San Francisco Bay Conservation and Development Commission
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BCDC ORIGINAL

PERMIT NO. 2003.007.03
(As Originally Issued on April 28, 2004,
As Amended Through December 18, 2020)
AMENDMENT NO. THREE (Time Extension)

California Department of Fish and Wildlife
Bay Delta Region (3)
2825 Cordelia Road, Suite 100
Fairfield, CA 94534

On April 15, 2004, the San Francisco Bay Conservation and Development Commission, by a vote of 17 affirmative, 0 negative, and 0 abstentions, approved the resolution pursuant to which the original permit had been issued. Moreover, on October 2, 2008, the San Francisco Bay Conservation and Development Commission, by a vote of 17 affirmative, 0 negative, and 0 abstentions, approved Amendment No. One to this permit. On September 20, 2010, and December 18, 2020, pursuant to Regulation Section 10822, the Executive Director approved Amendment Nos. Two and Three, respectively, to which this amended permit is hereby issued:

I. Authorization

A. **Authorized Project.** Subject to the conditions stated below, the permittee, the California State Department of Fish and Wildlife~~Game~~ (CDFW~~Fish and Game~~), is authorized to do the following:

1. **In the Bay (existing maintenance requirements previously authorized in BCDC Permit No. 1993.004.00 ~~4-93~~ to Cargill):**

   a. Use and maintain the existing dredge locks to allow equipment to enter salt ponds for maintenance (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill);

   b. Place riprap in the minimum amount necessary to protect existing levees, as approved according to Special Conditions II-F and II-M (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill);

   c. Repair and use docks on an in-kind, as needed basis, that does not result in a significant enlargement or increase of square footage (i.e., not more than 100 square feet) over that of the existing dock (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill);

d. Maintain, or replace in-kind, and use existing marine crossings (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill);

e. Provide native refugial cover several weeks prior to lock access, as needed to implement the best management practices, as described in the Special Conditions II-L and II-M herein (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill); and

f. Clean out, maintain, and use existing intake channels (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill).

2. **Within the 100-foot shoreline band (existing maintenance requirements previously authorized in BCDC Permit No. 1993.004.00 ~~4-93~~ to Cargill):**

a. Maintain and use water control structures and access facilities (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill); and

b. Store, on a temporary basis, shoreline protection materials in certain designated areas approved in writing by or on behalf of the Commission for levee protection purposes (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill).

3. **Within salt ponds (existing maintenance requirements previously authorized in BCDC Permit No. 1993.004.00 ~~4-93~~ to Cargill):**

a. Maintain and use in a serviceable condition, the salt pond levees owned or controlled by the permittee through the placement of material dredged from inside salt ponds or material imported in the minimum amount necessary to repair or protect levees (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill);

b. Maintain, or replace in-kind, and use existing improvements such as pumps, pumping facilities, culverts, pipes, siphons, electrical distribution lines, tide gate structures, fences, bridges, roads on salt pond levees, walkways, bulkheads, and similar facilities (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill);

c. Install and use new pipes, culverts, siphons, intake structures, electrical distribution lines for the permittee's operations, and pumping facilities, all involving the minimum fill necessary (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill);

d. Clean-out, maintain, and use existing intake channels, tide gates, brine ditches, and pumps into salt ponds (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill);

e. Dispose material dredged from salt ponds along the inside and top of salt pond levees to maintain levee configuration (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill);

f. Provide native refugial cover several weeks prior to lock access, as needed to implement the best management practices, as described herein in Special Conditions II-L and II-M (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill); and

g. Temporarily store shoreline protection materials at specific, dry land locations approved in writing by or on behalf of the Commission, for levee protection purposes (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill).

4. **Within salt ponds (Initial Stewardship Plan): Salt Pond Conversion:**

a. Convert the project area from a solar salt making production system to a variety of managed wetland habitats;

b. **Baumberg (a.k.a. Eden Landing Complex) 2 System (Ponds 1, 2, 4, and 7).** Construct, use and maintain the Baumberg 2 system with Bay water intake through four, new 48-inch-wide tide gates and through an existing pump station at Pond 1, and direct flow from Pond 7 to Pond 4 with outflow through two new 48-inch-wide tides gates at Pond 2, resulting in a total of approximately 1,961 cubic yards of fill covering 19,602 square feet (0.45 acres) of salt pond water surface area. Conduct adaptive management, as required, including managing Ponds 4 and 7 as high salinity batch ponds, if it is determined that additional higher salinity ponds are desirable (A batch pond does not have a direct hydrologic connection to the Bay, tidal sloughs or creeks and is not integrated into one of the series of ponds with continuous tidal circulation);

c. **Baumberg 2C System (Ponds 1C, 2C, 3C, 4C, 5, 5C, 6, and 6C).** Construct, use, and maintain the Baumberg 2C System by installing a new intake pump at Pond 6, circulating water through Ponds 6C, 5, 4C, and 3C, and discharging water through Pond 2C, resulting in a total of approximately 1,108 cubic yards of fill over 9,583 square feet (0.22 acres) of salt pond surface area. Use and maintain a second system through an existing intake pump at Pond 1C circulating water to Pond 5C and discharging through Pond 4C. Conduct adaptive management, if it is determined that additional higher salinity ponds are desirable, by operating Ponds 1C and 5C as high salinity batch ponds;

d. **Baumberg 6A System (Ponds 6A, 6B, and 8).** Construct, use, and maintain the Baumberg 6A System by installing a new 48-inch-wide tide gate at Pond 8, and a new outlet structure at Pond 6A, resulting in a total of approximately 521 cubic yards of fill over 2,613 square feet (0.06 acres) of salt pond surface area, and managing the ponds as seasonal ponds. Conduct adaptive management, if required, by managing Pond 6A as a muted tidal habitat during the summer;

e. **Baumberg 8A System (Ponds 8A, 8X, 9, 12, 13, and 14).** Use and maintain the Baumberg 8A System by installing four, new inlet 48-inch-wide tide gates from Mount Eden Creek into Pond 8A, as well as a new, 48-inch-wide discharge tide gate to Old Alameda Creek at Pond 8A, and circulating water through Ponds 8X and 9, resulting in a total of approximately 812 cubic yards of fill over 7,840 square feet (0.18 acres) of salt pond water surface area. Manage Ponds 12, 13, and 14 as seasonal habitat. Conduct adaptive management, as required, by managing Ponds 12, 13, and 14 as batch ponds, if it is determined that additional higher salinity ponds are desirable;

f. **Baumberg 11 System (Ponds 10 and 11).** Construct, use and maintain the Baumberg 11 System, consisting of new intake and outlet structures at Pond 10, which will result in a total of approximately 1,088 cubic yards of fill over 6,098 square feet (0.14 acres) of salt pond water surface area. Manage Pond 11 as seasonal habitat; ~~and~~

g. **Starter Channels.** Dredge approximately 96 cubic yards over 390 square feet to create starter channels in tidal areas in front of all outfall structures with the dredged material placed on adjacent pond levees~~.~~; and

h. Conduct in kind repair and maintenance of the structures described above on an as needed basis while additional phases of the restoration project is being conducted (Amendment No. Three).

5. **In the Bay (Phase One, Material Amendment No. One)**

a. Dredge approximately 17,370 cubic yards of material from 34,848 square feet (0.8 acres) of fringe tidal marsh to create pilot channels to connect salt ponds to the Bay (Complete).

6. **In Salt Ponds (Phase One, Material Amendment No. One) (See Exhibit A):**

a. **Eden Landing Complex, Ponds E8A, E8X, E9**

(1) Excavate approximately 251,620 cubic yards of material to breach levees, create pilot channels, internal channels and borrow ditches, lower internal levees, and accommodate water control structures;

(2) Use the excavated material to construct ditch blocks, raise or extend the outboard levees, realign levees, and resurface levee roads;

(3) Install an outboard water control structure consisting of a new culvert between Pond E8X and the northern extension of Pond E8X for management of Ponds E12 and E13;

(4) Place approximately 6,200 cubic yards of rock protection over 0.96 acres;

(5) Use low ground pressure or amphibious equipment to break up and/or remove the gypsum layer in Pond 8A and place the gypsum at the base of the Pond E9, E8X, and E14 levee; and

(6) Remove five water control structures in internal levees, at the northwest part of Pond E9, in the northeastern part of Pond E8A, and in the southern part of Pond E8X (Complete).

b. **Eden Landing Complex, Ponds E12 and E13**

(1) Excavate approximately 173,000 cubic yards of material to dig pilot channels and a distribution canal, and to accommodate water control structures;

(2) Use the excavated material to construct internal earthen berms and nesting islands, and to resurface levee roads;

(3) Install water control structures, one to convey flow into Ponds E12 and E13 from Mt. Eden Creek and North Creek, one between the mixing basin and Mt. Eden Creek, and one which is a pump station; and

(4) Install several 4-foot-wide-by-2-foot-high internal weir structures (of various lengths) in the check berms (Complete).

c. **Eden Landing Complex, Pond E14**

(1) Replace existing culverts in Pond E14 with new water control structures with tide gates and replace an existing culvert between Pond E9 and Pond E14 (Complete).

d. **Eden Landing Complex, Pond E10.** Place 34,000 cubic yards of material to realign a levee and widen Mount Eden Creek channel (Complete).

e. **Eden Landing Complex, Ponds E1, E2, E4, E5, E6, E6A, E7, and E8A (Amendment No. Two).** Import up to the 350,000 cubic yards of dredged material from Alameda County Flood Control District channels over a period of five years and distribute the material as needed in each pond to:

(1) Fill in borrow ditches;

(2) Raise pond elevations to support tidal marsh development;

(3) Create upland transition zone habitat; and

(4) Construct and/or raise internal levees and berms (Amendment No. Two) (Complete).

f. **Public Access Improvements (Phase One, Material Amendment No. One)**

(1) Construct, use and maintain approximately 3.8 miles of new public access trails at Ponds E12, E13, and E14, including two year-round trails and a seasonal trail, an interpretative station near the Oliver Salt Works, and two viewing areas to view the remains of three Archimedes screws; and

(2) Place a total of approximately 7,115 square-feet of pile-supported fill to construct a raised Oliver Saltworks viewing platform in Ponds E12 and E13, a kayak/boat launch at Ponds E12 and E13 along Mount Eden Creek to accommodate non-motorized small boats (e.g., kayaks and canoes) and small motorized craft for use in hunting, and two viewing areas (the Archimedes Screw and the Shoreline Viewing Areas) (Complete).

Table 1. Acreage to be Converted and Habitat Types Planned for Phase One (in acres)

Pond Complex	Pond	Planned Habitat Type	New Acreage	Anticipated Completion Date	Total Area
Eden Landing	Pond E8A, E9, and E8X	Tidal	630	2011	860
	Ponds E12 and E13	Reconfigured Managed Ponds	230	2012	
Total Area					**860**

Table 2. Approximate Existing Habitat and Habitat Areas Resulting from Phase One Conversion and Restoration Activities at Eden Landing (in acres)

Habitat Type	Existing Habitat Area	Habitat Area (after Phase One and Initial Facilities)
Salt Ponds	4,420	3,560
Tidal Marsh	600	1,230
Reconfigured Managed Ponds	0	230
Total Project Area	**5,020**	**5,020**

Table 3. Approximate Area and Length of Public Access to be Upgraded and/or Constructed for Phase One.

Public Access Type	Eden Landing Complex		TOTAL (Square Feet)
	Miles	Square Feet	
Existing Trails to be Upgraded	0	0	**0**
New Trails to be Built	3.8	300,960	**300,964**
Area of New Public Access Amenities	NA	7,115	**7,115**
TOTAL	**3.80**	**308,075**	**308,079 (3 Acres)**

NOTE: Public access trails will be 15 to 20 feet wide0; trail area calculations in the public access tables are based on an average width of 15 feet.

Table 4. Approximate Fill Volume and Area for Phase One Activities.

Fill Purpose	Pond E8A/E8X/E9		Pond E12/13		Pond E10		TOTAL (Square Feet)
	Cubic Yards	Square Feet	Cubic Yards	Square Feet	Cubic Yards	Square Feet	
Fill in The Bay	0	0	0	0	0	0	**0**
Fill for Levees	108,610	2,782,204	51,430	783,322	34,000	46,715	**3,612,241**
Fill for Berms/Rock Protection	0	0	80,000	153,390	0	0	**153,390**
Fill for Salt Pond Bottoms	39,970	45,511	56,000	2,408	0	0	**47,919**
Fill for Water Control Structures	10	4,334	22,000	3,058	0	0	**7,392**
Fill for Nesting Islands	0	0	15,000	58,966	0	0	**58,966**
Fill for Public Access (pile supported)	0	0	NA	5,693	0	0	**5,693**
Fill for Public Access (floating)	0	0	NA	344	0	0	**344**
TOTAL	148,590	2,832,049	224,430	1,007,181	34,000	46,715	**3,885,945 (89 Acres)**

B. **Application Dates.** This authority is generally pursuant to and limited by the CDFW ~~DFG~~'s application received on August 19, 2003 and September 12, 2003, for the original permit, ~~and~~ its application dated January 25, 2008, requesting Material Amendment No. One, ~~and~~ it's letter and email dated July 2, 2010, and November 4, 2020, requesting Amendment Nos. Two and Three, respectively, including all accompanying and subsequently submitted correspondence and exhibits, particularly the EIR/EIS for the South Bay Salt Ponds Initial Stewardship Plan and for Phase One of the South Bay Salt Pond Restoration Project, but subject to the modifications required by conditions hereto.

C. **Deadlines for Commencing and Completing Authorized Work.** The work authorized by Amendment No. One ~~must~~ was to commence by November 1, 2011 or this permit would have ~~will~~ lapsed and become null and void. All work was to ~~must also~~ be diligently pursued to completion, and ~~must be~~ completed by November 1, 2020 unless an extension of time is granted by amendment of this permit. The work authorized by Amendment No. Two was to ~~must~~ commence by November 1, 2011 and be diligently pursued to completion by November 1, 2016, unless an extension of time is

granted by further amendment to this amended permit. The work authorized by Amendment No. Three (maintenance activities previously authorized for Cargill in BCDC Permit No. 1993.004.00 and in-kind maintenance of existing structures) must commence prior to December 31, 2021 and must be diligently completed by February 1, 2024.

D. **Project Summary.** The ISP portion of the project involved the installation of 24 new water control structures, including intake and outlet structures, and additional pumps, resulting in approximately 5,091 cubic yards of fill covering 44,867 square feet (1.03 acres) of salt pond surface area. Amendment No. One authorizes Phase One of the South Bay Salt Ponds Restoration Project and will convert 630 acres of salt ponds to full tidal action and 230 acres of salt ponds to managed pond habitat. Phase One actions will result in approximately 407,020 cubic yards of fill in the Commission's salt pond jurisdiction (both in the Alviso and Ravenswood salt pond complexes) covering approximately 3,885,945 square feet (89 acres) of area (Material Amendment No. One). Amendment No. Two authorizes the placement of an additional 350,000 cubic yards of dredged material imported from Alameda County Flood Control District's flood control channels over a period of five years (Amendment No. Two). The work authorized by Amendment No. Three extends the period in with CDFW is authorized to conduct maintenance activities that were previously authorized for Cargill in BCDC Permit No. 1993.004.00, and in-kind maintenance of the structures authorized in the interim stewardship plan, and the Phase I restoration until February 1, 2024 (Amendment No. Three).

II. Special Conditions

The amended authorization made herein shall be subject to the following special conditions, in addition to the standard conditions in Part IV:

A. **Specific Plans and Plan Review**

1. **Plan Review**. No work whatsoever shall be commenced pursuant to this amended authorization until final precise site, public access, engineering, restoration, and grading plans and any other relevant criteria, specifications, and plan information for that portion of the work have been submitted to, reviewed, and approved in writing by or on behalf of the Commission. The specific drawings and information required will be determined by the staff. To save time, preliminary drawings should be submitted and approved prior to final drawings.

    a. **Site Plans**. Site, public access, engineering, restoration, and grading plans shall include and clearly label the five-foot contour line above Mean Sea Level (the Mean High Tide Line, or the inland edge of marsh vegetation up to five feet above Mean Sea Level in marshland), property lines, the boundaries of all areas currently reserved for public access purposes, grading, details showing the location, types, dimensions, and materials to be used for all structures, public access improvements, water control structures, fences, and other improvements. In addition to the information listed above, the site plan shall provide a dimension line which marks the minimum distance between a

proposed structure authorized by this permit and the Mean High Water Line (or, if marsh is present, the inland edge of marsh vegetation up to 5 feet above mean sea level NGVD (National Geodetic Vertical Datum) or North American Vertical Datum (NAVD). Additional dimension lines shall be provided, as necessary, to locate where this minimum dimension occurs in relation to either the property line, the top of bank, or some other fixed point upon the site.

b. **Engineering Plans**. Engineering plans shall include a complete set of contract drawings and specifications and design criteria. The design criteria shall be appropriate to the nature of the project, the use of any structures and soil and foundation conditions at the site. Final plans shall be signed by the professionals of record and be accompanied by:

   (1) Evidence that the design complies with all applicable codes; and

   (2) Evidence that a thorough and independent review of the design details, calculations, and construction drawings has been made.

c. **Plan Approval.** Plans submitted shall be accompanied by a letter requesting plan approval, identifying the type of plans submitted, the portion of the project involved, and indicating whether the plans are final or preliminary. Approval or disapproval shall be based upon:

   (1) completeness and accuracy of the plans in showing the features required above, particularly the Mean High Tide Line, or the inland edge of marsh vegetation up to a line five feet above Mean Sea Level in marshland, property lines, and the line 100-feet inland of the Mean High Tide Line, or a line five feet above Mean Sea Level in marshland, and any other criteria required by this authorization;

   (2) consistency of the plans with the terms and conditions of this amended authorization;

   (3) the provision of the amount and quality of public access to and along the shoreline and in and through the project to the shoreline required by this authorization to ensure: (a) the public's use and enjoyment of the access areas; (b) public safety; (c) accessibility for persons with disabilities; (d) sufficient durability and maintenance; and (e) the access is clear and continuous and encourages public use (Material Amendment No. One);

   (4) assurance that any fill in the Bay does not exceed this amended authorization and will consist of appropriate shoreline protection materials, as determined by or on behalf of the Commission;

   (5) consistency of the plans with the recommendations of the Design Review Board;

   (6) assurance that appropriate provisions have been incorporated for safety in case of a seismic event; and

2. **Future Board Review.** All public access facilities required herein shall be reviewed by or on behalf of the Commission's Design Review Board (Board) prior to submittal of construction documents to the staff for final plan approval pursuant to Special Condition II-A-1. It is anticipated that Board review will focus on project advertising at the site, such as a billboard, and the design vocabulary of site furnishings and other public facilities, including but not limited to overlooks, restrooms, seating, fencing, trash cans, interpretive signage and public access signage. The required drawings presented to the Board shall be determined by the Commission staff (Material Amendment No. One).

3. **Conformity with Final Approved Plans**. All work, improvements, and uses shall conform to the final approved plans. Prior to any use of the facilities authorized herein, the appropriate design professional(s) of record shall certify in writing that, through personal knowledge, the work covered by the authorization has been performed in accordance with the approved design criteria and in substantial conformance with the approved plan. No noticeable changes shall be made thereafter to any final plans or to the exterior of any constructed structure, outside fixture, lighting, landscaping, signage, landscaping, parking area, or shoreline protection work without first obtaining written approval of the change(s) by or on behalf of the Commission.

4. **Discrepancies Between Approved Plans and Special Conditions**. In case of any discrepancy between final approved plans and Special Conditions of this permit, the Special Condition or the legal instrument shall prevail. The permittee is responsible for assuring that all plans accurately and fully reflect the Special Conditions of this amended authorization.

B. **Marsh Restoration Plan for Phase One (Material Amendment No. One)** Prior to the commencement of any work in Phase One, the permittee shall submit a marsh restoration plan and program, to be approved by or on behalf of the Commission for the restoration and enhancement of the site. The plan shall contain the following:

1. **Site Conditions and Modifications.** A topographic map of the site in one-foot contours and a topographic map showing the proposed modifications. All elevations shall be relative to National Geodetic Vertical Datum (NGVD) or North American Vertical Datum (NAVD). The map shall include typical cross-sections showing proposed elevation of marsh plain, any channels, and any high spots. The map shall show: (1) figures for the ratios of typical horizontal to vertical slopes for existing and proposed marsh surface, channels, and sloughs; (2) proposed plant species along the cross-sections according to their expected zone of growth; (3) the elevation of adjacent surrounding properties; and (4) the estimated tidal range related to Mean Higher High Water, Mean High Water, Mean Lower Low Water, Mean Sea Level, the maximum predicted tide, and the 100-year tide. To promote natural sedimentation, channel formation, and plant colonization of the site, constructed elevations shall generally be six to twelve inches below target elevations.

2. **Levee Breaches.** For any levee breaches, the program shall show calculations for determining the size of any levee breach or pipe to be installed, including any tide control structure to be installed to control the amount of water entering at various tidal stages. The program shall indicate the amount of any cut and fill activities, the amount of material to be placed to strengthen the levee, and the expected tidal exchange. The expected tidal range shall indicate predicted expectations both inside and outside the levee breach. If plants will be used to protect the levee from erosion or undercutting, the program shall specify the type of plants to be used. If plants will not be used, the program shall describe how the breach will be protected from erosion and undercutting. If any inlet-outlet structure is to be used, the program shall include a detailed drawing of such structure(s) with a schedule of operation, inspection and maintenance.

3. **Soil and Water Information**. The program shall include a report identifying the type of soils found at the site and the soil type of any fill to be imported to the site. Information shall be provided on the quantitative soil measurements of salinity, pH, organic content, and bulk density.

4. **Schedule.** The program shall include a schedule indicating when excavation, fill, and grading will occur, the time to be allowed for settlement, the time when levee breaches or inlet structures will begin to function and the time when planting will occur. The program shall include an estimate of the extent of expected sedimentation over a fifteen-year period.

