

### **Ocean Waters**

The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

### **Persistent Pollutants**

Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

### **Pollutant Minimization Program (PMP)**

PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to CWC section 13263.3(d), shall be considered to fulfill the PMP requirements.

### **Pollution Prevention**

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

### **Reporting Level (RL)**

RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

### **Satellite Collection System**

The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

### **Source of Drinking Water**

Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

### **Standard Deviation ( $\sigma$ )**

Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

x is the observed value;

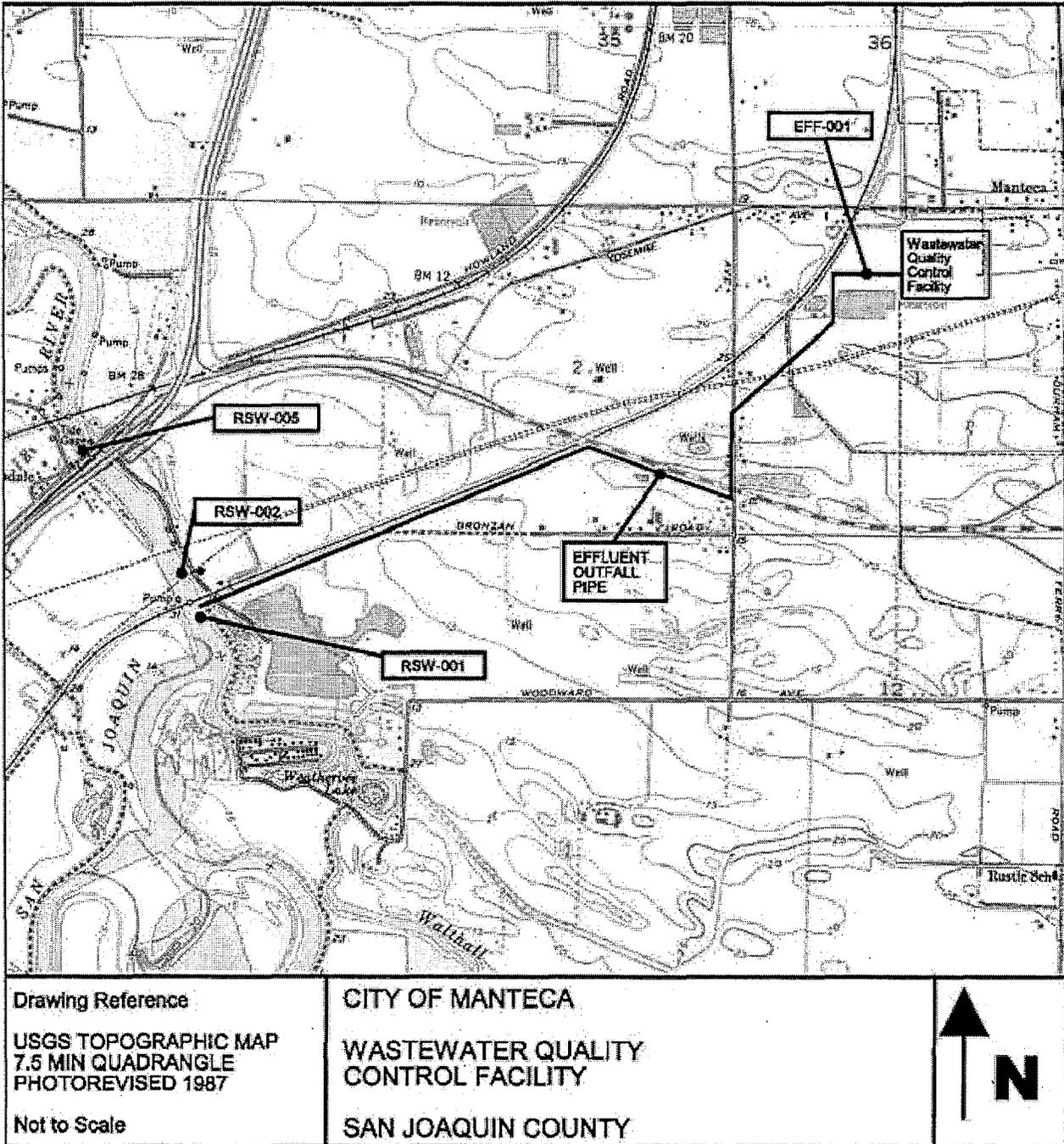
$\mu$  is the arithmetic mean of the observed values; and

n is the number of samples.

### **Toxicity Reduction Evaluation (TRE)**

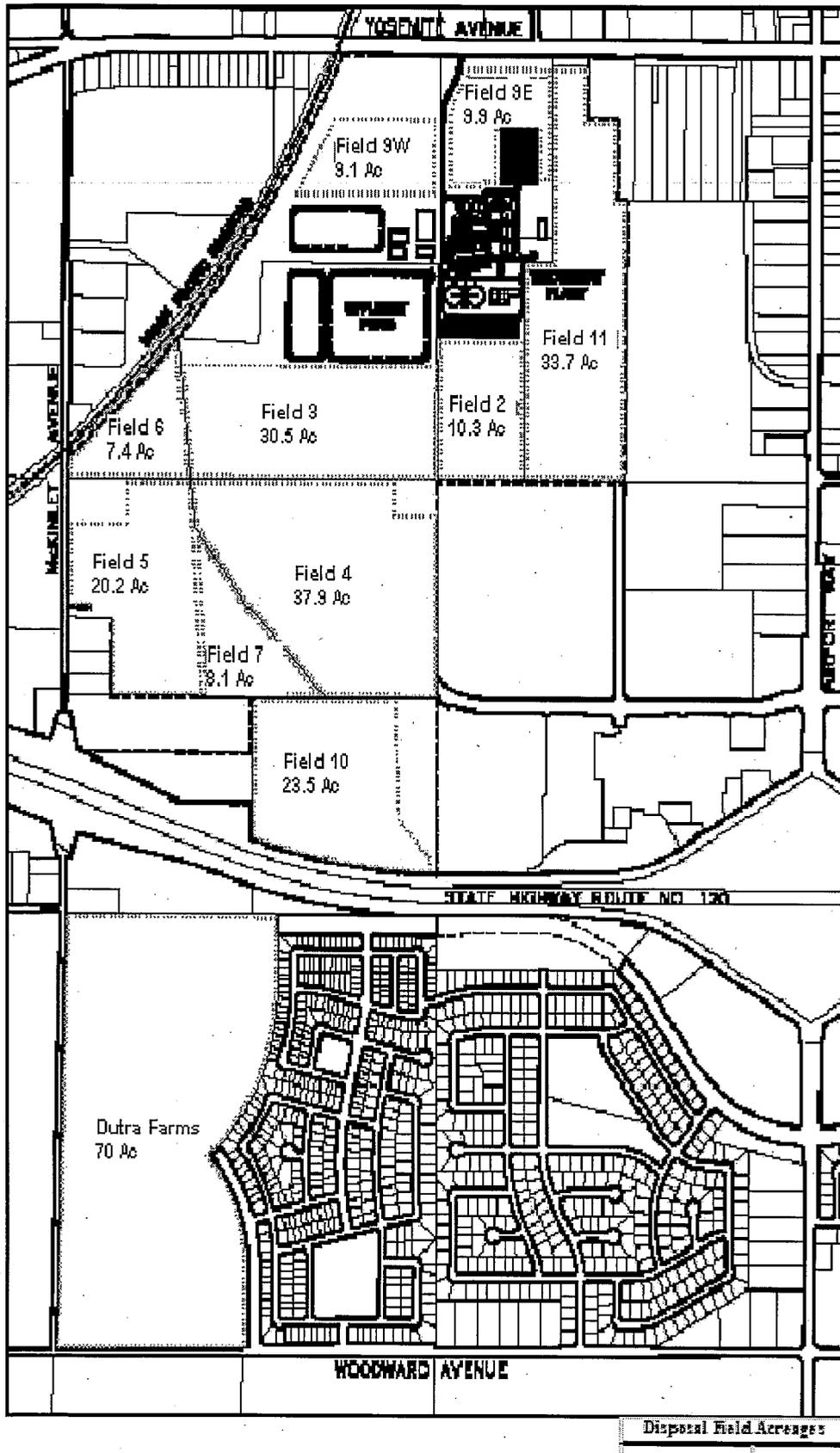
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

**ATTACHMENT B – MAP**





### ATTACHMENT C – AGRICULTURAL FIELDS



## **ATTACHMENT D – STANDARD PROVISIONS**

### **I. STANDARD PROVISIONS – PERMIT COMPLIANCE**

#### **A. Duty to Comply**

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR 122.41(a).)
2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR 122.41(a)(1).)

