



US Army Corps
of Engineers®

SAN FRANCISCO DISTRICT

PUBLIC NOTICE

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Regulatory Branch
1455 Market Street
San Francisco, CA 94103-1398

RESPONSE REQUIRED BY: 20 March 2008

PROJECT MANAGER: Bob Smith Phone: (415) 503-6792/E-mail: robert.f.smith@usace.army.mil

1. INTRODUCTION: Mr. Max Keech, Keech Properties, LLC, 1060 Twin Dolphin Drive, Suite 500, Redwood City, CA 94539 has requested, through his agent Terry Huffman, Huffman-Broadway Group, Inc., [415] 925-2000, Corps of Engineers authorization to construct a wetland mitigation bank, the Preserve at Redwood Shores Mitigation Bank, on a site adjacent to Belmont Slough and Shearwater Parkway in the Redwood Shores area of Redwood City, San Mateo County, California (Figures 1 – 3).

2. PROPOSED PROJECT: The Preserve at Redwood Shores Mitigation Bank project (Project) is proposing to restore an approximately 88-acre area to estuarine intertidal emergent and unconsolidated bottom wetlands habitat. Of the 88-acre restoration site, approximately 61.9 acres would be included in the Preserve at Redwood Shores Mitigation Bank boundary. The project would involve restoring the site to fully tidal estuarine intertidal emergent and unconsolidated bottom wetlands habitat. This would require breaching the current flood control levee and lowering the existing levee to the approximate MHW elevation (105 feet NGVD). Breaching of the levee would occur after completion of a new interior flood control levee that is proposed for the Preserve at Redwood Shores and Salt Court project (Corps Public Notice 30159S).

Historically the 88-acre restoration site was hydrologically connected to Belmont Slough and influenced by the ebb and flow of the tide. During the early part of the 20th century, along with the surrounding Redwood Shores area, the land was separated from the bay by a levee system and

drained of water. As a result, it is no longer influenced by the natural ebb and flow of the tide. Current land use on the Project site includes public access trails along a portion of the levee and wildlife viewing.

Approximately 13.9 acres of non-tidal palustrine emergent wetlands, 1.1 acres of tidal palustrine emergent wetlands, and 5.9 acres of open water ponds occur on the site, separated from the bay by the existing levee system. Figure 6, Sheets 1-4, is a map of the jurisdictional areas found within the study area. The proposed project would temporarily impact 0.12 acre of non-tidal wetlands, 0.08 acre of non-tidal open water subject to Corps jurisdiction.

Although the majority of the site is contained within the levee and is not connected to the San Francisco Bay (i.e., the area is not tidal), the soils have high salinity and thus the environment is ideal for such palustrine emergent species. Coastal scrub (non-native grasslands mixed with coyote brush) dominates the upland portions of the site adjacent to the non-tidal palustrine emergent wetlands. Dominant species of vegetation in upland areas include wild oat, soft brome, meadow barley, and coyote brush. Also, due to the historical marsh characteristics of the area, pickleweed may occasionally occur in upland areas.

Within the 88-acre restoration site, approximately 61.9 acres would be included in the mitigation bank boundary (Figure 3). The remaining 26.1 acres consist of:

(1) 1.1 acres of tidal wetlands, along the outside of the levee, which would be preserved;

(2) A 5.9-acre wetland mitigation site near the northeastern corner which was created for impacts related to a levee maintenance project conducted in 2000 by the City of Redwood City and permitted by the Corps (Corps # 19783S);

(3) A 7.7-acre parcel, which transects the northern section of the property and is owned by the State Lands Commission and leased to the Department of Fish and Game; and

(4) An 11.4-acre area which would be used to mitigate for impacts resulting from the Preserve at Redwood Shores and Salt Court project. The Preserve at Redwood Shores and Salt Court project is being processed under a separate permit application (Corps Public Notice 30159S)

To facilitate the restoration of the site, vegetation and debris would be removed and five wave breaks, three ditch blocks, and four levee breaches would be constructed. Additionally, a slough channel would be constructed from the largest levee breach and connected to a historical slough channel (Figures 4 and 5).

Prior to breaching the outer levee, woody vegetation and upland grassland areas would be mowed. The material, along with woody debris and garbage would be raked and hauled to a designated agency-approved upland disposal site. Additionally, as shown on Figures 4 and 5, several “wave breaks,” “ditch blocks,” and a slough channel would be constructed.

The wave breaks would promote accretion of sedimentation within the restoration site by minimizing the re-suspension of sediments as a result of wave action. The accretion of sediment would in turn promote vegetation growth and protect the new levee by damping wave action generated by wind and storm events. The wave breaks would be approximately 300 feet long, have a maximum elevation of approximately 104.5 feet NGVD, and a 5:1 outboard slope and 3:1 inboard slope. Refer to Figures 4 and 5 for a plan view and cross section of the proposed wave breaks.