C. **Monitoring**

1. **Mitigation, Monitoring, and Maintenance Plans and Reports (maintenance report previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill)**

   a. **Mitigation and Monitoring Plan.** By October 1, 2004, the permittee shall submit for review and approval by or on behalf of the Commission a Mitigation and Monitoring Plan for the project that provides: (1) a list of all of the mitigation measures required for the project, as determined necessary in the environmental document and as a result of agency approvals and consultations; and (2) a list of all the monitoring, and its required frequency, that will be conducted, as determined necessary within the environmental document and as a result of approvals from and consultations with agencies, such as those required by the Regional Water Quality Control Board.

   b. **Annual Mitigation, Monitoring, and Maintenance Report.** Every year on April 15th, a report shall be submitted to the Commission that provides the following information: (1) results of all mitigation implemented for that year, including the findings of any surveys; (2) the methodology and results of all monitoring conducted for that year; and (3) all maintenance conducted within that year, including information on the location, extent, and type of work undertaken by or on behalf of the permittee pursuant to this permit. In addition, the report should include the environmental impact reduction or avoidance measures used in compliance with the Best Management Practices listed in Special Conditions II-L and II-M.

c. **Pre-Notification of Proposed Maintenance Activities.** Every year on April 15th, a report shall be submitted that includes: (a) information on all maintenance proposed for the next year, including information on the location, extent, and type of work proposed to be undertaken by or on behalf of the permittee pursuant to this permit; (b) supplemental notification regarding dredge locks and levees to be maintained in the next June 1 to May 31 maintenance cycle to provide the Commission and other relevant agencies with a minimum of 10 months for review of proposed dredge lock use and maintenance. The report shall include: (i) a site map indicating the locks to be accessed, likely areas of levee maintenance and proposed equipment to be used; and (ii) a list of special status species known to be present and proposed measures to reduce and/or avoid impacts to known species. Simultaneously, the permittee shall stake for agency review, the lock access channel, sediment placement areas and areas proposed for stockpiles. Combined with the reporting required in Section II-C, this notification shall provide the Commission and other interested parties with a rolling 10-month advanced notification of proposed dredge lock use and maintenance activities.

d. The Commission staff shall respond in writing within 60 days of the submittal of the three reports, described above, after reviewing with other public agencies, interested organizations, and individuals. The Executive Director may withhold approval of one or more items of the proposed work or may impose additional Best Management Practices to reduce or avoid significant impacts to special status species. A separate permit may be made by the permittee for any proposed work that has not been approved by the Executive Director.

2. **Initial Stewardship Plan (ISP) Monitoring and Management**

a. **Salinity.** To avoid water quality impacts from increased salinity outputs from the initial release, permittee shall: (1) conduct pre-discharge and post-discharge monitoring; and (2) if monitoring identifies the potential for significant impacts to benthic invertebrates, operational changes in releases, such as slowing the rate of discharge, shall be made. This modified operation would decrease the maximum predicted salinity conditions, but may extend the period where more discharge would contain moderate increased salinity.

b. **Metals.** To avoid total mercury in discharged water and receiving water from exceeding total mercury water quality objectives and temporary impacts on water quality, the permittee shall monitor the discharges and receiving waters for exceedances of the mercury objective. If mercury exceeds predicted levels in the receiving waters by more than 10 percent, the permittee shall contact the Regional Board and the Commission, and an adaptive management strategy shall be devised to reduce mercury levels. Mitigation measures may include temporarily slowing discharge or additional dilution.

c. **Dissolved Oxygen.** To avoid decreased dissolved oxygen in ponds relative to the receiving waters due to increased algal activity in ponds, the permittee shall monitor the ponds, effluent, and receiving waters to determine the water quality

objectives are being met. During the implementation of the ISP actions (under the original permit), the CDFW ~~DFG~~ unsuccessfully attempted to implement several mitigation measures, discussed in the special conditions for Water Quality in the original permit for the implementation of the ISP, to address dissolved persistent low oxygen levels in several of the ponds. As Phase One actions are implemented, ~~I~~if monitoring shows that water quality objectives are not being met, then other management alternatives will be investigated and implemented to address and improve low dissolved oxygen levels (Material Amendment No. One).

d. **Turbidity**. To avoid discharges of pond water resulting in a greater than 10 percent increase in turbidity of receiving water and adversely affecting water quality and biota in adjacent waterways, the permittee shall monitor discharged water at discharge points of pond systems with known elevated turbidity and slow the discharge of water when the turbidity variance between the discharging water and the receiving water exceeds 10 percent.

e. **Temperature**. To avoid discharges that exceed the natural temperature of receiving waters by 20° Fahrenheit (F) and cause temperatures to rise greater than 4°F above the natural temperature of the receiving water at any time or place, the permittee shall monitor discharged water at discharge points of pond systems with known elevated temperatures and slow the discharge of To avoid deviations from the water quality objectives for pH, the ponds, effluent, and receiving waters shall be monitored by the permittee to determine if deviations from the water quality objectives are occurring. During the implementation of the ISP actions (under the water when the temperature variance between the discharging water and the receiving water exceeds 20º degrees Fahrenheit.

f. **pH.** To avoid deviations from the water quality objectives for pH, the ponds, effluent, and receiving waters shall be monitored by the permittee to determine if deviations from the water quality objectives are occurring. During the implementation of the ISP actions (under Amendment No. Four), the CDFW ~~DFG~~ unsuccessfully attempted to implement several mitigation measures, discussed in the special conditions for Water Quality in the original permit for the implementation of the ISP, to address poor pH conditions in several of the ponds. As Phase One actions are implemented, ~~I~~if monitoring shows deviations from the water quality objectives, then other management alternatives will be investigated and implemented to address and improve pH conditions (Material Amendment No. One).

g. **Sediments.** To determine if the mobility and bioavailability of inorganic contaminants have increased within project ponds, the permittee shall conduct pre-project sampling of sediments from specific ponds, in accordance with the project Additional Sediment Sampling Analysis Plan and Conduct post-implementation monitoring in areas with elevated concentrations of inorganics to determine whether conditions are occurring that would increase contaminant mobility (e.g., methylation, acidification, or oxidation of sediments, or visual

observation of increased drying or wetting/drying cycles). If post-implementation monitoring indicates the presence of conditions that would increase contaminant mobility, the permittee shall implement water management measures to mitigate these conditions.

3. **Phase One Monitoring and Management (Material Amendment No. One)**. Monitoring of Phase One improvements shall substantially conform to the "South Bay Salt Pond Restoration Project Phase I Monitoring Plan," as revised August 14, 2008 and prepared by H.T. Harvey and Associates. In addition to the parameters outlined in the aforementioned monitoring plan, CDFW ~~DFG~~ shall monitor Phase One public access improvements and associated parking areas serving this public access. Public access monitoring data to be collected is described below in Special Condition II-C-3. Monitoring for Phase One actions shall be conducted for 15 years from the time at which on-the-ground restoration work is completed for each part (i.e., each pond system) of Phase One project and shall include:

   a. **Sedimentation.** Provisions for monitoring sedimentation in all Phase One ponds using sedimentation pins or plates and staff gauges. A minimum of four sedimentation pins or plates shall be installed in the ponds to be monitored.

   b. **Erosion.** A plan for monitoring the effects of the project on increasing erosion and scour within the ponds and in adjacent channels, fringe marsh and surrounding areas.

   c. **Water Quality.** A water-quality monitoring program that shall, at a minimum, monitor pH, salinity, dissolved oxygen, turbidity, temperature, contaminants, and suspended sediment in the restoration area. Water quality monitoring shall substantially conform to the elements of the "South Bay Salt Pond Restoration Project Phase I Monitoring Plan," to ensure that water quality in the project area meets the Basin Plan's Water Quality Objectives as established by the San Francisco Bay Regional Water Quality Control Board to the maximum extent possible.

   d. **Vegetation.** In areas within the project site where tidal action has been restored, vegetation monitoring shall include determining the amount of vegetation establishment at the restoration site using aerial photographs and ground-truthing of the plant species established until it is determined that the site has achieved 20% cover of tidal marsh vegetation. These aerial photos will be included in the monitoring report. Once marsh vegetation has become established on 20% of restored ponds, vegetative transects or other suitable surveys may be conducted to provide more detailed information on vegetation cover, including species present, percentage of the site vegetated, approximate percentage representation of different plant species and a qualitative assessment of anticipated plant colonization.

e. **Bird Surveys.** Provisions for monitoring the use of the site by bird species including bird surveys conducted four times a year, two at high tide and two at low tide for the first five years following the completion of restoration activities and then every other year for the remainder of the monitoring period.

f. **Fish.** The fish monitoring plan shall follow the protocols developed in coordination with the National Marine Fisheries Service (NMFS).

g. **Invasive Plant Control.** Monitoring reports submitted to the Commission pursuant to the approved monitoring plans shall report on all eradication efforts conducted on the site for invasive plant species such as non-native *Spartina*, broom and thistle as well as any efforts to control other invasive plant species on site. The SBSPR Project team shall work with the San Francisco Estuary Invasive Spartina Project to monitor and control introduced and invasive *Spartina*, in order to ensure regional coordination. During the 15-year monitoring period, the permittee shall control non-native *Spartina* species and reasonably control such undesirable non-native species as star thistle and broom. Reasonable efforts shall be made to eradicate and/or control invasive species such as pampas grass, giant reed, and various species of broom for the duration of the monitoring period where feasible. Other invasive species of concern, such as *Lepidium*, wild radish, etc., shall be monitored and, should funding become available and if the eradication and/or control attempts are deemed appropriate, eradication and/or control attempts shall be implemented over the course of the monitoring period.

h. **Public Access.** The permittee shall conduct Applied Studies numbers 16, 17, and 18 from Appendix D of the Adaptive Management Plan in order to monitor public access to address the following concerns:

(1.) Whether boating activities adversely affect bird populations, harbor seals, and other target species. Monitoring activities shall include species richness and abundance in boater and non-boater areas, effects on nesting birds, and immediate behavioral and movement responses from harbor seals especially at seal haul-out and pupping sites;

(2.) Whether landside public access adversely affect birds and other target species on short and long timescales. Monitoring activities shall include bird buffer distances, sustained changes in abundance and/or species richness, availability and quality of impacted and non-impacted habitat;

(3.) Whether the public access features provided in Phase One meet the recreation and access needs of the public over short and long timescales. Monitoring activities shall include surveys administered to the public to assess demographic parameters, the frequency, locations, and types of recreation activities in which the public engages, the types of recreation activities desired, and the public's knowledge of the SBSPR Project; and

(4~~.~~) Whether parking facilities for Phase One public access areas are adequate, the permittee shall monitor usage of the 58-space parking area, located near the kayak/boat launch to Mt. Eden Creek being built as part of the restoration plan for the northern 835 acres of the Eden Landing Ecological Reserve (ELER), during regular workdays and holidays.

Monitoring of public access areas shall occur at least every five years over the fifteen-year monitoring period.

i. **Methylmercury Concerns.** To aid in the understanding of mercury methylation at the site and to inform future adaptive management strategies that may be proposed to remedy excess methylmercury accumulation at the site, if it occurs, the permittee shall do the following:

(1~~a.~~) By September 1, 2009, the permittee shall submit and receive approval, by or on behalf of the Commission, of a methlymercury monitoring program for the project. The program shall at a minimum include the following: (a~~1~~) methods that will be employed to assess methylmercury accumulation at the site, particularly in sentinel species, the frequency and timing of sampling, and a schedule for reporting results of the monitoring; (b~~2~~) provisions for the creation or use of an existing Methlymercury Technical Advisory Committee (MTAC) that shall include representatives from BCDC, RWQCB, and methylmercury experts such as U.S. Geological Service (USGS) and the San Francisco Estuary Institute (SFEI); (c~~3~~) provisions for implementing adaptive management techniques to remedy methylmercury accumulation if and when such techniques have been developed. Approval or disapproval of the monitoring program shall be made by or on behalf of the Commission in consultation with the MTAC, in particular the RWQCB; and (d~~4~~) implementation within a reasonable time of the plan once it is approved by the Commission.

(2~~b.~~) The permittee shall continue to make the project site available to researchers and scientists and continue to encourage methylmercury research at the site. To this end, the CDFW ~~DFG~~ shall report to the Commission and the RWQCB annually, beginning December 31 of the year following breaching of the levees at all ponds, on the results of methylmercury research at the site and any future research proposals or opportunities, and the status of efforts to gain the necessary funding of studies to help manage the methylation of mercury in the newly restored ponds.

j. **Monitoring Reports.** Monitoring reports describing the data collected pursuant to the approved restoration plan shall be submitted annually beginning on July 1, one year following the completion of restoration activities for each part (i.e. each pond) of the Phase One improvements. Monitoring reports shall continue for 15 years post-construction for each pond.

k. **Relevant Monitoring Data.** The permittee shall provide all monitoring information and data from other studies conducted on the site including but not limited to CalFed, U.S. Army Corps of Engineers (Corps), Ducks Unlimited, and Wildlife Conservation Board-funded studies.

D. **Adaptive Management Plan (Material Amendment No. One).** This amended permit authorizes specific facilities, public access, fill quantities, fill locations and coverage. Furthermore, this amended permit contains conditions specifying construction practices, timing, and mitigation measures. It is anticipated that operational experience with Phase One facilities will suggest modifications to the facilities and their management authorized herein. Modifications shall substantially conform to the process described in the "Adaptive Management Plan" (Appendix D in the South Bay Salt Ponds Restoration Project Final EIS/R) dated December 2007 and prepared by Lynne Trulio and the South Bay Salt Pond Restoration Project Science Team, which identifies, for each monitoring activity, restoration targets, expected time frames for decision-making, and management triggers to determine when Phase One activities are not performing as expected. Prior to installing any facilities or improvements, modifying any public access improvements, including the location, availability and use, placing additional fill for ditch blocks, roosting islands, or raising pond bottoms, constructing new pilot channels, or other modifications to adaptively manage Phase One ponds, CDFW ~~DFG~~ shall consult with Commission staff to determine if such modifications are consistent with the Commission's laws and policies and, if so, whether the modifications can be approved through plan review (Special Condition II-A), or if they will require an amendment to this amended permit (Material Amendment No. One).

E. **Public Access.** Within six months of completing the Phase One habit restoration activities, or by November 1, 2013, whichever is earlier, the permittee shall provide the following public access improvements:

1. **Phase One Improvements (Material Amendment No. One)**. Public access improvements in the Eden Landing pond complex shall be located in the northern portion of the pond complex, will link to a Bay Trail spine segment and parking area that will be constructed in 2008 as part of a separate restoration project at an adjacent area of the Eden Landing pond complex, and shall include:

   a. Approximately 3.8 miles of new trail at the Eden Landing ponds E12, E13, and E14 (See Exhibit B), consisting of 2.3-miles of year-round trails and a 1.5-mile seasonal loop trail with portions subject to seasonal closure for nesting birds~~.~~; ~~and~~

   b. An interpretive station/overlook and watercraft launch area with vehicular access at Mt. Eden Creek; ~~and~~

   c. A raised viewing platform and interpretive station at the historic Oliver Saltworks and two at-grade viewing areas with interpretive signage and bench seating~~.~~; and

d. The USFWS will ensure that all Phase One public access trails and amenities are constructed or upgraded provide barrier-free access either during the implementation of Phase One actions or within a reasonable period of time after the completion of Phase One.

2. **Temporary Impacts to Public Access.** To minimize the temporary effects on public access to and recreational use of the project areas, the permittee shall implement the following measures: (a) before construction, the contractor shall develop, in consultation with the appropriate representatives of the permittee, a Public Access Plan indicating how public access to the Bay Trail and nearby roads, trails, paths, and park areas shall be maintained, if possible, during construction; (b) during construction, limit access restrictions to specific areas surrounding the construction activities and limit such restrictions for the minimum period necessary. Once the activities are completed, public access shall resume as before; and (c) if needed, flaggers shall be stationed near the construction activity areas to direct and assist members of the public around these areas and signs shall be posted explaining how long the public access path will be affected and showing possible detours.

3. **Reasonable Rules and Restrictions.** The permittee may impose reasonable rules and restrictions for the use of the public access facilities authorized herein to correct particular problems that may arise. Such limitations, rules, and restrictions shall have first been approved by or on behalf of the Commission upon a finding that the proposed rules would not significantly affect the public nature of the area, would not unduly interfere with reasonable public use of the public access areas, and would tend to correct a specific problem that the permittee has both identified and substantiated. Rules may include restricting hours of use and delineating appropriate behavior.

4. **Maintenance.** The areas and improvements within the Phase One project area shall be permanently maintained by and at the expense of, the permittee or its assignees. Such maintenance shall include, but is not limited to, repairs to all path surfaces; replacement of any trees or other plant materials that die or become unkempt; repairs or replacement as needed of any public access amenities such as signs, benches, drinking fountains, trash containers and lights; periodic cleanup of litter and other materials deposited within the access areas; removal of any encroachments into the access areas; and assuring that the public access signs remain in place and visible. Within 30 days after notification by staff, the permittee shall correct any maintenance deficiency noted in a staff inspection of the site.

F. **Riprap**

1. **Riprap Material.** Riprap material shall be either quarry rock or specially cast or carefully selected concrete pieces free of reinforcing steel and other extraneous material and conforming to quality requirements for specific gravity, absorption, and durability specified by the California Department of Transportation or the U. S. Army Corps of Engineers. The material shall be generally spheroid-shaped. The overall thickness of the slope protection shall be no more than three feet measured

perpendicular to the slope. Use of dirt, small concrete rubble, concrete pieces with exposed rebar, large and odd shaped pieces of concrete, and asphalt concrete as riprap is prohibited.

2. **Riprap Placement.** Riprap material shall be placed so that a permanent shoreline with a minimum amount of fill is established by means of an engineered slope not steeper than two (horizontal) to one (vertical). The slope shall be created by the placement of a filter layer protected by riprap material of sufficient size to withstand wind and wave generated forces at the site.

3. **Riprap Plans**

   a. **Design.** Professionals knowledgeable of the Commission's concerns, such as civil engineers experienced in coastal processes, should participate in the design of the shoreline protection improvements authorized herein.

   b. **Plan Review**. No work whatsoever shall be commenced on the shoreline protection improvements authorized herein until final riprap plans have been submitted to, reviewed, and approved in writing by or on behalf of the Commission. The plans shall consist of appropriate diagrams and cross-sections that: (1) show and clearly label the Mean High Tide Line, or the inland edge of marsh vegetation up to a line five feet above Mean Sea Level in marshland, property lines, grading limits, and details showing the location, types, and dimensions of all materials to be used, (2) indicate the source of all materials to be used, and (3) indicate who designed the proposed shoreline protection improvements and their background in coastal engineering and familiarity with the Commission's concerns. Approval or disapproval of the plans shall be based upon (1) completeness and accuracy of the plans in showing the features required above, (2) consistency of the plans with the terms and conditions of this permit, (3) assuring that the proposed fill material does not exceed this permit, (4) the appropriateness of the types of fill material and their proposed manner of placement, and (5) the preparation of the plans by professionals knowledgeable of the Commission's concerns, such as civil engineers experienced in coastal processes. All improvements constructed pursuant to this amended permit shall conform to the final approved plans. No changes shall be made thereafter to any final plans or to the constructed shoreline protection improvements without first obtaining written approval of the change(s) by or on behalf of the Commission.

4. **Maintenance**. The shoreline protection improvements authorized herein shall be regularly maintained by, and at the expense of the permittee, any assignee, lessee, sublessee, or other successor in interest to the project. Maintenance shall include, but not be limited to, collecting any riprap materials that become dislodged and repositioning them in appropriate locations within the riprap covered areas, replacing in-kind riprap material that is lost, repairing the required filter fabric as needed, and removing debris that collects on top of the riprap. Within 30 days after notification by the staff of the Commission, the permittee or any successor or assignee shall correct any maintenance deficiency noted by the staff.

G. **Marsh Protection**

1. **Best Management Practices**. All construction operations shall be performed to prevent construction materials from falling, washing, or blowing into the Bay. In the event that such material escapes or is placed in an area subject to tidal action of the Bay, the permittee shall immediately retrieve and remove such material at its expense. The permittee shall also employ best management practices, such as compaction, soil fences, jute matting, etc. to assure that material placed for any purposes authorized herein will not erode into the Bay shortly after placement.

2. **Marsh and Upland Plant Protection During Construction.** The work authorized by this amended permit shall be performed in a manner that will prevent, avoid, or minimize to the extent possible any significant adverse impact on any tidal marsh, other sensitive wetland resources, and existing native upland vegetation. If any unforeseen adverse impacts occur to any such areas as a result of the activities authorized herein, the permittee shall restore the area to its previous condition, including returning the disturbed area to its original elevation and soil composition and, if the area does not revegetate to its former condition within one year, the permittee shall seed all disturbed areas with appropriate vegetation consistent with plans approved by or on behalf of the Commission, pursuant to Special Condition II-A. The permittee shall employ mitigation measures to minimize impacts to wetland areas, such as: minimizing all traffic in marsh/mudflat areas; and carefully removing, storing, and replacing wetland vegetation that has been removed or “peeled back” from construction areas as soon as possible following construction.

3. **Removal of Excavated Material**. All dredged and excavated material must either be used to stabilize levees, create ditch blocks, resurface levee roads, construct authorized pond berms, construct pilot and internal channels, raise pond elevations, install water control structures, or be removed from the project site for proper disposal outside of the Commission’s jurisdiction.

4. **Debris Removal**. All construction debris and any uncovered debris, such as concrete, asphalt, wood, plastics, etc., shall be removed from the project site for proper disposal outside of the Commission’s jurisdiction. Excavated debris may be temporarily stored within the Commission’s jurisdiction, provided measures are employed to assure that such material does not wash or erode into the surrounding marsh or waterways. In the event that any such material is placed in any area within the Commission's jurisdiction for an extended period (i.e., more than 60 days), the permittee, its assigns, or successors in interest, or the owner of the improvements, shall remove such material, at its expense, within ten days after they have been notified by the Executive Director of such placement.

5. **Protection of Special Status Animal Species.** The permittee shall take all precautions to avoid adverse impacts to the ~~California clapper~~ Ridgeways rail, California black rail, Salt Marsh harvest mouse, San Pablo song sparrow, salt marsh yellow throat, winter-run chinook salmon, and west coast steelhead trout. The permittee shall employ the mitigation measures outlined in the environmental document for the project and contained herein.

H. **Hydrology**

1. **Breaching of Ponds E8A, E8X, E9.** The permittee shall yearly monitor adjacent tidal flats and channels using the methodology described in the "South Bay Salt Pond Restoration Project Phase I Monitoring Plan," as revised August 14, 2008 and prepared by H.T. Harvey and Associates, to assess whether breaching Ponds E8A, E8X, and E9 is impacting the rate of scour, accretion, or channel formation and include these yearly assessments in the monitoring report (Material Amendment No. One).

2. **Sediment Deposition.** To avoid excessive sediment deposition near inlet/outlet structures that could impact operation of water control structures, the permittee shall conduct annual inspections of all water control structures to look for areas of excessive sediment deposition or scour. Results of these inspections shall be recorded on maintenance log sheets along with any follow-up inspections or maintenance sediment removal or re-grading operations. If monitoring determines sediment buildup is excessive and must be removed, the permittee shall comply with all regulatory requirements prior to removing deposited sediment, shall remove deposited sediment, and shall regrade as required to avoid deposition impacts.

