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Agency Secretary

California Regional Water Quality Control Board Colorado River Basin Region



Arnold Schwarzenegger
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ORDER NO. R7-2005-0062

The following discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Discharger	City of Westmorland
Name of Facility	City of Westmorland Constructed Wetlands
Facility Address	5305 Martin Road
	Westmorland, CA 92281
	Imperial County
Facility Contact and Phone Number	Lucas Agatep, (760) 344-2060
Type of Facility	Public Owned Treatment Works (POTW)
Agency Mailing Address	P.O. Box 699
	Westmorland, CA 92281
	Imperial County
Agency Contact and Phone Number	Joel Hamby, (760) 344-3411


The discharger is authorized to discharge from the following discharge point set forth below:

Discharge Point	Discharge Quality	Discharge Point Latitude	Discharge Point Longitude	Groundwater Basin
001	Secondary Effluent	33.0457 ° N	115.6297 ° W	Imperial Hydrologic Unit

This Order was adopted by the Regional Board on:	May 4, 2005
This Order shall become effective on:	May 4, 2005

IT IS HEREBY ORDERED, that in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, the Discharger shall comply with the requirements herein.

I, Robert Perdue, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on May 4, 2005.


ROBERT PERDUE
Executive Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

ORDER NO. R7-2005-0062

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

WASTE DISCHARGE REQUIREMENTS

ORDER NO. R7-2005-0062

I. FACILITY AND ORDER INFORMATION

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

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II. FINDINGS

The California Regional Water Quality Control Board, Colorado River Basin Region (hereinafter Regional Board), finds:

A. Background. The City of Westmorland, (hereinafter "Discharger") submitted a Report of Waste Discharge, dated December 1, 2004, and applied for Waste Discharge Requirements (WDRs) for the authorization to discharge up to 0.5 million gallons per day (MGD) of secondary treated wastewater to unlined free water surface (FWS) constructed wetlands. The application was deemed complete on February 1, 2005.

B. Facility Description. The Discharger owns and operates the FWS constructed wetlands. The FWS constructed wetlands receive treated effluent from the City of Westmorland's existing wastewater treatment plant (WWTP).

The existing WWTP operates under NPDES No. CA0105007 that permits the discharge of secondary disinfected effluent to Imperial Irrigation District's Trifolium Drain No. 6. The existing WWTP consists of a septage dumping and equalization basin, preliminary sewage grinder and grit removal systems, oxidation ditch, two secondary clarifiers and two chlorine contact basins.

The FWS constructed wetlands will provide a combination of physical, chemical and biological treatment processes that will provide enhanced treatment of the secondary wastewater effluent discharged from the existing WWTP to the FWS constructed wetlands.

The constructed wetland system consists of two, two-acre (approximate) unlined wetlands ponds that will be operated in parallel. The FWS constructed wetland will have a series of deep open water and shallow emergent vegetated sections. The shallow sections will be planted with native, emergent wetland plants that will include bulrush, cattail and other wetland plant species. Effluent streams from the two ponds will be joined into a single pipe that will flow by gravity back to the existing WWTP. Treated wastewater from the existing WWTP and FWS constructed wetlands will be combined and discharge to Trifolium Drain No. 6.

Attachment A is a site map for the constructed wetlands and WWTP. Attachment B is a process flow diagram for the existing WWTP. Attachment C is a site master plan for the constructed wetlands and recreation area. Attachments A, B and C are hereby incorporated into this Order.

C. Legal Authorities. This Order serves as WDRs pursuant to Article 4, Chapter 4, Division 7 of the California Water Code (CWC) for point source discharges from this facility to ground waters.

D. Background and Rationale for Requirements. The Regional Board developed the requirements in this Order based on information submitted as part of the application, through discharge limitations and requirements of the City of Westmorland's NPDES permit, NPDES No. CA0105007, monitoring and reporting programs, and through special studies. Attachments A through D contain background information and detailed rationale for Order requirements and are hereby incorporated into this Order and, thus, constitute part of the Findings for this Order.

E. California Environmental Quality Act (CEQA)

1. This action to adopt WDRs is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC.
2. In accordance with the California Environmental Quality Act (CEQA), City of Westmorland, acting as the lead agency, has filed a Notice of Determination for the project. The State Clearing House received the Negative Declaration, State Clearing House Number 2004061063, on June 10, 2004. The Regional Board has reviewed the Mitigated Negative Declaration and the water quality impacts of the project and concurs that the identified mitigation measures will reduce all potential impacts on water quality to less-than-significant

F. Technology-based Effluent Limitations. This Order includes technology-based effluent limitations based on Secondary Treatment Standards at 40 CFR Part 133 for POTWs for the protection of the designated beneficial uses of the groundwater. The Regional Board has considered the factors listed in CWC § 13241 in establishing these requirements.

G. California Department of Health Services. The California Department of Health Services (Department) has established statewide reclamation criteria in Title 22, California Code of Regulations, Section 60301, et seq (hereinafter Title 22) for the use of reclaimed water and has developed guidelines for specific uses.

