Beach Park improvements	Sonoma County	Sonoma County Regional Parks		X	
West County Trail acquisition, construction and improvements	Sonoma County	Sonoma County Regional Parks		X	
Bohemia Ranch Parks improvements	Occidental	Sonoma County Regional Parks		X	
Shiloh Expansion, park improvements	Sonoma County	Sonoma County Regional Parks		X	
Santa Rosa Creek Trail construction	Sonoma County	Sonoma County Regional Parks		X	
Taylor Mountain Regional Park improvements	Petaluma Hill Rd.	Sonoma County Regional Parks		X	
South County Regional Park, acquisition and improvements	Sonoma County	Sonoma County Regional Parks		X	
Sonoma Mountain, park improvements	Sonoma County	Sonoma County Regional Parks		X	
Maddux Park improvements	Sonoma County	Sonoma County Regional Parks		X	
Unity Church Property, park improvements	Sonoma County	Sonoma County Regional Parks		X	
Park Master Plan, Needs assessment of future park locations and opportunities	Various locations in Windsor	Windsor		X	
Taylor Meadows Park Design & Construction	City of Santa Rosa	Santa Rosa Public Works		X	
Water System Projects					
Emergency Well Program	Various locations within the City of Santa Rosa	Santa Rosa Utilities Dept.			X
Installation of water meters	Rohnert Park	City of Rohnert Park			X
Mirabel/Wohler Site Work	Mirabel and Wohler	Sonoma County Water Agency		X	
Water Supply Facility	Wohler Property	Sonoma County Water Agency		X	
Emergency Well Program	Occidental, Sebastopol, and Todd Rd. emergency well sites	Sonoma County Water Agency			X

Updated Cumulative Project List March 1996 to March 1997

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
Collector 1 & 2 Inspection and Rehabilitation	Wohler Collectors 1 & 2	Sonoma County Water Agency		X	
Water Supply and Transmission System Expansion	Russian River, Sonoma County	Sonoma County Water Agency			X
Water Main Replacement	Knolls Drive	Santa Rosa Public Works		X	
Water Main Replacement Extensions - East	Various locations on eastern side of Santa Rosa	Santa Rosa Public Works		X	
Water Main Replacement - West	Various locations on western side of Santa Rosa	Santa Rosa Public Works		X	
Industrial water service -replace water pipe and appurtenances.	Sonoma County Airport	Sonoma County Public Works		X	
Sewer Projects					
Cotati Intertie Pipeline and Gallo Reservoir	West of Cotati	Santa Rosa Utilities Dept.	X		
Forestville Community Sanitation District Capital replacement Program	Various locations within Forestville Community Sanitation District	Sonoma County Water Agency		X	
Graton Treatment Plant and Reclamation Improvements	Graton	Sonoma County Water Agency	X		
Occidental Community Sanitation District Capital Replacement Program	Various locations within Occidental Community Sanitation District	Sonoma County Water Agency		X	
Occidental Treatment Plant and Reclamation Improvements	Occidental	Sonoma County Water Agency			X
Penngrove Sanitation Zone Capital Replacement Program	Various locations within Penngrove Sanitation Zone	Sonoma County Water Agency		X	
Penngrove Sanitation Zone System Upgrades	Penngrove	Sonoma County Water Agency			X
Russian River Community Sanitation District Expansion/Upgrade	Russian River Treatment Plant	Sonoma County Water Agency			X
Leachate Piping Improvement - Connection of new leachate pipeline from landfill to City sewer system	3 miles east of Hwy. 101	Ukiah Planning		X	