I. **Control of Invasive Species.** The disturbance of existing vegetation could promote the spread of invasive cordgrass thus, the permittee shall: (1) coordinate with the ~~Santa~~ Alameda County Public Works Agency to ensure that existing clusters of invasive cordgrass (S. alterniflora) in the vicinity of the Island Ponds are removed prior to breaching the ponds; (2) ensure all equipment is cleaned prior to movement from an infested site; (3) conduct post-implementation monitoring for new, establishing populations of cordgrass; and (4) gain control of new, establishing populations using protocols suggested by the San Francisco Estuary Invasive Spartina Project.

J. **Monitor Changes in Wildlife Habitat.** The CDFW ~~DFG~~ shall continue surveys of waterbird use of ponds every two months and at least one "window" survey each year because wildlife habitat will change, with positive impacts for some wildlife species and negative impacts for other wildlife species due to changes in water levels, hydrology, salinity, and resultant invertebrate populations. In addition, the CDFW ~~DFG~~ shall compare the bimonthly monitoring data to monthly pond survey data taken by USGS during implementation and subsequent management of the Initial Stewardship Plan. If survey results show a major decline in waterbird use of ponds, the CDFW ~~DFG~~ shall change their management accordingly to increase pond use by declining species (for example, manage more ponds at lower water levels or as medium-high salinity batch ponds for shorebirds or grebes) (Material Amendment No. One).

K. **Protection of Wildlife**

1. **Protection of Nesting Waterbirds**. The permittee shall conduct the following measures to protect nesting waterbirds from the changes in water levels in some ponds that would result in impacts to nesting bird colonies from increased predator access and/or flooding, thereby substantially reducing the breeding habitat for

certain waterbird species in the South Bay: (1) identify islands and interior levees in need of protection from water level fluctuation; (2) check islands and interior levees weekly (as access conditions permit) from March to July for nesting waterbirds that could be impacted by flooding or landbridging; and (3) manipulate water levels, as needed, to ensure proper isolation from the surrounding levees and tidal marsh during the nesting season and to avoid flooding of nest sites.

2. **Protection of Wildlife from Contaminated Sediments**. The permittee shall ensure that lower average water levels in project ponds do not increase the exposure of some foraging waterbirds to contaminated sediments on the bottoms of some ponds, potentially resulting in a substantial reduction in suitable foraging habitat for some species.

3. **Avian Botulism.** Because increased suitable conditions for avian botulism could result from the overall reduction in pond salinities and water depths, the permittee shall take the following measures to reduce the spread of avian botulism: (1) if there is evidence of avian botulism in areas surveyed by the San Francisco Bay Bird Observatory, staff shall survey the adjacent ponds using shallow draft boats; (2) all personnel conducting operational activities in the ponds shall be trained to recognize symptoms of avian botulism and shall make special observation efforts during late August, September, and October, when outbreaks generally occur; and (3) if dead birds are found, they will be retrieved and incinerated in an approved facility. Sick birds shall be brought to an approved avian rehabilitation facility.

4. **Protection of Ridgeways ~~California Clapper~~ Rail.** The permittee shall implement the following measures to avoid or minimize adverse affects on ~~clapper~~ Ridgeways rails from direct construction impacts to existing tidal salt marsh habitat: (1) survey construction sites for ~~clapper~~ Ridgeways rails; (2) locate construction outside ~~clapper~~ Ridgeways rail nesting habitat; (3) offset any short-term impacts to ~~clapper~~ Ridgeways rail habitat by the long-term benefits of restoring Ponds E8A, E9 and E8X (630 acres) to tidal marsh; and (4) if surveys indicate that the ~~clapper~~ Ridgeways rail is present on the project site, then all project-related work shall be limited to the period between September 1st and February 1st of any year. If an active ~~clapper~~ Ridgeways rail nest is found, then a 750-foot-in-diameter buffer shall be established around the nest between February 1st through September 1st of any year.

5. **Protection of SMHM and SMWS.** The permittee shall implement the following measures to avoid or minimize adverse impacts to the salt marsh harvest mouse (SMHM) and salt marsh wandering shrew (SMWS) due to direct construction impacts on existing tidal or non-tidal salt marsh habitat: (a) survey construction sites for SMHM and SMWS prior to construction. Prior to the start of construction activities, a qualified wildlife biologist shall visit all construction sites. The biologist shall determine whether potential SMHM or SMWS habitat is present within the immediate disturbance area of each construction site; (b) whenever possible, construction sites shall be relocated, if necessary to avoid areas that support potential habitat for SMHM or SMWS; (c) if a construction site(s) cannot be located outside of such areas, construction impacts shall be limited to the smallest possible

area of suitable SMHM or SMWS habitat. The construction areas shall be clearly demarcated by temporary fencing and signs throughout the construction period. No construction activities shall be allowed in tidal marsh, except within the fenced areas; (d) just before construction, vegetation within the fenced areas shall be cleared using hand tools, if feasible, to discourage SMHM or SMWS from remaining in the construction areas and making it possible to see any mice that are present. Construction work shall start as soon as possible (and no longer than one week) after the vegetation has been cleared; (e) a qualified biological monitor shall oversee vegetation clearing and construction activities at the construction sites. The monitor shall remain on-site during all construction work directly affecting SMHM habitat. The monitor shall have the authority to control or halt construction activity that is not consistent with the protection measures noted above. Additionally, the monitor will notify the permittee of any unanticipated damage to protected habitat areas, or any dead or injured special-status species.

6. **Protection of Burrowing Owls.** The permittee shall implement the following measures to avoid or minimize adverse impacts to burrowing owls on the levees within the project area: (a) survey the construction sites for burrowing owls prior to construction. Pre-construction surveys for burrowing owls shall be conducted in and adjacent to all construction areas within 30 days of all construction activities, or by following the California Department of Fish and Wildlife ~~Game~~ (CDFW~~DFG~~) survey protocols currently in effect at that time. If construction activities at a site are delayed or suspended for more than 30 days, the site shall be re-surveyed; (b) during the breeding season (February 1 through August 31), if burrowing owls are found on or adjacent to a construction site, a clearly-delineated construction buffer shall be established around each occupied burrow at a minimum radius of 250 feet from the burrow. If construction vehicles must pass through an established buffer in order to access a construction site, a “no stopping” policy shall be implemented, and appropriate signs shall be posted at the buffer periphery; (c) during the non-breeding season, if destruction of an occupied burrow is unavoidable, or if a construction site is located within 160 feet of an occupied burrow, passive relocation measures shall be implemented to encourage the owl(s) to move away from the burrow prior to construction. If no suitable alternate burrows are present within 500 feet of the destroyed burrow, two artificial burrows shall be installed at an appropriate location, to be determined by a qualified wildlife biologist. Passive relocation methods and artificial burrow locations shall be subject to (CDFW ~~DFG~~) approval. Passive relocation shall not be conducted during the breeding season (February1-August 31); and (d) all protection measures shall remain in place for the duration of construction at the occupied sites or until a qualified biological monitor verifies that burrowing owls are no longer present.

7. **Protection of Northern Harriers**. The permittee shall implement the following measures to avoid or minimize adverse effects to northern harriers on the levees within the project area: (a) survey construction sites for northern harriers prior to construction at sites where construction is scheduled during the northern harrier nesting season (generally late March through August). Pre-construction surveys for northern harriers shall be conducted in and adjacent to all construction areas within 30 days of all construction activities, or by following the CDFW ~~DFG~~ survey protocols currently in effect at that time. If construction activities at a site are delayed or suspended for more than 30 days, the site shall be re-surveyed; (b) if an active harrier nest is found at or adjacent to a site, construction activities shall be rescheduled until after the nesting season. If this is not feasible, construction buffers shall be established around each nest, at a minimum radius of 200 feet from the nest. The buffers shall be clearly marked with temporary fencing and signs. No construction activities shall occur within the buffer as long as the nest is active. If construction vehicles must pass through an established buffer to access a construction site, a "no stopping" policy shall be implemented, and appropriate signs will be posted at the buffer periphery; (c) active nest sites shall be monitored by a qualified biologist throughout the nesting season to verify that the protective measures are effective and to implement additional measures, if necessary. The protection measures shall remain in effect until the biological monitor determines that the nesting cycle has been successfully completed or that the nest is no longer active.

8. **Protection of Common Yellowthroat and Song Sparrow**. The permittee shall implement the following measures to avoid or minimize adverse effects to the breeding activity of salt marsh common yellowthroat and Alameda song sparrow: (a) construction associated with implementation of the project shall be located and timed to avoid impacts to potential nesting habitat of these species, to the extent feasible; (b) if avoidance of construction during the nesting season is not feasible, pre-construction surveys shall be completed, prior to the initiation of project construction, at construction sites that are located within, or adjacent to, suitable nesting habitat for these species; (c) if active nests are present, construction buffers shall be established at a minimum radius of 50 feet from the nest. Active nest sites shall be monitored by a qualified biologist periodically during the nesting season to verify that the protection measures are effective and to implement additional measures, if necessary.

9. **Protection of Waterbird Nesting Sites.** The permittee shall implement the following measures to avoid or minimize adverse effects to nesting sites of western snowy plover, Caspian tern, Forster's tern, California gull, black skimmer, or other special status waterbird species (e.g., herons and egrets): (a) construction associated with implementation of the project shall be located and timed to avoid impacts to potential nesting sites of these species, to the extent feasible. This construction timing restriction shall be implemented from March through September 15 for western snowy plover and from April through August for the other waterbird species; (b) if avoidance of construction during the nesting season is not feasible,

pre-construction surveys shall be completed, prior to the initiation of project construction, at construction sites that are located within, or adjacent to, suitable nesting habitat for these species (e.g., seasonal ponds, islands, and levees); (c) if active nests are present, construction buffers shall be established at a minimum radius of 200 feet from the nesting site or nesting colony periphery. Active nest sites shall be monitored by a qualified biologist periodically during the nesting season unless monitoring demonstrates that nesting is complete, and the young are capable of flight. If construction vehicles must pass through an established buffer to access a construction site, a "no stopping" policy shall be implemented, and appropriate signs shall be posted at the buffer periphery. The protection measures shall remain in effect until the biological monitor determines that the nesting cycle has been successfully completed or that the nest is no longer active.

10. **Protection of Harbor Seals.** The permittee shall implement the following measures to ensure that construction for implementation of the project and various maintenance operations, do not impact harbor seals in the area: (a) pre-construction surveys shall be conducted prior to initiating project construction at locations near known harbor seal haul-outs and pupping sites; (b) to the extent feasible, water control structures shall not be located at or adjacent to active haul-out or pupping sites. The installation of such structures and the subsequent maintenance could be a source of significant disturbance to the seals; (c) if installation of structures and subsequent maintenance is proposed for locations in close proximity to sensitive harbor seal sites (i.e., within 200 feet for haul-outs and 500 feet for pupping sites; distance subject to approval of NOAA), such activities shall be conducted outside of the pupping season (March to May) and the molting season (June to August); (d) if construction and operations activities cannot be timed to avoid disturbance to haul-out sites, disturbance to hauled out individuals shall be minimized. A qualified biological monitor shall be present during construction activities near harbor seal haul-outs. A clearly-marked, protective buffer (200 feet wide, as measured from the edge of the haul-out site; distance subject to approval of NOAA) shall be established and maintained, and no construction personnel or equipment shall be allowed to enter this area while hauled out individuals are present.

11. **Protection of Benthic and Aquatic Organisms.** To avoid adverse impacts to benthic organisms, fish, and macroinvertebrates, due to a deterioration of water quality, the permittee shall assess and maintain salinity and other water quality parameters, as required in Special Conditions II-C, at levels protective of aquatic resources.

12. **Salmonid Migration.** The CDFW ~~DFG~~ shall comply with the Biological Opinion issued by the National Marine Fisheries Service regarding operation of water control structure intakes.

13. **Consistency with the National Marine Fisheries Service's (NMFS) Biological Opinion (Phase One, Material Amendment No. One).** The CDFW ~~DFG~~ shall comply with all requirements contained in the National Marine Fisheries Service Biological Opinion prepared for this project and provide BCDC staff with a copy of the opinion within 10 days of its issuance. If the NMFS biological opinion requires project modifications,

including but not limited to modifications in construction practices or timing, or the design, location, or operation of authorized facilities, the CDFW ~~DFG~~ must obtain an amendment to this amended permit prior to constructing any facility affected by the NMFS Biological Opinion.

L. **Dredge Lock Use and Maintenance Requirements (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill).** When using dredge locks to conduct levee maintenance authorized herein, the permittee shall use the following Best Management Practices by doing all of the following to the maximum practicable extent:

1. Access dredge locks at the highest practicable tide;
2. Place dredged material into existing stockpile areas, into the lock pond or on the levees, to the maximum extent feasible;
3. If sidecasting is required, place the material in temporary areas, then place the material back into the cut upon exiting;
4. Use material obtained from within the dredge lock to maintain the lock levee;
5. Place sediments from the lock interior in excess of that required for lock levee maintenance into the salt pond borrow ditches or on the salt pond levee;
6. Place dredged material on the top or on the inboard slope of the lock levee only;
7. Survey locks proposed for access during a high tide event just prior to maintenance to ensure that ~~clapper~~ Ridgeways rails are not in material deposition locations;
8. Preserve and enhance high marsh features created at previous lock access events, such as vegetated mounds, to the maximum extent feasible;
9. Preserve outboard vegetation on lock levees by placing material on the top and inboard slope only. Vegetative material removed from lock levee tops shall be placed aside, then replaced after topping the levee with fresh material;
10. Replant the access cut with cordgrass plugs to hasten revegetation;
11. Spray a salt solution on disturbed areas at the peak time of Lepidium seedling emergence or remove Lepidium by other means;
12. Maintain a 300-foot buffer surrounding any active nest at heron and egret rookeries during the nesting season;
13. Maintain a 500-foot buffer at active seal pupping locations unless the buffer is decreased in consultation with and the agreement of the National Marine Fisheries Service;
14. Enhance refugial habitat on both sides of pond levees 100 feet in both directions, from the points where the lock and pond levees meet, by using natural vegetation, as discussed in and pursuant to the U.S. Fish and Wildlife Service (FWS) biological opinion and associated mitigation matrix;

15. If ~~clapper~~ Ridgeways rails are assumed or found to be present at a lock, consistent with permittee-approved call count surveys, no lock entry or exit from a different lock than the lock entered shall occur between February 1 and August 31. No lock exit shall occur between March 1 and May 3 if rails are found to be present during the last and current breeding season. However, exit may occur if rails are found to be present after entry; and
16. Conduct the Animal Damage Control program employed by the San Francisco Bay National Wildlife Refuge with the incremental costs of additional predator management activities required for lock access and levee maintenance.

M. **Levee Maintenance Requirements (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill)**. When conducting levee and other maintenance activities authorized herein, the permittee shall use the following Best Management Practices:

1. Use chokers on the outsides of exterior levees;
2. Slope exterior levee tops inward;
3. Remove any spillage onto the marsh plain that occurs, unless it is deemed by consulting experts that the spillage removal would create additional impacts;
4. Perform levee maintenance, when it is possible to avoid the use of dredge locks, from the outside of the salt ponds;
5. Upon consultation with species experts, and subsequent approval by the Executive Director, the permittee shall construct low, linear islands suitable for least tern habitat in existing salt ponds in the three key post-breeding foraging areas traditionally used by least terns for foraging. However, the permittee shall not be subject to the required buffers upon usage by the least tern;
6. Provide annual monitoring reports on the effectiveness of Best Management Practices used and their effectiveness;
7. Maintain during the March 1 to September 14 breeding season, a 200-foot buffer between levee topping activity and active western snowy plover nests in high use areas in the annual work plan review;
8. Manage Ponds E12 and E13 for maximum land exposure during the March 1 to September 1 breeding season;
9. Access and maintain levees in no more than two California least tern “high use” areas in any single year; and
10. Create islands within reach of the dredge but as far away from the levees as possible in all high use areas identified for California least terns.

N. **Unanticipated Maintenance Work (previously part of BCDC Permit No. 1993.004.00 ~~4-93~~, issued to Cargill).** If the permittee wishes to undertake work it did not anticipate during the preparation of the pre-notification report required in Special Condition II-C~~H~~ herein, the permittee shall provide a written request describing the desired work, existing conditions, and proposed Best Management Practices to the Commission. Upon consultation with interested agencies and organizations, the Executive Director shall

respond within 45 days in writing, either approving, disapproving, or approving with modifications, the proposed work based upon the conformance of the proposal with the Best Management Practices listed in Special Conditions II-L and II-M, above. In addition, the Executive Director may approve, pursuant to this amended permit, and without the pre-notification review period, activities that would otherwise qualify for an emergency permit under government Code Section 66632(f) and Regulation Sections 10120 and 10652, upon consultation with the Chair of the Commission, if time allows.

O. **Regional Water Quality Control Board-401 Certification.** CDFW ~~DFG~~ shall comply with the Final Order, which includes Waste Discharge Requirements and a Water Quality Certification, for Phase Activities issued by the RWQCB on August 13, 2008. For the work authorized by Amendment No. Two, namely the importation of dredged material from the Alameda County Flood Control District's flood control channels, all imported sediment must meet the Regional Board's sediment screening and testing criteria for the beneficial reuse of dredged material. The California Department of Fish and Wildlife~~Game~~ shall coordinate with the Alameda County Flood Control District to ensure that the appropriate sediment testing has been performed (as required under BCDC Permit 5-82) prior to accepting dredged material (Amendment No. Two).

P. **Prevention of Flooding.** The permittee shall assure that the restoration plan meets the requirements of the Public Works Director or the Public Works Directors, Flood Control Districts, and/or Water Agencies that have jurisdiction over the site and surrounding area and are responsible for assuming adequate flood protection for surrounding communities. The permittee shall provide a letter to the Commission indicating that the review has been done and that inland areas will not flood as a result of the work shown on the plan. The Commission makes no warrants as to the adequacy of the flood protection provided by the project and is not responsible for any flooding that may result (Material Amendment No. One).

Q. **In-Kind Repairs and Maintenance.** Any in-kind repairs and maintenance of the facilities authorized herein shall only use construction material that is approved for use in San Francisco Bay. Construction shall only occur during current approved months during the year to avoid potential impacts to fish and wildlife. BCDC staff should be contacted to confirm current restrictions.

R. **Creosote Treated Wood.** No pilings or other wood structures that have been pressure treated with creosote shall be used in any area subject to tidal action in the Bay or any certain waterway, in any salt pond, or in any managed wetland within the Commission's jurisdiction as part of the project authorized herein.

S. **Abandonment.** If, at any time, the Commission determines that the improvements in the Bay authorized herein, have been abandoned for a period of two years or more, or have deteriorated to the point that public health, safety or welfare is adversely affected, the Commission may require that the improvements be removed by the permittee~~(s)~~, its assignees or successors in interest, or by the owner of the improvements, within 60 days or such other reasonable time as the Commission may direct.

T. **Certification of Contractor Review.** Prior to commencing any grading, demolition, or construction, the general contractor or contractors in charge of that portion of the work shall submit written certification that s/he has reviewed and understands the requirements of the permit and the final BCDC-approved plans, particularly as they pertain to any public access or open space required herein, or environmentally sensitive areas (Material Amendment No. One).

U. **Hold Harmless and Indemnify.** The CDFW ~~DFG~~ shall hold harmless and indemnify the Commission, all Commission members, Commission employees, and agents of the Commission from any and all claims, demands, losses, lawsuits, and judgments accruing or resulting to any person, firm, corporation, governmental entity, or other entity who alleges injuries or damages caused by work performed in accordance with the terms and conditions of this amended permit. This condition shall also apply to any damage caused by flooding of or damage to property that is alleged to be caused as a result of some action or lack of action by the Commission growing out of the processing of and issuance of this amended permit (Material Amendment No. One).

V. **Notifying NOAA to Update Nautical Charts.** Within 30 days of the completion of the project authorized by this amended permit, the USFWS shall provide written verification to the Commission that it has submitted to the Nautical Data Branch of the National Oceanic and Atmospheric Administration (NOAA) the following: (1) (a) as-built drawings, blueprints or other plans that correctly depict the completed development or, if the project involves the removal of an existing development; (b) a list of the existing development(s) that have been removed and a statement from a qualified engineer or professional salvage company certifying which portions of the development have been removed; (2) the geographic coordinates of the project using a differential geographic positioning system (DGPS) unit or other comparable equipment suitable for providing location on a Nautical Chart; and (3) the appropriate CDFW ~~DFG~~ contact person's name and contact information (such as a mailing address, telephone number, fax number and/or e-mail address) (Material Amendment No. One).

III. Findings and Declarations

This amended authorization is given on the basis of the Commission's findings and declarations that the work authorized herein is consistent with the McAteer-Petris Act, the *San Francisco Bay Plan*, the California Environmental Quality Act, and the Commission's amended coastal zone management program for San Francisco Bay for the following reasons:

A. **Priority Use Designation**. The project will be located in areas that are designated as Wildlife Refuge priority use areas on *San Francisco Bay Plan* (Bay Plan) Map No. Seven. The project is designed to convert salt ponds to approximately 630 acres of tidal habitat and 230 acres of reconfigured managed ponds. The project area is within the Eden Landing Ecological Reserve and actively managed by the California Department of Fish and Wildlife~~Game~~.

B. **McAteer-Petris Act and Bay Plan Policies on Fill.** Section 66605 of the McAteer-Petris Act states, in part, that: (1) "[t]hat the water area authorized to be filled should be the minimum necessary to achieve the purpose of the fill"; (2) "[t]hat the nature, location, and extent of any fill should be such that it will minimize harmful effects to the Bay area, such as, the reduction or impairment of the volume surface area or circulation of water, water quality, fertility of marshes or fish or wildlife resources, or other conditions impacting the environment…"; (3) "[t]hat public health, safety, and welfare require that fill be constructed in accordance with sound safety standards which will afford reasonable protection to persons and property against the hazards of unstable geologic or soil conditions or of flood or storm waters"; and (4) "[t]hat fill should be authorized when the applicant has such valid title to the properties in question that he or she may fill them in the manner and for the uses to be approved."

