

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2003-0017

FOR  
VILLAGE WEST MARINA MAINTENCE DREDGING PROJECT  
SAN JOAQUIN COUNTY

This monitoring program includes dredge site monitoring, effluent (return-water) monitoring and receiving water monitoring.

**DREDGE SITE RECEIVING WATER MONITORING**

Grab samples shall be taken from the following stations:

<u>Station</u>	<u>Description</u>
<b>R-1</b>	located in an unaffected area outside of the marina, and not to exceed 3000 feet from the dredge.
<b>R-2</b>	located inside the marina within 300 feet of the dredge suction head.

The first set of samples shall be reported within 72 hours, monitoring may be adjusted according to results. Samples shall be collected and analyzed from Stations R-1 and R-2 as follows:

<u>Constituent/ analysis</u>	<u>Units</u>	<u>Sampling Frequency</u>
Turbidity	NTUs	Daily
Dissolved Oxygen	mg/l	Daily
Arsenic	µg/l (filtered)	Every Fifth Day

**DMD SITE EFFLUENT MONITORING**

The effluent from the sedimentation basin or Dredged Material Disposal (DMD) site shall be monitored at the overflow weir or discharge pipe during discharge. The initial set of samples shall be collected within 24 hours and reported within 72 hours from initiation of discharge. Subsequent samples shall be collected from the effluent discharge and analyzed according to the following schedule:

<u>Constituent/ analysis</u>	<u>Units</u>	<u>Sampling Frequency</u>
Flow	MGD	Daily
pH		Daily
Suspended solids	mg/l	Every Third Day

<u>Constituent/ analysis</u>	<u>Units</u>	<u>Sampling Frequency</u>
Turbidity	NTU	Daily
Dissolved Oxygen	mg/l	Daily
Temperature	°F	Daily
*Arsenic	µg/l (filtered)	Every Fifth Day
*Tributyltin	µg/l (filtered)	Every Fifth Day
*Chronic bioassays		Initial Sample
*Acute bioassays		Initial Sample

\* Constituents to be monitored with initial sampling and reporting within 72 hours of discharge. Bioassays shall be conducted on initial samples and reported immediately following analysis, additional monitoring may be required contingent on results.

### RECEIVING WATER MONITORING FOR THE DMD SITE DISCHARGE

Grab samples shall be taken from the following stations:

<u>Station</u>	<u>Description</u>
<b>R-3</b>	located in an area undisturbed by the effluent discharge from the DMD site.
<b>R-4</b>	located within 300 feet of the discharge point and on the same side of 14-Mile Slough as the discharge point.

Samples shall be collected and analyzed from Stations R-3 and R-4 as follows:

<u>Constituent/ analysis</u>	<u>Units</u>	<u>Sampling Frequency</u>
pH		Daily
Turbidity	NTU	Daily
Dissolved Oxygen	mg/l	Daily
Temperature	°F	Daily
Suspended solids	mg/l	Every Fifth Day
Arsenic	µg/l (filtered)	Every Fifth Day

### REPORTING

The following constituents shall have monitoring performed with field equipment at the dredge site, in the effluent and in the receiving water with violations reported to Regional Board staff immediately:

Flow	pH
Dissolved Oxygen	Temperature
Turbidity	

The following are the "normal" expected turnaround times for laboratory analysis:

Total Suspended Solids	3 days after sample collection
Acute bioassays	7 days after sample collection
Chronic bioassays	21 days after sample collection
Other analyses	14 days after sample collection

Sample holding times must be observed according to U.S. EPA recommendations. Regional Board staff may ask for shorter turnaround times in cases where there is potential for the effluent to exceed water quality objectives in the receiving water and to impair beneficial uses (i.e. Arsenic and Tributyltin).

The Discharger shall immediately notify the Board by telephone whenever a violation or adverse condition occurs as a result of the dredging and disposal operation or the discharge of effluent. Written confirmation shall follow within 2 weeks.

If the project is in operation for more than one month, monthly Self Monitoring Reports shall be submitted to Regional Board Staff no more than 15 days after the end of the month. The Self Monitoring Reports shall include:

1. The date, exact place, time of sampling and the name of the person taking the sample.
2. The dates analyses were performed and the name of the person who performed the analyses.
3. Analytical techniques/methods used.
4. Results of the analyses.

The Discharger shall compile and summarize the data from the Self Monitoring Reports and submit an Annual Report to Board staff within 30 days of project completion.

The Discharger shall implement the above monitoring program on the effective date of this Program.

