CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

TENTATIVE ORDER

Waste Discharge Requirements and Water Quality Certification for:

California Department of Parks and Recreation, Yosemite Slough Wetlands Restoration Project, City and County of San Francisco

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter the Water Board, finds that:

1. The California Department of Parks and Recreation (hereinafter the Department) submitted an application for waste discharge requirements (WDRs) and Clean Water Act Section 401 water quality certification to restore a portion of the Candlestick Point State Recreation Area and to remove contaminated soil within the Yosemite Slough Wetlands Restoration Project (the Project). The Project consists of the following specific activities:

    a. Restore 12 acres of uplands to a tidally-influenced wetland area;
    b. Create two isolated nesting bird islands within the restored tidal wetlands;
    c. Provide approximately 5000 linear feet of interpretative trails with three vista points;
    d. Construct a 1200 square foot multi-use interpretive center with restrooms;
    e. Create about 2.5 acres of passive recreation area for walking, picnicking, and kite-flying;
    f. Revegetate designated areas with native species;
    g. Provide parking to accommodate approximately 30 vehicles and two buses;
    h. Install perimeter fencing and security/safety lighting; and,
    i. Remediate contaminated soil areas.

2. **Project Location:** The Project is part of the Candlestick Point State Recreation Area. It is located on the eastern shore of the San Francisco peninsula, north of Candlestick Park, south of the Bayview district, and about one half mile east of Highway 101 in the City and County of San Francisco. The Project consists of approximately 34 acres and is bisected by the Yosemite Slough, a channel that extends from Ingalls Avenue at its northwest end to its outlet in San Francisco Bay. A Project location map is included as Attachment A. The northern portion of the Project is bounded on the northeast by Thomas Avenue and the City of San Francisco's corporation yard; on the northwest by Hawes Street and a railroad right-of-way; and on the southeast by the Hunters Point Naval Shipyard. The southern portion of the Project is bordered on the southwest by Yosemite Avenue and Carroll Avenue and on the southeast by San Francisco Bay and Candlestick Park.

3. **Land Use History:** The Project vicinity was historically part of the tidal marshes and mudflats of San Francisco Bay. The history of the Yosemite Slough has been one of tidal habitat loss due to gradual filling for residential and industrial use. Development of the area began in the 1850s and filling of the tidelands continued through the 1950s and 1960s until the current shoreline became established in 1972. Light industrial and residential uses presently surround the Project area.

4. **Project Application:** On October 31, 2005, the Department submitted a Joint Aquatic Resource Permit Application (JARPA) for water quality certification and WDRs to restore tidal marshes, treat and/or remove contaminated soil hot-spots, and revegetate the site using native species. Water Board staff reviewed the JARPA application and provided comments that required additional project description, particularly on grading; planting, erosion, and sediment control plans; and other technical reports relevant to soil and/or groundwater investigation and remediation plans for the Project. The Department submitted an additional CEQA document on July 20, 2006, entitled Final Mitigated Negative Declaration and Notice of Completion for the Yosemite Slough Wetlands Restoration Project to complete its JARPA application.

5. **Project Description:** The purpose of the Project is to restore tidal wetlands on filled lands and associated transitional and upland habitats and to achieve the following benefits:

   - Increase tidally influenced wetlands along the Bay margin through the removal of historic bay fill and hence improve beneficial uses of waters of the State;
   - Restore habitat diversity by re-establishing tidal marsh in areas of upland fill;
   - Improve local foraging and roosting habitat for migratory and resident birds;
   - Improve quality of life for the surrounding community;
   - Remove and sequester contaminated soils to reduce potential for human and wildlife contact;
   - Enhance the local park so that people can visit and view wildlife habitat. The park will have a passive recreation area for picnicking and kite-flying and an environmental interpretive center, including restrooms and picnic benches;
   - Create an environmental area that local schools can use for field trips;
   - Attract visitors to the area thereby providing income for local businesses; and,
   - Extend the Bay Trail connection along the Candlestick Point Recreation Area to Hunters Point corridor.

6. The Project is comprised of three geographic zones, namely North A Area, North B Area, and South Area. The geographic zones will create approximately 12 acres of tidal wetland habitat. The existing acreage for each geographic zone and the tidal wetlands and uplands proposed for restoration are shown in Table 1 below:

Table 1 - Acreage of Existing and Future Wetlands and Uplands[4]

Geographic Zone	Existing Acreage	Total Acreage Restored	Restored Tidal Wetlands (acres)	Restored Upland (acres)
North A Area	10.48	8.93[1]	3.79	5.17
North B Area	13.38	11.13[2]	3.29	7.84
South Area	13.10	12.60[3]	4.94	7.66
Total	36.96	32.66	12.02	20.67

1. Acreage does not include paved areas (e.g., parking, street extension, Bay Trail)
2. Acreage does not include the passive recreation area of 2.5 acres
3. Acreage does not include the interpretative Center and associated parking
4. Note that all acreages are estimates and subject to change based on final construction drawings

7. The project design also provides two isolated bird nesting islands, including one specifically designed for special status species, nursery areas for fish and benthic organisms, transitional and upland areas to buffer sensitive habitats, public interpretative trails, viewpoints, and passive public use areas with an environmental interpretive center.