#### **B. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 CFR 122.41(c).)

#### **C. Duty to Mitigate**

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR 122.41(d).)

#### **D. Proper Operation and Maintenance**

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR 122.41(e).)

#### **E. Property Rights**

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR 122.5(c).)

#### **F. Inspection and Entry**

The Discharger shall allow the Regional Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 CFR 122.41(i); CWC section 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 CFR 122.41(i)(1));
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 CFR 122.41(i)(2));
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 CFR 122.41(i)(3)); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location. (40 CFR 122.41(i)(4).)

#### **G. Bypass**

##### **1. Definitions**

- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR 122.41(m)(1)(i).)
- b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR 122.41(m)(4)(i)):
  - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR 122.41(m)(4)(i)(A));
  - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR 122.41(m)(4)(i)(B)); and
  - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 CFR 122.41(m)(4)(ii).)
5. Notice
  - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 CFR 122.41(m)(3)(i).)
  - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR 122.41(m)(3)(ii).)

#### H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR 122.41(n)(3)):
  - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR 122.41(n)(3)(i));
  - b. The permitted facility was, at the time, being properly operated (40 CFR 122.41(n)(3)(ii));
  - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR 122.41(n)(3)(iii)); and
  - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR 122.41(n)(4).)

## II. STANDARD PROVISIONS – PERMIT ACTION

### A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR 122.41(f).)

### B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 CFR 122.41(b).)

### C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC. (40 CFR 122.41(l)(3) and 122.61.)

## III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR 122.41(j)(1).)

- B.** Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order. (40 CFR 122.41(j)(4) and 122.44(i)(1)(iv).)

#### **IV. STANDARD PROVISIONS – RECORDS**

- A.** Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least 5 years (or longer as required by 40 CFR Part 503), 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 Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 CFR 122.41(j)(2).)

**B. Records of monitoring information shall include:**

1. The date, exact place, and time of sampling or measurements (40 CFR 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 CFR 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 CFR 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 CFR 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 CFR 122.41(j)(3)(v)); and
6. The results of such analyses. (40 CFR 122.41(j)(3)(vi).)

**C. Claims of confidentiality for the following information will be denied (40 CFR 122.7(b)):**

1. The name and address of any permit applicant or Discharger (40 CFR 122.7(b)(1)); and
2. Permit applications and attachments, permits and effluent data. (40 CFR 122.7(b)(2).)

#### **V. STANDARD PROVISIONS – REPORTING**

**A. Duty to Provide Information**

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board,

State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR 122.41(h); Wat. Code, § 13267.)

## **B. Signatory and Certification Requirements**

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR 122.22(a)(3).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR 122.22(b)(1));
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR 122.22(b)(2)); and
  - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 CFR 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR 122.22(c).)
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."* (40 CFR 122.22(d).)

### **C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR 122.22(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 CFR 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR 122.41(l)(4)(iii).)

### **D. Compliance Schedules**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 CFR 122.41(l)(5).)

### **E. Twenty-Four Hour Reporting**

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR 122.41(l)(6)(ii)):
  - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR 122.41(l)(6)(ii)(A).)
  - b. Any upset that exceeds any effluent limitation in this Order. (40 CFR 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR 122.41(l)(6)(iii).)

#### **F. Planned Changes**

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b) (40 CFR 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR 122.41(l)(1)(ii).)

The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 CFR 122.41(l)(1)(ii).)

#### **G. Anticipated Noncompliance**

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 CFR 122.41(l)(2).)

#### **H. Other Noncompliance**

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 CFR 122.41(l)(7).)

#### **I. Other Information**

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any

report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR 122.41(l)(8).)

## **VI. STANDARD PROVISIONS – ENFORCEMENT**

- A.** The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, sections 13385, 13386, and 13387

## **VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS**

### **A. Publicly-Owned Treatment Works (POTWs)**

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 CFR 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR 122.42(b)(1)); and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 CFR 122.42(b)(2).)
3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR 122.42(b)(3).)

**ATTACHMENT E – MONITORING AND REPORTING PROGRAM**

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## **ATTACHMENT E – MONITORING AND REPORTING PROGRAM**

Title 40 of the Code of Federal Regulations (CFR), section 122.48 (40 CFR 122.48) requires that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This Monitoring and Reporting Program establishes monitoring and reporting requirements, which 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 Water Board.
- B.** Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
- C.** Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the Department of Public Health (DPH; formerly the Department of Health Services). In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.
- D.** All analyses shall be performed in a laboratory certified to perform such analyses by DPH. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board.
- E.** 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. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, 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.** Laboratories analyzing monitoring samples shall be certified by DPH, in accordance with the provision of CWC section 13176, and must include quality assurance/quality control data with their reports.
- H.** The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.
- I.** The Discharger shall file with the Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in this Monitoring and Reporting Program.
- J.** The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.

## II. MONITORING LOCATIONS

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

**Table E-1. Monitoring Station Locations**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Location where a representative sample of the facility's influent can be obtained, prior to any additives, treatment processes, and plant return flows.
001	EFF-001	Location where a representative sample of the facility's effluent can be obtained prior to discharge into the receiving water.
	LND-001	At irrigation distribution box, at which all waste tributary to the irrigation line is present, and is representative of the irrigation reuse waters applied to the agricultural fields.
	LND-002	At secondary effluent sampler where a representative sample of reclaimed wastewater can be obtained prior to discharge to the pond or land applied.
	REC-001	Location at the tertiary effluent station where a representative sample of the facility's recycled water used for construction purposes can be obtained prior to distribution to Discharger's clients
--	RSW-001	San Joaquin River, mid-stream approximately 100 feet south of Discharge Point 001
	RSW-002	San Joaquin River, mid-stream approximately 500 feet north of Discharge Point 001
	RSW-005	DWR's Monitoring Station, San Joaquin River at Mossdale Bridge (MSD)
	MW-3	Groundwater monitoring well located in land-application agricultural Field 3
	MW-5	Groundwater monitoring well located in land-application agricultural Field 5
	MW-9W	Groundwater monitoring well located in land-application agricultural Field 9W
	MW-10	Groundwater monitoring well located in land-application agricultural Field 10
	MW-11	Groundwater monitoring well located in land-application agricultural Field 11
	MW-AW	Background groundwater monitoring well located on Airport Way, upgradient and approximately 1200 feet east of the agricultural fields
	PND-001	At a point in the pond, at which all waste tributary to the pond is present, and is representative of the combined wastewaters discharged into the pond.
	BIO-001	Biosolids prior to removal from the Facility

### III. INFLUENT MONITORING REQUIREMENTS

#### A. Monitoring Location INF-001

1. The Discharger shall monitor influent to the facility at INF-001 as follows:

**Table E-2. Influent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	24-hr Composite	1/day	
Total Suspended Solids (TSS)	mg/L	24-hr Composite	1/day	
Electrical Conductivity	µmhos/cm @ 25°C	Grab	1/month	
Total Dissolved Solids	mg/L	Grab	1/month	

