CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

ORDER No. R2-2013-0017

SONOMA LAND TRUST
SEARS POINT RESTORATION PROJECT
SONOMA COUNTY

A. GENERAL

1. Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383 and 13387(b) of the California Water Code and in this Water Board's Resolution No. 73-16.

2. The principal purposes of a monitoring program by a waste discharger, also referred to as self-monitoring program, are: (1) to document compliance with waste discharge requirements and prohibitions established by this Water Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge.

B. SAMPLING AND ANALYTICAL METHODS

1. Sample collection, storage, and analyses shall be performed according to Code of Federal Regulations Title 40, Section 136 (40 CFR S136), or other methods approved and specified by the Executive Officer of this Water Board.

2. Water and soil analyses shall be performed by a laboratory approved for these analyses by the State Department of Public Health (DPH), or a laboratory waived by the Executive Officer from obtaining a DPH certification for these analyses, or by properly calibrated field equipment when approved by the Executive Officer of this Water Board.

3. The director of the laboratory whose name appears on the certification, or his/her laboratory supervisor who is directly responsible for the analytical work performed shall supervise all analytical work including appropriate quality assurance/quality control procedures in his/her laboratory and shall sign all reports of such work submitted to the Water Board.

4. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. Grab sample is defined as an individual sample collected in a short period of time not exceeding 15 minutes. It is used primarily in determining compliance with daily maximum limits and instantaneous maximum limits. Grab samples represent only the condition that exists at the time the wastewater is collected.

2. Continuous Monitoring Station is defined as a sampling location with a deployed sampling device (e.g., Sonde) that monitors specific parameters at a specified frequency.

3. Duly authorized representative is one whose:

   a. Authorization is made in writing by a principal executive officer or ranking elected official; and

   b. Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such chief engineer, project manager, or field supervisor.

4. Instantaneous maximum is defined as the highest measurement obtained for the calendar day.

5. Median of an ordered set of values is that value below and above which there is an equal number of values, or which is the arithmetic mean of the two middle levels, if there is no one middle value.

6. Receiving waters refers to any water that actually or potentially receives surface water discharged from the Sears Point Restoration Project area. The receiving waters in this case are Tolay Creek, Petaluma River, and San Pablo Bay.

7. Construction phase is defined as that period of time when the site is prepared for marsh restoration and includes all activities leading up to the restoration of tidal action.

8. Construction phase activities are defined as all site activities including the movement of soil or sediment, such as placement of dredged material via slurry techniques, excavation of trenches and toe drains, and all other soil handling such as detention basin, connector channel, pilot channel, breach, ditch block, berm and levee construction.

9. Post-construction phase is defined as the period of time beginning when site construction is substantially completed and tidal action has been restored to the Sears Point site.

10. Post-construction phase activities are defined as all monitoring, site maintenance, and adaptive management activities which take place after construction is completed and tidal action has been restored to the Sears Point site.

11. Project boundary is defined in Figure 2.

12. Monitoring period for purposes of reporting for receiving water quality shall be defined as that period of time beginning on the day the levees are breached, and ending when the water quality objectives have been met for two consecutive months. If water quality objectives are not met, the Dischargers can present evidence that beneficial uses are not being adversely affected by the Project and, if the case is acceptable to the Executive Officer, receiving water quality monitoring can cease. Habitat and geomorphic assessment monitoring period ends 5 years after breaching for each breach. Avian monitoring period ends at three years post breach. After the initial 5-year monitoring period, best professional

judgment or quantitative analysis will be used at 5-year intervals to determine if and when the final tidal marsh habitat target is met. In addition to assessing target tidal marsh vegetation, the Discharger will look for invasive species that might disrupt desirable biological populations, excessive sediment erosion or deposition, or other features that may prevent the desired predominantly native tidal marsh goal. The Project Technical Advisory Committee should assist with final decisions.

13. Ambient Water Quality shall be defined as the water quality (salinity, dissolved oxygen, temperature, turbidity, and pH) measured in Tolay Creek, Petaluma River, San Pablo Bay, or other appropriate reference site. The current ambient sampling point location is located south of the project area within San Pablo Bay, along the edge of the Petaluma Navigation Channel. Due to the unique environment that will exist post breach, it may be necessary to relocate the ambient sampling location or present data from a currently unidentified location to provide comparable readings to the other monitoring locations.