8. **Impacts to Jurisdictional Waters:** The Project will result in 1.2 acres of unavoidable temporary impacts to fringe wetlands and riprap to connect the restoration area to the Bay and Yosemite Slough and approximately 0.05 acres of permanent fill of tidal marsh and open waters. This permanent impact will be associated with the grading activities needed to create the transitions from open water to low marsh habitat and nesting bird islands. The vegetation present in the temporarily impacted jurisdictional areas includes the invasive *Spartina* hybrid *(S. alterniflora X S. foloisa)*, gum plant *(Grindelia)*, pickleweed *(Salicornia virginica)*, and saltgrass *(Distichlis spicata)*.

   The Department will implement effective best management practices to control erosion and sediment transport during grading of the restoration area. To reduce and protect habitat impacts during construction, the Department will isolate the work area by fencing, placing drainage mats to control run-off, and implementing dust control measures to prevent airborne material reaching open tidal lands. This Order requires the Department to submit a Stormwater Pollution Prevention Plan (SWPPP) prior to construction to ensure these potential impacts are effectively addressed.

9. **Mitigation:** The scope of the Project is to restore an historical fill area resulting in a net increase of 12 acres of wetlands and to enhance associated transitional habitats and natural upland areas.

10. **Specific Wetland Restoration Description:** The proposed wetland restoration will result in the excavation of fill along the northern and southern edges of

Yosemite Slough with the least intrusion into existing habitat as possible. The excavated areas will be graded to appropriate elevations suitable for the establishment of low marsh, mid marsh, high marsh, and transitional habitats.

The expanded low and mid marsh habitats will provide increased nesting and foraging habitat for seasonal birds (avifauna). Areas of cordgrass and low inter-tidal to mid-tidal ranges will provide habitat for the endangered California clapper rail *(Rallus longirostris obsoletus)*, and pickleweed and high marsh areas will provide habitat for the endangered salt marsh harvest mouse *(Reithrodontomys raviventris)*. The transitional areas and buffer zones would create refugia habitat during high tides, roosting habitat for raptors, and potential habitat for the salt marsh harvest mouse.

A principal feature of the proposed plan is the isolated bird nesting islands. The proposed sand, shell and rocky beaches on the islands will provide nesting habitat for a variety of summer nesting shorebirds such as the American avocet *Recurvirostra americana)*, black-necked stilt *(Himantopus mexicanus)*, and several species of terns. Isolation of the islands from the mainland by tidal channels will protect nesting birds from feral animal and human disturbance. Public access and trails are designed to limit intrusion into sensitive habitat areas.

The restoration site will be contiguous with the existing tidal wetlands, thereby increasing the area and the value of this wetland habitat. The wetland habitat created on the site will provide important functions and values including:

- Expand wetland habitat for wildlife;
- Increase supply of macro- and micro-invertebrates that are a food source for birds;
- Increase the upland vegetation buffer zone between the created and existing wetland areas and the adjacent residential and service areas;
- Increase bird watching opportunities, a passive recreational value, by expansion of existing wetlands through linkage with the restoration site;
- Improve water quality of run-off entering local waters through the water-filtering capabilities of native wetland vegetation;
- Establish plants on the site which will take up nutrients and transform them into organic plant tissues, thereby improving water quality and increasing food available for herbivores, detritivores, and other organisms;
- Create tidal habitat in a portion of San Francisco Bay Shoreline where this type of habitat is extremely limited; and,
- Increase sediment retention by restoring wetland vegetation.

11. **Soil and Groundwater Assessment:** On behalf of the Department, Northgate Environmental Management, Inc. (“Northgate”) conducted a Phase I site assessment in 2003 and 2004, and Phase II soil and groundwater investigations in January, September, and October 2004. The sampling and analysis program was designed to assess the quality of soil to be excavated (referred to as “cut soils”)

and potential reuse options for soils, including wetland and upland cover. In addition, groundwater investigations were conducted to assess whether chemicals have leached from soil to groundwater, and whether chemicals are migrating in groundwater. The soil and groundwater investigations included excavating 16 test pits, collecting over 200 soil samples; and collecting groundwater samples from ten borings and 17 monitoring wells. The samples were analyzed using US EPA analytical methods as shown in the following Table 2:

Table 2 – Soil and Groundwater Analytical Methods

	Analytical Methods[1]						
	Metals	TEPH	PAHs	SVOCs	PCBs	Pesticides	VOCs
Soil	EPA 6010, 7471A	EPA 8015	EPA 8270 SIM	EPA 8270	EPA 8082	EPA 8081	EPA 8260
Groundwater	EPA 6010, 7470A	EPA 8015	EPA 8270 SIM	na	EPA 8082	EPA 8081	EPA 8260

Notes:
[1] All samples were analyzed for selected metals. Selected samples were also analyzed for other parameters.
na: not analyzed
TEPH: total extractable petroleum hydrocarbons as gasoline, diesel, hydraulic oil, and motor oil
PAHs: polycyclic aromatic hydrocarbons
SVOCs: semivolatile organic compounds
PCBs: polychlorinated biphenyls
VOCs: volatile organic compounds

12. **Soil and Groundwater Analytical Results:** The soil analytical results were compared to Water Board screening criteria to assess the suitability of cut soil for reuse as wetland or upland cover for the wetland restoration. Soil investigation results indicated the presence of contaminants, such as copper, lead, nickel, zinc, total extractable petroleum hydrocarbons (TEPH), and polycyclic aromatic hydrocarbons (PAHs). Most of the metals detected, including chromium, arsenic, and selenium, were within the ambient background ranges or below environmental screening levels (ESLs) (SF Water Board 2005). Much of the fill soils at the Project site are chemically impacted to depths below the groundwater table. Based on the history of filling in the area, the chemical impacts to fill soils in the adjacent Bay margin are expected to be similar to those in the restoration area. These factors indicate that removal of all impacted soil would be infeasible.

Groundwater flow is generally toward the slough. Groundwater analytical results were compared to groundwater ESLs for protection of aquatic habitats (SF Water Board 2005). The groundwater investigation indicated that chemicals associated with the fill material were not leaching to groundwater with the exception of three metals (cobalt, lead, and nickel) at localized areas and TEPH in the northwest (North A) area and only TEPH in the northeast (North B) area. In the northwest area, nickel was detected in water samples at concentrations up to 400 microgram

per liter (µg/L), and TEPH was detected in one water sample at a concentration of 910 µg/L. However, additional groundwater investigations indicated that the detected chemicals were isolated and have not migrated in groundwater. In the northeast area, TEPH was detected at one location at a concentration of 11 milligrams per liter (mg/L). The soil in impacted areas will be excavated to remove sources of pollutants in groundwater that exceed groundwater ESLs for protection of aquatic habitats (SF Water Board 2005). The excavated soil from impacted areas will be treated on-site and reused or properly disposed of at an appropriate disposal facility. Excavated soil will be managed in a manner that is suitable for protection of upland recreational use and wetland aquatic habitat and is consistent with the soil management/reuse plan for the Project.

13. **Evaluation of Sediment and Pollutant Transport:** Yosemite Slough is located adjacent to the restoration area and in the general down-gradient groundwater flow direction from the planned restoration area. Sediments in this channel are being investigated and monitored by the City and County of San Francisco. The primary constituents detected in the slough sediments are lead, mercury, TEPH, PCBs, and pesticides. Although chemicals have been detected in the slough sediments, the concentrations generally tend to decrease in the shallower sediments, indicating that more recently deposited sediments have lower chemical concentrations (Noble Consultants, September 2005).

Dissolved phase transport of chemicals from surface water in the slough to groundwater in the restoration area is not considered to be a significant pathway for the following reasons: (a) the organic chemicals detected in sediments in the slough have low solubility and tend to be adsorbed to sediments; (b) the predominant groundwater flow direction is towards the slough; and, (c) these chemicals generally were not detected in groundwater samples collected from the restoration area adjacent to the slough.

However, chemical transport via movement of suspended sediment was assessed as a potential pathway for migration. Yosemite Slough was found to be a low-energy depositional environment based on a modeling study conducted by Noble Consultants in September 2005. To further reduce the potential for sediment transport from the slough to the restoration project, the overall elevation of the final restoration design surface was raised, as discussed in an April 27, 2004, meeting with Water Board staff.

The elevation of the final design wetland restoration areas is relatively high, with most areas higher than +5 feet NAVD. As a result, the restoration areas will only be inundated during high tides when the tidal currents are weak. Based on the modeling study (Noble Consultants, September 2005), most of the restoration areas will be inundated less than 20 percent of the time, with the maximum tidal current velocities less than 5 centimeters per second (or about 2 inches per second). The weak tidal currents in the restoration area will not likely induce any re-suspension of sediment or induce any noticeable erosion in Yosemite Slough. The modeling study (Noble Consultants, September 2005) also found that the wetland restoration areas were expected to be stable, with negligible bed erosion

or deposition. Therefore, noticeable tidal channels will not likely form on the top of the wetland restoration areas under typical tidal conditions.