### IV. EFFLUENT MONITORING REQUIREMENTS

#### A. Monitoring Location EFF-001

1. The Discharger shall monitor municipal effluent at EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

**Table E-3. Effluent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	1
<b>Conventional Pollutants</b>				
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	24-hr Composite	1/Day	1
	lbs/day	Calculate	1/Day	1
Total Suspended Solids (TSS)	mg/L	24-hr Composite	1/Day	
	lbs/day	Calculate	1/Day	
pH	Standard Units	Grab	1/Day	
Total Coliform Organisms	MPN/100 ml	Grab	1/Day	
Oil and Grease	mg/L	Grab	1/Month	
<b>Priority Pollutants</b>				
Bis (2-ethylhexyl) phthalate	µg/L	Grab	1/Month	1,2,3
Copper, Total Recoverable	µg/L	24-hr Composite	1/Month	1,3
Mercury, Total Recoverable	ng/L	Grab	1/Month	11
	lbs/month	Calculate	1/Month	
Benzidine	µg/L	24-hr Composite <sup>4</sup>	1/Month	1,3
Priority Pollutants (except those listed above)	µg/L	24-hr Composite <sup>4</sup>	5	1,3,10
<b>Non-Conventional Pollutants</b>				
Aluminum, Total Recoverable	µg/L	24-hr Composite	1/Month	1,6
Chlorine Residual	mg/L	Grab	1/Day <sup>14</sup>	
Temperature	°F (°C)	Meter	Continuous	
Turbidity	Nephelometric Turbidity Units	Meter	Continuous	
Hardness (as CaCO <sub>3</sub> )	mg/L	Grab	2/Month <sup>13</sup>	
Dissolved Oxygen	mg/L	Grab	2/Month <sup>13</sup>	
Settleable Solids	ml/L	Grab	1/Day	
Total Dissolved Solids	mg/L	Grab	1/Month	
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Month	

Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Week <sup>7,8</sup>	1
Nitrate (as N)	mg/L	Grab	1/Week	
Nitrite (as N)	mg/L	Grab	1/Week	
Mercury (methyl)	µg/L	Grab	1/Month	<sup>11</sup>
Standard Minerals <sup>9</sup>	mg/L	Grab	<sup>6</sup>	1
MBAS	µg/L	Grab	1/Month	
Whole Effluent Toxicity (see Section V. below)	--	--	--	--

- <sup>1</sup> Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136.
- <sup>2</sup> In order to verify if bis (2-ethylhexyl) phthalate is truly present in the effluent discharge, the Discharger shall take steps to assure that sample containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant.
- <sup>3</sup> For priority pollutant constituents with effluent limitations, detection limits shall be below the effluent limitations. If the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP) is not below the effluent limitation, the detection limit shall be the lowest ML. For priority pollutant constituents without effluent limitations, the Discharger shall monitor for all pollutants/constituents listed in Attachment H of this Order. Detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP.
- <sup>4</sup> Volatile constituents shall be sampled in accordance with 40 CFR Part 136.
- <sup>5</sup> As required by Other Monitoring Requirements. IX.E. in this section, Monitoring and Reporting Program, of this Order, and concurrent with receiving surface water sampling.
- <sup>6</sup> Compliance with the final effluent limitations for aluminum can be demonstrated using either total or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by USEPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer.
- <sup>7</sup> Concurrent with whole effluent acute toxicity monitoring.
- <sup>8</sup> pH and temperature shall be recorded at the time of ammonia sample collection.
- <sup>9</sup> Standard minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).
- <sup>10</sup> TCDD-Dioxin Congener Equivalents shall include all 17 of the 2,3,7,8 TCDD dioxin congeners as listed in section 3 of the SIP and Attachment I of this Order.
- <sup>11</sup> Unfiltered methyl mercury and total mercury samples shall be taken using clean hands/dirty hands procedures, as described in U.S. EPA method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, for collection of equipment blanks (section 9.4.4.2), and shall be analyzed by U.S. EPA method 1630/1631 (Revision E) with a method detection limit of 0.02 ng/l for methylmercury and 0.2 ng/l for total mercury.
- <sup>12</sup> Carbofuran shall be analyzed by a U.S. EPA approved method with a Reporting Limit of less than 2 µg/L.
- <sup>13</sup> Samples shall be monitored on the same day as the receiving water monitoring samples.
- <sup>14</sup> Monitoring is only required when chlorine is used in any processes or maintenance activities.

**V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS**

**A. Acute Toxicity Testing.** The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. Monitoring Frequency – The Discharger shall perform weekly acute toxicity testing, concurrent with effluent ammonia sampling.

2. Sample Types – For static non-renewal and static renewal testing, the samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location EFF-001.
3. Test Species – Test species shall be fathead minnows (*Pimephales promelas*).
4. Methods – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition. Temperature and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.
5. Test Failure – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

**B. Chronic Toxicity Testing.** The Discharger shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:

1. Monitoring Frequency – The Discharger shall perform quarterly three species chronic toxicity testing.
2. Sample Types – Effluent samples shall be flow proportional 24-hour composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location EFF-001. The receiving water control shall be a grab sample obtained from the RSW-001 sampling location, as identified in this Monitoring and Reporting Program.
3. Sample Volumes – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.
4. Test Species – Chronic toxicity testing measures sublethal (e.g., reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:
  - The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);
  - The fathead minnow, *Pimephales promelas* (larval survival and growth test); and
  - The green alga, *Selenastrum capricornutum* (growth test).
5. Methods – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002.
6. Reference Toxicant – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.

7. ***Dilutions*** – The chronic toxicity testing shall be performed using the dilution series identified in the table, below. The receiving water control shall be used as the diluent (unless the receiving water is toxic), unless initial tests results indicate that the receiving water is toxic.

If the receiving water is toxic, laboratory control water may be used as the diluent, in which case, the receiving water should still be sampled and tested to provide evidence of its toxicity.

**Table E-4. Chronic Toxicity Testing Dilution Series**

Sample	Dilutions (%)					Controls	
	100	75	50	25	12.5	Receiving Water	Laboratory Water
% Effluent	100	75	50	25	12.5	0	0
% Receiving Water	0	25	50	75	87.5	100	0
% Laboratory Water	0	0	0	0	0	0	100

8. ***Test Failure*** – The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of a test failure. A test failure is defined as follows:
- a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002 (Method Manual), and its subsequent amendments or revisions; or
  - b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in Table 6 on page 52 of the Method Manual. (A retest is only required in this case if the test results do not exceed the monitoring trigger specified in the Special Provision at section VI. 2.a.iii. of the Order.)
- C. WET Testing Notification Requirements.** The Discharger shall notify the Regional Water Board within 24-hours after the receipt of test results exceeding the monitoring trigger during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.
- D. WET Testing Reporting Requirements.** All toxicity test reports shall include the contracting laboratory’s complete report provided to the Discharger and shall be in accordance with the appropriate “Report Preparation and Test Review” sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:
- 1. **Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Regional Water Board within 30 days following completion of the test, and shall contain, at minimum:

- a. The results expressed in TUC, measured as 100/NOEC, and also measured as 100/LC50, 100/EC25, 100/IC25, and 100/IC50, as appropriate.
- b. The statistical methods used to calculate endpoints;
- c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);
- d. The dates of sample collection and initiation of each toxicity test; and
- e. The results compared to the numeric toxicity monitoring trigger.

Additionally, the monthly discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUC, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, accelerated, or Toxicity Reduction Evaluation (TRE).

- 2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly discharger self-monitoring reports and reported as percent survival.
- 3. **TRE Reporting.** Reports for TREs shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Workplan.
- 4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes (*if applicable*):
  - a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.
  - b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.
  - c. Any information on deviations or problems encountered and how they were dealt with.

