

# **Appendix C**

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## **Response to Comments**

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# **Proposed Amendment to the Water Quality Control Plan (Basin Plan)**

to Refine the Beneficial Uses of Hayward Marsh

RESPONSES TO COMMENTS



**Sept. 14, 2011**

San Francisco Bay  
Regional Water Quality  
Control Board

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## 1. INTRODUCTION

This document provides Water Board staff's responses to written comments on the proposed Basin Plan amendment and supporting Staff Report to refine the beneficial uses of Hayward Marsh, circulated for public review and comment on June 20, 2011. We received two comment letters during the public comment period that closed on August 4, 2011. The following entities submitted written comments:

1. U.S. Environmental Protection Agency
2. Union Sanitary District

In Section 2, each entity's comments are listed, followed by staff's responses.

## 2. RESPONSES TO WRITTEN COMMENTS

### 2.1 *Comment Letter 1: U.S. Environmental Protection Agency (U.S. EPA)*

#### **Comment 1.1.** Support for the proposed amendment

"We are pleased to express our support for the proposed amendment. The changes include amending Table 2-4, *Beneficial Uses of Wetland Areas*, to identify Hayward Marsh as a distinct water body with specific beneficial uses, to identify other Hayward marshlands and their uses, and to move the column entitled "Salt" to its correct place as a wetland type. These and the other changes help clarify the Basin Plan and assist in the protection of water quality within the San Francisco Bay Regional Water Quality Control Board."

**Response:** Comment noted. We appreciate U.S. EPA's support.

#### **Comment 1.2.** We expect the wastewater treatment system to continue to meet its current bacteriological limits at the point of entry to the marsh system

"The [Alvarado] wastewater treatment system is currently permitted and is achieving specific bacteriological limits at the point where treated effluent enters the marsh system (Basin 1), which is considered part of the treatment system. Since the wastewater discharge is meeting bacteriological limits at the point of entry into the marsh system, we expect the facility to continue to meet these current bacteriological limits to assure that water quality standards, including antidegradation requirements, are met."

**Response:** We agree that the facility should be expected to maintain its current performance for fecal coliforms. The tentative order for reissuance of the NPDES permit for discharge of treated wastewater to Hayward Marsh that will be considered by the Water Board at its September 14, 2011, hearing retains the status quo with respect to bacteriological limits. Also in response to this comment, we added a discussion to the Staff Report on the consistency of the proposed amendment with federal and State antidegradation guidance, as follows:

### **8.0 ANTIDEGRADATION**

Before a beneficial use can be removed, careful consideration must be given to federal and State antidegradation policies under 40 CFR 131.12 and State Water Board Resolution No.

68-16, respectively. The federal antidegradation policy requires, among others, that existing water uses and the level of water quality necessary to protect the existing use be maintained and protected and for high quality waters to be maintained and protected unless a lowering of water quality is necessary to accommodate important economic or social development in the area in which the waters are located. Similarly, the State antidegradation policy requires high quality waters to be maintained until it has been demonstrated that any change will be consistent with the maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in policies.

There is no evidence that the proposed action would lower existing water quality, because this action will not change how Hayward Marsh is operated. As described in Section 4.4, the NPDES permit for Hayward Marsh contains effluent limitations protective of REC-2 beneficial uses. Removal of REC-1 from Hayward Marsh would not, by itself, allow any new or increased volume or concentration of waste to be discharged to surface waters. Furthermore, any new or increased discharge would have to undergo a permit-specific antidegradation analysis in order to be authorized, if at all.

Finally, although REC-1 is a Clean Water Act § 101(a)(2) presumptive use, there is no evidence water contact recreation has ever occurred in Hayward Marsh, and water quality does not support contact recreation. The Marsh was designed and constructed in 1988 from degraded former salt ponds for the purpose of creating wildlife habitat, and REC-1 uses would be detrimental to the wildlife uses.

The proposed Basin Plan amendment is consistent with antidegradation policies.

## 2.2 *Comment Letter 2: Union Sanitary District (USD)*

### **Comment 2.1.** Edit Staff Report discussion about the 1988 NPDES permit

The District requests that the names of the two other co-permittees be added to the discussion on Page 1 about the issuance of the first permit for Hayward Marsh, as indicated below:

Currently, the Basin Plan designates beneficial uses for all wetlands in the Hayward area. Hayward Marsh is distinct among these wetlands because it was constructed in 1988 for the purposed of reclaiming treated wastewater to create brackish water habitat for wildlife. That same year, the Water Board issued a permit under the National Pollutant Discharge Elimination System (NPDES) to Union Sanitary District (USD), [East Bay Regional Park District \(EBRPD\)](#), and [East Bay Dischargers Authority \(EBDA\)](#) to supply treated effluent to Hayward Marsh.

