

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

ORDER 90-071

**WASTE DISCHARGE REQUIREMENTS FOR:**

**CITY OF SUISUN CITY  
PIERCE ISLAND DREDGE DISPOSAL SITE  
SUISUN CITY, SOLANO COUNTY**

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

1. The City of Suisun City (hereinafter called the discharger) has submitted a Report of Waste Discharge (ROWD), dated February 28, 1990, for the Pierce Island Dredge Disposal Site. The discharger is the site owner and the site operator. The U.S. Army Corps of Engineers San Francisco District has also proposed to dredge approximately 150,000 cubic yards of sediment from Suisun Slough Channel and discharge the dredged material to the Pierce Island Dredge Disposal Site.
2. The Pierce Island Dredge Disposal Site (Attachment A) is a 74 acre basin located in Suisun City. The disposal site is surrounded by Suisun Slough and Suisun Channel. The island was created in 1962 by constructing levees by excavating material from the island area and the channel. The site was constructed and used by Suisun City for the treatment of sewage until 1976. The site was also used by the Corps of Engineers for the disposal of dredged material from Suisun Slough in 1982.
3. The site is a diked off historic bayland that contains hydric soils, is inundated and flooded at a frequency and duration sufficient to support, and under normal circumstances would support, a prevalence of vegetation typically adapted for life in saturated soil conditions. However, wetland beneficial uses are reestablished between disposal operations and in April of 1986 the Corps of Engineers determined that the site had 27.9 acres of wetlands and 9.1 acres of open water area.
4. The discharger has proposed to continue to use the dredge disposal site in perpetuity for the management of dredge material resulting from the maintenance dredging of the marina and the approach channel. The discharger has indicated in the ROWD that it is anticipated that future maintenance dredging will occur approximately every five years. Only dredged sediment from the Suisun City Marina, Suisun Slough and Suisun Channel are proposed for disposal

at the site.

5. The U.S. Army Corps of Engineers, San Francisco District, must issue a permit, pursuant to Section 404 of the Clean Water Act, for the use of the site for the management of dredged material. The Corps of Engineers intends to allow the continued use of the site for the management of dredge spoils without requiring an individual Section 404 permit for each dredging project. The loss of wetland habitat values resulting from the use of the site for the management of dredged material cannot be used to change the jurisdiction of the Corps of Engineers pursuant to Section 404, over the site. Any other proposed use of the site will require an individual Section 404 permit and compliance with applicable requirements for the evaluation of alternatives and mitigation of unavoidable impacts.
6. As mitigation for the loss of 27.9 acres of wetlands and 9.1 acres of open waters the Regional Board's Executive Officer will require the implementation of a mitigation plan that restores 35 acres of viable tidal marsh wetlands. This plan will be submitted to the California Department of Fish and Game for review and comment. This mitigation plan proposes to reconstruct the island by removing the outer levees and restoring Ponds 1, 4, and 5 to tidal action. This will create 35 acres of tidal marsh wetlands. (Attachment B)
7. As mitigation for the loss of open water areas suitable for shorebird habitat this order requires the management of the remaining 35 acres of the site proposed for the management of dredged material (Ponds 2 and 3) in a manner that will also provide open water areas suitable for shorebird use. This Order requires the discharger to submit an operation and management plan for the disposal site area that will minimize adverse impacts of the management of dredged material and maximize the wetland habitat values for shorebird usage when the site is not being used to dry dredged material prior to ultimate offsite disposal. The Regional Board is in the process of considering alternatives for the disposal of dredged material and finds that it is in the public interest to allow the continued use of this site for the management of dredged material from projects sponsored by the City of Suisun City, so long as this is done in a manner to minimize the loss of wetland habitat values.
8. The discharger proposes to discharge dredged material to the disposal site, during the maintenance dredging operations, for drying prior to ultimate offsite disposal of the dredge material. In addition to the discharge of dredged material for drying it is proposed to discharge the decanted water from the disposal site into Suisun Channel via an overflow weir (E001 thru E004) located on the north side of the disposal site. Both of these discharges are discharges of wastes to waters

of the State and the discharge of dredged material to the wetlands of the disposal site degrades the wetland habitat values of the site.