H. Water Quality Control Plans. The Regional Board adopted a Water Quality Control Plan for the Colorado River Basin Region of California [hereinafter Basin Plan] that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Beneficial uses applicable to the Imperial Hydrologic Unit are as follows:

Discharge Point	Groundwater Basin	Beneficial Use(s)
Discharge 001	Imperial Hydrologic Unit	<u>Existing:</u> Municipal and Domestic Supply (MUN ¹); Industrial Service Supply (IND)

¹ At least one of the aquifers in the hydrologic unit currently supports a MUN beneficial use. The actual MUN usage of the Imperial hydrologic unit is limited only to a small portion of the groundwater unit.

Requirements of this Order specifically implement the applicable Water Quality Control Plans.

- I. **Anti-Degradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an anti-degradation policy consistent with the federal policy. The State Board established California's anti-degradation policy in State Board Resolution 68-16, which incorporates the requirements of the federal anti-degradation policy. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The permitted discharge is consistent with the anti-degradation provision of 40 CFR § 131.12 and State Board Resolution 68-16.
- J. **Monitoring and Reporting.** Sections 13267 and 13383 of the CWC authorize the boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment D and is hereby incorporated into this Order.
- K. **Notification of Interested Parties.** The Regional Board has notified the discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations.
- L. **Consideration of Public Comment.** The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

III. DISCHARGE PROHIBITIONS

- A. The monthly average daily discharge flow to the wetland system shall not exceed 0.5 MGD.
- B. The Discharger shall prohibit public access to the FWS constructed wetlands and WWTP through such means as fences, signs, and other acceptable alternatives.
- C. The bypass, overflow, or spill of untreated or partially treated waste is prohibited.
- D. The discharge of waste to land not owned or controlled by the discharger is prohibited.
- E. Discharge of treated wastewater at a location or in a manner different from that described in Finding Nos. II.A and II.B, above, is prohibited. This prohibition does not limit the flexibility in discharging different percentages of treated wastewater.
- F. The discharger shall not accept waste in excess of the design treatment capacity of the FWS constructed wetlands system.
- G. The discharge shall not cause degradation of any water supply.
- H. The treatment or disposal of wastes from the facility shall not cause pollution or nuisance as defined in Section 13050(l) and 13050(m) of Division 7 of the California Water Code.
- I. No irrigation with, or impoundment of, undisinfected secondary recycled water shall take place within 150 feet of any domestic water supply well.
- J. No spray irrigation of any recycled water, other than disinfected tertiary recycled water, shall take place within 100 feet of a residence or a place where public exposure could be similar to that of a park, playground, or school yard.

IV. LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Land Discharge Specifications

1. Beginning May 4, 2005, representative samples of influent discharged to the FWS constructed wetlands shall not contain constituents in excess of the limits indicated below. The effluent from the City of Westmorland's existing WWTP shall be monitored at a representative location that is acceptable to the Regional Board's Executive Officer or designee.

Constituent	Units	Influent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Average Annual
Biochemical Oxygen Demand (BOD 5-day 20°C)	mg/L	30	45				
	lbs/day	130	190				
Total Suspended Solids (TSS)	mg/L	30	45				
	lbs/day	130	190				
Hydrogen ion (pH)	pH units				6.0	9.0	

2. The average monthly concentration of total dissolved solids (TDS) in the wastewater discharged to the wetland system shall not exceed 400 mg/L over the average monthly TDS concentration of the public water supply. If this TDS limitation is exceeded, the discharger shall develop and implement appropriate mitigation measures, which are acceptable to the Regional Board's Executive Officer.
3. The discharge shall not cause the underlying groundwater to be degraded, to exceed water quality objectives, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.

V. PROVISIONS

A. Standard Provisions

1. **Regional Board Standard Provisions.** The Discharger shall comply with the following provisions:
 - a. The discharger shall comply with all conditions of this Board Order. Noncompliance constitutes a violation of the Porter-Cologne Water Quality Control Act, and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification of waste discharge requirements; or denial of a Permit renewal application.
 - b. The City of Westmorland Constructed Wetlands shall be protected from any washout or erosion of wastes or covering material, and from any inundation, which could occur as a result of floods having a predicted frequency of once in 100 years.
 - c. The discharger shall ensure that all site-operating personnel are familiar with the content of this Board Order, and shall maintain a copy of this Board Order at the site.
 - d. The constructed wetland system shall be supervised and operated by persons possessing certification of appropriate grade pursuant to Section 3680, Chapter 26, Division 3, Title 23 of the California Code of Regulations.
 - e. The discharger shall allow the Regional Board, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:
 - i. Enter upon the premises regulated by this Board Order, or the place where records must be kept under the conditions of this Board Order;
 - ii. Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this Board Order;
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Board Order; and
 - iv. Sample or monitor at reasonable times, for the purpose of assuring compliance with this Board Order or as otherwise authorized by the California Water Code, any substances or parameters at this location.
 - f. Prior to any change in ownership or management of this operation, the discharger shall transmit a copy of this Board Order to the succeeding owner/operator, and forward a copy of the transmittal letter to the Regional Board.
 - g. Prior to any modifications in this facility, which would result in material change in the quality or quantity of wastewater treated or discharged, or any material change in the location of discharge, the discharger shall report all pertinent information in writing to the Regional Board and obtain revised requirements before any modifications are implemented.
 - h. Adequate measures shall be taken to assure that flood or surface drainage waters do not erode or otherwise render portions of the discharge facilities inoperable.
 - i. This Board Order does not authorize violation of any federal, state, or local laws or regulations.
 - j. This Board Order does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