Wave action during extreme storm events will induce erosion in part of the restoration areas. The modeling study (Noble Consultants, September 2005) indicated that maximum storm-induced erosion depth would vary between two to eight inches for parts of the restoration areas that are adjacent to the South Basin, the immediate basin located between Hunters Point and Candlestick Park. Therefore, deeper depths of over-excavation and backfill with clean material are recommended in these areas.

14. **Grading Plan to Restore Tidal Marsh:** The present tidally influenced area of Yosemite Slough is approximately 9.8 acres. Three embayments will be excavated from the banks of the slough, adding about 12 acres of tidally-influenced wetlands and marsh areas. Excavation along the northern boundary of the slough will occur with the least intrusion into existing slough habitat areas as possible. The proposed restoration project involves inland excavation only, with no dredging within the slough. To limit the disturbance of contaminated sediments and reduce potential for public contact, only limited grading will occur along the slough bank. As indicated in Finding 13 above, the restoration project is unlikely to increase mobility or mass transfer of contaminated sediment. The potential of cross contamination from Yosemite Slough to the Project is also expected to reduce when USEPA implements its emergency sediment removal and capping action in the slough in the summer/fall of 2007.

15. **Soil Testing/Management/Reuse:** Construction of the proposed wetland restoration will generate about 265,800 cubic yards (cy) of cut soils that will be managed according to applicable regulations. Excavated cut soils will be stockpiled and sampled at a targeted sampling frequency of one sample per 500 to 1,000 cubic yards. The sampling frequency may be adjusted as testing results become available, and based on field observations of the physical soil characteristics. The testing schedule is divided into two stages. Stage 1 analyses will include selected pollutants that were previously found to exceed screening criteria. Stage 1 will be performed on all excavated soil to determine the soil's potential suitability for reuse, treatment, or disposal. Stage 2 analyses will include tests of soil leachability, toxicity, and physical characteristics. Stage 2 will be performed only on soils designated for reuse or as required by the accepting disposal facility, and will be based on Stage 1 testing results. Cut soils that have the potential to leach pollutants to groundwater will be treated, as necessary, and reused as non-cover fill (e.g., deeper fill in restoration areas or below paved surfaces) or disposed off-site at an appropriate facility. During construction, soil will be managed in accordance with a Soil Handling Materials Management Plan (SHMMP) and erosion and sediment controls will be implemented in accordance with a SWPPP.

16. **Long-Term Monitoring/Maintenance**: The Department will prepare a Risk Management Plan (RMP) to describe erosion monitoring and long-term operation and maintenance requirements for the upland cover layer. The RMP will include

procedures to prevent disturbance to the upland cover layer. In the event that cover soils must be disturbed (e.g., for subsurface utility maintenance and repairs), the RMP will present the specific procedures for managing soil and shallow groundwater at the site in a manner that is protective of human health and the environment. The Department will monitor and maintain the wetland cover for erosion and will evaluate achievement of success criteria consistent with the Wetland Restoration and Monitoring Plan (WRA 2006).

17. The Water Board has determined to regulate the proposed discharge of fill materials into waters of the State by issuance of WDRs pursuant to §13263 of the California Water Code (CWC) and 23 CCR §3857, in addition to issuing certification pursuant to 23 CCR §3859. The Water Board considers WDRs necessary to adequately address impacts and mitigation to beneficial uses of waters of the State from this Project, to meet the objectives of the California Wetlands Conservation Policy (Executive Order W-59-93), and to accommodate and require appropriate changes over the life of the Project and its construction.

18. The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Water Board and approved by the State Water Resources Control Board, Office of Administrative Law and the U.S. EPA, where required.

19. Yosemite Slough and the associated wetlands of the Site are located in the San Francisco Bay Lower sub-basin. As defined in the Basin Plan, the existing beneficial uses for identified water bodies in the vicinity of the Site include:

- Ocean, commercial, and sport fishing;
- Estuarine habitat;
- Industrial service supply;
- Fish migration;
- Navigation;
- Preservation of rare and endangered species;
- Water contact recreation;
- Non-contact water recreation;
- Shellfish harvest; and,
- Wildlife habitat.

20. The Basin Plan Wetland Fill Policy (policy) establishes that there shall be no net loss of wetland acreage and no net loss of wetland value when the project and any proposed mitigation are evaluated together. Mitigation for wetland fill projects is to be located in the same area of the Region as the project whenever possible. The policy further establishes that wetland disturbance should be avoided and/or

minimized whenever possible. Mitigation for wetland loss should be considered only after avoidance and minimization have been determined to be infeasible.

