CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGION

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ORDER R5-2007-0113-01
WASTE DISCHARGE REQUIREMENTS AND MASTER RECLAMATION PERMIT FOR THE CITY OF LODI WHITE SLOUGH WATER POLLUTION CONTROL FACILITY SAN JOAQUIN COUNTY

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	**City of Lodi**
Name of Facility	**White Slough Water Pollution Control Facility, Lodi**
Facility Address	**12751 North Thornton Road**
	Lodi, CA 95242
	San Joaquin County

The discharge by the City of Lodi from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Place Identification	Owner	Township, Range and Section	Assessor's Parcel Nos.
Wastewater Treatment Plant	**City of Lodi**	**T3N, R5E, Section 24**	**055-130-15**
Land Application Areas (LAAs)	**City of Lodi**	**T3N, R5E, Section 24**	**055-12-003; 055-12-008; 055-12-011; 055-13-004; 055-13-013; 055-13-016; 055-15-015; 055-15-029; 055-19-001**
Reclamation	**City of Lodi**	**N/A**	**N/A**

IT IS HEREBY ORDERED, that Order No. 5-00-031 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code and regulations adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **14 September 2007, and amended by Order R5-2013-0126 on 4 October 2013.**

Original Signed By

PAMELA C. CREEDON, Executive Officer

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I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 3. Facility Information

Discharger	City of Lodi
Name of Facility	White Slough Water Pollution Control Facility
Facility Address	12751 North Thornton Road
	Lodi, CA 95242
	San Joaquin County
Facility Contact, Title, and Phone	Mr. Larry Parlin, Deputy Public Works Director - Utilities (209) 333-6720
Mailing Address	1331 South Ham Lane, Lodi, CA 95242
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow	8.5 million gallons per day (mgd)

II. FINDINGS

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

A. Background. In February 2012 the Discharger submitted a ROWD to renew Order R5-2007-0113 and National Pollutant Discharge Elimination System (NPDES) Permit No CA0079243, which regulated discharges to Dredger Cut, a water of the United States, and part of the Sacramento-San Joaquin Delta. The Facility also seasonally discharges to land and provides reclaimed water to the Northern California Power Agency (NCPA) and San Joaquin County (SJCo) Vector Control District. Order R5-2007-0113 regulated both the discharges to Dredger Cut and the discharges to land. In the February 2012 ROWD the Discharger requested separate permits to be issued by the Central Valley Water Board for the surface water and land discharges. Due to the complexities of the discharges to land for this Facility, separate permits have been issued for the surface water and land discharges. On 4 October 2013, the Central Valley Water Board adopted Waste Discharge Requirements Order R5-2013-0125 (NPDES Permit No. CA0079243), which is a renewed NPDES permit that only regulates the surface water discharge to Dredger Cut. This Order was amended by Order R5-2013-0126 on 4 October 2013 to remove all NPDES permitting requirements and now only regulates the discharges to land and reclaimed water uses.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. Facility Description. The Discharger owns and operates two separate wastewater collection systems, a municipal wastewater line and an industrial wastewater line that collects primarily food processing wastewater from Pacific Coast Producers, a local cannery. The Facility's wastewater treatment system consists of a head works with comminutors, mechanical grit removal, primary sedimentation, conventional activated sludge with nitrification and denitrification, secondary sedimentation, tertiary treatment using cloth media filtration, and ultraviolet light pathogen deactivation (UV Disinfection).

A separate NPDES Permit, Order R5-2013-0125 (NPDES No. CA0079243), allows year-round discharges of tertiary treated, UV disinfected municipal wastewater to Dredger Cut, a water of the United States, and part of the Sacramento-San Joaquin Delta. However in general, the Facility only discharges to surface water during the months of September through June. During the summer months (mid-June through early-September), the secondary treated municipal wastewater is pumped to the Facility's 40-acres of unlined storage ponds, and is eventually used to irrigate the Discharger's agricultural fields. The Discharger's agricultural fields cover approximately 790 acres adjacent to the Facility (see Attachment C-2) and are used for fodder, fiber, or feed crops that are not directly used for human consumption (hereinafter The Agricultural Fields). Throughout the year, the Discharger also supplies tertiary treated municipal wastewater (Recycled Water) to Northern California Power Agency (NCPA) and San Joaquin County (SJCo) Vector Control District. Approximately 1.0 – 1.5 mgd of Recycled Water is used as cooling water makeup for NCPA. The SJCo Vector Control District uses approximately 45 million gallons per year of Recycled Water for its mosquito fish rearing ponds.

The industrial wastewater does not receive treatment; instead, during the summer months, the untreated industrial wastewater, which is derived of approximately 92% food processing waste from the Pacific Coast Producers (PCP) cannery, 7% flows from metal finishers, and 1% winery waste, is applied directly to The Agricultural Fields. During the irrigation season, the untreated industrial wastewater is blended with treated municipal wastewater and agricultural run-off and applied directly to The Agricultural Fields for reuse. On an annual basis, the industrial wastewater averages 90 million gallons, treated municipal wastewater approximately 1000 million gallons and agricultural run-off averages 143 million gallons based on data in a November 2010 Industrial Influent Characterization Report and the Discharger self-monitoring reports. The remainder of the year, when the industrial wastewater flows are significantly less and primarily comprised of the metal finishers' and other industries' wastewater, the industrial wastewater is stored in the Facility's 40-acres of unlined ponds.

Biosolids are thickened with a dissolved air floatation (DAF) thickener, treated by anaerobic digestion, and stored in the Facility's lined sludge lagoons. The digested biosolids are dewatered by rotary press. The dewatered biosolids are applied to the Agricultural Fields as a soil amendment between cropping cycles.

Attachment B of this Order provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility and a map of the Discharger's agricultural fields. Section II. Facility Description, in Attachment F of this Order, contains further details about the Facility's systems.

C. Legal Authorities. This Order serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

D. Background and Rationale for Requirements. The Central Valley Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. All other attachments (A through E) are also incorporated into this Order.

E. Water Quality Control Plans. The Central Valley Water Board adopted a *Water Quality Control Plan, Fourth Edition (Revised September 2004), for the Sacramento and San Joaquin River Basins* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water

Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the underlying groundwater are as follows:

Table 4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
Land Application Areas and Effluent Storage Ponds	**Underlying Groundwater**	Municipal and domestic supply (MUN), agricultural supply and stock watering (AGR), industrial process water supply (PROC), and industrial service supply (IND).

F. Antidegradation Policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Central Valley Water Board's Basin Plan implements the state antidegradation policy. As discussed in detail in the Fact Sheet (Attachment F, Sections III.C.2. and IV.B.1.), this Order requires compliance with the antidegradation provisions of State Water Board Resolution No. 68-16. The Discharger's groundwater monitoring results show that the land application activities are a threat to groundwater quality. The Antidegradation Policy requires that, "*Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.*" To evaluate whether the Discharger is meeting BPTC, this Order requires the Discharger to continue to fully characterize background groundwater quality and complete a BPTC Evaluation. This Order requires BPTC to be implemented under a compliance schedule.

G. Title 27. Title 27 of the California Code of Regulations (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste. Discharges of wastewater to land, including but not limited to evaporation ponds or percolation ponds, are exempt from the requirements of Title 27, CCR, based on section 20090 et seq. The Facility includes the Effluent Storage Ponds, application of wastewater and dewatered biosolids on the Agricultural Fields Areas and the sludge lagoons. The sludge lagoons and application of dewatered biosolids on the Discharger's Agricultural Fields are unconditionally exempt from Title 27. However, the Facility's Effluent Storage Ponds and application of wastewater on the Agricultural Fields are not unconditionally exempt from Title 27, because untreated industrial wastewater is applied. The Discharger believes based on evidence provided in its January 2011 study[1] that the Effluent Storage Ponds meet the preconditions for exemption from Title 27 because the study indicates that background groundwater quality is not exceeded as a result of this activity. The Discharger's 2011 study also concludes that the discharge of wastewater to the Agricultural Fields is threatening to cause or has caused groundwater to contain waste constituents in concentrations statistically greater than background water quality. However, the Discharger has made a number of recent improvements with respect to discharge of wastewater to the Agricultural Fields, and additional monitoring and evaluation is needed to determine if the preconditions for the wastewater exemption under Title 27 are satisfied. The Central Valley Water Board has not fully evaluated the evidence and has therefore not made any conclusions

[1] *City of Lodi White Slough Water Pollution Control Facility, Background Groundwater Quality Characterization Report*, January 2011

with respect to application of the exemptions of Title 27 for the Effluent Storage Ponds and wastewater discharge to the Agricultural Fields. This Order requires either demonstration of satisfying the preconditions for the wastewater exemption under Title 27 for the Effluent Storage Ponds and the Agricultural Fields or compliance with the regulatory requirements of Title 27. Additional details on Title 27 exemptions are in the Fact Sheet, Section IV.C.1.