B. Monitoring and Reporting Program Requirements

1. The discharger shall comply with "Monitoring and Reporting Program, and future revisions thereto as specified by the Regional Board's Executive Officer, found in Attachment D of this Order.
2. The monitoring and reporting requirements in Monitoring and Reporting Program No. R7-2005-0062 are necessary to determine compliance with these waste discharge requirements and to determine the facility's impacts, if any, on receiving water.
3. The discharger is the responsible party for the waste discharge requirements and the monitoring and reporting program for the facility. The discharger shall comply with all conditions of these waste discharge requirements. Violations may result in enforcement actions, including Regional Board Orders or court orders, requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board.

C. Special Provisions

1. Re-opener Provisions

- a. This Board Order may be modified, rescinded and reissued, for cause. The filing of a request by the discharger for a Board Order modification, rescission and reissuance, or a notification of planned changes or anticipated noncompliance does not stay any Board Order condition. Causes for modification include the promulgation of new regulations, modification of land application plans, or modification in sludge use or disposal practices, or adoption of new regulations by the State Board or the Regional Board, including revisions to the Basin Plan.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. The discharger shall develop an operation and maintenance manual for the management of the wetland system and submit a copy of the plan to the Regional Board's Executive Officer, or his designee, for review and approval within 180-days of adoption of the WDRs for the facility. At a minimum, the manual shall address the management of flow through the FWS constructed wetlands system (with particular consideration of water depth control, internal piping, inlet/outlet structure cleaning, inspection of berm integrity, vector control and management of the wetlands vegetation).
- b. The discharger shall provide a report to the Regional Board when it determines that the treatment plant's average dry weather flowrate for any month exceeds 80 percent of the design treatment capacity specified in Findings No. II.A above. The report should indicate what steps, if any, the discharger intends to take to provide for the expected wastewater treatment capacity necessary when the plant reaches design capacity.
- c. The discharger shall report any noncompliance that may endanger human health or the environment. The discharger shall immediately report orally information of the noncompliance as soon as (1) the discharger has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures, to the Regional Board office at (760) 346-7491 and the Office of Emergency Services at (800) 852-7550 or (916) 845-8911. During non-business hours, the discharger shall leave a message on the Regional Board office voice recorder. A written report shall also be provided within five (5) business days of the time the discharger becomes aware of the incident. The written report shall contain a description of the noncompliance and its cause, the period of noncompliance, the anticipated time to achieve full compliance, and the steps taken or planned, to reduce, eliminate, and prevent recurrence of the noncompliance. The discharger shall report all intentional or unintentional sewage spills in excess of one thousand (1,000) gallons occurring within the facility or collection system to the Regional Board office in accordance with the above time limits.

- d. The discharger shall provide adequate notice to the Regional Board's Executive Officer of the following:
 - i. Any new introduction of pollutants into any of the treatment facilities described in the Findings of this Board Order from an indirect discharger which would be subject to Section 301 or 306 of the Clean Water Act, if it were directly discharging the pollutants.
 - ii. Any substantial change in the volume or character of pollutants being introduced into any of the treatment facilities described in the Findings of this Board Order by an existing or new source.
 - iii. Any planned physical alterations or additions to the facilities described in this Board Order, or changes planned in the discharger's sludge use or disposal practice, where such alterations, additions, or changes may justify the application of Board Order conditions that are different from or absent in the existing Board Order, including notification of additional disposal sites not reported during the Board Order application process, or not reported pursuant to an approved land application plan.
- e. The discharger shall report all instances of noncompliance. Reports of noncompliance shall be submitted with the discharger's next scheduled self-monitoring report or earlier if requested by the Regional Board's Executive Officer, or if required by an applicable standard for sludge use and disposal.

3. Best Management Practices and Pollution Prevention

- a. **Best Management Practices Plan** (Not Applicable)
- b. **Stormwater.**
 - i. Federal regulations for storm water discharges require specific categories of facilities which discharge storm water associated with industrial activity (storm water) to obtain National Pollutant Discharge Elimination System (NPDES) permits and to implement Best Conventional Pollutant Technology (BCT) and Best Available Technology Economically Achievable (BAT) to reduce or eliminate industrial storm water pollution.
 - ii. In the event that there are storm water discharges associated with industrial activities, the discharger shall submit a Notice of Intent and/or maintain coverage under the General Storm Water Permit.

4. Compliance Schedules (Not Applicable)

5. Construction, Operation and Maintenance Specifications

- a. **Constructed wetlands**
 - i. A minimum depth of freeboard of two (2) feet shall be maintained at all times in the evaporation pond cells and constructed wetland cells.
 - ii. The constructed wetland system shall be managed to control the breeding of flies, mosquitoes and other vectors of public health significance.
 - iii. On-site wastes, including windblown spray, shall be strictly confined to the lands specifically designated for the wetlands system.
 - iv. The wetland system shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, ancillary inflow, and infiltration. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

b. Facility and Treatment Operation

- i. The discharger shall, at all times, properly operate and maintain all systems and components of treatment system which are installed or used by the discharger to achieve compliance with the conditions of this Board Order. Proper operation and maintenance includes effective performance, adequate process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of this Board Order. All systems both in service and reserved, shall be inspected and maintained on a regular basis. Records shall be kept of the inspection results and maintenance performed and made available to the Regional Board upon demand.
- ii. Facilities shall be available to keep the plant in operation in the event of commercial power failure.