**Response:** We have made the requested changes to the Staff Report.

### **Comment 2.2:** Revise Staff Report sections that describe the basis for the NPDES permit's bacteria objectives

The bacteria effluent limits included in the current permit were established in 1994 as explained in the *Justification for Fecal Coliform Effluent Limitation* (EBDA 1995). This report indicates that the

limits were allowed in place of total coliform limits based on the “limited degree to which the receiving waters in the vicinity of the EBDA outfall are used for water contact recreation...” Noncontact water recreation (REC-2) is discussed separately throughout that report. The District requests that the following edits are made for accuracy:

(Page 1)

Water quality based effluent limits for bacteria in that permit, and subsequently reissued permits, were not based on the Basin Plan’s current water quality objectives for the water noncontact recreation (REC-21) beneficial use.

(Page 8)

For treated effluent entering the Marsh, the permit contains the following effluent limitations for bacterial indicators that are derived to be protective of REC 2. The water quality-based effluent limits in the current permit are:

(Page 16)

In the proposed project, the REC-1 beneficial use would not apply to Hayward Marsh, and NPDES permit requirements would continue to be based on bacteriologic water quality objectives for protective of REC-2 beneficial uses.

**Response:** We agree that the language on page 1, paragraph 2, of the Staff Report is not accurate and have made the following change:

Water quality based effluent limits for bacteria in that permit, and subsequently reissued permits, were based on total coliforms and were determined to be protective of existing beneficial uses. Subsequently, permit limits were derived for fecal coliforms based on the EBDA Study, Justification for Fecal Coliform Effluent Limitation.

We have also made the other suggested edits to the Staff Report, pages 8 and 16 (now page 18).

**Comment 2.3:** Revise Staff Report sections that describe the discharge point into Lower San Francisco Bay and the Northwest Channel to improve accuracy

The District requests that descriptions of the discharge point into Lower San Francisco Bay and the Northwest Channel be revised as follows:

(Page 6)

From freshwater Basins 2A and 2B, treated effluent enters the Mixing Channel, where it mixes with saline inflow from San Francisco Bay and becomes brackish. The brackish mixture enters Basins 3A and 3B, providing habitat to numerous species, as further described in Section 5.1 below. Finally, flow from Basins 3A and 3B enters the Northwest Channel and then discharges into Lower San Francisco Bay through an earthen channel (point E-2 in Figure 3).

(Page 7)

This is particularly important along the Northwest Discharge Channel, where fence posts would give birds of prey easy access to the nests, eggs, and nestling on the islands in Basin 3B.

**Response:** We have made the suggested changes to the Staff Report.

**Comment 2.4:** Revise Staff Report sections on special-status species to improve accuracy

The District requests that the descriptions of certain species protected by the Preservation of Rare and Endangered (RARE) beneficial use be revised for accuracy, as follows:

(Page 7)

The large bird populations, and particularly the nesting sites, attract predators, including birds of prey and raccoons. EBRPD personnel trap and remove raccoons from the vegetation bands and the freshwater islands, which the raccoons access from the surrounding levees. The brackish water islands in Basin 3A and 3B are isolated from mainland mammal predators, but are subject to birds of prey, such as hawks, ravens, crows, and gulls. Because endangered special-status species, including western snowy plover (federally-listed as threatened), and California least tern, (federally- and state-listed as endangered), nest on the brackish water islands, predatory birds are controlled as necessary by the U.S. Department of Agriculture’s Wildlife Service under permit from the U.S. Fish & Wildlife Service.

(Page 10)

With the exception of RARE, each of these is designated as a beneficial use of wetland in the Hayward area in Basin Plan Table 2-4. ~~Rare and endangered~~ Species protected under this beneficial use that can be found on Hayward Marsh include ~~Forster’s tern, Caspian tern, black skimmers, Western-western~~ snowy plover, and California least tern.

**Response:** We have made the suggested changes to page 7. The Water Board acts to protect water quality, rather than the RARE species themselves; therefore on page 10 we have made the following change: ~~Rare and endangered~~ Special status species found on Hayward Marsh include ~~Foster’s tern, Caspian tern, black skimmers, W~~western snowy plover and California least tern.

