

CHAPTER 4

Revisions to the Draft EIR

4.1 Revisions to the Draft EIR

The text changes presented in this chapter were initiated by Lead Agency staff or by comments on the Draft EIR. The changes are in the order they appear in the Draft EIR and include text corrections to the Draft EIR in cases where the error may cause misinterpretation of the information. Throughout this chapter, newly added text is shown in underline format, and deleted text is shown in strikeout format.

1. The text on page ES-23, Table ES-2, of the Executive Summary of the Draft EIR under Mitigation Measures 4.4.3 and 4.4.4 has been corrected as follows:

4.4.3. Short-term impacts to Waters and Wetlands. Creation and maintenance of the lagoon outlet channel could adversely affect federal and state jurisdictional waters.	Implement Mitigation Measure 4.4.1b.	LTS <u>LSM</u>
4.4.4. Short-term impacts to Wildlife Movement and Nursery Sites. Creation and maintenance of the lagoon outlet channel could interfere with wildlife movement or impede the use of nursery sites.	Implement Mitigation Measure 4.4.1b.	LTS <u>LSM</u>

2. The text on page ES-29, Table ES-2, of the Executive Summary of the Draft EIR under Mitigation Measure 5.1 has been revised as follows:

CUMULATIVE		
5.1: Short-term (Construction-related) Cumulative Impacts. Concurrent construction of the projects within the Russian River Watershed in northern Sonoma County could result in cumulative short-term impacts associated with construction activities.	None Required. Mitigation Measures in Chapter 4.0	LSM

3. The text on page ES-29, Table ES-2, of the Executive Summary of the Draft EIR under “Public Services and Utilities and Public Safety” heading has been revised as follows:

<p>4.13.3: Public Safety. The Estuary Management Project could substantially affect public safety at the outlet channel location during channel creation.</p>	<p>4.13.43: Following outlet channel creation or artificial breaching, the Water Agency will install semi-permanent signage notifying beach users of channel conditions, potential for safety hazards from beach erosion or hydrologic action, and emergency contact information. Signage should be posted and maintained at key locations, such as the parking lot at Goat Rock State Beach Parking lot, the unofficial beach access trail located on the north side of the beach off Highway 1, and 100 feet on either side of the outlet channel.</p>	<p>LTS</p>
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4. The text on page 2-29, Project Description of the Draft EIR has been revised to include a footnote clarifying the California State Lands Commission permit information:

“ 2.7.2 Existing Permits and Agreements

The Water Agency currently manages the artificial breaching of the barrier beach in compliance with a number of federal and State permits and agreements. These include authorizations from NMFS, USACE, State Parks, the California State Lands Commission, the California Coastal Commission, CDFG, and North Coast Regional Water Quality Control Board (NCRWQCB). Specifically, these permits and agreements include:

1. NMFS Marine Mammal Protection Act Incidental Harassment Authorization
2. USACE Clean Water Act Section 404 Permit (File No. 221211N)
3. California State Parks temporary use permit
4. State Lands Commission General Lease for Public Agencies (PRC 7918.9)¹

Since 1996, the Sonoma County Water Agency possesses operated artificial breaching under a general rent-free land use lease permit issued by the CSLC, in accordance with Article 2 of the Leasing and Permitting Regulations, to conduct artificial breaching within CSLC jurisdiction (CSLC, 2007). The Water Agency’s most recent lease expired as of December 31, 2010 and an application for renewal of this land use lease is pending review by CSLC. However, this lease has a hold-over clause that provides a month-to-month lease while a new lease is under review. The Water Agency submitted a lease application prior to the December 31, 2010 expiration of the existing lease.”

5. The text on page 3-8, Draft EIR Chapter 3.0 Project Background and Environmental Setting, under heading 3.5.1, “Monitoring Programs”, has been clarified as follows:

“The Russian River Biological Opinion requires the Water Agency continue fisheries and water quality monitoring in the Estuary and maximum backwater area, as well as requires invertebrate sampling to better understand juvenile steelhead prey resources in the Estuary and how these resources may be affected by summer lagoon management.”

6. The text beginning on page 3-18, Draft EIR Chapter 3.0 Project Background and Environmental Setting, under heading 3.6.2, “Current Estuary Management and Fish Habitat, Estuary Fish Habitat”, has been clarified as follows:

“Salinity

...Additionally, based on current breaching practices between May and October, these water quality characteristics can change rapidly within the project area. The following section summarizes the current trends for critical habitat water quality characteristics in the project area under the current artificial breaching regime based on monitoring data collected by the Water Agency (SCWA 2006, 2010, 2011a, 2011b).

Water quality is generally of higher habitat value (lower temperatures and higher DO)... the length of time the barrier beach remains open. This cycle was documented in the Estuary during ongoing monitoring studies conducted by the Water Agency (SCWA, 2006, 2010, 2011a, 2011b).