9. The ROWD did not provide any information regarding the groundwater at the site or potential impacts of the disposal operation on the groundwater. This order requires the submittal of a technical report to address this issue.
10. The Regional Board adopted a revised Water Quality Plan for the San Francisco Bay Basin on December 17, 1986 and this Order implements the water quality objectives stated in that plan.
11. The beneficial uses of Suisun Slough, Suisun Channel, and contiguous waters are as follows:
  - a. Navigation
  - b. Water contact recreation
  - c. Non-water contact water recreation
  - d. Warm freshwater habitat
  - e. Wildlife habitat
  - f. Fish spawning
12. The existing and potential beneficial uses of the 74 acres of wetlands which exist in the disposal site are as follows:
  - a. Wildlife habitat
  - b. Preservation of rare and endangered species
  - c. Estuarine habitat
  - d. Non-contact water recreation
  - e. freshwater habitat
13. This project constitutes a minor modification to land for the continued operation of an existing landfill, with changes to meet public health and safety standards, and is therefore categorically exempt from the provisions of the California Environmental Quality Control Act (CEQA) pursuant to Sections 15301 and 15304 of the Resources Agency Guidelines. The City of Suisun City has also prepared an EIR, dated August 1984, for the use of Pierce Island for the management of dredged material. This EIR identified the loss of wetlands and proposes the mitigation measures outlined above.
14. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge, and has provided them with an opportunity to submit their written views and recommendations.
15. The Board in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the City of Suisun City shall meet the

provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and shall also comply with the following:

**A. EFFLUENT LIMITATIONS**

The wastewater overflow as discharged to waters of the State from the land disposal site via discharge stations E001 thru E004 shall meet the following limits of quality at all times:

- |                      |             |         |
|----------------------|-------------|---------|
| a. Settleable matter | 1.0 ml/l-hr | maximum |
| b. pH                | 6.5-8.5     |         |
| c. Dissolved sulfide | 0.1 mg/l    | maximum |

**B. RECEIVING WATER LIMITATIONS**

1. The dredging, treatment, and/or disposal of waste shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. The dredging and/or disposal of waste shall not cause:
  - a. Floating, suspended, or deposited macroscopic particulate matter or foam in waters of the State at any place more than 100 feet from the dredge or point of discharge of the return flow.
  - b. Bottom deposits or aquatic growth in waters of the State at any place.
  - c. Alteration of apparent color beyond present natural background levels in waters of the State at any place more than 100 feet from the dredge or point of discharge of the return flow.
  - d. Visible floating, suspended, or deposited oil or other products of petroleum origin in waters of the State at any place.
  - e. Waters of the State to exceed the following quality limits at any point:

Dissolved Oxygen                      5.0 mg/l minimum.

When natural factors cause lesser concentrations than this discharge shall not cause further reduction in the concentration of dissolved oxygen.

Dissolved Sulfide  
pH

0.1 mg/l maximum  
A variation from natural ambient pH by more than 0.2 pH units.

Toxic or other deleterious substances

None shall be present in concentrations or quantities which may cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

3. The turbidity of the waters of the State at any point beyond 100 feet from the point of discharge of the return flow shall not increase above background levels by more than the following:

