SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION
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November 1, 2013

TO: Commissioners and Alternates

FROM: Lawrence J. Goldzband, Executive Director (415/352-3653 lgoldzband@bcdc.ca.gov)
Brenda Goeden, Sediment Program Manager (415/352-3623 brendag@bcdc.ca.gov)

SUBJECT: **Staff Recommendation on U.S. Fish and Wildlife Service's Material Amendment No. Three to Consistency Determination No. C2004.005.00, Potential Authorization for a Sediment Offloading Facility at the Cullinan Ranch Marsh Restoration Project** (For Commission consideration on November 7, 2013)

Recommendation Summary

The staff recommends that the Commission concur with the U.S. Fish and Wildlife Service's (USFWS) consistency determination to construct and use a sediment offloading facility and associated pipeline to further wetland restoration efforts at the Cullinan Ranch Wetland Restoration Project, which as conditioned, will result in the following:

1. Construction and temporary use (for up to two years) of a 16,000-square-foot offloading facility and associated 4,800-foot-long sediment transport pipeline to convey up to 405,000 cubic yards of dredged sediment to the existing restoration site to raise elevations in a manner suitable for colonization of salt marsh vegetation to facilitate wetland restoration at Cullinan Ranch.

Staff Note

Because the project involves a material amendment to an existing consistency determination, the format of the recommendation is different than recommendations for new consistency determinations. This recommendation includes the language of the existing consistency determination, as well as the changes proposed by the amendment. Language to be deleted from the consistency determination has been ~~struck through~~ and language to be added to the amended consistency determination has been <u>underlined</u>. Language that has neither been struck through nor underlined is language of the existing consistency determination that will remain unchanged with the adoption of Material Amendment No. Three.

Staff Recommendation

The staff recommends that the Commission adopt the following resolution:

I. Agreement

A. The San Francisco Bay Conservation and Development Commission concurs with the determination of the United States Fish and Wildlife Service (USFWS) that the following project is consistent with the Commission's Amended Management Program for the San Francisco Bay segment of the California coastal zone, subject to the USFWS's acceptance of the conditions contained in Section II below and the incorporation of those conditions into the project. If the USFWS fails to agree to the conditions and/or fails to incorporate the conditions into the project, the USFWS should treat this conditional concurrence as an objection and should notify the Commission immediately. If this conditional concurrence is converted into an objection, the provisions of Title 15 Code of Federal Regulations Sections 930.43, 930.44, and 930.45 shall apply.

B. **Authorized Project**

Location: In the Commission's certain waterway jurisdiction, in the Napa River at its confluence with Dutchman Slough and within ~~Within~~ a wildlife refuge priority-use area, at Cullinan Ranch, located in the northwest corner of San Pablo Bay National Wildlife Refuge, approximately 1 mile northwest of Vallejo, bounded on the north by South Slough and Dutchman Slough, on the south by Highway 37, and on the east by Guadalcanal Village in Napa and Solano Counties.

Description: 1. **Within the Commission's certain waterway jurisdiction:**

a. Construct and use an approximately 16,000 square-foot floating offloading facility. The offloading facility would consist of a floating platform with a slurry pump, held in place with four 24-inch-in-diameter spud piles, and two fish screens mounted on the end of water intake pipes (Material Amendment No. Three);

b. Drive and use three 24-inch-diameter piles for scow moorage (Material Amendment No. Three); and

c. Place and use an approximately 4,800-foot, 24-inch-diameter sediment conveyance pipeline held in place by up to ten, two-foot concrete blocks to prevent movement of the pipeline (Material Amendment No. Three).

2. **Within a wildlife refuge priority-use area (certain waterway):**

a. Excavate approximately 14,600 cubic yards of material (below the inland extent of marsh vegetation) over an approximately 88,100-square-foot area (2.0 acres) to create four 100-foot-wide breaches in the levee along South and Dutchman Sloughs (Material Amendment No. One); and

~~Temporarily moor a barge in Dutchman Slough from which dredged material would be hydraulically pumped via pipeline to the site (Material Amendment No. One).~~

3. ~~2.~~ **Within a wildlife refuge priority-use area (including shoreline band):**

   a. Construct three boardwalks to maintain access to PG&E transmission towers when tidal action is restored to Cullinan Ranch. The boardwalks would cover a total area of 3,340 square feet (835 feet x 4 feet) (Original Authorization);

   b. Excavate approximately 276,000 cubic yards of material from on-site over an approximately 3,600,000-square-foot area (82.6 acres) to lower approximately 26,000 linear feet (4.9 miles) of the levee along South and Dutchman Sloughs, create four 100-foot-wide breaches in the levee along South and Dutchman Sloughs, create one 100-foot-wide breach in the levee bordering the Guadalcanal Village marsh, lower internal berms and levees, create pools for deep water habitat, excavate tidal channels, and create borrow ditches (Material Amendment No. One);

   c. Import up to 100,000 cubic yards of dredged material from Pond 1 (owned by the California Department of Fish and Wildlife (CDFW) ~~DFG~~), up to 405,000 cubic yards of dredged material from ~~other~~ dredging projects, and place up to 650,000 cubic yards of material (imported and excavated from on-site) over an approximately 5,500,000 square-foot area (126 acres) to raise site elevations, create tidal marsh habitat, fill borrow ditches, create ditch blocks and raise and strengthen levees, and create upland and transitional habitat (Material Amendment No. One);

   d. Place approximately 92,000 cubic yards of rip rap over an approximately 611,000-square-foot area (14.0 acres) to armor 12,100 linear feet of the north side of Highway 37 (Material Amendment No. One);

   e. Place approximately 101,600 cubic yards of material over an approximately 504,425-square-foot area (11.6 acres) 100 feet inland from Highway 37 to construct a 3,500-foot-long buttress levee to protect low lying areas of Highway 37 from flooding (Material Amendment No. One);

   f. Install two water control structures consisting of two 100-foot-long by 48-inch-in-diameter pipes (1,600 cubic yards) within the Pond 1 levee (BCDC Permit No. 2004.008.00 ~~8-04~~ issued to the CDFW ~~Department of Fish and Game~~ will be amended to authorize a portion of these water control structures) (Material Amendment No. One);

   ~~g. Temporarily install dredged material delivery pipeline (up to 30 inch in diameter), as needed, to carry slurry dredged material(up to 405,000 cubic yards) from a dredged material offloader temporarily moored in Dutchman Slough to the site~~;

g~~h.~~ Place approximately 15,200 cubic yards of material over an approximately 126,324-square-foot area (2.9 acre) adjacent to Highway 37 to construct a 750-foot-long acceleration lane and a 650-foot long deceleration lane (to be partially authorized in an amendment to BCDC Permit No. 2004.008.00 ~~8-04~~ issued to the CDFW ~~California Department of Fish and Game~~) (Material Amendment No. One);

h~~i.~~ Place approximately 6,200 cubic yards of material over an approximately 47,000-square-foot area (1.1 acre) to construct an earthen viewing platform near the Pond 1 parking area (to be partially authorized in an amendment to BCDC Permit 8-04) (Material Amendment No. One);

i~~j~~. Construct, use, and maintain a 1,350-square-foot (0.03 acre) gravel overlook area at the north end of the Pond 1 levee (to be partially authorized in an amendment to BCDC Permit 8-04) (Material Amendment No. One);

j~~k~~. Improve, use, and maintain a total of approximately 7,000 linear feet of existing levee trail by installing 600 linear feet of ADA-compliant surfacing at the southern end of the trail and 6,400 linear feet of gravel along the remaining trail section (to be partially authorized in an amendment to BCDC Permit 8-04) (Material Amendment No. One);

k~~l~~. Construct, use, and maintain a 1,200-square-foot (0.03 acre) ADA-accessible wooden pile-supported fishing pier (to be partially authorized in an amendment to BCDC Permit 8-04) (Material Amendment No. One);

l~~m~~. Construct, use, and maintain a 1,950-square-foot (0.04) ADA-accessible wooden pile-supported kayak launch (to be partially authorized in an amendment to BCDC Permit 8-04) (Material Amendment No. One);

m~~n~~.Construct, use, and maintain a 650-square-foot (0.01 acres) earthen kayak pull-out ramp by lowering an existing berm near the north end of the Pond 1 levee (Material Amendment No. One);

n~~o~~. Install, use, and maintain a wooden kiosk and interpretive signage (Material Amendment No. One); and

o~~p~~. Construct a temporary offloading platform by either installing a 100-foot by 50-foot earthen platform encircled by sheet piles or a 100-foot-long by 40-foot-wide pile-supported deck along the outboard levee in Dutchman Slough to allow riprap, dredged material, and other construction materials to be offloaded at the site (Material Amendment No. One).

4. **Within the former Guadalcanal Village (once title has been transferred to USFWS):**

   a. Construct, use and maintain a 1,760-foot-long by eight- to ten-foot-wide (approximately 0.04 acre) ADA-compliant trail on top of an existing levee (Material Amendment No. One);

   b. Construct, use and maintain a 200-square-foot (0.005 acres) wooden pile supported fishing pier at the terminus of the levee trail (Material Amendment No. One); and

   c. Install, use, and maintain a wooden kiosk and interpretive signage (Material Amendment No. One).

C. This amended conditional concurrence is given based on information submitted by the U.S. Fish and Wildlife Service in their letter dated June 2, 2004, and received in the Commission's office on June 3, 2004, requesting a consistency determination for the original project, the construction of boardwalks to utility towers, and in its application dated March 3, 2010, requesting Material Amendment No. One, the restoration to tidal action of the 1,575-acre Cullinan Ranch including all accompanying and subsequent correspondence and exhibits. This amended conditional concurrence is given based on information submitted by the USFWS in their emailed letter, dated and received on July 20, 2011, requesting a consistency determination for the construction and use of an offloading facility and its associated pipeline to convey dredged sediment to the restoration site to increase site elevations sufficient to support salt marsh habitat, including all accompanying and subsequent correspondence and exhibits (Material Amendment No. Three).

D. The work authorized by this amended consistency determination must commence by October 1, 2014, ~~November 1, 2012~~ and must be diligently pursued to completion by December 31, ~~January 1~~, 2016, unless the terms of this amended consistency determination are changed by further amendment of this amended consistency determination (Material Amendment No. Three ~~One~~).

II. Conditions

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

A. **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 the project 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 Commission staff. To save time, preliminary drawings should be submitted and approved prior to final drawings (Material Amendment No. One).

1. **Construction Plans**. Site, public access, engineering, restoration, offloading and dredged sediment placement (Material Amendment No. Three) 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), the 100-foot-shoreline band, property lines, the boundaries of all areas currently reserved for public access purposes, grading, excavation and fill placement areas, details showing the location, types, dimensions, and materials to be used for all structures, public access improvements, water control structures, and other improvements. 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 (Material Amendment No. One).

2. **Levee Breach Plan.** Prior to the commencement of any restoration activities at the Cullinan Ranch site, pursuant to this amended authorization, the USFWS shall submit a plan for breaching and lowering the levee along South and Dutchman Sloughs and breaching and lowering the levee bordering Guadalcanal Village to be approved by or on behalf of the Commission. The plan shall contain the following: (1) calculations for determining the size and slopes of the levee breaches; (2) the final amount of material removed to excavate the breaches; (3) construction best management practices for minimizing sedimentation and erosion into adjoining waterways while lowering the levees; and (4) an estimation of the amount of water entering the breaches at various tidal stages (Material Amendment No. One).

