

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

Tentative Order

Waste Discharge Requirements and Water Quality Certification for:

Sonoma Land Trust

Sears Point Wetland Restoration Project, Sonoma County

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

- 1. Site Location.** The Sears Point Wetland Restoration Project includes 1,944 acres in southern Sonoma County, just north of San Pablo Bay between the mouth of the Petaluma River to the west and Tolay Creek to the east (Figure 1). Historically agriculture was the predominant land use south of Highway 37, and grazing north of that highway. The EIS/R for this project covered a larger area -- 2,327 acres -- that included additional areas not covered by this Order. Figure 2 shows the Project area is bisected by the Sonoma Marin Area Rail Transit rail line into two parcels: (i) the 500 acre parcel is located north of the SMART rail line and south of Highway 37, and will be incorporated into the San Pablo Bay Natural Wildlife Refuge (Refuge); and (ii) the 960 acre parcel located south of the SMART rail line and is bounded on the east by Tolay Creek, on the south by San Pablo Bay, and on the west by an existing levee at Sonoma Baylands. The receiving waters for the site are Tolay Creek, San Pablo Bay, and the Petaluma River. The remaining 484 acres will probably retain the current use and are not part of the Project.
- 2. Permit Application.** On August 23, 2012 the Regional Water Board received a Report of Waste Discharge/401 Water Quality Certification application from the Sonoma Land Trust (SLT or the Discharger) to enhance seasonal ponds, wetlands and a riparian corridor on the 500 acre parcel and restore most of the 960 acre parcel to tidal marsh. SLT acquired the land in late 2004 and early 2005 and conducted restoration planning. In the future, the SLT intends to transfer the 500 acre parcel north of SMART rail line to the U.S. Fish and Wildlife Service (US FWS) and the 960 acre parcel south of the SMART rail line to the California Department of Fish and Wildlife (CDFW). The SLT will continue to own and manage any portion of the property not transferred to US FWS and CDFW.
- 3. Project Purpose.** The purpose of the Sears Point Wetland Restoration Project (The Project) is to restore natural estuarine tidal marsh on diked baylands; enhance or preserve non-tidal seasonal wetlands and existing agriculture; and provide public access, recreation and educational opportunities. Specifically the Project would:

- Restore approximately 940 acres of tidal marsh on the 960 acre parcel;
- Preserve and enhance 106 acres of seasonal ponds, wetland and riparian corridor while maintaining existing agriculture uses on the 500 acre parcel between the SMART rail line and Highway 37; and
- Provide public recreation access south and possibly north of Highway 37.

4. USFWS issued a Biological Opinion for the Project on January 10, 2013 (which was amended on February 12, 2013), and signed a Record of Decision (ROD) on July 25, 2012 based on the Final Environmental Impact Report (EIR), which the CDFW certified as a Lead Agency for the Project. CDFW signed a Notice of Determination (NOD) approving the Project on June 22, 2012. USFWS initiated consultation with National Marine Fisheries Service on December 4, 2012, which is still pending. CDFW and both federal agencies support the overall restoration to tidal marsh as a major benefit to biological species, along with the enhanced seasonal wetlands, increased recreational opportunities, and the preserved agricultural area. The permit application to the Regional Water Board states that 49.5 acres of wetlands will have fill placed within them (e.g., filling ditches and marsh mounds), 6.2 acres of wetlands or waters will be permanently filled, and 70.3 acres will be only temporarily disturbed, resulting in an overall gain in wetlands or waters of approximately 867 acres for the 1,944 acre site. Table 1 shows the existing habitats and land uses. Table 2a shows the existing and proposed habitats and land use changes, with the net changes, and Table 2b shows the net change in wetlands and waters.

5. **Existing Conditions and Projected Habitat Changes.** The site is predominantly undeveloped diked agricultural baylands with a mixture of tidal marsh, seasonal wetlands, streams, and upland habitats. Topography ranges from below sea level to about 100 feet above sea level.

6. Overall, as shown in Tables 2a & 2b, the habitat gains will be predominantly in tidal marsh and the Tolay Creek slough channel, and losses will occur primarily in agricultural lands and, to a lesser extent, in seasonal wetlands, ditches, developed areas, and vernal pools¹. Features of the Project site that will remain unchanged include land in San Pablo Bay, freshwater marsh, ephemeral stream, wildflower field, and non-native grassland.

7. **Benefits of Wetland Restoration.** The Project will make a large and valuable contribution to tidal wetland restoration and seasonal wetland preservation in the San Francisco Bay Estuary, which was recommended by the *Baylands Ecosystem Habitat Goals Report* (1999), the *Comprehensive Conservation and Management Plan* (1993; updated 2007), and the *San Francisco Bay Joint Venture Implementation Strategy*. These reports encourage the return of salt ponds and farmland to tidal marsh where feasible, while preserving adequate seasonal wetlands and ponds for birds. The Project will

¹ The 0.03 acres loss of vernal pools is justified by the very large gain in tidal marsh. .

provide valuable wetland habitat and recreational benefits, while preserving agricultural land where feasible.

8. The Project is a restoration project encouraged by many natural resource and environmental agencies and organizations in the San Francisco Bay Region, including the Regional Water Board. One of the Project's goals, to provide public access and recreation, will help educate the public, achieve regional public access (e.g., the Bay Trail), and build public support for future restoration projects.

9. **Related Restoration Projects in the North Bay.** The Project is surrounded by other wetland restoration projects including 9,450 acres at the Napa River Salt Marsh Restoration Project on the western shore of the Napa River; 1,460 acres at the Napa Plant Site on the eastern shore of the Napa River; 1,575 acres at Cullinan Ranch to the east of the Project, and 322 acres at Sonoma Baylands west of the Project (Figure 3)².

Project Description.

10. The complete project description with relevant figures is found in Attachment A, which is incorporated as part of this Order³. Table 3 shows the planned excavation of 1.6 million cubic yards (MCY) and fill of 1.3 MCY, resulting in an excess of about 0.3 MCY for sediment shrinkage, compaction, levee maintenance, and other site features. Figure 4 shows the planned project.