21. The goals of the California Wetlands Conservation Policy (Executive Order W-59-93, signed August 23, 1993,) include ensuring "no overall loss" and achieving a "…long-term net gain in the quantity, quality, and permanence of wetland acreage and values…" Senate Concurrent Resolution No. 28 states that "[i]t is the intent of the legislature to preserve, protect, restore, and enhance California's wetlands and the multiple resources which depend upon them for benefit of the people of the State." Section 13142.5 of the CWC requires that the "[h]ighest priority shall be given to improving or eliminating discharges that adversely affect…wetlands, estuaries, and other biologically sensitive areas."

22. With the successful implementation of the mitigation measures described and required in the findings and provisions, respectively, the Water Board finds that the Project will comply with the California Wetlands Conservation Policy and Basin Plan Wetland Fill Policy referenced in Findings 20 and 21 above.

23. This Order applies to the temporary and permanent fill and indirect impacts to waters of the State associated with the Project.

24. The Department has submitted an Alternatives Analysis May 2006 to show that appropriate effort was made to avoid and then to minimize wetland disturbance as required by the Basin Plan. Water Board and federal agency staff held additional discussions with the Department regarding its Alternatives Analysis. The Water Board concurs with the conclusions of the Alternatives Analysis.

25. Discharges of stormwater associated with construction activities for the project are likely to occur during the Project's proposed grading and contaminated soil removal activities. The Department is responsible for obtaining appropriate permits for these discharges, including complying with the rules and regulations of National Pollutant Discharge Elimination System (NPDES) permit requirements for stormwater discharges during and after construction. The Project proponent must file a Notice of Intent to comply with the Statewide NPDES General permit for Discharges of Stormwater Associated with Construction Activity (Construction General Permit).

26. Because of the Project's proximity to the San Francisco Bay and Yosemite Slough, this Order requires the Department to submit a Storm Water Pollution Prevention Plan (SWPPP) for the Project at least 60 days prior to the beginning of construction for the Project.

27. Discharges of uncontaminated groundwater or other non-stormwater during construction may be required. This Order considers such discharges covered by the Construction General Permit, contingent on submittal of acceptable discharge plans at least 30 days prior to such discharge.

28. The California Environmental Quality Act (CEQA) requires all discretionary projects approved by public agencies to be in full compliance with CEQA, and requires a lead agency to prepare an appropriate environmental document (e.g., Environmental Impact Report or Negative Declaration) where necessary for such projects. The Department has prepared the "Final Initial Study and Mitigated Negative Declaration" (MND) for the Project and dated May 2006 and adopted it and filed a Notice of Determination on June 5, 2006. The Water Board, as a responsible agency, has reviewed the MND and finds that it is adequate and that all significant environmental impacts have been mitigated to a level of insignificance.

29. The Department submitted a Wetland Restoration and Monitoring Plan dated January 2006 for the Project. The plan proposes design, implementation, monitoring, and reporting schedules for the Project.

30. The Department has applied to the U.S. Army Corps of Engineers (Corps) for Nationwide Permit 27, *Wetland and Riparian Restoration and Creation Activities*, pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344) or Section 10 of the Rivers & Harbors Act 1899 for the Project.

31. The Water Board has notified the Corps, City and County of San Francisco, California State Parks Foundation, San Francisco Bay Conservation and Development Commission (BCDC), and other interested agencies and persons of its intent to prescribe WDRs and Water Quality Certification for this discharge.

32. The Water Board is issuing this Water Quality Certification and WDRs for the Project as described herein, pursuant to 23 CCR Sections 3857 and 3859.

33. **Wetland Tracker:** It has been determined through regional, state, and national studies that tracking of mitigation/restoration projects must be improved to better assess the performance of these projects, following monitoring periods that last several years. In addition, to effectively carry out the State's No Net Loss Policy for wetlands, the State needs to closely track both wetland losses and mitigation/restoration project success. Therefore, we require that the Department use a standard form to provide Project information related to impacts and mitigation/restoration measures. An electronic copy of the form and instructions can be downloaded at: http://www.waterboards.ca.gov/sanfranciscobay/certs.htm. Project information concerning impacts and mitigation/restoration will be made available at the web link: http://www.wetlandtracker.org.

34. *Spartina alterniflora* and its hybrids *(S. alterniflora X S. foliosa)* are the most widespread invasive *Spartina* species in the San Francisco estuary. *S. alterniflora* readily hybridizes with and out-competes the native California cordgrass, *S. foliosa*, and threatens this native cordgrass with local extinction. Surveys show that the invasive *Spartina* hybrids are rapidly spreading in the South, Central, and

North Bay regions. Populations appear to begin at the Bay and slough edges and move into the interior of marshes as the invasion progresses. Since the invasive hybrid occurs at the Project site, it is likely to invade the restored tidal marsh areas. Therefore, we require that the Department cooridnate with the Invasive Spartina Project to control the spread and eradicate this species from the Project site.