1. **Initial Stewardship Plan (ISP)**

The application for the ISP states that the installation of new water control structures will result in approximately 44,867 square feet (1.03 acres) of fill in salt ponds. The original permit also states that the structures have been designed to result in the minimum fill necessary "…to effectively maintain existing shallow open water habitat and reduce salinity within the ponds [and meet water quality objectives in discharge waters]." The permit for the ISP and the environmental document state that the new water control structures have been sited to result in the minimum direct and indirect impacts to wetlands. The impacts to wetland habitat can be categorized as direct impacts from installation of the water control structures and indirect impacts resulting from changes in habitat due to the discharge of pond water into various receiving waters, reduced salinity in the ponds, and changes in water regime (seasonal ponds). The mitigation measures that will be implemented to minimize indirect impacts to wetland habitat are discussed below regarding the project's, "Consistency with Bay Plan Policies on Fish, Other Aquatic Organisms, and Wildlife." In addition, while a total of 3.64 acres of existing salt pond water surface area will be permanently lost as a result of installing water control structures, implementation of the Initial Stewardship Plan should offset the adverse impacts of this fill many fold due to the management of the ponds to maximize functions and values for wildlife. In regards to public safety concerns, the environmental document for the project states that "…the existing levees would be maintained and the existing risk of flooding due to unplanned levee failures would not be affected. In general, water levels in the ponds would be similar to existing conditions and would not affect the available storage within the ponds to contain potential overflows from adjacent creeks and sloughs. Similarly, the Initial Stewardship Plan should have no impact on the Bay's shoreline because, with the exception of the Island Ponds, where levees may be breached, the Initial Stewardship Plan does not involve change to the existing network of ponds, channels, and levees. As the permit states, the "…water control structures will allow circulation of water through the salt ponds to minimize any effects on existing potential wildlife habitat, pond water quality, and salinity levels during the planning and implementation of a long-term salt pond restoration program." In other words,

no change is envisioned in the existing network of ponds and adjoining channels although water circulation patterns will change. Finally, the permittee has provided proof of valid title to all areas proposed for the installation of water control structures.

For all of the reasons above, the Commission finds that the project is consistent with its law and policies on fill in salt ponds in that the project will result in the minimum fill necessary to successfully complete the project and minimize impacts to the Bay environment.

2. **Phase One (Amendment No. One)**

   a. **Minimum Amount Necessary.** The CDFW ~~DFG~~ states that the placement of approximately 407,020 cubic yards of material at the Eden Landing complex, as part of Phase One, is the minimum necessary to meet the goals of restoring the site to fully functioning tidal marsh and creating managed pond habitat. The CDFW ~~DFG~~ states that "[t]he fill is necessary to create habitat (i.e., nesting islands) while maintaining the structural integrity of several existing levees, and to construct features such as starter channels and berms, ditch blocks, etc. to produce the appropriate hydrologic conditions conducive to tidal marsh formation. The majority of fill will be generated from on-site activities, such as levee lowering, thus, not imported from off-site. This material will be redistributed within the restoration project area for maintenance and restoration improvements." A minor amount of additional fill will be placed to provide shoreline protection (approximately 6,200 cubic yards) and public access (7,115 square feet of pile-supported, floating, and/or solid fill).

   b. **Effects on Bay Resources.** In addition to Section 66605 of the McAteer-Petris Act regarding effects of fill on water volume and circulation, the Bay Plan policies on water surface area and volume state that, "[w]ater circulation in the Bay should be maintained, and improved as much as possible. Any proposed fills, dikes or piers should be thoroughly evaluated to determine their effects on water circulation and then modified as necessary to improve circulation or at least to minimize any harmful effects."

      The fill for ponds E12 and E13 will be used to reconfigure existing salt ponds by reshaping levees and constructing berms and to create viable bird habitat by building nesting islands. The CDFW ~~DFG~~ states that, "…ponds E12 and E13 will be reconfigured to create islands for nesting birds and shallow water habitat for shorebird foraging. It is important to note that these ponds have been designed as an experiment to create a high density of bird nesting islands interspersed with shallow water foraging habitat that has not been created previously in San Francisco Bay. The design attempts to optimize the balance of the constraints and considerations above based on what is known at this time." The restoration actions undertaken in Phase One (as well as the overall SBSPR Project) will be evaluated for impacts and beneficial outcomes using adaptive management techniques. An Adaptive Management Plan has been prepared by the SBSPR Project Science Team that provides project objectives and "an approach to

achieving [them] through learning from restoration and management actions." There are some key uncertainties regarding the habitat designs in Phase One, specifically how the ecosystem will respond to restoration activities. To address this uncertainty, the CDFW ~~DFG~~ will use monitoring, applied studies, and modeling to refine the design approach and plan future phases accordingly. Special Conditions II-C and II-D are included in this amended permit to ensure that appropriate monitoring and adaptive management efforts occur for Phase One actions.

c. **Public Health, Safety, and Welfare.** The CDFW ~~DFG~~ states that "[a]ny impacts (e.g., fill placement to create nesting islands) are done to create or enhance habitat for wildlife, including listed species, and to optimize restoration activities; environmental benefits will result from implementation of restoration."

The CDFW ~~DFG~~ states that "[r]eestablishing tidal connectivity initially will increase the average discharge in tidal channels, increasing the potential for erosion of levees as a result of tidal currents and seepage-related failures. Consequently, there will be an initial increase in the risk of property loss (levee failure) during Phase 1 actions. As part of the project, a monitoring and adaptive management plan will be implemented to monitor the expansion of the slough channels to accommodate the additional tidal prism and to ensure that the expansion does not threaten the adjacent levee systems. If channel expansion threatens adjacent levees, project managers will identify measures to protect the levee in question, if needed, including potentially closing the breach. These measures may include additional levee breaches, altering the phasing of pond levee breaching, or requiring levee repairs or revetment." Special Condition II-D ensures that the CDFW ~~DFG~~ will employ adaptive management measures to address such issues.

To address these potential impacts the CDFW ~~DFG~~ states "[w]hile we do not anticipate these impacts, any negative outcome of the project will be reversible under the adaptive management techniques prescribed for the project. Studies proposed under Phase One, under adaptive management, will guide future work within the SBSPR Project area (i.e., all remaining ponds included in the SBSPR Project will be addressed at later dates under separate permit applications). It is important to note, therefore, that all Phase One improvements are reversible and no proposed actions irretrievably set the course of future restoration actions. All of these actions can be revisited or revised in the future."

The CDFW ~~DFG~~ states that for Phase One "the project will also result in beneficial impacts on flooding. Specifically, the existing levee system will be repaired, if needed, should an emergency occur or for reducing the risk of failure. To prevent channel erosion and potential damage to adjacent levee systems, although not anticipated, the CDFW ~~DFG~~ will repair unintended levee breaches that are not consistent with the restoration option selected. Tidal channels on and adjacent to restored marshlands will be larger after restoration, than under

existing conditions, as a result of natural channel erosion. Consequently, the flood conveyance capacity of major tidal channels will be increased, lowering flood risk on nearby parcels."

The CDFW ~~DFG~~ further states that "[l]evees could potentially fail due to seismic ground shaking. However, repairs and upgrades to existing levees for the proposed trail system and water conveyance/control structures associated with the ponds, as well as regular maintenance, will be performed as part of the project. New water control structures will be engineered to withstand seismic events to the extent practicable, and these structures will not be located in an area that will result in the increased exposure of people to adverse effects." Special Condition II-M is included in this amended permit to ensure that such levee maintenance will occur.

In addition, the Army Corps of Engineers is conducting the South San Francisco Bay Shoreline Study, a Congressionally-authorized study to identify and recommend for Federal funding one or more projects for flood damage reduction, ecosystem restoration, and related purposes such as public access in the entire SBSPR Project area.

The CDFW ~~DFG~~ states that "…it is important to note that the Phase One actions were chosen because they do not, in and of themselves, require the implementation of flood control measures and they are an integral step from which much is expected to be learned and applied toward the successful implementation of planned future phases of the Project." In other words, the ponds chosen for restoration as part of Phase One, were sited in areas where altering hydrology and reestablishing tidal action will not be expected to affect any of the levees that are currently providing flood protection to populated, urbanized areas near the project site.

d. **Valid Title**. The California Department of Fish and Wildlife~~Game~~ acquired approximately 5,500 of former salt ponds in the Eden Landing complex, including Ponds E8A, E8X, E9, E10 and E14, in March 2003 from Cargill, Inc. using state, federal, and private foundation funds.

The Commission finds that the project, as conditioned herein, is consistent with its law and policies on fill in salt ponds in that the project will result in the minimum fill necessary to successfully complete a project, whose primary goal is to increase the ecological functions, biological diversity, and compatible recreational opportunities at former salt ponds has been designed to minimize impacts to the Bay environment, will be constructed in a manner to protect persons and property against unstable soil and flooding conditions, and at a site to which the project sponsor holds valid title.

C. **Bay Plan Policies on Salt Ponds and Other Wetlands.**

1. **Initial Stewardship Plan.** At the time of the Commission's authorization for the Initial Stewardship Plan, the Bay Plan policies on salt ponds and other wetlands stated, in part, that "[a]s long as is economically feasible, the salt ponds should be maintained in salt production and the wetlands should be maintained in their present use. Property tax policy should assure that rising property taxes do not force conversion of the ponds and other wetlands to urban development." The salt pond policies also stated that, "[i]f, despite these provisions, the owner of the salt ponds or the owner of any managed wetland desires to withdraw any of the ponds or marshes from their present uses, the public should make every effort to buy these lands, breach the existing dikes, and reopen these areas to the Bay. This type of purchase should have a high priority for any public funds available, because opening ponds and managed wetlands to the Bay represents man's last substantial opportunity to enlarge the Bay rather than shrink it. (In some cases, if salt ponds are opened to the Bay, new dikes will have to be built on the landward side of the ponds to provide the flood control protection now being provided by the salt pond dikes.)"

   On March 16, 2003, the State of California and the United States of America acquired 16,500 acres of commercial salt ponds in San Francisco Bay from Cargill, Inc. This acquisition set the stage for the development of the largest tidal wetland restoration project on the West Coast. Specifically, the purpose of this acquisition was to protect, restore, and enhance the property for fish and wildlife, as well as to provide opportunities for wildlife-oriented recreation and education. Of the acquired lands, most of the salt ponds are located in South San Francisco Bay and the remaining lands are in the North Bay in Napa County. Under terms of the acquisition, the permittee owns and will manage 8,000 acres of the "Alviso Ponds" and 1,600 acres of the "West Bay Ponds," while Fish and Wildlife~~Game~~ owns and will manage 5,500 acres of the "Baumberg Ponds". Commercial salt making will still continue at Cargill's Newark Plant site and surrounding salt ponds and the same volume of salt will be produced on a smaller site with the use of improved production techniques. While the Initial Stewardship Plan does not envision any levee breaches other than breaching the levees at the Island Ponds, implementation of the Initial Stewardship Plan is anticipated to greatly enhance wildlife functions and values of the ponds, and to set the stage for implementation of the long-term restoration plan which will result in substantial enlargement of the Bay through levee breaches and the management of all the ponds for improved habitat values.

2. **Phase One (Amendment No. One).** The Bay Plan policies on salt ponds were revised in August 2005. The Bay Plan policies on salt ponds now read, in part, that "[i]f the owner of any salt ponds withdraws any of the ponds from their present uses, the public should make every effort to buy these lands and restore, enhance or convert these areas to subtidal or wetland habitat. This type of purchase should have a high priority for any public funds available, because opening ponds to the Bay represents a substantial opportunity to enlarge the Bay and restoring, enhancing or converting ponds can benefit fish, other aquatic organisms and wildlife, and can increase public access to the Bay."

The revised Bay Plan policies on salt ponds also state, in part, that "[a]ny project for the restoration, enhancement or conversion of salt ponds to subtidal or wetland habitat should include clear and specific long-term and short-term biological and physical goals, success criteria, a monitoring program, and provisions for long-term maintenance and management needs. Design and evaluation of the project should include an analysis of: (a) the anticipated habitat type that will result from pond conversion or restoration, and the predicted effects on the diversity, abundance and distribution of fish, other aquatic organisms and wildlife; (b) potential fill activities, including the use of fill material such as sediments dredged from the Bay and rock, to assist restoration objectives; (c) flood management measures; (d) mosquito management measures; (e) measures to control non-native species; (f) the protection of the services provided by existing public facilities and utilities such as power lines and rail lines, (g) siting, design and management of public access and recreational opportunities while avoiding significant adverse effects on wildlife; and (h) water quality protection measures that include management of highly saline discharges into the Bay; monitoring and management of mercury methylation and sediments with contaminants; managing the release of copper and nickel to the Bay; and the minimization of sustained low dissolved oxygen levels in managed ponds."

The overall goal of the 50-year SBSPR Project is to restore and enhance a mix of wetland habitats, provide wildlife-oriented public access and recreation, and provide for flood management. The specific goals of Phase One actions are to restore a mosaic of habitats, including tidal marsh, mudflat, salt panne and open water habitats (managed ponds), to support populations of fish and wildlife, special status species, migratory waterfowl, shorebirds, and anadromous and resident fishes.

Phase One activities are designed to test restoration techniques on a small scale, and, with adaptive management, design approaches that will allow for the successful restoration of the entire SBSPR Project site over time. The SBSPR Project will result of a mix of restored tidal and managed pond habitat. The final combination of how much of each type of habitat will be determined through an adaptive management process allowing for lessons learned from earlier phases to be incorporated into subsequent phases. Each phase of the project will have a separate monitoring plan with common elements and adaptive strategies as more data are gathered. The CDFW ~~DFG~~ states that "this approach to phased tidal restoration acknowledges that uncertainties exist and provides a framework for adjusting management decisions, as the cause-and-effect linkages between management actions and the physical and biological response of the system are more fully understood."

The project sponsors drafted an Adaptive Management Plan that identifies management triggers to determine when restoration activities are not performing as expected. These triggers are intended to assist decision makers before a significant impact occurs. If a management trigger is tripped, further restoration will not occur until a focused evaluation is conducted to assess if a potentially significant impact will result. If the evaluation determines a significant impact will result, adaptive management actions to avoid the impact will be implemented, and ongoing

monitoring will determine the effectiveness of that action. An Adaptive Management Summary Table provided by the project sponsors includes, for each monitoring activity, restoration targets, expected time frames for decision-making, management triggers, and resulting potential management actions. Site management and any necessary maintenance activities will occur pursuant to the adaptive management plan described in Special Conditions~~s~~ II-D.

Ponds E8A, E8X, and E9 will be restored to tidal action. At these ponds, monitoring will include evaluating tidal marsh habitat evolution (vegetation and channel mapping), invasive *Spartina* and other invasive plants, and endangered species (~~California clapper~~ Ridgeways rail and salt marsh harvest mouse). Ponds E12 and E13 will be reconfigured as managed ponds. At these ponds, monitoring will include evaluating water quality (including salinity pH, temperature, dissolved oxygen), invasive plants, and Federally-listed species (California least tern and Western snowy plover). There is a risk of invasive species colonizing the restoration site. The CDFW ~~DFG~~ will comply with Special Condition II-C-3 which requires monitoring reports and eradication efforts.

The CDFW ~~DFG~~ states that all actions associated with the project are expected to either improve flooding risk (through restoration to tidal action) or maintain the status quo.

An increase in vegetated wetlands could potentially increase mosquito populations if the areas do not drain properly. The EIS/R states the potential increase in mosquito populations as a result of the Phase One will be less than significant, as well-drained tidal marshes typically do not provide high-quality habitat for mosquitoes. In addition, the CDFW ~~DFG~~ worked closely with the local Mosquito Abatement Districts in preparing the restoration plan.

A description of the public access improvements for Phase One and potential effects on wildlife is discussed under the public access section. Fill activities for Phase One are discussed under the fill section.

Special Conditions II-A, II-B, II-F, and II-G are included in this permit to ensure that the Commission reviews and approves plans provided by CDFW ~~DFG~~ for overall site improvements, public access improvements, shoreline protection (i.e., riprap), and the marsh restoration program, which will ensure that the project is carried out in a manner that conforms with the specific provisions included in the Commission's salt pond policies.

Fill activities for Phase One are discussed in the earlier section regarding fill. Public access improvements and water quality protection measures are discussed in following sections of this amended consistency determination.

For all the reasons above, the Commission finds that the project, as conditioned herein, are consistent with its policies on salt ponds.

D. **McAteer-Petris Act and Bay Plan Policies on Public Access**. Section 66602 of the McAteer-Petris Act states that "…existing public access to the shoreline and waters of the…[Bay] is inadequate and that maximum feasible public access, consistent with a proposed project, should be provided."

In addition, the Bay Plan policies on public access state in part, "[p]ublic access to some natural areas should be provided to permit study and enjoyment of these areas. However, some wildlife are sensitive to human intrusion. For this reason, projects in such areas should be carefully evaluated in consultation with appropriate agencies to determine the appropriate location and type of access to be provided." The policies further state, "[p]ublic access should be sited, designed and managed to prevent significant adverse effects on wildlife…Siting, design and management strategies should be employed to avoid or minimize adverse effects on wildlife, informed by the advisory principles in the Public Access Design Guidelines…." The policies further state, "[p]ublic access should be integrated early in the planning and design of Bay habitat restoration projects to maximize public access opportunities and to avoid significant adverse effects on wildlife." Finally, the policies state, "[t]he Commission should continue to support and encourage expansion of scientific information on the effects of public access on wildlife and the potential of siting, design and management to avoid or minimize impacts."

In addition, the Bay Plan policies on salt ponds state, in part, that the restoration, enhancement or conversion of salt ponds to subtidal or wetland habitat, "[d]esign and evaluation of the project should include an analysis of…(g) siting, design and management of public access to maximize public access and recreational opportunities while avoiding significant adverse effects on wildlife."

1. **Initial Stewardship Plan.**

In assessing whether the public access improvements proposed as part of a public agency project are consistent with Commission law and policy, the Commission must consider whether there is a reasonable relationship between a permit condition and the impact or burden created by a development project. In this case, the Commission should evaluate the impact of the project on existing public access facilities and the demand on public access facilities that will be generated by the interim project and whether any potential increases in demand on public facilities would arise from completion of the Initial Stewardship Plan.

The permit states that "[u]nder prior management for commercial salt operations, most of the ponds included in the ISP [Initial Stewardship Plan] were closed to public access. However, Alviso Ponds A-9 through A-17 and the West Bay Ponds 1 and 2 were previously owned by the permittee as part of the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge) and were open to the public for pedestrian and bicycle access to promote wildlife observation, wildlife photography, interpretation, and environmental education opportunities. These ponds will continue to be open for similar public access activities during the Initial Stewardship period."

No public access was proposed as part of the ISP. The application states that "…[m]ore extensive public access opportunities in these areas will be developed during the long-term South Bay Salt Pond restoration planning process. Significant use conflicts make it infeasible to provide additional, unsupervised public access at the project site at this time. There are present on the site a number of federally listed species, including the ~~California clapper~~ Ridgeways rail, salt marsh harvest mouse, western snowy plover, California least tern, California black rail, and American peregrine falcon. Additional biological information and trail planning will need to be completed before additional public access is feasible. This is part of the long-term restoration planning process."

The Commission finds that the project is consistent with its laws and policies on public access because: (1) requiring public access in association with the Initial Stewardship Plan could potentially adversely affect wildlife and that planning studies must be completed that indicate the appropriate locations, types, and times for public access; (2) requiring additional public access with this interim project would not be reasonable, if the long-term planning period is not longer than 5 years, especially because the permittee is willing to consider implementing some public access improvements, if the long-term restoration plan has not commenced implementation in five years. The Commission finds that this modest public access proposal is adequate for an interim plan, but should a long-term management proposal take more than 5 years to commence implementation, additional public access should be provided with the project.

2. **Phase One Public Access (Amendment No. One)**

   a. **Phase One Improvements.** Phase One includes a 0.8-mile year-round trail located along the existing levee at the north end of Pond E12, and connects the Eden Landing Ecological Reserve (ELER) staging area with the historic Oliver Salt Works Complex (see Exhibit B). A 1.5-mile year-round shoreline trail, which connects the salt works with the Bay, will be located along the southern edge of Mount Eden Creek and will be incorporated into the existing levee. A spur trail off the main trail will provide access to the Archimedes viewing area between Ponds E13 and E14, along the Ponds E12 and E13 levee. The spur trail (a 1.5-mile loop trail) will be subject to closure depending on the presence/absence of sensitive species. Fencing will be installed, where appropriate, to prevent human disturbance to sensitive habitat areas. Dogs will not be permitted except for waterfowl hunting and as per CDFW ~~DFG~~ regulations. The project includes a viewing platform (Oliver Salt Works viewing platform), and two viewing areas (one overlooking the Archimedes screws in Pond E14 and one at the terminus of the year-round shoreline trail). Both viewing areas will include interpretive stations.

   The EIS/R discusses the potential for some existing public access areas to be lost or removed as part of the overall SBSPR Project. Phase One actions, however, will not result in any loss of public access. Rather, they will provide a substantial increase in public access. In addition, the CDFW ~~DFG~~ states that "the EIS/R

concluded that the maintenance and habitat restoration work proposed at the ponds will enhance habitat for a number of plant, fish, and wildlife species. Overall, these habitat quality increases will result in increases in recreational potential of the project site. The public is expected to be attracted to the site as species populations and composition increase. Specifically, recreational use of the site for bird watching, hunting and fishing is expected to increase. Thus, the restoration activities can be expected to enhance access and recreation at the site and make it a more desirable destination for hikers, boaters, bird watchers, anglers and possibly hunters."

In many locations around the Bay, the shoreline edge is a vital area for wildlife. Access to some wildlife areas allows visitors to discover, experience and appreciate the Bay's natural resources and can foster public support for Bay resource protection. However, in some cases, public access may have adverse effects on wildlife (including flushing, increased stress, interrupted foraging, and/or nest abandonment), and may result in adverse long-term population and species effects. The type and severity of effects, if any, on wildlife depend on many factors, including site planning, the type and number of species present and the intensity and nature of the human activity. Potential adverse effects on wildlife may be avoided or minimized by siting, designing and managing public access. The Commission's advisory document, *Shoreline Spaces: Public Access Design Guidelines for the San Francisco Bay,* cites several strategies to reduce or prevent adverse human and wildlife interactions including: using design elements such as paving materials and site amenities to encourage or discourage specific types of human activities; using durable materials to reduce erosion and to keep users from creating alternate access routes, using physical design features to buffer wildlife from human use such as bridges, boardwalks, moats, fencing, viewing platform and overlooks, and vegetation; managing the type and location of public use such as restricting specific activities or implementing periodic closures during sensitive periods such as breeding seasons; and incorporating education and interpretive elements.

The CDFW ~~DFG~~ states that "the SBSPR Project will allow public access to the maximum extent compatible with resource protection and maintenance of research and education programs. Unlimited public access to all parts of the wildlife area may be incompatible with resource protection, public safety, and existing regulations."

Special Condition II-E is included in this amended consistency determination to ensure that all of these improvements occur.