**VI. LAND DISCHARGE MONITORING REQUIREMENTS**

**A. Monitoring Location--LND-001**

- 1. The Discharger shall monitor the wastewaters applied to agricultural fields at LND-001 as required in Table E-5. Sampling is not required during periods when wastewater is not applied to agricultural fields:

**Table E-5. Land Discharge Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>1</sup>	Required Analytical Test Method <sup>4</sup>
Flow <sup>2,3</sup>	mgd & in/ac/day	Metered	Continuous	
Rainfall	inches	Measurement	1/Day	
Acreage Applied <sup>2,3</sup>	acres	Calculated	1/Day	

Application Rate <sup>2,3</sup>	gal/ac/day	Calculated	1/Day
pH <sup>3</sup>	Standard Units	Grab	1/week/event
Total Dissolved Solids <sup>2,3</sup>	mg/L & lbs/ac/day	Grab	1/week/event
Total Sodium <sup>2,3</sup>	mg/L & lbs/ac/day	Grab	1/week/event
Fixed Dissolved Solids <sup>3</sup>	mg/L	Grab	1/week/event
Electrical Conductivity <sup>3</sup>	µmhos/cm	Grab	1/week/event
Total Suspended Solids	mg/L	Grab	1/week/event
BOD-5-day @ 20°C <sup>2,3</sup>	mg/L & lbs/ac/day	Grab	1/day/event
Total Nitrogen <sup>2,3</sup>	mg/L & lbs/ac/day	Grab	1/week/event
Nitrate (as N) <sup>3</sup>	mg/L	Grab	1/week/event
Ammonia, Total (as N) <sup>3</sup>	mg/L	Grab	1/week/event

1. The minimum required sampling frequency is once per event. The maximum required sampling frequency is once per sampling period (i.e. week or month).
2. For each land application area, flows shall be reported as cumulative daily flows and calculated based on pump curves and run times, unless an alternative method is proposed and approved by the Executive Officer.
3. Land application areas shall be identified.
4. Pollutants shall be analyzed using the analytical methods described in 40 CFR sections 136.

**B. The Agricultural Field Inspections**

1. The Discharger shall inspect the land application areas at least once daily during irrigation events, and observations from those inspections shall be documented for inclusion in the monthly self-monitoring reports. The following items shall be documented for each field to be irrigated on that day.
  - a. Evidence of erosion;
  - b. Evidence of berm damage or erosion;
  - c. Evidence of damage to standpipes and flow control valve (if applicable);
  - d. Evidence of improper use of valves;
  - e. Condition of head ditch;
  - f. Soil saturation;
  - g. Ponding;
  - h. Evidence of damage to tailwater ditches and evidence of potential and actual runoff to off-site areas;
  - i. Evidence of potential and actual discharge to surface water;
  - j. Accumulation of organic solids in ditches and at soil surface;
  - k. Soil clogging;
  - l. Odors that have the potential to be objectionable at or beyond the property boundary; and
  - m. Evidence of fly and/or mosquito breeding.
  - n. Temperature, wind direction and relative strength; and other relevant field conditions shall also be observed and recorded. The notations shall also document any corrective actions taken based on observations made, including fresh water flushing of the force main and head ditches. A copy of entries made in the log during each month shall be submitted as part of the monthly self-monitoring report.

**C. Report Requirements**

1. The Discharger shall report the analytical results and inspection findings required in previous sections VI.A and B. as specified in the Reporting Requirements of the MRP sections X.B.3. and D.4.

**VII. RECLAMATION MONITORING REQUIREMENTS**

**A. Monitoring Location LND-002**

1. The Discharger shall monitor undisinfected secondary effluent at LND-002 when discharging to pond or to agricultural fields as follows:

**Table E-6. Reclamation Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd & in/ac/day <sup>1</sup>	Meter	Continuous	
Acreage Applied <sup>1</sup>	acres	Calculated	1/Day	
Application Rate <sup>1</sup>	gal/ac/day	Calculated	1/Day	
BOD 5-day @ 20°C	mg/L	Grab	1/day	
Total Settleable Solids	mg/L	Grab	1/day	
pH <sup>1</sup>	Standard Units	Grab	1/week/event	
Total Dissolved Solids <sup>1</sup>	mg/L & lbs/ac/day	Grab	1/week/event	
Electrical Conductivity <sup>1</sup>	µmhos/cm	Grab	1/week/event	
Total Nitrogen <sup>1</sup>	mg/L & lbs/ac/day	Grab	1/week/event	
Nitrate (as N)	mg/L	Grab	1/week/event	
Ammonia, Total (as N)	mg/L	Grab	1/week/event	

1. Only necessary when directly discharging to land. For each land application area, flows shall be reported as cumulative daily flows and calculated based on pump curves and run times, unless an alternative method is proposed and approved by the Executive Officer. Land application areas shall be identified.

**B. Monitoring Location REC-001**

1. The Discharger shall monitor disinfected tertiary-level treated effluent at REC-001 when supplied to clients for construction purposes as follows:

**Table E-7. Reclamation Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	
BOD 5-day @ 20°C	mg/L	Grab	1/day	
Total Coliform Organisms	MPN/100 ml	Grab	1/day	
Total Suspended Solids	mg/L	Grab	1/day	
Turbidity	Nephelometric Turbidity Units	Meter	Continuous	

**VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER**

**A. Monitoring Location RSW-001**

1. The Discharger shall monitor San Joaquin River at RSW-001 as follows:

**Table E-8. Receiving Water Monitoring Requirements, RSW-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab	1	
pH	Standard Units	Grab	1	
Turbidity	Nephelometric Turbidity Units	Grab	1	
Temperature	°F (°C)	Grab	1	
Total Dissolved Solids	mg/L	Grab	1/quarter	
Electrical Conductivity @25 °C	µmhos/cm	Grab	1	
Fecal Coliform Organisms	MPN/100ml	Grab	1/quarter	
Mercury, Total	ng/L	Grab	1/quarter	EPA Method 1631 <sup>8</sup>
Methylmercury	ng/L	Grab	1/quarter	EPA Method 1630 <sup>8</sup>
Hardness (as CaCO <sub>3</sub> )	mg/L	Grab	2/month <sup>9</sup>	
Priority Pollutants (and other constituents of concern)	µg/L	Grab	5	2,3,4, 10

<sup>1</sup> Samples shall be collected every two weeks when discharging to the receiving water.

<sup>2</sup> Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136.

<sup>3</sup> For priority pollutant constituents with effluent limitations, detection limits shall be below the effluent limitations. If the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP) is not below the effluent limitation, the detection limit shall be the lowest ML. For priority pollutant constituents without effluent limitations, the Discharger shall monitor for all pollutants/constituents listed in Attachment H of this Order. Detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP.

<sup>4</sup> TCDD-Dioxin Congener Equivalents shall include all 17 of the 2,3,7,8 TCDD dioxin congeners as listed in section 3 of the SIP.

<sup>5</sup> As required by Other Monitoring Requirements IX.E. in this section (Monitoring and Reporting Program) of this Order, and concurrent with effluent sampling.

<sup>8</sup> Unfiltered total mercury and methylmercury samples shall be taken using clean hands/dirty hands procedures, as described in U.S. EPA method 1669: *Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels*, for collection of equipment blanks (section 9.4.4.2), and shall be analyzed by U.S. EPA method 1631/1630 (Revision E) with a method detection limits of 0.02 ng/l.

<sup>9</sup> Samples shall be monitored on the same day as the effluent monitoring samples.

<sup>10</sup> In order to verify if bis (2-ethylhexyl) phthalate is truly present in the receiving water, the Discharger shall take steps to assure that sample containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant.

**B. Monitoring Location RSW-002**

1. The Discharger shall monitor San Joaquin River at RSW-002 as follows:

**Table E-9. Receiving Water Monitoring Requirements, RSW-002**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab	1	
pH	Standard Units	Grab	1	
Turbidity	Nephelometric Turbidity Units	Grab	1	
Temperature	°F (°C)	Grab	1	
Total Dissolved Solids	mg/L	Grab	1/quarter	
Electrical Conductivity @25 °C	µmhos/cm	Grab	1	
Fecal Coliform Organisms	MPN/100ml	Grab	1/quarter	
Hardness (as CaCO <sub>3</sub> )	mg/L	Grab	2/month <sup>6</sup>	

<sup>1</sup> Samples shall be collected every two weeks when discharging to the receiving water.

<sup>2</sup> Temperature and pH shall be determined at the time of sample collection.

<sup>3</sup> Unfiltered total mercury and methylmercury samples shall be taken using clean hands/dirty hands procedures, as described in U.S. EPA method 1669: *Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels*, for collection of equipment blanks (section 9.4.4.2), and shall be analyzed by U.S. EPA method 1631/1630 (Revision E) with a method detection limits of 0.02 ng/l.