3. **Dredged Material Placement Plan.** No dredged material shall be imported to the site until a final set of plans and any other relevant criteria, specifications, and plan information for all work associated with dredged material placement (e.g., sediment cells, pipeline locations, mooring facilities, etc.,) have been submitted to, reviewed, and approved in writing by or on behalf of the Commission (see Special Condition II-C below). The dredged material placement plan should describe the location, size and length of pipeline to be placed, provide information and calculations for any berms that may need to be constructed to contain the material at the 50-acre area near Guadalcanal Village, specify measures to minimize impacts to the outboard marsh in Dutchman Slough and mitigate for unavoidable impacts, and provide a schedule for completion of the work.

4. **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:

   a. 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 marshlands, Mean Higher High Water, property lines, and the line 100-feet inland of the inland edge of marsh vegetation south of Highway 37, and any other criteria required by this amended consistency determination;

   b. consistency of the plans with the terms and conditions of this amended consistency determination;

   c. 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 amended consistency determination, to ensure: (1) the public's use and enjoyment of public access areas; (2) public safety; (3) accessibility for persons with disabilities; (4) sufficient durability and maintenance; and (5) the access is clear and continuous and encourages public use; and

   d. assuring that appropriate provisions have been incorporated for safety in case of seismic event.

5. **Discrepancies between Approved Plans and Special Conditions**. In case of any discrepancy between final approved plans and Special Conditions of this amended consistency determination, the Special Condition or the legal instrument shall prevail. The USFWS is responsible for assuring that all plans accurately and fully reflect the Special Conditions of this amended authorization (Material Amendment No. One).

   Plan review shall be completed by or on behalf of the Commission within 45 days after receipt of the plans to be reviewed.

B. **Public Access**

1. **Pond 1 Levee Improvements.** Within six months of breaching the levees along South and Dutchman South and the levee bordering the Guadalcanal Village site, the USFWS shall provide the following public access improvements along the Pond 1 levee trail (see Exhibits A-1 and A-2):

   a. a 750-foot-long acceleration lane and a 650-foot-long deceleration lane along State Route 37 (partially on land owned by the California Department of Fish and Game);

   b. a 1,950-square-foot (0.04 acres) ADA-accessible wooden, pile-supported kayak launch and a 600-square-foot (0.01 acres) earthen kayak launch ramp (partially on land owned by the CDFW ~~California Department of Fish and Game)~~. The USFWS shall make every effort to design the earthen kayak pull-out ramp at the north end of the Pond 1 levee, especially the slope of the landing/pull out area at the bottom of the ramp, to be ADA-accessible;

   c. an approximately 1,350-square-foot (0.03 acres) overlook and three benches at the north end of the Pond 1 levee trail (partially on land owned by the CDFW ~~California Department of Fish and Game~~);

   d. a 1,000-square-foot (0.02 acres) earthen viewing platform and one informational kiosk near the parking lot (partially on land owned by the CDFW ~~California Department of Fish and Game~~);

   e. a 1,200-square-foot (0.02 acres) ADA-accessible wooden, pile-supported fishing pier (partially on land owned by the CDFW ~~California Department of Fish and Game~~);

   f. ADA-accessible surfacing on approximately 600 linear feet at the south end of the Pond 1 levee trail (partially on land owned by the CDFW ~~California Department of Fish and Game~~); and

   g. interpretive and directional signage (partially on land owned by the CDFW ~~California Department of Fish and Game~~) (Material Amendment No. One).

   Prior to breaching the levees along South and Dutchman South and the levee bordering the Guadalcanal Village site, the USFWS shall complete construction of the wooden fishing pier, wooden kayak launch, earthen kayak pull-out ramp, and grade the overlook area at the north end of the Pond 1 levee. Within six months of breaching the levees, the USFWS shall complete the installation of ADA-accessible surfacing along 600 linear feet of the Pond 1 levee, the installation of other trail surface improvements along the remainder of the Pond 1 levee, installation of gravel surfacing and three benches at the overlook area at the north end of the Pond 1 levee, construction of the earthen viewing area, and installation of an interpretive kiosk and signage.

2. **Guadalcanal Village Site Improvements.** Within two years of breaching the levees, the USFWS shall provide the following public access improvements within the Guadalcanal Village site (see Exhibit A-3):

   a. a_1,760-foot-long by eight to ten-foot-wide ADA-compliant trail on top of an existing levee within the Guadalcanal Village site; and

   b. a 1,200-square-foot (0.03 acres), wooden pile-supported fishing pier at the terminus of this levee trail (Material Amendment No. One).

   Management measures to minimize potential adverse impacts on wildlife from human uses at the Guadalcanal Village trail, especially on the salt marsh harvest mouse, may be incorporated into the final public access plan for the trail and approved by plan review by or behalf of the Commission.

3. **Possible Alternative East Side Public Access Improvements.** The Guadalcanal Village site is currently owned by the California Department of Transportation (CalTrans). Caltrans has communicated their intent to transfer this parcel to the USFWS and USFWS is prepared to accept ownership and maintain the land. If it is determined that the USFWS will not acquire the Guadalcanal site, within two years of such determination, USFWS shall provide a suitable public access alternative for providing access on the east side of the Cullinan Ranch site and submit this proposal, including a schedule for implementing alternative access within two years, to be approved by or on behalf of the Commission pursuant to Special Condition II-A. Potential approvable alternative east side public access may include an ADA-compliant trail and public access improvements on the proposed buttress levee along Highway 37, a monetary contribution to future public access improvements at River Park in Vallejo, a monetary contribution to future public access sites in the Napa-Sonoma Marshes Area (such as CDFW ~~California Department of Fish and Game~~ around the Napa Airport or Fagan Slough Wildlife Area Ponds 9 and 10), and/or the construction of a public access trail or area in the vicinity of the east end of the Cullinan Ranch site (Material Amendment No. One).

4. **Maintenance**. The public access improvements along the Pond 1 levee trail and the new 1,760-foot-long public access trail within the Guadalcanal Ranch site (or alternative east end site), authorized by this amended consistency determination, shall be permanently maintained by and at the expense of the USFWS. Such maintenance shall include, but is not limited to, repairs to trail surfaces, making repairs or replacement as needed of any public access amenities (such as benches or signs), periodic cleanup of litter and other materials deposited along the trail, removal of any encroachments into the trail area, assuring that the public access signs remain in place and visible. Within 30 days after notification by staff, the USFWS shall correct any maintenance deficiency noted in a staff inspection of the site (Material Amendment No. One).

5. **Reasonable Rules and Restrictions.** The USFWS 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 USFWS has both identified and substantiated. Rules may include restricting hours of use and delineating appropriate behavior (Material Amendment No. One).

C. **Importation of Dredged Material.** In order to facilitate the placement of up to 405,000 cubic yards of dredged material on Cullinan Ranch, the USFWS may construct and use a offloading facility and drive three, 24-inch in diameter piles for moorage at the confluence of Dutchman Slough and Napa River, and a 4,800-foot long sediment conveyance pipeline ~~temporarily moor a barge in Dutchman Slough and construction a pipeline system up to 30 inches in diameters~~ for up to two years to hydraulically pump dredged sediments ~~material~~ from scows ~~the barge~~ to the Cullinan Ranch site. The offloading facility, pipeline and mooring piles shall be appropriately marked with lights or other navigational aids to reduce navigational hazards (Material Amendment No. Three~~One~~).

1. **Protection of Listed Aquatic Species.** To prevent impacts to listed aquatic species, specifically listed salmon, steelhead, Delta and longfin smelt and green sturgeon, the USFWS shall implement the following measures as recommended and required by the CDFW, NMFS and the Endangered Species Branch of USFWS (Material Amendment No. Three).

   a. **In Water Construction.** Construction of the offloader, placement of the sediment conveyance pipeline and pile-driving shall be limited to the period of August 1st and January 31st of any year to prevent impacts to migrating salmonids (Material Amendment No. Three).

   b. **Pile Driving Activity**. The USFWS shall ensure that all pile-driving activities minimize impacts to aquatic species through the use of sound dampening equipment described in the 2013 Addendum to CDFW's California Environmental Quality Act review completed by the State Lands Commission (Material Amendment No. Three).

   c. **Fish Screens.** As part of the offloading facility, the USFWS shall install and use appropriately sized fish screens on all water intake pipelines to prevent entrainment and impingement of listed salmonids, Delta and longfin smelt. The fish screens shall be located inside of a cement vault constructed as part of the offloading facility to reduce flow rates of water and further protect against impacts to listed species. Prior to pumping water through the offloading facility the USFWS shall provide the specifications of the proposed fish screens and pump velocities to the Endangered Species Branch of USFWS, NMFS and the CDFW for review and approval. Once that approval has occurred, the USFWS will provide documentation of those approvals to the Commission staff for final consideration and concurrance. (Material Amendment No. Three).

   In the event that any of these conditions cannot be met, the USFWS will confer with the above listed resource agencies and Commission staff to identify any additional minimization or mitigation measures that may be necessary to reduce or avoid impacts to threatened and endangered species due to the use of an offloading facility (Material Amendment No. Three).

   ~~**Temporary Mooring of a Barge to Deliver Dredged Material to the Site.** Any barge may be temporarily moored in Dutchman Slough for no more than 180 days to facilitate the pumping of dredged material onto the site (Material Amendment No. One).~~

2. **Installation of the Dredged Material Pipeline.** ~~Any temporary~~ The sediment transportation pipeline authorized herein ~~transporting dredged material~~ shall not exceed 2430 inches in diameter. In addition, it shall be anchored in ~~be~~ place~~d~~ and be located to limit ~~any~~ impacts to the existing fringe tidal marsh in Dutchman Slough and ~~be placed at a location~~ where one of the levee breaches will later occur (Material Amendment No. Three). If it is determined that the installation of the pipeline may

have additional impacts to water quality, wildlife or adjacent habitat in Dutchman Slough, the USFWS may need to amend this consistency determination to authorize the work (Material Amendment No. One).

3. **Dredged Material Placement Plan.** No dredged material shall be imported to the site until a final dredged material placement plan describing the proposed work associated with the delivery and placement of dredged material to the site has been submitted to, reviewed, and approved in writing by or on behalf of the Commission (see Special Condition II-A above). If dredged material is to be delivered to the site by a method other than hydraulic pumping or requires different facilities and infrastructure other than those authorized, this consistency determination may need to be amended further to authorize the work (Material Amendment No. One).

4. **Handling of Dredged Material.** Any dredged material delivered to the site shall be kept wet, with a minimum of six inches of water across the dredged sediment placement area, (Material Amendment No. Three) until the site is breached to tidal action to prevent the material from drying out which could result in the material acidifying and metals becoming soluble and leaching out of the mud thereby causing adverse impacts to water quality (Material Amendment No. One).

5. **Sediment Testing.** All imported dredged material must meet the criteria for beneficial reuse as specified by the San Francisco Regional Water Quality Control Board, and the 2010 USFWS biological opinion (Material Amendment No. Three ~~One~~).

6. **Removal of Offloading Facility.** Within 3 months of completing placement of dredged sediment, or within two years of commence of sediment placement, whichever is sooner, the USFWS shall remove the offloading facility, associated pipeline and mooring piles. Continued use beyond the authorized two-year period may require a time extension of this amended consistency determination (Material Amendment No. Three).