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Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
Leachate Booster Station and storage tank construction	3 miles east of Hwy. 101	Ukiah Planning		X	
Franklin to Gay Sewer Replacement	Franklin St. to Gay St.	Santa Rosa Public Works		X	
Junior Street Sewer and Water Replacement	Junior Street	Santa Rosa Public Works		X	
Poppy Drive Sewer Replacement	Poppy Drive	Santa Rosa Public Works		X	
Roweland Ct. Area Sewer Replacement	Roweland Ct.	Santa Rosa Public Works		X	
Sewer Main Replacement	Madison St.	Santa Rosa Public Works		X	
Sewer and Water Main Replacement	Morgan St. & Montgomery Dr.	Santa Rosa Public Works		X	
Ultraviolet light disinfection facility	Laguna Treatment Plant	Santa Rosa Utilities		X	
Repair existing sewer line. New line to be installed underground through the creek bed.	37700 N. Hwy. 1, Westport, Mendocino Co.	California Coastal Commission			X
Transportation Projects					
Intermodal Facility - Phase I	Geyersville	Sonoma County Public Works		X	
Park and Ride	Healdsburg	Sonoma County Public Works		X	
Park and Ride	Petaluma	Sonoma County Public Works		X	
Construct Travel Lanes and shoulders	Moorland Ave from West Robles to Todd	Sonoma County Public Works		X	
Airport Park Blvd. Extension, 1,600'	Airport Park Blvd.	Ukiah Planning		X	
Southern Pacific Railroad Depot - landscaping, parking facilities	Willits, Mendocino County	Caltrans		X	
Route 20 - Addition of east and westbound truck passing lane	West of Lake County line along Route 20	Caltrans		X	
Hwy. 101 - Addition of 4 lane expressway	Near Hopland north of Sonoma County line	Caltrans		X	
Hwy. 101 - Addition of 2 lane expressway	Willits Bypass, Willits	Caltrans		X	

Updated Cumulative Project List March 1996 to March 1997

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
Santa Rosa Railroad Depot restoration	Santa Rosa	Caltrans	X		
Intermodal Transfer Facility - Rail, bus, taxi, and park and ride station	Cloverdale	Caltrans		X	
Hwy. 12 - Roadway widening to standard width	Malita Road East to Conoma Creek Bridge	Caltrans		X	
Commuter bikeway	Sebastopol	Caltrans		X	
Starr and Gumview Creek Bridge Replacements	Kloer Rd.	Windsor		X	
Road Improvements	Extension of Bell Rd. form Windsor River Rd. to Old Redwood Highway	Windsor		X	
Road Reconstruction	Industrial Drive	Santa Rosa Public Works		X	
Kawana Springs Road Widening	Kawana Springs Road	Santa Rosa Public Works		X	
Ritter Tank Slide Repair	Cloverdale	City of Cloverdale Public Works	X		
Pruitt Creek at Shiloh Rd. - new roadway bridges at Conde Ln. and Shiloh Rd., conduit crossing under Hwy. 101, and 3,500' of creek improvements	Pruitt Creek at Shiloh Rd. to Northwestern Pacific Railroad	Windsor		X	
Pool Creek at Northwestern Pacific Railroad - two new bridges (Conde Ln. and NWPRR) and 1,400' of creek improvements	Golf Course to Conde Lane	Windsor		X	
Wiljan Court Extension to Dowd Drive	Dowd Drive	Santa Rosa Public Works		X	

Updated Cumulative Project List March 1996 to March 1997

Project Title/Description	Location	Reporting Agency	Appv. and Under Const.	Appv. and Not Under Const.	Not Appv.
Miscellaneous Projects					
Power Upgrade Program	Laguna Treatment Plant	Santa Rosa Utilities Dept.		X	
Sheriff's Substation - remodel and expand current facility.	Guerneville	Sonoma County Public Works		X	
Emergency Operations Center at the New Windsor Fire Station	Windsor	Windsor		X	
Town Plaza - 2 to 3 acre parcel for development as a feature of the Civic Center	Old Downtown section of Windsor	Windsor		X	

Page 14, Appendix H-3 of the Draft EIR/EIS. The following text is added to the second sentence of the second paragraph:

However, the 1996 data are not considered representative of long-term reclaimed water quality because of a treatment plant malfunction that appears to have caused the elevated *Giardia* and *Cryptosporidium* values in 1996, with the exception of the detection of *Cryptosporidium* on one date after the filter malfunction was corrected. The implications of the *Giardia* and *Cryptosporidium* measurements of 1996 are described in the addendum to Appendix J-3.

Page 31, Appendix I-8 of the Draft EIR/EIS. The following text is added to the last sentence and after the last sentence in the second paragraph under the 4.3.3 Reclaimed Water Discharge heading:

Then the maximum allowable discharge rate was determined as a function of the previous day's Russian River average flow. Actual operation has historically been based on the previous day's peak flow, but this has been under review by the Regional Board during the time that these simulations were being conducted. In light of this uncertainty, average flow was used because simulated discharge (and thus water quality impact) on any given day would be generally less than if peak flow was used. This is considered conservative because impacts of project alternatives are being evaluated based on differences from existing conditions.