H. Monitoring and Reporting. CWC sections 13267 and 13383 authorize the Central Valley Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement State requirements. This Monitoring and Reporting Program is provided in Attachment E.

The technical and monitoring reports in this Order are required in accordance with Water Code section 13267, which states the following in subsection (b)(1), "In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."

The Discharger owns and operates the Facility subject to this Order. The monitoring reports required by this Order are necessary to determine compliance with this Order. The need for the monitoring reports is discussed in the Fact Sheet.

In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall bear the professional's signature and stamp.

I. Notification of Interested Parties. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order (Attachment F, section VIII).

J. Consideration of Public Comment. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order (Attachment F, section VIII).

III. DISCHARGE PROHIBITIONS

A. Discharge or application of waste at a location or in a manner different from that described in the Findings is prohibited.

B. Neither the treatment, storage, discharge, nor application of waste shall create a nuisance as defined in CWC Section 13050(m).

C. Discharge or application of waste classified as 'hazardous', as defined in CCR, Title 23, Section 2521(a), is prohibited.

D. The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, supplemental irrigation water, groundwater, cooling waters, or condensates that are essentially free of pollutants.

E. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the Standard Provisions and Reporting Requirements for Waste Discharge Requirements.

F. Except as allowed by Order R5-2013-0125 (NPDES No. CA0079243), discharge of wastes to surface waters or surface water drainage courses is prohibited.

G. Wastewater shall not be applied to areas other than agricultural fields 1A through 6G (As shown in Attachment C-2) or used for reclamation at the Northern California Power Agency and San Joaquin County Vector Control District (as described in Findings II.B).

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Land Discharge Specifications

The Discharger shall maintain compliance with the following land discharge specifications as described in the attached MRP (Attachment E). Loading calculations shall be performed as specified in the attached MRP (Attachment E), Section VIII.B.5. All reports shall be prepared under the direct supervision of a certified agronomist and signed by the registered professional.

1. **Hydraulic Loading.** The hydraulic loading to any individual agricultural field (1A through 6G as shown in Attachment C-2) shall be at reasonable agronomic rates designed to minimize percolation of wastewater constituents below the evaporative and root zone (i.e., deep percolation).

2. **Total Nitrogen.** The total nitrogen loading to any individual agricultural field (1A through 6G as shown in Attachment C-2) shall not exceed the agronomic rate for plant available nitrogen (PAN) for the type of crop to be grown, as specified in the most recent edition of the Western Fertilizer Handbook. For biosolids application rates, the Discharger must calculate the PAN using the procedure, volatilization factors, and mineralization rates described in USEPA's G*uide for [Biosolids] Land Appliers* (EPA/831-B-03-002b).

3. **BOD_5.** The maximum BOD_5 loading to any individual agricultural field (1A through 6G as shown in Attachment C-2) shall not exceed any of the following:
   a. 200 lbs/acre/day as a cycle average; and
   b. The daily and cycle average loading rate that ensures compliance with Discharge Prohibition III.B and Groundwater Limitations V.A.

4. **Metals.** Wastewater and biosolids applied to any agricultural field (1A through 6G as shown in Attachment C-2) shall not exceed the following cumulative metals loading limits:

Pollutant	CR (lbs/ac)
Arsenic	36
Cadmium	34
Copper	1336
Lead	267
Mercury	15
Molybdenum	16
Nickel	374
Selenium	89
Zinc	2494

5. **Secondary Treated Effluent Discharged to Ponds.** The Discharger shall maintain compliance with the following effluent limitations specified in Table 5, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP (Attachment E).

Table 5. Secondary Treated Effluent Limitations

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
BOD 5-day @ 20°C	mg/L	40	80
Settleable Solids	mL/L	0.2	0.5

B. Reclamation Specifications

1. Public contact with the reclaimed water shall be precluded or controlled through such means as fences, signs, and other acceptable alternatives.

2. All reclaimed water equipment, pumps, piping, valves, and outlets shall be appropriately marked to differentiate them from potable facilities, and these shall be of a type, or secured in a manner, that permits operation by authorized personnel only.

3. Reclaimed water shall be used in compliance with Title 22, Division 4, Chapter 3, Article 3, *Uses of Recycled Water* and this Order.

4. The Discharger shall also maintain compliance with the following reclamation specifications and effluent limitations with compliance measured at Monitoring Location REC-001 as described in the attached MRP.

   a. **Tertiary Treated Effluent.** The Discharger shall treat the wastewater such that it complies with Title 22 CCR, Section 60301.230 (“Disinfected Tertiary Recycled Water”) .

b. **Total Coliform Organisms**. Effluent total coliform organisms shall not exceed:
   i. 2.2 most probable number (MPN) per 100 mL, as a 7-day median;
   ii. 23 MPN/100 mL, more than once in any 30-day period; and
   iii. 240 MPN/100 mL for any single sample.

c. **Turbidity.** Effluent turbidity shall not exceed any of the following:
   i. An average of 2 Nephelometric Turbidity Units (NTU) within a 24-hour period;
   ii. 5 NTU more than 5 percent of the time within a 24-hour period; and
   iii. 10 NTU at any time.

V. RECEIVING WATER LIMITATIONS

A. Groundwater Limitations

1. **Effective 1 May 2020**, release of waste constituents from any portion of the Facility and The Agricultural Fields:

   a. Shall not unreasonably affect beneficial uses;

   b. Shall not cause a condition of pollution or nuisance; and

   c. Shall not cause the groundwater within influence of the Facility and The Agricultural Fields to contain waste constituents in concentrations greater than listed or in excess of natural background quality, whichever is greater.

Constituent	Units	Limitation
Boron	mg/L	0.7
Chloride	mg/L	106
Iron	mg/L	0.3
Lead	mg/L	0.015
Mercury	ug/L	2
Molybdenum	mg/L	0.01
Manganese	mg/L	0.05
Sodium	mg/L	69
Total Coliform Organisms	MPN/100 mL	<2.2
Total Dissolved Solids	mg/L	450
Total Nitrogen	mg/L	10
Nitrite (as N)	mg/L	1
Nitrate (as N)	mg/L	10
Ammonia (as NH_4)	mg/L	1.5

VI. PROVISIONS

A. Standard Provisions

The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and made part of this Order by reference. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s)."

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order.

C. Special Provisions

1. **Special Studies, Technical Reports and Additional Monitoring Requirements (N/A)**

2. **Construction, Operation and Maintenance Specifications**

a. **Pond Operating Requirements.**

i. Ponds shall be managed to prevent breeding of mosquitoes. In particular,

a) An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.
b) Weeds shall be minimized.
c) Dead algae, vegetation, and debris shall not accumulate on the water surface.

ii. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas *(*or property owned by the Discharger).

iii. As a means of discerning compliance with Pond Operating Requirements a.ii., the dissolved oxygen (DO) content in the upper zone (1 foot) of wastewater in the ponds shall not be less than 1.0 mg/L for three consecutive weekly sampling events. If the DO in any single pond is below 1.0 mg/L for three consecutive weekly sampling events, the Discharger shall report the findings to the Central Valley Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.

iv. Ponds shall not have a pH less than 6.5 or greater than 9.0.

3. **Special Provisions for Municipal Facilities (POTWs Only)**

a. **Sludge/Biosolids Treatment or Disposal Specifications**

i. Sludge and solid waste shall be removed from screens, sumps, ponds, clarifiers, etc. as needed to ensure optimal plant performance.

ii. Collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer, and consistent with *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste,* as set forth in Title 27, CCR, Division 2, Subdivision 1, section 20005, et seq. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) that are operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy these specifications.

iii. The use and disposal of biosolids shall comply with existing Federal and State laws and regulations, including permitting requirements and technical standards included in CFR Part 503. If the State Water Board and the Regional Water Board are given the authority to implement regulations contained in CFR Part 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. The Discharger must comply with the standards and time schedules contained in CFR Part 503 whether or not they have been incorporated into this Order.

iv. Any proposed change in biosolids use or disposal practice from a previously approved practice shall be reported to the Executive Officer and USEPA Regional Administrator at least **90 days** in advance of the change.

b. **Biosolids Storage Requirements**

i. Facilities for the storage of biosolids shall be located, designed and maintained to restrict public access to biosolids.

ii. Biosolids storage facilities shall be designed and maintained to prevent washout or inundation from a storm or flood with a return frequency of 100 years.

iii. The storage of biosolids, residual sludge, and solid waste on the Facility property shall be temporary and controlled, and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations V.B.

c. **The Agricultural Fields' Area Specifications**

i. Areas irrigated with wastewater shall be managed to prevent breeding of mosquitoes and other vectors. More specifically:

a) The discharge of wastewater to, or stormwater within, any agricultural field (As shown in Attachment C-2) must infiltrate completely, or be returned to the Facility's storage ponds as tailwater within 24 hours.

b) Ditches shall be maintained essentially free of emergent, marginal, and floating vegetation.