D. **Monitoring of Marsh Restoration**

1. **Monitoring Plan.** Prior to the commencement of any restorations activities authorized herein pursuant to this authorization, the USFWS shall submit a final monitoring and adaptive management plan, to be approved by or on behalf of the Commission (Material Amendment No. One).

2. **Schedule.** Monitoring for all parameters shall be conducted prior to construction to establish baseline conditions and shall continue for fifteen years following the completion of project construction to ensure that the restoration goals are met (Material Amendment No. One).

3. **Monitoring Reports.** Monitoring reports shall be submitted to the Commission every other year by December 1st. Monitoring shall generally follow the monitoring program described in the document entitled "Draft Monitoring Plan for Cullinan Ranch", prepared by Ducks Unlimited and the USFWS, dated August 12, 2010. Should adverse conditions be identified during the fifteen year monitoring period, the monitoring reports should propose adaptive management measures (see Adaptive Management Plan condition below), and the USFWS shall take corrective action as specified by or on behalf of the Commission. Monitoring shall provide information on:

   a. **Hydrology and Geomorphology.** The site shall be monitored for changes to hydrology and geomorphology, including channel network development, channel density, and channel width (Material Amendment No. One).

b. **Sedimentation.** Sedimentation shall be monitored using sedimentation plates, pins, erosion tables or LiDAR. Sediment accumulation on the plates shall be measured in years 1, 5, 10, and 15 (Material Amendment No. One).

c. **Vegetation.** Monitoring shall evaluate vegetation establishment within the Cullinan Ranch site using aerial photographs and ground-truthing, and report on species cover, richness, and composition. The aerial photos shall be included in the monitoring report. In addition the USFWS shall evaluate the relative abundance of native plant species compared with non-native plants. The USFWS shall make reasonable efforts to control invasive species colonization within the site for the duration of the monitoring period, especially for high-priority species such as invasive cordgrass species (e.g., *Spartina alterniflora, Spartina densiflora*) and *Lepidium latifolium* (perennial pepperweed.) The USFWS shall also coordinate with the Invasive Spartina Project if invasive Spartina species become a problem within the site and control measures need to be implemented (Material Amendment No. One).

d. **Water Quality.** Water quality monitoring should assess the effects of breaching the outboard levees on the water quality of receiving waters. General water quality parameters to be monitored shall include, at a minimum, salinity, temperature, pH, dissolved oxygen (DO), turbidity, mercury, methyl-mercury (in water, sediment, and/or biosentinel species), and other components of the San Francisco Bay Regional Water Quality Control Board's (Regional Board) Final Order's Specifications. If the Regional Board and the Technical Advisory Committee (TAC) for the Cullinan Ranch Project make a determination that mercury and methyl-mercury monitoring are no longer a concern at the site, then these parameters may be eliminated from the monitoring program. Throughout the course of the restoration work, water quality in the project area should meet the Basin Plan's Water Quality Objectives as established by the San Francisco Regional Water Quality Control Board to the maximum extent possible (Material Amendment No. One).

e. **Wildlife Use.** The monitoring report shall describe the results of wildlife surveys measuring wildlife abundance and species diversity. Wildlife surveys should, at a minimum, monitor shorebirds, waterfowl, small mammals, and fish (Material Amendment No. One).

E. **Adaptive Management Plan (Material Amendment No. Five).** This amended consistency determination authorizes specific facilities, public access, fill quantities, fill locations and coverage. Furthermore, this amended consistency determination contains conditions specifying construction practices, timing, and mitigation measures. Given the size of the Cullinan Ranch restoration project, it is anticipated that the USFWS may experience new management concerns and restoration challenges as the site develops. It may be necessary to modify the site design and management authorized herein. Any proposed modifications shall substantially conform to potential management actions identified in Table 2 of the document entitled "Draft Monitoring Plan for Cullinan Ranch", prepared by Ducks Unlimited and the USFWS and dated August 12, 2010. This plan identifies, for each monitoring activity, restoration targets, expected time frames for decision-making, and management triggers to determine when restoration activities are not performing as expected. Issues that may require adaptive management include mosquito abatement, invasive species, erosion, flooding, and others. An evaluation of how the marsh is evolving relative to stated project targets and triggers will be presented in the biennial monitoring reports.

Prior to initiating any adaptive management actions within the Cullinan Ranch restoration site that are not specifically authorized in this amended consistency determination, the USFWS 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 consistency determination (Material Amendment No. One).

F. **Marsh Protection**

1. **Construction**. 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 USFWS shall immediately retrieve and remove such material at their expense (Material Amendment No. One).

2. **Construction Timing**. Breaching of the outboard levee must be completed between November 1 and January 31 ~~30~~ to avoid migrating juvenile salmonids and comply with the National Marine Fisheries Service informal consultation dated April 5, 2010 and the USFWS Biological Opinion dated May 7, 2010 and to avoid breeding California clapper rail. The Guadalcanal breach opening may also be opened at this time. In order to avoid or minimize impacts to clapper rails, activities within or adjacent to tidal marsh areas shall be avoided during the clapper rail breeding season, between February 1 and August 31 of any calendar year, unless a qualified biologist determines that clapper rails are not present in that area.

3. **Water Quality**. As described in its request for a consistency determination, dated March 3, 2010, the USFWS shall prepare a hazardous spill plan prior to construction that incorporates and describes Best Management Practices to be implemented to reduce potential impacts to water quality. In addition, the USFWS shall implement all the conservation measures described in the Regional Water Quality Control Board's (Regional Board) ~~Draft Tentative~~ Order, dated August 12, 2010, including pre-flooding the site with waters from Pond 1 prior to breaching, lowering some levee sections before breaching to allow water from the adjacent sloughs to overtop into the site, and breaching the site on an incoming rising tide. The Regional Board ~~is expected to~~ issued its Final Order in October 13, 2010. ~~If any additional conditions are included in the Final Order, t~~The USFWS shall ~~further~~ comply with the~~se~~ requirements in order to minimize or avoid impacts to water quality within and adjacent to the site (Material Amendment No. Three ~~One~~).

4. **Marsh and Upland Plant Protection During Construction.** The work authorized by this amended consistency determination 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 USFWS 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 USFWS shall seed all disturbed areas with appropriate vegetation consistent with plans approved by or on behalf of the Commission. The USFWS shall employ mitigation measures to minimize impacts to wetland areas, such as: (1) minimizing all traffic in marsh/mudflat areas; and (2) limiting traffic in wetland as much as possible to areas that will be excavated or filled (Material Amendment No. One).

5. **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, waterways or ponds. 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 USFWS, its assigns, or successors in interest, or the owner of the improvements, shall remove such material, at its expense, within ten days after it has been notified by the Executive Director of such placement (Material Amendment No. One).

6. **Protection of Special-Status Fish and Wildlife Species.** The USFWS shall implement all the conservation measures described in the Section 7 Consultation letter, issued by the USFWS on May 7, 2010, including having a qualified biologist conduct clapper rail surveys prior to construction, avoiding construction within 700 feet of any areas where clapper rails are known to be found, slowly pre-flooding to encourage a slow emigration of salt marsh harvest mice from the site prior to breaching, avoiding impacts to soft bird's beak (*Cordalanthus mollis spp.*) to the maximum extent feasible, and salvaging, transplanting and/or mitigating for impacted populations of soft bird's beak within the site (Material Amendment No. One).

7. **Construction of a Temporary Earthen Pier or Pile-Supported Deck.** Any temporary earthen pier or pile-supported deck structure shall be constructed at the northeast corner of the site on the outboard levee along the Dutchman Slough and, if possible, shall be located where one of the breaches will later occur. All temporary construction facilities shall be removed prior to levee breaching. In addition, the USFWS shall make every effort to limit any impacts to the existing fringe tidal marsh in Dutchman Slough during construction. If it is determined that the proposed structure may exceed the originally anticipated size, involve additional construction activities not authorized herein, or have additional impacts to water quality, wildlife or adjacent habitat in Dutchman Slough, the USFWS will likely need to amend this consistency determination to authorize the work (Material Amendment No. One).

G. **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 (Material Amendment No. One).

H. **Regional Water Quality Control Board ~~– Tentative~~ Order.** The USFWS shall comply with all the requirements of the Conditional ~~Tentative~~ Order for the Cullinan Ranch Marsh Restoration Project, issued on October 13, 2010 ~~August 12, 2010,~~ by the ~~San Francisco Bay Regional Water Quality Control Board (~~Regional Board~~)~~. ~~No work shall commence on the project until the Final Order for the Cullinan Ranch Marsh Restoration Project has been issued by the Regional Board~~ (Material Amendment No. Three ~~One~~).

I. **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 amended consistency determination 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).

J. **Hold Harmless.** The USFWS agrees to cooperate, to the extent allowed by law, in the submission of claims pursuant to the Federal Tort Claims Act against the United States for personal injuries or property damage resulting from the negligent or wrongful act or omission of any employee of the United States while acting within the scope of his/her employment, arising out of this agreement. Further, the USFWS agrees to perform all work under this agreement with reasonable diligence and precaution (Material Amendment No. One).

III. Findings and Declarations

This amended consistency determination 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 National Environmental Protection Act, the California Environmental Quality Act, and the Commission's amended coastal zone management program for the San Francisco Bay for the following reasons:

A. **Bay Fill.** Section 66605 of the McAteer-Petris Act states, in part, that fill in the Bay can be authorized only when public benefits of the fill exceed the public detriment from the loss of water area, that the fill must be limited to water oriented uses (such as water-related industry), that the fill can be authorized only when no alternative upland location exists for such purposes, that the water area authorized to be filled should be the minimum necessary to achieve the purpose of the fill, and 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 (Material Amendment No. Three).

1. **Public Benefits v. Public Detriment.** Approximately 16,000 square feet of floating fill for the offloader platform and 983 cubic yards of solid fill for the mooring piles, spuds and sediment conveyance pipeline placed on the Bay bottom will be placed in the Commission's certain waterway jurisdiction. The dredge material offloader and accompanying mooring piles and pipeline will enable dredged sediment from Bay Area dredging projects to be offloaded from dredge scows and pumped to the Cullinan Ranch site, approximately 5,000 feet from the offloading site. Beneficially reusing dredged sediment on site to raise the elevations to those suitable for marsh development will substantially reduce the amount of time necessary for tidal marsh to develop at the restoration site, thereby providing endangered species habitat sooner, aiding in their recovery (Material Amendment No. Three).

   This project, along with other beneficial reuse projects, will reduce the volume of dredged material that currently is disposed of in the Bay, reducing water quality impacts to the Bay. In addition, wetland restoration projects have significant benefits to the public such as increased wildlife viewing and recreational opportunities, reduced flooding impacts due to the ability to absorb stormwater, and increased habitat for native, and threatened and endangered species (Material Amendment No. Three).

2. **Wildlife Refuge.** Section 66605(a) of the McAteer-Petris Act states that, "...further filling of San Francisco Bay...should be...limited to minor fill for water-oriented uses…such as wildlife refuges...."

   The purpose of the fill associated with the offloader will be to beneficially reuse dredged material in the restoration of wetlands in the San Pablo Bay Wildlife Refuge, thereby increasing wildlife habitats, and implementing the wildlife refuge priority use designation for Cullinan Ranch (Material Amendment No. Three).