11. The Project is divided into two major components – tidal marsh restoration and seasonal wetlands preservation.

A. Construction activities for the tidal marsh include:

- i. Constructing a new levee with a design height of +12 feet North American vertical datum of 1988 south of and parallel to the SMART rail line to separate the nontidal and tidal habitats. The new levee has been designed to account for future sea level rise and would consist of a 13,000-foot long core levee, geotechnical stability berms on both sides of the core levee, and a gentle outboard slope to dissipate wave energy and provide habitat.
- ii. Remediating lead contaminated soil. Approximately 12,000 CY of lead contaminated surface soils are located on the eastern portion of the tidal restoration site at the Black Point Sports Club. Consistent with a Corrective Action Plan approved by the Regional Water Board

² Board Order and CIWQS numbers for these projects include: CDFW 401 Certification for Ponds 6-8 phase of the Napa River Salt Marsh Restoration Project (ciwqs #654284), Cullinan Ranch (Regional Water Board Order R2-2010-0108), CDFW's Napa River Salt Marsh Restoration (Order R2-2004-0063), Napa Plant Site Restoration (R2-2007-0045), and Sonoma Baylands (R2-1993-0081), in addition to Caltrans' Guadalcanal Village mitigation project to the east.

³ To see all the diagrams and figures, see the original application form received by the Regional Water Board on August 23, 2012.

- on August 28, 2009, the contaminated soil would be remediated prior to tidal marsh restoration.
- iii. Lowering about 6,850 feet of existing outboard perimeter levee along San Pablo Bay to create habitat for native plants and wildlife. An additional 19,200 feet of the levee along San Pablo Bay and Tolay Creek will be graded. Some of the soil will also be used for construction and to fill in the drainage ditches or be sidecast to create topographic complexity in the marsh.
 - iv. Excavating up to four levee breaches: Breach #1 would be located on the southernmost part of the tidal marsh area and would connect the area to San Pablo Bay through a connector channel excavated through the perimeter marsh and mudflats; Breach #2 would be located near the southwestern at the corner of Dickson Ranch and connect to Tolay Creek; Breaches #s 3 and 4 may occur at a later date, if necessary, and both would likely be on Tolay Creek.
 - v. Dredging a 2,100 foot connector channel between Breach 1 and San Pablo Bay using a clam shell or hydraulic dredge.
 - vi. Constructing about 29,500 linear feet of interior pilot channels to enhance water circulation. Pilot channels would have an irregular, sinuous planform layout that emulates the channel configuration of historic tidal sloughs. Ditch blocks may be placed in some agricultural ditches to prevent waters from flowing into them.
 - vii. Constructing topographic features such as marsh mounds, sidecast ridges and sidecast mounds, and gentle habitat levee edges to provide habitat diversity, dissipate wind and wave energy, and prevent erosion.
 - viii. Demolishing buildings and infrastructure.
 - ix. Relocating utility lines.
 - x. Removing and relocating stormwater pumps. Three stormwater pumps will be removed and replaced by two new pump stations on the north side of the rail line. The new pump stations would pump stormwater from lands between Highway 37 and the SMART rail line across the rail line embankment and the new flood control levee and into the tidal restoration area.
 - xi. Pre-vegetating the tidal marsh area prior to breaching to enhance surface roughness, increase sediment trapping, develop root mass to stabilize the existing soil surface and provide seed sources for tidal marsh vegetation.
 - xii. Adaptively managing mosquito abatement.

B. Construction activities for seasonal wetlands and wetland compatible agriculture include:

- i. Implementing agriculture modifications to enhance 106 acres of seasonal wetlands and riparian corridor to accommodate wildlife. The agricultural areas will be managed for crops and use techniques that enhance seasonal wetlands such as disking.

- ii. Enhancing freshwater habitat and modifying the stormwater conveyance system. Riparian woodland would be planted at the end of the existing Highway 37 culvert.
- iii. Constructing two 1.2 acre flood control detention basins at the pump stations to hold stormwater before it is pumped into the tidal marsh.
- iv. Building an access road and relocating utility lines.
- v. Building the bay trail system.

12. Project Schedule and Time Frame. All construction is expected to occur over a three-year period with a construction window between April and December, or as feasible based on weather. Construction activities would be implemented to ensure compliance with regulatory requirements.

Restored tidal marsh should have some native tidal marsh vegetation within five years after the levees are breached. The entire restored tidal marsh may take 20-30 years to develop to maturity, though unforeseen circumstances may cause delays.

The Project should restore 30 acres of native tidal marsh over the first three to five years after the levee breach and, approximately 910 additional acres over the next 20-30 years, totaling 940 acres of tidal marsh on the 960 acre parcel bordering San Pablo Bay and Tolay Creek.

13. Mitigation Incorporated into the Project Design as Conservation Measures. The USFWS ROD and Biological Opinion provide measures to minimize environmental harm and protect biological species and waters of the State potentially affected by the Project. These conservation measures are incorporated in this Order. The conservation measures most relevant to water quality are: educate construction crews about appropriate methods to protect water quality and species; implement water quality control measures during Project construction; implement a hazardous waste spill prevention and control plan; manage storm water management by preparing and following a storm water pollution prevention plan (SWPPP); use soil or sediment from the Project area, or comply with the Regional Water Board's wetland beneficial reuse for dredged sediment guidelines if dredged sediment is imported to the site; avoid or minimize the spread of noxious weeds; survey special status plants; prevent nonnative tidal vegetation from entering site; ensure tidal marsh habitat establishment within the first five years after restoration at a replacement ratio of three acres tidal marsh gained to each acre lost; avoid equipment in clapper rail habitat between February 1 to August 31; time levee lowering to avoid extreme high tides and to avoid loss of salt marsh harvest mice; develop and implement a methyl-mercury sampling and adaptive management plan; restrict construction in aquatic and upland habitats for red-legged frog to the dry season (April 1-November 1); avoid construction/dredging in tidal aquatic habitats when federally listed fish could be present; if hydraulic dredging occurs, follow measures to protect green sturgeon; and implement water quality control measures for project construction and dredging.

14. The Discharger shall look for ways to decrease pollutants such as oil, trash, fertilizers, pesticides, and other harmful substances in the runoff before it enters the restored tidal marsh from the upper watershed, which includes Highway 37 and the SMART rail line. Trash racks will be installed at the pump station intake and maintained to prevent trash and debris from entering the tidal marsh. The onsite agricultural ditches and the flood control detention basins shall be managed to optimize their natural functions to remove pollutants in the runoff.

15. **Sources of Sediment.** With the exception of the connector channel and pilot channel described in the Project Description (Attachment 1), no additional dredged sediment will be generated for this Project. Since excavated material onsite will be adequate for filling ditches and other project construction, importing dredged sediment is not expected. If excavated sediment from onsite is insufficient to complete the Project and importing dredged materials become necessary, the Discharger will be required to submit data characterizing the quality of all imported dredged materials (Bay sediments) proposed for use as fill before placement at the Project site in accordance with Specification B of this Order.