c) Low-pressure and un-pressurized pipelines and ditches, which are accessible to mosquitoes, shall not be used to store wastewater.

ii. The Discharger shall provide and maintain the following setbacks for all The Agricultural Fields (As shown in Attachment C-2):

a) A 50-foot buffer zone between The Agricultural Fields and all property boundaries.

b) A 100-foot buffer zone between any spring, domestic well or irrigation well and the wetted area produced during irrigation of wastewater.

c) The irrigation system shall be designed and managed to ensure even application of wastewater over any agricultural field (As shown in Attachment C-2) and to minimize erosion.

iii. Biosolids may not be applied, to any agricultural field 24 hours before forecasted precipitation, during periods of precipitation, and for at least 24 hours after cessation of precipitation, or when soils are saturated.

iv. Irrigation using recycled water shall not be performed during rainfall or when the ground is saturated.

v. All tailwater returns and runoff control systems must be fully functional prior to irrigation with wastewater.

vi. The Discharger is encouraged to comply with the "Manual of Good Practice for Agricultural Land Application of Biosolids" developed by the California Water Environment Association.

d. **Collection System.** On 2 May 2006, the State Water Board adopted State Water Board Order 2006-0003, a Statewide General WDR for Sanitary Sewer Systems. The Discharger shall be subject to the requirements of Order 2006-0003 and any future revisions thereto. Order 2006-0003 requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDR. The Discharger has applied for and has been approved for coverage under State Water Board Order 2006-0003 for operation of its wastewater collection system.

4. Other Special Provisions

a. Wastewater reclaimed for use at the San Joaquin County Vector Control District and the Northern California Power Agency shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the DHS reclamation criteria, California Code of Regulations, Title 22, Division 4, Chapter 3.

b. The treatment and storage facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

c. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory and certification requirements in the Standard Provisions (Attachment D) and state that

the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

5. Compliance Schedules

a. Compliance Schedule for Groundwater Limitations V.A and with State Water Board Resolution 68-16.

The Antidegradation Policy requires that a discharge will not result in water quality impacts that exceed applicable water quality objectives or background water quality, whichever is greater. In addition, this Order must include requirements that result in the implementation of best practicable treatment or control (BPTC) that assure a pollution or nuisance will not occur and the degradation is to the maximum benefit of the people of the state. The Discharger's groundwater monitoring results show that the land application activities are a threat to groundwater quality. To determine compliance with Groundwater Limitations contained in this Order, and to evaluate whether the Discharger is meeting BPTC in accordance with the Antidegradation Policy, the Discharger must continue to fully characterize background groundwater and complete the BPTC Evaluation.

The Discharger submitted a December 2010, *City of Lodi Water Pollution Control Facility Best Practicable Treatment and Control Evaluation Work Plan*. The Work Plan included an initial BPTC evaluation for the storage ponds, irrigation facilities and biosolids application facilities. The Discharger shall develop and submit a BPTC Evaluation that sets forth a comprehensive technical evaluation of each component of the facilities' waste management system to determine best practicable treatment or control for each of the waste constituents of concern. The Discharger must comply with Groundwater Limitations V.A and complete the BPTC evaluation and implement the recommendations in accordance with the following schedule:

Task	Compliance Date
Begin Evaluation	1 August 2014
Complete Evaluation	1 December 2014.
Submit BPTC Report	1 February 2015
Submit Corrective Action Plan/Implementation Schedule *The Discharger shall submit to the Central Valley Water Board a corrective action plan and implementation schedule to assure compliance with Groundwater Limitations V.A and compliance with State Water Board Resolution 68-16, which requires implementation of best practicable treatment or control. At minimum, the corrective action plan shall consider treating the industrial influent wastewater.*	1 November 2015
Begin Implementation of BPTC Recommendations	1 May 2015
Progress Reports	1 November, annually, beginning 1 November 2016
Submit report documenting completion of construction of BPTC Recommendations and compliance with Groundwater Limitations V.A	1 May 2020

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations and discharge specifications contained in section IV of this Order will be determined as specified below:

A. Land Discharge Loading Limits (Section IV.A.). The Discharger shall perform the following calculations during all months when land application occurs.

1. **Total Nitrogen (Section IV.A.2)**. The Total Nitrogen loading rate shall be calculated for each irrigation field (As shown in Attachment C-2) on a monthly basis using the daily applied volume of wastewater, the most recent effluent monitoring results, and the daily application area. Loading rates for supplemental nitrogen (e.g. fertilizers and biosolids), when applicable, shall be calculated and included in the total nitrogen loading rate for each irrigation field on a monthly basis using the actual daily applied load and the estimated daily application area. The cumulative nitrogen loading rate 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.

2. **20ºC Biological Oxygen Demand, 5-day (BOD_5) (Section IV.A.3)**. Wastewater BOD_5 loading rates shall be calculated for each irrigation field. For compliance determination, the cycle average BOD_5 loading rates shall be calculated using the total volume applied on the day of application, the number of days between applications, the total application period, application area, and a running average of the three most recent results of BOD_5 for the applicable source wastewater. When reporting, include the daily BOD_5 loading rates, which shall be calculated using the total volume applied on the day of application, estimated application area, and a running average of the three most recent results of BOD_5 for the applicable source water.

3. **Metals (Section IV.A.4).** Cumulative metals loading rates shall be calculated for each irrigation field (As shown in Attachment C-2) on a monthly basis using the daily applied volume of wastewater, the most recent effluent monitoring results, and the daily application area. Cumulative metals loading rates for biosolids, when applicable, shall be calculated and included in the total loading rate for each irrigation field on a monthly basis using the actual daily applied load, the most recent quarterly biosolids monitoring results, and the estimated daily application area. The cumulative metal(s) loading rate for each irrigation field for the calendar year to date shall be calculated as a running total of monthly loadings to date for each metal.

ATTACHMENT A – DEFINITIONS

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Best Practicable Treatment or Control (BPTC): BPTC is a requirement of State Water Resources Control Board Resolution 68-16 – "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (referred to as the "Antidegradation Policy"). BPTC is the treatment or control of a discharge necessary to assure that, *"(a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained."* Pollution is defined in CWC Section 13050(l). In general, an exceedance of a water quality objective in the Basin Plan constitutes "pollution".

Biosolids: sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and State regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities.

Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ) are those sample results less than the Reporting Level (see RL), but greater than or equal to the laboratory's Method Detection Level (see MDL).

Estimated Chemical Concentration is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the Minimum Level value (see ML).

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL) means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For

pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (*n*) is odd, then the median = $X_{(n+1)/2}$. If *n* is even, then the median = ($X_{n/2}$ + $X_{(n/2)+1}$)/2 (i.e., the midpoint between the *n*/2 and *n*/2+1).

MDL, Method Detection Limit is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in CFR Part 136 (revised as of July 3, 1999).

Not Detected (ND) are those sample results less than the laboratory's MDL.

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 CWC 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 Boards.

RL, Reporting Level 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.

Source of Drinking Water is any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

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

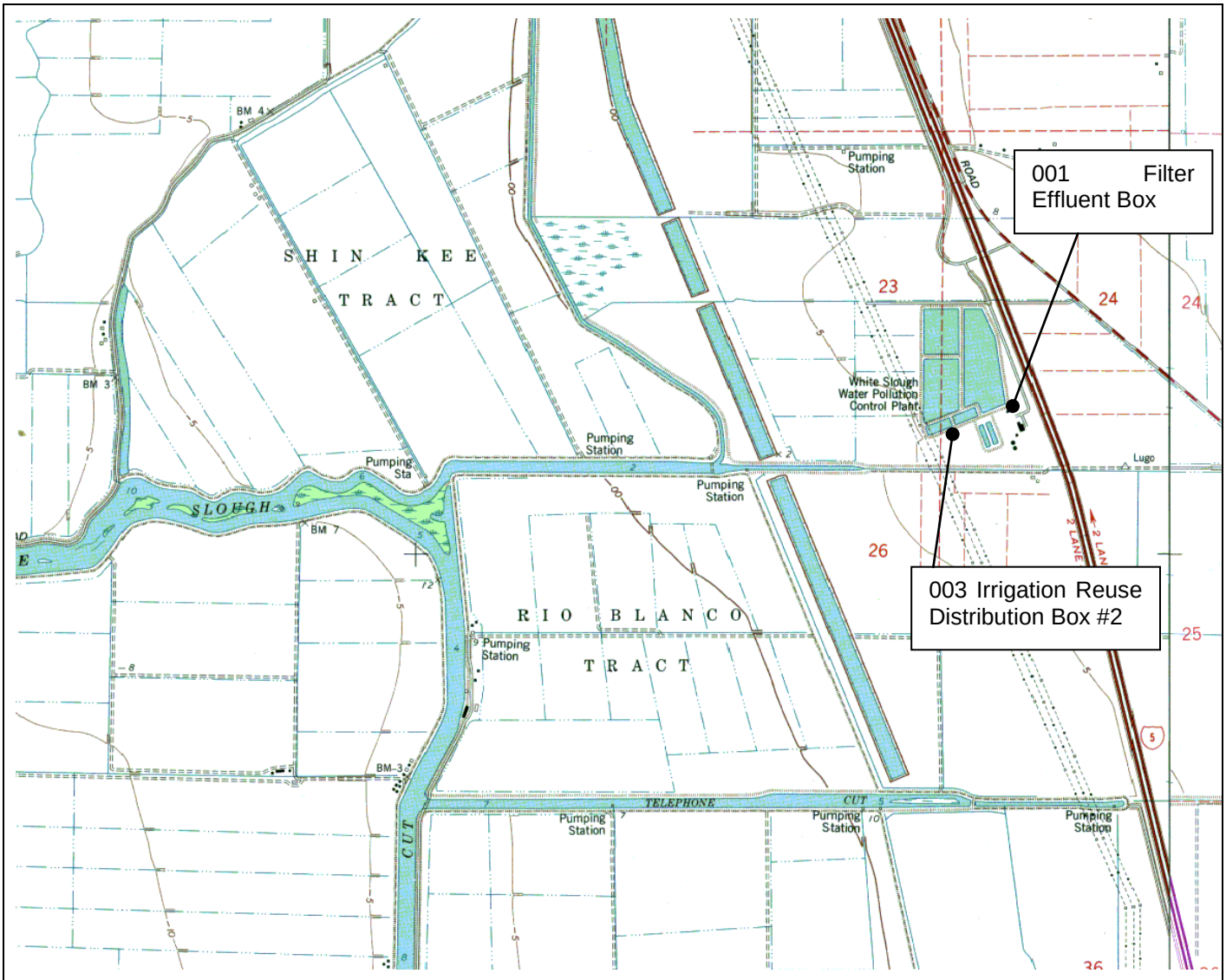
$$\sigma = (\sum[(x - u)^2]/(n - 1))^{0.5}$$