3. **Alternative Upland Location.** Currently, there is no feasible way to transport 405,000 cubic yards of dredged sediment to the site via a land route because dredged sediment is first loaded into scows at the dredging site and is then transported via barge to its final placement site. If trucks were used to transport the sediment by land, it would require a shoreside facility with holding cells to dry material and then load it into trucks for transport to the restoration site. This process would be cost prohibitive for the restoration project and cause traffic congestion on Highway 37 and potentially other highways in the region (Material Amendment No. Three).

4. **Minimum Necessary Fill.** The proposed Bay fill will be only that needed to provide the dredged material offloader facility, mooring piles, and dredged sediment delivery pipeline. The USFWS states that the fill proposed with the project is the minimum amount necessary to safely and efficiently offload dredged material from scows and to pump the slurried sediment to the project site. The floating footprint of the off-loader currently includes one flat deck barge for pumping equipment, held in place by four spuds. In addition, three mooring piles are necessary for mooring barges during offloading activities. The dredged sediment conveyance pipeline is sized specifically for this job and is the minimum length and size necessary for offloading sediment from the above described scows. As required in Special Condition II-C(6), after the two years, the USFWS will remove the offloader, piles, anchors and pipeline from the Bay (Material Amendment No. Three).

The Commission has determined that the fill placed in the Bay meets the McAteer-Petris Act's criteria for approving fill in the Bay.

B~~A~~. **Maximum Feasible Public Access**

1. **Maximum Feasible 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." The Bay Plan Public Access policies state that "a proposed fill project should increase public access to the Bay to the maximum extent feasible" (Policy No. 1).

   Public access opportunities are limited within the Refuge since the area consists of large expanses of wetland habitat and networks of sloughs and islands, with little uplands and Highway 37 the only public road. Public access at the Cullinan Ranch site currently exists along a 7,000-foot-long gravel trail atop the Pond 1 levee at the west end of the site owned by the California Department of Fish and Game. At the south end of this trail, there is a small paved parking lot with spaces for approximately ten vehicles. A locked gate precludes vehicles from driving out onto the Pond 1 levee and an ADA-compliant pedestrian gate allows access for bikers and pedestrians onto the levee. The parking lot can only by accessed by vehicles traveling west along Highway 37. Given the high rate of speed that vehicles typically travel along the highway, making the sudden right turn into the lot can be dangerous. At the west end of the site, the USFWS is proposing new acceleration and deceleration lanes along State Route 37, new viewing, fishing and kayaking facilities along the Pond 1 levee and resurfacing of the Pond 1 levee trail.

   There is currently no public access at the east end of Cullinan Ranch. There is a public access seating area and parking lot for eight vehicles at the neighboring Guadalcanal Village site, owned and maintained by the California Department of Transportation (CalTrans). CalTrans is currently in the process of transferring ownership of Guadalcanal Village marsh site to the UFSWS (not including the seating area and parking lot). Once this property is acquired, the USFWS will

construct a new ADA-compliant trail on an existing levee within the Guadalcanal Village and a wooden pile-supported fishing pier at the terminus of the trail. In order to access this new trail, the public will need to cross the CalTrans public access seating area.

a. **Previously Required Public Access Improvements.** In 2004, the ~~California Department of Fish and Game~~ CDFW~~G~~ was required to construct two 75-square-foot kayak launches adjacent to the Pond 1 levee trail as a condition of BCDC Permit 2004.008.00 ~~8-04~~. In 2006, when it was determined that the average depth of Pond 1 was too shallow for kayaks, the permit was amended to allow the CDFW ~~CDFG~~ to construct the kayak launches as part of the Cullinan Ranch restoration project instead because both CDFW ~~CDFG~~ and USFWS believe that kayak facilities are more appropriate and desirable at Cullinan Ranch. As part of the project proposed by Amendment No. One, the USFWS will construct an approximately 1,950-square-foot wooden, pile-supported kayak launch on the east side of the Pond 1 levee (Exhibit D). BCDC Permit No. 2004.008.00 ~~8-04~~ also required that CDFW ~~CDFG~~ improve, use and maintain the Pond 1 levee trail for public access by placing approximately 2,740 tons of aggregate base rock to a 4-inch depth.

   The CDFW ~~CDFG~~ will provide funding and support for the USFWS to make these trail surface improvements as part of the project. New public access improvements to the Pond 1 levee not already required of the CDFW ~~CDFG~~ include the acceleration and deceleration lanes, an ADA-compliant-fishing pier, an earthen kayak pull-out ramp, an earthen viewing platform, a gravel seating area with three benches at the northern end of the levee, and ADA-compliant surfacing over 600 linear feet of trail at the southern end of the levee.

b. **Kayak Launch.** Because the Cullinan Ranch site has subsided considerably over the past century, as much as six feet in some areas, it is expected that most of the site will remain as open water and accessible to kayaks and small crafts for decades after the site is breached. The USFWS will excavate a channel connecting the proposed kayak launch to a nearby tidal channel in an effort to extend the time that kayak access would be maintained as sediment accretes and marsh plain forms throughout the site. If sedimentation occurs faster than expected and the kayak channel becomes too shallow for boats, the kayak launch may be relocated.

c. **Guadalcanal Trail and East End Improvements.** Special Condition II-B requires the USFWS to provide a new trail on top of an existing levee within the neighboring Guadalcanal Village site, provided they acquire ownership of the site. The Guadalcanal Village site is currently owned by CalTrans who has communicated their intent to transfer this parcel to the USFWS. While it appears that this land transfer is imminent, the USFWS has not yet acquired the land and it is uncertain as to when the transfer will occur. If for unforeseen reasons, the USFWS does not acquire the Guadalcanal Village site, the USFWS will provide an alternative public access component for the east end of the site, subject to approval by or on behalf of the Commission, which may include an ADA-compliant, public access trail and improvements on the proposed buttress levee along Highway 37, a monetary contribution to future public access improvements at River Park in Vallejo, a monetary contribution to future public access sites in the Napa-Sonoma Marshes Area (such as access at CDFW's ~~CDFG's~~ Ponds 9 and 10 around the Napa County Airport (Fagan Slough)), and/or the construction of a public access trail or area somewhere else in the vicinity. Special Conditions II-B-2 and II-B-3 are included in this amended consistency determination to ensure that the

proposed public access improvements in Guadalcanal Ranch are constructed or that alternative public access of equal value is provided by the USFWS at another location if access within Guadalcanal Ranch is determined to be infeasible.

d. **Minimize Public Access Impacts to 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 the flushing of nesting or foraging birds, increasing stress, and/or nest abandonment), and may result in adverse long-term population and species effects. The type and severity of effects 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. The Bay Plan Public Access policies 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…"(Policy No. Three ~~3~~) The policies further state, in part, that "siting, design, and management strategies should be employed to avoid or minimize adverse impacts on wildlife…" (Policy No. Four4) and that "public 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 to wildlife" (Policy No. Twelve~~12~~). Lastly, the policies state, in part, 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, and should be identified with appropriate signs." (Policy No. Six~~6~~).

At the west end of the site, the 7,000-foot-long Pond 1 levee owned and operated by the CDFW ~~CDFG~~ has a gravel trail on top of it that is already open to the public. The project will construct improvements along the levee, including new trail surfacing, an overlook, a viewing platform, a fishing pier and two kayak launches. Current conditions along the levee consist of ponded open water and shallow mudflat to the west (in Pond 1) and freshwater and ruderal habitat to the east (within Cullinan Ranch) (Exhibit A). In addition, most of the Cullinan Ranch site has significantly subsided since being diked off for agricultural use, as much as six feet in some places. Therefore, it is anticipated that the site will initially be mainly open water, supporting waterfowl, succeeded by mudflats, supporting shorebirds for at least 15-30 years after the site is returned to tidal action. As marsh habitat begins to develop along the edge of the Pond 1 levee, endangered species and other wildlife use may increase and the USFWS will likely have a better understanding of what long-term management measures are needed to minimize conflicts between the public and wildlife.

The Guadalcanal Village site was breached in 2001 and is still accumulating sediments and being colonized by marsh vegetation. Salt marsh harvest mice, an endangered species, have been observed using portions of the site in the last few years. The 1,760-foot-long public access trail proposed for this site will be located on an existing levee that is currently used as informal access by the public, especially fisherman. A designated public access trail can be designed to minimize intrusion into the marsh by the public. As tidal marsh within Guadalcanal Village continues to develop, the USFWS will monitor wildlife use in and around the levee and evaluate the potential impacts of this trail on wildlife. The USFWS may propose management measures to reduce potential conflicts between trail use and wildlife. Further, if large-scale restoration efforts like Cullinan Ranch,

Sears Point, and the South Bay Salt Ponds Project are successful, populations of currently listed species, such as the salt marsh harvest mouse and the California clapper rail, may increase sufficiently for these species to be delisted.

The Commission finds that the project proposed by Material Amendment No. One, as conditioned herein, is consistent with the Bay Plan policies regarding public access.

C~~B~~. **Natural Resources Policies.** The Bay Plan policies on Tidal Marshes and Tidal Flats state, "where 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…." The policies also state, "[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 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, where applicable; (g) expected use of the site by fish, other aquatic organisms and wildlife; and (h) site characterization. If success criteria are not met, corrective measures should be taken…."

The Bay Plan policies on Subtidal Areas state that, "Any 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 plants; and (e) the Bay's bathymetry." Further, Subtidal Areas, Policy Two states, "Projects in subtidal areas should be designed to minimize and, if feasible, avoid any harmful effects. Filling, changes in use; and dredging projects in these areas should therefore be allowed only if: (a) there is no feasible alternative; and (b) the project provides substantial public benefits."

~~"[s]ubtidal restoration projects should be designed to: (a) promote an abundance and diversity of fish, other aquatic organisms and wildlife; (b) restore rare subtidal areas; (c) establish linkages between deep and shallow water and tidal and subtidal habitat in an effort to maximize habitat values for fish, other aquatic organisms and wildlife; or (d) expand water open areas in an effort to make the Bay larger…."(Policy No. 3). The Bay Plan policies on subtidal habitats also state that subtidal restoration projects should be monitored for the same components that are required in the tidal marsh and tidal flats policy described above.~~

The Bay Plan policies on Fish, Other Aquatic Organisms and Wildlife state that, "To 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." To accomplish this, the Bay Plan policies state: "The 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."

Regarding endangered and threatened species, the Bay Plan policies direct "The Commission should: [c]onsult with the California Department of Fish and Game and the U.S. Fish and Wildlife Service or the National Marine Fisheries Service whenever a proposed project may adversely affect an endangered or threatened…species." Further the policies direct the Commission to "[n]ot authorize projects that would result in the "taking" of any…species listed as endangered or threatened pursuant to the state or

federal endangered species acts, or the federal Marine Mammal Protection Act… unless the project applicant has obtained the appropriate "take" authorization…". Finally, the policies direct the Commission to "[g]ive appropriate consideration to the recommendations of the California Department of Fish and Game, the National Marine Fisheries Service or the United States Fish and Wildlife Service in order to avoid possible adverse effects of a proposed project on fish, other aquatic organisms and wildlife habitat."(Material Amendment No. Three)

Before being diked for agriculture, Cullinan Ranch was a tidal marsh. The site is currently a mix of freshwater and seasonal wetlands, upland, ruderal habitat, emergent marsh, open water and remnant tidal marsh.