6. Special Provisions for Municipal Facilities

a. Sludge Disposal Requirements

- i. The discharger shall provide a plan as to the method, treatment, handling and disposal of sludge that is consistent with all State and Federal laws and regulations and obtain prior written approval from the Regional Board specifying location and method of disposal, before disposing of treated or untreated sludge, or similar solid waste materials.
- ii. The discharger shall maintain a permanent log of all solids hauled away from the treatment facility for use/disposal elsewhere and shall provide a summary of the volume, type, use (agricultural, composting, etc.), and the destination in accordance with the Monitoring and Reporting Program of this Board Order. The sludge that is stockpiled at the treatment facility shall be sampled and analyzed for those constituents listed in the sludge monitoring section of the Monitoring and Reporting Program of this Board Order and as required by Title 40, Code of Federal Regulations, Part 503. The results of the analyses should be submitted to the Regional Board as part of the Monitoring and Reporting Program.

7. Other Special Provisions

- a. The discharger shall abide by the guidelines and criteria for the use of recycled water as developed by the Department of Health Services and established in Title 22, California Code of Regulations, Section 60301.
- b. No recycled water used for irrigation, or soil that has been irrigated with recycled water, shall come into contact with the edible portion of food crops eaten raw by humans.
- c. Except as allowed under section 7604 of Title 17, California Code of Regulations, no physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.
- d. Recycled water shall not be delivered to any new user who has not first received a discharge permit from the Regional Board and approval from the State Department of Health Services.
- e. Prior to delivering recycled water to any new user, the discharger shall submit to the Regional Board a report discussing the distribution system, the use for which the recycled water is intended and plans to assure that no untreated or inadequately treated wastewater will be delivered to the use area.
- f. The delivery or use of recycled water shall be in conformance with the reclamation criteria contained Title 22, or amendments thereto, for the irrigation of food crops, irrigation of fodder, fiber, and seed crops, landscape irrigation, supply of recreational impoundments and ground water recharge.

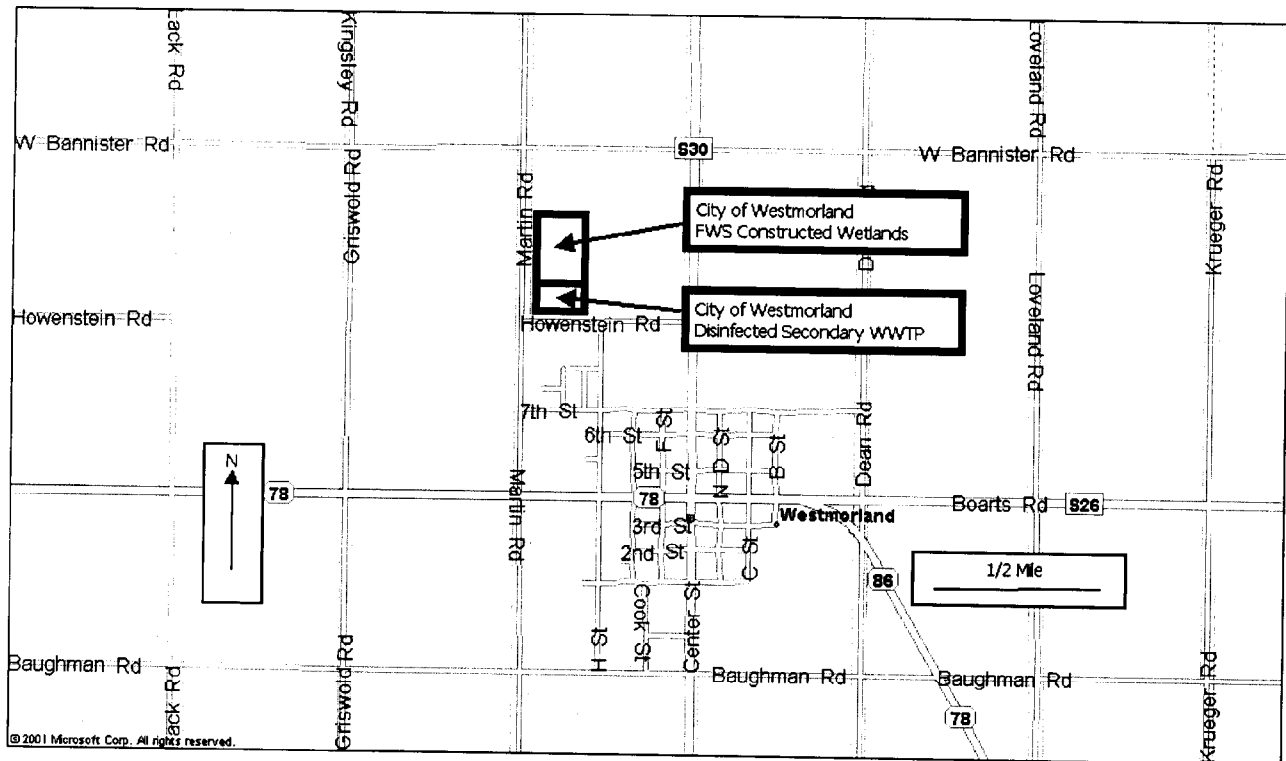
- g. The storage, delivery, or use of recycled water shall not individually or collectively, directly or indirectly, result in pollution, or adversely affect water quality, as defined in the California Water Code.
- h. The discharger shall not deliver recycled water for reuse to those users whom, by reason of their operational practices; cause nuisances associated with wastewater or otherwise contribute to the violation of the requirements of this Board Order.
- i. All use areas where recycled water is used that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than 4 inches high by 8 inches wide, that include the following wording: "RECYCLED WATER - DO NOT DRINK". Each sign shall display an international symbol similar to that shown in figure 60310-A of Section 60310, Article 4, Title 22 of the CCR. The Department may accept alternative signage and wording, or an educational program, provided the applicant demonstrates to the Department that the alternative approach will assure an equivalent degree of public notification.
- j. Any use of recycled water shall comply with the following:
 - i. Any irrigation runoff shall be confined to the recycled water use area, unless the runoff does not pose a public health threat and is authorized by the regulatory agency.
 - ii. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.
 - iii. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.