Receiving Water Background

Incremental Increase

<50 units  
50-100 units  
>100 units

5 units, maximum  
10 units, maximum  
10% of background, maximum

C. PROVISIONS

1. The discharge of silt, sand, soil, clay, or other earthen materials from dredging, construction, or any other onshore operation in quantities sufficient to cause deleterious bottom deposits or turbidity or discoloration in excess of natural background levels in surface waters is prohibited.
2. Dredging operations shall cease immediately whenever violations of requirements are detected by the Self Monitoring Program (SMP) and operations shall not resume until alternative methods of compliance are provided. The discharger shall notify the Regional Board immediately whenever violations are detected and operations shall not resume until the Executive Officer has approved of the corrective action plan that will provide alternative methods of compliance.
3. The discharger shall file with the Regional Board monthly self-monitoring reports performed according to any Self Monitoring Program issued by the Executive Officer.
4. All reports pursuant to these Provisions shall be prepared under the supervision of a registered civil engineer or certified engineering geologist.
5. The dredge disposal site shall be designed, constructed and operated to prevent inundation, washout or erosion of

wastes which could occur as a result of a 100 year 24 hour precipitation event or flood event.

6. The discharger shall ensure to the extent practicable that the foundation of the site, the levees surrounding the site, and the structures which control leachate, surface drainage, and erosion for this site are constructed and maintained to withstand conditions generated during the maximum probable earthquake.
7. The discharger shall install any and leachate monitoring devices required to fulfill the terms of any Self-Monitoring Program issued to the discharger in order that the Board may evaluate compliance with the conditions of this Order.
8. The discharge of hazardous, designated, nonhazardous, and inert wastes, as defined in Title 23, Chapter 3, Subchapter 15 of the California Administrative Code, to the disposal site is prohibited. Only dredged material that has been demonstrated to be nonhazardous may be discharged to the disposal site.
9. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.
10. The discharger shall file with this Board a report of any material change or proposed change in the character, location, or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries of the disposal areas or the ownership of the site.
11. The discharger shall maintain a copy of this Order at the site so as to be available at all time to site operating personnel.
12. This Board considers the property owner and site operator to have continuing responsibility for correcting any problems which arise in the future as a result of this waste discharge or related operations.
13. The discharger shall maintain all devices or designed features installed in accordance with this Order such that they continue to operate as intended without interruption except as a result of failures which could not have been reasonably foreseen or prevented by the discharger.
14. The discharge of dredged material to the land disposal site from any and all dredging projects is subject to the approval of the Executive Officer. Approval to discharge shall be based upon the chemical characteristics of the dredged sediment as determined by following the November 1987 "Interim Testing Procedure for Evaluating Dredged Material Suitability for Open Water Disposal in San Francisco

Bay". Only sediment to be disposed at the unconfined aquatic disposal sites in San Francisco Bay needs to be characterized according to the Interim Testing Procedure. The Executive Officer may require waste extraction testing of the dredged sediment in lieu of the bioassay requirements of the Interim Testing Procedures.

15. The ultimate offsite disposal of the dried dredged material is subject to the approval of the Executive Officer. This approval shall be based upon a demonstration that the ultimate disposal will occur at a site that has Waste Discharge Requirements (WDR) from this Regional Board or a site that has received a waiver of WDR.
16. The discharger has proposed a staged project construction involving the preparation of Pond 3 for the initial dredged material disposal along with the wetland mitigation proposed for the outboard margin of this pond. The design of Ponds 1, 4 and 5 shall proceed immediately following a determination of the feasibility of providing maximum habitat value.
17. The discharger shall submit, by January 1, 1991, a management and operations plan for the dredge disposal site which provides for the management and continued practical use of the dredge disposal site while maintaining wetland habitat values to the extent possible consistent with the use of the site for the deposit and management of dredged material. This mitigation plan shall be submitted to the California Department of Fish and Game for review and comment.
18. The discharger shall submit, by January 1, 1991, a levee maintenance plan that will ensure the integrity of the levees surrounding the site and compliance with these requirements.
19. The discharger shall permit the Regional Board or its authorized representative, upon presentation of credentials:
  - a. Entry upon the premises on which wastes are located or in which any required 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 treatment equipment, monitoring equipment, or monitoring method required by this Order.
  - d. Sampling of any discharge or groundwater covered by this Order.
20. These requirements do not authorize commission of any act causing injury to the property of another or of the