Phase One includes the implementation of a number of applied studies researching the effect of trail use on shorebirds using Ponds E12 and E13. Results of those studies will be used to determine whether periodic closures of trail segments to protect wildlife are needed pursuant to Special Condition II-C of this amended permit.

b. **Design Review Board.** The Design Review Board (DRB) initially reviewed this project at its December 10, 2007 meeting in East Palo Alto, following a site visit to the Ravenswood SF2 pond. The DRB focused on four aspects of the public access design: (1) ensuring that elevations of the public access areas were designed appropriately, relative to future sea level rise; (2) adequate parking availability; (3) "access to the access", i.e., ensuring that the public is aware of the project and the new public access areas; and (4) designing the proposed dead end trails to attract more public usage.

The CDFW ~~DFG~~ responded that: (a) viewing platforms would be constructed well above anticipated sea level rise, trails would be built on levees which will have to be raised to protect inland areas from flooding as sea level rise occurs, and many public access platforms and levee trails would be around managed ponds with controlled water levels; (b) key public access areas are accessible by car, bike and foot and parking already exists at all public access areas; (c) the project managers will use different approaches to raise public awareness (billboards, web cams, websites, encouraging school groups to use the refuge, etc.); and (d) wildlife viewing areas would be situated at the ends of the two terminal trails planned for Phase One to provide a "reward" for the public to go to the end.

The DRB reviewed this project a second time at its April 8, 2008 meeting in San Francisco, and recommended that the CDFW ~~DFG~~ review BCDC's shoreline signage guidelines for design direction for the billboard. The DRB also requested that a future review focus on a comprehensive sign program that includes interpretive, way-finding, etc., and that in advertising the project, the CDFW ~~DFG~~ should include a whole network of communication techniques, including technology and/or photography.

Special Condition II-A-2 ensures that the DRB will conduct further plan review of public access areas and amenities.

c. **Parking.** Phase One of the SBSPR Project will establish many new trails and public access features but no new parking facilities. BCDC's Design Review Board expressed concern about the lack of new parking available in that it may prevent the public from accessing the site. The CDFW ~~DFG~~ responded by stating that "parking is planned for 58 vehicles and is being built as part of the restoration plan for the northern 835 acres of the Eden Landing Ecological Reserve (ELER), a separate action currently underway and permitted separately. No paved roads are planned within the Phase One actions."

d. **Barrier-Free Access.** Bay Plan Public Access policies provide that "improvements should be designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, should permit barrier-free access for the physically-handicapped to the maximum feasible extent, should include an ongoing maintenance program, and should be identified with appropriate signs."

CDFW ~~DFG~~ states that it will "…install Americans with Disabilities Act (ADA)-compliant features for all trails over time. ADA-compliant features will be added to the Shoreline Trail and loop trail (Eden Landing)…(these actions may be undertaken during Phase One or during later Phases of the SBSP Restoration Project)." However, to ensure that these improvements are provided in a timely manner, Special Condition II-E-1 requires that the barrier-free trails and amenities be implemented either during Phase One or within a reasonable period of time thereafter.

The project will include measures to ensure barrier-free access for the disabled, will provide an appropriate maintenance program, and will identify facilities for the disabled with appropriate signs. These provisions comply with Bay Plan policies to provide barrier-free access because the improvements must meet the federal accessibility guidelines pursuant to the ADA.

To better assess public access needs in the future, Special Condition II-C-3 of this amended permit requires the CDFW ~~DFG~~ to monitor public use of parking lots, trails, and viewing platforms so that public access facilities can be provided consistent with public demands on the facilities.

The Commission finds that the Phase One project, as conditioned, is consistent with the Bay Plan policies regarding public access.

E. **Bay Plan Policies on Water Quality.** The Bay Plan policies on water quality state in part, that "[b]ay water pollution should be prevented to the greatest extent feasible. The Bay's tidal marshes, tidal flats, and water surface area and volume should be conserved and, whenever possible, restored and increased to protect and improve water quality. Fresh water inflow into the Bay should be maintained at a level adequate to protect Bay resources and beneficial uses. The policies also state that "[w]ater quality in all parts of the Bay should be maintained at a level that will support and promote the beneficial uses of the Bay as identified in the *San Francisco Bay Regional Water Quality Control Plan, San Francisco Bay Basin* and should be protected from all harmful or potentially harmful pollutants. The policies, recommendations, decisions, advice, and authority of the State Water Resources Control Board and the Regional Board, should be the basis for carrying out the Commission's water quality responsibilities." Finally, the policies also state that "[n]ew projects should be sited, designed, constructed, and maintained to prevent or, if prevention is infeasible, to minimize the discharge of pollutants into the Bay by: (a) controlling pollutant sources at the project site; (b) using construction materials that contain nonpolluting materials; and (c) applying appropriate, accepted, and effective best management practices, especially where water dispersion is poor and near shellfish beds and other significant biotic resources."

1. **Initial Stewardship Plan.** The permittee will begin the discharge of water to the Bay from a limited number of salt ponds beginning in July and August of 2004, meeting Water Quality Objectives, as outlined by the Regional Water Quality Control Board, San Francisco Bay Region, Waste Discharge Requirements, discussed below. In March and April of 2005, the permittee will discharge water from the remaining salt ponds, when salinities within the ponds and receiving waters are at their lowest.

On March 17, 2004 the Regional Water Quality Control Board, San Francisco Bay Region, approved Waste Discharge Requirements for the project. The Regional Board states, in part, that these discharge requirements "…permit discharge from certain ponds under an initial release scenario where high salinities discharged from certain ponds will likely impact beneficial uses in the short term, but impacted areas are expected to fully recover within one year. These requirements also permit subsequent discharge from these ponds as waters from the south bay area are taken into pond systems and then discharged more-or-less continuously (continuous circulation). For the continuous circulation period, the Discharger must manage the pond systems to ensure beneficial uses remain protected. The initial release refers to the time expected to substantially empty salt ponds of their current contents. Modeling performed by the Discharger indicates that the duration of the initial release will be about eight weeks or less…it is the position of the Board that the long-term water quality benefits of this project (i.e., maximizing the acreage of salt ponds restored to tidal marsh habitat) outweigh short-term impacts associated with the initial release."

Because the ISP will, after the initial discharge period (expected to be approximately 8 weeks), maintain almost all of the existing water surface area and volume of the existing salt ponds, while reducing salinities in many of the ponds to promote use of most of these ponds for a greater variety of fish and wildlife uses, the Commission finds that the proposed project, with the mitigation measures included herein, is consistent with its water quality policies because although some short-term water quality impacts will occur, the long-term benefits to Bay water quality exceed the short-term impacts.

2. **Phase One (Amendment No. One).** There is a potential that Phase One actions could affect water quality throughout the SBSPR Project area. Breaching levees to restore tidal action to diked salt ponds or increasing circulation into managed ponds could cause adverse changes in turbidity, aquatic habitat sedimentation, or exposure to toxic substances and other contaminants.

   Potential impacts to water quality from methylmercury could result from project implementation. An analysis of this issue is discussed in the subsection entitled "Mercury".

   The CDFW ~~DFG~~ states that "all managed ponds will comply with water quality discharge requirements and objectives set by the RWQCB. In addition, best management practices (BMPs) identified in the Storm Water Pollution Prevention Plan to be prepared by the project sponsors and the Biological Opinion will be employed to limit turbidity and sediment transport. Construction activities may cause temporary water quality impairment because of discharges to nearby water and/or drainage channels." Best management techniques to be used include floating sediment curtains; the construction of temporary containment berms, baffles, and hay bales; and hydroseeding disturbed slopes with native vegetation. All of these actions are designed to limit erosion and sediment release and keep effects

localized. It should also be noted that the CDFW ~~DFG~~ states that most of the construction will occur inside the ponds prior to being breached and away from the breach locations to prevent releases to adjacent sloughs or creeks.

The CDFW ~~DFG~~ further states that "short-term channel incision would likely result in increased sediment suspension and water turbidity downstream of areas where erosion is taking place. However, appropriate site-specific design should ensure that this effect would be comparatively minor and that it would decrease and disappear as the system equilibrates as part of habitat restoration."

CDFW ~~DFG~~ states that as part of Phase One actions "all managed ponds will comply with water quality discharge requirements and objectives set by the RWQCB." Special Condition II-C-3 requires that the USFWS comply with the provisions of the RWQCB's authorization for the Phase One project.

Further, construction activities could cause temporary water quality impairment because of discharges to nearby water and/or drainage channels. Best management practices (BMPs) for controlling soil erosion and discharges of other construction-related contaminants will be identified in a Storm Water Pollution Prevention Plan to be prepared by the project sponsors. Best management techniques to be used include floating sediment curtains; the construction of temporary containment berms, baffles, and hay bales; and hydroseeding disturbed slopes with native vegetation. Special Condition II-G-1 of this amended consistency determination requires CDFW ~~DFG~~ to implement BMP's, such as those above, to limit erosion and sediment release and keep effects localized.

a. **Salinity.** The CDFW ~~DFG~~ states that Phase One actions are designed to ensure that discharged salinity levels comply with the RWQCB's water quality standards. Salinity levels will be monitored in Ponds E12 and E13 and, if triggers are exceeded in the Adaptive Management Plan, then actions will be implemented to avoid significant impacts. Special Condition II-C-3 requires CDFW ~~DFG~~ to monitor salinity and Special Condition II-D ensures that appropriate adaptive management actions will be implemented if water quality standards are not met for salinity.

b. **Dissolved Oxygen**. The SBSPR Project has experienced difficulty in the past in maintaining adequate dissolved oxygen levels at pond discharge points under the Initial Stewardship Plan, particularly in the Alviso complex. There have been three reported occasions in the past four years in the Alviso complex where severe depletion in dissolved oxygen levels has led to gulls feeding on oxygen stressed fish or conditions where low dissolved oxygen levels caused fish mortality. No occasions of depleted oxygen levels were reported in the Eden Landing complex. However, the Phase One actions for the Eden Landing complex have been designed to minimize high risk factors for low dissolved oxygen. Design elements, including hydraulic residence time, water depth, and mixing will be optimized to maintain dissolved oxygen levels that meet the RWQCB's Basin Plan Water Quality Objectives. Dissolved oxygen levels will be monitored in Ponds E12 and E13 and, if triggers are exceeded in the Adaptive Management

Plan, then actions will be implemented to avoid significant impacts. Special Condition II-C-3 requires CDFW ~~DFG~~ to monitor salinity and Special Condition II-D ensures that appropriate adaptive management actions will be implemented if water quality standards are not met for salinity.

c. **Mercury**. Sediments in some of the ponds throughout the SBSPR Project area contain high levels of mercury contamination. The Alviso complex ponds are an area of special concern given that the historic New Almaden mercury mine released significant quantities of mercury into Guadalupe Slough that accumulated in the Alviso ponds. The remobilization of mercury-contaminated sediments into the water column, either directly (e.g., during excavation of pilot channels) or indirectly (through increased sediment scour after a pond is opened to tidal action), can cause increased mercury concentrations in the water column and sediment in the Bay and have impacts on water quality, and fish and wildlife. In 2006, the RWQCB approved a total maximum daily load (TMDL) plan for mercury in San Francisco Bay which specifies that mercury levels cannot exceed 0.2 part per million (ppm) in large fish and 0.03 ppm in small fish. The Bay mercury TMDL also requires that activities avoid release of sediments into the Bay that have a median mercury concentration greater than 0.2 ppm, and that existing water quality objectives (0.025 – 0.050 µg/L) for mercury be attained.

   The CDFW ~~DFG~~ states that "to help ensure that these objectives are met, testing of sediments for mercury concentrations has been conducted within ponds to be opened to tidal action, and within sloughs and marshes that may scour following breaching of a pond. As a result of the preliminary testing, a mercury study is currently underway to ensure that impacts on biota are minimized during the restoration process. This mercury study focuses on the Alviso area where mercury levels are known to be high, but also includes sampling sites elsewhere in the South Bay. This study is measuring mercury levels in the sediment, water column, and various sentinel species; measuring the bioavailability of inorganic mercury in sediments; measuring mercury methylation across salinity gradients in managed ponds, marshes, and other habitat types. This study will increase the understanding of mercury cycling within the Project area and will inform management decisions to further minimize mercury exposure."

   As tidal habitat is restored in some of the ponds, there is a potential for increased methylmercury (MeHg) production. MeHg is a particular toxic form of mercury which is more bioavailable to fish and wildlife and therefore can have more adverse effects on them. Pond A8 is of special concern since it contains a significant amount of mercury-laden sediment. The CDFW ~~DFG~~ states that "restoration of tidal action at Pond A8 is designed to be reversible so that in the event that unacceptable ecological impacts begin to occur, tidal exchange to Pond A8 can be eliminated to prevent long-term adverse impacts."

On August 13, 2008, RWQCB issued a waste discharge requirements and water quality certification authorizing Phase One activities for the South Bay Salt Ponds Restoration Project. The order requires the CDFW ~~DFG~~ to have all discharge waters comply with the water quality objectives set by the Basin Plan; monitor all of the parameters listed in the habitat mitigation and monitoring plan, as discussed in the section entitled, "Monitoring/Adaptive Management"; and comply with the limits set by the mercury TMDL for mercury concentrations. Special Condition II-C-4 of this amended consistency determination requires CDFW ~~DFG~~ to develop a methylmercy monitoring program to assess methylmercury accumulation at the site in sentinel species, formation of a methyl mercury technical advisory committee, provides for adaptively managing the ponds to reduce methyl mercury if levels exceed acceptable, and making the ponds available to researchers to study methyl mercury. In addition, the conditional consistency concurrence for Phase One (Amendment No. One) requires CDFW ~~DFG~~ to develop a methylmercy monitoring program to assess methylmercury accumulation at the site in sentinel species.

For all these reasons, the Commission finds that Phase One is consistent with its policies on water quality.

F. **Bay Plan Policies on Fish, Other Aquatic Organisms, and Wildlife and on Tidal Marshes and Tidal Flats and Subtidal Areas.** The Bay Plan policies on fish, other aquatic organisms, and wildlife state, in part, that "[t]o assure the benefits of fish, other aquatic organisms, and wildlife for future generations, to the greatest extent feasible, the Bay's tidal marshes, tidal flats, and subtidal habitat should be conserved, restored, and increased." The policies also state that, "[s]pecific habitats that are needed to conserve, increase, or prevent the extinction of any native species, species threatened or endangered, species that the California Department of Fish and WildlifeGame has determined are candidates for listing as endangered or threatened under the California Endangered Species Act, or any species that provides substantial public benefits, should be protected, whether in the Bay or behind dikes." In addition, the policies state that "[i]n reviewing or approving habitat restoration programs the Commission should be guided by the recommendations in the Baylands Ecosystem Habitat Goals report and should, where appropriate, provide for a diversity of habitats to enhance opportunities for a variety of associated native aquatic and terrestrial plant and animal species." Finally, the policies state that "[t]he Commission may permit a minor amount of fill or dredging in wildlife refuges, shown on the Plan Maps, necessary to enhance fish, other aquatic organisms, and wildlife habitat or to provide public facilities for wildlife observation, interpretation, and education."

The Bay Plan policies on tidal marshes and tidal flats state, in part, that "[w]here and whenever possible, former tidal marshes and tidal flats that have been diked from the Bay should be restored to tidal action in order to replace lost historic wetlands or should be managed to provide important Bay habitat functions, such as resting, foraging, and breeding habitat for fish, other aquatic organisms, and wildlife. As recommended in the Baylands Ecosystem Habitat Goals report, around 65,000 acres of areas diked from the Bay should be restored to tidal action…." The policies also state that "[a]ny tidal

restoration project should include clear and specific long-term and short-term biological and physical goals, and success criteria and a monitoring program to assess the sustainability of the project. Design and evaluation of the project should include an analysis of: (a) the effects of relative sea level rise; (b) the impact of the project on the Bay's sediment budget; (c) localized sediment erosion and accretion; (d) the role of tidal flows; (e) potential invasive species introduction, spread, and their control; (f) rates of colonization by vegetation; (g) the expected use of the site by fish, other aquatic organisms, and wildlife; and (h) site characterization. If success criteria are not met, appropriate corrective measures should be taken." The Bay Plan policies on subtidal habitat, state in part, that "[a]ny proposed filling or dredging project in a subtidal area should be thoroughly evaluated to determine the local and Bay-wide effects of the project on: (a) the possible introduction or spread of invasive species; (b) tidal hydrology and sediment movement; (c) fish, other aquatic organisms and wildlife; (d) aquatic plans; and (e) the Bay's bathymetry. Project in subtidal areas should be designed to minimize, and, if feasible, avoid any harmful effects."

1. **Initial Stewardship Plan.** The environmental document for the ISP outlines the potential impacts to biological resources in the project area. The document states that there may be potentially significant and significant short-term (24 hours to 8 weeks) impacts from elevated salinity in discharges to benthic organisms in several of the creeks and sloughs in the project area during the initial release period. These short-term impacts will be mitigated to less than significant levels by the implementation of mitigation measures such as assessing and maintaining salinity in discharges at levels to minimize impacts to invertebrates in receiving waters and other water quality parameters at levels that protect aquatic resources. Special Condition II-K outlines the measures that will be required to protect wildlife.

   The long-term impacts to vegetation are expected to be less than significant during the continuous circulation period. Impacts to vegetation in the project area could occur due to disturbances from the construction of water control structures or the spread of invasive cordgrass. Impacts from the installation or replacement of water control structures will result in the loss of an estimated 44,867 square feet (1.03 acres) in the Alviso and West Bay complexes. The environmental document for the ISP states that "[t]here are no reports of populations of special-status plants within or adjacent to the project areas, and survey of the proposed water control structure sites did not identify special-status plants in these specific locations. Disturbance and/or loss of common plan communities at these locations would not jeopardize their existence. Therefore, this impact is considered less than significant." Impacts due to invasive cordgrass will be mitigated to less than significant levels by the implementation of mitigation measures, outlined in Special Condition II-I, which requires the removal of invasive cordgrass in areas adjacent to intakes, and the monitoring and removal of invasive cordgrass within the ponds themselves.

   Impacts to fish could potentially be significant and significant on a short-term basis (24 hours to 8 weeks) from elevated salinity in discharges into adjoining waterways in several of the creeks and sloughs in the project area during the initial release of water from the ponds. A potential for impacts to juvenile fish by entrainment by the

water control structures also exists. These short-term impacts will be mitigated to less than significant levels by the implementation of mitigation measures, outlined in Special Condition II-C, such as assessing and maintaining salinity and other water quality parameters at levels protective of aquatic resources and possibly closing intakes on salmonid migration routes during periods of juvenile migration if recommended by the biological opinion. Long-term impacts are expected to be less than significant during the continuous circulation period.

The environmental document for the ISP states that changes in pond management will result in some wildlife habitat changes. For example, conversion of project area salt ponds to seasonal ponds will result in substantial loss of open water foraging habitat for some waterbirds. This conversion will be beneficial to snowy plovers, however reduction in medium and high salinity ponds will substantially reduce the available foraging habitat for waterbirds which favor this habitat (e.g., sandpipers). The loss of medium- and high- salinity ponds is a significant impact to waterbirds. Although mitigation measures are proposed to mitigate this impact, the impact remains potentially significant even with these measures. Mitigation measures to avoid or minimize impacts to wildlife, in part, include: (1) monitoring waterbird use and comparing pre-implementation of the Initial Stewardship Plan to post-implementation monthly monitoring data to determine waterbird use. If survey results show a major decline in waterbird populations, adaptive management would be implemented to manage more ponds as medium- or high salinity batch ponds; (2) identifying islands and interior levees in need of protection from water level fluctuation to reduce impacts to nesting bird colonies from increased predator access and/or flooding; and (3) surveying areas to avoid direct impacts to salt marsh harvest mouse, salt mouse wandering shrew, burrowing owl, nesting harriers, and other species, as a result of water control structure construction and if any of these species of special concern are found, construction would be located outside the habitat, if possible, or buffers between construction area and species would be installed and the species monitored, or work would be rescheduled until after nesting season. These mitigation measures are included as Special Condition II-K.

While the ISP may have some significant impacts to some species of fish and wildlife during the initial construction and discharge period, and by reducing the number of high salinity pond, it is expected that the project will quickly provide improved habitat function for most San Francisco bay species. The project also will monitor impacts of the project on fish and wildlife species adjacent to the project to assure protection of species most directly impacted. For these reasons, the Commission finds that the proposed project is consistent with its Bay Plan policies on Fish, Other Aquatic Organisms, and Wildlife and on Tidal Marshes and Tidal Flats and Subtidal Areas in that the project will result in improved wildlife habitat and special conditions are included in this amended permit that will reduce most of the potential impacts to less than significant levels.

2. **Phase One (Amendment No. One).** In the process of restoring tidal action and hydraulic connectivity to the ponds in Phase One, approximately 17,370 cubic yards of material over 34,848 square feet (0.8 acres) of fringe tidal marsh will be impacted by dredging and excavation to construct pilot channels and levee breaches. There is the potential for the scouring of adjacent tidal marshes, sloughs and channels and the erosion of nearby tidal flats as tidal action is restored to the ponds in the Phase One project area. These impacts could potentially occur when levees are breached. If there is inadequate suspended sediment supply available to feed the accreting wetland areas, then the increased sediment may be eroded from nearby tidal flats by the increased tidal prism and altered hydrologic patterns in the area and pulled into the new wetland areas, thereby impacting to some unknown degree, the resource values of existing tidal flats.

   Historically, the salt ponds in all three of the SBSPR Project complexes were comprised of tidal marsh and marsh ecotone habitats. Commercial salt production at the site began as early as the mid-1800s and continued into the 1990's. Existing salt pond levees currently prevent floodwaters and tides from the Bay from entering the site. Phase One actions will involve the restoration of approximately 3,069 acres of former salt ponds to a mosaic of tidal habitat and managed ponds which will provide habitat for a broad range of migratory shorebirds and waterfowl, marsh-dependent birds, mammals, fish and other aquatic organisms, including special-status species such as the ~~California clapper~~ Ridgeways rail and the salt marsh harvest mouse. The restoration will also establish connectivity among habitats within and adjacent to the project site, which will allow for the movement of wildlife between habitat types.

   The U.S. Army Corps of Engineers (Corps) has completed Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) for the entire SBSPR Project. A programmatic Biological Opinion that assesses potential impacts of the entire project and of Phase One actions, was completed in August of 2008. The USFWS opinion on the effects of the project on the endangered salt marsh harvest mouse (*Reithrodontomys raviventris*) (harvest mouse), endangered ~~California clapper~~ Ridgeways rail (*Rallus longirostris obsoletus*) (~~clapper~~ Ridgeways rail), threatened western snowy plover (*Charadrius alexandrinus nivosus*) (plover), the endangered California least tern (*Sternula antillarum browni*) (tern), and the threatened California brown pelican (*Pelecanus occidentalis californicus*) is that that Phase One actions are not likely to adversely affect any of these species. Furthermore, the Biological Opinion found that the creation of tidal wetlands and managed ponds will greatly increase the amount of habitat that supports these species.