7. The text on page 3-20, Draft EIR Chapter 3.0 Project Background and Environmental Setting, under heading 3.6.2, “Current Estuary Management and Fish Habitat, Open Estuary Conditions”, has been clarified as follows:

“Open Estuary Conditions

...In the middle Estuary, salinities can range as high as 30 ppt in the saltwater layer, with brackish conditions prevailing at the upper end of the salt wedge, to less than 1 ppt in the freshwater layer on the surface (SCWA 2011a, 2011b). Salinities near the mouth are similar to ocean salinities (SCWA, 2006; SCWA, 2009).”

8. The text on page 3-20, Draft EIR Chapter 3.0 Project Background and Environmental Setting, under heading 3.6.2, “Current Estuary Management and Fish Habitat, Open Estuary Conditions”, has been clarified as follows:

“Dissolved Oxygen

The DO levels in the Estuary fluctuate significantly during the monitoring season, and fluctuations are not necessarily associated with tidal cycles or a diurnal cycle (SCWA, 2006). DO levels in the Estuary also depend upon factors such as the extent of diffusion from surrounding air and water movement, including freshwater inflow (SCWA 2011a, 2011b). DO levels are also a function of nutrients, which can accumulate in standing water during an extended period of time and promote excessive plant and algal growth that utilize the DO (SCWA 2011a, 2011b). This can reduce DO levels leading to eutrophication and affecting overall ecological health of the Estuary.”

9. The text on page 3-21, Draft EIR Chapter 3.0 Project Background and Environmental Setting, under heading 3.6.2, “Current Estuary Management and Fish Habitat, Closed Estuary Conditions”, has been clarified as follows:

“Salinity

Typically salinity steadily increases from the freshwater/estuary interface in the upper reach with low salinity (0-5 ppt), to a predominantly saline environment with a thin freshwater layer that flows over the denser saltwater in the lower and middle reaches of the Estuary. When the barrier beach is formed at the mouth of the Estuary, saltwater is trapped in the lagoon and water quality conditions can undergo abrupt alteration (SCWA 2011a, 2011b). Salinity, DO and temperature changes can begin within 24 hours (SCWA 2006, 2010, 2011a, 2011b). The freshwater layer begins to thicken at the surface, starting at the mouth and extending upstream. Highly saline conditions are present in the mid and bottom depths of the lower and middle reaches of the Estuary within a few days of barrier beach closure (SCWA 2011a, 2011b).”

10. The text beginning on page 3-21, Draft EIR Chapter 3.0 Project Background and Environmental Setting, under heading 3.6.2, “Current Estuary Management and Fish Habitat, Closed Estuary Conditions, Dissolved Oxygen”, has been clarified as follows:

“Dissolved Oxygen

...When the mouth closes, salinity stratification results in pronounced DO stratification in the closed lagoon (SCWA 2011a, 2011b). DO fluctuations increase in the mid and upper depths and the bottom depths experience sharp drops in DO concentrations. Data from 1996 to 2000 monitoring indicates stratification, with hypoxic to anoxic conditions in the near-bottom layers of the Estuary within a few days of closure. Supersaturation, hypoxic, and anoxic events were observed, with prolonged hypoxic and anoxic events occurring at the bottom in the deeper portions of the Estuary through the duration of Estuary closure (SCWA 2011a, 2011b).

Decreasing DO concentrations were also observed in the middle layers of the water column during barrier beach closures. In deeper pools, DO typically drops to less than 5 mg/l (SCWA 2006; NMFS, 2008). However, DO levels in the freshwater layer at the surface in the Estuary did not appear to be negatively impacted by Estuary closure and remained similar to pre-closure conditions, or increased in some instances (SCWA, 2006; SCWA, 2011a, 2011b.)”

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11. The text on page 3-22, Draft EIR Chapter 3.0 Project Background and Environmental Setting, under heading 3.6.2, “Current Estuary Management and Fish Habitat, Closed Estuary Conditions”, has been clarified as follows:

“Temperature

Because saltwater trapped in the lagoon is denser than freshwater it forms a layer under the fresh water ... the effects of solar heating, a hot mid-depth layer of saline to brackish water subject to the effects of solar heating, and a relatively warm freshwater layer on the surface (SCWA 2011a, 2011b)... Because the barrier beach is breached soon after closure under current practices, the duration of low DO and high temperature conditions within the lower water column are generally limited to approximately two weeks or less, however a 29-day closure did occur in 2009. Data from the monitoring surveys conducted by the Water Agency (2006, 2011a, 2011b) show that water quality in near-bottom layers and in deep pools is typically better when the barrier beach is open than when it has been closed for a short period of time (two weeks; Entrix, 2004)... The water quality monitoring studies described here have, to date, only monitored water quality during short periods of barrier beach closure (typically two weeks up to 29 days). The Estuary has not been closed for longer time periods after mouth closure and creation of a freshwater lagoon has not been observed. Additionally, the monitoring conducted by the Water Agency (SCWA, 2005, 2006, ~~and~~ 2010, 2011a, 2011b) provides a general assessment of water quality changes in the Estuary, but does not assess the extent of microhabitat within the Estuary that may provide refugia for salmonids and other aquatic species (Entrix, 2004).”