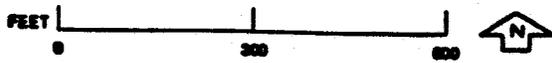
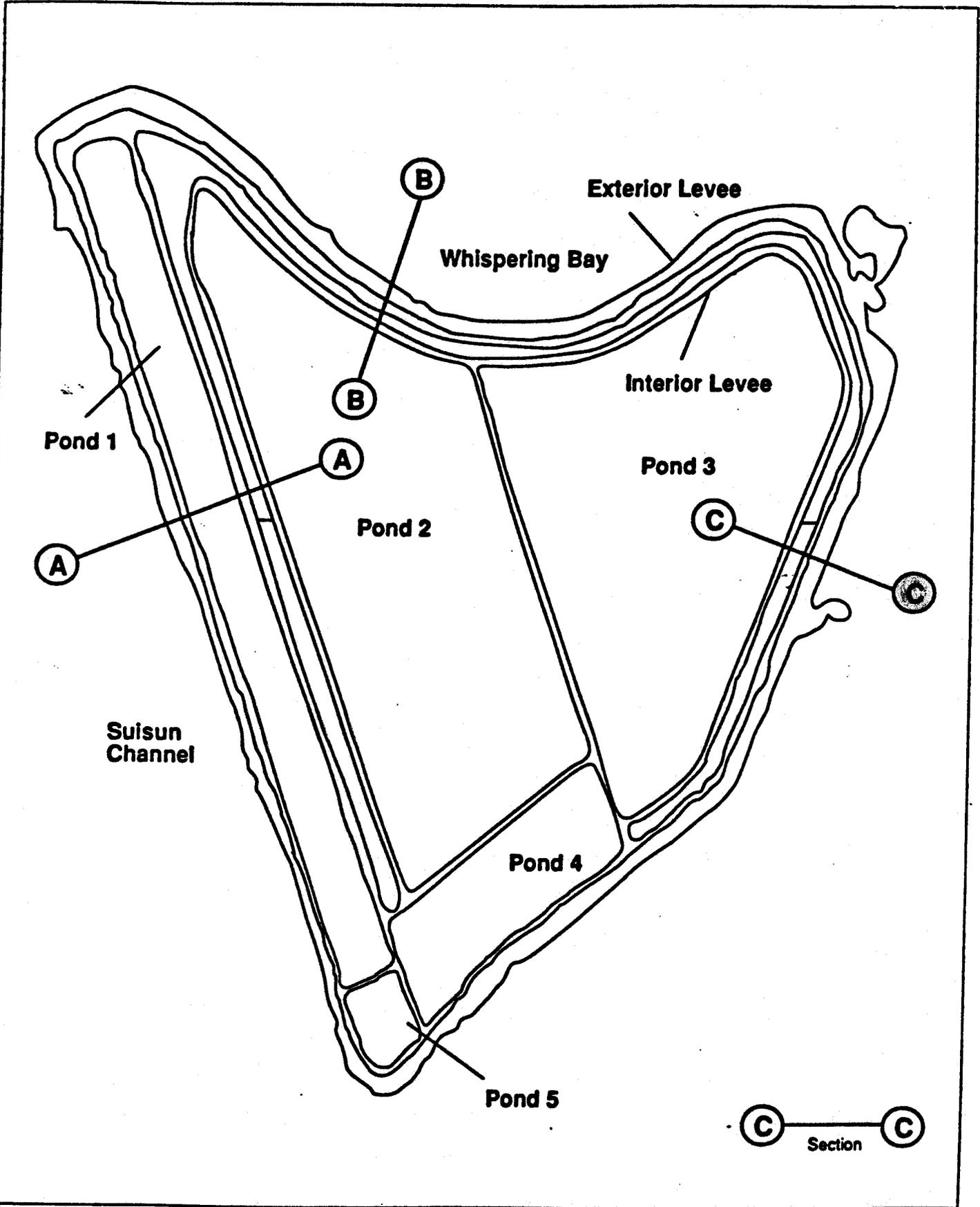
public; do not convey any property rights; do not remove liability under federal, state or local laws; and do not authorize the discharge of wastes without appropriate permits from other agencies or organizations.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on 16 May 1990.