Ordered by: \_\_\_\_\_  
THOMAS R. PINKOS, Executive Officer

\_\_\_\_\_  
31 January 2003

(Date)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO. R5-2003-0017

WASTE DISCHARGE REQUIREMENTS

FOR

VILLAGE WEST MARINA INVESTORS,  
PEGASUS GROUP GENERAL PARTNERS, CITY OF STOCKTON  
VILLAGE WEST MARINA MAINTENANCE DREDGING PROJECT  
SAN JOAQUIN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board) finds that:

1. The Village West Marina Investors, Pegasus Group General Partners, and the City of Stockton (hereafter referred to as the Discharger) submitted a Report of Waste Discharge, dated 19 April 2001 for the Village West Marina Dredging Project. The Marina is adjacent to 14-mile Slough within the town of Stockton in San Joaquin County.
2. The maintenance dredging activities regulated in this Order include dredging the Village West Marina basin, disposal of dredged sediments into a diked disposal site on land (Dredged Material Disposal site), discharges of effluent from the Dredged Material Disposal (DMD) site into surface water, and water quality monitoring during the dredging operation.
3. The project is proposed to remove 30 years of accumulated sediments and restore hazard-free boating and access to the marina.
4. These Waste Discharge Requirements are for dredging activities within the Village West Marina basin, using one specified DMD site on the Wright Elmwood Tract adjacent to 14-Mile Slough within the Sacramento-San Joaquin Delta.
5. The dredging operation will involve the use of a pipeline hydraulic suction dredge for maintaining needed depth for boating and marina access. The hydraulic dredging method greatly reduces the amount of turbidity within the water column. This Order only allows the use of a hydraulic suction dredge.
6. Approximately 70,000 cubic yards of sediment will be removed from the Village West Marina basin, restoring the basin to its original design depth of -10 Mean Low Low Water. Following the completion of dredging operations, this Order will be rescinded.

7. During excavation, a pipeline will transport the dredged material slurry to the DMD site for settling and disposal. The DMD site is a 50.5 acre former wastewater treatment basin (Parcel No. 71-140-17) owned by the City of Stockton. In the DMD site, solids will settle out and the “effluent” or “return water” will be discharged back into 14-Mile Slough by pump. The DMD site is designed for a 96-hour holding time to remove a significant portion of suspended material from the effluent. The disposal site has a maximum dredge material capacity of 125,000 cubic yards.
8. A pump will be used to decant water back to 14-Mile Slough. Noise levels generated by dredging and water return pumps will be in compliance with the San Joaquin County noise standard of 65 decibels for maximum outdoor noise levels in residential areas. Equipment soundproofing may be used to achieve compliance with the noise level standard.
9. The estimated rate of effluent discharge during the dredging operation is as follows:
 

Effluent Average Flow (into receiving water):	2.70 mgd
Effluent Maximum Flow (into receiving water):	3.00 mgd
10. The DMD site will fully contain dredged material and prevent any surface runoff or erosion into waters of the state, except for the effluent discharge described in Section D of this Order. After drying, the material may be removed for reuse at other locations.
11. The Discharger has performed analytical analyses of sediments to be dredged in order to determine the anticipated sediment quality during dredging operations. The sediment constituents and average concentrations found in dredge material are listed below.

<b>Constituent</b>	<b>Average Concentration</b>		
	<b>Solid analysis (mg/kg)</b>	<b>DI extraction (µg/l)</b>	<b>Modified elutriate test (µg/l)</b>
Antimony	ND (<1ppm)	1.0	
Arsenic	3.3	1.0	12.5
Barium	109.0	66.1	
Cadmium	ND (<0.3 ppm)	ND (<1 ppb)	ND (<0.04 ppb)
Chromium	21.3	1.7	ND (<0.01 ppb)
Copper	21.9	5.7	1.4
Lead	7.9	0.4	ND (<0.5 ppb)
Mercury	0.04	ND (<1 ppb)	0.039
Nickel	18	2.0	ND (<1 ppb)
Selenium	ND (<0.5 ppm)	ND (<2 ppb)	
Thallium	ND (<0.5 ppm)	ND (<0.2 ppb)	
Zinc	41	9	ND (<5 ppb)

Constituent	Average Concentration		Modified elutriate test (µg/l)
	Solid analysis (mg/kg)	DI extraction (µg/l)	
Tributyltin	0.05		25 ng/L (24 hour)
Polyaromatic Hydrocarbons	ND		ND
Polychlorinated biphenyls	ND		ND
Organochlorine pesticides	ND		ND

\*\* Averages of detected and non-detectable results were computed with non-detectable levels assumed to be 0.