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12. The following references on page 3-31, Draft EIR Chapter 3.0 Project Background and Environmental Setting, have been added as follows:

Sonoma County Water Agency (SCWA). 2011a. Russian River Biological Opinion Status and Data Report Year 2009-10. Manning, D.J., and J. Martini-Lamb, editors. February 28, 2011.

Sonoma County Water Agency (SCWA). 2011b. Russian River Biological Opinion Status and Data Report Year 2010-11. J. Martini-Lamb and D.J Manning, editors. June 2011.

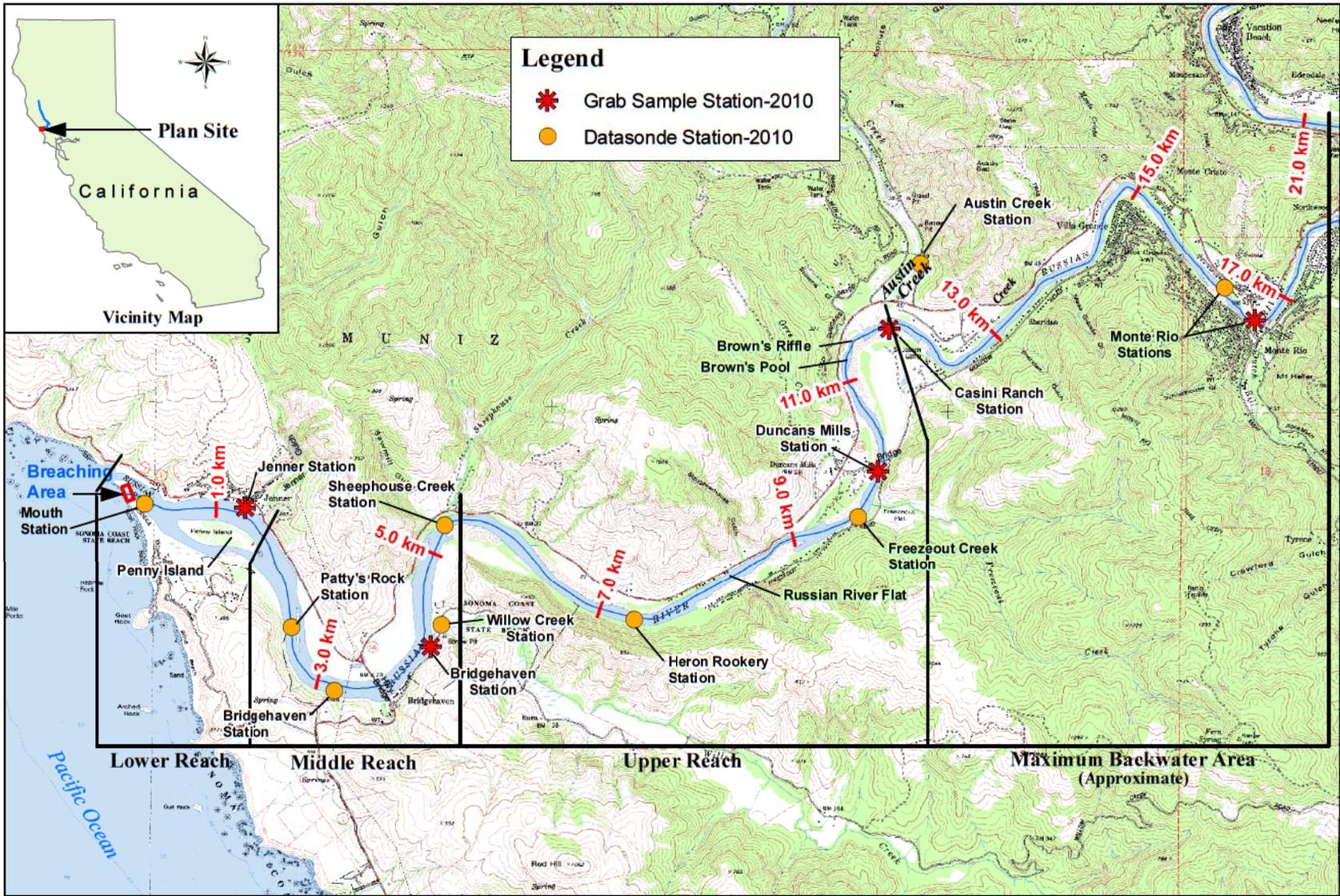
13. The text on page 4.3-3 of Draft EIR Section 4.3, Water Quality, has been clarified as follows:

“Sampling Program Summary

The Water Agency conducted water quality monitoring from April or May of each year through the spring, summer, and fall (SCWA, 1996; 1997; 1998; 1999; 2005; 2011). Current water quality monitoring efforts include data collection at ~~six-nine~~ stations in the Estuary including seven stations in the mainstem and two stations in tributaries (refer to **Figure 4.3-1**): the Mouth of the Russian River at Goat Rock State Beach (Mouth Station); Patty’s Rock upstream from Penny Island (Patty’s Rock Station); Bridgehaven just downstream from the Highway 1 bridge (Bridgehaven Station); the mouth of Willow Creek, which flows into the mainstem just upstream of Bridgehaven (Willow Creek Station); in the pool downstream of Sheephouse Creek (Sheephouse Creek Station); a pool next to an area known as Heron Rookery approximately halfway between Sheephouse and Freezeout creeks (Heron Rookery Station); ~~and~~ downstream of Freezeout Creek (Freezeout Creek Station); downstream of the first steel bridge in lower Austin Creek, which flows into the mainstem above Duncans Mills (Austin Creek Station); and in Monte Rio downstream of Dutch Bill Creek.