<sup>4</sup> Persistent chlorinated hydrocarbon pesticides include: aldrin, dieldrin, chlordane, endrin, endrin aldehyde, heptachlor, heptachlor epoxide, hexachlorocyclohexane (alpha-BHC, beta-BHC, delta-BHC, and gamma-BHC or lindane), endosulfan (alpha and beta), endosulfan sulfate, toxaphene, 4,4'DDD, 4,4'DDE, and 4,4'DDT.

<sup>5</sup> Samples shall be collected once per month when discharging to the receiving water.

<sup>6</sup> Samples shall be monitored on the same day as the effluent monitoring samples.

**C. Monitoring Location RSW-005**

1. The Discharger shall monitor San Joaquin River at RSW-005 as follows:

**Table E-10. Receiving Water Monitoring Requirements, RSW-005**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	cfs	Meter	Continuous	
Direction of Flow		Meter	Continuous	

**D. Visual Observations RSW-001 and RSW-002**

1. In conducting receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001 and RSW-002. A description, including at the minimum, the presence or absence of the following shall be recorded and summarized in the self-monitoring reports.

- a. Floating or suspended matter;
- b. Discoloration;
- c. Bottom deposits;
- d. Aquatic life;

- e. Visible films, sheens, or coatings;
- f. Fungi, slimes, or objectionable growths; and
- g. Potential nuisance conditions.

**E. Groundwater Monitoring**

1. The Discharger shall monitor the groundwater in existing monitoring wells MW-3, MW-5, MW-9W, MW-10, MW-11, which characterize the condition of the groundwater underlying the influence of the Facility, and MW-AW, which is the background groundwater monitoring well located on Airport Way. Groundwater monitoring shall include, at a minimum, the following:

**Table E-11. Receiving Water Monitoring Requirements, Groundwater**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Depth to Groundwater	0.01 feet	Measurement	1/quarter	
Groundwater elevation <sup>1</sup>	feet	Calculated	1/quarter	
Gradient magnitude	Feet/feet	Calculated	1/quarter	
Gradient direction	degrees	Calculated	1/quarter	
pH	Standard Units	Grab	1/quarter	
Total Dissolved Solids	mg/L	Grab	1/quarter	
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/quarter	
Chloride	mg/L	Grab	1/quarter	
Sodium	mg/L	Grab	1/quarter	
Boron	mg/L	Grab	1/quarter	
Ammonia, Total (as N)	mg/L	Grab	1/quarter	
Nitrate (as N)	mg/L	Grab	1/quarter	
Nitrite (as N)	mg/L	Grab	1/quarter	
Total coliform organisms	MPN/100 mL	Grab	1/quarter	
Dissolved iron <sup>2</sup>	mg/L	Grab	1/quarter	
Dissolved manganese <sup>2</sup>	mg/L	Grab	1/quarter	

1. Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation.
2. Samples shall be filtered with a 0.45-micron filter prior to sample preservation.

**IX. OTHER MONITORING REQUIREMENTS**

**A. Biosolids**

**1. Monitoring Location BIO-001**

- a. A composite sample of sludge shall be collected quarterly at Monitoring Location BIO-001 in accordance with EPA's *POTW Sludge Sampling and Analysis Guidance Document*, August 1989, and tested for priority pollutants listed in 40 CFR Part 122, Appendix D, Tables II and III (excluding total phenols).

- b. A composite sample of sludge shall be collected quarterly at Monitoring Location BIO-001 in accordance with USEPA's *POTW Sludge Sampling and Analysis Guidance Document*, August 1989, and tested for the metals listed in Title 22.
- c. Sampling records shall be retained for a minimum of **5 years**. A log shall be maintained of sludge quantities generated and of handling and disposal activities. The frequency of entries is discretionary; however, the log must be complete enough to serve as a basis for part of the annual report.
- d. Upon removal of sludge, the Discharger shall submit characterization of sludge quality, including sludge percent solids and the most recent quantitative results of chemical analysis for the priority pollutants listed in 40 CFR Part 122, Appendix D, Tables II and III (excluding total phenols). In addition to USEPA's *POTW Sludge Sampling and Analysis Guidance Document*, August 1989, suggested methods for analysis of sludge are provided in USEPA publications titled *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods* and *Test Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater*. Recommended analytical holding times for sludge samples should reflect those specified in 40 CFR 136.6.3(e). Other guidance is available.

**B. Storage Pond Monitoring**

- 1. At a minimum, the Discharger shall monitor wastewater impounded at PND-001 as required in Table E-12, below.

**Table E-12. Pond Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab	1/week	
pH	Standard Units	Grab	1/week	
Freeboard	feet	Measured	1/week	
Available Storage Volume	Acre-feet	Calculated	1/month	

**C. Ultraviolet (UV) Disinfection System**

- 1. The Discharger shall monitor as follows:

**Table E-13. Ultraviolet Disinfection System Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow rate <sup>1</sup>	mgd	Meter	Continuous	
Turbidity <sup>1,2</sup>	Nephelometric Turbidity Units	Meter	Continuous	
Number of UV banks in operation	Number	Meter	Continuous	
UV Transmittance <sup>1,3,4</sup>	Percent (%)	Meter	Continuous	
UV Power Setting	Percent (%)	Meter	Continuous	
UV Dose <sup>5</sup>	mJ/cm <sup>2</sup>	Calculated	Continuous	

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
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1. To be monitored at EFF-001
2. Report daily average turbidity and maximum turbidity. If the turbidity sample collected at EFF-001 exceeds 10 Nephelometric Turbidity Units, collect an effluent grab sample and analyze for total Coliform organisms and report the duration of the turbidity exceedance.
3. The Discharger shall report documented routine meter maintenance activities, including date, time of day, duration, in which the UV Transmittance analyzer(s) is not in operation to record monitoring information.
4. The UV Transmittance analyzer can be out of service for calibration no more than 2 hours. One UV Transmittance sample shall be grabbed and analyzed. Grab sample results will then be entered into UV control system as the value used for UV dose calculation.
5. Report daily minimum UV dose, daily average UV dose, and weekly average UV dose. For the daily minimum UV dose, also report associated number of banks, gallons per minute per lamp, power settings, and UV transmittance used in the calculation. If effluent discharge has received less than the minimum UV dose and is not diverted from discharging to San Joaquin River, report the duration and dose calculation variables with each incident.

## D. Municipal Water Supply

### 1. Monitoring Location SPL-001

The Discharger shall monitor the municipal water supply at SPL-001 as follows. A sampling station shall be established where a representative sample of the municipal water supply can be obtained. Municipal water supply samples shall be collected at approximately the same time as effluent samples.

**Table E-14. Municipal Water Supply Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Dissolved Solids <sup>1</sup>	mg/L	Grab	1/quarter	
Electrical Conductivity @ 25°C <sup>1</sup>	µmhos/cm	Grab	1/quarter	
Standard Minerals <sup>2</sup>	mg/L	Grab	1/year	

1. If the water supply is from more than one source, the total dissolved solids and electrical conductivity shall be reported as a weighted average and include copies of supporting calculations.
2. Standard minerals shall include all major cations and anions and include verification that the analysis is complete (i.e., cation/anion balance).

**E. Effluent and Receiving Water Characterization Study.** An effluent and receiving water monitoring study is required to ensure adequate information is available for the next permit renewal. During the third year of this permit term, the Discharger shall conduct monthly monitoring of the effluent at EFF-001 and of the receiving water at RSW-001 for all priority pollutants and other constituents of concern as described in Attachment H. Dioxin and Furan sampling shall be performed only twice during the year, as described in Attachment I. The report shall be completed in conformance with the following schedule.

Task	Compliance Date
i. Submit Work Plan and Time Schedule	No later than 2 years 6 months from adoption of this Order
ii. Conduct monthly <sup>1</sup> monitoring	During third year of permit term
iii. Submit Final Report	6 months following completion of final monitoring event

<sup>1</sup> Dioxin and Furan sampling shall be performed only twice during the year, as described in Attachment I.