16. **Bay Mud.** The Regional Water Board has determined that if fine-grained dredged material (Bay Mud) dries out on the surface for long periods, the following adverse effects on wetland environments can occur: it can harden, making it a poor substrate for wetland biota; it can develop deep cracks that harbor mosquitoes and increase the chances of acidification; and it can cause metals, including mercury, to become soluble, thereby increasing their potential to leach out when the site is re-flooded. The Project will dredge material from the connector channel and the breaches and will attempt to keep the material wet until final placement. However, the final placement of the dredged material will be under seven feet of water for years after breaching, so long-term acidification should not be an issue, and monitoring will probably not be required.

17. **Detention Basins.** The primary purpose of the detention basins is to capture precipitation and other stormwater run-off that is discharged onto the site and to pump it into San Pablo Bay (as is currently done). The detention basins may also provide habitat that red-legged frogs can use, but the presence of this species is not a Project requirement.

18. The Discharger will perform routine maintenance of the detention basins as needed to maintain the capacity of the detention basins. The bed of the detention basins could support wigeongrass, which is widespread and abundant in existing ditches. Thus, they would have the potential to support numerous wildlife species, including California red-legged frogs as stated above. Prior to conducting routine maintenance, the Discharger will consult with the Regional Water Board, Corps of Engineers and other regulatory agencies.

19. **Monitoring.** Monitoring shall be undertaken in accord with the Discharger's Monitoring and Adaptive Management Plan (MAMP), which is included in Attachment C. A Self Monitoring Plan (SMP), which is included as Attachment D, contains

additional details for water quality monitoring, and summarizes some of the MAMP monitoring in the included table. Specifically, as shown in the MAMP, within the first five years, monitoring will document changes primarily in tidal channel evolution, plants, and habitat types. Water quality will be monitored during construction and immediately after the levees are breached and will likely be completed within the first few months after the levee breach. Birds will be monitored for three years and the endangered salt marsh harvest mouse will be monitored in years four and five, if suitable habitat exists (and as funding allows). Project monitoring will occur immediately before or after the first levee breach with the collection of pre-breach baseline data to serve as a reference for Project development.

The MAMP and SMP submitted by the Discharger includes some monitoring for water quality within the first two months, shorebirds or waterfowl within the first three years, the endangered salt marsh harvest mouse, and mercury in fish, and a few others listed in Tables 1 and 2 of the MAMP (Attachment C). In addition to the intense monitoring of the tidal marsh during the first five years, the Discharger will also monitor the enhanced seasonal wetlands, preserved vernal pools, and other enhanced areas to ensure that the condition or function does not change for the worse. These should be monitored in the beginning, middle, and end of the five year monitoring period using a conditional or functional assessment method such as the California Rapid Assessment Method (CRAM). (See the MAMP and SMP for more specific monitoring plan details.)

The Discharger's MAMP and SMP propose a relatively short (five years overall) and abbreviated monitoring period due to lack of funds to monitor the success of the restored tidal marsh, and also because most of the existing land at Sears Point is diked farmland, with relatively few existing benefits to plants and wildlife. However, the Regional Water Board will also require that the long-term tidal marsh be assessed at five year intervals, in order to assure the long term restoration goal of between 30 and 940 acres of tidal marsh after 30 years is met. This monitoring may be conducted by using best professional judgment in the following way: walking or boating around the Project perimeter; using free web-based satellite or aerial photos if they occur within five year periods and can detect necessary changes with appropriate ground-truthing; using other satellite or aerial photos; measuring transects through the Project area; or any other means approved by the Regional Water Board staff that are sufficient to estimate the tidal marsh acreage, by which the Discharger can determine when the native tidal marsh goal is met.

If free web-accessible satellite or aerial photographs (such as Google Earth) is available to assess the Project's success, it should help ensure that native tidal marsh is eventually established and highly invasive species are kept off the site, and to monitor any excessive sediment accretion or erosion. If native tidal marsh is not achieved over the 20-30 year period of establishment, the Discharger will work with a Technical Advisory Committee (the TAC) to determine if actions should be taken to encourage native tidal marsh restoration, to prevent some aggressive non-native tidal marsh species to take over the site, or if the Project should be allowed to continue without intervention. The TAC will also provide guidance and recommendations for other Project issues including

construction, monitoring, goals, performance criteria, and completion. The Discharger may invite representatives of any appropriate group or individual to participate on the TAC, but must invite, at a minimum, the Regional Water Board, and BCDC, California Coastal Conservancy, CDFW, USFWS, National Marine Fisheries Service, US Army Corps of Engineers, and other appropriate regional agencies and individuals.

A plan for methyl-mercury monitoring, which is not in the MAMP or SMP, will be developed in accordance with the requirements of the San Francisco Bay Regional Water Board's Basin Plan for mercury. However, the implementation of such a plan may wait for the results of other mercury biosentinel monitoring in restored San Francisco Bay marshes, unless the Regional Water Board determines that mercury sampling should be monitored at the Project before then. (See Mercury section below for more details.)

20. **Basin Plan.** The Porter Cologne Act (section 13240) authorizes the Regional Water Board to develop a Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan), which is the Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes implementation programs to achieve water quality objectives. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Resources Control Board (State Water Board), US EPA, and the Office of Administrative Law where required. The latest version can be found at the Regional Water Board's website at http://www.waterboards.ca.gov/sanfranciscobay/basin_planning.shtml

21. The Basin Plan includes the following Beneficial Uses for San Pablo Bay: Ocean, Commercial and Sport Fishing; Estuarine Habitat; Wildlife Habitat; Fish Spawning and Migration; Preservation of Rare and Endangered Species; Shellfish Harvesting; Industrial Service Supply; Navigation; Water Contact Recreation; and Non-contact Water Recreation. The Basin Plan includes the following Beneficial Uses for Petaluma River: Estuarine Habitat; Wildlife Habitat; Fish Spawning and Migration; Preservation of Rare and Endangered Species; Warm and Cold Freshwater Habitat; Navigation; Water Contact Recreation; and Non-contact Water Recreation. The Basin Plan includes the following Beneficial Uses for Tolay Creek: Wildlife Habitat; Preservation of Rare and Endangered Species; Warm Freshwater Habitat; Water Contact Recreation; and Non-contact Water Recreation.

22. The Project is consistent with the goals of the State Wetlands Policy and California Wetlands Conservation Policy (Executive Order W-59-93, signed August 23, 1993), which is incorporated in the Basin Plan, that includes ensuring "no overall loss" and achieving a "...long-term net gain in the quantity, quality, and permanence of wetland acreages and values...". Senate Concurrent Resolution No. 28 states that "it is the intent of the legislature to preserve, protect, restore, and enhance California's wetlands and the multiple resources which depend on them for benefit of the people of the State." Section 13142.5 of the Water Code requires that the "[h]ighest priority shall be given to improving or eliminating discharges that adversely affect ...wetlands, estuaries, and other biologically sensitive areas."