**Comment 2.5:** Revise Staff Report Table 1 to more clearly show that REC-1 enterococcus water quality objectives are not attained in Basins 3A and 3B

The District requests that language in Table 1 be clarified as follows to avoid any confusion about the meaning of the information included:

(Page 9)

**Table 1. Summer 2008 Bacteriological Data**

Enterococci (MPN/100ml)								
Station	Event 1	Event 2	Event 3	Event 4	Event 5	Geometric Mean	90 <sup>th</sup> Percentile	REC-1 Water Quality Objective Attained*
	7/25/08	8/1/08	8/8/08	8/15/08	8/22/08			
E-1	2	12	16	10	10	8.2	14.4	<del>Meets REC-1</del> Yes
3A	292	3600	820	10	10	153.9	2488	<del>Exceeds REC-1</del> No
3B	127	41	1700	3400	130	446.4	5980	<del>Exceeds REC-1</del> No
E-3	10	10	10	10	20	11.5	16	<del>Meets REC-1</del> Yes

\*See discussion of Enterococci objectives below.



**Response:** We have made the suggested clarification to Table 1 as shown. In addition, Figure 3 was modified to add location E-3 in Lower San Francisco Bay.

**Comment 2.6:** Revise Staff Report’s explanation of why the Marsh does not support REC-1 for clarity

The District requests that the explanation be revised as follows, to indicate that the Marsh was created to be, and is successfully sustained as, an important wildlife habitat.

(Page 11)

- 40 CFR 131.10(g)(3): Human-caused conditions or sources of pollution prevent the attainment of the REC-1, and these conditions cannot be remedied or would cause more environmental damage to correct than to leave in place. This criterion applies because Hayward Marsh was created and is sustained using reclaimed wastewater [to create wildlife habitat](#). [The Marsh was never intended to be used for REC-1 activities](#).

**Response:** We have made the requested change.

**Comment 2.7:** The District would like to provide missing bird survey data for inclusion in Table 2 of the Staff Report

Bird survey data (from the East Bay Regional Park District) is now available for December 2010. The District requests that *Table 2. Summary of Monthly Bird Survey Data* be amended to add the datum as shown below.

(Page 12)

**Table 2. Summary of Monthly Bird Survey Data**

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Month	Number of Birds Counted									
Jan	4650	3101	3963	4687	3190	4946	3315	4423	9366	5059
Feb	3095	2292	2594	3563	4238	4390	5662	3389	2818	4121
Mar	4937	4007	4273	4312	4057	4702	9983	5159	3837	4023
April	3236	3581	2734	3090	3360	5038	7134	2839	3338	3248
May	2350	3261	1771	1696	1930	2070	3511	2604	2521	2876
June	2959	3220	2768	2775	2251	2122	3324	2012	1800	2968
July	3313	2332	2727	2520	2405	2237	2510	2834	2224	3375
Aug	2672	3861	3843	2737	4282	3076	3437	2158	1996	3224
Sept	6812	7039	12,451	15,292	7798	6008	6631	5272	7760	4619
Oct	8423	7380	14,607	7779	10,178	6505	7874	7180	5053	6701
Nov	8345	3868	5977	6110	6008	6231	6135	8269	5765	12,010
Dec	4374	4551	5171	6087	5852	4068	4413	5707	4093	<a href="#">no data</a> <a href="#">3562</a>

**Response:** We have made this addition to Table 2.

**Comment 2.8:** Revise Staff Report sections that describe the environmental benefits of Hayward Marsh to improve accuracy

The District would like to provide some suggested revisions to *Section 6.4: Environmental Benefits of Hayward Marsh*, to ensure that the description is accurate and up-to-date. These revisions are shown below.