## X. REPORTING REQUIREMENTS

### A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. Upon written request of the Regional Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).
3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Regional Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the compliance time schedule.
4. The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "*Emergency Planning and Community Right to Know Act*" of 1986.

### B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State Water Board or the Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality

System (CIWQS) Program Web site

(<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this Monitoring and Reporting Program under sections III through IX. The Discharger shall submit monthly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR. **Monitoring results shall be submitted to the Regional Water Board by the 1st day of the second month following sample collection. Quarterly monitoring results shall be submitted by the 1st day of the second month following each calendar quarter.**
3. For reporting the land discharge specifications and applicable limitations of this Order, at a minimum, the self-monitoring report shall be submitted monthly, and the report shall include:
  - a The monthly results of the required monitoring in this MRP for land discharge (Section VI), reclamation (Section VII), groundwater (Section VIII.E), and ponds (Section IX.B). Data shall be presented in tabular format.
  - b Daily precipitation data in tabular form accompanied by starting and ending dates of irrigation for each field.
  - c Daily field inspection reports, during periods when land application operations is conducted, including records of the date and time.
  - d A comparison of monitoring data to the discharge specifications and applicable limitations and an explanation of any violation of those requirements.
  - e Daily discharge volumes and acres irrigated shall be tabulated. The report shall include discharge volumes and irrigation practices used (water source, method of application, application period/duration, drying times, etc.) for each field or group of fields utilized during the month. **Hydraulic loading rates** (inches/acre/month) shall be calculated.
  - f **Maximum daily BOD5 loading rates** (lbs/acre/day) shall be calculated for each irrigation field using the total volume applied on the day of application, estimated application area, and a running average of the three most recent results of BOD5 for the applicable source water, which also shall be reported along with supporting calculations.
  - g **Total nitrogen** (lbs/acre/day) shall be calculated for each irrigation field on monthly basis using the daily applied volume of wastewater, daily application area, and the most recent monitoring results, which shall also be reported along with supporting calculations.

- h **Nitrogen loading rates** for other sources (i.e., fertilizers) shall be calculated for each irrigation field on a monthly basis using the daily applied load and the estimated daily application area.
- i **Cumulative nitrogen** for each irrigation field for the calendar year to date shall be calculated as a running total of monthly loadings to date from all sources.

4. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table E-15. Monitoring Periods and Reporting Schedule**

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	First day of the calendar month following the permit effective date or on permit effective date if that date is first day of the month	All	Submit with monthly SMR
1/Day	First day of the calendar month following the permit effective date or on permit effective date if that date is first day of the month	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
1/Week or every 2 weeks	First Sunday of the calendar month following the permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	Submit with monthly SMR
1 or 2/Month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	First day of calendar month through last day of calendar month	Submit with monthly SMR
1/Quarter	Closest of 1 January, 1 April, 1 July, or 1 October following permit effective date	1 January through 31 March 1 April through 30 June 1 July through 30 September 1 October through 31 December	Submit with monthly SMR
1/Year	1 January following permit effective date	1 January through 31 December	Submit with monthly SMR

5. **Reporting Protocols.** The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated



entry into a tabular format within the system; the Discharger shall electronically submit the data in a tabular format as an attachment.

- b. The Discharger shall attach a cover letter to the SMR. 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 for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
- c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

Regional Water Quality Control Board  
Central Valley Region  
NPDES Compliance and Enforcement Unit  
11020 Sun Center Dr., Suite #200  
Rancho Cordova, CA 95670-6114

**C. Discharge Monitoring Reports (DMRs)**

- 1. As described in section X.B.1 above, at any time during the term of this permit, the State Water Board or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.
- 2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

STANDARD MAIL	FEDEX/UPS/ OTHER PRIVATE CARRIERS
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15 <sup>th</sup> Floor Sacramento, CA 95814

- 3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of EPA Form 3320-1.

**D. Other Reports**

- 1. **Progress Reports.** As specified in the compliance time schedules required in the Special Provisions contained in section VI of the Order, progress reports shall be submitted in accordance with the following reporting requirements. At minimum, the progress reports shall include a discussion of the status of final compliance, whether

the Discharger is on schedule to meet the final compliance date, and the remaining tasks to meet the final compliance date.

**Table E-16. Reporting Requirements for Special Provisions Progress Reports**

Special Provision	Reporting Requirements
Pollution Prevention Plan (PPP) for Mercury (Special Provisions VI.C.3.a)	1 December, annually, after submittal of updated PPP
Site-specific Salinity Study (Special Provisions VI.C.2.c)	1 December, annually, after approval of the work plan

2. The Discharger shall report the results of any special studies, acute and chronic toxicity testing, TRE/TIE, and Pollution Prevention Plan (PPP) required by Special Provisions VI.C.2, 3, and 6 of this Order. The Discharger shall submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date, except for mercury PPP which must be submitted in compliance with the reporting requirements described in Table E-16.
3. Within 60 days of permit adoption, the Discharger shall submit a report outlining minimum levels, method detection limits, and analytical methods for approval, with a goal to achieve detection levels below applicable water quality criteria. At a minimum, the Discharger shall comply with the monitoring requirements for CTR constituents as outlined in section 2.3 and 2.4 of the SIP.
4. The Discharger's sanitary sewer system collects wastewater using sewers, pipes, pumps, and/or other conveyance systems and directs the raw sewage to the wastewater treatment plant. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the wastewater treatment plant. Sanitary sewer overflows are prohibited by this Order. All violations must be reported as required in Standard Provisions. Facilities (such as wet wells, regulated impoundments, tanks, highlines, etc.) may be part of a sanitary sewer system and discharges to these facilities are not considered sanitary sewer overflows, provided that the waste is fully contained within these temporary storage facilities.
5. **Annual Operations Report.** By 30 January of each year, the Discharger shall submit a written report to the Executive Officer containing the following:
  - a. The names, certificate grades, and general responsibilities of all persons employed at the Facility.
  - b. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.
  - c. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.

- d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment plant as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.
- e. The Discharger may also be requested to submit an annual report to the Regional Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

**6. Annual Pretreatment Reporting Requirements.** The Discharger shall submit annually a report to the Regional Water Board, with copies to USEPA Region 9 and the State Water Board, describing the Discharger's pretreatment activities over the previous 12 months. In the event that the Discharger is not in compliance with any conditions or requirements of this Order, including noncompliance with pretreatment audit/compliance inspection requirements, then the Discharger shall also include the reasons for noncompliance and state how and when the Discharger shall comply with such conditions and requirements.

An annual report shall be submitted by **28 February** and include at least the following items:

- a. A summary of analytical results from representative, flow proportioned, 24-hour composite sampling of the POTW's influent and effluent for those pollutants USEPA has identified under Section 307(a) of the CWA which are known or suspected to be discharged by industrial users.

Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling and analysis. The sludge analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period. Wastewater and sludge sampling and analysis shall be performed at least annually. The discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which may be causing or contributing to Interference, Pass-Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto.

- b. A discussion of Upset, Interference, or Pass-Through incidents, if any, at the treatment plant, which the Discharger knows or suspects were caused by industrial users of the POTW. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of, the industrial user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any additional limitations, or changes to existing requirements, may be necessary to prevent

Pass-Through, Interference, or noncompliance with sludge disposal requirements.

- c. The cumulative number of industrial users that the Discharger has notified regarding Baseline Monitoring Reports and the cumulative number of industrial user responses.
- d. An updated list of the Discharger's industrial users including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The Discharger shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to federal categorical standards by specifying which set(s) of standards are applicable. The list shall indicate which categorical industries, or specific pollutants from each industry, are subject to local limitations that are more stringent than the federal categorical standards. The Discharger shall also list the noncategorical industrial users that are subject only to local discharge limitations. The Discharger shall characterize the compliance status through the year of record of each industrial user by employing the following descriptions:
  - i. complied with baseline monitoring report requirements (where applicable);
  - ii. consistently achieved compliance;
  - iii. inconsistently achieved compliance;
  - iv. significantly violated applicable pretreatment requirements as defined by 40 CFR 403.8(f)(2)(vii);
  - v. complied with schedule to achieve compliance (include the date final compliance is required);
  - vi. did not achieve compliance and not on a compliance schedule; and
  - vii. compliance status unknown.