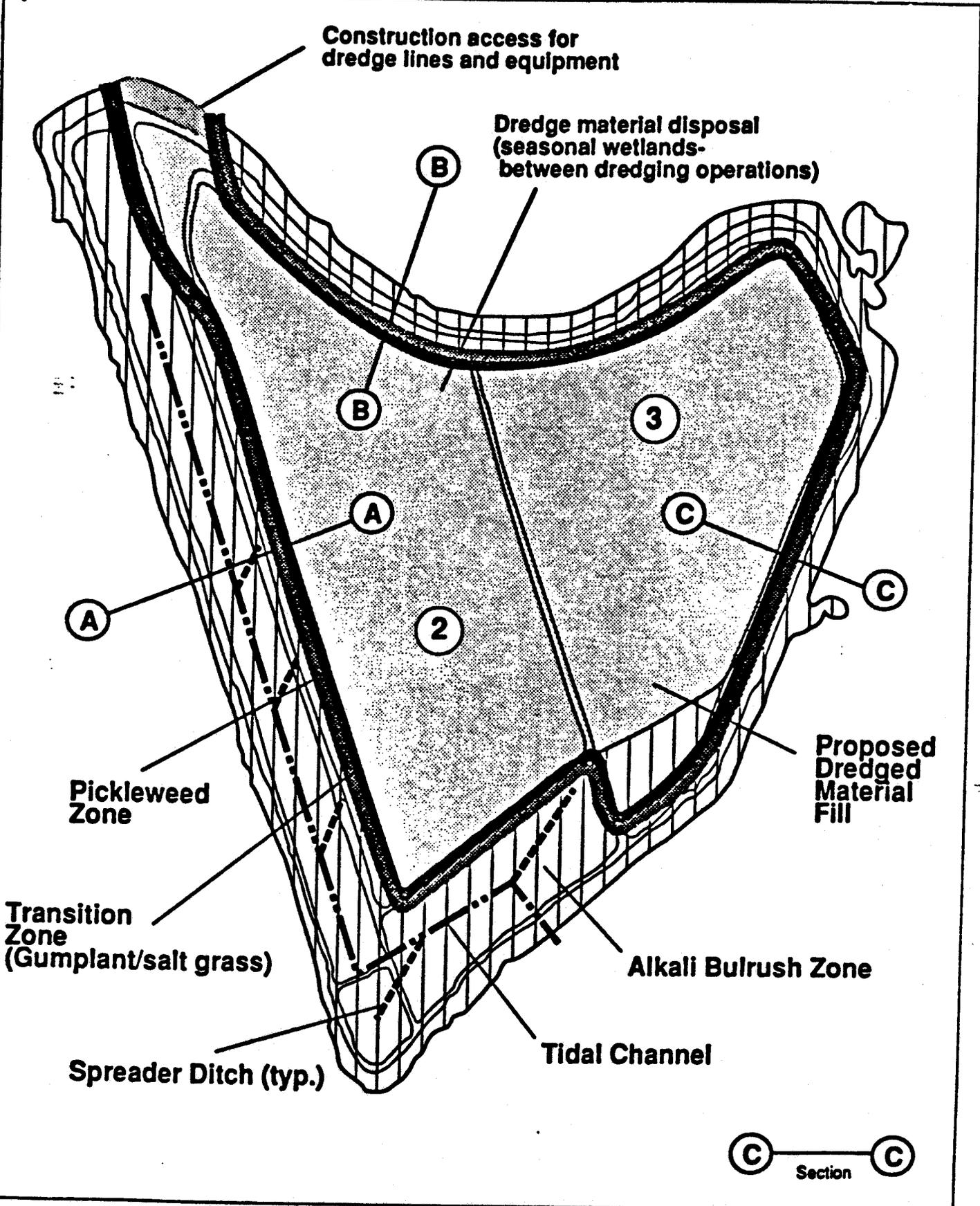
  
for Steven R. Ritchie  
Executive Officer

Attachments: A&B) Site maps  
C) Self Monitoring Program

# PIERCE ISLAND WASTEWATER TREATMENT PONDS



# CONCEPTUAL WETLAND RESTORATION AND ENHANCEMENT PLAN



**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

**SELF-MONITORING PROGRAM**

**FOR**

**CITY OF SUISUN CITY  
PIERCE ISLAND DREDGE DISPOSAL SITE**

**PART A**

**A. GENERAL**

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No.73-16. This Self-Monitoring Program is issued in accordance with Section D.3 of Regional Board Order No. 90-071.

The principal purposes of a self-monitoring program by a waste discharger are: (1) to document compliance with waste discharge requirements and prohibitions established by the Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of effluent standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

**B. SAMPLING AND ANALYTICAL METHODS**

Sample collection, storage, and analyses shall be performed according to 40 CFR 136 or methods approved by the Executive Officer

Water and waste analysis shall be performed by a laboratory approved for these analyses by the State Department of Health. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

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

### C. DEFINITION OF TERMS

1. A grab sample is a discrete sample collected at any time.
2. Receiving waters(s) refers to any water which actually or potentially receives surface or groundwaters which pass over, through, or under waste materials or contaminated soils. In this case the groundwater beneath and adjacent to the dredge disposal site, the surrounding surface drainage ditches, Suisun Slough, and Suisun Channel are considered the receiving waters.
3. Standard observations refer to:
  - a. Receiving Waters
    - 1) Discoloration and turbidity: description of color, source, and size of affected area.
    - 2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
    - 3) Evidence of beneficial use: presence of water associated wildlife.
    - 4) Flow rate.
    - 5) Weather conditions: wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.
  - b. Perimeter of the waste management unit.
    - 1) Evidence of liquid leaving or entering the waste management unit, estimated size of affected area and flow rate. (Show affected area on map)
    - 2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
    - 3) Evidence of erosion.
4. Standard analysis and measurements refer to:
  - a. pH
  - b. Settleable Solids ml/l/hr
  - c. Dissolved sulfide
  - d. Total Suspended Solids
  - e. Arsenic
  - f. Total Chromium
  - g. Copper

- h. Cadmium
- i. Nickel
- j. Zinc
- k. Lead
- l. Mercury
- m. Silver
- n. Total Polynuclear Aromatic Hydrocarbons (PAHs)
- o. Total Phenols