   The EIS/R for Phase One activities found that there is potential for significant impacts to species of birds that currently use the salt ponds. As a result of conversion of 50% of the ponds to tidal habitat (Alternative B in the EIS/R), foraging habitat for ruddy ducks could be lost. However, given that Phase One aims to

introduce gradual restoration of the SBSPR Project ponds area that will result in approximately 2,450 acres of tidal habitat (16% of the ponds) and 709 acres of managed ponds (5% of the ponds), this is not an immediate issue of concern for Phase One actions.

The EIS/R identified potential impacts to estuarine fish including the federally listed threatened steelhead. The project is expected to have a net benefit to steelhead by increasing estuarine habitat. However, the EIS/R states that it is possible that steelhead and other fish could enter managed ponds and become trapped. Phase One actions require a Biological Opinion from the National Marine Fisheries Service (NMFS). The Biological Opinion from NMFS is expected in October 2008. Special Condition II-K of this amended permit requires the CDFW ~~DFG~~ to obtain a Biological Opinion from NMFS. In addition, the CDFW ~~DFG~~'s monitoring program includes sampling of pelagic and demersal fish in Ponds A6 and SF2.

Like the ISP, Phase One may have some significant impacts to some species of fish and wildlife during the initial construction and salt pond water discharge period, and by reducing the number of high salinity ponds. But as with the ISP, it is expected that the project will quickly provide improved habitat function for most San Francisco Bay species. The project also will monitor impacts of the project on fish and wildlife species adjacent to the project to assure protection of species most directly impacted. For these reasons, the Commission finds that Phase One is consistent with its Bay Plan policies on Fish, Other Aquatic Organisms, and Wildlife and on Tidal Marshes and Tidal Flats and Subtidal Areas, in that the project will result in improved wildlife habitat and special conditions are included in this amended permit that will reduce most of the potential impacts to less than significant levels.

For these reasons, the Commission finds that the Phase One project, as conditioned, is consistent with its Bay Plan policies on Fish, Other Aquatic Organisms, and Wildlife, on Tidal Marshes and Tidal Flats, and on Subtidal Areas.

G. **Bay Plan Policies on Mitigation.** The Bay Plan policies on mitigation state, in part, that "[p]rojects should be designed to avoid adverse environmental impacts to Bay natural resources…Whenever adverse impacts cannot be avoided, they should be minimized to the greatest extent practicable. Finally, measures to compensate for unavoidable adverse impacts to the natural resources of the Bay should be required. Mitigation is not a substitute for meeting the other requirements of the McAteer-Petris Act." In addition, the policies state that "[i]ndividual compensatory mitigation projects should be sited and designed within a Bay-wide ecological context, as close to the impact site as practicable, to: (1) compensate for the adverse impacts; (2) ensure a high likelihood of long-term ecological success; and (3) support the improved health of the Bay ecological system. Determination of the suitability of proposed mitigation locations should be guided in part by the information provided in the Baylands Ecosystem Habitat Goals report."

Implementation of the Initial Stewardship Plan and Phase One will lead to significant changes in a large area of the south Bay. The most significant change over the long term will be the conversion of a number of ponds from salt production to tidal and managed wetlands. Over time, a number of animals, particularly wading shorebirds and a few species of invertebrates (e.g. brine shrimp and brine fly) have come to depend on the higher salinity ponds for foraging and breeding habitat). Other animals have come to roost and nest on salt pond levees and islands. The Initial Stewardship Plan and Phase One are first steps toward managing this 16,000-acre portion of the salt pond complex for wildlife. It seeks to reduce salinity in a number of the ponds, while maintaining a sufficient number of ponds at various salinities to support the species currently utilizing the ponds. Because the ISP and Phase One are intended to maximize habitat function in the former salt ponds, most Bay plant and animal species will benefit from its implementation. In addition, water quality benefits should also be realized through a reduction in pond salinity and increases in tidal prism and circulation. However, some species, particularly those primarily utilizing higher salinity ponds, may experience a decline in the number of individuals as acreage of ponds of such habitat will be reduced. Through monitoring and adaptive management, it is anticipated that impacts to such species can be minimized but not fully avoided. However, there is consensus that most Bay species will greatly benefit through implementation of the ISP and Phase One and the eventual implementation of the long term restoration plan. For this reason, the project is self-mitigating. Though the ISP will result in the lost of approximately 3.56 acres of salt pond water surface area, though there will be some short term impacts on receiving waters as highly saline waters from the salt ponds are controlled released into receiving waters, through tidal flats and some channels may experience increased scouring as a result of increased tidal prism and though some species may experience declines in populations as the number of high salinity ponds are reduced, the overall positive impact to most Bay species through implementation of the ISP are expected to far outweigh these negative impacts.

For the above reasons, the Commission finds that both the Initial Stewardship Plan and Phase One are consistent with its laws and policies on mitigation because the project will result in significantly improved habitat values and is thus, self-mitigating.

H. **Dredging**

1. **Phase One (Amendment No. One).** Bay Plan policies on dredging state in part, that "[d]redging and dredged material disposal should be conducted in an environmentally and economically sound manner. Dredgers should reduce disposal in the Bay and certain waterways over time…" According to Dredging Policy Two, the Commission should authorize dredging when it can find that (a) it serves a water-oriented use or other important public purpose; (b) the materials to be dredged meet the water quality requirements of the San Francisco Bay Regional Water Quality Control Board; (c) important fisheries and Bay natural resources will be protected through seasonal restrictions; (d) the project will result in the minimum dredging volume necessary; and (e) the materials will be disposed of in accordance

with Policy 3." Dredging Policy Three states in part, that dredged materials should, if feasible, be reused or disposed outside the Bay and certain waterways. Except when reused in an approved fill project, dredged material should not be disposed in the Bay…."

As part of the Phase One activities, sediment will be dredged both from the Commission's Bay and Salt Pond jurisdictions to breach levees, create pilot channels, internal channels and habitat islands, create borrow pits, and lower internal levees. The project will involve placement of the dredged material in the bottom of salt ponds restored to tidal habitat, on levee tops, within ponds for nesting islands, in historic borrow areas, in ponds to create low berms to guide channel and pond development and to partition ponds into smaller management units, and in dredge cuts to create ditch blocks.

The dredged sediment for this project will be used to create habitat features, such as nesting islands, and to aid in restoration, such as creating ditch blocks and raising pond bottoms. No dredged material is proposed for disposal within the Commission's Bay jurisdiction, so therefore, this project meets the overall LTMS goals (Long Term Management Strategy for the Placement of Dredged Material in the San Francisco Bay Region) of reusing dredged material when feasible in restoration and construction activities. The project as described is a water oriented use as it will restore tidal action to the project site, and increase overall tidal habitats of the Bay increasing resident, migrant and endangered species habitat, an important public purpose.

The RWQCB issued a Waste Discharge Requirement and Water Quality Certification for the project (Order No. R2-2008-0078) on August 13, 2008, which requires that the CDFW ~~DFG~~ apply the appropriate dredged material screening procedures to characterize sediments prior to any dredging in order to prevent the placement of contaminated sediments on-site. As stated earlier, this amended permit includes a special condition to ensure that the CDFW ~~DFG~~ complies with the RWQCB's authorization.

2. **Importation of Dredged Material for Phase One Activities (Amendment No. Two).** Amendment No. Two authorizes the importation and placement of up 350,000 cubic yards of dredged material at the Eden Landing Complex ponds provided by the Alameda County Flood Control District (ACFCD) in order to accelerate the establishment of marsh vegetation. The ACFCD is authorized under BCDC Permit 5-82 to perform regular maintenance and dredging within a number of flood control channels. When the initial Phase One activities were being reviewed and approved by the Commission in October 2004, the California Department of Fish and Wildlife~~Game (CDFG)~~ had planned only to use material generated from on-site to restore Ponds E8A, E8X, E9 and A6. Since that time, the CDFW ~~CDFG~~ has coordinated with the ACFCD and Regional Board to obtain additional dredged material, up to 350,000 cubic yards, from ACFCF over the next five years to place in Pond E8A (i.e., the placement of imported dredged material) in order to fill borrow ditches and raise pond bottom elevations in order to expedite the restoration schedule. In

addition, CDFW ~~CDFG~~ is planning to use some of the material to prep Ponds E1, E2, E4, E5, E6, E6A, and E7 for subsequent restoration. Since the above-mentioned restoration activities in Pond E8A and the other pond locations (E1 through E7) were not authorized by Material Amendment No. One, Amendment No. Two is being issued to include this work. All dredged material will be tested as part of the requirements of BCDC permit 5-82 and only material that meets the Regional Board's beneficial reuse guidelines will be taken to Eden Landing (Amendment No. Two).

For all the reasons, the Commission finds that the dredging work for Phase One is consistent with the Commission's dredging policies.

I. **Sea Level Rise/Safety of Fills.** The Bay Plan policies on Safety of Fills state in part that, "[t]o prevent damage from flooding, structures on fill or near the shoreline should have adequate flood protection including consideration of future relative sea level rise as determined by competent engineers." Additionally, these policies state in part that, "[t]o minimize the potential hazard to Bay fill projects and bayside development from subsidence, all proposed development should be sufficiently high above the highest estimated tide level for the expected life of the project or sufficiently protected by levees…" These policies further state in part that, "[l]ocal governments and special districts with responsibilities for flood protection should assure that their requirements and criteria reflect future relative sea level rise and should assure that new structures and uses attracting people are not approved in flood prone areas or in areas that will become flood prone in the future, and that structures and uses that are approvable will be built at stable elevations should assure long-term protection from flood hazards." Finally, the Bay Plan Salt Pond Policy 3.c. states in part that "[a]ny project for the restoration, enhancement or conversion of salt ponds to subtidal or wetland habitat should…[be]….[d]esign[ed] and evaluat[ed]…[based partly on]…an analysis of [f]lood management measures."

The CDFW ~~DFG~~ states that the "…project generally utilized a mid-range sea level rise estimate for analysis. The Final EIS/R for the…project used the 2001 Intergovernmental Panel on Climate Change (IPCC) mid-range sea level rise estimate of 6 inches by 2050 (3 mm/yr average) and 18 inches by 2100 (6 mm/yr average between 2050 and 2100) (IPCC 2001). The higher rates in the second half of the century reflect the effects of accelerated sea level rise.

Further, the CDFW ~~DFG~~ states that local subsidence historically occurred due to groundwater withdrawals, but that a reduced rate of groundwater withdrawals coupled with the recharge of aquifers, has resulted in decreased subsidence. According to the CDFW ~~DFG~~, "[r]ecent estimates of vertical land movements in the Santa Clara Valley (Schmidt and Burgmann 2003) show that only small amounts of subsidence are likely to be occurring in the South Bay that are due to groundwater extraction. In this analysis it is assumed that no land movement due to groundwater withdrawal takes place."

The permittee plans to further consider sea level rise during the detailed design for each subsequent phase of project implementation, including flood protection levees. According to the CDFW ~~DFG~~, "[t]he plans would outline a strategy for low-, mid-, and high-end sea level rise predictions. For example, the plan may include building a levee to accommodate the 50-year mid-range sea level rise projection, and incorporate features or outline a process to deal with higher or lower rates of sea level rise…. Higher than anticipated sea level rise would require subsequent design phases to raise the levee (i.e., widening and raising the levee or building a flood wall) before sea level rises above the design level for flood protection. Other options would include overbuilding the levee initially to anticipate a higher rate of sea level rise, either by building a higher levee, or by building a levee with a wider base to more easily accommodate future increases in levee height. The future design of the flood protection levee would balance the cost and benefits of the potential approaches at the time of design. The project-level analysis and design will be presented in a future project-level EIS/R. Subsequent phases of environmental documentation may also be required to address changes to the Project based on updated sea level rise information and analysis. There may be a need to import more fill than currently anticipated in the project's programmatic EIS/R for flood protection levee construction and maintenance of the flood protection and managed pond levees."

Most of the public access for Phase One involves trails and observation areas on the top of, or immediately adjacent to, levees. Some of these trails, particularly those that will be part of the Bay Trail spine, will be on levees that protect inland developed areas from flooding. The U.S. Army Corps of Engineers is currently studying flood protection in the South Bay to determine suitable strategies for protecting developed areas from flooding, but it is likely that some or all of the levees bordering development will be raised. The public access on top of raised levees will thus be high enough not to be flooded by anticipated sea level rise. However, depending on the adaptive management strategies developed as the restoration of the salt ponds proceeds, some of the spur trails that run on top of ponds that will be managed to provide a variety of pond habitats may be lost if it determined that some of these ponds will be restored to tidal action, or that it will be too expensive to maintain these levees. All of the built structures, such as observation decks, restrooms, interpretive panels, etc. will either be constructed at elevations sufficient to accommodate expected sea level rise, or will be able to be readily removed and relocated. Special Condition II-A, regarding plan review in this amended consistency determination will provide the Commission with the opportunity to review and approve such changes in public access when and if they are proposed.

For these reasons, the Commission finds that the project is consistent with the policies on safety of fills, particularly as those policies concern public access areas affected by rising sea levels.

J. **Continuing Maintenance of the Ponds (as previously authorized in BCDC Permit No. 1993.004.00 ~~4-93~~, to Cargill, [note: contains original permit language])**

1. **Salt Pond Policies**. The *San Francisco Bay Plan* salt pond policies state that "as long as is economically feasible, the salt ponds should be maintained in salt production and the wetlands should be maintained in their present use....In addition, the integrity of the salt production system should be respected (i.e., public agencies should not take for other projects any pond or portion of a pond that is a vital part of the production system)...."

   The Bay Plan policies support the continuation of the salt pond system because of its many environmental and open space benefits. Because they are quite shallow and thus easily filled for other types of uses and development, the continued economic viability of the salt pond system is critical. A substantial acreage of salt ponds have been purchased as a part of the San Francisco Bay National Wildlife Refuge Complex and by the California Department of Fish and Wildlife~~Game~~, hundreds of acres are still held in fee ownership by the Cargill, however. Cargill will continue its solar salt making process and produce similar volumes of salt was it did on a greater acreage in the past.

   The project authorized herein also provides for maintenance and conversion of the existing salt pond for wildlife purposes primarily through existing practices, including the use of the floating dredge, called the *Mallard*, and use and maintenance of the existing system of "dredge locks." This method of maintaining the salt ponds, which has been used for over fifty years, is the most technologically and economically feasible method for solar salt production in south San Francisco Bay. As described below, the Final Environmental Assessment and its background studies also conclude that this method of salt pond system maintenance is the most feasible. As modified by Special Conditions herein, incorporating the proposed Best Management Practices to lessen and mitigate for adverse impacts to marshes and mudflats, fish and wildlife, and endangered species habitat, as well as providing for potential lock relocations, the Commission finds that the salt pond maintenance work authorized herein complies with the Bay Plan salt pond policies.

2. **Fish and Wildlife.** The *San Francisco Bay Plan* policies on fish and wildlife state that "the benefits of fish and wildlife in the Bay should be insured for present and future generations of Californians. Therefore, to the greatest extent feasible, the remaining marshes and mudflats around the Bay...should be maintained....Specific habitats at are needed to prevent the extinction of any species, or to maintain or increase any species that would provide substantial public benefits, should be protected, whether in the Bay or on the shoreline behind dikes...."

3. **Adverse Impacts and Reduction and Avoidance Measures**

   a. **Wetland Impacts.** The South Bay marshes and mudflats support a diverse array of wildlife, including several special status species such as the endangered ~~California clapper~~ Ridgeways rail, California least tern and salt marsh harvest

mouse. As described in the Final Environmental Assessment (FEA), the past (i.e., pre-BMP) dredge lock and salt pond levee use and other maintenance activities authorized currently in BCDC Permit No. M76-110 have resulted in approximately 17 acres of temporal disturbance to South Bay salt marshes at any one time because as the dredge enters a new dredge lock, the previously used locks are in the process of revegetating and recovering. As detailed in the Final Environmental Assessment, wildlife habitat values substantially recover within five years of disturbance, although a small proportion of the 38 locks are accessed so often that they never fully recover before being re-disturbed. In addition, it should be noted that these activities have been occurring on an ongoing basis for at least the last fifty years, thus no pristine areas of tidal marsh habitat are being disturbed.

To reduce the impacts of the project, the permittee will use a set of Best Management Practices, which were fully analyzed in the FEA and are required by Special Conditions of this amended Permit to become part of its operating practices. Monitoring of Lock B-1 that was accessed using these BMP's, which have been further refined based upon that experience, indicates that both the extent and duration of temporal impacts are significantly less when implementing the BMP's. Thus, the 17-acre estimate of temporal wetland impacts is considered to be conservative. As part of the BMP's, monitoring of all maintenance activities, particularly dredge lock use and maintenance, will provide data on actual impacts using the BMP's.

b. **Wildlife/Endangered Species**. As described in the Final Environmental Assessment, maintenance activities could potentially impact fish and wildlife due to temporary habitat loss, disturbance, and changes in water quality. Impacts to animal species include direct effects on organisms or nests, removal or elimination of habitat, or other types of indirect effects such as changes to water quality. While the direct effects are considered relatively minor, as approximately 17 acres out of 8,600 acres of tidal marsh in the South Bay are disturbed at any one time, they may include impacts on endangered or other special status species, which could be significant.

   i. **Dredge Lock Use and Maintenance.** The potential impacts on animal species due to dredge lock use and maintenance include the direct loss of special status species, including the ~~California clapper~~ Ridgeways rail and salt marsh harvest mouse, due to excavation and deposition of dredge materials. ~~clapper~~ Ridgeways rails may potentially be lost due to deposition of materials on lock levees at high tide periods when the rails seek refugial cover at such areas. In addition to the implementation of the Best Management Practices required by Special Conditions II-M and II-N, including advanced noticing, pre-access staking, pre-access surveys, and minimization and avoidance measures, as stated above, Special Conditions II-L and II-M require monitoring during high-tide events to ensure that no ~~clapper~~ Ridgeways rails are present and, if found to be present, no dredged materials would be placed within 150 feet of the rail nests.

In addition to direct impacts, dredge lock use and maintenance could result in the temporary loss of foraging and breeding areas, and high-tide refugia, which could potentially affect special status species including the salt marsh harvest mouse and ~~California clapper~~ Ridgeways rail. As noted in the Final Environmental Assessment, however, these activities have been occurring for at least the last 50 years, thus pristine areas are not being disturbed, and the estimated 17 acres of temporal impacts represent 0.2 percent of the 8,600 acres of tidal marsh in the South Bay. However, in addition to the measures mentioned above, Special Condition II also requires additional measures recommended by the FEA: (a) preservation and enhancement of high-marsh features created at prior lock access events; (b) preservation of outboard vegetation by placing dredged material on the top and inboard slopes only; (c) replanting access cuts with cordgrass plugs following egress; and (d) provision of artificial refugial cover, or floating platforms, several weeks prior to lock access. These measures will reduce these impacts to a less-than-significant level.

During the three days it takes for a dredge to access a lock and move into the salt pond, the associated noise, movement and human activity may disturb species that inhabit adjacent sloughs, mudflats and tidal marsh. As indicated in the Final Environmental Assessment, this activity may disrupt ~~clapper~~ Ridgeways rails breeding and foraging, harbor seals breeding and pupping, and the heron and egret breeding colony located at Mallard Slough. Thus, Special Conditions II-L and II-M require mitigating for these impacts by conducting pre-access surveys for ~~clapper~~ Ridgeways rails, and maintaining 150-foot-buffer areas around active nests, and by minimizing active dredging in Bay-side mudflats and tidal marsh near haul-outs, and by maintaining a 300-foot buffer zone around the active nests in the heron and egret rookery during the breeding season. In addition, monitoring of the nests and rookery will be conducted by qualified biologists during active dredge lock use, which will provide empirical evidence to be used to modify these buffers as appropriate.

In its comments on the Draft Environmental Assessment prepared for the Commission's review of the project, the United States Fish and Wildlife Service indicated that a 150-foot buffer from active ~~clapper~~ Ridgeways rail nests would not be sufficient. However, the Service has not offered, to this date, any data on whether a larger buffer would provide substantially more protection for the rail. As discussed in the Final Environmental Assessment, this buffer distance was provided, in consultation with the Commission's biology consultant, Wetlands Research Associates, by Jules Evens, a noted expert on ~~clapper~~ Ridgeways rails, and was therefore incorporated into the proposed Best Management Practices. The required BMP's also provide for a qualified biologist to monitor the rails' activities when a rail nest is near, but not within a buffer zone. Finally, the project, as conditioned to provide monitoring of project impacts on sensitive species and re-evaluation of the

BMP's after five years, will provide specific new data on impacts on the rail which will later provide the basis for any necessary modification of buffer distances based upon actual on-site experience.

Finally, the Final Environmental Assessment, has determined that increased predation of the ~~clapper~~ Ridgeways rails and salt marsh harvest mouse could occur due to loss of vegetated cover which enhances predator access. However, Special Conditions II-L and II-M require measures to preserve and enhance beneficial high marsh refugia, preserve and protect outboard vegetation on lock levees, revegetate access cuts to provide supplemental refugial access cover, as well as to have the permittee provide the animal damage control program with additional funds to cover the incremental cost of predator control activities associated with reduced access from levee maintenance activities. Thus, this potential impact will be reduced to a less-than-significant impact.

(ii) **Salt Pond Levee Maintenance.** Levee maintenance activities on the salt pond levees include topping the levees with fresh dredged material, discing and grading the levees approximately two to three years after topping, grading the levees and constructing chokers prior to the next round of maintenance.

During the process of placing sediments on salt pond levees, "slip-outs" may occur, potentially causing a small temporary loss of habitat for ~~clapper~~ Ridgeways rails and salt marsh harvest mice. Special Conditions II-L and II-M requires sloping the levees toward the salt pond interior and creating a choker which will greatly reduce the possibility of any slip-outs. In addition, Special Conditions II-L and II-M require pre-access surveys for ~~clapper~~ Ridgeways rail nests if maintenance is scheduled to occur during its breeding season. If active nests are found, a 100-foot buffer will be required which, along with the salt pond levee which itself provides additional buffer from noise and human activities, will reduce these potential impacts to a less-than-significant level.