Multi-parameter, continuously-recording water quality meters (sondes) were typically deployed during mid-April to mid-May and were retrieved prior to the onset of winter rains. Hourly data was collected on water temperature, dissolved oxygen (DO), salinity, pH, and specific conductance in 2005, 2006, 2007, 2008, 2009, ~~and~~ 2010, and 2011 (SCWA, 2009; 2011)”

14. Figure 4.3-1a, Estuary Study Area and Maximum Backwater Area: Biological and Water Quality Sampling Locations, has been added to include an additional 2010 monitoring location and grab sample nutrient/bacteria/algae location in the maximums backwater area in Monte Rio. The revised figure is included below.



4-7

SOURCE: Sonoma County Water Agency, 2011

Russian River Estuary Management Project . 207734.01

Figure 4.3-1a
 Estuary Study Area and Maximum Backwater Area:
 Water Quality Monitoring Stations - 2010

15. The text on page 4.3-7 of Draft EIR Section 4.3, Water Quality, "Indicator Bacteria" heading has been revised as follows:

"In 2006, the California Department of Public Health (CDPH) developed the "Draft Guidance for Fresh Water Beaches", which describes bacteria levels that, if exceeded, may require posted warning signs in order to protect public health. The draft guidance was most recently updated in January 2011. The CDPH 2011 draft guideline for single sample values of total coliforms is 10,000 most probable number (MPN) per 100 milliliters (ml), and 400 MPN per 100 ml for fecal coliforms. The MPN for *Enterococcus* is 61 per 100 ml, and the MPN for *Escherichia coli* (*E. coli*) is 235 per 100 ml. However, it must be emphasized that these are draft guidelines, not adopted standards, and are therefore both subject to change (if it is determined that the guidelines are not accurate indicators) and are not currently enforceable. In addition, these draft guidelines were established for and are only applicable to fresh water beaches. Currently, there are no numeric guidelines that have been developed for estuarine areas.

Sources of these bacteria include the natural environment (soils and decaying vegetation), stormwater, urban runoff, animal wastes (both wildlife and domestic animals), and human sewage. Analysis for total and fecal coliforms, *Enterococcus*, and *E. coli* bacteria are widely used as an indicator test. Coliform is a heading that describes a type of bacteria, which includes *E. coli*. ~~†Fecal coliform, including~~ *E. coli*, is found within the intestines of warm-blooded animals, though most water contamination comes from cattle and people. *Enterococcus* is much like coliform bacteria, but is known to have a greater correlation with swimming-associated illnesses and is less likely to die-off in highly saline water. While these bacteria normally occur at low levels in the environment, high levels can indicate contamination (but do not cause illness) and the presence of other harmful pathogens. The 2009 sampling effort included analysis for Total Coliforms, *Enterococcus*, and *E. coli* and the 2010 effort included analysis for Total Coliforms, Fecal Coliforms, and *Enterococcus*. Sampling for *E. coli*, as was done in 2009, is often conducted as a surrogate for fecal coliforms.

Analysis for levels of Total Coliforms, Fecal Coliforms, *Enterococcus*, and *Escherichia coli* are of primary concern. However, other measurements are taken in the field that can provide an indication of whether conditions of concern exist at the time of sampling including dissolved oxygen content, pH (hydrogen ion activity), conductivity (ionized or dissolved minerals in the water), water temperature, and turbidity (clarity)."

16. The text on page 4.3-8 of Section 4.3, Water Quality, has been clarified as follows:

“Analysis for levels of Total Coliform, *Enterococcus*, and *Escherichia coli* are of primary concern. However, other measurements are taken in the field that can provide an indication of whether conditions of concern exist at the time of sampling including dissolved oxygen content, pH (hydrogen ion activity), conductivity (ionized or dissolved minerals in the water), water temperature, and turbidity (clarity). For example, a lower than normal dissolved oxygen reading can indicate the presence of decaying matter; a higher than normal turbidity could indicate a recent discharge of sediment; or a higher than normal conductivity reading could indicate the presence of a nonpoint source runoff of animal wastes (which are high in ionized salts).

Sampling events in 2009 and 2010 indicate there is a large variation in indicator bacteria levels observed through the different sections of the Estuary. *Enterococcus* and *E. coli* counts were generally low, but were observed to occasionally exceed recommended values in ~~both open and~~ closed conditions. It is important to note that the draft guidance for beach postings applies only to freshwater beaches.