**D. SCHEDULE OF SAMPLING, ANALYSIS, AND OBSERVATIONS**

The discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B.

**E. RECORDS TO BE MAINTAINED**

Written reports shall be maintained by the discharger, and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board. Such records shall show the following for each sample:

1. Identity of sample and sample station number.
2. Date and time of sampling and the person performing the sampling.
3. Date and time that analyses are started and completed, and name of the personnel performing the analyses.
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used. A reference to a specific section of a reference required in Part A Section B is satisfactory.
5. Calculation of results.
6. Results of analyses, and detection limits for each analyses.

**F. REPORTS TO BE FILED WITH THE REGIONAL BOARD**

1. Written self-monitoring reports shall be filed each month by the fifteenth day of the following month. In addition an annual report shall be filed as indicated in F.2 The reports shall be comprised of the following:
  - a. Letter of Transmittal

A letter transmitting the essential points in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the past month

and actions taken or planned for correcting the violations, such as operation modifications and/or facilities expansion. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last quarter this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting reports shall be signed by the City Manager and a principal executive officer at the level of Vice President or their duly authorized representative if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the officials, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

- b. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.
  - c. Laboratory statements of results of analyses specified in Part B must be included in each report. The laboratory director shall sign the laboratory statement of analytical results.
  - d. The quantity of dredged material disposed of during the past month, and the locations of the disposal operations.
  - e. The quantity of dredged material disposed of during the past month and the locations of the disposal operations.
  - f. An evaluation of the effectiveness of the operations and management plan to maintain wetland habitat values.
2. By January 31 of each year the discharger shall submit an annual report to the Regional Board covering the previous calendar year. This report shall contain:
- a. Tabular and graphical summaries of the monitoring data obtained during the previous year.
  - b. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements.
  - c. A map showing the area, if any, in which filling has been completed during the previous calendar year.