Topping the salt pond levees with fresh dredged material may result in the direct loss of individual birds from grading and choker construction and the temporary loss of bare open surfaces with friable substrate, which is suitable habitat for species such as the Western snowy plover and California least tern. Special Conditions II-L and II-M requires measures to reduce and avoid these impacts, including: (a) if maintenance is to occur during the breeding season of the snowy plover or least tern, pre-access surveys and observation of a 200-foot buffer between the dredge and any nests that are found; (b) for maintenance in traditional snowy plover nesting habitat, consultation with a United States Fish and Wildlife Service biologists and development of a maintenance plan that will fulfill maintenance requirements while providing available plover nesting habitat; and (c) construction of low, linear islands within salt ponds traditionally used by nesting snowy plovers. If placed in a location where deep water surrounds the islands throughout the breeding

season (April through July) these islands would afford protection against terrestrial predators, particularly the red fox. However, the buffer restrictions required as part of the BMP's in Special Conditions II-L and II-M, above, shall not apply to these newly created islands. These required measures will reduce these impacts to a less-than significant level.

Deposition of sediments eliminates the flat, smooth surface adjacent to the water's edge where snowy plovers forage. While the Final Environmental Assessment identifies this as a less-than-significant impact for adult plovers, which use adjacent ponds for foraging, there is a potentially significant impact for juvenile plovers if a nest is present. Therefore, Special Conditions II-L and II-M require pre-maintenance surveys for nests during the snowy plover breeding season, and the creation of a 200-foot buffer area around any active nests to preserve foraging habitat. These measures will reduce the potential impacts to a less-than-significant level.

Dredged sediment deposition, which occurs on approximately 5 percent of the salt pond levees (10 miles out of 200 total) a year, could potentially affect the California least tern at post-breeding foraging ponds. However, according to the Final Environmental Assessment, monitoring shows that the least terns rarely roost on salt pond levees, preferring artificial islands, duckblinds, boardwalks and other human-made structures. As a result, this is identified as a less-than-significant impact by the Final Environmental Assessment. The impact will be further reduced through the creation of artificial islands in traditional least tern ponds. Special Conditions II-L and II-M require that these islands be placed away from locations where maintenance is scheduled to occur so that undue disturbance to nesting seabirds and shorebirds is avoided.

As with the dredge locks themselves, dredge noise, movement and human activity potentially disrupt breeding, foraging and roosting activity, particularly by the Western snowy plover, California gull, Caspian, Forsters terns, and California least tern. Special Conditions require the protection of these species.

Finally, the Final Environmental Assessment states that maintenance activities could potentially force snowy plovers and California least terns to use marginal breeding and roosting sites which would increase the possibility of predation, particularly by the red fox. To reduce this potential impact to a less-than-significant level, the best management practices require the creation of low, linear islands in traditional snowy plover and least tern breeding and roosting ponds, as well as funding of the incremental costs associated with increased predator management activities by the Animal Damage Control personnel.

This permit herein provides for various modifications to the restrictions and mitigation measures required in the original permit issued to Cargill, Inc., as assigned to permittee. These modifications are based upon the biological opinion on the project provided by the permittee, which based its conclusions, in part, on the Draft and Final Environmental Assessment, and will provide the permittee with consistent requirements in both its state and federal permits. These modifications are generally consistent with the Commission's findings and declarations contained in the original permit and are consistent with the policies of the McAteer-Petris Act and the San Francisco Bay Plan.

K. **Beneficial Impacts.** The Final Environmental Assessment identifies the following beneficial environmental impacts for the project:

1. **Shorebird and Waterfowl Habitat**. The continued maintenance of the salt pond system preserves habitat for large numbers of wintering shorebirds and waterfowl, and as a stopover for numerous migrating bird species. United States Fish and Wildlife Service studies indicate that the salt ponds hold the majority of over 30 species of waterfowl. As a whole, San Francisco Bay has been identified as a site of critical importance to migrating and wintering shorebirds, and over 60 percent of these occur primarily south of the San Mateo Bridge and within the salt pond system;

2. **Wildlife Habitat**. The salt pond system provides expanses of open, friable substrate which is suitable nesting habitat for several shorebird and seabird populations that did not commonly breed in the South Bay prior to creation of the salt pond system. These include the American avocet, black-necked stilt, Forster's tern, Caspian tern, California gull, western gull and, of note, the first breeding record for northern California, the black skimmer;

3. **Snowy Plover Breeding Habitat**. The federally threatened snowy plover is not otherwise present in the South Bay. However, habitat provided by the salt pond system supports one of the largest breeding populations of snowy plovers in North America; and

4. **California Least Tern Habitat**. The federally endangered California least tern historically nested atop levees and other locations with open, friable substrate throughout the salt pond system. Although these sites have not been used lately, least terns still occur locally, and could breed at these locations in the future. In addition, several of the salt ponds are used by least terns as post-breeding foraging sites.

L. **Alternatives.** As discussed in detail in the FEA, many of the adverse impacts noted above, particularly those associated with the use of the dredge, the *Mallard*, are associated with the use and maintenance of existing dredge locks the permittee employs to gain access to the ponds. The United States Army Corps of Engineers and others have suggested, however, that many of these impacts could be avoided through the use of alternative technologies, or through the relocation of locks. An independent

analysis of these alternatives was conducted by Chris Matson of Vickerman-Zachary-Miller Engineers for the consultant on the FEA, which was provided in an attachment to the FEA, along with an additional study completed for the Corps of Engineers. In addition, a multi-agency consultation with the FWS has provided further information on these alternatives. As summarized in the Final Environmental Assessment, these reviews found the following:

1. **Lock Relocation**. This alternative would include relocating dredge locks to bayfront segments of levee where there is no marsh, or where access cuts would be less than 70 feet in order to prevent the need for sidecasting material. However, out of the 38 extant dredge locks, a total of 16 ponds with dredge locks have bayfront levees, and of these 8 already have bayfront dredge locks, thus only eight potentially could be relocated. Of the eight available for relocation, four would require access cuts over 70 feet long, leaving only four available for relocation. Finally, given the eroded condition of the existing bayfront locks, such relocation would likely not be successful. However, as part of the continuing review of the maintenance program afforded by the pre-maintenance notification and review, further opportunities for relocating locks from environmentally sensitive sites to less sensitive sites will be defined. It should be noted, however, that creation of a new lock requires a period of years before it is usable, thus any identified relocation opportunities will not likely be available during the first five-year period of this amended permit;

2. **Internal Locks**. This alternative refers to the possibility of creating locks within ponds. While technically feasible in some locations, high maintenance costs and shortage of borrow material may make these practically infeasible. Furthermore, the internal locks would not preclude the need for the dredge to cut through marsh to reach the levee, nor the need to stockpile material on the marsh side of the levee;

3. **Structural Locks**. This alternative is estimated to cost in excess of $3,000,000 each and, as with internal locks, the cost and potential environmental impacts render these infeasible;

4. **Land-Based Equipment**. Due to the width of the borrow ditch and exterior salt pond levees, a 70-foot reach is required and existing land-based equipment with such a reach are too heavy and could result in levee damage and potential levee failure. In addition, not all levees are accessible by land. The permittee does use such equipment when feasible, especially near the salt crystallizers; and

5. **Transportable Dredge**. This alternative was found in the Vickerman-Zachary-Miller report and in analyses in the Review Report, letter from Bill Dutra, and peer review committee comments, all provided as part of the Final Environmental Assessment, to be the most technologically feasible in reducing the use of some of the dredge locks. However, it was estimated that the transportable dredge would increase current levee maintenance costs by at least 200 percent.

The advantage of a transportable dredge is that it would access ponds from the land, thus reducing the need for the use of some dredge locks, but impacts from levee maintenance itself would be identical. The analysis concluded that three island pond complexes could not be accessed by land, and that 32 pond complexes would require substantial infrastructure modifications and investment in easements for land access, and three pond complexes would require little structural modification. The costs of these modifications are not included in either of the cost estimates provided.

Finally, while use of the transportable dredge would avoid impacts associated with dredge lock use, it would create separate impacts not now associated with dredge lock use. These include: (1) construction of staging areas, or pads, which would require fill in salt ponds; (2) mobilization of the dredge which would require 20-25 truckloads of equipment and a 120-ton crane, resulting in air quality and noise impacts during transport and construction; (3) refueling every two weeks, in comparison with every two months with the *Mallard*. This additional need for fueling increases the potential for fuel spills and leaks into adjacent wetlands, more levee disturbance, and significantly increased air pollution; (4) the transportable dredge, with a muffler, would generate significantly greater noise than the *Mallard*, which would result in increased potential for disturbance of endangered species; and (5) the transportable dredge has a greater draft than the *Mallard*, which would necessitate additional dredging of material from salt ponds to provide flotation, which could result in increasing dredging amounts.

Therefore, the Commission finds that, due to the additional costs, impacts and constraints of alternative equipment, the proposed use of the *Mallard* and associated dredge locks is the most feasible alternative for salt pond levee maintenance and its use. The Commission also finds that, as modified by the Best Management Practices and mitigation measures as amended and as identified in the FEA, USFWS biological opinion, and as required herein, including continued review of potential lock relocations and other impact minimization and avoidance measures, the use of the Mallard and associated dredge locks is consistent with the Bay Plan policies on Fish and Wildlife and Marshes and Mudflats.

M. **Compliance with Federal and State Endangered Species Acts**

1. **Applicable Legal Requirements**

The Federal Endangered Species Act (16 U. S. Code sections 1531 through 1543) does not impose any requirements on the Commission in its review and action on this amended permit. Nevertheless, the Commission has evaluated the project in terms of this statute and the data and advice provided by the United States Fish and Wildlife Service.

The California Endangered Species Act (Cal Fish and Wildlife~~Game~~ Code sections 2050 through 2068) contains several provisions that apply to this permit. First, the Act contains several legislative findings that are pertinent. Section 2052 provides in pertinent part that "[i]t is the policy of the state to conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat...."

Section 2053 provides in pertinent part that "[i]t is the policy of the state that state agencies should not approve projects as proposed which would jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy" and that "reasonable and prudent alternatives should be developed by the department [of Fish and Wildlife~~Game~~], together with the project proponent and the state lead agency, consistent with conserving the species, while at the same time maintaining the project purpose to the greatest extent possible." Finally, section 2055 provides in pertinent part that "[i]t is the policy of this state that all state agencies, boards, and commissions shall seek to conserve endangered species and threatened species and shall utilize their authority in furtherance of the purposes of this chapter [the California Endangered Species Act]."

In furtherance of these express policies, the California Endangered Species Act establishes a series of procedural requirements for the Commission when it acts as the lead agency, as the Commission is in this case. First, the Commission must consult with the State Department of Fish and Wildlife~~Game~~ to ensure that the proposed project is not likely to jeopardize the continued existence of any endangered or threatened species (Cal. Fish and Wildlife~~Game~~ Code section 2090(a)). As part of that consultation process, the State Department of Fish and Wildlife~~Game~~ ("the Department") must provide a written statement to the Commission concerning whether or not the proposed activity would have such an impact or would result in the incidental taking of any such species (section 2090(b)).

Second, if the Department finds that an activity is likely to result in jeopardy, the Department must specify to the Commission reasonable and prudent alternatives consistent with conserving the species that would prevent jeopardy to the continued existence of the species or the destruction or modification of essential habitat. If the Department determines that an incidental taking may occur, the Department must also specify to the Commission necessary and appropriate measures to minimize the adverse impacts of the incidental taking (section 2091).

Third, if the Department finds that an activity is likely to result in jeopardy, the Commission must require reasonable and prudent alternatives consistent with conserving the species and preventing jeopardy (section 2092(a)). If specific economic, social, or other conditions make these alternatives infeasible, the Commission may still approve the project despite a finding of jeopardy if both of the following conditions are met: (1) the Commission requires reasonable mitigation measures to minimize the adverse impact of the project on the endangered or threatened species or on the essential habitat and (2) the Commission finds that (i) the benefits of the proposed project clearly outweigh the benefits of the project as carried out with alternatives consistent with avoiding jeopardy and (ii) the applicant has not made an irreversible or irretrievable commitment after the commencement of

consultation with the Department that forecloses the opportunity for formulating and implementing alternatives that would prevent jeopardy (section 2091(b)). In any case, the Commission may not approve a project that would likely result in the extinction of any threatened or endangered species based on the best existing scientific information (section 2091(c)).

The Department did not provide the Commission with a jeopardy opinion.

2. **Commission Consultation with the State Department of Fish and Wildlife~~Game~~ and Other Agencies**.

To meet the requirements of the State Endangered Species Act and the Commission's own policies and procedures, the Commission staff mailed a copy of the application to the State Department of Fish and Wildlife~~Game~~ on October 20, 1994 and a summary of the application, including the draft environmental assessment of the proposed project, to the State Department of Fish and Wildlife~~Game~~ on October 18, 1994. The Commission staff also mailed a copy of the application and the application summary, including the draft environmental assessment, to other interested agencies, including the United States Fish and Wildlife Service, on October 18, 1994.

The application summary and the draft environmental assessment identified the following species located in the vicinity of the Cargill facilities as having some level of protection or recognition under the California Endangered Species Act: the salt marsh harvest mouse (endangered), the ~~California clapper~~ Ridgeways rail (endangered), the California least tern (endangered), the Alameda song sparrow (California species of special concern), the salt marsh common yellow throat (California species of special concern), the Western Snowy Plover (California species of special concern), the Double-crested Cormorant (California species of special concern), the California gull (California species of special concern), the Northern harrier (California species of concern), the Burrowing owl (California species of special concern), the short-eared owl (California species of special concern), the California horned lark (California species of special concern), and the salt marsh wandering shrew (California species of special concern).

On December 15, 1994 and on January 12, 1995, Brian Hunter, Regional Manager of Region 3, California Department of Fish and Wildlife~~Game~~, wrote to Richard Cooper of the Commission staff in response to these documents. On December 13, 1994, Joel A. Medlin, Field Supervisor, United States Fish and Wildlife Service, wrote to the Commission, Attn.: Richard Cooper. In addition, staff members of the Commission, the California Department of Fish and Wildlife~~Game~~, the United States Fish and Wildlife Service, the U. S. Army Corps of Engineers, and other interested parties have met on many occasions to discuss the implications of this project viz-a-viz compliance with the State Endangered Species Act, the Federal Endangered Species Act, and other applicable laws and policies.

3. **Consistency of the Permit with the State Endangered Species Act**.

These letters and discussions raise a number of issues relative to the State Endangered Species Act. This process led to the incorporation of numerous requirements into this amended permit to protect various endangered and threatened species. Those requirements are contained herein.

Eventually, these discussions eliminated any disagreement on all but the following issues regarding compliance with the federal and state Endangered Species Acts: (1) the suitability of the proposed best management practices, (2) the restoration of 34 acres for suitable habitat for the salt marsh harvest mouse and the ~~California clapper~~ Ridgeways rail, (3) the use of vegetative cover and floating rafts to compensate for the loss of upland refugia needed at high tide, (4) the decision to require a 150-foot buffer zone around ~~clapper~~ Ridgeways rail nests during the breeding season for the dredge when entering or exiting a pond through a dredge lock, (5) the suitability of using a 100-foot buffer zone around ~~clapper~~ Ridgeways rail nests during the breeding season when working on levee maintenance, (6) the suitability of maintaining a 200-foot buffer zone around any snowy plover or least tern nests during the breeding season, (7) the suitability of requiring the construction of low linear islands in salt ponds and making suitable roosting habitat available at all times as a mitigation measure, and (8) the reliance on Animal Damage Control personnel as a mitigation measure to reduce potential increased predation caused by temporary changes in habitat.

It should be noted that most if not all of the objections raised come from the United States Fish and Wildlife Service, not the California Department of Fish and Wildlife~~Game~~. Although the Commission has traditionally considered the comments from this agency, neither the Commission's own law and regulations nor the Federal or State Endangered Species Act requires the Commission to incorporate those comments or recommendations into the Commission permit.

As described more fully in the environmental assessment and in the application summary and staff recommendation, the Commission finds that the implementation of the best management practices and other mitigation measures described in the assessment and required by this amended permit will adequately protect the endangered and threatened species that the authorized maintenance activities may affect, especially the ~~California clapper~~ Ridgeways rail, the salt marsh harvest mouse, the California least tern, and the western snowy plover.

In addition, the adoption of all of the recommendations of the U. S. Fish and Wildlife Service on these issues would make the continued operation of the Cargill salt operation extremely difficult, if not impossible. Most, if not all, of the authorized maintenance work must occur other than during the winter months. The draft environmental assessment identifies approximately one-third of the existing 38 dredge locks as having nests located in or near them. Thus, the adoption of much

larger “buffer zones” within which no work could occur during the breeding season would severely hamper necessary levee maintenance activities and could eventually lead to substantial problems maintaining the levees that make up the salt pond system.

Moreover, the Fish and Wildlife Service has not presented any data that shows that the operation of the dredge “Mallard” or levee maintenance activities threaten the identified species. In fact, it appears that the past construction of the locks has created conditions attractive to the ~~California clapper~~ Ridgeways rail, the species of most concern. Therefore, the Commission finds that the conditions imposed in this amended permit will provide adequate protection to the ~~California clapper~~ Ridgeways rail, the California least tern, the salt marsh harvest mouse, and the snowy plover.

Finally, many of the areas of concern that this permit has raised are characterized by a lack of substantial data so that a complete evaluation of the potential impacts of the proposed maintenance activities and proposed mitigation measures is difficult. Special Conditions in the permit respond to this lack of data and resultant uncertainty by requiring CDFW ~~DFG~~ to monitor its activities and to provide the Commission with a report at the end of five years that summarizes the work completed, the best management practices used, and any impact on threatened or endangered species. If necessary, the Commission may at any time require modifications to the best management practices if it determines such changes are appropriate to protect special status species after appropriate consultation.

N. **Bay Fill.** Section 66605 of the McAteer-Petris Act, in part, provides that "further filling of San Francisco Bay should be authorized only when public benefits from fill clearly exceed public detriment from the loss of the water areas and should be limited to water-oriented uses (such as...water-oriented recreation...) or minor fill for improving shoreline appearance or public access to the bay....That fill in the bay for any purpose, should be authorized only when no alternative upland location is available for such purpose....That the water area...to be filled should be the minimum necessary to achieve the purpose of the fill....That the nature, location and extent of any fill should be such that it will minimize harmful effects to the bay area, such as, the reduction or impairment of the volume surface area or circulation of water, water quality, fertility of marshes or fish or wildlife resources...."

The project authorized herein includes the continued practice of using existing dredged material stockpile locations, some of which are located in the Commission’s Bay jurisdiction. These stockpiles, which are used to dry material in order to create an effective dam after dredge lock and salt pond access, are re-used, thus disturbance occurs generally in the same location. Therefore, the original permittee asserted that no “new” fill is proposed. However, as the material is removed and then replaced with new material on each pass (typically once every 5 to 10 years), the Commission finds that the material is new Bay fill each time it is placed. The staff notes that the fill associated with this activity has a very unique type and purpose. The temporary fill authorized herein is a necessary part of maintenance activities for shoreline protection surrounding the salt

pond system. Thus, the proposed fill is used to prevent salt pond waters, at various levels of salinity, from entering Bay waters, or the reverse, and is an integral part of the solar production of salt. The original permittee has used the same stockpile locations at the dredge locks for many years, as it has determined, through practice, where the best locations are for the purpose of maintaining salt pond levees and preventing unnecessary erosion of the dredge locks themselves. As the levee tops are disced and graded prior to maintenance, and the levee sides are steep, the use of stockpiles in the Bay are the only feasible alternative available to the permittee. The amount of fill placed in the stockpiles is that which the dredge crews determine is the amount required for the damming of the levees. It does not appear that more Bay mud is stockpiled than is necessary; however, this is a judgment that is difficult to verify. The project, as conditioned, includes several methods to minimize the amount of fill placed and any adverse impacts, including staking the stockpiles areas to reduce them to a minimum footprint. Finally, the authorized project provides many public benefits, including the habitat maintenance described above, flood protection, retaining 29,000 acres in open space, and the provision of benefits to the local, regional and national economies.

Therefore, the Commission finds: (1) that the public benefits of the temporary fill, including the provision of habitat and open space, flood control, and continuation of an existing industry, outweigh the detriments of the temporary fill; (2) that the temporary fill is a necessary part of maintenance that provides continued shoreline protection and is, therefore, an allowable use under the McAteer-Petris Act and is consistent with the Bay Plan policies on fill; (3) that the temporary fill is the minimum amount necessary, as a result of long-time practices and special conditions of this amended permit; and (4) that no feasible upland alternative exists for the fill.

O. **Dredging.** At the time the Commission authorized the original project, The *San Francisco Bay Plan* policies on dredging stated, in part, that "dredging should be authorized when the Commission can find that the applicant has demonstrated that the dredging is needed to serve a water-oriented use or other important public purpose, the materials to be dredged meet the water quality requirements of the San Francisco Bay Regional Water Quality Control Board, important fisheries and Bay natural resources would be protected, and...the maximum feasible amount of dredged material should be disposed of at non-tidal sites or in the ocean. Until non-tidal upland disposal sites are secured and ocean disposal sites designated, aquatic disposal in the Bay should be authorized at sites designated by the United States Army Corps of Engineers and the Commission. Dredged materials disposed of aquatically in the Bay, particularly at the Alcatraz Island disposal site, should be carefully managed to ensure that the amount and timing of disposal does not create navigational hazards, adversely affect Bay currents or natural resources of the Bay, or foreclose the use of the site by projects critical to the economy of the Bay Area."

The dredge lock use and maintenance include the dredging of the dredge lock access channels in the Bay, where the dredged material is either placed in stockpiles or used on dredge lock or salt pond levees. If the access channel is greater than 70 feet in length, the dredge cannot reach these locations, and the material is sidecast. The project also

includes periodic dredging at the Redwood City loading dock and Newark barge canal, with disposal on top of salt pond levees, in salt pond borrow ditches, at dry land locations, or at an available Bay or ocean disposal site.

As part of the Best Management Practices required herein, the permittee is required to decrease dredging and dredging impacts by (1) placing dredged material excavated from the dredge lock interior into temporary areas along the access cut, then pulling the material back into the cut upon exit, (2) excess material excavated from the dredge lock interior not needed for dredge lock maintenance will be placed on the salt pond levees or in salt pond borrow ditches for later salt pond maintenance; and (3) maximizing opportunities for placing material from the access cut on existing stockpiles.

The purpose of the proposed dredging for dredge lock use and maintenance is to maintain and continue existing solar salt production in San Francisco Bay. As noted above, analysis of alternative methods and technologies appears to indicate that there is no other viable method of conducting such maintenance.