However, in 2010, total coliform counts were not significantly elevated during mid-summer open conditions (except at the Bridgehaven Station) and instead were observed to be significantly elevated during closed conditions at the end of the management season and were accompanied by high counts of *Enterococci* and ~~E. coli~~ fecal coliforms, as well.”

17. The text on page 4.3-11 of Section 4.3, Water Quality, under “North Coast Basin Plan” has been clarified as follows:

“As previously noted with respect to indicator bacteria, the CDPH’s “Draft Guidance for Fresh Water Beaches” describes bacteria levels that, if exceeded, may require posted warning signs in order to protect public health. The CDPH draft guideline for total coliforms is 10,000 ~~most probable number (MPN)~~ MPN per 100 ~~milliliters (ml)~~, and 400 MPN per 100 ml for fecal coliforms. The MPN for *Enterococcus* is 61 per 100ml, and the MPN for *E. coli* is 235 per 100ml. However, it must be emphasized that these draft guidelines were established for and are only applicable to fresh water beaches. Currently, there are no numeric guidelines that have been developed for estuarine areas. In addition, these are draft guidelines, not adopted standards, and are therefore both subject to change (if it is determined that the guidelines are not accurate indicators) and are not currently enforceable.”

18. Table 4.3-3, Basin Plan Water Quality Objectives for Applicable Beneficial Use, on page 4.3-13 of Section 4.3, Water Quality, has been revised as follows:

**TABLE 4.3-3
BASIN PLAN WATER QUALITY OBJECTIVES FOR APPLICABLE BENEFICIAL USES**

Parameter/ Constituent	Water Quality Objectives	Applicable Beneficial Use or Designation⁵
Temperature	Not to exceed 5°F () above naturally receiving water temperature	Cold and warm freshwater habitat
Bacteria (shall not degrade beyond the natural background levels) Fecal Coliform	Median fecal coliform concentrations based on a minimum of not less than 5 samples for any 30-day period shall not exceed 50/100 milliliter (ml) of sample Nor shall more than 10% of total samples during any 30-day period exceed 400/100 ml	Water contact recreation
Dissolved Oxygen (Russian River Hydrologic Unit)	Minimum – 7 mg/L 90% Lower Limit (1) – 7.5 mg/L 50% Lower Limit (2) – 10 mg/L	Cold and Warm freshwater habitat
Biostimulatory substances (nitrogen, phosphorus) Algal productivity (see below)	Waters shall not contain in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.	Water contact recreation
Additional Non-Basin Plan Criteria		
USEPA – Total Nitrogen (3)	0.38 mg/L	Recommended Criteria for aquatic life and recreation
USEPA – Total Phosphates (3)	0.022 mg/L	Recommended Criteria for aquatic life and recreation
USEPA – Chlorophyll a (3)	0.0018 mg/L	Recommended Criteria for aquatic life and recreation
CDPH – Total Coliform (4)	10,000 MPN/100 milliliters	Draft Guidance for Freshwater Beaches
<u>CDPH – Fecal Coliform (4)</u>	<u>400 MPN/100 milliliters</u>	<u>Draft Guidance for Freshwater Beaches</u>
CDPH – Fecal Coliform (4)	400 MPN/100 milliliters	Draft Guidance for Freshwater Beaches
CDPH – Enterococcus (4)	61 MPN/100 milliliters	Draft Guidance for Freshwater Beaches
CDPH – E. Coli (4)	235 MPN/100 milliliters	Draft Guidance for Freshwater Beaches

19. The text beginning on page 4.3-20 of Section 4.3, Water Quality, has been revised as follows:

“Nutrients and Indicator Bacteria

In 2010, the Water Agency collected water quality samples as part of the Temporary Urgency Change Petition Water Quality Plan for 2010 to review whether summer

time water quality exhibited high nutrient loads. Although the USEPA section 304(a) nutrient criteria were established for freshwater systems, and as such, are only applicable to the freshwater portions of the Estuary, they are being used in the absence of estuarine criteria. Total nitrogen concentrations in the upper estuary, including monitoring at Monte Rio, were predominantly below the USEPA criteria of 0.38 mg/L, with a few exceptions. Concentrations of approximately 0.4 mg/L were recorded at Monte Rio, Casini Ranch, and Duncans Mills~~Austin Creek, and Freezeout Creek~~ in June, when spring flows were still high from an above average rainfall season.”

20. The text on page 4.3-22 of Section 4.3, Water Quality, has been revised as follows

“Sampling events in 2009 and 2010 indicate there is a large variation in indicator bacteria levels observed through the different sections of the Estuary. These variations were observed to occur under both open and closed mouth conditions and may be seasonal as well. In 2009, total coliform counts were observed to be higher during open conditions in mid-summer than during closed conditions, including the 29-day extended closure at the end of the management season. All three stations sampled in 2009 had at least one total coliform value above the draft guidance for freshwater beach posting of 10,000 MPN/100ml during open conditions, with the highest value of 24,196 MPN/100 ml occurring at the Jenner station. Total coliform values in 2009 were relatively elevated during closed conditions, but not as high as during open mid-summer conditions, and the draft guidance was not exceeded at any station. Enterococcus and E. coli counts were generally low, but were observed to occasionally exceed recommended values in ~~both open and~~ closed conditions.