- d. An evaluation of the effectiveness of the operations and management plan to maintain wetland habitat values. This should include estimates of bird usage and percent vegetative cover and water area.

Part B

1. DESCRIPTION OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS

A. Land Observations

STATION	DESCRIPTION	OBSERVATIONS	FREQUENCY
P-1 thru P-'n' (perimeter)	Located at equidistant intervals not exceeding 200 feet around the perimeter of the waste management unit.	Standard observations for the perimeter and receiving waters.	Weekly

A map showing perimeter compliance points (P stations) shall be submitted by the discharger in the monthly monitoring report.

B. Seepage Monitoring

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
S-1 thru S-'n' (seepage)	At any point(s) at which seepage is found occurring from the waste management unit.	Standard observations for the perimeter, and standard analysis.	Daily until remedial action is taken and seepage ceases.
CU-1 (receiving waters, upstream)	Located in Suisun Channel and Slough at the site 200 feet upstream from the upper most point of seepage discharge(s).	Standard observation for receiving waters and standard analysis.	Daily, during a seepage event.
CD-1 thru CD-'n' (receiving waters downstream)	Located in drainage ditches surrounding the site and Suisun Channel 200 feet downstream of seepage discharge(s).	Same as receiving waters upstream.	Daily during a seepage event.

C. Effluent Monitoring

STATION	DESCRIPTION	OBSERVATION/ ANALYSIS	FREQUENCY
E001-E004	Four discharge weirs as shown on attached map. Composite sample of two grab samples collected at the beginning and the end of the day.	Standard analyses.*	Monthly*

\*pH, dissolved sulfide, settleable solids & Total Suspended Solids shall be monitored daily. The Standard Analyses for this discharge also includes a monthly bioassay, according to a method acceptable to the Executive Officer.

D. Receiving Water Monitoring

STATION	DESCRIPTION	OBSERVATION/ ANALYSIS	FREQUENCY
C-1-E & C-2-E	100 feet upcurrent & downcurrent of E001-E004 discharge in Suisun Channel. Grab Samples.	Standard Observations for receiving waters and Standard Analyses a, b, & c. *	Weekly

\*Standard Analyses for this receiving water monitoring shall also include dissolved oxygen in mg/l and turbidity in NTU.

2. CONTINGENCY REPORTING

A report shall be made by telephone of any seepage from the disposal area immediately after it is discovered. A written report shall be filed with this Board within five days. This report shall contain the following information: 1) a map showing the location(s) of discharge, 2) approximate flow rate, 3) nature of effects; i.e. all pertinent observations and analyses, and 4) corrective measures underway or proposed.

3. CONTINGENCY MONITORING

In addition to weekly Standard Observation No. 3.a.3 for the Receiving Waters the discharger shall monitor and report on the wetland habitat values of the dredge disposal site. This

shall include the approximate number and species of birds using the site. The SMP report shall include an evaluation of wetland habitat values and the ability of the operations plan to maintain wetland habitat values. The report should also discuss the percentage of the 112 acre site that was available and used as wetland habitat during the previous monitoring period and provide a proposed time line for when the dredged material will be removed and the habitat values of the entire site restored prior to the next proposed dredging project. A discussion of problems encountered and corrective actions taken shall also be included. A map of the site showing ponded water areas, and the areas with wetland vegetation indicators, should be included in the report.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 90-071.
2. Is effective on May 18, 1990.
3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer, or request from the discharger.

*for*   
Steven R. Ritchie  
Executive Officer