A report describing the compliance status of each industrial user characterized by the descriptions in items iii. through vii. above shall be submitted for each calendar quarter **within 21 days of the end of the quarter**. The report shall identify the specific compliance status of each such industrial user and shall also identify the compliance status of the POTW with regards to audit/pretreatment compliance inspection requirements. If none of the aforementioned conditions exist, at a minimum, a letter indicating that all industries are in compliance and no violations or changes to the pretreatment program have occurred during the quarter must be submitted. The information required in the fourth quarter report shall be included as part of the annual report. This quarterly reporting requirement shall commence upon issuance of this Order.

- e. A summary of the inspection and sampling activities conducted by the Discharger during the past year to gather information and data regarding the industrial users. The summary shall include:

- i. the names and addresses of the industrial users subjected to surveillance and an explanation of whether they were inspected, sampled, or both and the frequency of these activities at each user; and
  - ii. the conclusions or results from the inspection or sampling of each industrial user.
- f. A summary of the compliance and enforcement activities during the past year. The summary shall include the names and addresses of the industrial users affected by the following actions:
  - i. Warning letters or notices of violation regarding the industrial users' apparent noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the apparent violation concerned the federal categorical standards or local discharge limitations.
  - ii. Administrative orders regarding the industrial users noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.
  - iii. Civil actions regarding the industrial users' noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.
  - iv. Criminal actions regarding the industrial users noncompliance with federal categorical standards or local discharge limitations. For each industrial user, identify whether the violation concerned the federal categorical standards or local discharge limitations.
  - v. Assessment of monetary penalties. For each industrial user identify the amount of the penalties.
  - vi. Restriction of flow to the POTW.
  - vii. Disconnection from discharge to the POTW.
- g. A description of any significant changes in operating the pretreatment program which differ from the information in the Discharger's approved Pretreatment Program including, but not limited to, changes concerning: the program's administrative structure, local industrial discharge limitations, monitoring program or monitoring frequencies, legal authority or enforcement policy, funding mechanisms, resource requirements, or staffing levels.
- h. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases.

Duplicate signed copies of these Pretreatment Program reports shall be submitted to the Regional Water Board and the:

State Water Resources Control Board  
Division of Water Quality  
1001 I Street or P.O. Box 100  
Sacramento, CA 95812

and the

Regional Administrator  
U.S. Environmental Protection Agency W-5  
75 Hawthorne Street  
San Francisco, CA 94105

**7. Nutrient Management Plan.** An Annual Report shall be prepared and shall include all monitoring data required in the monitoring schedule applicable land applications, including pond and groundwater monitoring. The Annual Report shall be submitted to the Regional Water Board by **1 February** each year. In addition to the data normally presented, the Annual Report shall include the following:

- a. Tabular and graphical summaries of historical monthly total loading rates for water (hydraulic loading in gallons and inches), BOD, total nitrogen, fixed dissolved solids, and total dissolved solids (TDS).
- b. The flow-weighted average TDS concentration shall be calculated based on flow, effluent, and supplemental irrigation water monitoring results for the year.
- c. A mass balance relative to constituents of concern and hydraulic loading along with supporting data and calculations. The report shall describe the types of crops planted and dates of planting and harvest for each crop.
- d. For each violation of the Discharge Specifications, applicable Prohibitions, and Groundwater Limitations of this Order, the report shall describe in detail the nature of the violation, date(s) of occurrence, cause(s), mitigation or control measures taken to prevent or stop the violation, and additional operational or facility modifications that will be made to ensure that the violation does not occur in the following year.
- e. A comprehensive evaluation of the effectiveness of the past year's wastewater application operation in terms of odor control, including consideration of application management practices (i.e. waste constituent and hydraulic loadings, application cycles, drying times, and cropping practices), and groundwater monitoring data.
- f. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the land application discharge, or groundwater limits, into full compliance with the requirements in this Order.
- g. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

- h. Based on this information, the Discharger shall develop and include a Cropping and Irrigation plan for the following season.
- 8. Water Recycling/Reuse Annual Report.** An annual report shall be prepared and shall include an update of the Discharger's water recycling/reuse activities within the Discharger's service area (e.g., landscape, golf course irrigation, etc). The annual report shall be submitted to the Regional Water Board by **1 July** each year.

## ATTACHMENT F – FACT SHEET

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## ATTACHMENT F – FACT SHEET

As described in the Findings in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

### I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

**Table F-1. Facility Information**

<b>WDID</b>	5B390104001
<b>Discharger</b>	City of Manteca, and Dutra Farms, Inc. for land parcel APN 241-320-47
<b>Name of Facility</b>	City of Manteca Wastewater Quality Control Facility
<b>Facility Address</b>	2450 West Yosemite Avenue
	Manteca, CA 95337
	San Joaquin County
<b>Facility Contact, Title and Phone</b>	Tom Foley, Superintendent, (209) 456-8472
<b>Authorized Person to Sign and Submit Reports</b>	Phil Govea, Deputy Director of Public Works, (209) 456-8415
<b>Mailing Address</b>	1001 West Center Street, Manteca, CA 95337
<b>Billing Address</b>	SAME
<b>Type of Facility</b>	Publicly Owned Domestic Wastewater Treatment Works
<b>Major or Minor Facility</b>	Major
<b>Threat to Water Quality</b>	1
<b>Complexity</b>	A
<b>Pretreatment Program</b>	Y
<b>Reclamation Requirements</b>	Producer
<b>Facility Permitted Flow</b>	9.87 million gallons per day (mgd) <sup>(1)</sup>
<b>Facility Design Flow</b>	9.87 mgd
<b>Watershed</b>	San Joaquin River Watershed
<b>Receiving Water</b>	San Joaquin River
<b>Receiving Water Type</b>	Sacramento-San Joaquin Delta

(1) Effective immediately, the design and permitted treatment capacity is 9.87 mgd. Upon compliance with Special Provisions VI.C.6.c, the permitted flow may increase to 17.5 mgd.

- A.** The City of Manteca (hereinafter Discharger) is the owner and operator of the City of Manteca Wastewater Quality Control Facility (hereinafter Facility), a Publicly-Owned Domestic Wastewater Treatment Works.

For the purposes of this Order, references to the “discharger” or “permittee” in

applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

- B. The Facility discharges wastewater to the San Joaquin River within the Sacramento-San Joaquin Delta, a water of the United States, and is currently regulated by Order No. R5-2004-0028, which was adopted on 19 March 2004, and its subsequent amendments. Further, Cease and Desist Order No. R5-2004-0029 was adopted by the Regional Water Board on 19 March 2004 and establishes time schedules for the Discharger to comply with some limitations and provisional requirements. Order No. R5-2004-0028 expired on 1 March 2009. The terms and conditions of the current Orders have been automatically continued and remain in effect until the new Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order.
- C. The Discharger filed a report of waste discharge and submitted an application for renewal of its WDRs and NPDES permit in August 2008. The application was deemed complete on 11 December 2008. A site visit was conducted on 27 May 2009 to observe operations and collect additional data to develop permit limitations and conditions.

## II. FACILITY DESCRIPTION

The Discharger provides sewerage service for commercial and residential uses within the City of Manteca and a portion of the City of Lathrop, serving a population of approximately 80,500. The Discharger has an approved EPA pretreatment program that has two non-categorical significant industrial users and one categorical industrial user. The municipal wastewater collection system consists of two main lines servicing the City of Manteca that includes 184 miles of sewer mains with 18 pump stations, and another line servicing the City of Lathrop that is connected by 27 miles of sewer mains. The collection systems are regulated under State Water Board Order 2006-003. A separate industrial line accepts food processing wastewater seasonally from Eckert Cold Storage from about May through November. Eckert Cold Storage processes frozen vegetables (e.g. cabbage and a variety of peppers), and discharges primarily wastewaters from the cutting and washing of these vegetables. However, at times, the food processing wastewater is mixed with wastewaters from clean-up of the processing equipment, freezer defrost waters, and cooling towers. The food processing wastewater is stored and aerated in a lined pond at the Facility, and then applied to agricultural fields when needed.