VI. COMPLIANCE DETERMINATION

Compliance with land discharge limitations and specifications shall be determined as follows:

- A. Dischargers shall be deemed out of compliance with an effluent limitation or discharge specification if the concentration of the constituent in the monitoring sample is greater than the effluent limitation or discharge specification and greater than or equal to the Minimum Level (ML).
- B. When determining compliance with an average monthly effluent limitation or discharge specification or an average weekly limitation, and more than one sample result is available for the averaging period (i.e., month or week), the arithmetic mean of the data set shall be computed unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In such cases, the median shall be computed in place of the arithmetic mean in accordance with the following procedure:
 1. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
 2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

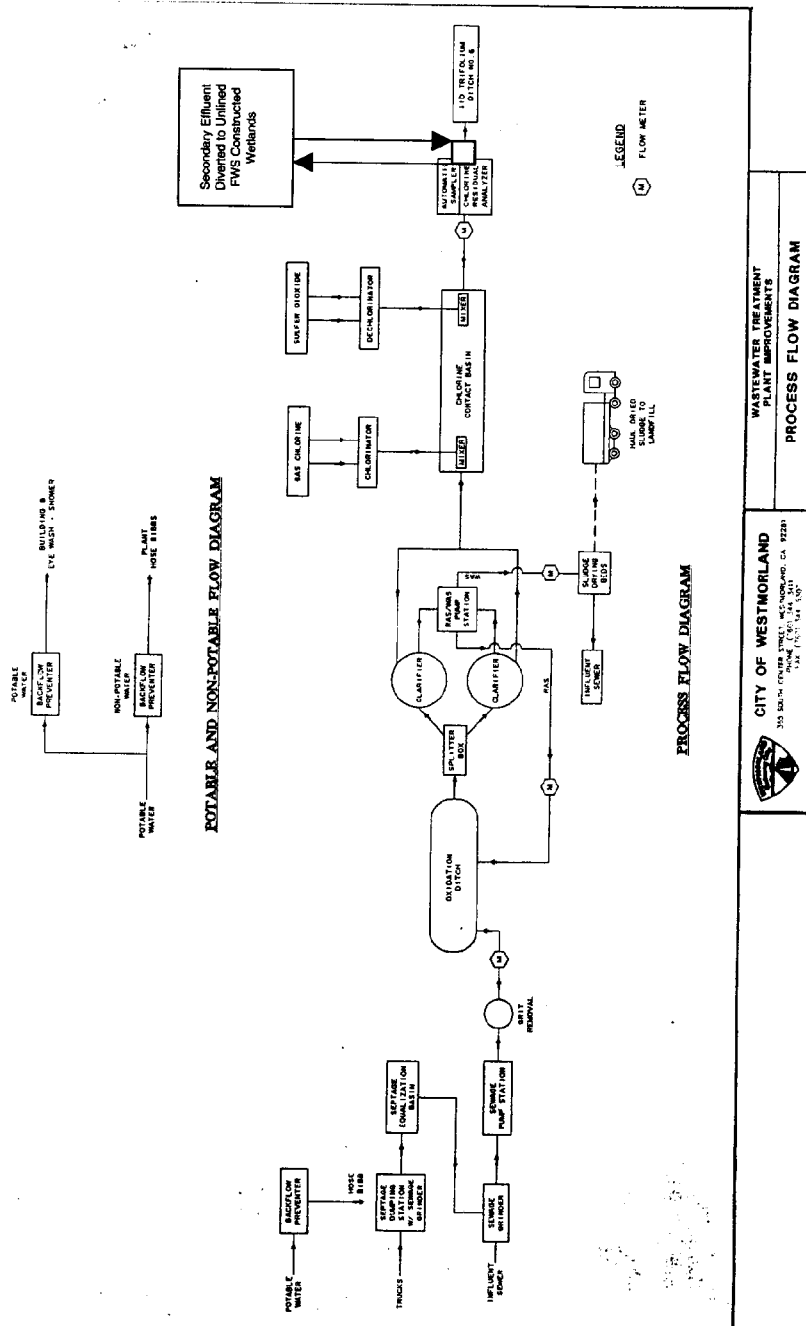


**ATTACHMENT A
CONSTRUCTED WETLANDS AND
WASTEWATER TREATMENT PLANT SITE MAP**

CITY OF WESTMORLAND, OWNER/OPERATOR
FREE WATER SURFACE CONSTRUCTED WETLANDS
Westmorland – Imperial County