Ditch blocks would be constructed within the non-tidal open water ditch (also referred to as the borrow ditch) adjacent to the two small breach locations. The ditch blocks would serve two functions: (1) promote accretion of sediment and vegetation growth and (2) prevent a channel from forming along the base of the existing levee. Refer to Figures 4 and 5 for plan view and cross sections of the proposed ditch blocks.

The main channel (main slough channel) would be constructed from the large levee breach to a historical slough channel (Figure 4). The bottom elevation would be excavated to approximately 98.5 feet NGVD with a bottom width of 3 feet and 5:1 slope. Refer to Figure 5 for a cross section and elevation of the constructed slough channel. The constructed slough channel would act as the primary tidal channel to the restoration site. Due to the presence of overhead power lines the breach would be protected by a floating boom or similar device to keep sailboats from entering the slough.

Once the wave breaks, ditch blocks, and main slough channel are complete, four levee breaches would be constructed. The smallest levee breach, referred to as a “sill” on Figures 4 and 5, is near the northeastern corner of the site across from Bird Island. It would have a bottom width of 15 feet and bottom elevation of 102 feet NGVD. This breach would be armored with rock to prevent downward scouring.

Two small breaches are proposed along the western boundary. They would have a bottom width of 20 feet and bottom elevation of 99 feet NGVD. The two small breaches would also be armored to prevent downward cutting. The sill and two small breaches would provide an additional inlet and outlet during high tides to promote water circulation and the movement of wildlife from wetlands along Belmont Slough and Bird Island to the restoration site.

The largest breach, located just north of the PG&E electrical towers, would serve as the main tidal channel. The bottom of the main channel would be 100 feet wide at an elevation of 97 feet NGVD. Near the center of the bottom of the main channel, a small 20-foot-wide pilot channel would be constructed at elevation 95 feet NGVD. To promote scouring and channel formation during the ebb and flow of the

tides, the pilot channel and main bottom would not be armored. The banks of the main breach would be constructed at a 5:1 slope and stabilized with rock armor. A plan view of the breach locations and cross sections can be found on Figures 4 and 5.

In addition to the four levee breach locations, the outer levee would be lowered to approximately 105 feet NGVG (refer to Figure 5, cross section F). Elevations along the existing levee are approximately 108 – 107 feet NGVD. Lowering the outer levee to 105 feet NGVD would serve several functions, to include: (1) establishment of high marsh vegetation; (2) wildlife access from Belmont Slough and Bird Island to the restoration site by providing visual and physical access; (3) refuge for wildlife (salt marsh harvest mouse and California clapper rail) by providing an upper zone of peripheral halophytes (salt-tolerant plants).

The applicant states that one of the most severely reduced habitats of the San Francisco Bay ecosystem is the tidal marsh/salt marsh community. Of the 193,800 acres of tidal marsh that bordered San Francisco Bay in 1850, about 30,100 remain. These marshes provide essential habitat for many species including the federally listed salt marsh harvest mouse and California clapper rail. The proposed restoration and mitigation bank Project would provide for the restoration of approximately 88 acres of historical baylands of which approximately 61.9 acres would be available as mitigation bank credits. Restoration of the 88 acres would expand or enhance essential habitat for the federally listed salt marsh harvest mouse and California clapper rail, which is key for their recovery.

The Project would provide the public's need for wildlife viewing opportunities and access to the Bay and the public's need to promote the recovery of the salt marsh harvest mouse and California clapper rail in accordance with the U.S. Fish and Wildlife Service. The Project would also provide a private need for mitigation opportunities for project-specific impacts within the mitigation bank service boundary (Figure 7).

3. CONSIDERATION OF COMMENTS: The Corps of Engineers is soliciting comments from the public, Federal, State and local agencies and officials, Indian Tribes, and other interested parties in order to consider and evaluate authorization of the proposed bank. The Corps will consider any comments received in preparation of the bank enabling instrument.

4. SUBMISSION OF COMMENTS: Interested parties may submit, in writing, any comments concerning this activity. Comments should include the applicant's name and the number and the date of this Public Notice, and should be forwarded so as to reach this office within the comment period specified on Page 1. Comments should be sent to the **U.S. Army Corps of Engineers, San Francisco District, Regulatory Branch, 1455 Market Street, San Francisco, California 94103-1398**. Additional details may be obtained by contacting the applicant whose name and address are indicated in the first paragraph of this Public Notice or by contacting Bob Smith of our office at telephone [415] 503-6792 or E-mail: robert.f.smith@usace.army.mil.