35. The Water Board, in a public meeting, heard and considered all comments pertaining to this Order.

36. Project files are maintained at the Water Board under file number 2169.6061 and site number 02-23-C0095.

IT IS HEREBY ORDERED that the Department, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, shall comply with the following, pursuant to authority under CWC Sections 13263 and 13267:

A. Discharge Prohibitions

1. The direct discharge of wastes, including soil, debris, concrete, asphalt, or other solid wastes into waters of the State or at any place where they would contact or would eventually be transported to surface waters, including flood plains, is prohibited.

2. The discharge of floating oil or other floating materials from any activity in quantities sufficient to cause deleterious bottom deposits, turbidity, or discoloration in surface waters is prohibited.

3. The discharge of silt, sand, clay, or other earthen materials from any activity in quantities sufficient to cause deleterious bottom deposits, turbidity, or discoloration in surface waters is prohibited.

4. The wetland fill activities subject to these requirements shall not cause a nuisance as defined in CWC § 13050(m).

5. The discharge of decant water from active dredging or fill sites and dredged material/wet sediment stockpile or storage areas to surface waters or surface water drainage courses is prohibited, except as conditionally allowed following the submittal of a discharge plan or plans as described in the Provisions.

6. The groundwater in the vicinity of the Project shall not be degraded as a result of Project activities or placement of fill for the Project. Groundwater wells other than those retained for their long-term monitoring service shall be properly destroyed to avoid any vertical conduits.

7. The discharge of materials other than stormwater, which are not otherwise regulated by a separate NPDES permit or allowed by this Order, to waters of the State is prohibited.

8. The discharge of drilling slurry to waters of the State, or where such slurry could be discharged to waters of the State, is prohibited.

B. Receiving Water Limitations

1. The discharges shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, dissolved, or deposited macroscopic particulate matter or foam in concentrations that cause nuisance or adversely affect beneficial uses;

   b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin; and

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological accumulation.

2. The discharges shall not cause nuisance, or adversely affect the beneficial uses of the receiving water.

3. The discharges shall not cause the following limits to be exceeded in waters of the State at any one place within one foot of the water surface:

   a. Dissolved Oxygen: 5.0 mg/L, minimum

      The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, then discharges shall not cause further reduction in ambient dissolved oxygen concentrations.

b. pH: The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH by more than 0.5 pH units.

c. Nutrients: Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause a nuisance or adversely affect beneficial uses.

C. Provisions

1. The Department shall comply with all Prohibitions, Receiving Water Limitations, and Provisions of this Order immediately upon adoption of this Order or as provided below.

2. The Department shall submit copies of all necessary approvals and/or permits for the Project to the Water Board prior to the start of construction. These includes, but are not limited to, permits from applicable government agencies, such as the Corps and BCDC for each Project component applicable to that component, prior to the start of construction on that component.

Project Implementation Deadlines

3. The Department shall submit a SWPPP for the Project, prepared pursuant to the Construction General Permit and acceptable to the Executive Officer, at least 60 days prior to the beginning of construction for the Project. Construction shall not begin until the Department has received the Executive Officer's written acceptance of the SWPPP.

4. The Department shall implement the wetland restoration, monitoring, and reporting plans as described in its 2005 JARPA application for water quality certification and the Wetland Restoration and Monitoring Plan (WRA 2006).

5. The Department shall submit a workplan including cut soil sampling frequency, soil and groundwater screening criteria, and feasible soil cleanup action consistent with the action goals established in Table 3 below to protect recreational use for upland areas and ecological habitat for the restored wetlands. The Department shall develop the workplan using the proposed action goals provided in Table 3 below. For surface cover with no "clean cover" brought to the site, no single soil sample shall exceed the values in column 1 of Table 3; and, on average for each Project area, the soil samples shall not exceed the values in column 2 of Table 3. In areas where imported backfill is required, the cover soil shall not exceed the values in column 3 in Table 3. The Department shall submit the required workplan at least 60 days before the start of Project construction. The workplan must be acceptable to the Executive Officer. Construction shall not begin until the

Department has received the Executive Officer's written acceptance of the workplan. If any pollutant concentration level in the reused or imported soil samples exceeds the action goals in Table 3 and the Department proposes to use that soil on the site, the Department shall submit a technical report to the Executive Officer at least 60 days prior to proposed placement demonstrating the Department's ability to comply with all other requirements of this Order and demonstrating that the material is unlikely to impact beneficial uses.