Page 8, Table 2, Appendix I-12 of the Draft EIR/EIS. The following changes are added to the notes at the bottom of the table:

Table 2.

Water Quality Objectives (Conductivity, Total Dissolved Solids, and Dissolved Oxygen) for the North Coast Region

	Conductivity ($\mu\text{mhos}/\text{cm}^2$) at 77 °F		Total Dissolved Solids (mg/L)		Dissolved Oxygen (mg/L)		
	90% Upper Limit ^a	50% Upper Limit ^b	90% Upper Limit ^a	50% Upper Limit ^b	Min.	90% Lower Limit ^a	50% Lower Limit ^b
Russian River upstream of the Laguna	320	250	170	150	7.0	7.5	10.0
Russian River downstream of the Laguna	375	285	200	170	7.0	7.5	10.0
Laguna de Santa Rosa					7.0	7.5	10.0
Other waters designated warm, marine, or saline					5.0		
Other waters designated cold including Santa Rosa Creek					6.0		
Other waters designated spawning					7.0		
Other waters designated spawning during critical periods ^c					9.0		

Source: North Coast Regional Water Quality Control Board. 1994. Water Quality Control Plan for the North Coast Region.

- ^a 90% upper and lower limits represent the 90th percentile values for a calendar year. 90 percent or more of the values must be less than or equal to an upper limit and greater than or equal to a lower limit for the water to be in attainment.
- ^b 50% upper and lower limits represent the 50th percentile values of the monthly means for a calendar year. 50 percent or more of the monthly means must be less than or equal to an upper limit and greater than or equal to a lower limit for the water to be in attainment. The 50th percentile upper limit point of significance for conductivity is more stringent than the 90th percentile upper limit point of significance. Therefore, compliance with the 50th percentile upper limit point of significance was evaluated. [Compliance with the minimum dissolved oxygen point of significance was also evaluated.](#)
- ^c Critical periods are during spawning and egg incubation.

Page 27, Appendix I-16 of the Draft EIR/EIS. The following sentence is added to the beginning of the first bulleted item under the Ammonia heading:

A numeric criterion for protection of aquatic organisms from potential toxic effects which applies to the Russian River.

Page 27, Appendix I-16 of the Draft EIR/EIS. The following sentence is added to the beginning of the second bulleted item under the Ammonia heading:

A narrative waste load reduction criterion for ammonia which applies to the Laguna and Santa Rosa Creek.

Page 116, Appendix I-16 of the Draft EIR/EIS. The following text changes are added to the third sentence of the second paragraph under the Toxicity heading:

~~Thus, The~~ impact on toxicity in the Laguna is considered to be significant for the 15 and 20 percent Laguna discharge and No Project alternatives, and the impact on toxicity in the Russian River is considered to be less than significant for all alternatives.

Page 116, Appendix I-16 of the Draft EIR/EIS. The following text is added to the end of the second paragraph under the Toxicity heading:

The 5 and 10 percent design Laguna discharge would cause toxicity to occur in the receiving water at a frequency that is less than the existing condition; therefore, the impact of these design discharge alternatives is considered to be less than existing conditions. However, such discharges would not be, and the existing condition is not in attainment of the Regional Board toxicity objective which prohibits toxicity in receiving water, and mitigation could be required by the Regional Board.

Page 135, Appendix I-16 of the Draft EIR/EIS. The following text is added to the fourth sentence in the second paragraph under the Discharge Management Strategy heading:

Tables 4-26 and 4-27 show the number of adverse or beneficial impacts for benthic algae, planktonic algae, turbidity, and average dissolved oxygen potentially caused by each discharge component expressed as a percentage of the number of analyses.