However, in 2010, total coliform counts were not significantly elevated during mid-summer open conditions (except at the Bridgehaven Station) and instead were observed to be significantly elevated during closed conditions at the end of the management season and were accompanied by high counts of Enterococci and ~~E. coli~~ fecal coliforms. During preliminary sampling events in June and July 2010, the total coliform counts in the Estuary ranged from a low of 30 MPN/100ml at the Monte Rio station to an estimated value of greater than 1600 MPN/100 ml at the Bridgehaven station. However, variability in total coliform counts were observed at all stations including Monte Rio, which had a high count of 900 MPN/100ml, and Jenner, which had a low count of 110 MPN/100ml during this same time period. As such, variability was also observed with Enterococcus and ~~E. coli~~ fecal coliforms counts (SCWA, 2010).”

21. The following reference has been added to Draft EIR Section 4.3, Water Quality, page 4.3-28, have been added as follows:

Sonoma County Water Agency (SCWA), 2011. Russian River Biological Opinion Status and Data Report Year 2009-10, February 28, 2011.

22. The text on page 4.4-64, Draft EIR Section 4.4, Biological Resources, has been revised as follows:

“Since 1996, the Sonoma County Water Agency ~~possesses~~ operated under a general rent-free land use lease permit issued by the CSLC, in accordance with Article 2 of the Leasing and Permitting Regulations, to conduct artificial breaching within CSLC jurisdiction (CSLC, 2007). The Water Agency’s most recent lease expired as of December 31, 2010, and an application for renewal of this land use lease is pending review by CSLC. However, this lease has a hold-over clause that provides a month-to-month lease while a new lease is under review. The Water Agency submitted a lease application prior to the December 31, 2010 expiration of the existing lease.

23. Text on page 4.4-73, Draft EIR Section 4.4, Biological Resources, under the Impact 4.4.2 and Impact 4.4.3 headings has been revised as follows:

“Impact 4.4.2: Sensitive Natural Communities. The creation and maintenance of the lagoon outlet channel could adversely affect sensitive natural communities. (Less than Significant with Mitigation).”

“Impact 4.4.3: Waters and Wetlands. Creation and maintenance of the lagoon outlet channel could adversely affect federal and state jurisdictional waters. (Less than Significant with Mitigation).”

24. The text reference to Table 4.4-2 on page 4.4-79, under Impact 4.4.8 in Draft EIR Section 4.4, Biological Resources, has been revised as follows:

“Although a number of special-status plant and animal species are known or have the potential to occur within the Estuary Study Area (see **Tables 4.4-2 and 4.4-3**), few could be adversely affected by lagoon adaptive management. This discussion focuses on the plant and animal species considered and summarized in **Tables 4.4-2 and 4.4-3** with a moderate to high potential to occur in the Estuary Study Area and those species that are primarily associated with freshwater marsh and riparian habitats, and open water habitat and beaches, gravel bars, and mudflats.”

25. Caption for Figure 4.4-13 on page 4.4-80, Draft EIR Section 4.4, Biological Resources, has been revised as follows:

Photo 1: Pinniped (Harbor seal) access to Estuary during ~~created outlet channel, July 1, 2010~~ perched channel conditions. Water surface elevations had been elevated a week prior to the subsequent closure event.

26. The text references in Impact 4.4.8, Draft EIR Section 4.4, Biological Resources, page 4.4-81 have been revised as follows:

“Impact 4.4.8: Protected Marine Mammals. Long-term adaptive management of the Estuary as a lagoon could adversely affect protected marine mammal species. (Significant and Unavoidable)

Lagoon adaptive management could adversely affect harbor seals... The Incidental Harassment Authorization (IHA) issued by NMFS under the Marine Mammal Protection Act (NMFS, 2010c) does not provide for long-term harassment or alteration of habitat conditions that would contribute to abandonment of the Jenner haulout, nor could such an authorization be expected in the future. Therefore, the potential impact for restricted access for a longer duration during the lagoon management period is considered less than significant with implementation of **Mitigation Measure 4.4-68.**

Harbor seals use regular haulouts located within the mainstem Estuary, including the Jenner (Penny) logs, Paddy’s Rock, and Chalanchawi... Therefore, the potential inundation impact on interior river haulouts for a longer duration during the lagoon management period is considered to remain significant with implementation of **Mitigation Measure 4.4-68.**

As discussed previously in **Section 4.4.2, Setting**, Pinniped Haulouts, pinniped distribution and use of haulout locations is difficult to predict, as it is subject to several factors... It is anticipated that conditions resulting from the Estuary Management Plan would be consistent with the range of conditions currently experienced in the Estuary, and that its implementation would result in conditions that are more natural relative to observed conditions in other estuary systems on the West Coast. Implementation of Mitigation Measure 4.4-68 below would reduce this impact to the degree feasible.”