12. Results from the pre-dredge solids analysis and DI extraction tests indicate that sediments will not contain pollutants at concentrations in excess of applicable screening values. Modified elutriate analysis indicate the potential for soluble arsenic in the effluent from the DMD to be 12.5 ppb, which is 2.5 ug/l above Receiving Water Limits.
13. Flows within 14 Mile Slough are influenced by tidal change. Tidal flow rate calculations and average background concentrations of soluble arsenic indicate dilution will result in an estimated soluble arsenic concentration of 1.9 ug/L within 14-Mile Slough. The Basin Plan Objective for arsenic within the Sacramento-San Joaquin Delta is 10 ug/L. Although there will be monitoring during the dredging operation, this project is not expected to exceed Receiving Water Limits for arsenic.
14. Solids analysis indicated the presence of Tributyltin (TBT) in the sediment. The modified elutriate analysis indicate that levels of TBT in the supernatant are below water quality objectives after settling. TBT is an antifouling compound commonly found in marine paints. TBT is toxic to aquatic organisms and bioaccumulates in the aquatic environment. Characteristics of TBT promote sorbtion to sediments, although agitation through hydraulic dredging can partition TBT into the dissolved phase. Pre-dredge testing indicates that TBT is likely to resorb to the sediments within 24 hours and the effluent is not likely to exceed water quality objectives. TBT is not likely to leach from the material at the disposal site. Bacteria or ultraviolet light readily degrade TBT in the upland environment. The expected ½ life of TBT in aerobic environments (upland) is 1 to 3 months compared with approximately 2 years under anaerobic conditions (in-water). Although monitoring will be required, TBT is not expected to exceed water quality objectives or cause any environmental impacts in the upland disposal site or reuse areas where there is no substantial runoff to waterways.
15. The predredge testing of TBT indicated a minimum holding time of 24 hours at the DMD site to allow adequate settling of TBT. The DMD site is designed to allow for a 96 hour holding time.

16. Solids analysis of representative sediment samples indicate that the dredge material is suitable for unrestricted beneficial reuse in the upland environment, and will not pose a threat to human health nor the ecosystem. The material should not be reused where substantial amounts of dredge material could runoff into the waterways, as the high levels of solid-phase TBT may pose a threat to benthic organisms in the aquatic environment.
17. The Board adopted a Water Quality Control Plan, Fourth Edition, for the Sacramento River Basin and the San Joaquin River Basin (hereafter Basin Plan), containing beneficial uses, water quality objectives, and implementation programs for waters of the Basin. These requirements implement the Basin Plan.
18. The beneficial uses of the Sacramento-San Joaquin Delta as identified in Table II-1 of the Basin Plan are: municipal and domestic supply, agricultural uses, industrial process supply, industrial service supply, body contact and other non-body contact recreation, warm and cold freshwater aquatic habitat, warm and cold water fish migration habitat, warm water spawning habitat, wildlife habitat, and navigation.
19. The beneficial uses of the ground water are: municipal and domestic supply, agricultural supply, industrial process supply, and industrial service supply.
20. The U.S. EPA adopted the California Toxics Rule (CTR) on 18 May 2000, which together with the U.S. EPA National Toxics Rule (NTR), provide enforceable numeric water quality criteria for priority toxic pollutants. The *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, hereafter referred to as the State Implementation Plan, was adopted in March 2000 by the State Water Board. It provides implementation requirements for the CTR and NTR criteria and was followed as appropriate in the development of this permit. CTR and NTR standards may be incorporated in this Order to implement the narrative objectives of the Basin Plan.
21. The Discharger submitted information about the probable constituents of concern and their anticipated concentrations in the dredged material, effluent, and receiving water. The Board finds that the effluent discharges are not likely to cause or contribute to a violation of applicable water quality objectives and CTR/NTR criteria.
22. Dredging operations may cause some degradation to the waters of the State. Dredging operations cause only temporary impacts to surface waters, as dredging and effluent discharge occur only a few weeks out of the year. Since the effluent contains only water and sediment that originated in the water body, it does not constitute a new source of pollutants. However, dredging may cause temporary degradation of turbidity, total suspended solids, dissolved oxygen and elevated levels of some constituents. The dredging project covered under this Order will not exceed any applicable water quality objectives. Maintenance dredging of the

Village West Marina basin is necessary to maintain hazard-free boating, and access to the marina.