Page II, Appendix J-3 of the Draft EIR/EIS. The following text is added to the list of appendices at the bottom of the page:

Appendix G

Page 3-1, Appendix J-3 of the Draft EIR/EIS. The following sentence is added to the end of the first paragraph:

[Appendix G of this report updates the analysis of impacts in this section.](#)

Pages G-1 through G-9, Appendix G of Appendix J-3 of the Draft EIR/EIS. The following pages are added behind Appendix F of Appendix J-3 as Appendix G:

APPENDIX G

[This addendum is an analysis of potential project impacts on the density of pathogens in the Russian River and on the potential need for additional drinking water treatment facilities. The addendum is different from the Section 3 of Appendix J-3 in two ways:](#)

- [This addendum takes into account the presence of *Cryptosporidium* in effluent that was detected after Appendix J-3 was prepared \(as noted on Appendix H-3 page 14\).](#)
- [This addendum takes into account the City's decision to convert from chlorine to ultra-violet light disinfection that was made after the Draft EIR/EIS was prepared.](#)

[This addendum provides a description of the regulatory background, a summary of pathogens in reclaimed water, and a description of the existing receiving water conditions, and an updated evaluation of impacts.](#)

Regulatory Background

[Coliform is the only pathogen for which a maximum contaminant level \(MCL\) has been established. The standard established by the California Department of Health Services is described on page 4.7-28: a maximum of five percent of samples each month may be positive for total coliform, and no re-tests may be positive. The State of California's Surface Water Filtration and Disinfection Treatment regulations \(Title 22, Sections 64650 - 64666\) as the equivalent EPA's Surface Water Treatment Rule \(SWTR\) establishes a treatment standard for *Giardia*, which requires a 3-log removal \(1,000 fold reduction\) through filtration and chemical disinfection. The SWTR applies to surface waters and groundwaters considered by the California Department of Health Services to be under the direct influence of surface waters. Groundwater under the direct influence of surface water is defined in Title 22 Section 64651.50 as "any water beneath the surface of the ground with significant occurrence of insects or other microorganisms, algae or large diameter pathogens such as *Giardia lamblia*, or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity or pH which closely correlate to climatological or surface water conditions."](#)

The EPA has proposed the Enhanced Surface Water Treatment Rule (Enhanced SWTR - Federal Register 38832, July 29, 1994) wherein several regulatory options are identified as follows:

1. No change from the existing SWTR;
2. Require additional (greater than 1,000 fold) *Giardia* removal depending on *Giardia* cyst density in the source water;
3. Require *Cryptosporidium* removal depending on *Cryptosporidium* oocyst density in the source water; or
4. Two and three above.

The Proposed Enhanced SWTR states that the Final Enhanced SWTR will not be promulgated until after water utilities provide information to EPA on the density of *Cryptosporidium* and *Giardia* in their source and finished waters pursuant to the Information Collection Rule. Data collection has been delayed and is currently scheduled to begin in mid-1997. The date of Final Enhanced SWTR promulgation is not known. The Proposed Enhanced SWTR does not include MCLs for *Cryptosporidium* or *Giardia*. The Proposed Enhanced SWTR applies to surface waters and groundwaters considered by the Department of Health Services to be under the influence of surface waters. The Proposed Enhanced SWTR (beginning of Section II) also states “the Groundwater Disinfection Rule, which is currently under development, will add further protection for systems using ground water.” EPA has not yet issued a Proposed Groundwater Disinfection Rule for public review or comment.

The Sonoma County Water Agency and Sweetwater Springs Water District are the only two drinking water suppliers within Department of Health Services jurisdiction that are potentially affected by the project discharge components. District wells are located away from the River and have an overall water quality that differs significantly from the River. Department of Health Services expects that the filtration characteristics of River sediments will not change in a manner that would affect the wells’ status under the SWTR (Bruce Burton, Department of Health Services, October 29, 1996, personal communication). The Water Agency’s Intake No. 5 is the only drinking water intake in the Russian River project area that is considered by the Department of Health Services to be under the direct influence of surface water and thus subject to SWTR and any Final Enhanced SWTR. The four other water agency intakes and District wells are considered by the Department to be not under the direct influence of surface water according to the SWTR. The Department of Health Services considers the “not under the direct influence” status of the four Water Agency intakes to be subject to periodic review because of the potential that the filtration characteristics of River sediments may change or the quality of the River would be degraded.