where:

x is the observed value;
u is the arithmetic mean of the observed values; and
n is the number of samples.

Wastewater is defined as either the discharge of: (1) treated municipal wastewater, (2) industrial wastewater, (3) stormwater runoff, (4) return agricultural tailwater, or (5) any combination of (1) through (4).

ATTACHMENT B – SITE LOCATION MAP



Drawing Reference: U.S.G.S TOPOGRAPHIC MAP 7.5 MINUTE QUADRANGLE *Photorevised 1973* *Not to scale*	**CITY OF LODI** **WHITE SLOUGH WATER POLLUTION CONTROL FACILITY** **SAN JOAQUIN COUNTY**	

ATTACHMENT C-1 – FLOW SCHEMATIC

ATTACHMENT C-2 – DISCHARGER'S AGRICULTURAL FIELDS

ATTACHMENT D –STANDARD PROVISIONS

The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991. The document may be found on the Central Valley Water Board website at the following link:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/std_provisions/wdr-mar1991.pdf

Copies of the document may also be obtained by contacting or visiting the Central Valley Water Board's office at 11020 Sun Center Drive, Suite 200, Rancho Cordova, California 95670, weekdays between 8:00 a.m. and 5:00 p.m.

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Water Code Sections 13267 and 13383 authorize the Regional Water Quality Control Board (Central Valley Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the State 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 Central Valley Water Board.

B. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Public Health (DPH). 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 Central Valley Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Central Valley Water Board.

C. All analyses shall be performed in a laboratory certified to perform such analyses by the DPH. Laboratories that perform sample analyses shall be identified in all monitoring reports.

D. 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 to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this MRP.

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

	Monitoring Location Name	Monitoring Location Description
	INF-001	Municipal Influent to Facility
	INF-002	Industrial Influent to Facility
	REC-001	At the filter pump station effluent box (38º 05' 22.9" N, 121º 23' 07.1" W), at which all waste tributary to the recycled water supply line is present, and is representative of the disinfected tertiary recycled water supplied to the Discharger's clients.
	EFF-001	Secondary Effluent discharged to Effluent Storage Ponds
	PND-001 - 004	At a point in each pond, at which all waste tributary to the pond is present, and is representative of the combined wastewaters discharged into the facility pond(s).
	Agricultural Fields 1A through 6G as shown in Attachment C-2	At reclaimed water distribution box #2 (38º 05' 19.8" N, 121º 23' 16.3" W), at which all waste tributary to the irrigation line is present, and is representative of the irrigation reuse waters applied to The Agricultural Fields.
	RGW-XX	Monitoring wells WSM-1, WSM-2, WSM-4 through WSM-18, and RMW-1 through RMW-3.
	BIO-001	Representative sample location for biosolids
	IRR-001	Representative sample location for each source of supplemental irrigation supply prior to mixing with land discharge

III. INFLUENT MONITORING REQUIREMENTS

A. Municipal Influent - Monitoring Location

1. The Discharger shall monitor the municipal influent to the facility at INF-001 as follows. Influent samples shall be collected at approximately the same time as effluent samples and shall be representative of the influent:

Table E-2. Municipal Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
BOD 5-day 20°C	mg/L	24-hr Composite[1]	1/week	
Total Suspended Solids	mg/L	24-hr Composite[1,]	1/week	
Flow	mgd	Meter	Continuous	
Electrical Conductivity @ 25°C	umhos/cm	Grab	1/week	
Total Dissolved Solids	mg/L	Grab	1/quarter	

1. 24-hour flow proportioned composite.

B. Industrial Influent - Monitoring Location

1. The Discharger shall monitor the industrial influent to the facility at INF-002 as follows.

Table E-3. Industrial Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Meter	Continuous	
Electrical Conductivity @ 25°C	umhos/cm	Grab	1/week	
Total Dissolved Solids	mg/L	Grab	1/week	
Total Nitrogen	mg/L	Grab	Quarterly[4]	
Ammonia (as NH_4)	mg/L	Grab	Quarterly[4]	
Nitrate plus Nitrite (as N)	mg/L	Grab	Quarterly[4]	
Standard Minerals[3]	mg/L	Grab	Quarterly[4]	
Heavy Metals[1]	ug/L	Grab	Annually[2]	Method 1631

1. Heavy metals (or metals) shall include analyses for Arsenic, Cadmium, Chromium, Copper, Dissolved Iron, Dissolved Lead, Dissolved Manganese, Mercury, Molybdenum, Nickel, Selenium, and Zinc. Mercury analysis requires use of "clean technique."
2. Samples shall be collected during the month of February.
3. Standard minerals shall include the following: boron, bromide, calcium, fluoride, iron, magnesium, manganese, nitrate as nitrogen, total potassium, sodium, chloride, total phosphorus, sulfate, total alkalinity (including alkalinity series), and total hardness as CaCO3, and include verification that the analysis is complete (i.e., cation/anion balance).
4. Sampling should coincide with canning season, non-canning season and first flush.

IV. LAND DISCHARGE MONITORING REQUIREMENTS

A. Land Discharge to Agricultural Fields - Monitoring Location LND-001

1. At a minimum, the Discharger shall monitor the wastewater discharged to the Agricultural Fields as required in Table E-4. Sampling is not required during periods when no wastewater is discharged to The Agricultural Fields.

Table E-4 Land Discharge to The Agricultural Fields Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency [2]
Flow	mgd & inch/acre/day	Metered or Calculated[1]	Continuous
pH	Standard Units	Grab	1/week/event
Total Dissolved Solids	mg/L	Grab	1/week/event
Fixed Dissolved Solids	mg/L	Grab	1/week/event
Electrical Conductivity	umhos/cm	Grab	1/week/event
BOD 5-day 20ºC	mg/L & lbs/acre/day	Grab	1/week/event
Total Nitrogen	mg/L & lbs/acre/day	Grab	1/week/event
Nitrate (as N)	mg/L	Grab	1/week/event
Ammonia (as N)	mg/L	Grab	1/week/event

Metals (total) [3]	ug/L & lbs/acre/month	Grab	1/month/event
Standard Minerals [4]	mg/L	Grab	1/month/event

1. The total flow directed to The Agricultural Fields shall be calculated as the sum of the flow pumped from storage ponds (metered), Industrial Line flow (metered), and Supplemental Irrigation Supply (metered).
2. The minimum required sampling frequency is once per event. The maximum required sampling frequency is once per sampling period (i.e. week or month).
3. Metals shall include at least the following: arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc.
4. Standard minerals shall include the following: boron, bromide, calcium, fluoride, iron, magnesium, manganese, nitrate as nitrogen, total potassium, sodium, chloride, total phosphorus, sulfate, total alkalinity (including alkalinity series), and total hardness as CaCO3, and include verification that the analysis is complete (i.e., cation/anion balance).

B. Land Discharge to Agricultural Fields – Monitoring Location IRR-001

1. 1. The Discharger shall monitor the Supplemental Irrigation Supply when discharged to the Agricultural Fields for flow (continuous metered) and total dissolved solids (annual grab).