(Page 14)

Notable environmental benefits associated with the marsh include:

- The unique complex of islands within Hayward Marsh protects ground-nesting birds from predation by mainland-based predators, with ~~an average of 500~~ 568 nesting pairs of birds in the marsh during the 2011 nesting season.
- The ~~un-~~vegetated islands in Hayward Marsh provide optimal conditions for nesting Forster's tern. Hundreds of terns have nested on several islands within the marsh, resulting in some of the greatest reproductive success of terns nesting throughout the San Francisco Bay Estuary.
- The California least tern, a federal and state endangered species, has nested successfully in the Marsh ~~in~~ since 1990. During the 2010 nesting season, there were 53 nests, which produced 91 chicks and approximately 75 fledglings. ~~spring of 2005, eight pairs of California least terns attempted to nest on enhanced nesting areas in the Marsh, and several more pairs were observed prospecting for nest sites.~~ Establishing a viable California least tern colony is of regional significance because few nesting colonies exist within San Francisco Bay.
- The Hayward Marsh at one time supporteds one of the largest colonies of nesting snowy egrets and black-crowned night herons in Lower San Francisco Bay. The federally threatened Western snowy plover and the Caspian tern also nest in the Marsh.

**Response:** We made all the suggested changes to the Staff Report (now page 15), except the first point. Further explanation on the first bullet point is given in italics:

- The unique complex of islands within Hayward Marsh protects ground-nesting birds from predation by mainland-based predators, with an average of 500 nesting pairs of birds in the marsh.

*We have not changed this statement, because it effectively makes the point that, over a number of years, large numbers of nesting pairs of birds inhabit the Marsh. Further information about a single year, as suggested by the Commenter, is not necessarily more accurate or informative.*

**Comment 2.9:** Revise Staff Report sections that describe the goals of the Hayward Marsh to improve accuracy

There were several goals behind the creation of the Marsh, including the beneficial reuse of treated wastewater, but it may not be correct to suggest that this was the primary goal. The District requests that descriptions of the intended goals of the Hayward Marsh be revised for accuracy as indicated below.

(Page 15)

#### **Water Reuse**

The beneficial reuse of treated wastewater ~~was a primary goal in the creation of Hayward Marsh, and it is also~~ a goal of the Water Boards. By reusing approximately 3 mgd of

recycled water for over two decades, Hayward Marsh has provided a sustainable freshwater supply to support fish and wildlife habitat and a significant environmental benefit.

(Page 16)

Hayward Marsh was created in 1988 ~~and was designed to use reclaimed for the purpose of reclaiming~~ treated wastewater to create brackish marsh habitat. Since that time, the Marsh has been operated as brackish aquatic habitat to support numerous wildlife species and protect their nesting sites. Water contact recreation has never been allowed in the marsh, because human contact would be inconsistent with the purposes of Hayward Marsh.

**Response:** We have made the requested revisions (pages 16 and 17), with some modification to the text on page 16 as shown below. Further explanation is given in italics:

### **Water Reuse**

One of the primary objectives of the Hayward Shoreline Marsh Expansion Project was to create a diversified marsh system using secondary effluent.<sup>1</sup> The beneficial reuse of treated wastewater ~~was a primary goal in the creation of Hayward Marsh, and it~~ is also a goal of the Water Boards. By reusing approximately 3 mgd of recycled water for over two decades, Hayward Marsh has provided a sustainable freshwater supply to support fish and wildlife habitat and a significant environmental benefit.

*This clarifies that reuse of treated effluent was only one of the objectives behind creating Hayward Marsh, while quoting a published source.*

### **Comment 2.10:** Revise Staff Report sections that describe environmental impacts for clarity

The District requests that the reference to a potential need to construct facilities to support alternative disinfection processes be removed to avoid any misconceptions, as the District has no intention or reason to consider alternatives such as ultraviolet disinfection at this time. A second sentence regarding impacts of additional chlorination is suggested instead, as shown below.

(Page 18)

In addition, there are likely to be additional environmental impacts associated with any increased use of chlorine at the wastewater treatment plant ~~or construction of facilities to support alternative disinfection treatments, e.g., ultraviolet treatment,~~ that would be required to be implemented in order to achieve REC-1 objectives. These impacts could potentially include a substantial increase in the discharge of disinfection byproducts to the Bay.

**Response:** By including this statement in the CEQA analysis (page 18 of the Staff Report), we are not making any statement about the District's intentions with regard to disinfection. The statement was meant to demonstrate that the "no project" alternative could cause additional environmental impacts. Construction of such disinfection facilities would be detrimental to the environment and to beneficial uses of Hayward Marsh; thus the purpose of this statement aligns with the Commenter's purpose. For this reason, we decline to delete the phrase "or construction of facilities to support alternative disinfection treatments, e.g., ultraviolet treatment."

<sup>1</sup> U.S. Environmental Protection Agency (U.S. EPA), 1993. *Wetlands from Wastewater, The Hayward Marsh Expansion Project*. EPA832-R-93-005h. September 1993. Page 5 of 12.