The Department of Health Services currently has the authority to require more than 1,000 fold *Giardia* removal for any intakes found to be under the direct influence of surface water. Current operating procedures used for the Sonoma County Water Agency's Intake No. 5 are considered to be an alternative to filtration technologies identified in Title 22 Section 64653(a), as defined in Section 64653(f). Pursuant to Section 64653(h), performance standards may be established for such alternative filtration technologies by the Department for individual systems, such as Intake No. 5. In addition, California Health and Safety Code Section 4014 states that the Department may impose additional treatment requirements that "it deems necessary to assure a reliable and adequate supply of water at all times which is pure wholesome, potable, and does not endanger the health of consumers." Thus, the Department can impose additional treatment requirements on any of the Water Agency intakes if it finds that the project would adversely affect the health of consumers. The treatment performance standard that the Department of Health Services would require is described in the Department's *Surface Water Treatment Staff Guidance Manual* (May 15, 1991) Appendix B: *Guidelines for Determining When Surface Waters Will Require More Than The Minimum Levels of Treatment Defined in the Surface Water Treatment Regulations*. If the Department were to determine that additional treatment is required for either of the reasons cited above (change in the filtration characteristics of River sediments or the degraded River water quality), the required *Giardia* cyst removal/inactivation is based on source (River) water cyst and coliform density as shown in Table 1:

Table 1

<u>Required <i>Giardia</i> Cyst Removal</u>			
	<u>If cyst or coliform density is:</u>		
<u>Allowable daily average cyst density /100L (geometric mean in source water)</u>	<u><1</u>	<u>>1 - 10</u>	<u>>10 - 100</u>
<u>Allowable Total Coliform Density /100 mL</u>	<u><1,000</u>	<u>>1,000 - 10,000</u>	<u>>10,000 - 100,000</u>
	<u>The Cyst Removal is:</u>		
<u>Required <i>Giardia</i> cyst removal</u>	<u>3-log (1,000 fold)</u>	<u>4-log (10,000 fold)</u>	<u>5-log (100,000 fold)</u>

This table means that if, for example, the measured daily average *Giardia* cyst density in the River is between 1 and 10 per 100 liters (L) or the measured median monthly total coliform density is between 1,000 and 10,000 MPN per 100 milliliters (mL), DOHS could require 4-log (10,000-fold reduction) *Giardia* cyst

removal instead of 3-log (1,000 fold) cyst removal. The River would be considered the source water if the intakes are found to be under the influence of surface water.

Existing regulations do not address *Cryptosporidium*, but the Proposed Enhanced SWTR includes options for performance standards which recognize that chlorine disinfection is not effective, and removal by filtration and inactivation by non-traditional methods (i.e., ozonation) is effective.

No information about the potential future regulation of groundwater under the Groundwater Disinfection Rule is available on which to base an evaluation of impacts.

Reclaimed Water Quality

Pathogens in reclaimed water are summarized below. A project to convert the disinfection system from chlorine disinfection to ultra-violet light is being implemented, and the impact on pathogens is addressed below.

Measurements of Pathogens in Reclaimed Water

Appendices H-2 and H-3 describe density of pathogens in reclaimed water that were available at the time that the Draft EIR/EIS was issued. The *Cryptosporidium* and *Giardia* density values collected through 14 May 1996 were reported in Appendix 4 of Appendix H-3, and are based on Standard Methods (18th ed.) method 9711B (FA), which reports presumptive values. The City of Santa Rosa has continued to collect protozoan data since 14 May 1996, but has used EPA's Information Collection Rule method exclusively since then. The change to the EPA method occurred for two reasons:

- Cyst counts are based on a more detailed analysis that confirms presumptive cyst counts. Thus, data from the EPA method are considered to be more accurate.
- The water and wastewater industry has switched to the EPA method to be consistent with the Information Collection Rule requirements.

Since then, additional *Cryptosporidium* and *Giardia* data have been collected. A total of 34 *Cryptosporidium* and *Giardia* measurements in plant effluent have been made after 14 May 1996 through 6 January 1997, and these are summarized in Table 2. The data are provided in Table 3. Of the 34 samples, four were confirmed positive for *Giardia* and one was confirmed positive for *Cryptosporidium*.

Table 2

Summary of *Cryptosporidium* and *Giardia* in Laguna Plant Effluent
(cysts/100 L)

<u><i>Cryptosporidium</i></u>		<u><i>Giardia</i></u>	
<u>Median</u>	<u>Range</u>	<u>Median</u>	<u>Range</u>
<6.6	<1.6 - 9.641	<8.534	<1.6 - 37106

Source: City of Santa Rosa, Initial Study and Negative Declaration for Conversion to Ultra-Violet Disinfection (February, 1997).