C.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.

2. 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.

D. Secondary Effluent to Storage Ponds - Monitoring Location EFF-001

1. At a minimum, the Discharger shall monitor the municipal wastewater discharged to the storage ponds at Monitoring Location EFF-001 as required in Table E-5. Sampling is only required during periods when municipal wastewater is discharged to ponds.

Table E-5 Discharges of Municipal Wastewater to Storage Ponds

Parameter	Units	Sample Type	Minimum Sampling Frequency[2]
BOD 5-day @ 20°C	mg/L	24-hour composite[1]	1/week/event
Settleable Solids	mL/L	Grab	1/week/event

1. 24-hour flow proportioned composite.
2. The minimum required sampling frequency is once per event. The maximum required sampling frequency is once per sampling period (i.e. week or month).

V. RECLAMATION MONITORING REQUIREMENTS

A. Tertiary Recycled Water - Monitoring Location REC-001

1. The Discharger shall monitor at REC-001 during events when the tertiary level treated wastewater is supplied to the Northern California Power Agency and/or San Joaquin County Vector Control District as follows:

Table E-6. 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	24-hour composite[1]	1/day	
Total Coliform Organisms	MPN/100 mL	Grab	1/day	
Total Suspended Solids	mg/L	24-hour composite[1]	1/day	
Turbidity	NTU	Meter	Continuous	

1 24-hour flow proportioned composite.

B. Effluent Storage Ponds - Monitoring Locations PND-001 through PND-004.

1. At a minimum, the Discharger shall monitor wastewater impounded in each Facility pond(s) at PND-001 through PND-004 as required in Table E-7, below. Grab samples shall be collected from each pond during the specified sampling frequency and combined to create one composite sample.

Table E-7. Pond(s) Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen[4]	mg/L	Grab	1/week	
pH	Standard Units	Grab	1/week	
Freeboard	feet	--	1/week	
Available Storage Volume	Acre-feet	--	1/month	
BOD 5-day @ 20ºC	mg/L	Grab	1/week	
Total Dissolved Solids	mg/L	Grab	1/week	
Electrical Conductivity	umhos/cm	Grab	1/week	
Ammonia (as N)[1]	mg/L	Grab	1/month	
Nitrate (as N)	mg/L	Grab	1/month	
Nitrite (as N)	mg/L	Grab	1/month	

Metals[2]	ug/L	Grab	1/quarter	
Standard Minerals[3]	mg/L	Grab	1/quarter	

1 Report as total.

2 Metals shall include at least the following: arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc.

3 Standard minerals shall include the following: boron, calcium, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, chloride, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

4 Samples shall be collected at a depth of one foot from each pond in use, opposite the inlet. Samples shall be collected between 0700 and 0900 hours.

VI. RECEIVING WATER MONITORING REQUIREMENTS – GROUNDWATER

A. Groundwater Monitoring Locations

1. The Discharger shall monitor the groundwater in existing monitoring wells WSM-1, WSM-2, WSM-4 through WSM-18, RMW-1 through RMW-3, or additional monitoring wells as approved by the Executive Officer. Monitoring wells WSM-10, WSM-11, WSM-13 and RMW-1 through RMW-3 shall only be monitored for groundwater elevation and gradient direction.

   Prior to construction and/or sampling of any additional groundwater monitoring wells, the Discharger shall submit plans and specifications to the Central Valley Water Board for review and approval.

   Prior to sampling, the groundwater elevations shall be measured and the wells shall be purged of at least three well volumes until temperature, pH and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet. Samples shall be collected and analyzed using standard USEPA methods. Except as noted above, groundwater monitoring shall include, at a minimum, the following:

Table E-8. 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[1]	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	
Fixed dissolved solids	mg/L	Grab	1/quarter	
Electrical conductivity at 25ºC	umhos/cm	Grab	1/quarter	
Chloride	mg/L	Grab	1/quarter	
Sodium	mg/L	Grab	1/quarter	
Total Kjeldahl nitrogen	mg/L	Grab	1/quarter	
Nitrate (as N)	mg/L	Grab	1/quarter	
Nitrite (as N)	mg/L	Grab	1/quarter	
Ammonia (as NH_4)	mg/L	Grab	1/quarter	
Boron	mg/L	Grab	1/quarter	

Dissolved iron[2]	mg/L	Grab	1/quarter	
Dissolved lead[2]	mg/L	Grab	1/quarter	
Dissolved manganese[2]	mg/L	Grab	1/quarter	
Total coliform organisms	MPN/100 mL	Grab	1/quarter	
Standard Minerals[3]	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.
3 Standard minerals shall include the following: boron, bromide, calcium, fluoride, iron, magnesium, manganese, nitrate as nitrogen, potassium, sodium, chloride, phosphorus, sulfate, total alkalinity (including alkalinity series), and total hardness as CaCO3, and include verification that the analysis is complete (i.e., cation/anion balance).

VII. OTHER MONITORING REQUIREMENTS

A. Biosolids

1. Monitoring Location BIO-001

Samples of biosolids shall be collected at Monitoring Location BIO-001 and analyzed as indicated in Table E-9 and in accordance with EPA's *POTW Sludge Sampling and Analysis Guidance Document*, August 1989. Sampling records shall be retained for a minimum of 5 years. Table E-9. Biosolids Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Quantity	dry tons	--	1/application
Solids Content	percentage	--	1/application
Disposal Location	--	--	1/application
Arsenic	mg/kg	Composite[1,5]	1/quarter
Cadmium	mg/kg	Composite[1,5]	1/quarter
Copper	mg/kg	Composite[1,5]	1/quarter
Lead	mg/kg	Composite[1,5]	1/quarter
Mercury	mg/kg	Composite[1,5]	1/quarter
Molybdenum	mg/kg	Composite[1,5]	1/quarter
Nickel	mg/kg	Composite[1,5]	1/quarter
Selenium	mg/kg	Composite[1,5]	1/quarter
Zinc	mg/kg	Composite[1,5]	1/quarter
Organic Nitrogen	mg/kg (dry)	Composite[2,5]	1/quarter[3]
Ammonia Nitrogen	mg/kg (dry)	Composite[2,5]	1/quarter[3]
Nitrate Nitrogen	mg/kg (dry)	Composite[2,5]	1/quarter[3]
Plant Available Nitrogen (PAN)	lbs N/acre	Composite[2,4]	1/quarter[3]
Total Phosphorus	mg/kg (dry)	Composite[2,5]	1/quarter[3]
Total Potassium	mg/kg (dry)	Composite[2,5]	1/quarter[3]

1. Samples may be collected either the biosolids storage lagoon or the stockpiled biosolids.
2. Samples to be collected from stockpiled biosolids.
3. If a biosolids application event is scheduled to occur during a given quarter, monitoring should be completed prior to application event.
4. Calculate PAN using the procedure, volatilization factors, and mineralization rates described in USEPA's Guide for [Biosolids] Land Appliers (EPA/831-B-03-002b).
5. Composite samples mean several grab samples combined.

VIII. 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 Central Valley 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 Central Valley 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 Central Valley Water Board by letter when it returns to compliance with the compliance time schedule.

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 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 RL 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 chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy ($\pm$ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

   c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

   d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.

5. **Multiple Sample Data.** When determining compliance with an AMEL , AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported

determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

B. Monthly Self Monitoring Reports (SMRs)

1. Monitoring results shall be submitted to the Central Valley Water Board by the **first day** of the second month following sample collection. Quarterly and annual monitoring results shall be submitted by the **first day of the second month following each calendar quarter, semi-annual period, and year**, respectively.

2. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the discharge complies with waste discharge requirements. The highest daily maximum for the month, monthly and weekly averages, and medians shall be determined and recorded as needed to demonstrate compliance.

3. With the exception of flow, all constituents monitored on a continuous basis (metered), shall be reported as daily maximums, daily minimums, and daily averages; flow shall be reported as the total volume discharged per day for each day of discharge.

4. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.

5. 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 the industrial influent (Section III), reclamation (Section V.A.),pond (Section V.B), supplemental irrigation supply (when applicable), and all land application area monitoring (Section IV). 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 BOD_5 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 BOD_5 for the applicable source water, which also shall be reported along with supporting calculations.

g. **Cycle average BOD_5 loading rates** shall be calculated using the total volume applied on the day of application, the number of days between applications, the total application period, application area, and a running average of the three most recent results of BOD_5 for the applicable source wastewater.

h. **Total nitrogen and Total metals** (lbs/acre/month) 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.

i. **Nitrogen loading rates** for other sources (i.e., fertilizers and biosolids) shall be calculated for each irrigation field on a monthly basis using the daily applied load and the estimated daily application area.

j. **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.

k. **Cumulative metals** for each irrigation field shall be calculated as a running total of monthly loadings to date from all sources.

C. Quarterly Self-Monitoring Reports

1. The results from quarterly monitoring of the Municipal Influent (Section III.A), Industrial Influent (Section III.B), Effluent Storage Ponds (Section V.B), and groundwater (Section VI.A) in tabular format.

2. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDRs this MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater, parameters measured before, during and after purging; method of purging; calculation of casing volume; and total volume of water purged;

3. Calculation of groundwater elevations, an assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends, if any;

4. Summary data tables of historical and current groundwater elevations and analytical results; and

5. A scaled map showing relevant structures and features of the Facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level.

6. Copies of laboratory analytical reports(s) for groundwater monitoring.

D. Annual Self-Monitoring Reports

1. The results from annual monitoring of the Industrial Influent (Section III.B) and Supplemental Irrigation Supply (Section IV.B).

2. An evaluation of the groundwater quality beneath the wastewater treatment facility and land application area, and determination of compliance with the groundwater limitations of the WDRs based on statistical analysis for each constituent monitored for each compliance well. Include all calculations and data input/analysis tables derived from use of statistical software, as applicable.

3. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge in full compliance with the waste discharge requirements.

4. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

5. A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions.

6. SMRs must be submitted to the Central Valley 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
   11020 Sun Center Dr., Suite #200
   Rancho Cordova, CA 95670-6114
   Attention: Title 27/Non-15 Compliance/Enforcement Unit

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

Table E-10. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	**Effective date of this Order**	**All**	**First day of second calendar month following month of sampling.**
1/day	**Effective date of this Order**	**(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.**	**First day of second calendar month following month of sampling.**
1/week	**Sunday following permit effective date**	**Sunday through Saturday**	**First day of second calendar month following month of sampling.**
1/month	**First day of calendar month following permit effective date**	**1st day of calendar month through last day of calendar month**	**First day of second calendar month following month of sampling.**
1/quarter	**Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date**	**January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31**	**May 1 August 1 November 1 February 1**
2/year	**Closest of January 1 or July 1 following (or on) permit effective date**	**January 1 through June 30 July 1 through December 31**	**August 1 February 1**
1/year	**January 1 following (or on) permit effective date**	**January 1 through December 31**	**February 1**
1/permit term	**Effective date of this Order**	**Not applicable**	**First day of second calendar month following month of sampling.**

E. Other Reports

1. **Cropping And Irrigation Annual Monitoring Report and Plan**
   An Annual Cropping and Irrigation Annual Monitoring Report and Plan shall be submitted to the Regional Water Board by **1 February** each year and 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 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).

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.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described 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

WDID	5B390103002
Discharger	City of Lodi
Name of Facility	White Slough Water Pollution Control Facility, Lodi
Facility Address	12751 North Thornton Road
	Lodi, CA 95242
	San Joaquin County
Facility Contact, Title and Phone	Mr. Larry Parlin, Deputy Public Works Director - Utilities (209) 333-6720
Authorized Person to Sign and Submit Reports	Mr. Larry Parlin, Deputy Public Works Director - Utilities (209) 333-6720
Mailing Address	1331 South Ham Lane, Lodi, CA 95242
Billing Address	221 West Pine Street, Lodi, CA 95240
Type of Facility	Publicly Owned Treatment Works (POTW)
Pretreatment Program	Y
Reclamation Requirements	Producer
Facility Permitted Flow	8.5 mgd
Facility Design Flow	8.5 mgd

A. City of Lodi (hereinafter Discharger) is the owner and operator of White Slough Water Pollution Control Facility (hereinafter Facility), a publicly owned treatment works (POTW).

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 Discharger filed a report of waste discharge (ROWD) and submitted an application for renewal of its WDRs and NPDES permit in February 2012. The application was deemed complete on 9 October 2012. In the February 2012 ROWD the Discharger requested separate permits to be issued by the Central Valley Water Board for the surface water and land discharges. Due to the complexities of the discharges to land for this Facility, separate permits

have been issued for the surface water and land discharges. On 4 October 2013, the Central Valley Water Board adopted Waste Discharge Requirements Order R5-2013-0125 (NPDES Permit No. CA0079243), which is a renewed NPDES permit that only regulates the surface water discharge to Dredger Cut. This Order was amended by Order R5-2013-0126 on 4 October 2013 to remove all NPDES permitting requirements and now only regulates the discharges to land and reclaimed water uses.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

1. The Discharger owns and operates two separate wastewater collection systems, one to collect municipal wastewater and another to collect industrial wastewater. The municipal wastewater collection system has 23,000 service laterals and consists of 178 miles of collection mains, 2,880 manholes, 7 lift stations, and 5 miles of trunk line delivering wastewater to the Facility for treatment and disposal. Dischargers to the domestic trunk line include a present population of approximately 63,000, businesses, and some industries within the City of Lodi. The industrial wastewater collection system has 5 service laterals, 4.1 miles of mains, 43 manholes, 1 lift station, and 5 miles of trunk line delivering wastewater to the Facility. The industrial wastewater collection system accepts primarily food processing wastewater from Pacific Coast Producers (PCP), a large canning facility, which discharges during the summer. PCP comprises approximately 90% of the industrial waste flow during the summer months. The remaining industries that discharge to the industrial line include Holz Rubber Company, Valley Industries, M&R Packing, Lodi Iron Works, Chevron, and Van Ruiten Winery. Wastewater from the industrial line does not receive treatment at the Facility. It is either discharged directly to the irrigation fields during the irrigation season or stored in ponds at the Facility during the non-irrigation season.

2. The Facility's design daily average dry weather flow capacity is 8.5 mgd. The Facility provides tertiary level treatment of the municipal wastewater that is discharged to Dredger Cut, regulated by Order R5 -2013-0125, during September through May (non-growing season); during the remainder of the year, the treated municipal wastewater is pumped to the Facility's 40-acres of storage ponds. Additionally, throughout the year, tertiary level treated municipal wastewater that complies with Title 22, *Uses of Recycled Water,* is supplied to San Joaquin County Vector Control District and to a power generation facility (Northern California Power Agency) for use as cooling water in a closed loop system. The cooling tower blowdown from the cogeneration facility is returned to the headworks of the Facility's treatment systems.

3. During the summer months, the untreated industrial wastewater stream, which includes the cannery waste from Pacific Coast Producers, is blended with the Facility's storage pond wastewater and then applied to the Discharger's agricultural fields. During the non-growing season, when the flow is significantly less, because it does not contain the cannery waste, the industrial wastewater stream is stored in the Facility's ponds along with stormwater from the irrigation fields.

4. The Facility's treatment process consists of comminutors, mechanical grit removal, primary sedimentation, conventional activated sludge with nitrification and denitrification, secondary sedimentation, tertiary treatment through cloth media filtration, and ultraviolet pathogen deactivation. Sludge is anaerobically digested and stored in the Facility's lined sludge lagoons. The digested biosolids are dewatered by a rotary press. The dewatered biosolids

are applied as a soil amendment between cropping cycles to approximately 790 acres of the Discharger's agricultural fields. The Discharger owns 1034 acres; however, only 790 acres typically receive land application or either wastewater or biosolids. Of this farmed area (hereinafter The Agricultural Fields), approximately 225 acres receive biosolids on an annual basis. The biosolids application area is rotated throughout The Agricultural Fields from year to year. The Agricultural Fields are used to grow fodder and feed crops that are not used directly for human consumption. The tailwater and stormwater from The Agricultural Fields are captured and returned to the Facility's storage ponds. Currently, a network of 20 monitoring wells monitor groundwater beneath The Agricultural Fields as well as the Facility.

5. This Order regulates irrigation water composed of untreated industrial wastewater, secondary treated municipal wastewater, agricultural runoff and stormwater runoff. This Order also regulates tertiary treated reclaimed water supplied to San Joaquin County Vector Control District and to a power generation facility (Northern California Power Agency). This Order also regulates stabilized biosolids applied the The Agricultural Fields.

6. Order R5-2013-0125 regulates the tertiary level treated municipal wastewater discharged to Dredger Cut at Discharge Point 001.

B. Discharge Points and Receiving Waters

1. The Facility is located in Section 23, T3N, R5E, MDB&M, as shown in Attachment B, a part of this Order.

2. The Discharger mixes the secondary treated municipal effluent with untreated industrial wastewater influent and agricultural and stormwater runoff from the storage ponds, for irrigation of The Agricultural Fields located in Section 24, T3N, R5E, MDB&M.

3. Year round, the Discharger supplies treated municipal wastewater that complies with Title 22 CCR, Section 60301.230, *Disinfected Tertiary Recycled Water,* to Northern California Power Agency and San Joaquin County Vector Control District through Discharge Point REC-001, at a point Latitude 38°, 5', 23" N and Longitude 121°, 23', 7" W.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the applicable plans, policies, and regulations identified in section II of the Limitations and Discharge Requirements (Findings). This section provides supplemental information, where appropriate, for the plans, policies, and regulations relevant to the discharge.

A. Legal Authority

See Limitations and Discharge Requirements - Findings, Section II.C.