D. SPECIFICATIONS FOR SAMPLING AND ANALYSES

The Discharger is required to perform sampling and analyses according to the schedule in **Table D-1** in accordance with the following conditions:

1. Tidal Restoration Area

    a. If continuous monitoring stations are not deployed, then grab samples of water shall be collected during periods of maximum peak discharge flows, and shall coincide with receiving waters sample days.

    b. If analytical results are received showing any instantaneous maximum limit is exceeded for any organic constituent, a confirmation sample shall be taken within 24 hours and results known within 24 hours of the sampling.

    c. If any instantaneous maximum limit for a constituent is exceeded in the confirmation sample(s), then the discharge shall be restricted to the extent practical, until the cause of the violation can be found and corrected.

    d. For other violations, the discharger shall implement procedures that are acceptable to the Executive Officer on a case by case basis.

2. Receiving Waters

    a. Receiving water sampling shall be conducted on days coincident with tidal restoration effluent (water is actively leaving the site).

    b. In tidally-influenced receiving waters, samples shall be collected at each station on each sampling day during the period within 1 hour following low slack water. Where sampling at lower slack water period is not practical, sampling shall be performed during higher slack water period.

    c. Samples of downstream receiving water shall be collected within the discharge plume and down current of the discharge point so as to be representative, unless otherwise stipulated.

d. Due to the inability to collect samples of Ambient Water Quality upcurrent of the discharge point, an ambient sampling point has been identified in San Pablo Bay.

e. If feasible, samples shall be collected within one foot below the surface of the receiving water body and one foot above the channel or pond bottom.

3. Seasonal and Vernal Pool Wetland Area

a. A functional or conditional assessment (e.g. California Rapid Assessment Method) will be conducted on a subset of the passive enhanced seasonal wetland features and the vernal pools preserved north of the SMART rail line.

b. A baseline assessment will be conducted in year one and then again in years three and five.

E. DESCRIPTION OF SAMPLING STATIONS

1. A site plan drawing showing the location of all sampling points is included as Figure C-1 in Attachment C. A site plan drawing showing the location of all sampling points shall be submitted with all monitoring reports submitted under this Plan.

2. Receiving water sampling point SP-1 and SP-2 shall be established outside of the breach locations within 250 feet of the point of discharge into the receiving water.

3. Receiving water sampling points SP-3 and SP-4 shall be established within the tidal restoration area.

4. Ambient water sampling point SP-5 shall be established within San Pablo Bay near the edge of the Petaluma Navigation Channel.

F. STANDARD OBSERVATIONS

1. Receiving Water

a. Floating and suspended materials of waste origin (to include oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.

b. Discoloration and turbidity: description of color, source, and size of affected area.

c. Odor: presence or absence, characterization, source, distance of travel, and wind direction.

d. Evidence of beneficial water use: presence of waterfowl or wildlife, fishermen, and other recreational activities in the vicinity of the sampling stations.

e. Hydrographic condition, if relevant:

1) Time and height of corrected high and low tides (corrected to nearest NOAA location for the sampling date and time of sample and collection).

2) Depth of water columns and sampling depths.

f. Weather condition:

1) Air temperature.

2) Wind - direction and estimated velocity.

3) Precipitation - total precipitation during the previous five days and on the day of observation.

2. Tidal Restoration Area

a. Floating and suspended materials of waste origin (to include oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.

b. Discoloration and turbidity: description of color, source, and size of affected area.

c. Odor: presence or absence, characterization, source, distance of travel, and wind direction.

d. Evidence of beneficial water use: presence of waterfowl or wildlife, fishermen, and other recreational activities in the vicinity of the sampling stations.

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2) Depth of water columns and sampling depths.

f. Weather condition:

1) Air temperature.

2) Wind - direction and estimated velocity.

3) Precipitation - total precipitation during the previous five days and on the day of observation.

G. REPORTS TO BE FILED WITH THE WATER BOARD

1. **Notifications and Reports:** The Water Board will be notified by email when construction starts and ends and when levee breaching occurs. The following reports will also be required:

(i) a startup (or construction completion) report analyzing the first 30 days of data collected after levees are breached; it should include the same elements stipulated in G. 3. below; and

(ii) an as-built report to note any changes that have occurred from the original design.

The startup report is due no more than 45 days after levees are breached. The as-built report is due 90 days after construction is completed.