Table 3

Density of *Cryptosporidium* and *Giardia* in Laguna Plant Effluent
(cysts/100 L)

<u>Date</u>	<u><i>Crypto</i></u>	<u><i>Giardia</i></u>	<u>Date</u>	<u><i>Crypto</i></u>	<u><i>Giardia</i></u>
<u>23-May-96</u>	<u><3</u>	<u><3</u>	<u>16-Sep-96</u>	<u><27</u>	<u><27</u>
<u>28-May-96</u>	<u><5.3</u>	<u><5.3</u>	<u>23-Sep-96</u>	<u><12</u>	<u><12</u>
<u>4-Jun-96</u>	<u><2.5</u>	<u><2.5</u>	<u>30-Sep-96</u>	<u><22</u>	<u><22</u>
<u>13-Jun-96</u>	<u><1.6</u>	<u><1.6</u>	<u>7-Oct-96</u>	<u><4.3</u>	<u><4.3</u>
<u>19-Jun-96</u>	<u><13</u>	<u><13</u>	<u>15-Oct-96</u>	<u><7.4</u>	<u><7.4</u>
<u>26-Jun-96</u>	<u><6.6</u>	<u><6.6</u>	<u>21-Oct-96</u>	<u><12</u>	<u><12</u>
<u>2-Jul-96</u>	<u><2.6</u>	<u><2.6</u>	<u>28-Oct-96</u>	<u><6.6</u>	<u><6.6</u>
<u>11-Jul-96</u>	<u><6.6</u>	<u><6.6</u>	<u>4-Nov-96</u>	<u><6.5</u>	<u><6.5</u>
<u>18-Jul-96</u>	<u><51.4</u>	<u><51.4</u>	<u>12-Nov-96</u>	<u><19</u>	<u><19</u>
<u>24-Jul-96</u>	<u><43.5</u>	<u><43.5</u>	<u>18-Nov-96</u>	<u><16</u>	<u><16</u>
<u>31-Jul-96</u>	<u><6.6</u>	<u><6.6</u>	<u>25-Nov-96</u>	<u><37</u>	<u>37</u>
<u>8-Aug-96</u>	<u><3.3</u>	<u><3.3</u>	<u>2-Dec-96</u>	<u><5.4</u>	<u>16.4</u>
<u>15-Aug-96</u>	<u><5.4</u>	<u><5.4</u>	<u>9-Dec-96</u>	<u><9.5</u>	<u><9.5</u>
<u>22-Aug-96</u>	<u><3.3</u>	<u><3.3</u>	<u>16-Dec-96</u>	<u><2.7</u>	<u>2.7</u>
<u>27-Aug-96</u>	<u><60</u>	<u><60</u>	<u>23-Dec-96</u>	<u><13</u>	<u><13</u>
<u>3-Sep-96</u>	<u><3.2</u>	<u><3.2</u>	<u>30-Dec-97</u>	<u>9.6</u>	<u>4.8</u>
<u>9-Sep-96</u>	<u><14</u>	<u><14</u>	<u>6-Jan-97</u>	<u><2.8</u>	<u><2.8</u>

Source: Laguna Treatment Facility

The median of protozoan density values reported Appendix H-3 is higher and the range is broader. This is because Appendix H-3 values are presumptive (not confirmed) and because data include a period in which the filters were not functioning properly. _

Filter medium loss results from routine filter operation. Construction activities at the Laguna Plant necessitated unusual filter operations which greatly accelerated filter medium loss. The loss of filter medium that occurred in late 1995 was identified immediately by treatment plant staff, and staff took steps to obtain additional medium to replace that which was lost. Medium replacement was delayed by approximately three months due to the normal purchasing and delivery process, and then was delayed for another three months due to unusually high flows in the Laguna Plant. A filter must be taken off line to add the filter medium, and high flows during early 1996 necessitated keeping all filters that were present at that time on line at all times until early April 1996. Since that time the City has instituted a policy to store filter medium on site to avoid delays related to acquiring medium. The policy also requires evaluation and correction of filter medium depth prior to the rainy season when treatment plant flows would further delay problem correction. Based on the solution that has already been implemented, impacts are evaluated below using pathogen density data from the period of routine filter operation.

