26 October 2007

Mr. Mark D'Avignon
South Section Chief
U.S. Army Corps of Engineers
Regulatory Branch
1455 Market Street, 16th Floor
San Francisco, CA 94103-1398

SUBJECT: South Bay Salt Pond Restoration Project Phase 1: Submittal of Application Materials for a Section 404 Individual Permit.

Dear Mr. D'Avignon:

This permit application constitutes a request by U.S. Fish and Wildlife Service (Don Edwards San Francisco Bay National Wildlife Refuge) and California Department of Fish and Game that the U.S. Army Corps of Engineers (Corps) authorize the Phase I Actions of the South Bay Salt Ponds Restoration Project located in Alameda, Santa Clara, and San Mateo Counties, under a Section 404 Individual Permit. The attached permit application has been prepared following the guidelines presented in *Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material* (33 CFR, Part 230, Vol. 45, No. 249, 24 Dec 1980). An original, signed application form will follow this submittal.

As a result of our field survey effort conducted over the last few years in preparation of the environmental clearance documents and restoration plan, we have tentatively identified the extent and distribution of Section 404 wetlands and other waters, and current and historical Section 10 waters. Thus a set of maps was submitted for Ponds A5, A6, A7, A8N, A8S, A16, A17, E8, E8A, E12, E13, E8X, E9 and SF2. USACE wetland determination data forms (Arid West Region) were completed for 13 sample points, including 7 points within the Alviso pond complex, 2 points within the Ravenswood pond complex, and 4 points within the Eden Landing pond complex.

Permanent and temporary impacts to waters of the U.S. will occur as part of proposed restoration/enhancement activities. The total estimated volume of excavation work is 579,773 cubic yards, with a total excavation footprint of around 469 acres. Fill placement acreage and volume totals are also estimated at 469 acres and 579,773 cubic yards, respectively. For clarification, the vast majority of the material removed as part of the excavation activities will be reused on site as fill to enhance habitat features. Thus, totaling all fill and excavation work results in values of approximately 1,197,546 cubic yards and 988.4 acres. In addition, indirect impacts to waters of the U.S. resulting from scour of existing outboard marshes along Mt. Eden Creek, North Creek, Old Alameda Creek, Alameda Creek Flood Control Channel, Mud Slough, Coyote Creek, Alviso Slough, Guadalupe Slough, Stevens Creek, Mountain View Slough, Charleston Slough, and Ravenswood Slough total approximately 100 acres.

Phase 1 of this project will result in the restoration of approximately 1060 acres of tidal habitat (with an additional 1400 acres of reversibly tidal habitat within the Pond A8 complex), and the

creation of 709 acres of high quality avian foraging and nesting habitat in managed ponds. Due to the anticipated development of marsh habitats within tidal restoration ponds (E9/E8A/E8X, A6 and, reversibly, A8/A8S) resulting from the proposed activities and continued use of Ponds E12/E13, A16, and SF2 as managed ponds for wildlife, there would be no mitigation measures required with the exception of measures taken to minimize or avoid disturbance to sensitive habitat areas.

The project may affect several special-status species known from the SBSP Phase I project vicinity, including seven federally listed species: the salt marsh harvest mouse (*Reithrodontomys raviventris*), California Clapper Rail (*Rallus longirostris obsoletus*), Western Snowy Plover (*Charadrius alexandrinus nivosus*), California Least Tern (*Stern antillarum browni*), California Brown Pelican (*Pelecanus occidentalis californicus*), Central California Coast steelhead (*Oncorhynchus mykiss*) and its Critical Habitat, and green sturgeon (*Acipenser medirostris*). Thus, a Biological Assessment (BA) is being prepared and will be forwarded upon completion and submittal to the USFWS. After receipt of the BA, as the federal permit lead, we then ask that a draft formal Section 7 Consultation letter be forwarded to the Service requesting consultation.

We fully acknowledge that Corps staff are currently overburdened with permit requests and greatly appreciate your timely consideration of our package. We have included a draft public notice along with this application for your use. If you or your staff has any questions, please feel free to contact me (408.445.3221) or Patrick Boursier (408.458.3204) with any questions you may have. Thank you for your assistance with our request.