The authorization of the original project was found consistent with the Commission's Fish, Other Aquatic Organisms and Wildlife policies, in part based on ~~a~~n Intra-Service Section 7 consultation that concluded that the original project would not adversely impact the California clapper rail, soft bird's beak, and salt marsh harvest mouse habitats in the area. To avoid any potential impact in California salt marsh harvest mouse habitats, construction work was to be scheduled to avoid extreme high tides, and would not commence until a Wildlife Refuge biologist re-surveyed the area for any mouse habitat. The construction path was to be constantly monitored, and if necessary, halted to ensure safe passage of critical habitat species should they enter the construction area (Amendment No. Three).

The consistency determination requested for Material Amendment No. One states that "seasonal wetlands characterized by cattails and other wetland plants now occur through approximately 1/3 of the site" and "upland non-native grasses occur over most of the remainder of the site." The USFWS has concluded that there is currently little wildlife use and habitat value throughout much of the site. The project will restore the site to tidal marsh, tidal channels, transitional habitat, and upland habitat. The consistency determination states that "the purpose and need of the project is to fulfill the federal mandate to protect and create habitat for endangered and threatened salt marsh-dependent species. The property was purchased under the authority of the federal Endangered Species Act (ESA) by the USFWS with the intent that it would be restored to support tidally influenced habitats. In addition, the site would provide migratory bird habitat for several decades as the site accretes to marsh plain elevation." It will likely take up to 60 years to develop into a fully vegetated tidal marsh. Much of it will remain open water and mudflat habitat for decades, providing valuable habitat for diving ducks and shorebirds. The USFWS's consistency determination states that "in order to expedite the establishment of tidal marsh, the northern levee would be lowered, interior levee slopes would be flattened, and selected areas within the site raised with imported sediments and/or on-site soil." The USFWS further states that the "[material] would be placed to…create a minimum 30-acre area along Dutchman and South Sloughs and Guadalcanal Village that would be available for near-term establishment of mid to high marsh vegetation." Since 2010, the USFWS has undertaken a number of authorized activities to prepare the site for restoration, including earth moving, berm construction and the buttress levee to protect Highway 37. However, due to the shallow location of the authorized offloading site at Dutchman Slough and lack of offloading equipment, no dredged sediment has been delivered to the site and areas targeted for salt marsh habitat have remained far below sea level (Material Amendment No. Three).

~~The USFWS's consistency determination states, that "up to 50 acres of additional marsh habitat may be created adjacent to Guadalcanal Village if sufficient material and budget are available." The importation and placement of up to 405,000 cubic yards of dredged material at the site has been authorized to expedite the formation of high quality tidal marsh and provide an increased quantity of near term habitat for endangered species.~~

~~The beneficial reuse of dredged material at the site is consistent with the Commission's dredging policies and the goals of the Long Term Management Strategy (LTMS) for San Francisco Bay. Special Condition II-C has been included to ensure that any dredged material imported into the site meets the Regional Board's sediment testing criteria for beneficial reuse and is kept wet until the site is breached to tidal action to minimize potential water quality impacts (Material Amendment No. One).~~

The USFWS has completed a Section 7 consultation with the USFWS Endangered Species Branch ~~(ESB)~~. The Endangered Species Branch ~~ESB~~ issued a biological opinion (BO) on May 7, 2010 that found the project would not be likely to adversely affect the endangered salt marsh harvest mouse (*Reithrodontomys raviventris*) (harvest mouse) or the endangered California clapper rail (*Rallus longirostris obsoletus*) (clapper rail). The BO also found that the project would be unlikely to adversely affect the threatened delta smelt (*Hypomesus transpacificus*) as long as specific conservation and mitigation measures were met, such as limiting construction to the work window of August 31 to January 31, diluting any waters containing low dissolved oxygen concentrations prior to breaching, and implementing other best management practices. Further, the BO anticipates the project would benefit delta smelt by flushing nutrients and food into the Napa River once the site is breached. In the event that the project would result in temporary impacts to the harvest mouse or clapper rail, the USFWS has issued an Incidental Take Statement for these two species. Conservation measures recommended by the USFWS ESB and identified in the Environmental Impact Statement / Environmental Impact Report (EIS / EIR) will be incorporated into pre-construction and construction activities associated with the project in order to minimize any impacts. Special Condition II-F has been included to ensure that construction activities are performed in such a manner as to minimize impacts to wildlife within the site.

On April 5, 2010, NOAA National Marine Fisheries Service (NMFS) issued a ~~biological opinion (~~BO~~)~~ that found that the proposed action was not likely to adversely affect threatened steelhead, endangered winter run Chinook salmon, threatened spring run Chinook salmon, or threatened green sturgeon. The BO incorporated an Essential Fish Habitat (EFH) consultation, which found ~~did find~~ that the project has the potential to result in impacts to the resource ~~to Essential Fish Habitat (EFH),~~ however, NFMS states that the conservation and mitigation measures proposed by the USFWS should be adequate to offset any adverse impacts and ultimately the project would result in an increase in quantity and quality of EFH within the project area.

The construction and use of an offloading facility may have additional impacts to subtidal habitats and listed species, including shading, entrainment, impingement, sound waves due to pile driving and smothering. To examine these potential impacts, the State Lands Commission completed an addendum to the CDFW CEQA document prior to issuing their lease for the offloading facility. In addition, the USFWS issued a Statement of Environmental Action, with both documents determining that with the minimization measures included in this consistency determination, the potential impacts of construction and use of the offloading facility were less than significant (Material Amendment No. Three).

The floating offloading facility will shade the subtidal habitat below and adjacent to the platform and scows. Shade cast from over-water structures has been shown to reduce the amount of ambient light within the environment beneath the structure and can affect marine algae, aquatic vegetation, invertebrate and vertebrate community composition, reduce fish prey forage, and alter fish species composition and predator-prey relationships over normal open-water conditions (Nightingale and Simenstad 2001). However, there is no aquatic vegetation or marine algae in this location and the area of shade that would result from the proposed project is small, relative to the size of the

Napa River estuary with sufficient similar habitat adjacent to the site to provide necessary resources for fish and invertebrates in this area. Given the large amount of similar adjacent habitat, impacts from shading on fish and invertebrates would be considered minimal (Material Amendment No. Three).

Sediment offloaded from scows would be slurried and pumped to Cullinan Ranch using water from the Napa River. Pumping of fine grain dredged sediment requires a mixture of approximately 80% water to 20% sediment. Drawing water has the potential to entrain or impinge aquatic organisms, including fish and invertebrates. Entrainment and impingement of marine organisms would be minimized through the use of a fish screen on the water intake pipeline that would comply with NOAA Fisheries, USFWS and CDFW guidelines to protect listed species, including salmonids, longfin and Delta smelt. Special Condition II-C(1)c includes a requirement to use appropriately sized fish screens to avoid or minimize entrainment and impingement of marine species (Material Amendment No. Three).

In-water pile driving activities have the potential to create underwater sound waves that can harm or kill marine organisms, including marine mammals, fish and invertebrates. To minimize the effects of sound waves from pile driving, the USFWS would conduct in water pile driving activities during the in-water construction period of August 1st through November 30th, when sensitive species are not present. If construction activities must occur during periods when sensitive species could be present, the USWFS would consult with NOAA Fisheries and CDFW to determine what, if any, additional mitigation measures may be required as required in Special Condition II-C(1)b (Material Amendment No. Three).

There is potential for smothering of benthic organisms in the area of the pile driving and the placement of the sediment conveyance pipeline. In driving the piles, any non-mobile organisms, primarily clams, worms and other invertebrates, will likely be killed by the pile driving activity in the precise location where the piles are driven, as well as the precise areas affected by the offloader spuds. In addition, there is potential for non-mobile organisms to be smothered by the pipeline in Dutchman Slough if the pipeline is laid on the bottom or moves up and down with the tides. It is likely these relatively small areas would likely recover quickly once the offloader, piles and pipeline is removed in two years (Material Amendment No. Three).

Special-status fish, listed at both the state and federal level, such as anadromous salmonids, Delta smelt, longfin smelt, and green sturgeon, have the potential to occur in the Napa River and Dutchman Slough, including the location of the offloader and pipeline. With the exception of longfin smelt and green sturgeon, these special status fish species are unlikely to be present in the lower Napa River outside of migration periods. Although there are no haul-outs for harbor seals (*Phoca vitulina*) or California sea lions (*Zalophus californianus*) on the Napa River, these species may occasionally be present in the lower Napa River during foraging forays (Material Amendment No. Three).

While the USFWS has completed a Section 7 consultation with the USFWS Endangered Species Branch and NMFS the offloader was not fully considered in the respective biological opinions. However, since the issuance of the biological opinions, the USFWS has been in conversation with the resource agencies, and each agency has provided advice on the screening of the offloader water intake pipline to avoid take of listed species. USFWS staff further stated in an email communication to the project manager on March 13, 2012, that the offloading facility would not significantly affect Delta Smelt if a 50 gpm pump and a fish screen appropriate for Delta smelt was used on the intake pipe. CDFW has provided guidance on screening for longfin smelt in flowing water locations such as the Napa River, and NMFS has stated that impacts to salmonids

should be avoided by conducting in water work during the period in which salmonids would not be migrating through the area and the provision to use a fish screen consistent with NOAA Fisheries guidelines. This advice is reflected in Special Condition II-C(1)c (Material Amendment No. Three).

Minimizing Impacts. In order to minimize impacts to endangered or special status species, the USFWS has incorporated the following construction techniques: ~~(1) the Army Corps of Engineers is currently in informal consultation with NOAA Fisheries and, at its recommendation, has included~~ fish exclusion screens on the water intake area of the offloader. This would reduce the amount of fish and larger invertebrates that would otherwise be entrained in the intake pipes; (2) the USFWS would drive the necessary piles for the project during the period of year when endangered or special status species would not be present in San Pablo Bay. In the event that the project required driving piles during periods when endangered species are present, sound attenuation techniques such as a vibratory hammer, hammer dampening, bubble curtains or other measures would be taken to minimize the impacts due to pile driving.

To ensure the successful restoration of tidal and upland habitat within Cullinan Ranch, the USFWS has prepared a draft monitoring and adaptive management plan for the restoration project that includes both biotic and abiotic parameters, performance standards, habitat targets, protocols, and sampling frequencies for the site. This plan also identifies potential adaptive management triggers. Because Cullinan Ranch is located adjacent to the CDFW~~G~~'s Napa Sonoma Marshes and is a similar tidal restoration project, the Cullinan Ranch monitoring plan is derived from the monitoring program that was prepared for the Napa Sonoma Marshes. Minor changes have been made for the Cullinan Ranch plan as appropriate. In addition, the USFWS has reviewed and incorporated adaptive elements of the South Bay Salt Pond monitoring plan where feasible.

Monitoring will continue for 15 years following the completion of the breaching and include data collection on water quality (temperature, turbidity, ~~DO (~~dissolved oxygen~~)~~, pH, and salinity), methyl mercury, wildlife surveys (birds, fish, small mammals), native vegetation percent cover and colonization success, control of invasive species, tidal channel development, and sedimentation rates. Biennial monitoring reports will be generated and submitted to the Commission staff. Further, adaptive management triggers have been established by the USFWS if restoration goals are not being met at the site and corrective measures will be evaluated as part of each biennial monitoring report. Special Condition II-D has been included to ensure that the USFWS's proposed monitoring and adaptive management program is implemented and monitoring reports are submitted to the Commission.