23. The Project is consistent with:
- Comprehensive Conservation and Management Plan
 - San Francisco Bay Plan (Bay Conservation and Development Commission Plan)
 - San Pablo Bay NWR Comprehensive Conservation Plan (Draft)
 - CALFED Bay-Delta Program and Ecosystem Restoration Program Plan
 - San Francisco Bay Area Wetlands Ecosystem Goals Project
 - Sonoma County General Plan and Zoning Ordinance
 - Bay Trail and Sonoma Bay Trail Corridor Plan
 - Draft Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California

24. **California Wetlands Portal.** It has been determined through regional, State, and national studies that tracking mitigation/restoration projects must be improved to better assess the performance of these projects, following monitoring periods that last several years. In addition, to effectively carry out the State's No Net Loss Policy for wetlands, the State needs to closely track wetland losses, gains, and mitigation/restoration project success. Therefore, the Discharger will use the California Wetlands Standard Form to provide project information related to impacts and mitigation/restoration measures. An electronic copy of the form and instructions can be downloaded at: <http://www.waterboards.ca.gov/sanfranciscobay/certs.shtml> . Project information concerning impacts and mitigation/restoration will be made available at the web link: <http://www.californiawetlands.net> .

CEQA

25. The California Environmental Quality Act (CEQA) requires that project effects be analyzed to prevent significant avoidable impacts and reduce or mitigate unavoidable impacts. All projects approved by State agencies must be in full compliance with CEQA. As lead agencies, the CDFW and USFWS, certified a *Final Environmental Impact Report/Statement (FEIR/S) for the Sears Point Wetland and Watershed Restoration Project* (April 2012). As stated earlier CDFW filed a Notice of Determination for the Project on June 22, 2012, and a Record of Decision was signed by the USFWS on July 25, 2012. The final EIR/S has been considered and relied upon in preparation of this Order. The Regional Water Board, as a responsible agency under CEQA, finds that all environmental effects have been identified for project activities that it is required to approve, and that the Project will not have significant adverse impacts on the environment with the following stipulations: 1) the MAMP provided in Attachment C will be carried out by the Discharger, and 2) the CEQA mitigation provided in Attachment B, which were presented in the final EIR/S, will also be carried out as conditioned in the FEIR/S's Mitigation Conservation Measures.

26. The FEIR/S found that after a three to five year construction period, the tidal marsh restoration should take about 20-30 years to develop, barring unforeseen complications. The benefits from the Project would outweigh adverse environmental impacts, after CEQA mitigation measures are implemented and future monitoring and

adaptive management are carried out. In adopting this Waste Discharge Requirements/Water Quality Certification (WDR/WQC), the Regional Water Board has eliminated or substantially lessened any significant effects on water quality. This action will assure the maintenance, restoration, and enhancement of a natural resource and protection of the environment.

Water Quality Issues under CEQA for the Project

27. 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 if the Discharger adheres to the water quality monitoring and protective measures identified in the Order: (i) those found in the following sections of this Order, namely, Prohibitions (A), Specifications (B), Receiving Water Limitations (C), and Provisions (D); and (ii) those listed as the Conservation Measures in Attachment B.

28. The FEIR/S found that during construction high turbidity, low dissolved oxygen and other pollutants throughout Project construction especially during levee breaching could have significant impacts and require water quality control measures. The Discharger is required to develop and implement necessary water quality control measures in a Storm Water Pollution Prevention Plan and conduct necessary water quality monitoring before and after levee breaching to ensure the receiving waters are protected. A plan for mercury will also be provided to protect water quality and is discussed below.

29. **Mercury Methylation.** The Discharger will submit a plan for monitoring methyl-mercury, which may or may not have to be implemented pending the results of other studies in the area. (See Monitoring section above.)

Mercury occurs naturally in the San Francisco Bay environment and has been introduced as a contaminant in various chemical forms from a variety of anthropogenic sources. Total levels of mercury in ambient San Francisco Bay sediments are elevated above naturally occurring background levels. Although mercury often resides in forms that are not hazardous, it can be transformed through natural processes into toxic methyl-mercury. Natural accretion processes in salt marshes continually supply fresh layers of mercury-contaminated sediments that release mercury in a form that can become biologically available to mercury-methylating bacteria and subsequently bioaccumulate in the food chain. The resulting concentration of methyl-mercury depends on numerous variables, including: redox potential, salinity, pH, vegetation, sulfur, dissolved organic carbon, nitrogen, and seasonal variations in each of the identified variables.

Breaching levees could add to methyl-mercury already at the Project site. The USFWS ROD and the Project application state that restoring the site is unlikely to cause a methyl-mercury concern in the long-term, for the following reason: flooding of the site will be a one-time occurrence, and will leave most of the Project under about seven feet of water until it accretes. Slotton's work (2008) showed that opening up the Napa-River tidal marshes decreased methyl-mercury levels in fish. In addition, Best et al (2005) showed that methyl-mercury levels in permanently flooded sites were lower than those from sites

that underwent episodic flooding. If Sears Point is flooded only once, any temporary increase in mercury levels should not re-occur or be sustained over the long-term.

Given this possibility, the Discharger shall be prepared to adaptively manage the site for apparent problems due to methyl-mercury bioaccumulation after the breach. But, in any event, the Discharger shall be prepared to produce a methyl-mercury monitoring plan on the terms noted above.

The Discharger's plan for methyl-mercury monitoring shall be in accord with the Basin Plan, which includes a TMDL for Mercury⁴, and which states that wetlands may contribute substantially to methyl-mercury production and subsequent biological exposure to mercury within the Bay.

The methyl-mercury monitoring plan may be deferred pending the results of other regional methyl-mercury analyses being conducted at tidal marsh restoration sites. However, the Regional Water Board retains the discretion to require a methyl-mercury monitoring plan from the Discharger at any time.