Effect of UV Disinfection on Pathogen Density

The City of Santa Rosa is currently implementing the Conversion to Ultra-Violet Disinfection Project, which replaces the existing chlorine disinfection process with one that uses ultra-violet light. The ultra-violet conversion project was not addressed in the Draft EIR/EIS because the City of Santa Rosa had not yet decided to implement the conversion prior to issuance of the Draft EIR/EIS. Since then, however, the City has committed to the ultra-violet conversion project and has described potential impacts in a separate CEQA document (*Initial Study and Negative Declaration for Conversion to Ultra-Violet Disinfection* (February, 1997)). The *Initial Study and Negative Declaration for Conversion to Ultra-Violet Disinfection* is based on confirmed values from 23 May 1996 through 6 January 1997, which are described in Tables 2 and 3.

The City of Santa Rosa's *Initial Study and Negative Declaration for Conversion to Ultra-Violet Disinfection* determined that ultra-violet disinfection is equally effective as chlorine for kill of bacteria and viruses in filtered reclaimed water. The ultra-violet Initial Study/Negative Declaration also found no change in kill of *Cryptosporidium*; neither disinfection method is believed to inactivate *Cryptosporidium* oocysts. Chlorine is capable of 0.5-log *Giardia* reduction, but ultra-violet light is not considered capable of inactivating *Giardia* cysts. The Initial Study/Negative Declaration concludes that changing to ultra-violet disinfection would not affect protozoan pathogen levels in the receiving water because:

- Filtration at the Laguna Plant and settling in storage provide 4- to 5-log (10,000 to 100,000-fold) removal of *Cryptosporidium* and *Giardia*; and
- The density of protozoan pathogens in reclaimed water is low relative to background levels in receiving waters.

The Initial Study/Negative Declaration concluded that ultra-violet disinfected reclaimed water will continue to meet the Title 22 standards for unrestricted reuse.

Effect of Storage on Pathogen Density

The Initial Study/Negative Declaration cited above estimated that natural die-off, settling, and predation of *Cryptosporidium* and *Giardia* in storage ponds to predominate over additions of *Cryptosporidium* and *Giardia* to storage ponds. Thus, the density of *Cryptosporidium* and *Giardia* is estimated to decrease as a result of storage from the values in Table 2 by 1 log (10-fold) to 2 log (100-fold).

Coliform levels in ponds routinely increase, but no reason exists to assume that the coliform level in Delta Pond reflects a problem with human fecal contamination. Low numbers of total coliform provide a good indication that bacteria have been removed by filtration and disinfection. The regulations that specify no more than 23 coliforms per 100 mL are for fresh effluent and the point of compliance is at the end of chlorine contact at the Laguna plant. Higher total coliform numbers in storage ponds are primarily a reflection of inputs from waterfowl and other wildlife and are not necessarily reflective of human pathogens.

Measurements of total coliform in storage facilities detect the presence of five genera of bacteria: *Escherichia* (the genus of *E. coli*), *Klebsiella*, *Citrobacter*, *Enterobacter*, and lactose positive species of *Aeromonas*. Many of these do not cause illness in humans. For example, *Aeromonas* is a naturally occurring freshwater organism that is only pathogenic to cold-blooded animals such as frogs. *Enterobacter* includes several strains of nitrogen fixing bacteria that are widely present in water and soil, and are not characteristic intestinal inhabitants. Thus, the fact that total coliform levels in ponds are higher than levels measured at the treatment plant is not an indicator of human health risk. Typical total coliform levels in surface water routinely measure 1,000 or more, but most of the organisms that are detected in a total coliform analysis are likely to be non-pathogenic organisms. In fact, because it detects so many non-pathogenic organisms, EPA no longer recommends use of total coliform as an indicator for surface water. Analysis of either *enterococci* or *E. coli* is recommended to determine safety of surface waters for water contact recreation. (Dufour, A.P., Health Effects Criteria for Fresh Recreational Water, U.S. Environmental Protection Agency, EPA 600/1-84-004, Cincinnati, Ohio, 1984.)

Pathogens in Receiving Water

Sonoma County Water Agency's Russian River Demonstration Study (July 1993) reports that 48 samples were collected in the Russian River near the Water Agency intakes from April 1992 through May 1993 and analyzed for *Cryptosporidium* and *Giardia*. Three samples were positive for *Giardia* and one sample was positive for *Cryptosporidium*. The data are summarized in Table 4.