As stated previously, the proposed dredging for salt pond maintenance activities is an activity that has been occurring on an ongoing basis for at least the last fifty years. Throughout this period, the original permittee has frequently been in contact with the San Francisco Bay Regional Water Quality Control Board regarding these activities, and the Regional Board has not objected to their continuation. Both the original permittee and the Commission staff contacted the Regional Board regarding this project and, to date, no objections have been received. There are, however, the following potential impacts on water quality, which are discussed in the Final Environmental Assessment as follows:

1. **Changes in Turbidity and Dissolved Oxygen**. As discussed in the Final Environmental Assessment, most of the material dredged from the access cut is placed on levees or on stockpiles, both of which are above the mean high water line. However, a portion of the material is placed below the Mean High Water line and enters the water column. These impacts are considered insignificant, as they occur within tidal sloughs, mudflats and tidal marsh, where high levels of turbidity already occur and the benthic organisms present in those locations are adapted to such conditions. Monitoring of dredging associated with levee maintenance shows an increased turbidity and decreases in dissolved oxygen that last five to seven days, potentially resulting in small localized fish kills in low salinity ponds where fish occur. This effect occurs in the salt ponds themselves, and only in a small portion of the ponds where the dredge is actively dredging, and ambient levels are attained after one week following dredging; and

2. **Contaminants**. As described in detail in the Final Environmental Assessment, existing levels of background mercury in the sloughs and marshes of South Bay are high and are found in rails and other species and proposed dredging may increase the bioavailability of this contaminant. However, recent analyses conducted by scientists associated with the Aquatic Habitat Institute indicate that significant increases in sediment concentrations of mercury from the proposed activity are highly unlikely. For example, at Lock A7, where some of the highest mercury concentrations in the

South Bay occur, an estimated potential increase of mercury concentration of 0.066 mg/kg could occur that is within the range of natural variation of mercury levels in the area. However, as a result of inter-agency consultations, a one-time testing program was conducted by the permittee which is intended to determine whether the authorized project results in any significant increases of bioavailable mercury in the areas near the levees and locks, or in the prey of the ~~clapper~~ Ridgeways rail.

The Commission finds, therefore, that based upon the results of its review of available data, the requirement on the part of the original permittee to develop adequate data on the water quality impacts of the project, and on the requirement for the permittee to obtain further authorization from the Regional Water Quality Control Board, the project, as conditioned, is consistent with the Bay Plan policies on water quality.

3. **Public Access.** The *San Francisco Bay Plan* policies on public access state that "in addition to the public access to the Bay provided by waterfront parks, beaches, marinas, and fishing piers, maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline....Public access improvements provided as a condition of any approval should be consistent with the project and the physical environment, including protection of natural resources, and provide for the public's safety and convenience....Access to the waterfront should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where convenient parking or public transportation may be available...."

   The original permittee proposed providing access for scientists, agency staff persons, and other interested parties to the mitigation site in order to review and study the progress of marsh restoration in a former salt pond. It has not, however, proposed public access to the salt pond levees or any access improvements as part of the project. However, access to almost 50 percent of the salt pond system is currently provided by the San Francisco Bay National Wildlife Refuge. In addition, the project authorized herein would not include any additional impacts, or burdens, to existing public access in the area of the project. Thus, the Commission was not able to find any burden, or nexus, between the authorized project and public access needs. In addition, these are areas of extremely valuable habitat for large numbers of wildlife that could potentially be harmed by unregulated human intrusion, especially during certain seasons of the year. Finally, most potential locations to provide access are along narrow salt pond levees constructed out of Bay mud, which may not be conducive to public access due to the type and quality of the surface materials, periodic topping with fresh sediments, their proximity to high tides, and other safety considerations, particularly during stormy conditions.

   The Commission finds, therefore, that although the maintenance work authorized herein includes no additional public access, the project is consistent with its policies on public access.

4. **Mitigation.** The Bay Plan policies on mitigation, state, in part, that "...mitigation for the unavoidable adverse environmental impacts of any Bay fill should be considered by the Commission in determining whether the public benefits of a fill project clearly exceed the public detriment from the loss of water areas due to the fill and whenever mitigation is necessary for the Commission to comply with the provisions of the California Environmental Quality Act....Mitigation should consist of measures to compensate for the adverse impacts of the fill to the natural resources of the Bay, such as to water surface, volume or circulation, fish and wildlife habitat or marshes or mudflats....When mitigation is necessary to offset the unavoidable adverse impacts of approvable fill, the mitigation program should assure: (1) that benefits from the mitigation should be commensurate with the adverse impacts on the resources of the Bay and consist of providing area and enhancement resulting in characteristics and values adversely affected; (2) that the mitigation would be at the fill project site, or if the Commission determines that on-site mitigation is not feasible, as close as possible; (3) that the mitigation measures would be carefully planned, reviewed, and approved by or on behalf of the Commission, and subject to reasonable controls to ensure success, permanence, and long-term maintenance; (4) that the mitigation would, to the extent possible, be provided concurrently with these parts of the project causing adverse impacts; and (5) that the mitigation measures are coordinated with all affected local, state, and federal agencies having jurisdiction or mitigation expertise to ensure, to the maximum practicable extent, a single mitigation program that satisfies the policies of all the affected agencies....”

   As delineated in the Final Environmental Assessment, an estimated maximum of 17 acres of disturbance to existing salt marsh have occurred in the past due to maintenance activities conducted prior to the use of the BMP’s required herein at any one time. These impacts are considered temporal, however, in that the wetland and habitat values of the disturbed areas regenerate within five years after disturbance (although a small number of locks are accessed more than once each five years, thus this small proportion of locks may not fully regenerate before being re-disturbed).

   As mitigation for the estimated 17 acres of temporal impacts, the original permittee implemented a mitigation program to convert a 49 -acre portion of salt pond B-1 to salt marsh, including low, intermediate, and high tidal marsh. The restoration project will provide suitable habitat for special status species, particularly the ~~California clapper~~ Ridgeways rail and salt marsh harvest mouse. The mitigation project will include constructing new levees within a salt pond, grading the area to be converted to appropriate elevations, then breaching the existing exterior levee to restore tidal action to the site. At this time, the permit requires natural revegetation, as opposed to planting wetland species, and allowing the salt marsh to be naturally colonized by wetland species. Special Conditions in the original permit, however, requires a five-year monitoring program, at which time, if deemed necessary, the permittee must take necessary measures to ensure the success of the mitigation. Furthermore, even though the 17-acre estimate of temporal impacts is considered to be conservative (i.e., a high estimate), if monitoring of project impacts reveals that more acreage is

being disturbed than 17 acres, the permittee must increase the size of the mitigation area to maintain a 2-to-1 ratio. The additional 15 acres of tidal marsh restoration authorized and required by Amendment No. One herein, as recommended by the USFWS, will better offset potential impacts of salt pond maintenance activities on ~~clapper~~ Ridgeways rails to the point that some of the impact avoidance measures required by the original permit can be eliminated.

The three potential sites proposed for mitigation include Salt Ponds 1 and 9 in the Baumberg system, and Salt Pond 23 in the Alviso system. In consultation with the appropriate resource agencies, including the United States Army Corps of Engineers, United States Fish and Wildlife Service, and Department of Fish and Wildlife~~Game~~, the Salt Pond B-1 alternative was selected, as this pond has the greatest potential for successful restoration.

In determining the appropriateness of the mitigation, it should be noted that salt ponds, particularly those with low salinity, do provide habitat for several species of fish and wildlife. Thus, tidal restoration of a 34-acre salt pond would take 34 acres of salt pond out of production and convert existing habitat values. However, this would be only a very small proportion of the existing 29,000-acre salt pond system.

The Commission finds, therefore, that the conversion of 34 acres of salt pond B-1 is appropriate mitigation for the adverse impacts of the project, and will provide 2-to-1 mitigation for the habitat values disrupted by the project. As such, the mitigation is consistent with the Bay Plan policies on mitigation

5. **Environmental Document-Lead Agency.** As lead agency for the maintenance project (conducted for the permit issued to Cargill in 1995), the Commission complied with the California Environmental Quality Act through use of its "functional equivalency" regulations. The Commission prepared, with the assistance of a peer review committee, made up of experts in fields of wetlands, endangered species, fisheries and engineering, a Notice of Preparation of the Environmental Assessment, and a Draft Environmental Assessment, and received numerous comments, which, along with responses to these comments, have been incorporated into the attached Final Environmental Assessment. The Commission finds that, with the inclusion of the Best Management Practices and other conditions listed in Section II, above, along with 34 acres of mitigation for the estimated 17 acres of temporal impacts of the project, the project will have no significant adverse impacts on the environment, and will include substantial environmental and economic benefits, and hereby approves the environmental assessment. The Commission further finds and declares that, under the terms and conditions stated herein, the project authorized herein is consistent with Public Resources Code sections 21000 though 21177. I.

P. **Commission Jurisdiction.** Government Code Section 66610(c) defines the Commission's salt pond jurisdiction as "…all areas which have been diked off from the bay and have been used during the three years immediately preceding the effective date of the amendment of this section during the 1969 Regular Session of the Legislature for the solar evaporation of bay water in the course of salt production." All of the ponds that are a part of Phase One satisfy those criteria and therefore are subject to this amended

consistency determination are and will continue to be with the Commission's salt pond jurisdiction. Commission Regulation Section 10710 supports this conclusion; it states that areas once subject to Commission jurisdiction remain subject to that same jurisdiction even if filled or otherwise artificially altered. Further, Government Code Section 66610(a) defines the Commission's "Bay" jurisdiction as "…all areas that are subject to tidal action…." Phase One will result in breaching some salt pond levees and opening them to tidal waters and therefore, will extend the Commission's "Bay" jurisdiction inland to Mean High Tide or, in areas containing tidal marsh, to the inland edge of marsh vegetation up to five feet above Mean Sea Level (Material Amendment No. Five).

Q. **Amendments**

1. **Original Authorization.** The work authorized by the original permit is part of the "Initial Stewardship Plan" for the South Bay Salt Ponds and includes performing on-going maintenance activities within the ponds (such as placing rip rap and excavated material to strengthen levees, using and maintaining dredge locks, repairing docks as needed, maintaining water control structures, marine crossings, and levee roads, and cleaning out intake channels, tide gates and brine ditches) as well as preparing the ponds for the large-scale restoration project by installing new intake pumps, tide gates and water control structures, and gradually increasing tidal circulating within the ponds. The original project was approved by the Commission on April 28, 2004.

2. **Material Amendment No. One.** The work authorized by Material Amendment No. One initiates "Phase One" of the South Bay Salt Ponds Restoration Project and includes restoring approximately 630 acres of tidal wetlands, reconfiguring approximately 230 acres of managed ponds, constructing public access trails and amenities, and conducting on-going operations and maintenance of existing site features. The project authorized by Amendment No. One was approved by the Commission on October 2, 2008.

3. **Amendment No. Two.** The work authorized under Amendment No. Two includes the importation of up to 350,000 cubic yards of dredged material from the Alameda County Flood Control District's flood control channels to fill borrow ditches, raise pond bottoms to the appropriate elevations for tidal marsh plant recolonization, to raise or construct internal berms and levees, and to create upland habitat, activities which involve the minimum amount of fill necessary to provide improved habitat for fish or wildlife, as defined in Regulation Section 10601(a)(2), and are thus a "minor repair or improvement," for which the Executive Director may issue an amendment to this permit pursuant to Regulation Section 10822.

4. **Amendment No. Three.** Amendment No. Three extends the time in which maintenance activities and in kind repairs can be undertaken as described in the authorization section for the activities previously authorized to Cargill, the interim stewardship plan, and Phase I of Eden Landing Restoration Project. An extension of time to complete maintenance and repair work on protective structures (levees), water control structures, and discharge pipes previously authorized by the

Commission to provide improved habitat for fish or wildlife in the Bay, shoreline band, and salt ponds, as defined in Regulation Section 10601(a)(b) and (c), is a "minor repair or improvement," for which the Executive Director may issue an amendment to this permit pursuant to Regulation Section 10822.

R. **Environmental Review.** The California Department of Fish and Wildlife~~Game (DFG)~~ and the USFWS, as lead agencies for the overall project, prepared, circulated and, on March 11, 2004, certified a Final Environmental Impact Report/Environmental Impact Statement for the South Bay Salt Ponds Initial Stewardship Plan. The same two agencies prepared and circulated a revised version of the EIS/R, which evaluates the potential impacts of Phase One actions. The Final EIS/R was issued in December of 2007 and certified by the CDFW ~~DFG~~ in March 2008.

S. **Conclusion.** For all of the above reasons and at this first stage of the submitted permit, the Commission finds declares, and certifies that subject to the Special Conditions stated herein, the project authorized herein is consistent with the Commission's amended coastal zone management program for San Francisco Bay.

IV. Standard Conditions

A. **Permit Execution**. This amended permit shall not take effect unless the permittee executes the original of this amended permit and returns it to the Commission within ten days after the date of the issuance of the amended permit. No work shall be done until the acknowledgment is duly executed and returned to the Commission.

B. **Notice of Completion**. The attached Notice of Completion and Declaration of Compliance form shall be returned to the Commission within 30 days following completion of the work.

C. **Permit Assignment**. The rights, duties, and obligations contained in this amended permit are assignable. When the permittee transfers any interest in any property either on which the activity is authorized to occur or which is necessary to achieve full compliance of one or more conditions to this amended permit, the permittee/transferor and the transferee shall execute and submit to the Commission a permit assignment form acceptable to the Executive Director. An assignment shall not be effective until the assignee executes and the Executive Director receives an acknowledgment that the assignee has read and understands the amended permit and agrees to be bound by the terms and conditions of the amended permit, and the assignee is accepted by the Executive Director as being reasonably capable of complying with the terms and conditions of the amended permit.

D. **Permit Runs with the Land**. Unless otherwise provided in this amended permit, the terms and conditions of this amended permit shall bind all future owners and future possessors of any legal interest in the land and shall run with the land.

E. **Other Government Approvals**. All required permissions from governmental bodies must be obtained before the commencement of work; these bodies include, but are not limited to, the U. S. Army Corps of Engineers, the State Lands Commission, the Regional

Water Quality Control Board, and the city or county in which the work is to be performed, whenever any of these may be required. This amended permit does not relieve the permittee of any obligations imposed by State or Federal law, either statutory or otherwise.

F. **Built Project must be Consistent with Application**. Work must be performed in the precise manner and at the precise locations indicated in your application, as such may have been modified by the terms of the amended permit and any plans approved in writing by or on behalf of the Commission.

G. **Life of Authorization**. Unless otherwise provided in this amended permit, all the terms and conditions of this amended permit shall remain effective for so long as the amended permit remains in effect or for so long as any use or construction authorized by this amended permit exists, whichever is longer.

H. **Commission Jurisdiction**. Any area subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission under either the McAteer-Petris Act or the Suisun Marsh Preservation Act at the time the amended permit is granted or thereafter shall remain subject to that jurisdiction notwithstanding the placement of any fill or the implementation of any substantial change in use authorized by this amended permit. Any area not subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission that becomes, as a result of any work or project authorized in this amended permit, subject to tidal action shall become subject to the Commission's "bay" jurisdiction.

I. **Changes to the Commission's Jurisdiction as a Result of Natural Processes**. This amended permit reflects the location of the shoreline of San Francisco Bay when the permit was issued. Over time, erosion, avulsion, accretion, subsidence, relative sea level change, and other factors may change the location of the shoreline, which may, in turn, change the extent of the Commission's regulatory jurisdiction. Therefore, the issuance of this amended permit does not guarantee that the Commission's jurisdiction will not change in the future.

J. **Violation of Permit May Lead to Permit Revocation**. Except as otherwise noted, violation of any of the terms of this amended permit shall be grounds for revocation. The Commission may revoke any amended permit for such violation after a public hearing held on reasonable notice to the permittee or its assignee if the amended permit has been effectively assigned. If the amended permit is revoked, the Commission may determine, if it deems appropriate, that all or part of any fill or structure placed pursuant to this amended permit shall be removed by the permittee or its assignee if the amended permit has been assigned.

K. **Should Permit Conditions be Found to be Illegal or Unenforceable**. Unless the Commission directs otherwise, this amended permit shall become null and void if any term, standard condition, or special condition of this amended permit shall be found illegal or unenforceable through the application of statute, administrative ruling, or court determination. If this amended permit becomes null and void, any fill or structures placed in reliance on this amended permit shall be subject to removal by the permittee

or its assignee if the amended permit has been assigned to the extent that the Commission determines that such removal is appropriate. Any uses authorized shall be terminated to the extent that the Commission determines that such uses should be terminated.

L. **Permission to Conduct Site Visit**. The permittee shall grant permission to any member of the Commission's staff to conduct a site visit at the subject property during and after construction to verify that the project is being and has been constructed in compliance with the authorization and conditions contained herein. Site visits may occur during business hours without prior notice and after business hours with 24-hour notice.

Executed in San Francisco, California, on behalf of the San Francisco Bay Conservation and Development Commission on the date first above written.

DocuSigned by:
Larry Goldzband
FD166E908010417...

LAWRENCE J. GOLDZBAND
Executive Director
San Francisco Bay Conservation and Development Commission

LJG/BG/ra

cc: U.S. Army Corps of Engineers, Attn: Regulatory Functions Branch, Mr. Greg Brown (File No. 2008-00103S)
San Francisco Bay Regional Water Quality Control Board, Attn: Certification Section, Ms Agnus Farres
Environmental Protection Agency, Attn: Mr. Sam Ziegler
State Coastal Conservancy, Attn: Mr. David Halsing
US Fish and Wildlife Service, Attn: Mr. Chris Barr

* *

Receipt acknowledged, contents understood and agreed to:

Executed at San Joaquin County

California Department of Fish and Wildlife
Permittee

On 12/21/2020 | 12:10:37 PM PST

By: DocuSigned by:
Gregg Erickson
BE74D4C93C604EA...

Gregg Erickson Regional Manager
Print Name and Title

South Bay Salt Pond Restoration Project

Figure 2. Proposed Phase 1 Actions

Project Area
Tidal Habitat
Managed Pond
Reversibly Tidal
Trail
Interpretive Display and Viewing Platform
Kayak/Boat Launch
Parking

N

5,000 2,500 0 5,000 Feet

2,500 1,250 0 2,500 Meters

Map datum and projection: NAD83, UTM Zone 10N
Map data: Siegel & Bachand, 2002 (sewer force mains, H-H Aqueduct, power transmission lines, distribution lines), Cargill (pond boundaries), SFEI (baylands), EDAW (highways), NASA (South Bay imagery)
Map by: EDAW Inc. Map Date: March, 2007

San Mateo Bridge

Seasonal Trails

Reconfigured Pond

Tidal

Eden Landing

South San Francisco Bay

Interpretive Display & Viewing Opportunity to be installed in cooperation with the City of Menlo Park

Ravenswood

Dumbarton Bridge

Reconfigured Pond

Phase 1 actions at Pond A8 would affect the water depth at Ponds A5 and A7 because these ponds are hydraulically connected

Alviso

Tidal

Bay Trail Spine Sunnyvale to Stevens Creek

Knapp Tract A6

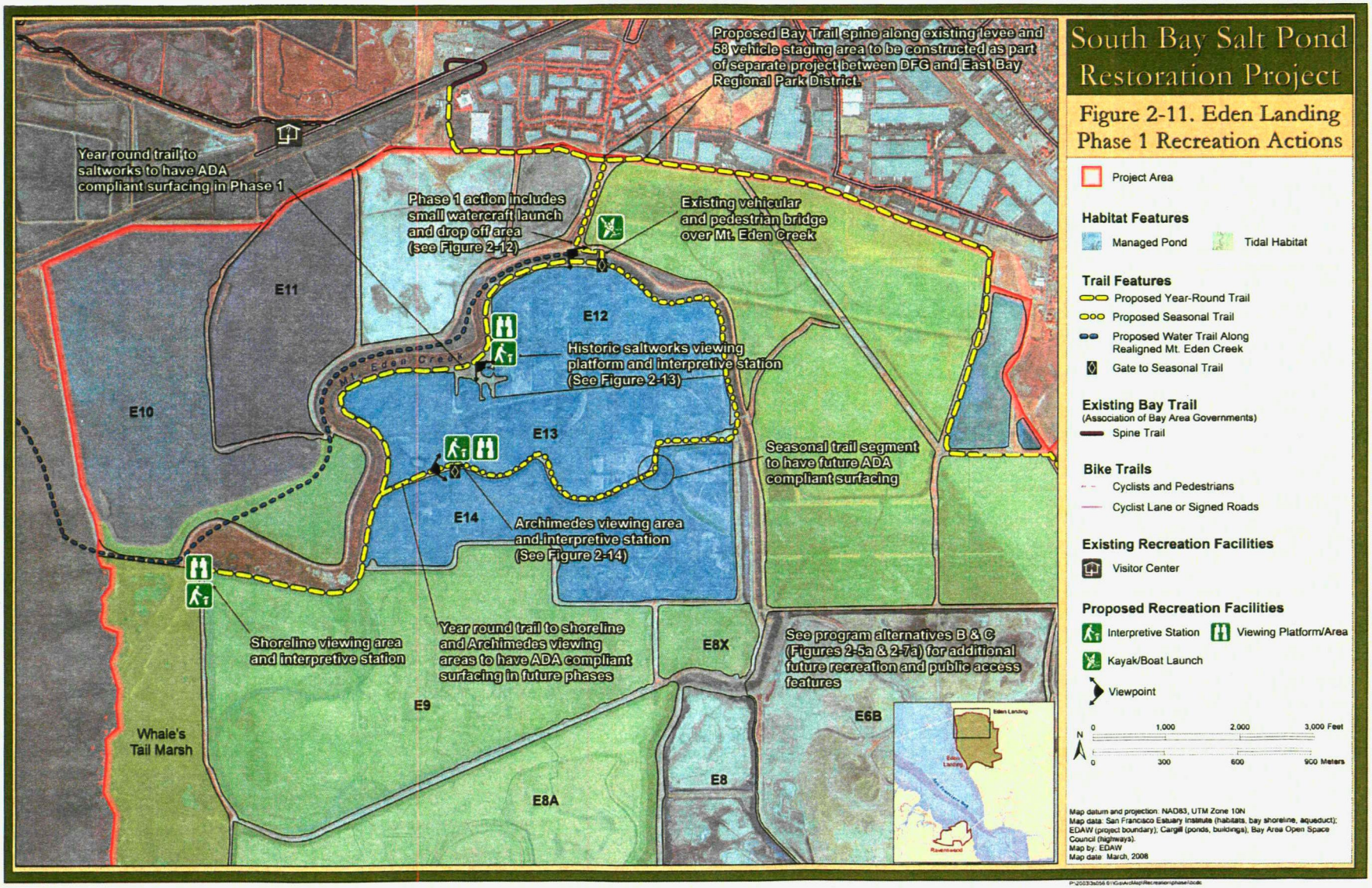
Reconfigured Pond

Reversibly Tidal

P:\2003\Ju058.01\AI\December2006

EXHIBIT A

EXHIBIT B



EDEN LANDING PUBLIC ACCESS OVERVIEW