Other Water Quality Issues

30. This Project is not suitable for coverage under the Construction General Permit (CGP). For this reason, the Regional Water Board has required the Discharger to apply for and obtain a 401 WQC/WDR. There is a site-specific reason why the CGP is not appropriate here. Construction activities associated with the Project are designed to lower and breach the levees to restore the natural sediment erosion, suspension, and deposition. To require the Project to comply with the Construction General Permit is counterproductive and would actually impede restoration of tidal marsh and wetlands. To control any short-term impacts associated with the construction activities for the long-term gain, this Order requires the Discharger to develop and implement a Storm Water Pollution Prevention Plan to control any discharges of oil, fuels, trash, and hazardous materials and any long-term effect on San Pablo Bay, Petaluma River and Tolay Creek.
31. **Mosquito abatement.** The proposed tidal wetlands at the restored site should have fewer mosquitoes than the current seasonal wetlands. The site is in the jurisdiction of the Sonoma County mosquito abatement district. The Discharger will coordinate with the district during design, implementation, and operation phases of the Project to mitigate for any increases in potential mosquito breeding habitat.
32. **Invasive Cordgrass.** Invasive cordgrass was inadvertently introduced into San Francisco Bay tidal marshes in the 1970's (predominantly *Spartina alterniflora* and *S. densiflora*) and threatens the existence of the native cordgrass (*S. foliosa*)

¹ http://www.waterboards.ca.gov/sanfranciscobay/basin_planning.shtml

- upon which many tidal marsh species depend. To mitigate for potential impacts from cordgrass, the Discharger will cooperate with the Invasive Spartina Project to eradicate invasive cordgrass and protect the native tidal marsh species. In particular, the Discharger will follow the Invasive Spartina Project's "Best Practices" listed below, which have been incorporated into the Project:
- a. No Spartina is proposed to be planted in the Project area. If circumstances arise where Spartina will be planted in the Project area, the plantings will be genetically verified to be *Spartina foliosa*.
 - b. The Project area should be monitored annually for the presence of non-native or hybrid Spartina. In addition to field identification, representative samples of any found Spartina should be genetically analyzed to verify absence of *S. alterniflora* or *S. densiflora* genetic markers. Any found non-native or hybrid Spartina plants should be removed or killed before their first season of flowering and seed set by manual methods if feasible, or using approved pesticides if a larger stand is detected.
 - c. One measure of the Project's success in achieving the project objective regarding management of "the spread of non-native invasive species" is that there is no non-native or hybrid Spartina found in the Project area.
 - d. The Project will not initiate connection of marsh with tidal flows (full or muted) at locations where *S. alterniflora* or *S. alterniflora* x *S. foliosa* seed or propagules are likely to get into the Project area.
 - e. The Project will avoid introducing non-native Spartina seed or propagules into the Project area on contaminated excavators, dredges, or other equipment. The Project will require that all equipment be cleaned prior to entry into an intertidal part of the Project area if it has been in contact with non-native Spartina plants, seeds, or roots.
 - f. Variations to the above best practices may be appropriate based on site-specific conditions and scientific analysis. Proposed variations will be developed with assistance or review from the Invasive Spartina Project. Additionally, the US FWS will discuss any proposed variations with nearby marsh owners/managers, who could be affected by the actions of the Project.
33. To assure that the hydrology is proceeding as expected to achieve the habitat goals within 20-30 years, the MAMP (Attachment C) and SMP (Attachment D) outline the targets and performance criteria within that time frame. In the event that the interim and final habitat goals are not met, the Discharger will investigate the causes for the failure and provide management recommendations to either stay on the same course, or try other means of restoration.
34. The Regional Water Board notified the Discharger and interested agencies and persons of its intent to issue WDR/WQC for the Project and provided them with an opportunity to submit their written views and recommendations.
35. The Regional Water Board, in a public meeting on May __, 2013, heard and considered all comments pertaining to the WDR/WQC for the Project.

It is Hereby Ordered pursuant to the provisions of Division 7 of the California Water Code and regulations, and guidelines adopted thereunder, that the Discharger, their agents, successors, and assigns shall comply with the following:

A. PROHIBITIONS

1. Discharges of water, material, or wastes which are not otherwise authorized by the Order are prohibited.
2. The direct discharge of wastes to surface waters or surface drainage courses is prohibited, except as authorized by this Order.
3. It is prohibited to import dredged materials without first following the testing and screening protocols described in Specifications B.1 and 2, below, and obtaining Executive Officer's approval. Movement of onsite material within the Project site is allowed.
4. The activities subject to these requirements shall not cause a condition of pollution or nuisance as defined in sections 13050(i) and (m), respectively, of the Water Code.

B. SPECIFICATIONS

Dredged Material Screening Procedures. The Discharger shall submit data characterizing the quality of all imported dredged materials (Bay sediments) proposed for use as fill before placement at the Project site. Sediment characterization and placement shall follow the protocols specified in:

1. The Dredge Materials Management Office (DMMO) guidance document, "Guidelines for Implementing the Inland Testing Manual in the San Francisco Bay Region" (Corps Public Notice 01-01, or most current version), with the exception that the water column bioassay simulating in-bay unconfined aquatic disposal shall be replaced with the modified effluent elutriate test, as described in Attachment B of the Inland Testing Manual, for both water column toxicity and chemistry (DMMO suite of metals only); and,
2. Regional Water Board May 2000 staff summary report, "Beneficial Reuse of Dredged Materials: Sediment Screening and Testing Guidelines," or most current revised version. These levels are shown in Table 4, which are approved for the wetland surface criteria within the top three feet of the Project. Before any wetland foundation material is placed a plan must be submitted and approved by the Executive Officer of the Regional Water Board to ensure that the wetland foundation material will be isolated and will not be eroded or incised by channels.
3. Modifications to these procedures may be approved on a case-by-case basis, using guidance from the two reports mentioned above, pending the Discharger's ability to

demonstrate that the dredged materials are unlikely to adversely impact beneficial uses.

C. RECEIVING WATER LIMITATIONS

The receiving waters for this Project are the San Pablo Bay, Tolay Creek, and the Petaluma River.

1. The Project activities shall not cause:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam in quantities sufficient to cause deleterious bottom deposits, turbidity, or discoloration in receiving waters, or to unreasonably affect beneficial uses;
 - b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;
 - c. The temperature of any cold or warm freshwater habitat to be increased by more than 5 degrees Fahrenheit above natural receiving water temperature, unless a qualified biologist can demonstrate that such alteration in temperature does not adversely affect beneficial uses;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin; and
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waters shall not cause violations of the following limits to be exceeded in receiving water at any one place within 1 foot of the water surface:
 - a. Dissolved Oxygen: 5.0 mg/L, minimum
When natural factors cause lesser concentrations, then these activities shall not cause further reduction in the concentration of dissolved oxygen.

 - b. Dissolved Sulfide: 0.1 mg/L, maximum

 - c. pH: Variation from normal ambient pH by more than 0.5 pH units

 - d. Un-ionized Ammonia: 0.025 mg/L as N, annual median; and
0.16 mg/L as N, maximum

 - e. Nutrients: receiving water shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

3. Turbidity of the receiving water shall not increase by more than the following,

to the extent practicable:

Receiving Waters Background	Incremental Increase
< 50 NTU	5 NTU maximum
≥ 50 NTU	10% of background, maximum

4. The discharge shall not cause a violation of any water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board as required by both the State's Porter-Cologne Water Quality Control Act and the federal Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

D. PROVISIONS

1. **Project Monitoring and Reporting, For the First Five Years, Short-term.**

The Discharger shall conduct monitoring and submit technical monitoring reports as described in the MAMP and the SMP (See Monitoring under Findings).