For all these reasons, the Commission finds that the proposed by Material Amendment No. Three~~One~~, as conditioned herein, is consistent with its policies regarding Fish, Other Aquatic Organisms, and Wildlife, Tidal Marshes and Tidal Flats, and Subtidal Areas.

D~~C~~.**Water Quality Policies.** The Bay Plan policies on water quality state 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 Board's Basin

Plan 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" (Policy No. Two~~2~~).

The San Francisco Bay Regional Water Quality Control Board (Regional Board) has prepared an ~~draft Tentative~~ Order for the Cullinan Ranch project. ~~BCDC has reviewed the draft Tentative Order and had communications with Regional Board staff regarding the project.~~ The ~~Tentative~~ Order found that "potential water quality impacts, their applicable proposed mitigation measures, and whether the impact duration is ongoing or only during the construction phase were found to be insignificant with the exceptions of dissolved oxygen (DO) and pH which could be adversely impacted by the project." The ~~Tentative~~ Order contains special conditions (described below) which require the USFWS to address the topics of low dissolved oxygen ~~DO~~ and pH as well as other water quality parameters in order to ensure that water quality impacts are avoided or minimized.

1. **Dissolved Oxygen / pH**. The USFWS states that "the project has the potential for short-term construction related impacts to water quality. These include the potential for low dissolved oxygen (DO) and methyl-mercury." Before breaching the South and Dutchman Slough levees, the USFWS will slowly pre-flood the site using water from CDFG Pond 1 delivered through the new water control structures. The goal will be to pre-flood the site between October 1 and December 31, not more than one month prior to breaching, to a minimum water depth of 12 inches. The water delivered from Pond 1 will likely be brackish, and the combined depth of water and slight brackish character should begin to kill the existing vegetation within the site. The decaying vegetation may deplete dissolved oxygen ~~(DO)~~ in the standing water, and may also lower pH (make it more acidic) relative to the incoming water pH levels. The degree of dissolved oxygen ~~DO~~ depletion will depend on a number of factors including: rates of precipitation and vegetation decay, daily temperatures, amount of wind-induced mixing of the standing water, and time the standing water remains on the site. To avoid potential impacts from reduced dissolved oxygen ~~DO~~ and pH in the water, the levees will be breached on an incoming rising tide. This will allow the standing water from early flooding to mix with water from the sloughs prior to discharge back into the sloughs on the ebb tide. The Regional Board's ~~draft Tentative~~ Order states that "the DO concentrations in the site, once the incoming water has mixed with the water from the sloughs, would still be well above the minimum threshold of 5.0 mg/L that has been the standard for recent permits in this area. The potential impact of the discharge from the site would be further reduced because the initial discharge (i.e., from the first breach) would be relatively small and the breaches would widen over time." The USFWS further comments that "breaching would occur before January 30 when salmonids are expected to migrate through the area, as directed through consultation with the NOAA National Marine Fisheries Service…" and that "as the site continues to accumulate sediment and the tidal prism increases, the water quality conditions will improve..." In addition to the above measures, the USFWS will monitor DO concentrations within the site over the course of the 15-year monitoring period and employ different management measures if concentrations exceed target thresholds. Special Conditions II-D and II-F have been included to ensure that appropriate management measures are implemented to both monitor and minimize dissolved oxygen concentrations within the site.

2. **Mercury.** Mercury occurs naturally in the San Francisco Bay environment and has been introduced in various chemical forms from a variety of anthropogenic sources. Restoring tidal marshes around the Bay can sometimes increase the potential for the methylmercury (MeHg) production, ~~the form of mercury that occurs in Bay sediments~~ and can adversely impact fish and wildlife. In addition, the ~~re~~mobilization 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 Bay. In 2006, the Regional Board approved a total maximum daily load (TMDL) plan for mercury in San Francisco Bay specifying 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 releasing 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 Regional Board's ~~draft Tentative~~ Order states that "breaching levees at the Cullinan Ranch Site could contribute methyl-mercury (MeHg) to the environment, even though the site does not have high levels of existing total mercury." The ~~draft Tentative~~ Order further states, however, that is unlikely that MeHg will be an issue at Cullinan Ranch given that "mercury levels in the Napa River are below those considered impaired by the US EPA, the site is likely to be flooded once initially and remain under water for many years and sites remaining under water for a relatively long time may have low methyl-mercury levels, and preliminary results from a US ACOE [U.S. Army Corps of Engineers] study of mercury in the nearby Hamilton Restoration project also found levels to be lower in permanently flooded areas." In order to address the potential increased MeHg concentrations within the site, the UFSWS will monitor mercury and methyl-mercury concentrations in sediment, water, and/or methyl-mercury bioaccumulation in appropriate biosentinel species (e.g., water birds, fish, resident marsh birds, or brine flies) and report their findings in the biennial monitoring reports. Special Condition II-D has been included to ensure that appropriate management measures are implemented to monitor and minimize methyl mercury concentrations within the site. MeHg monitoring activities at Cullinan Ranch will be adaptively managed over time and possibly modified or combined with other MeHg monitoring efforts, depending on early monitoring results and the recommendations of the Regional Board and the Technical Advisory Committee (TAC) for the project. In addition, Special Condition II-C has been included to ensure that any dredged material imported into the site meets the Regional Board's sediment testing criteria for beneficial reuse and is kept wet until the site is breached to tidal action to minimize potential water quality impacts (Material Amendment No. Three).

   The USFWS will also prepare a Storm Water Pollution Prevent Plan (SWPPP) prior to construction. The SWPPP will outline Best Management Practices for construction activities and procedural control measures, such as sediment control, soil and material storage locations, equipment fueling, and responding to and managing accidental spills, consistent with this consistency determination in order to prevent to the maximum extent practicable the release of pollutants.

   Regarding the offloading facility and associated dredged sediment conveyance pipeline, the staff at the Regional Board has stated the existing Order includes the construction of the offloading facility and the requirement to provide final plans and specifications would allow adequate oversight of the project from the Board's perspective (Material Amendment No. Three).

For these reasons, the Commission finds that the project proposed by Material Amendment No. One, as conditioned herein, is consistent with its policies on water quality.

E~~D~~. **Dredging Policies.** The Commission's Dredging Policies state, in part, that ""Dredged materials should, if feasible, be reused or disposed outside the Bay and certain waterways..." In addition, they state "To ensure adequate capacity for necessary Bay dredging projects and to protect Bay natural resources, acceptable non-tidal disposal sites should be secured...Further, dredging projects should maximize use of dredged material as a resource consistent with protecting and enhancing Bay natural resources, such as creating, enhancing, or restoring tidal and managed wetlands, creating and maintaining levees and dikes, providing cover and sealing material for sanitary landfills, and filling at approved construction sites." Finally, that "[i]nterested agencies and parties are encouraged to explore and find funding solutions for the additional costs incurred by transporting dredged materials to non-tidal and ocean disposal sites, either by general funds contributed by ports and other relevant parties, dredging applicants or otherwise." (Material Amendment No. Three).

The USFWS's consistency determination states, that "up to 50 acres of additional marsh habitat may be created adjacent to Guadalcanal Village if sufficient material and budget are available." The importation and placement of up to 405,000 cubic yards of dredged material at the site has been authorized to expedite the formation of high quality tidal marsh and provide an increased quantity of near-term habitat for endangered species. The beneficial reuse of dredged material at the site is consistent with the Commission's dredging policies and the goals of the Long Term Management Strategy for the Placement of Dredged Sediment in the Bay Region (LTMS). However, since initiating construction at the restoration site, no dredged sediment has become available due to shallowness of Dutchman Slough and the lack of offloading equipment. Therefore, the USFWS has reconsidered the options for acquiring dredged sediments to raise elevations on the site and provided initial plans for a larger offloading facility on the Napa River that has both the deep water necessary for larger dredged scows, and easier access. This action provides additional capacity and further facilitates the ability for the dredging community to provide sediment to be beneficially reused on the site, furthering the goal of maximizing dredged sediment as a resource. In addition, use of the dredged sediment will provide insurance against impacts from sea level rise on part of the site (Material Amendment No. Three).

For these reasons, the Commission finds that the project proposed by Material Amendment No. Three, as conditioned herein, is consistent with its policies on dredging.

F~~D~~. **Priority Use Designation**. The project will be located in a Wildlife Refuge priority use area on *San Francisco Bay Plan* (Bay Plan) Map No. 2. The project is designed to restore approximately 1,549 acres of tidal marsh and 26 acres of associated transitional and upland habitat to improve habitat for special status and other sensitive marsh species. The project is located within the San Pablo Bay National Wildlife Refuge and actively managed by the U.S. Fish and Wildlife Service. The Commission finds that the project proposed by Amendment No. One, as conditioned herein, is consistent with the priority use designation for the site (Material Amendment No. One).

G~~E~~. **Sea Level Rise.** There is ~~some~~ evidence that there is a decrease in sediment supply to ~~potential sediment debt in~~ the Bay. Current sea level rise projections predict that water levels in the Bay may increase 16 inches by 2050 and 55 inches by 2100. With sea level rising and available sediment decreasing, during the EIS/EIR Public Comment period the question was raised as to whether sedimentation within the Cullinan Ranch site, once breached, would be able to keep pace with sea level rise. Current predictions of sea level rise and sediment budgets are highly varied and there is no agreement about the actual levels of sea rise and sediment accretions within the time period covered by the

scope of this project. The Final EIS/EIR states that "since accurate sediment rates and vertical land motion are unknown for the site, we cannot assess the estimated rate of sea level rise for the project area." The Final EIS/EIR also states, that "a CALFED Independent Science Board indicates that most models use 0.2 to 0.5 inches per year or 20 to 55 inches per century." The EIR further states that "immediate restoration of tidal flow, coupled with the predicted moderate rate of sea level rise would give the site the greatest opportunity to accrete to a level where it can keep pace with accelerating sea level rise…" The USFWS further states that monitoring data from the restoration of CDFW's ~~CDFG's~~ Pond 3 site, which was breached in the early 2000's, found that approximately 1.9 feet of sediment accumulated over five years, higher than expected by the project proponents. In addition, the USFWS expects that much of the site will remain open water for decades. If sedimentation does occur at a slower rate and the site is not able to convert entirely to tidal marsh, the project will still be providing significant benefits in the form of open water habitat for benthic invertebrates, fish, and birds.

The Commission finds that the project proposed by Material Amendment No. One, as conditioned herein, is consistent with its policies on safety of fills and sea level rise.

H~~F~~. **Consistency Determination History.** On June 2, 2004, the United States Department of the Interior, U.S. Fish and Wildlife Service submitted a description of the original project, the raising and building of boardwalks for access to transmission towers on the former Cullinan Ranch site in anticipation of its future restoration to tidal action, and requested that the Commission concur that the proposed project was consistent with its Amended Coastal Zone Management Program for San Francisco Bay. Based on the information contained in those materials, the original project was found to be consistent with the provisions of the McAteer-Petris Act and the policies of the San Francisco Bay Plan in that: (1) the project involved construction, maintenance and use of 3,340 square feet of boardwalk within an area designated in the Bay Plan as a Wildlife Refuge that was currently managed as a managed wetland but is proposed to become a tidal salt marsh in order to provide access to PG&E transmission towers, once the area is returned to tidal action. The project, therefore, involved a similar activity as defined in Regulation Section 10601(e)(3) to the placement of small amounts of inert inorganic fill in the shoreline band that will not adversely impact present or possible future public access, on present or possible future use for a designated priority water-related use, and on the environment, as defined in Regulation Section 10601(b)(1), and thus are equivalent to a "minor repair and improvement", and (2) the project would not provide any new public access and would not place any new fill in the Bay.