Table 3 - Yosemite Wetland Restoration Proposed Action Goals

Constituent	Wetland Not to Exceed Numbers[a]	Wetland Surface Average[c]	Hamilton Action Goals[d]
Metals *(mg/kg in dry weight)*			
Arsenic	70	15.3	23
Beryllium			1.68
Cadmium	9.6	1.2[b]	1.8
Chromium	370	112	149
Copper	270	68.1	88.7
Lead	218	43.2	46.7[b]
Mercury	0.43	0.43	0.58
Nickel	112	112	132
Selenium		0.64	
Silver	3.7	0.58	1.0
Zinc	410	158	169
Organochlorine Pesticides & PCBs *(µg/kg in dry weight)*			
DDTs, sum	46	7.0	30/24
Chlordanes, sum	2.3	2.3	.479
Dieldrin	0.72	0.72	
PCBs, sum	180	22.7	90
Polycyclic Aromatic Hydrocarbons *(mg/kg in dry weight)*			
PAHs, Total	4.022[b]	3.390	4.022
TPH-Diesel	500	144	144

[a] Effect-Range Median values taken from Long, E.R., D.D. MacDonald, S.L. Smith, and F.D. Calder, 1995, "Incidence of Adverse Biological Effects Within Ranges of Chemicals Concentrations in Marin and Estuarine Sediment," *Environmental Management*, 19:81-97.

[b.] Effect-Range Low values taken from Long, E.R., D.D. MacDonald, S.L. Smith, and F.D. Calder, 1995, "Incidence of Adverse Biological Effects Within Ranges of Chemicals Concentrations in Marin and Estuarine Sediment," *Environmental Management*, 19:81-97.

[c] Same as the Import Criteria for "Beneficial Reuse of Dredged Materials: Sediment Screening and Testing Guidelines," Water Board May 2000 staff report

[d] Site Cleanup Requirements in Order No. R2-2005-0034, July 20, 2005, California Regional Water Quality Control Board

6. The Department shall submit annual mitigation monitoring and maintenance reports acceptable to the Executive Officer on June 30 of each year after completion of construction. The annual reports shall be submitted for five years following construction of each phase or until the restored wetlands have met their performance standards and final success criteria, and the Executive Officer has accepted a notice of restoration completion for the Project. At the end of the fifth year after completion of construction, the restored wetlands shall meet the following success criteria:

   - Vegetation percent cover in the restored mid and high marsh weltand shall average at least 80 percent (80%) cover, excluding marsh panne habitat;
   - Vegetation percent cover in the restored low marsh wetland shall average at least 40 percent (40%) cover;
   - The restoration site shall be dominated by target tidal wetland plant species;
   - All restored tidal areas shall meet the Corps' 1987 manual wetland definition;
   - Survival of transitional upland buffer plantings shall exceed 80 percent (80%); and,
   - Invasive exotic plant species within the transitional upland buffer shall not exceed five percent cover.

   If the restoration and monitoring program indicates that establishment of the habitat is not progressing in a manner or at a rate consistent with the success criteria proposed and approved by the Executive Officer and as described in the Wetland Restoration and Monitoring Plan (WRA 2006), the annual mitigation monitoring reports shall evaluate the probable cause(s) of any problems and propose appropriate corrective measures.

7. As part of the long-term monitoring and maintenance plan, the Department shall submit a Risk Management Plan (RMP) 90 days prior to the beginning of construction. The RMP must be acceptable to the Executive Officer and shall describe erosion monitoring and long-term operation and maintenance requirements for the upland and wetland cover layers.

8. Not later than 60 days prior to commencement of each major phase of Project activities, as identified in Finding 1, the Department shall submit, acceptable to the Executive Officer, a schedule of Project implementation that includes the dates of impact and areas and lengths of wetlands and waters temporarily or permanently impacted, restored, and/or created. The Department shall notify the Water Board immediately upon deviation from the submitted schedule of implementation.

9. Following the end of each construction season (April 1 – October 31), and no later than December 31, the Department shall provide an updated summary detailing the extent of impacts to wetlands and waters, with dates and water bodies identified, as well as areas that have been restored during that year.

Other Provisions

10. Any substantive modifications to the Wetland Restoration and Monitoring Plan (WRA 2006) or other documents referenced in the Provisions must be approved in writing by the Executive Officer, prior to implementation of the modification.

11. All Reports pursuant to these Provisions shall be prepared under the supervision of suitable professionals registered in the State of California, if such registration is required or offered in the profession of the subject field.

12. The Department shall immediately notify Water Board staff by telephone whenever an adverse condition occurs as a result of this discharge. Such a condition includes, but is not limited to, a violation of the conditions of this Order, a significant spill of petroleum products or toxic chemicals, or damage to control facilities that would cause noncompliance. A written notification of the adverse condition shall be submitted to the Water Board within two weeks of occurrence. The written notification shall identify the adverse condition, describe the actions necessary to remedy the condition, and specify a timetable, subject to any modifications by the Water Board staff, for the remedial actions.