Sincerely,

John A. Bourgeois, M.S.
Senior Restoration Ecologist

Cc: Steve Ritchie, California Coastal Conservancy
Mendel Stewart and Clyde Morris, USFWS, Don Edwards Refuge
Carl Wilcox and John Krause, CDFG
Michelle Orr, PWA

Enclosures:

- *Application for Department of the Army Permit (Form33 CFR 325)*
- *South Bay Salt Pond Restoration Project: Phase 1: Request for Jurisdictional Determination Supplemental Materials*
- *Draft Public Notice*

- *South Bay Salt Ponds Restoration Project: Phase I Actions and On-going Maintenance Activities—Analysis and Compliance with Section 404(b)(1) Guidelines: Submittal of materials for Section 404 Individual Permit* (including alternatives analysis)

26 October 2007

Mr. Mark D'Avignon
South Section Chief
U.S. Army Corps of Engineers
Regulatory Branch
1455 Market Street, 16th Floor
San Francisco, CA 94103-1398

ATTENTION: Ms. Paula Gill

SUBJECT: South Bay Salt Pond Restoration Project, Phase 1 Actions: Request for Jurisdictional Determination Supplemental Materials

Dear Mr. D'Avignon:

On behalf of the U.S. Fish and Wildlife Service (Don Edwards San Francisco Bay National Wildlife Refuge) and California Department of Fish and Game please find attached our maps for Phase 1 of the South Bay Salt Pond Restoration Project. The project study area extends over several South Bay counties including Santa Clara, San Mateo, and Alameda. As a result of our field survey effort conducted over the last few years in preparation of the environmental clearance documents and restoration plan, we have tentatively identified the extent and distribution of Section 404 wetlands and other waters, and current and historical Section 10 waters. Thus a set of maps is included with the transmittal for Ponds A5, A6, A7, A8N, A8S, A16, A17, E8, E8A, E12, E13, E8X, E9 and SF2.

As per your request during our meeting of 25 September 2007 at your office with Paula Gill, Molly Martindale and Dan Martel, we have revised the Jurisdictional Determination maps. In addition, we include USACE wetland determination data forms (Arid West Region) that were completed for 13 sample points, including 7 points within the Alviso pond complex, 2 points within the Ravenswood pond complex, and 4 points within the Eden Landing pond complex.

The habitats of the SBSP Restoration Project are broadly quantified and described below. Generally, salt ponds in the South Bay are characterized by expanses of non-tidal open water, bare mud, or bare salt flats surrounded by mostly barren levees. Vegetation is sparse and is limited primarily to some levees. Due to the paucity of vegetation, salt ponds provide little to no cover for small mammals or reptiles, and provide nesting habitat only for species that nest on the bare levees and the occasional islands that have been created (by breaching of levees or deposition of material dredged from borrow ditches) within the ponds.

The ponds within the SBSP Restoration Project area are, collectively, highly productive systems, supporting very high invertebrate biomass due to the abundance of a few key species and providing roosting, nesting, and foraging habitat for large numbers of waterbirds. However, with the exception of the birds that move in and out of the ponds (as discussed below), and some fish and aquatic invertebrates that are drawn into intake ponds, the salt ponds are primarily a closed

system, with virtually no export of detritus, nutrients, or energy to the tidal marsh, sloughs, mudflats, or open waters of the Bay. Furthermore, much of the biomass produced by these ponds is unavailable to birds or fish due to water depths (for shorebirds) and salinities (for fish) that preclude these vertebrates' use of most of the invertebrates in the deeper, higher-salinity ponds.

Eden Landing. Mudflat and open water bay habitats are found in the Eden Landing pond complex. Open-water habitat exists in OAC, North Creek, along Mt. Eden Creek and as internal marsh ponds within the Whale's Tail marsh, a marsh at the mouths of the Old Alameda and Mt. Eden Creeks along the western edge of the Eden Landing pond complex (sample points E1-E4).

Vegetation. The Eden Landing pond complex includes salt marsh, brackish marsh, freshwater marsh and peripheral halophyte marsh habitat. Open water borders the northeastern ponds. Mudflat borders the western edge of Whale's Tail marsh. Developing cordgrass salt marsh in Cargill Marsh borders Whale's Tail marsh to the east. Large areas of pickleweed salt marsh lie to the west of the Eden Landing pond complex within the Whale's Tail marsh. The lower reaches of Mt. Eden Creek, which intersect the northern ponds in the complex, consist of pickleweed salt marsh (sample point E3). Pickleweed salt marsh also dominates the lower reach of the ACFCC along the southern boundary of the pond complex. Peripheral halophyte marsh habitat borders the northeastern ponds inland along Mt. Eden Creek. Brackish marsh exists upstream in OAC and continues along the eastern boundary of the pond complex. In addition to the habitats described above, small oyster shell beach ridges are found within the north end of Whale's Tail marsh and on the north end of the outboard marsh of Pond E2.