Board Order No. R7-2005-0062

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
 COLORADO RIVER BASIN REGION**

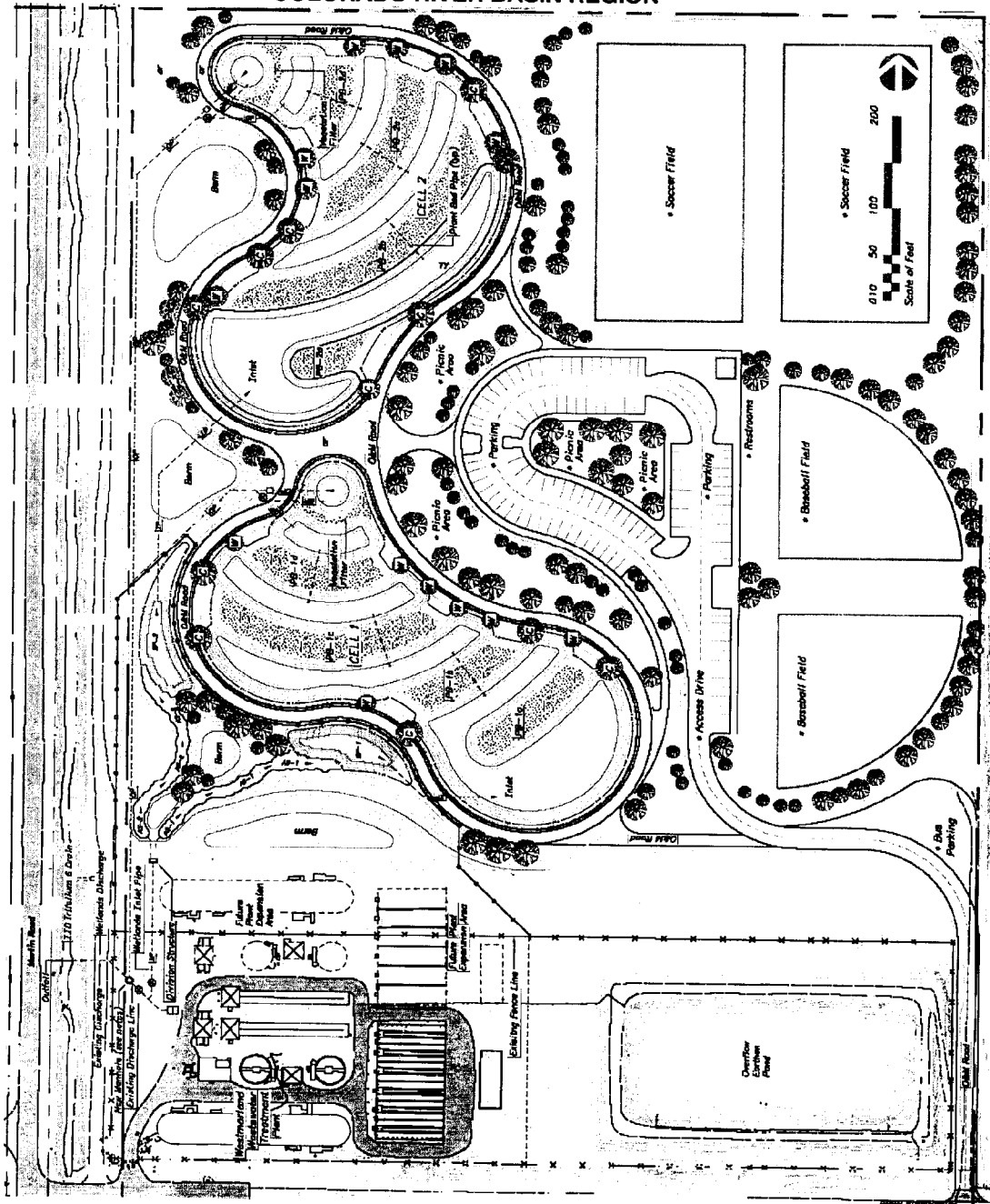


**ATTACHMENT B
 WASTEWATER TREATMENT PLANT
 PROCESS FLOW DIAGRAM**

CITY OF WESTMORLAND, OWNER/OPERATOR
 FREE WATER SURFACE CONSTRUCTED WETLANDS
 Westmorland - Imperial County

Board Order No. R7-2005-0062

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION



ATTACHMENT C
CONSTRUCTED WETLANDS AND
RECREATION AREA SITE MASTER PLAN

CITY OF WESTMORLAND, OWNER/OPERATOR
FREE WATER SURFACE CONSTRUCTED WETLANDS
Westmorland - Imperial County

Board Order No. R7-2005-0062

ATTACHMENT D – MONITORING AND REPORTING PROGRAM (MRP)