B. California Environmental Quality Act (CEQA)

See Limitations and Discharge Requirements - Findings, Section II.E.

C. State Regulations, Policies, and Plans

1. **Water Quality Control Plans**. The Central Valley Water Board adopted a *Water Quality Control Plan, Fourth Edition (Revised August 2006), for the Sacramento and San Joaquin*

River Basins (Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, State Water Board Resolution No. 88-63 requires that, with certain exceptions, the Central Valley Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan.

The Basin Plan on page II-1.00 states: "*Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning…*" and with respect to disposal of wastewaters states that "...*disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses.*"
The Basin Plan on page II-3.00 also states: *"Unless otherwise designated by the Regional Water Board, all ground waters in the Region are considered as suitable or potentially suitable, at a minimum, for municipal and domestic water supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PRO)."* The Basin Plan further states exceptions to these designations based on State Board Resolution No. 88-63; however, the Discharger did not provide any additional information to determine that the groundwater underlying the Facility, or The Agricultural Fields, meet the specified criteria. Therefore, this Order also contains land discharge specifications, which are also necessary to protect the beneficial uses of the underlying groundwater (receiving water), as discussed in more detail in Section IV.C.2. of this Fact sheet.

2. **Antidegradation Policy.** The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Central Valley Water Board's Basin Plan implements the State antidegradation policy. This Order includes requirements that result in the implementation of best practicable treatment or control (BPTC) that assure a pollution or nuisance will not occur and the degradation is to the maximum benefit of the people of the state. This Order includes a compliance schedule that requires the Discharger to continue conducting its best practicable treatment or control (BPTC) evaluation to determine what constitutes BPTC for this facility.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The Central Valley Water Board's Basin Plan, page IV-17.00, contains an implementation policy ("Policy for Application of Water Quality Objectives") that specifies that the Central Valley Water Board "*will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives*." With respect to narrative objectives, the Central Valley Water Board must establish effluent limitations using one or more of three specified sources, including (1) USEPA's published water quality criteria, (2) a proposed state criterion (*i.e.*, water quality objective) or an explicit state policy interpreting its narrative water quality criteria (*i.e.*, the Central Valley Water Board's "Policy for Application of Water Quality Objectives")(CFR Part 122.44(d)(1) (vi) (A), (B) or (C)), or (3) an indicator parameter. The Basin Plan contains a narrative objective requiring that: "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life*" (narrative toxicity objective). The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, discoloration, toxic substances, radionuclides, or taste and odor producing substances that adversely affect beneficial uses. The Basin Plan states that material

and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The Basin Plan also limits chemical constituents in concentrations that adversely affect groundwater water beneficial uses. For waters designated as municipal, the Basin Plan specifies that, at a minimum, waters shall not contain concentrations of constituents that exceed Maximum Contaminant Levels (MCL) of CCR Title 22. The Basin Plan further states that, to protect all beneficial uses, the Central Valley Water Board may apply limits more stringent than MCLs.

A. Discharge Prohibitions

1. **Prohibition III.A (No discharge or application of waste other than that described in this Order**). This prohibition is based on CWC Section 13260 that requires filing of a report of waste discharge (ROWD) before discharges can occur. The Discharger submitted a ROWD for the discharges described in this Order; therefore, discharges not described in this Order are prohibited.

2. **Prohibition III.B (No controllable condition shall create a nuisance).** This prohibition is based on CWC Section 13050 that requires water quality objectives established for the prevention of nuisance within a specific area. The Basin Plan prohibits conditions that create a nuisance.

3. **Prohibition III.C (No discharge or application of waste classified as 'hazardous').** This prohibition is based on CWC 13173, CCR sections 2510 and 2520, et seq. that requires waste classified as hazardous discharged only at Class I waste management units. The Facility is not categorized as a Class I waste management unit; therefore, discharge of waste classified as hazardous is prohibited.

4. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by Standard Provision E.2 of the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*.

5. Wastewater shall not be applied to areas other than agricultural fields 1A through 6G (As shown in Attachment C-2).

B. Final Effluent Limitations

1. Satisfaction of Antidegradation Policy

a. The Discharger utilizes Effluent Storage Ponds, reuses municipal and industrial wastewater for irrigation of the Agricultural Fields and applies dewatered Class B biosolids as a soil amendment to the Agricultural Fields. This Order requires the Discharger to limit the hydraulic, total nitrogen, and BOD loadings to the extent of the plant uptake to assure that pollution or nuisance will not occur. This Order also requires the Discharger to comply with groundwater limits by 1 May 2020 for certain pollutants of concern (see Section V.A. Groundwater Limitations) for protection of the beneficial uses of the groundwater and to ensure that degradation does not occur.

The Antidegradation Policy (State Water Board Resolution 68-16) requires that a discharge to a high quality water will not result in degradation unless the waste discharge requirements result in the implementation of best practicable treatment or control (BPTC) of the discharge to assure a pollution or nuisance will not occur and the degradation is to the maximum benefit of the people of the state. The Discharger's land application activities are a threat to groundwater quality. The Discharger conducted studies to characterize the industrial wastewater, storage pond water and groundwater. The results of the monitoring were provided in a January 2011 report titled, *City of Lodi White Slough Water Pollution Control Facility, Background Groundwater Quality Characterization Report* (additional supporting information was provided as part of the renewal process for this Order). This report shows southeast of the facility is a cone of depression from pumping groundwater that tends to drive groundwater flow easterly. Additionally, the entire area is surrounded by agricultural lands, as well as, confined animal facilities. The groundwater study concluded monitoring wells exceeded background for boron, chloride, electrical conductivity, fixed dissolved solids, manganese, nitrate, sodium, total dissolved solids, phosphorus and potassium. The groundwater study also concluded that boron, manganese, nitrate, phosphorus and potassium exceedances may be the result of the Facility's wastewater application on the Agricultural Fields based on the composition of the irrigation water and biosolids slurry. Over the last several years, the Discharger has made improvements to its facility and the composition of the irrigation water and pond water has improved. Further, the Discharger now dewaters its biosolids for application to the agricultural fields. Due to the recent facility changes, this Order requires continued groundwater characterization and requires the Discharger to continue conducting a BPTC evaluation study.. Due to the need for continued evaluation, this Order includes a compliance schedule for meeting groundwater limitations. Compliance with this Order will result in the implementation of BPTC and compliance with the Antidegradation Policy.

C. Land Discharge Specifications

1. **Title 27.** Discharge of wastewater to the Agricultural Fields, and the operation of Effluent Storage Ponds associated with the Facility can be allowed without requiring compliance with Title 27 regulations only if 1) the discharge is regulated by Waste Discharge Requirements, 2) any groundwater degradation complies with the Basin Plan and Resolution No. 68-16 (Antidegradation Policy), and 3) it does not violate water quality objectives.

   Title 27 contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies siting and construction standards for containment of classified waste, and requires extensive monitoring of groundwater. Generally, no degradation of groundwater quality by any waste constituent is acceptable under Title 27 regulations. However, some discharges to land are conditionally exempt from Title 27 regulations.

   Discharges of domestic sewage or treated effluent to land, including but not limited to evaporation ponds or percolation ponds, are unconditionally exempt from the requirements of Title 27, CCR, based on section 20090(a) (i.e., sewage exemption). The Facility includes discharges of wastewater to the Effluent Storage Ponds, the Agricultural Fields, temporary storage of treated biosolids in the sludge lagoons, and beneficial reuse of dewatered biosolids on the Agricultural Fields. The State Water Resources Control Board issued Water Quality Order 2009-0005 (Lodi Order) in July 2009 in response to the California Sportfishing Protection Alliance (CSPA) petition that the Effluent Storage Ponds did not meet the exemptions for Title 27. The State Water Board's 2009 Order was subsequently amended

by Water Quality Order 2012-0001 in February 2012 in response to a settlement agreement between the State Water Board and the Central Valley Clean Water Association.. The State Water Board's February 2012 amendment modified the Lodi Order by changing the State Water Board's interpretation of the Title 27 exemption for post-treatment facilities. The amended Lodi Order finds that the unconditional sewage exemption (Section 20090(a)) applies to post-treatment facilities (1) are used to store treated municipal wastewater prior to ultimate disposal or reuse, (2) do not receive any other wastes other than authorized on-site storm water flows, and (3) are under the control of the municipal treatment plant. The Central Valley Water Board's findings regarding Title 27 exemptions are discussed below.

Effluent Storage Ponds (Storage Ponds). The Effluent Storage Ponds hold undisinfected secondary treated effluent, untreated industrial flows, storm water, and agricultural return water and thus are not unconditionally exempt pursuant to Title 27, section 20090(a) because they store untreated industrial flows. The conditional exemption pursuant to Title 27, section 20090(b) (i.e., wastewater exemption) is the Title 27 exemption that may be applied to the Effluent Storage Ponds. The wastewater exemption has the following preconditions for exemption from Title 27:

20090(b) Wastewater *– Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:*

(1) the applicable [regional water quality control board] has issued WDRs, or waived such issuance;

(2) the discharge is in compliance with the applicable water quality control plan; and

(3) the wastewater does not need to be managed . . . as a hazardous waste . . .