Phase 1 Action Areas. Characteristics of individual ponds that were selected for Phase 1 of the SBSP Restoration Project are discussed below.

Ponds E8A, E8X and E9.

Pond E8A is approximately 240 acres in size and is bordered by OAC on the south, North Creek on the east, and by Ponds E9 and E8 on the north and east. The west side of Pond E8A is bordered by tidal salt marsh extending outward to the Bay. Pond E8A is currently managed under the ISP as a System Pond.

Pond E8X is approximately 30 acres in size and is bordered by North Creek on the south and east and by Ponds E9 on the west and E14 on the north. Pond E8X is currently managed under the ISP to receive water only during the highest tides, and is mostly mudflat and/or shallow water throughout much of the year.

Pond E9 is approximately 360 acres in size and is bordered on the south by Pond E8A, on the west by tidal salt marsh (sample points E1, E2) extending to the Bay, and on the north and east by Ponds E14 and E8X. Mt. Eden Creek borders the northwest edge of Pond E9. Pond E9 is currently managed under the ISP as a System Pond.

Ponds E12 and E13.

Pond E12 is approximately 110 acres in size and is bordered on the south by Pond E13 and on the north and east by Mt. Eden Creek. Pond E12 is currently managed as a Seasonal Pond.

Pond E13 is approximately 120 acres in size and is bordered by Pond E12 to the north, Mt. Eden Creek to the west and Pond E14 to the south. Pond E13 is currently managed as a Seasonal Pond (sample points E3, E4). Seasonal ponds provide different types of habitat, including aquatic habitat for waterfowl during winter, shallow water foraging during the spring and fall shorebird migration periods and salt panne habitat for nesting shorebirds during summer.

Alviso. Large areas of mudflat and open water Bay habitats are found adjacent to the Alviso pond complex. Open water exists along Mountain View Slough, Stevens Creek, Alviso Slough, Artesian Slough, Guadalupe Slough, and in Coyote Creek. Large expanses of newly formed mudflat habitat exist downstream of the Island Ponds (A19, A20, and A21), including a large newly formed mudflat island at the mouth of Alviso Slough adjacent to Pond A9. Mudflat occurs at the mouth of Guadalupe Slough and along Charleston Slough. Advancing mudflat occurs adjacent to Calaveras Point, and also at the mouths of Mountain View Slough and Stevens Creek adjacent to Ponds A1 and A2W. Small areas of mudflat surrounded by open water are adjacent to Pond A12. Additional small areas of mudflat are surrounded by freshwater marsh at the upper end of the reach to the south of the Island Ponds (sample points A1-A7).

Vegetation. Marsh habitat adjacent to the Alviso pond complex includes salt marsh, brackish marsh, freshwater marsh as well as areas of peripheral halophytes. Salt marsh habitat occurs on the outboard levees along the extent of the Alviso pond complex. Salt marsh dominated by cordgrass is found at lower elevations bordering the mudflats and along the fringing lower elevations of Coyote Creek. Cordgrass also borders Mountain View Slough, the mouth of Stevens Creek, Guadalupe Slough and Alviso Slough, the mouth of Mud Slough, and also includes formation of a new cordgrass salt marsh island at the mouth of Alviso Slough between Ponds A9 and A6. Pickleweed marsh (sample point A6), is found at higher elevations just above cordgrass dominated marsh and extends upstream into Mountain View Slough, Stevens Creek, Coyote Creek, Guadalupe Slough, Mud Slough, and Alviso Slough. Brackish marsh covers the marsh plain in the transition from salt to brackish marsh along Coyote Creek, and also dominates the outboard levees near the junction of Mud Slough and Coyote Creek. Brackish marsh replaces salt marsh moving upstream along Guadalupe Slough, Alviso Slough, Mountain View Slough, and Stevens Creek. To the east of the Artesian Slough junction, the brackish marsh initially contains patches of pickleweed salt marsh within the marsh plain, and then becomes primarily brackish marsh. Brackish marsh dominates Triangle Marsh and extends into the lower reaches of Artesian Slough. Artesian Slough becomes dominated by freshwater marsh upstream (south) of Pond A17. Levees separate many of the individual ponds in the Alviso pond complex. Upland vegetation borders sections of the freshwater and brackish marshes. Unvegetated islands exist within several of the salt ponds.