CWC sections 13267 and 13383 authorize the Regional Water Quality Control Board to require technical and monitoring reports. This Monitoring and Reporting Program establishes monitoring and reporting requirements to implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

- A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of this Regional Board.
- B. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration and operation of acceptable flow measurement devices can be obtained from the following references:
 1. "A Guide to Methods and Standards for the Measurement of Water Flow," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.
 2. "Water Measurement Manual," U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington D.C. 20402. Order by Catalog No. 172.19/2:W29/2, Stock No. S/N 24003-0027.)
 2. "Flow Measurement in Open Channels and Closed Conduits," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)
 4. "NPDES Compliance Sampling Manual," U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, CO 80225.)
- C. Unless otherwise approved by the Regional Board's Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. All analyses shall be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants", (40 CFR Part 136) promulgated by the United States Environmental Protection Agency (USEPA).
- D. The collection, preservation and holding times of all samples shall be in accordance with USEPA approved procedures.

- E. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- F. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.
- G. The discharger shall comply with the following:
 - 1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - 2. The discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Board Order, and records of all data used to complete the application for this Board Order, for a period of at least 5 years from the date of the sample, measurement, report or application.
 - 3. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements.
 - b. The individual(s) who performed the sampling or measurements.
 - c. The date(s) analyses were performed.
 - d. The individual(s) who performed the analyses.
 - e. The analytical techniques or methods used; and
 - vi. The results of such analyses.
- H. If the facility is not in operation, or there is no discharge during a required reporting period, the discharger shall forward a letter to the Regional Board indicating that there has been no activity during the required reporting period.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstration compliance with the influent limitations, discharge specifications, and other requirements in this Order:

Monitoring Location Name	Monitoring Location Description	Monitoring Location Latitude	Monitoring Location Longitude
INF-001	Constructed Wetland Influent	33.0455 °N	115.6296 °W
M-001	Constructed Wetland Treatment Cells	33.0457 °N	115.6297 °W
M-002	Constructed Wetland Effluent	33.0455 °N	115.6298 °W

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

- The Discharger shall monitor the treated wastewater discharged to the FWS constructed wetlands at monitoring location INF-001 as follows:

Constituent	Units	Sample Type	Minimum Sampling Frequency	Reporting Frequency
Flow (Total Plant Influent)	MGD ¹	Flow Meter Reading	Daily ²	Monthly
Biochemical Oxygen Demand (BOD 5-day 20°C)	mg/L ³	24-Hr. Composite	Weekly	Monthly
Total Suspended Solids (TSS)	mg/L	24-Hr. Composite	Weekly	Monthly
Hydrogen Ion (pH)	pH Units	Grab	Weekly	Monthly
Dissolved Oxygen	mg/L	Grab	Weekly	Monthly
Temperature	°F	Grab	Weekly	Monthly
Total Dissolved Solids (TDS)	mg/L	24-Hr. Composite	Monthly	Monthly
Nitrates as Nitrogen (N)	mg/L	24-Hr. Composite	Quarterly	Quarterly
Nitrites as N	mg/L	24-Hr. Composite	Quarterly	Quarterly
Ammonia Nitrogen as N	mg/L	24-Hr. Composite	Quarterly	Quarterly
Total Nitrogen as N	mg/L	24-Hr. Composite	Quarterly	Quarterly
Total Phosphate as Phosphorus (P)	mg/L	24-Hr. Composite	Quarterly	Quarterly
Ortho-Phosphate as P	mg/L	24-Hr. Composite	Quarterly	Quarterly
Selenium ¹	µg/L	Grab	Quarterly	Quarterly

¹ The minimum level (ML) and analytical method used for the analysis of selenium shall comply with those specified in Attachment 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP).

IV. CONSTRUCTED WETLAND SEDIMENT MONITORING REQUIREMENTS

A. Monitoring Location M-001

- The Discharger shall monitor the bottom sediment of the FWS constructed wetlands treatment cells as follows:

Constituent	Units	Sample Type	Minimum Sampling Frequency	Reporting Frequency
Selenium ¹	mg/kg	Composite ²	Semi-Annual	Semi-Annual

¹ Selenium shall be analyzed using an approved analytical method listed in EPA Publication SW-846, "Test Methods for Evaluating Solid Waste Physical/Chemical Methods."

² The Discharger shall composite several grab samples collected from recently deposited bottom sediment from sites within the Evaporation Ponds and Wetland cells that have lower hydrologic energy. The Discharger shall establish sampling locations near the inlets and outlets of the Evaporation Pond Nos. 1 and 2 and from the inlets and outlets of the Wetland Cells Nos. 1 and 2. Samples shall be collected from the established sampling location in a consistent manner.