Table 4

Density of *Cryptosporidium* and *Giardia* in Russian River
(cysts/100 L)

<u><i>Cryptosporidium</i></u>		<u><i>Giardia</i></u>	
<u>Median</u>	<u>Range</u>	<u>Median</u>	<u>Range</u>
<u><1</u>	<u><1 - 2.7</u>	<u><1</u>	<u><1 - 13.8</u>

Source: SCWA's Russian River Demonstration Study
(July 1993)

Project Impacts

Table 5 compares the density of *Cryptosporidium* and *Giardia* cysts in storage pond discharge to existing background conditions in the River. Table 5 shows that the median density in storage pond discharge and in the River are both less than the limit of detection. The range of *Giardia* cyst density in storage pond discharge overlaps, but is generally lower than that in the River. The range of *Cryptosporidium* oocyst density in storage pond discharge is less than to that of the River. The Table 5 data show that discharge at any rate would have no apparent effect on *Cryptosporidium* or *Giardia* cyst density in the Russian River. These data further indicate that discharge at any rate would not measurably increase risk of exposure to protozoan pathogens and that discharge at any rate would not measurably degrade water quality or lead to imposition of additional treatment requirements on the Sonoma County Water Agency by the Department of Health Services. Therefore, the impact of discharge alternatives using chlorine or ultra-violet disinfection is considered less-than-significant for exposure of humans to bacterial and protozoan pathogens. Because of the medium values less than detection limit, a more definitive analysis is not possible.

Table 5

Comparison of *Cryptosporidium* and *Giardia* in River and Reclaimed Water
(cysts/100 L)

	<i>Cryptosporidium</i>		<i>Giardia</i>	
	Median	Range	Median	Range
Discharge From Storage Pond ¹	<0.06 - <0.6 ³	<0.1 - <14.1 ⁴³	<0.08 - <0.8 ³	<0.401 - 41 ⁴³
Background in River ²	<1	<1 - 2.7	<1	<1 - 13.8

1. [Source: City of Santa Rosa, Initial Study and Negative Declaration for Conversion to Ultra-Violet Disinfection \(February, 1997\).](#)
2. [Source: Sonoma County Water Agency's Russian River Demonstration Study \(July 1993\), see Table 4](#)
3. [The range is based on the median value from Table 2 divided by 10 and 100, which is the estimated attenuation due to die-off, settling and predation in storage.](#)
4. [The maximum value is the maximum treatment plant effluent value \(Table 2\) divided by 10 and 100, which is the estimated multiplied by the density attenuation due to die-off, settling and predation in storage. Storage will also dampen the magnitude of cyst density variation, as described in Response to Comment 82-200. This effect is not reflected in the range given in Table 5. The range will therefore be less than that shown in Table 5.](#)

Page 42, Appendix K-3 of the Draft EIR/EIS. The following text change is added to the Plant Communities heading:

Vegetative ~~Plant~~ Communities

Page 42, Appendix K-3 of the Draft EIR/EIS. The following text change is added to the first sentence of the first paragraph under Vegetative Communities:

Acres of vegetative ~~plant~~ communities potentially affected by construction and maintenance of the proposed reservoir storage facilities are presented in Table 5-1.

Page 42, Table 5-1, Appendix K-3 of the Draft EIR/EIS. The following text change is added to the table heading:

Acreage of vegetative ~~plant~~ communities and mapped features potentially affected by the project components.

Page 38, Appendix L-1 of the Draft EIR/EIS. The following heading is added before the third complete paragraph:

Steelhead Smolts

CUMULATIVE ANALYSIS

The cumulative project list was updated in order to identify and recent projects that may have cumulative impact in concert with the Long-Term Project. Federal, state and local agencies provided lists of projects that had been filed between March of 1996, (date of the Draft EIR/EIS cumulative project list) and March of 1997. This appears in Chapter 6 of the Final EIR.

The EIR/EIS authors have reviewed the recent additions to the cumulative project list and found no new significant cumulative impacts, nor any substantial increase in the severity of cumulative impacts already identified in the Draft EIR/EIS.

[Click here to go to next section.](#)