~~An Intra-Service Section 7 consultation concluded that the original project would not adversely impact the California clapper rail, soft bird's beak, and salt marsh harvest mouse habitats in the area. To avoid any potential impact in California salt marsh harvest mouse habitats, construction work was to be scheduled to avoid extreme high tides and would not commence until a Wildlife Refuge biologist re-surveys the area for any mouse habitat. The construction path was to be constantly monitored, and if necessary, halted to ensure safe passage of critical habitat species should they enter the construction area.~~

On March 3, 2010, the USFWS submitted a request for Material Amendment No. One to this consistency determination to restore tidal action to the 1,575-acre Cullinan Ranch. The Commission provided a conditional letter of agreement for the project after a public hearing and vote on September 10, 2010. ~~The USFWS has completed a Section 7 consultation with the USFWS Endangered Species Branch (ESB). The ESB issued a biological opinion on May 7, 2010 that found the project proposed by Material Amendment No. One would not be likely to adversely affect the endangered salt marsh harvest mouse (*Reithrodontomys raviventris*) (harvest mouse) or the endangered~~

~~California clapper rail (*Rallus longirostris obsoletus*) (clapper rail). The biological opinion BO also found that the project would be unlikely to adversely affect the threatened Delta smelt (*Hypomesus transpacificus*) as long as specific conservation and mitigation measures were implemented and that the project would likely benefit delta smelt by flushing nutrients and food into the Napa River once the site is breached. On April 5, 2010, NOAA National Marine Fisheries Service (NMFS) issued a biological opinion (BO) that found that the proposed action was not likely to adversely affect threatened steelhead, endangered winter run Chinook salmon, threatened spring run Chinook salmon, or threatened green sturgeon. The BO found that the project does have the potential to result in impacts to Essential Fish Habitat (EFH), however, NFMS states that the conservation and mitigation measures proposed by the USFWS should be adequate to offset any adverse impacts and ultimately the project would result in an increase in quantity and quality of EFH within the project area.~~

Amendment No. Two requested amendment to this consistency determination to transfer the Guadalcanal Canal property from Caltrans to USFWS. However, the property documents have not been provided and therefore the application for Amendment No. Two remains incomplete (Material Amendment No. Three).

I~~G~~.**Environmental Review.** The original project was found to be categorically exempt from the requirement to prepare an environmental impact report, pursuant to Regulation Section 11501, because the project was found to be equivalent to a "minor repair or improvement," as defined in Regulation Sections 10601(b)(1) and 10601(a)(6), in that the project involved the placement of small amounts of inert, inorganic material that will not have a significant effect on the present or future maximum feasible public access to the Bay or Bay resources. For the project that is the subject of Material Amendment No. One, the CDFW ~~California Department of Fish and Game (CDFG)~~ and the ~~U.S. Fish and Wildlife Service (~~USFWS~~)~~, acting as joint lead environmental agencies, issued a Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) in April 2008 and certified the document in May 2010 as required under the California Environmental Quality Act (CEQA) and the National Environmental Protection Act (NEPA). For the project that is the subject of Material Amendment No. Three, the State Lands Commission completed an Addendum to the CDFW CEQA document analyzing the impacts of the offloading facility and associated pipeline and the USFWS issued a Statement of Environmental Action under NEPA. Both documents found the impacts of the offloading facility as conditioned here in, less than significant.

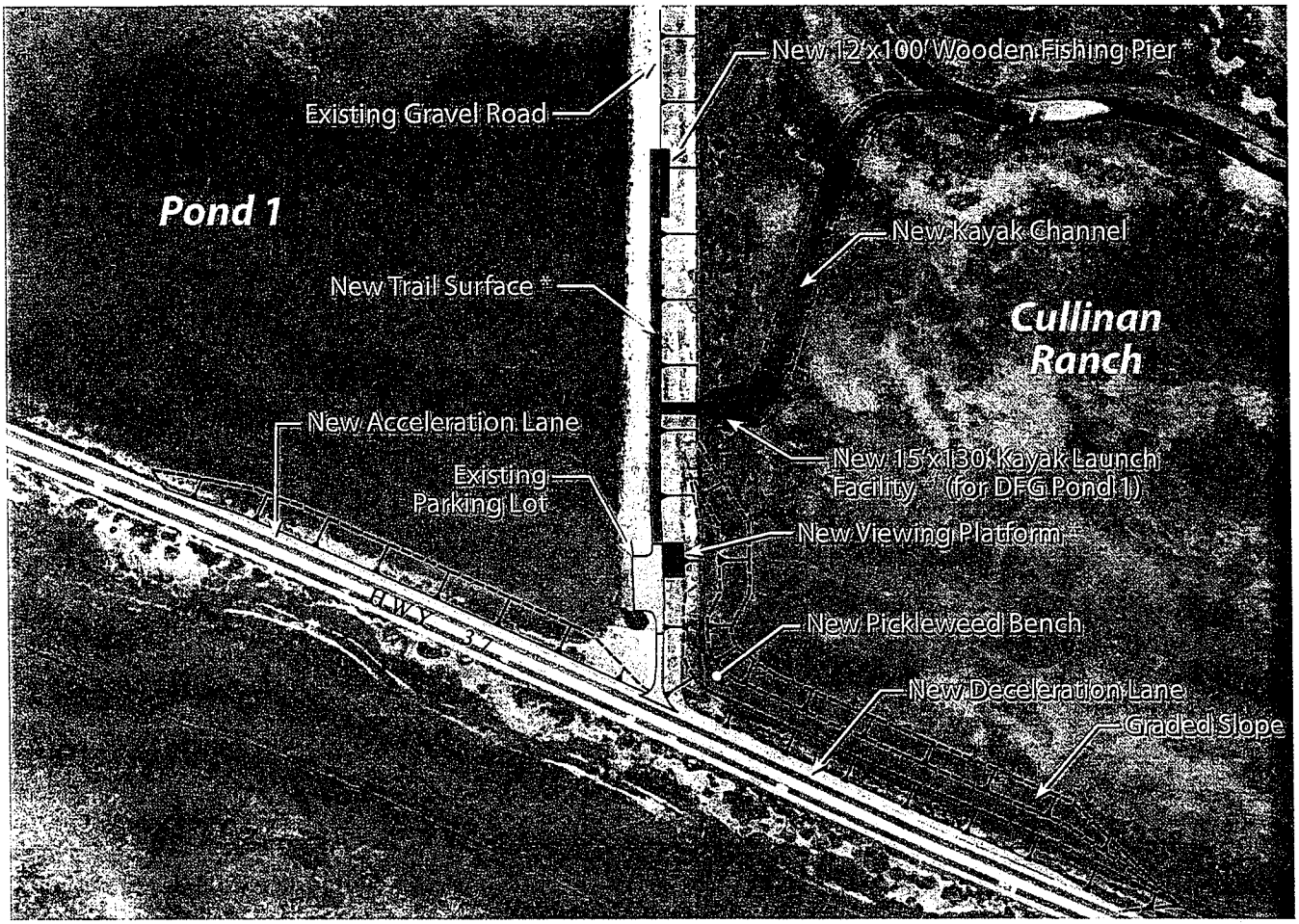
J~~H~~. **Coastal Zone Management Act.** The Commission, pursuant to the Coastal Zone Management Act of 1972, as amended (16 USC Section 1451), and the implementing Federal Regulations in 15 CFR Part 930, is required to review Federal projects within San Francisco Bay and agree, conditionally agree, or disagree with the Federal agency's determination that the project is consistent with the Commission's Amended Coastal Zone Management Program for San Francisco Bay. This amended letter constitutes such review and comment.

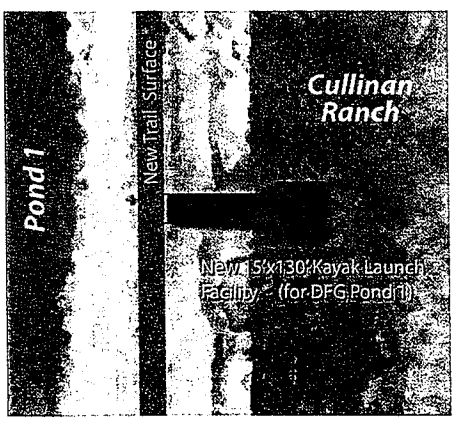
K~~I~~. **Commission Meetings.** The original project was listed with the Commission on July 14, 2004, at which time no Commissioner or other party objected to the project. A public hearing and vote for the project that is the subject of Material Amendment No. One was ~~will be~~ held on September 2, 2010, at the Commission meeting in San Francisco, in which it was approved. A public hearing and vote for the project that is the subject of Material Amendment No. Three was held on November 7, 2013, at the Commission meeting at the San Francisco Ferry Building.

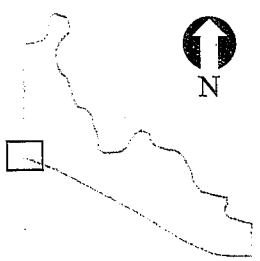
* Complies with Americans with Disabilities Act Accessibility Guidelines or Architectural Barriers Act Accessibility Standards, as applicable.