13. The Department is considered to have full responsibility for correcting any and all problems that arise in the event of a failure that results in an unauthorized release of waste or wastewater.

14. The Department shall at all times fully comply with the engineering plans, specifications, and technical reports submitted with its application for water quality certification and the completed report of waste discharge.

15. All discharges of groundwater or other non-stormwater during construction shall be covered under construction permit, contingent on submittal of an acceptable discharge plan at least 30 days prior to such a discharge.

16. Any hazardous, designated or non-hazardous waste as defined in Title 23, Division 3, Chapter 15 of the California Administrative Code, shall be disposed of in accordance with applicable state and federal regulations.

17. The Department shall clean up and abate any wastes that are discharged at any sites in violation of this Order.

18. In accordance with CWC §13260, the Department will submit to the Water Board a report of any material change or proposed change in the ownership, character, location, or quantity of this waste discharge. Any proposed material change in operation shall be reported to the Executive Officer at least 30 days in advance of the proposed implementation of any change. This shall include, but not be limited to, all significant new soil disturbances, all proposed expansion of development,

or any change in drainage characteristics at the Project site. For the purpose of this Order, this includes any proposed change in the boundaries of the area of wetland/waters of the Sate and/or United States to be filled.

19. The Department is required to use the standard Wetland Tracker form to provide Project information describing impacts and mitigation/restoration measures within 14 days from the date of adoption of this Order. The completed Wetland Tracker form with maps shall be submitted electronically to wetlandtracker@waterboards.ca.gov or shall be submitted as a hard copy to the Water Board, to the attention of Wetland Tracker.

20. The Department is required to coordinate with the Invasive Spartina Project to prevent the invasive *Spartina* hybrid from invading the restored tidal marsh areas and eradicated this invasive species from the Project site.

21. The following standard conditions apply to this Order:

    a. Every certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to CWC §13330 and 23 CCR §3867.

    b. Certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR §3855(b) and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

22. An annual fee for Waste Discharge Requirements pursuant to Section 13260 of the California Water Code is required and shall be paid by the Department in a timely manner.

23. The Department shall maintain a copy of this Order at the Project site to be available at all times to site operating personnel and agencies.

24. The Department shall permit the Water Board or its authorized representative at all times, upon presentation of credentials:

    a. Entry onto Project premises, including wetlands, uplands, or where records related to the Project are kept;

    b. Access to copy any records required to be kept under the terms and conditions of this Order;

    c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this Order; and,

d. Sampling of any discharge or surface water covered by this Order.

25. This Order does not authorize commission of any act causing injury to the property of another or of the public; does not convey any property rights; does not remove liability under federal, state, or local laws, regulations or rules of other programs and agencies, nor does this Order authorize the discharge of wastes without appropriate permits from other agencies or organizations.

26. The Water Board will consider rescission of this Order upon Project completion and the Executive Officer's acceptance of notices of completion of wetland creation and habitat restoration activities required or otherwise permitted now or subsequently under this Order.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on July 11, 2007.

_____

Bruce H. Wolfe
Executive Officer

References:

1. Final Initial Study Mitigated Negative Declaration, Candlestick Point State Recreation Area Yosemite Slough Restoration, WRA Environmental Consultants, May 2006.

2. Hydrodynamic Modeling, Wave Analysis and Sedimentation Evaluation for the Yosemite Canal Wetland Restoration Project San Francisco, California, Noble Consultants, Inc., September 2005.

3. Not-to-exceed screening criteria for the wetland cover layer consists of Effects Range-Median values (ER-Ms; Long, E.R., D. D. MacDonald, and F. D. Calder. 1995. Incidence of Adverse Biological Effects within Ranges of Chemical Concentrations in Marine and Estuarine Sediments. Environ. Manage. 19(1):81-97) for most chemicals.

   "Interim Sediment Screening Criteria and testing Requirements for Wetland Creation and Upland Beneficial Reuse," 2000 version.

4. Phase II Environmental Site Assessment Yosemite Slough Wetlands Restoration San Francisco, California, Northgate Environmental Management, Inc., February 11, 2005.

5. SF Water Board, February 2005, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater. Interim Final.

6. Wetland Restoration and Monitoring Plan Yosemite Slough, Candlestick Point State Recreation Area San Francisco County, California, WRA Environmental Consultants, January 2006.

Attachment A: Site Location Map

FIGURE 1
Site Location Map

Yosemite Slough
Wetlands Restoration
San Francisco, California
February 2005
Proj. No. 1116.02