23. The effluent discharges are consistent with the antidegradation provisions of 40 CFR 131.12 and SWRCB Resolution 68-16.
24. Maintenance dredging activities are exempt from the provisions of the CEQA in accordance with Title 14, CCR, Section 15304(g). The Central Valley Regional Water Quality Control Board adopted an Initial Study/Negative Declaration for the Village West Marina Maintenance Dredging Project on 7 September 2001, to address potential impacts from the disposal of dredge material into the DMD.
25. Pre-dredge testing provided assurance that dredged sediments will not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives and CTR/NTR criteria. The dredge sediments will be classified as Inert Waste as defined in Title 27 Subchapter 2 Section 20230 of the California Code of Regulations. Inert wastes do not need to be discharged at classified waste management units, therefore Title 27 waste discharge requirements are not required for this project. Pursuant to Title 27, Section 20230 of the California Code of Regulations, the Board can prescribe individual or general waste discharge requirements.
26. The U.S. Army Corps of Engineers will issue a Section 10 permit (Rivers & Harbors Act) for dredging operations and a Clean Water Act Section 404 permit for the discharge of the "effluent" to surface waters. Therefore, these dredging operations are exempt from NPDES regulations, but require a Clean Water Act Section 401 Water Quality Certification to be issued by the Board.

### **PROCEDURAL REQUIREMENTS**

27. The following agencies also have jurisdiction over this dredging and disposal project:
  - California Department of Fish and Game
  - National Marine Fisheries Service
  - United States Fish and Wildlife Service
  - United States Army Corps of Engineers
  - State Lands Commission
28. The Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge, and provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.



29. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.
30. Any person adversely affected by this action of the Board may petition the State Water Resources Control Board to review the action. The petition must be received by the State Board within 30 days of the date of issuance of this Order. Copies of the law and regulations applicable to filing the petition will be provided on request.

IT IS HEREBY ORDERED that Village West Marina, Village West Marina Dredging Project, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

**A. APPLICABILITY**

1. All dredging discharges covered by this Order shall be limited to maintenance dredging activities associated with Village West Marina as identified in Finding Nos. 2, 4 and 6 above.
2. The dredging operation shall use a pipeline hydraulic cutter-head suction dredge.

**B. PROHIBITIONS**

1. The discharge of 'hazardous waste' or 'designated waste' is prohibited. For the purposes of this Order, the term 'hazardous waste' is as defined in Title 23, California Code of Regulations, Section 2510 et seq., and 'designated waste' is as defined in California Water Code Section 13173.
2. The discharge of dredged materials other than to a Dredged Material Disposal site specifically designed for their containment is prohibited.
3. The discharge shall not cause the release of pollutants, or waste constituents in a manner that could cause a condition of nuisance, contamination, or pollution of groundwater to occur.
4. The discharge of solid waste, liquid waste, leachate, or waste constituents shall neither cause nor contribute to any contamination, pollution, or nuisance to surface waters, ponded water, or surface water drainage courses, including, but not limited to:
  - a. floating, suspended, or deposited macroscopic particulate matter or foam;

- b. increases in bottom deposits or aquatic growth;
  - c. exceedances of water quality objectives for temperature, turbidity, or color that causes nuisance or adversely affects beneficial uses;
  - d. the creation or contribution of visible, floating, suspended, or deposited oil or other products of petroleum origin; and
  - e. the introduction or increase in concentration of toxic or other contaminants/pollutants resulting in impairment of beneficial uses of waters of the State.
5. The direct discharge of wastes to surface waters or surface water drainage courses other than effluent from the DMD site (described in Section D) is prohibited.
  6. The discharge of sanitary waste to the DMD sites is prohibited.

**C. DISCHARGE SPECIFICATIONS**

(For discharge of dredged materials into Dredged Material Disposal Site)

1. The discharge of dredged materials shall only be to the site identified in Finding No. 7 of this Order.
2. The discharge to the DMD site shall consist solely of inert waste as defined by Title 27, Chapter 3, Section 20230 of the California Code of Regulations.
3. The discharge of any materials generated during dredging operations shall not cause a nuisance or condition of pollution as defined by the California Water Code.
4. The discharge shall not cause concentrations of any materials that are deleterious to animals, aquatic, human or plant life in adjacent water bodies.
5. The discharge shall not cause the pollution or contamination of any water supply.
6. The discharge shall not alter the apparent color of adjacent water bodies such that it causes nuisance or adversely affects beneficial uses.
7. The discharge to the DMD site shall consist solely of sediment and water produced from dredging operations.

8. Appropriate soil erosion control measures shall be made and maintained to prevent discharge of sediment to surface waters or surface water drainage courses from disturbed areas at the DMD site.
9. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the activity area.
10. Newly constructed or rehabilitated levees at the DMD sites shall be designed and constructed under the direct supervision of a California Registered Civil Engineer.
11. All retention dikes or levees shall be so constructed and maintained to prevent sloughing that causes turbidity in excess of Receiving Water Limitations.
12. The discharge shall remain within the designated disposal area at all times, except for effluent discharges specified in Section D Effluent Limitations. After drying, the solid material may be removed for beneficial reuse at other locations.