Cullinan Ranch Restoration Project

US-CA-119-10



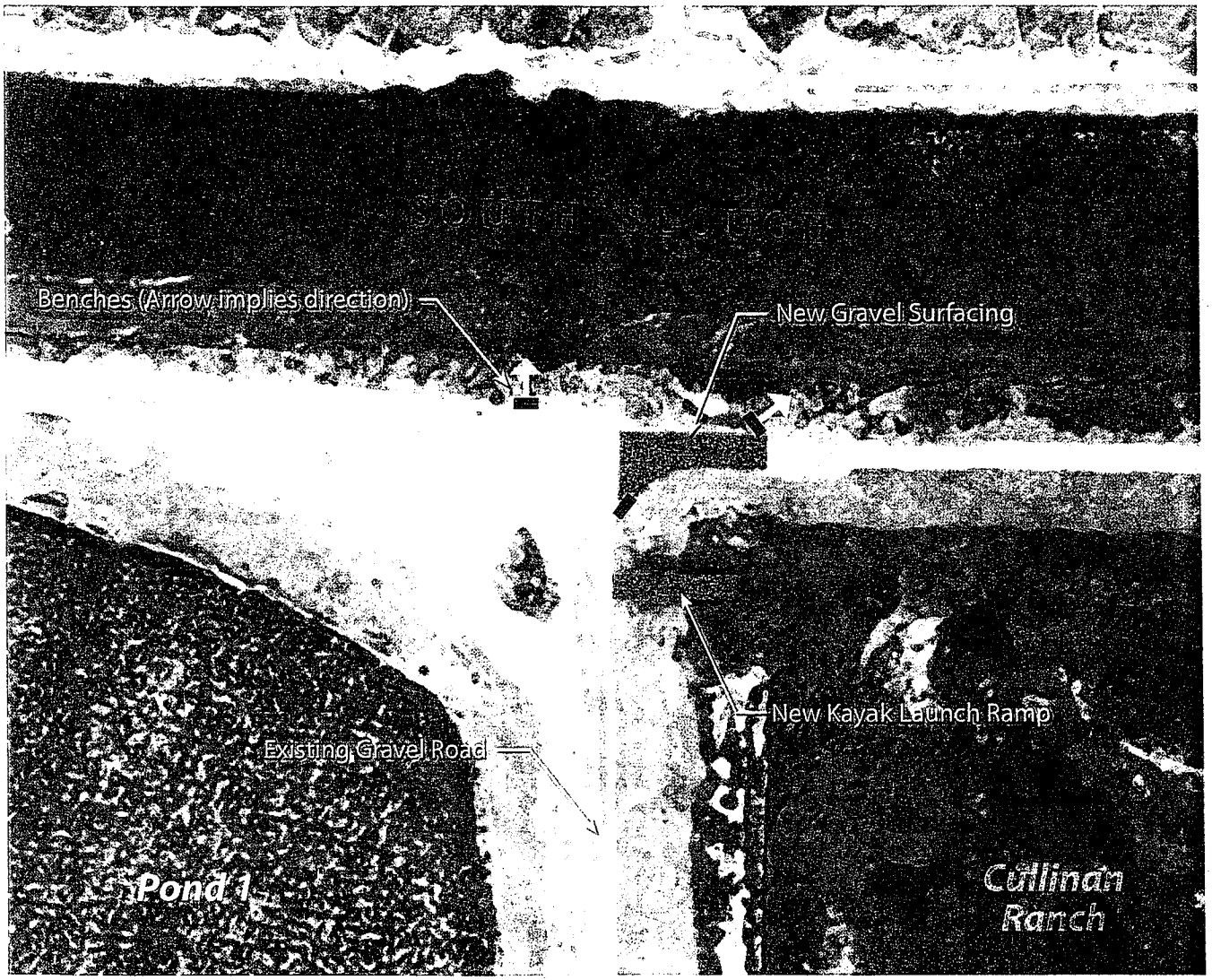


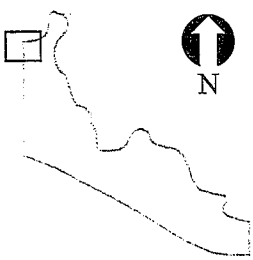


DUCKS UNLIMITED

Pond 1 Levee Entrance Detail

EXHIBIT A – 1





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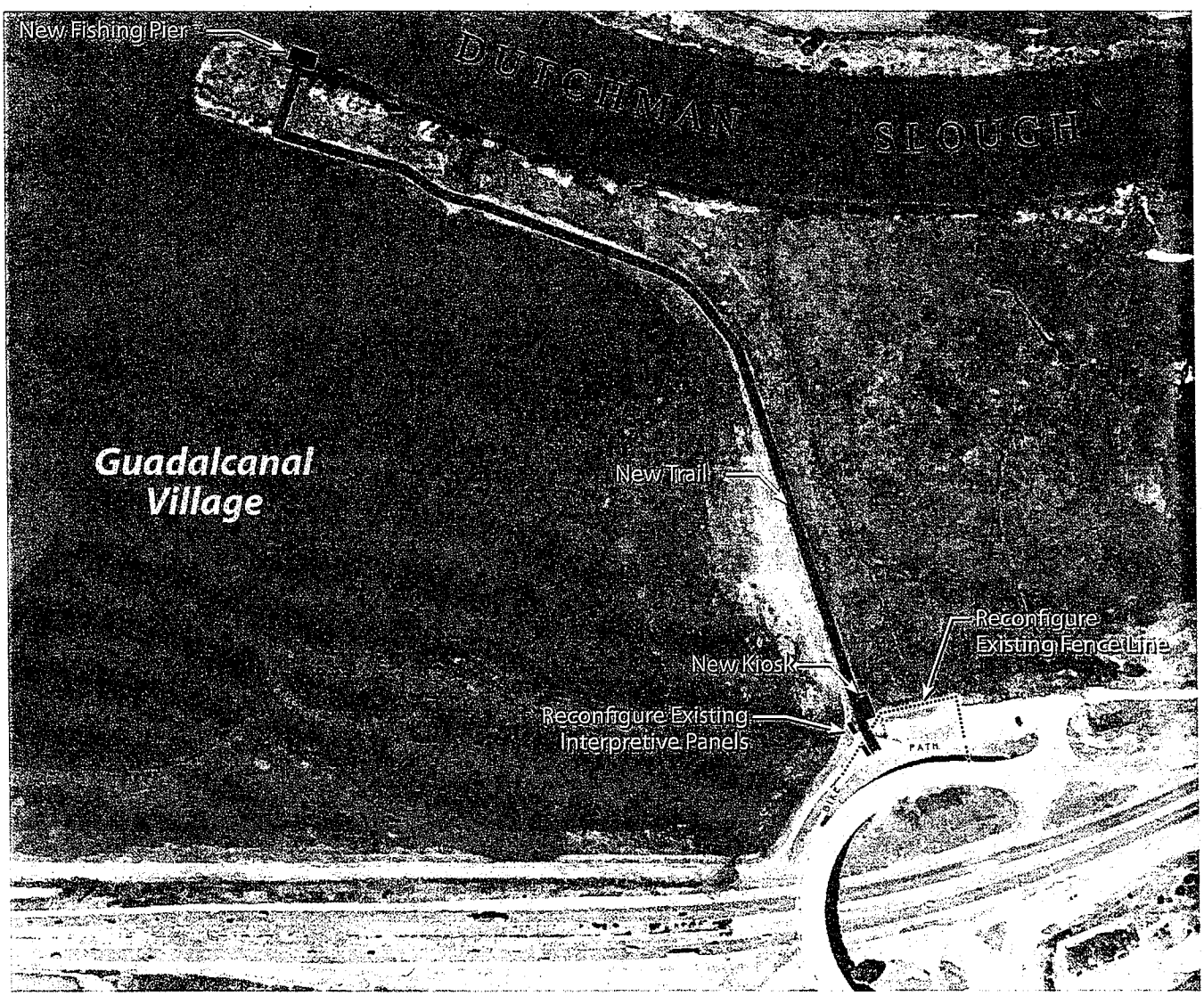
Pond 1 Levee Terminus Detail

EXHIBIT A – 2

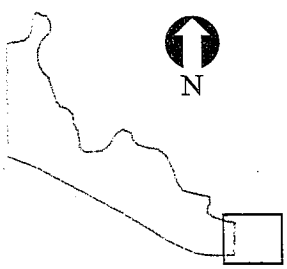
* Complies with Americans with Disabilities Act Accessibility Guidelines or Architectural Barriers Act Accessibility Standards, as applicable.

Cullinan Ranch Restoration Project

US-CA-119-10



NOTE: Improvements to Guadalcanal Village public access infrastructure will be constructed once U. S. Fish and Wildlife Service has successfully transferred Guadalcanal Village from the California Department of Transportation and as permits and funding allows. Alternatively, U.S. Fish and Wildlife Service will provide a similar level of access on a future North Bay project in addition to the access proposed for that project.



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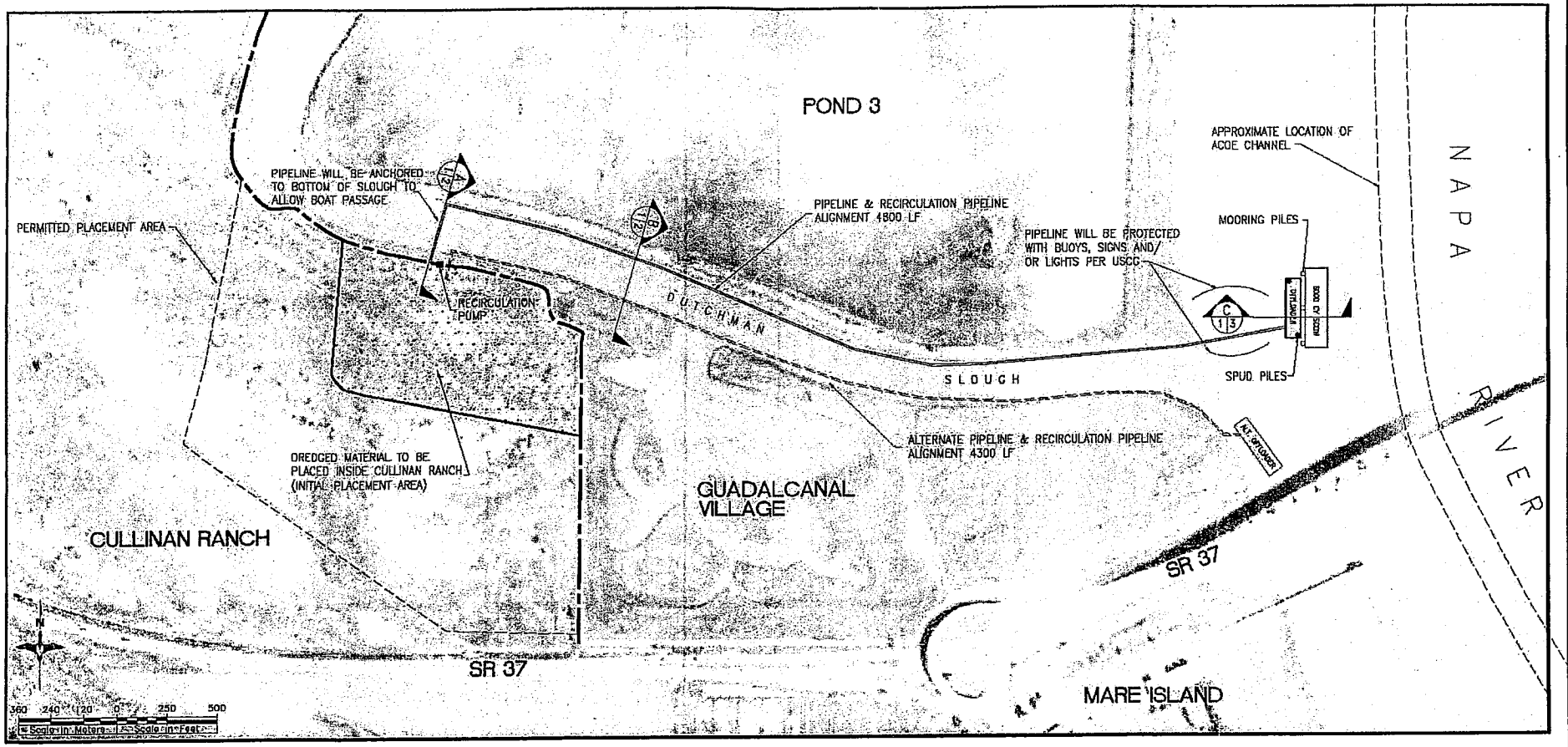
Guadalcanal Levee Detail

EXHIBIT A – 3



DUCKS UNLIMITED INC.
WESTERN REGIONAL OFFICE

CULLINAN RANCH RESTORATION
DREDGE OFFLOADING FACILITY
EXHIBIT 1 OF 3

EXHIBIT B

NOTE: SURVEY ELEVATIONS ARE IN NAVD 88

EXHIBIT B