¹ MGD – Million Gallons-Per-Day

² Reported for each day with average monthly flow calculated

³ mg/L - Milligrams per Liter

V. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-002

1. The Discharger shall monitor the effluent from the FWS constructed wetland at Monitoring Location M-002 as follows:

Constituent	Units	Sample Type	Minimum Sampling Frequency	Reporting Frequency
Daily Effluent Discharge	MGD	Flow Meter Reading	Daily	Monthly
<i>E. Coli</i>	MPN ⁴ /100 ml	Grab	5 samples per month	Monthly
20°C BOD ₅	mg/L	24-Hr. Composite	Weekly	Monthly
TSS	mg/L	24-Hr. Composite	Weekly	Monthly
pH	pH units	Grab	Weekly	Monthly
Dissolved Oxygen	mg/L	Grab	Weekly	Monthly
Temperature	°F	Grab	Weekly	Monthly
TDS	mg/L	24-Hr. Composite	Monthly	Monthly
Nitrates as Nitrogen (N)	mg/L	24-Hr. Composite	Quarterly	Quarterly
Nitrites as N	mg/L	24-Hr. Composite	Quarterly	Quarterly
Ammonia Nitrogen as N	mg/L	24-Hr. Composite	Quarterly	Quarterly
Total Nitrogen as N	mg/L	24-Hr. Composite	Quarterly	Quarterly
Total Phosphate as Phosphorus (P)	mg/L	24-Hr. Composite	Quarterly	Quarterly
Ortho-Phosphate as P	mg/L	24-Hr. Composite	Quarterly	Quarterly
Selenium ¹	µg/L	Grab	Quarterly	Quarterly

¹ The minimum level (ML) and analytical method used for the analysis of selenium shall comply with those specified in Attachment 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP).

VI. ADDITIONAL MONITORING REQUIREMENTS

A. Water Supply Monitoring

1. The discharger shall monitor the domestic water supply for the following constituent(s):

Constituent	Units	Sample Type	Minimum Sampling Frequency	Reporting Frequency
TDS	mg/L	Grab	Quarterly	Quarterly

⁴ MPN - Most Probable Number

B. Operation and Maintenance

The Discharger shall report the following:

Activity	Reporting Frequency
Inspect and document any operation/maintenance problems of the FWS constructed wetland system. At a minimum, inspect the inlet/outlet structures and berm integrity.	Quarterly
Calibration of flow meter	Annually

C. Sludge Monitoring

- Sludge that is removed from the FWS constructed wetlands shall be sampled and analyzed for the following constituents prior to disposal:

Constituent	Units	Sample Type	Minimum Sampling Frequency
Arsenic	mg/kg ⁵	Composite	Prior to Disposal
Cadmium	mg/kg	Composite	Prior to Disposal
Chromium	mg/kg	Composite	Prior to Disposal
Copper	mg/kg	Composite	Prior to Disposal
Lead	mg/kg	Composite	Prior to Disposal
Mercury	mg/kg	Composite	Prior to Disposal
Molybdenum	mg/kg	Composite	Prior to Disposal
Nickel	mg/kg	Composite	Prior to Disposal
Selenium	mg/kg	Composite	Prior to Disposal
Zinc	mg/kg	Composite	Prior to Disposal
Fecal Coliform	MPN/gram	Composite	Prior to Disposal

- The discharger shall report the quantity, location and method of disposal of all sludge and similar solid materials removed from the FWS constructed wetland.

VII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

- The results of any analysis take, more frequently than required at the locations specified in this Monitoring and Reporting Program shall be reported to the Regional Board.
- Reporting of any failure in the facility shall be as described in Special Provision No. 2.C. Results of any analysis performed as a result of a failure of the facility shall be provided within ten (10) days after collection of the samples.

⁵ mg/kg – milligrams per kilogram

B. Self Monitoring Reports

1. The Discharger shall submit monthly, quarterly, annual Self Monitoring Reports including the results of all required monitoring and monitoring conducted in addition to the minimum required monitoring and using USEPA approved test methods or other test methods specified in this Order. Monthly reports shall be due on the 15th day of the second month following the end of each calendar month; Quarterly reports shall be due on January 15, April 15, July 15, and October 15 following each calendar quarter; Annual reports shall be due on January 15 following each calendar year.
2. Monitoring periods for all required monitoring shall commence according to the following schedule:

Sampling Frequency	Monitoring Period Starts On...	Monitoring Period	Reporting Due with SMR on...
Daily	May 5, 2005	Calendar day (Midnight through 11:59 PM)	Fifteenth day of the following month of sampling
Weekly	May 8, 2005	Sunday through Saturday	Fifteenth day of the following month of sampling
Monthly	June 1, 2005	1 st day of calendar month through last day of calendar month	Fifteenth day of the following month of sampling
Quarterly	July 1, 2005	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	January 15 April 15 July 15 October 15
Annually	January 1, 2006	January 1 through December 31	January 15

3. The discharger shall report with each sample result the applicable Minimum Level (ML) and the laboratory current Method Detection Limit (MDL) as determined by the procedure in 40 CFR Part 136.
4. The discharger shall arrange all reported data in tabular form so that the specified information is readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the facility is operating in compliance with waste discharge requirements.
5. The Discharger shall attach a cover letter to its Self Monitoring Report. The information contained in the cover letter shall clearly identify violations of the WDRs, discuss corrective actions taken or planned and the proposed time schedule of corrective actions. Identified violations should include a description of the requirement that was violated and a description of the violation.
6. Monitoring results must be reported on forms approved by this Regional Board. Duplicate copies of the monitoring reports, signed and certified must be submitted to the address listed below:

Submit monitoring reports to:
California Regional Water Quality Control Board Colorado River Basin Region 73-720 Fred Waring, Suite 100 Palm Desert, CA 92260