Water quality monitoring related to breaching levees will be required immediately before the breach and over approximately ten monitoring events covering two months or until background levels are achieved, at which time the Discharger can notify the Regional Water Board that the water quality provision for that breach has been met. If additional monitoring is conducted to show that the Project is not causing harm to the area (e.g., if ambient monitoring shows that similar water quality levels occur naturally in the area), or if the literature shows that water quality values are not likely to cause problems, then the Discharger can request approval from the Regional Water Board staff to cease water quality monitoring. Data shall be posted to the California Wetlands portal (<http://www.californiawetlands.net>) according to the schedule in Provision D.8.

To show progress toward achieving target habitats, monitoring will be required. Appropriate baseline data shall be gathered to show the evolution from pre- to post-project restoration. Baseline data is specified in the MAMP and SMP, and includes water quality, habitat development, biological species, and other pertinent parameters. Such baseline data shall be collected immediately before the levees are breached. After a baseline is established, monitoring shall proceed as specified in the MAMP and SMP, which provide target habitat goals for the site, and parameters to be monitored including procedures and locations for assuring that the beneficial uses of water and habitat will be protected and/or improved.

At the end of the beginning, middle, and end of the first five year monitoring period, the Project shall be assessed for seasonal wetlands, vernal pool, and riparian corridor for conditions using CRAM or other method designed to provide similar results, as approved by the Executive Officer.

The Discharger shall submit technical monitoring reports as described in the MAMP and the SMP every other year beginning after construction and restoration are initiated. (See Monitoring under Findings). These technical reports shall contain the information required in the Project's MAMP and SMP.

The technical monitoring reports shall: i) analyze all physical and biological data collected to date, and contain appropriate figures, graphs, and photos; ii) assess progress toward target habitat acres and functions; iii) make recommendations for future monitoring and assessment; and iv) notify the Regional Water Board of any sampling occurring during that period and any problems, and shall provide appropriate photos. Technical monitoring reports shall be due at the end of years one, three, and five, following the breaches. In years when no data is collected or analyzed, and aerial or satellite photo review shows no substantial changes, an email can be sent to the Regional Water Board stating those findings. A report for the Project shall be submitted in year five after implementation of the Project.

The Five Year Monitoring Report shall include the following as shown in the SMP table and report (Attachment D) and in the Monitoring and Adaptive Management Plan (Attachment C): water quality through construction and a few weeks or months after levee breaches; channel and marsh development; vegetation mapping; mercury monitoring of water, sediment, or biosentinel species in accordance with regional programs, if required by the Regional Water Board after mercury data is analyzed for other nearby restoration projects; and highly invasive (detrimental) species, which should include plants and introduced predators; specific target species monitored (endangered species) or groups such as birds, fish, mammals.

Due Date, Technical Reports: March 31 of Year 1 and 3.

Due Date, 5-Year Monitoring Report: March 31, Year 5.

2. **Project Monitoring and Reporting, After the First Five Years, Long-term.**
After the Five Year Monitoring Report, the Discharger will use best professional judgment or quantitative analysis to determine if and when the Project goal for tidal marsh is met. The Project goal is predominantly tidal marsh over the following time periods: approximately 30 acres over the short term (five years); and approximately 940 acres over the long term (20-30 years). After the initial five year monitoring is completed, and every five years until the Project Goal of approximately 940 acres of predominantly native tidal marsh vegetation is met with 75% cover, the Project will monitor the site with one of the four methods outlined in the Findings (or other appropriate method). Those methods include, if feasible and available, any one of the following: free web-based aerial or satellite

photography (see Provision below); other aerial or satellite photography; walking or boating the project perimeter and using professional judgment; or noting plants along a transect through the restoration area. The aim is to safely determine whether the site has evolved toward the target predominantly native tidal marsh, and whether highly invasive species have encroached, or excess erosion or sedimentation has occurred. The TAC will oversee the long term monitoring.

Due Date, for a Report for Final Project Success or Change of Target Habitat:
After Project goals are met or modified by the TAC.

3. **Mercury Monitoring.** The Discharger shall submit a plan for methyl-mercury monitoring, which is not in the MAMP or SMP. It will be developed in accord with the requirements of the San Francisco Bay Regional Water Board's Basin Plan for mercury. However, the implementation of such a plan may wait for the results of other mercury biosentinel monitoring in restored San Francisco Bay marshes, unless the Regional Water Board determines that mercury sampling should be monitored at the Project before then.

If methyl-mercury monitoring is required at the Project, the Discharger can propose a different sampling plan, which will be subject to Executive Officer approval. The selected sampling method will be determined in accordance with permit requirements, acceptable scientific methods, and available budget. Triggers and the final sampling plan will be subject to Executive Officer approval and triggers should be suggested by the TAC.

Due Date for Methyl-Mercury Sampling Plan: the plan is not required at this time, pending the results of other mercury data analysis from nearby tidal marsh restoration projects.

4. **Aerial or Satellite Photos.** If feasible and available to show pertinent Project features, aerial or satellite photos (such as those readily available on Google Maps, or IKONOS images using multispectral satellite imagery) should be reviewed periodically to ensure that habitat evolution is occurring without any associated significant adverse or unforeseen events, such as excessive scour or erosion, sedimentation, or establishment of highly invasive plants. Collecting and comparing annual satellite photos will depend on the availability of free imagery and is meant only for rough non-technical comparisons, not quantitative GIS analysis. The short-term habitat target should be met after the five-year monitoring period and the long-term target should be met after 20-30 years. If the habitats are not met, the TAC, described below, shall determine whether aerial or satellite photos should continue for a specified period, as defined by the TAC, until the target habitats are achieved, or whether the Project has successfully provided adequate wetland habitat benefits to justify discontinuing monitoring.
5. **The TAC.** A Technical Advisory Committee (the TAC) shall be organized and convened through a public process by the Discharger and shall, at a minimum,