27. The text reference in the first paragraph of Impact 4.4.9, Draft EIR Section 4.4, Biological Resources, page 4.4-82 has been revised as follows:

“This could change the jurisdictional limits of federal and state waters, including wetlands, in the Estuary. Because potential effects of the lagoon adaptive management on natural communities addressed freshwater marsh, which would be considered wetlands (see Impact 4.4.67, Natural Communities), this discussion focuses on waters (i.e., open waters of the Russian River).”

28. The text reference under Impact 4.4.10, Draft EIR Section 4.4, Biological Resources, page 4.4-83 has been revised as follows:

“Impact 4.4.10: Wildlife Movement and Nursery Sites. Long-term adaptive management of the Estuary as a lagoon could interfere with wildlife movement or impede the use of nursery sites. (Less than Significant with Mitigation)”

The increased duration of inundation and potentially induced changes in vegetation community composition would not alter the ability of animals to move along the river edge. There would be no significant impact on the movement of wildlife along the Russian River corridor. There could be some adverse change in the availability of riverine marsh, tributary streams, or back-channel ponding for amphibian breeding (nursery) sites. In the wetland communities where these sites occur, the discussion in Impact 4.4.6 (Natural Communities) predicts a combination of offsetting increases or losses as the water is retained for longer periods and a potential increase in wetland communities (Coastal and Valley Freshwater Marsh), and hence no net loss of amphibian nursery sites. Impacts, and mitigation, associated with effects to pinniped movement and nursery sites, are discussed in Impacts 4.4.1 and 4.4.7, and 4.4.78 above. The impact would be less than significant with implementation of **Mitigation Measures 4.4.1a, 4.4.1b, and 4.4.68.**

Mitigation Measures

See **Mitigation Measure 4.4.8.**

Level of Significance after Mitigation. Less than Significant.

29. The text on page 4.5-23 of Section 4.5 Fisheries, has been revised as follows:

“Chinook salmon can begin immigrating as early as August (a few individuals), but peak migration into the Estuary is typically in November and December (Chase et al. 2005; Chase et al. 2007), after the proposed management period.”

30. The following references on page 4.5-27 of Section 4.5, Fisheries, have been added as follows:

“Chase, S., R. Benkert, D. Manning, and S. White. 2005. Sonoma County Water Agency’s Mirable Rubber Dam/Wohler Pool Fish Sampling Program: Year 5 results 2004. December 31, 2005.

Chase, S.D., D.J. Manning, D.G. Cook, and S.K. White. 2007. Historic accounts, recent abundance, and current distribution of threatened Chinook salmon in the Russian River, California. California Fish and Game 93(3): 130-148.”

31. The text on page 4.6-6 of Section 4.6, Land Use and Agriculture, has been revised as follows:

“Since 1996, the Sonoma County Water Agency possesses operated artificial breaching under a general rent-free land use lease permit issued by the CSLC, in accordance with Article 2 of the Leasing and Permitting Regulations, to conduct artificial breaching within CSLC jurisdiction (CSLC, 2007). The Water Agency’s most recent lease expired as of December 31, 2010, and an application for renewal of this land use lease is pending review by CSLC. However, this lease has a hold-over clause that provides a month-to-month lease while a new lease is under review. The Water Agency submitted a lease application prior to the December 31, 2010 expiration of the existing lease.

32. The text on pages 4.7-3 and 4.7-9, of Section 4.7, Recreation, has been revised as follows:

“In the maximum backwater area, there is formal public access at Monte Rio Community Beach, Patterson Point Preserve, and Vacation Beach. Monte Rio Community Beach is located on a large bend in the river and offers picnic amenities and boat rental facilities. This location is frequently used for community gatherings. Patterson Point Preserve is located in Villa Grande and maintained by Friends of Villa Grande for public river recreation and restoration as a redwood and riparian area. Vacation Beach is located at Vacation Beach Road in Guerneville and has a seasonal dam during the summer recreation season that is removed over four days in late September” (page 4.73).

“Public beach access within the maximum backwater area is limited to Monte Rio Community Beach, Patterson Point Preserve, and Vacation Beach. Many of the beach areas occurring within the Estuary Study Area and maximum backwater area do not have formal public access. Inundation associated with higher water levels would reduce the amount of beach acreage available within the Estuary, and these conditions would

occur for a longer duration, depending upon performance of the outlet channel”
(page 4.7-9).

33. The text on page 4.8-4, of Section 4.8, Cultural Resources, has been revised as follows:

“In 1867 John Rule purchased 4,000 acres of Rancho Muniz at the mouth of the Russian River. The following year, Charles Jenner reportedly received permission from Rule to erect a small house on the north side of the Russian River and named the spot Jenner Gulch. In 1905 the Redwood Lumber Company mill was erected on the south side of the river. It was later rebuilt upriver at Duncans Mills. Jenner School opened in 1905 for children of the mill workers. In the 1920s the Penny brothers owned and lived on the 29-acre island in the Russian River (now called Penny Island; Twohy, n.d.). Following the death of one brother, the surviving Penny asked longtime friend Joe Santos to take care of him until his death and bury him on the island. In return the island was deeded to him. The Santos family built a house and lived on the island until 1948 (Schwaderer and Stardford, 1982; Twohy, n.d.). One coffin has been found on the island that may be associated with the Penny brother however this has not been substantiated (Schwaderer and Stardford, 1982:7).”