The Facility occupies approximately 22 acres of the 210 acres owned by the Discharger. Since adoption of Order No. R5-2004-0028, the Facility has undergone major expansions and upgrades. In August 2005, the Discharger obtained higher-quality surface water from South County Water Supply Program to blend with its existing groundwater drinking water supply to improve its drinking water supply source (e.g. lower salinity). In May 2006, biological nitrification-denitrification was added to the secondary treatment process. In September 2007, the City also added a secondary effluent equalization pond, a filter-feed pump station, coagulation and flocculation facilities, tertiary filters, a chemical storage and handling facility, an ultraviolet light pathogen deactivation system (UV Disinfection), an effluent pumping station, a recycled water pumping station, a groundwater well for plant process water, and a construction truck recycled water filling station. In 2007, the Facility

was also modified to fully separate the food-processing waste received from Eckert Cold Storage to apply directly to agricultural fields.

#### **A. Description of Wastewater and Biosolids Treatment or Controls**

The Facility is currently a 9.87 mgd rated combined biofilter-activated sludge tertiary treatment plant, and the maximum daily flow rate is about 8.1 mgd. A Facility expansion to increase capacity to 17.5 mgd is projected during the term of this Order, beginning in the fourth quarter of 2010 and ending in the second quarter of 2012; a detailed discussion follows in Section II.E of this Fact Sheet. The Discharger completed an antidegradation analysis for the expansion, and a detailed discussion is contained in Section IV.D.4 of this Fact Sheet.

Currently, at the Facility, an influent pump station with two mechanical screens serves two parallel treatment systems. Primary treatment, which is identical in both systems, consists of aerated grit removal, and primary sedimentation. Primary effluent undergoes biological treatment by ultra fine-bubble activated sludge aeration basins, nitrification and denitrification, and secondary sedimentation at both treatment systems. However, at the northside treatment system, the primary effluent first undergoes additional treatment through two biotowers with high-rate plastic media.

Undisinfected secondary effluent is either stored for agricultural use in a 15 million gallon pond or blended with food processing waste and applied directly to agricultural fields. The agricultural fields are used to grow crops for dairy feed. The land application area consists of ten fields located on land owned by the Discharger (Fields 2 through 11 shown in Attachment C-2), plus one field located on property owned by Dutra Farms, Inc. The Discharger-owned agricultural fields total approximately 190 acres surrounding the Facility. Dutra Farms, Inc. is named in this Order as the responsible party for management and operation of its 70 acre agricultural field, APN 241-320-47, where wastewater is also applied.

Tailwater from the fields 2, 4, 5, 10, and Dutra-Farms, Inc. is collected in a sump and pumped back to the irrigation supply system. Tailwater from field 3 drains to a sump and pumped into the pond for irrigation. Tailwater from field 6 percolates into the soil. Tailwater from field 7 drains to field 10. And tailwater from field 9W drains to adjacent unused land that doesn't contain an outlet.

Secondary effluent in excess of crop demands undergoes further treatment through rapid mixing, flocculation, tertiary level using cloth media filtration, and UV Disinfection. The disinfected tertiary effluent is pumped from The Facility to its Truck Fill Station, located at the entrance of the Facility. The Truck Fill Station provides access for construction vehicles to receive recycled water for construction purposes. The Discharger has plans for additional uses of recycled water (City of Manteca Recycled Water Master Plan, 2007). Disinfected tertiary level treated effluent is also discharged to the San Joaquin River through a 36-inch outfall.

Sludge removed from primary sedimentation is pumped directly to anaerobic digesters while secondary sedimentation is thickened by dissolved air floatation and then pumped

to anaerobic digesters. After digestion, the treated sludge is dewatered by centrifuge, and drying beds. Dried biosolids, grit, and screenings are hauled offsite to a privately-owned landfill for disposal.

**B. Discharge Points and Receiving Waters**

1. The Facility is located in Section 4, T2S, R6E, MDB&M, as shown in Attachment B, a part of this Order.
2. Tertiary-level treated municipal wastewater is discharged at Discharge Point No. 001 to San Joaquin River, a water of the United States at a point latitude 37° 46' 45" N and longitude 121° 18' 00" W.
3. The Facility and Discharge Point 001 are within the 1992 Legal Boundary of the Sacramento-San Joaquin Delta Watershed Management Area, Section 12220 of the California Water Code.

**C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data**

Effluent limitations and Discharge Specifications contained in Order No. R5-2004-0028 for discharges from Discharge Point No. 001 and representative monitoring data from the term of Order No. R5-2004-0028 are as follows:

**Table F-2a. Historic Effluent Limitations and Monitoring Data**

Parameter	Units	Effluent Limitation			Monitoring Data (From Sept 2007 To Aug 2008)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
BOD <sup>1</sup>	mg/L	10	20	30	2.27	2.7	4
BOD <sup>1</sup> Minimum Monthly Removal	%	85			98.9	98.7	98.0
TSS	mg/L	10	20	30	1.68	2.4	3.1
TSS Minimum Monthly Removal	%	85			99.3	99.0	98.4
Temperature	°F	<= Receiving Water plus 20 °F			79.3	80.6	81.4
pH	SU	Minimum: 6.5	Maximum: 8.5		7.2	7.3	6.7 – 7.4
Dry Weather Flow (July-Sept)	mgd	9.87			6.31	7.48	8.27
Peak Wet Weather Flow (Oct – June)	mgd	13			6.58	7.32	8.45

Parameter	Units	Effluent Limitation			Monitoring Data (From Sept 2007 To Aug 2008)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Acute Toxicity	%	1-sample not to fall below 70% and 3-sample median not to fall below 90% survival.				100	90
Total Coliform	MPN/100ml	23 <sup>3</sup>	2.2 <sup>2</sup>	240 <sup>4</sup>	2	2	90
Nitrate	mg/L	10			10.38		
EC	µmhos/cm	1000			827		
Ammonia	mg/L	2.1 (June–Sept) 2.8 (Oct–May)		4.4 (June–Sept) 5.6 (Oct–May)	0.3 (June–Sept) 0.6 (Oct–May)		0.3 (June–Sept) 0.9 (Oct–May)
Aluminum	µg/L	71		140	24.3		24.3
Mercury	lbs/yr	0.69			0.03		
Chlorine Residual	mg/L	0.01 <sup>5</sup>		0.02 <sup>6</sup>	0.00		0.00
Turbidity	NTU	2 <sup>7</sup>	5 <sup>8</sup>	10 <sup>9</sup>	3.3	3.3	3.3
Nitrite	mg/L	1			0.17		
Settleable Solids	ml/L	0.1		0.2	<0.1		<0.1
Oil & Grease	mg/L	10		15	0.6		0.7
Arsenic	µg/L	10			8		
Copper	µg/L	7.9		10.4	4.6		4.6
Cyanide	µg/L	3.7		10	<2.0		<2.0
Iron	µg/L	300			49		
Manganese	µg/L	50			17.7		
Bis(2-ethylhexyl) phthalate	µg/L	22		44	<2		<2
Bromodichloromethane	µg/L	30		47	<0.1		<0.1
Dibromochloromethane <sup>11</sup>	µg/L	7		16	<0.08		<0.08
2,4,6-Tri-chlorophenol	µg/L	34		69	<1		<1
MBAS	µg/L	500			290		

1. 5-day, 20°C biochemical oxygen demand
2. 7- day median
3. Not to exceed more than once in 30 days
4. Instantaneous maximum
5. 4-day average
6. 1-hour average
7. Daily average
8. Not to occur more than 5% of the time within 24 hour period
9. Not to exceed any time