Phase 1 Action Areas. Characteristics of individual ponds that were chosen for Phase 1 of the SBSP Restoration Project are discussed below.

Pond A6

Pond A6 (also called the Knapp Tract) is approximately 330 acres in size and is bordered by Guadalupe Slough on the west and Alviso Slough on the east. The northern portion of Pond A6 is bordered by Coyote Creek. Ponds A5 and A7 border Pond A6 on its southern edge. Pond A6 is currently managed as a Seasonal Pond. This pond is mostly dry through the summer, but shallow water during winter provides foraging habitat for shorebirds and other waterbirds. Winter salinities are moderate (e.g., a low salinity of 46 ppt in January 2005), but summer salinities in the surrounding borrow channel are high (e.g., a high salinity of 329 ppt in September 2004). A small amount of tidal salt marsh is present along the outboard levees of Pond A6.

Pond A8

Pond A8 is approximately 410 acres in size and is located at the upstream extent of Alviso Slough near the community of Alviso. Fringing tidal marsh borders the northern and eastern edges of Pond A8. Ponds A5 and A7 border the western edge and Pond A8S borders the southern edge of the pond. Pond A8 is currently managed as a Seasonal Pond. Due to slightly deeper water, this pond has more moderate year-round salinities than Pond A6. Shallow water and patches of dry habitat provide foraging and roosting opportunities for shorebirds during summer and fall, and shallow to moderate water levels during winter provide habitat for waterfowl and other waterbirds.

Pond A16

Pond A16 is approximately 240 acres in size and is located north of the Refuge's Alviso Education Center and New Chicago Marsh and west of Artesian Slough. The railroad right-of-way is west of Pond A16 and farther west are Ponds A13 and A15. Pond A16 is currently managed as Muted Tidal, and provides foraging and roosting habitat for shorebirds, and foraging habitat for waterfowl and other waterbirds.

Ravenswood. Mudflat and open water bay habitats are found in the Ravenswood pond complex. Open-water habitat exists throughout the pond complex in the historic slough channels. Mudflat habitat has formed at the mouth of Ravenswood Slough. The pond complex primarily includes salt marsh and peripheral halophyte marsh habitats. A large expanse of mudflat lies to the north and east of the pond complex (sample points R1, R2).

Vegetation. The Ravenswood pond complex is surrounded by salt marsh, consisting of cordgrass marsh along the lower elevation fringes of the marsh and pickleweed marsh (sample point R1) in the higher elevation marsh plain. There are some patches of salt marsh dominated by other species, particularly along the southern edge of the pond complex. Peripheral halophyte vegetation borders the salt marsh in much of the transitional zone to upland areas. Upland vegetation is also found at higher elevations around the salt marsh boundary, often bordering the levees. There is one small area of freshwater marsh along the southern boundary of the Ravenswood pond complex.

Phase 1 Action Areas. Characteristics of individual ponds that were chosen for Phase 1 of the SBSP Restoration Project are discussed below.

Pond SF2

Pond SF2 is approximately 240 acres in size and is adjacent to the Dumbarton Bridge and San Francisco Bay. Pond SF2 is bordered by diked marsh to the southwest and the southeast, and a small section of upland habitat borders the pond to the south. The northeast portion of the pond borders narrow fringe marsh along the Bay. Pond SF2 is currently managed as a Seasonal Pond. Portions of this pond are dry during summer, providing nesting habitat for western snowy plovers.

Please feel free to contact me (408.445.3221) or Patrick Boursier (408.458.3204) with any questions you may have. We look forward to hearing from you soon to schedule our verification field surveys. I have also recently discussed the permitting timeline with Paula Gill and want to continue to keep an open dialogue about the desire for the project to receive permits in March 2008. Thank you for your assistance with our request.

Sincerely,

John A. Bourgeois, M.S.
Senior Restoration Ecologist

Cc: Steve Ritchie, California Coastal Conservancy
Mendel Stewart and Clyde Morris, USFWS, Don Edwards Refuge
Carl Wilcox and John Krause, CDFG
Michelle Orr, PWA
Marie Galvin, EDAW