34. The text on page 4.8-5, of Section 4.8, Cultural Resources, under the heading “Background Research and Records Search Results”, has been modified to include the following:

“California State Land’s Commission (CSLC) staff search the CSLC Shipwreck Database (Database) for possible shipwrecks in the Estuary Study Area. The Database lists that the schooner *Sovereign* was grounded at the Russian River in 1873. This information may have been taken from Marshall (1978), which states that the *Sovereign* was a “total loss at Russian River” on “1/1873” (Marshall, 1978:122). The CSLC Database lists the incident as 7/21/1873 with no additional information. It should be noted however that not all shipwrecks are listed in the CSLC Database and that shipwreck locations may be inaccurate.”

Reference: Marshall, Don B., *California Shipwrecks: Footsteps in the Sea*. Superior Publishing Company, Seattle, 1978.

35. The text on page 4.8-13, of Section 4.8, Cultural Resources, has been revised as follows:

“Impacts associated with ~~traffic and transportation~~ cultural resources are summarized and categorized as either “less than significant,” “less than significant with mitigation,” or “significant and unavoidable.”

36. The text on page 4.8-13, of Section 4.8, Cultural Resources, has been revised as follows:

“Mitigation Measure 4.8.1: The Water Agency will implement the following measure:

Inadvertent Discovery of Historical and Unique Archaeological Resources. If discovery is made of items of historical or archaeological interest, the contractor or Water Agency staff shall immediately cease all work activities in the area (within approximately 100 feet) of discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; ~~and~~ deposits of metal, glass, and/or ceramic refuse, and shipwreck remains. After cessation of excavation the contractor shall immediately contact the Water Agency, State Parks, ~~and~~ the U.S. Army Corps of Engineers, and the California State Lands Commission. The contractor shall not resume work until authorization is received from ~~both~~ all agencies.

1. In the event of unanticipated discovery of archaeological materials occurs during construction, the Water Agency shall retain the services of a qualified professional archaeologist to evaluate the significance of the items prior to resuming any activities that could impact the site. A qualified maritime archaeologist shall be retained to examine shipwreck remains or related submerged artifacts if discovered near the river mouth during outlet channel creation or maintenance.
2. In the case of an unanticipated archaeological discovery, if it is determined that the find is potentially eligible for listing in the California and/or National Registers, and the site cannot be avoided, the Water Agency shall provide a research design and excavation plan, prepared by a qualified archaeologist, outlining recovery of the resource, analysis, and reporting of the find. The research design and excavation plan shall be approved by the Water Agency, State Parks, and U.S. Army Corps of Engineers. The California State Lands Commission shall provide approval of a research design for shipwreck remains or related submerged artifacts. Implementation of the research design and excavation plan shall be conducted prior to work being resumed. Upon project approval, the Water Agency will coordinate with State Parks and U.S. Army Corps of Engineers to develop an action plan that can be implemented in the event that flooding is imminent and breaching must occur immediately.

Impact Significance after Mitigation: Less than Significant.”

37. The text on page 4.8-14, of Section 4.8, Cultural Resources, has been revised as follows:

“Mitigation Measure 4.8.2: The Water Agency will implement the following measures:

Discovery of Human Remains. If potential human remains are encountered, the contractor or Water Agency staff shall halt work in the vicinity of the find and contact the Sonoma County coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5...”

38. The text on page 4.13-9, of Section 4.13, Public Services and Utilities and Public Safety, has been revised as follows:

“Impact 4.13.3: Public Safety. The Estuary Management Project could substantially affect public safety at the outlet channel location during channel creation. (Less than Significant with Mitigation)

During continued artificial breaching and outlet channel creation, the Water Agency will deploy and operate heavy machinery on the beach... After outlet channel establishment, construction vehicles will be removed and beach access will be restored. While public citizens are responsible for safe enjoyment of the beach, the Water Agency will implement **Mitigation Measure 4.13.13**, which requires installation of signage at key locations to notify the public of potential safety hazards associated with beach erosion and hydrologic action at the outlet channel or artificial breaching location.

Mitigation Measures

Mitigation Measure 4.13.13: Following outlet channel creation or artificial breaching, the Water Agency will install semi-permanent signage notifying beach users of channel conditions...”

39. The text on page 5-19, of Chapter 5.0, Cumulative Analysis, has been revised as follows:

“The Russian River Biological Opinion addresses this problem by mandating the creation of pools, backwaters and side channels on six miles of the ~~15~~14-mile creek over a 12-year period.”

40. The text on page 5-32, of Chapter 5.0, Cumulative Analysis, has been revised as follows:

“Mitigation Measures

Mitigation Measures in **Chapter 4.0, Environmental Setting, Impacts, and Mitigation Measures.**

Impact Significance: Less than Significant with Mitigation.”