**D. EFFLUENT LIMITATIONS**

(Return flows from the Dredged Material Disposal Site to the specified receiving water)

1. The effluent discharge from the Dredge Material Disposal site is subject to the following flow limitations:
  - The average daily flow shall not exceed 2.70 mgd.
  - The maximum daily flow shall not exceed 3.00 mgd.
2. The discharge shall not have a pH less than 6.5 nor greater than 8.5.
3. Concentrations of dissolved oxygen in the effluent shall not fall below 5.0 mg/l.
4. The effluent shall not contain any constituent at concentrations that could cause acutely toxic conditions to aquatic life nor adversely impact biologically sensitive or critical habitats.
6. The point of compliance for effluent limitations is the point just before the effluent enters the receiving water.

**E. RECEIVING WATER LIMITATIONS:**

Receiving water limitations implement Water Quality Objectives in applicable water quality control plans. As such, they are a required part of this Order.

In the following limitations, the discharge is defined as the effluent from the DMD sites and/or sediment released to the receiving waters from the dredge cutting head. The Discharger shall not cause the following Receiving Water Limits to be exceeded in the receiving water:

1. Concentrations of dissolved oxygen to fall below 5.0 mg/l.
2. Oils, greases, waxes, or other materials to form a visible film or coating on the water surface or on the stream bottom.
3. Oils, greases, waxes, floating material (liquids, solids, foams, and scums) or suspended material to create a nuisance or adversely affect beneficial uses.
4. Toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal or aquatic life.
5. Aesthetically undesirable discoloration.
6. Fungi, slimes, or other objectionable growths.
7. The normal ambient pH to fall below 6.5, exceed 8.5 or change by more than 0.5.
8. Deposition of material that causes nuisance or adversely affects beneficial uses.
9. The normal ambient temperature to increase more than 5° F.
10. The discharge shall not cause an increase in turbidity exceeding the following limits in the receiving water:
  - a. 1.0 Nephelometric Turbidity Units (NTUs) where natural turbidity is between 0 and 5 NTUs;
  - b. 20 percent where natural turbidity is between 5 and 50 NTUs;
  - c. 10 NTUs where natural turbidity is between 50 and 100 NTUs;
  - d. 10 percent where natural turbidity is greater than 100 NTUs.
11. Taste or odor-producing substances to impart undesirable tastes or odors to domestic or municipal water supplies, or to fish flesh or other edible products of aquatic origin or to cause nuisance or otherwise adversely affect beneficial uses.
12. Violation of any applicable water quality objective for receiving waters adopted by the Board or the SWRCB, or to CTR/NTR criteria promulgated by the USEPA, pursuant to the Clean Water Act and regulations adopted thereunder.

**F. PROVISIONS**

1. Pursuant to Section 13267 of the California Water Code, the Discharger may be required to submit technical reports as directed by the Executive Officer.
2. The Discharger shall comply with the attached Monitoring and Reporting Program No. R5-2003-0017, which is part of this Order, and any revision thereto as ordered by the Executive Officer. Violations may result in enforcement action, including Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of the Notice of Applicability.
3. The Discharger shall comply with the “Standard Provisions and Reporting Requirements for Waste Discharge Requirements”, dated 1 March 1991, which are attached hereto and by reference made a part of this Order. This attachment and its individual paragraphs are commonly referenced as “Standard Provision(s).”
4. In the event of any change in control or ownership of land or control of dredging and disposal operations described herein, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.
5. The Discharger shall notify the Board when the dredging project covered by these requirements is complete, so that Waste Discharge Requirements may be withdrawn and the Discharger will no longer be covered by this Order, although long-term maintenance of sediments in the DMD sites will continue to be covered.
6. The Discharger shall immediately notify the Board by telephone whenever a violation or an adverse condition occurs as a result of the dredging and disposal operation or the discharge of effluent. Written confirmation shall follow within two (2) weeks. An “adverse condition” is defined as any action or incident that may result in a risk to public health and safety, condition of nuisance, violation of water quality standards or violation of other conditions of this Order.
7. The Discharger shall report promptly to the Board any material change or proposed change in the character, location, or volume of the discharge.
8. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Board or court orders requiring corrective action or imposing civil

monetary liability or in revision or rescission of these Waste Discharge Requirements

9. A copy of this Order shall be kept as a reference for dredging operation personnel. Key operating personnel shall be familiar with its contents.

I, Thomas R. Pinkos, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region on 31 January 2003.

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THOMAS R. PINKOS, Executive Officer