2. **Self-Monitoring Reports**: The Discharger shall submit technical monitoring reports every other year (i.e., Year 1 and Year 3). Written technical reports are due on March 31st. The reporting shall begin the first year following the completion of construction activities. The reports and memos will summarize the data collected and analyzed. The reports shall be comprised of the following: water quality data analysis and geomorphic and habitat assessments over the previously undocumented monitoring period. Results should be shared with the Technical Advisory Committee by email or at meetings.

   The monitoring elements, schedule, performance criteria, and general protocols are contained in the attached MAMP (Attachment C) for the Project.

   a. Letter of Transmittal: A letter transmitting self-monitoring reports should accompany each report. Such a letter shall include identification of changes to the project design, and any unplanned releases or failures that may have occurred since the preparation of the previous self-monitoring report. If unplanned releases are noted, then a discussion of the corrective actions taken or planned, and a time schedule for completion, shall be included.

   b. Map or Aerial Photograph: A map or aerial photograph shall accompany the report showing sampling and observation station locations.

   c. Results of Analyses and Observations: The report format shall be a format that is acceptable to the Executive Officer:

      1) If the Discharger monitors any pollutant more frequently than required by this permit using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Self-Monitoring Report.

      2) Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this Order.

      3) The report shall also include a table identifying by method number the analytical procedures used for analyses. Any special methods shall be identified and should have prior approval of the Executive Officer.

      4) Lab results shall be summarized in tabular form, but do not need to be included in the report.

3. **Final Report**: Reporting requirements under this Order will end a) for water quality

when the water quality objectives have been met for two consecutive months; b) for habitat and geomorphic assessment the monitoring period ends 5 years after breaching; c) for avian monitoring period ends at 3 years post breach. The Final Report will be submitted to the Water Board that contains both tabular and graphical summaries of the monitoring data obtained during the Project. In addition, the Final Report shall contain a comprehensive discussion of the compliance record and the corrective actions taken. The Final 5-Year Report need not contain the subsequent 5-year habitat assessments, which can be based on best professional judgment or quantitative analysis, until the tidal marsh habitat goal is met or changed by the Technical Advisory Group.

4. **Spill Reports**: If any hazardous substance is discharged in or on any waters of the State, or discharged and deposited where it is, or probably will be discharged in or on any waters of the State, the discharger shall report such a discharge to the Water Board, at (510) 622-2369 and to the Office of Emergency Management Agency at (800) 852-7550 during non-office hours. A written report shall be filed with the Water Board within five (5) working days and shall contain information relative to:

   a. nature of waste or pollutant,
   b. quantity involved,
   c. duration of incident,
   d. cause of spilling,
   e. Spill Prevention, Control, and Countermeasure Plan (SPCC) in effect, if any,
   f. estimated size of affected area,
   g. nature of effects (i.e., fish kill, discoloration of receiving water, etc.),
   h. corrective measures that have been taken or planned, and a schedule of these activities, and
   i. persons/agencies notified.

5. Monitoring reports, and letters transmitting monitoring reports, shall be signed by a principal executive officer or ranking elected official of the Discharger, or by a duly authorized representative of that person. The letter shall contain the following certification: "I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

H. RECORDS TO BE MAINTAINED

1. Written reports, laboratory analytical reports, maintenance records, and other records shall be maintained by the Discharger and retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Water Board or Regional Administrator of the U.S. EPA, Region IX. Such records shall show the following for each sample:

   a. Identity of sampling and observation stations by number.

b. Date and time of sampling and/or observations.

c. Method of sampling (See Section C - Definition of Terms).

d. Complete procedure used, including method of preserving sample and identity and volumes of reagents used. A reference to a specific section of Standard Methods is satisfactory.

e. Calculations of results.

f. Results of analyses and/or observations.

I, Bruce H. Wolfe, Executive Officer do hereby certify the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the Water Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Water Board Order No. R2-2013-0017.

2. Was adopted by the Water Board on May 8, 2013.

3. May be revised by the Executive Officer pursuant to U.S. EPA regulations (40 CFR 122.36); other revisions may be ordered by the Water Board.

Digitally signed by Bruce H. Wolfe
Date: 2013.05.13 18:02:48 -07'00'

Bruce H. Wolfe
Executive Officer

Attachments: Table E-1
Figure C-1 (see Attachment C, the Monitoring and Adaptive Management Plan.)