- invite representatives from CDFW, USFWS, the Regional Water Board, the SF Bay Conservation and Development Commission, California Coastal Conservancy, ACOE, and the National Marine Fisheries Service. These representatives will be invited, but their presence on the TAC is not mandatory. The purpose of the TAC shall be to assess progress of the Project by reviewing monitoring data, and to suggest adaptive management strategies. Results of the data analysis shall be presented at a meeting accessible by conference phone to the TAC annually, for discussion and comment for the initial 5-year monitoring period. Thereafter, results will be presented to interested TAC members every 5 years until the target habitat of about 940 acres of predominantly native tidal marsh is met. The TAC can include members of the Napa-Sonoma Marsh Restoration Group, the San Francisco Bay Joint Venture, San Francisco Estuary Institute, USGS, or any other appropriate group, and any other appropriate issues.
6. **Lead Contaminated Soil Encapsulation.** Prior to breaching the levee, the Discharger shall fully implement the Regional Water Board approved Corrective Action Plan.
(http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL0609728268). Within 90 days from completing the Corrective Action Plan, the Discharger shall submit a report, acceptable to the Executive Officer, to document completion of the Corrective Action Plan.
 7. **California Wetlands Portal.** The Discharger is required to use the California Wetlands Standard Form to provide project information describing impacts and restoration measures. An electronic copy of the form can be downloaded at: <http://www.waterboards.ca.gov/sanfranciscobay/certs.shtml>. The completed California Wetlands form shall be submitted electronically to habitatdata@waterboards.ca.gov or as a hard copy to both: 1) The Regional Water Board, 1515 Clay Street, Suite 1400, Oakland, CA 94612, to the attention of California Wetlands Portal; and 2) San Francisco Estuary Institute, 4911 Central Avenue, Richmond, CA 94804 to the attention of California Wetlands Portal. Due Date for California Wetlands Form: 60 days after adoption of this Order.
 8. **Submitting monitoring reports by uploading them to California Wetlands Portal.** Monitoring reports shall be submitted either by uploading them to the California Wetlands Portal website at <http://www.californiawetlands.net/tracker/ba/list>, via email, or via mail at the addresses listed in the Provisions. The Regional Water Board project manager will be notified if monitoring reports are uploaded to the California Wetlands Portal.

In addition to uploading the California Wetlands form and monitoring reports to <http://www.californiawetlands.net/tracker/>, the Discharger shall also send monitoring data and reports to the Regional Water Board as one hard copy and one electronic copy. In the case of large files, the electronic copy shall be sent on a CD or DVD or placed on an FTP site.

9. **Conservation Measures.** The Discharger shall follow the Conservation Measures listed in Attachment B.

10. **Aggressive Non-Native Plant Species.** If feasible, the Discharger shall remove and keep off the Project site aggressive non-native plant species that threaten sensitive native tidal marsh communities, including those listed under Tier I (and to a lesser extent Tier II) of the Regional Water Board’s “Invasive Non-Native Plant Species to Avoid in Wetlands Projects in the San Francisco Bay Region” (2006), or other updated regional invasive species list should be kept out to the extent feasible.
[see:http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stream_and_wetland_protection.shtml under “Fact Sheet for Wetland and Riparian projects, Attachment 1: Invasive Non-Native Plants”]. Some of the Tier I species already occur on site. The Discharger should review the Tier I and Tier II lists and discuss with Regional Water Board staff which species are feasible to keep off the Project site. Invasive cordgrass (*Spartina alterniflora*) and the other non-native cordgrass species are a high priority for preclusion from tidal wetlands restoration sites in the Region, and the US FWS shall coordinate efforts with the Invasive Spartina Project to eradicate this species.

11. **Runoff.** To protect the seasonal and tidal wetlands from polluted runoff, the Discharger shall manage the onsite agricultural ditches and the flood control detention basins to optimize their natural functions to remove pollutants in the runoff; install, operate, and maintain trash racks at the stormwater pump stations; and implement pollution prevention measures to control pollutants in the agricultural runoff.

Due Date for As-built report for the pump stations and the detention basins: 60 days after construction is complete.

12. **SWPPP.** The Discharger will, before construction begins, submit a Storm Water Pollution Prevention Plan (SWPPP) to the San Francisco Bay Regional Water Board, and shall implement required Best Management Practices (BMPs) to prevent water pollution from restoration activities. The Discharger shall use both in-water and on-land BMPs to keep sediment, soil, and other pollutants from entering Tolay Creek, Petaluma River, and San Pablo Bay, and also provide measures to prevent and control potential spills of hazardous material into wetlands, creeks and sloughs. Contractors are required to implement BMPs identified in a the SWPPP to control soil erosion and discharges of other construction-related contaminants such as fuel, oil, grease, paint, concrete, and other hazardous material, both during and after construction. Emergency response, routine maintenance, and preventative activities should be included in the SWPPP. The SWPPP shall be submitted to the Regional Water Board for review and comment at least 45 days before construction begins and must be

approved by the Regional Water Board staff based on BMPs and other erosion control features that have been proven successful in the past.

Due Date for SWPPP: at least 45 days before construction starts

13. **Start-up and As-Built Reports.** The Discharger shall notify the Regional Water Board by email when construction starts and ends and 30 days before levee breaching occurs. The following reports will also be required: i) a startup report analyzing the first two months of data, and ii) an as-built report to note any changes that have occurred from the original design.

Due Date for Notification: when construction begins, ends, and when breaches occur.

Due Date for Startup (or Construction Completion) Report: no more than 45 days after levees are breached.

Due Date for As-Built Report: 90 days after construction is completed.

14. **Inspections.** The Discharger shall conduct periodic inspection and maintenance of restoration features to ensure that the restoration is performing as intended. For example, routine inspection of ditch blocks for unintentional channel bypassing or erosion shall be necessary, particularly following storm events. Levee inspections for erosion or other problems should be performed, at least annually. The Discharger shall summarize the results of these efforts in its biennial reports or memos.

The Discharger shall inspect water control structures and channels on the Project site periodically for debris or trash, and obstructions shall be removed to maintain desired flows. Potentially damaging obstructions shall be removed manually or mechanically to maintain flows. Routine inspection of the levees, trails and internal berms for unintentional breaching and erosion shall also be conducted. If unintentional breaching or erosion occurs, the berm or levee shall be repaired to prevent potential tidal inundation of adjacent areas, and maintain public access along the trails. The old perimeter levees will be lowered and no longer maintained, but the proposed new levee will replace these sections and will be maintained.

15. **Construction Operations.** Construction shall last no longer than three years and will occur between April and December. The Discharger must obtain prior approval from the Executive Officer to extend the construction period or alter the construction window with appropriate SWPPP BMPs.

During construction, and until the ambient water quality is achieved after the breaches, the Discharger will adhere to conservation measures to protect water quality and species as set forth in this Order and Attachment B. The Project covers protective measures for special status species including the endangered California clapper rail, salt marsh harvest mouse, soft bird's beak, delta smelt, and

others, which are listed in the Sears Point Wetland and Watershed Restoration Final EIR. (March 2012).

The Discharger shall minimize in-water construction during periods when listed species may be present.