We agree to add “These impacts could potentially include a substantial increase in the discharge of disinfection byproducts to the Bay” as requested.

To further address the Commenter’s concern about clarity in the environmental impacts assessment, we have added the following clarification to Section 7.2, page 18:

Though an alternative analysis is not required, below we do provide a level of analysis of the No Project alternative to illustrate that the proposed project would be *environmentally beneficial*, because under the No Project alternative, the REC-1 use would continue to apply, and the freshwater input to Hayward Marsh (i.e., treated effluent) would likely cease, which would cause a host of adverse environmental impacts, particularly to wildlife habitat.

Also, the *only* foreseeable alternative for the proposed project is the No Project alternative.

**Comment 2.11:** Revise Staff Report Table 2-4 Beneficial Uses of Wetlands Areas to remove the fresh Wetland Type designation for the Marsh and to correct the name of the Marsh

Table 2-4 of the Proposed Basin Plan Amendment in Appendix A includes both the fresh and brackish Wetland Type designations for the Marsh. Freshwater Basins 1, 2A, and 2B are part of the District’s treatment process and should not be included in this designation. Basins 3A and 3B, to which the beneficial uses described in this Draft Staff Report apply, are brackish marsh. In addition, the name of the Marsh should be corrected to avoid confusion.

(Appendix A – Page 1)

Basin / Marsh Area	Wetland Types			Beneficial Uses									
	Fresh	Brackish	Salt	EST	MAR	MIGR	COMM	RARE	REC1	REC2	SALT	SPWN	WILD
ALAMEDA COUNTY Hayward Shoreline Marsh		•		•				•		•		•	•

**Response:** We have made the changes proposed by the Commenter in Appendix A as shown above.

**3. STAFF INITIATED CHANGES**

**3.1 Additional CEQA Discussion in Staff Report**

To provide additional clarity and regulatory citations regarding the alternatives assessed, we have added the following information to the CEQA Analysis, second paragraph, page 17:

The State Water Board’s regulations require a substitute environmental document to include 1) a brief project description; 2) an identification of any significant or potentially significant adverse impacts of the proposed project; 3) an analysis of reasonable alternatives to the project and mitigation measures to avoid or reduce any significant or potentially significant adverse environmental impacts; and 4) an analysis of the reasonably foreseeable methods of compliance. Tit. 23, Cal. Code Regs. § 3777(b). Where there is no fair argument that the

project could result in any reasonable foreseeable environmental impacts, the substitute environmental document need not contain an analysis of reasonably foreseeable alternatives. Similarly where there is no fair argument that the reasonably foreseeable methods of compliance with the project could result in any reasonably foreseeable significant adverse environmental impacts, the substitute environmental document need not contain an analyses of reasonably foreseeable alternative methods of compliance or mitigation measures. Tit. 23, Cal. Code Regs., § 3777(e) and (f). As explained in this report, the proposed project will not have any significant adverse impacts to the environment; therefore, alternatives beyond the no project alternative are not explored. In addition, there are no adverse environmental impacts from compliance actions, because no compliance measures would be needed; the project would not result in new effluent limitations or change the way Hayward Marsh is operated.

### **3.2 Clarification in Basin Plan Amendment**

The proposed Basin Plan amendment circulated for public comment on June 20, 2011, included new text for Section 4.5.5.1 to clarify that effluent limitations in Table 4-2A would not be applicable where treated sanitary effluent is discharged into water bodies that do not have REC-1 uses. The proposed wording follows:

Table 4-2A contains both daily maximum and longer-term effluent limitations for bacteriological indicator organisms. All NPDES permits for discharges that contain sanitary waste shall include the applicable effluent limitations from Table 4-2A, except where such discharges are to water bodies for which REC1 is not a beneficial use. Where REC1 is not a beneficial use, but REC2 does apply, NPDES permits may use Table 3-1 water quality objectives for fecal coliform.

To clarify that Hayward Marsh is currently the only water body in the region that both receives treated sanitary effluent and has no REC-1 uses, staff changed the wording as follows:

Table 4-2A contains both daily maximum and longer-term effluent limitations for bacteriological indicator organisms. All NPDES permits for discharges that contain sanitary waste shall include the applicable effluent limitations from Table 4-2A, except for discharges into Hayward Marsh, for which REC-1 is not a designated beneficial use.