Construction activities shall be scheduled to avoid the local nesting periods of the special status wildlife species, to the extent practical. When construction is conducted during the nesting period of a special status species known to be present, the activities shall be restricted to maintain a 150-foot buffer between heavy equipment and the nesting sites. Construction activities shall be scheduled in such a way as to limit the period of disturbance in a particular area to as brief a time window as is practical

Before constructing project components within tidal marsh habitat, the Discharger shall conduct clearance surveys or implement minimization measures, as deemed necessary by USFWS and CDFW, for special-status species that have potential to occur within the construction area.

To the extent feasible, the Discharger shall avoid construction activities in or near marsh habitat suitable for the salt marsh harvest mouse, California clapper rail, or other protected species

The Discharger shall have a construction monitor onsite to ensure that the Project is constructed according to the design and construction plan. The construction monitor shall also resolve implementation questions and refer "Requests for Information" and "Submittals" to the design engineers. Construction monitoring notes and observations shall be maintained for five years after project construction is completed, and submitted to the Regional Water Board upon request.

16. **Sediment/Soil Excavation and Placement Provisions.** The Discharger shall minimize the effects of temporary increases in suspended sediment and turbidity on special status fish species by employing BMPs for turbidity control during all in-water work conducted in the sloughs and/or Bay.

To minimize the effects on special status fish species resulting from the loss of existing habitat, construction activities in river or slough areas having immersed or submersed aquatic plants shall be avoided to the maximum extent practical.

Ditch blocks shall be located in such a way as to not trap fish at low tide. Berms adjacent to starter channels shall be constructed on one side of the channel only, and shall be discontinuous, so that fish have easy access to the starter channels as the tide recedes.

17. To avoid the dredged sediment from becoming dry and hardened, making it a poor substrate for wetland biota; developing deep cracks that harbor mosquitoes; increasing the chances of acidification; and causing metals, including mercury, to become soluble, attempts will be made to keep it wet until it will be inundated under approximately seven feet of water for years and until the tidal marsh begins to accrete. If these plans change, the Discharger will notify the Regional Water Board staff and the TAC.
18. **Mosquito Abatement Provision.** The Discharger shall coordinate with the county mosquito abatement districts during the design, implementation, and operations of the Project.
19. **General Provisions.** The Discharger shall comply with all the Prohibitions, Specifications, Limitations and Provisions of this Order, immediately upon adoption of this Order, unless otherwise provided below
20. The Discharger shall notify the Regional Water Board immediately whenever violations of this Order occur.
21. The Discharger shall remove and relocate any wastes that are discharged at any sites in violation of this Order.
22. The Discharger shall implement and comply with appropriate BMPs to prevent and control erosion and sedimentation.
23. No debris, soil, silt, sand, cement, concrete, or washings thereof, or other construction related materials or wastes, oil or petroleum products or other organic or earthen material shall be allowed to enter into or be placed where it may be washed or pumped from the site by rainfall or runoff into Tolay Creek, Petaluma River or San Pablo Bay. When operations are completed, any excess material shall be removed from the work area and any adjacent area where such material may be washed into Tolay Creek, Petaluma River or San Pablo Bay.
24. Construction contractors working on the Project shall be required to provide their employees with spill prevention and response training, and shall be required to have spill response equipment available at the job site, as directed by the Discharger. Contractors shall provide double containment for any hazardous materials or wastes at the job site. Contractors shall be prepared to respond to any spill immediately and to fully contain spills in the area, including any open-water areas.
25. The Discharger shall maintain a copy of this Order at its Headquarters. The Order shall be available at all times to site personnel. The Discharger shall ensure that all individuals working on the site, including all contractors and sub-contractors,

- are familiar with the contents and requirements of this Order, and with all relevant plans and BMPs.
26. The Discharger shall permit the Regional Water Board or its authorized representative, upon presentation of credentials:
 - a. Entry onto premises on which wastes are located and/or in which records are kept.
 - b. Access to copy any records required to be kept under the terms and conditions of this Order.
 - c. Inspection of any monitoring equipment, construction area(s), or monitoring method completed as part of the Project.
 - d. Sampling of any discharge or surface water covered by this Order.
 27. This Order does not authorize commission of any act causing injury to the property of another or of the public; does not convey any property rights; does not remove liability under federal, state, or local laws, regulations or rules of other programs and agencies; nor does this Order authorize the discharge of wastes without appropriate permits from this agency or other agencies or organizations.
 28. The Discharger shall immediately notify the Regional Water Board by telephone or email whenever an adverse condition occurs as a result of the proposed discharge or construction activities. An adverse condition includes, but is not limited to, a violation or threatened violation of the conditions of this Order, significant spill of petroleum products or toxic chemicals, or other events that could affect compliance. Pursuant to Water Code section 13267(b), a written notification of the adverse condition shall be submitted to the Regional Water Board within two weeks of occurrence. The written notification shall identify the adverse condition, describe the action(s) necessary to remedy the condition, and specify a time schedule for performance, subject to modification by the Regional Water Board.
 29. The Discharger shall halt work activities if dead or dying fish, or fish exhibiting stress, are observed within 1,000 feet of work activity or discharge. The Discharger shall immediately assign a qualified biologist to investigate the cause of the problem, and to identify an acceptable response, if the cause is determined to be the work activity or discharge. The Discharger shall immediately report all incidents of dead, dying, or stressed fish, as well as prescribed action plans, to the Regional Water Board by calling (510) 622-2369 and to California Emergency Management Agency at (800) 852-7550.
 30. All reports pursuant to this Order shall be prepared under the supervision of a suitable professional in the State of California.
 31. This Order is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the Water

Code and section 3867 of Title 23 of the California Code of Regulations (Title 23).

32. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to Title 23, section 3855(b) and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
33. The Discharger has paid in full the application fee for the Project of nine-hundred and forty-four dollars (\$944.00), which was received by the Regional Water Board on September 26, 2012. An annual fee for WDRs pursuant to section 13260 of the Water Code is required.
34. The Regional Water Board may modify, or revoke and reissue, this Order if present or future investigations demonstrate that the discharge(s) governed by this Order shall cause, have the potential to cause, or shall contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters. The Regional Water Board may reopen this Order to review results of the Discharger's and Regional Water Board staff's studies and new data on Section 303(d) listed contaminants and decide whether effluent limits should be revised.

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

Bruce H. Wolfe
Executive Officer

Attachments

Tables: 1-5

Figures: 1-4

Attachments for Sears Point Order:

Attachment A: Project Description from application received by Regional Water Board 8.23.12

Attachment B: Final EIR Conservation Measures to protect Water Quality and other Environmental Features

Attachment C: Monitoring and Adaptive Management Plan (MAMP)

Attachment D: Water Quality Self Monitoring Program (SMP)

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