The Effluent Storage Ponds meet preconditions (1) and (3). However, since the Effluent Storage Ponds are unlined, wastewater contained in the ponds percolates to the underlying groundwater. Therefore, additional evaluation is needed to determine if precondition (2) has been met. The Discharger provided a January 2011 groundwater study[1] that concludes groundwater monitoring results obtained downstream of the Effluent Storage Ponds indicate that all constituents comply with the applicable water quality control plan and therefore, the exemption pursuant to Title 27, section 20090(b) applies because the quality of the wastewater discharged to the ponds ensures that waste releases comply with Basin Plan groundwater objectives. Central Valley Water Board staff has not completed its evaluation of the evidence provided by the Discharger. Consequently, the Central Valley Water Board has not made any conclusion with respect to the application of the Title 27 exemptions for the Effluent Storage Ponds in this Order. Central Valley Water Board staff will evaluate the evidence provided by the Discharger and update this Order to include specific findings regarding compliance with Title 27 for the Effluent Storage Ponds.

Wastewater Applied to the Agricultural Fields/Reuse. During the agricultural season (about April through September), the Discharger irrigates the Agricultural Fields with the untreated food processing wastewater blended with secondary treated municipal effluent. The conditional exemption pursuant to Title 27, section 20090(b) (i.e., wastewater exemption) is the Title 27 exemption that may be applied to the discharge of wastewater to the Agricultural Fields. The discharge of wastewater to the Agricultural Fields meet preconditions (1) and (3). However, the Discharger's groundwater study shows

[1] *City of Lodi White Slough Water Pollution Control Facility, Background Groundwater Quality Characterization Report*, January 2011

exceedances of manganese and nitrate that may be attributed by the discharge of wastewater to the Agricultural Fields. Therefore, the discharge of wastewater to the Agricultural Fields may be threatening to cause or has caused groundwater to contain waste constituents in concentrations statistically greater than background water quality and precondition (2) may not be met. The Discharger has made a number of recent improvements with respect to discharge of wastewater to the Agricultural Fields, and additional monitoring and evaluation is needed to determine if the preconditions for the wastewater exemption under Title 27 are satisfied. Central Valley Water Board staff has not completed its evaluation of the evidence provided by the Discharger. Consequently, the Central Valley Water Board has not made any conclusion on the exemptions to Title 27 for the discharge of wastewater to the Agricultural Fields. Central Valley Water Board staff will evaluate the evidence provided by the Discharger and update this Order to include specific findings regarding compliance with Title 27 for the discharge of wastewater to the Agricultural Fields.

Biosolids Applied to the Agricultural Fields. The Discharger land applies dewatered Class B biosolids to selected agricultural fields between cropping cycles as a soil amendment. The use and disposal of biosolids comply with existing Federal and State laws and regulations, including permitting requirements and technical standards in Code of Federal Regulations (CFR) Part 503. Previous disposal practices included mixing biosolids subnatant with irrigation water as well as applying liquid slurry of biosolids directly to the Agricultural Fields. The Facility improvements completed in 2012, include an additional lined sludge lagoon, fan press dewatering and lined covered sludge storage area. All subnatant and supernatant are discharged to the headworks for treatment and no longer applied to the Agricultural Fields. Additionally, the biosolids are no longer applied to the Agricultural Fields. Only dewatered biosolids are applied to the Agricultural Fields. The land application of biosolids on the Agricultural Fields as a soil amendment is exempt from Title 27 pursuant to Section 20090(f).

Sludge Lagoons. The Discharger operates two concrete-lined sludge lagoons as part of the solids handling operations. Liquid, digested biosolids are held in the lagoons prior to dewatering. Supernatant from the lagoons is discharged to the headworks of the treatment plant. Because the sludge lagoons are a necessary part of the Facility's wastewater treatment system, the sludge lagoons are exempt from Title 27 pursuant to Section 20090(a).

2. Land Discharge Specifications

Groundwater is generally encountered at approximately four to thirteen feet below the ground surface, and the groundwater flow direction is generally toward the east. However, groundwater elevations along the eastern perimeter of the Facility fluctuate during irrigation season due local groundwater pumping. The Discharger's available groundwater monitoring data indicate that underlying groundwater concentration levels for EC, sodium, chloride, and nitrate are elevated in some areas within the Facility. Based on the available groundwater data and the analysis of concentrations in the discharges that can migrate to groundwater, this Order requires additional BPTC to reduce the potential for groundwater impacts.

a. and b. **Hydraulic and Nitrogen Loading**. The Facility's impound and reuse areas are not ideal for land application of wastewater because of the shallow water table. The underlying principle of land application is to beneficially reuse wastewater and the plant nutrients that it contains. Under ideal circumstances, soils within the land application

area provide a matrix for biodegradation of the organic components of the wastewater (measured as BOD), create conditions conducive for transformation of organic nitrogen to plant available nitrate, create conditions conducive for denitrifying excess nitrate so that it does not percolate to the water table, provide pH buffering, and attenuate inorganic waste components (salts and metals).

Waste applications must be balanced to provide adequate plant nutrients and water while minimizing nuisance potential and percolation of waste constituents to the water table. The chemical and biological reactions that take place are interrelated and require that constituent loadings and wetting and drying cycles be optimized. As in this case, when the depth of the unsaturated (vadose) zone is less than several feet, the zone in which most of the treatment and attenuation occurs is limited. Thus this Order requires the Discharger to apply wastewater at reasonable agronomic rates.

c. **BOD5.** As previously explained, under ideal circumstances, soils within the land application area provide a matrix for biodegradation of the organic components of the wastewater, which is measured as BOD. BOD is associated with both suspended solids and dissolved organic material. The BOD associated with suspended solids will remain close to the surface where the soil organisms have access to atmospheric oxygen to break the material down. The BOD in the dissolved organic material will percolate through the unsaturated zone of the soil and, under aerobic conditions, be removed during percolation. If the loading is too great, the soil will become anaerobic, and the crop and treatment process will fail.

The Discharger completed a BOD loading study "Draft White Slough WPCF Organic Loading Study Technical Report", March 2009. This study showed no odors or changes to the soil or percolates to the groundwater at BOD loadings greater than 200 pounds per acre.

d. **Metals**. These limits are the same as in the previous permit, and are based on Federal Regulations CFR Part 503.13.

3. **Secondary Treated Effluent Discharged to Ponds**. This Order retains the secondary-level limits contained in the previous permit, to determine that the treatment system complies minimum level of effluent quality attainable by secondary treatment in terms of biochemical oxygen demand (BOD5) and settleable solids for discharges to the Facility's storage ponds.

D. Reclamation Specifications

Treated municipal wastewater discharged for reclamation usage must meet the requirements of CCRs, Title 22. The Discharger discharges treated municipal wastewater to land and supplies tertiary-level treated reclamation water to Northern California Power Agency and San Joaquin County Vector Control District. Therefore, this Order contains the following reclamation specifications requiring compliance with Title 22, Division 4, Chapter 3, Water Recycling Criteria.

1. **Reclamation Specification 1 through 3.** These specifications are based on Title 22, Division 4, Section 60301 et. seq.

2 **Reclamation Specification 4.** This specification is based on Title 22, Sections 6020l.230 and 60304 (Disinfected Tertiary Recycled Water).

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Basin Plan water quality objectives to protect the beneficial uses of surface water and groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity, and tastes and odors. The toxicity objective requires that surface water and groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective requires that surface water and groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use or that exceed the maximum contaminant levels (MCLs) in Title 22, CCR. The tastes and odors objective states that surface water and groundwater shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect domestic drinking water supply, agricultural supply, or any other beneficial use.

1. The Central Valley Board is required, relative to the groundwater that may be affected by the discharge, to implement the Basin Plan and consider the beneficial uses to be protected along with the water quality objectives essential for that purpose. The beneficial uses of the underlying ground water are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.

2. Basin Plan water quality objectives include narrative objectives for chemical constituents, tastes and odors, and toxicity of groundwater. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use. The tastes and odors objective prohibits taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

3. Water quality objectives define the least stringent limits that could apply as groundwater limitations except where natural background quality unaffected by the discharge already exceeds the objective. These groundwater limitations are required to protect the beneficial uses of the underlying groundwater, and are based on Basin Plan water quality objectives .

4. The level of groundwater quality is dependent upon background conditions. Groundwater monitoring has been conducted at the Facility, but the site's groundwater quality is highly variable due to the complexities of regional and local influences, as well as the Facility's land application practices. Therefore, this Order requires the Discharger to continue to characterize background groundwater quality to determine whether the discharge continues to degrade groundwater below water quality objectives (See Provision VI.2.c.dThis Order requires the Discharger to evaluate and implement BPTC since the groundwater monitoring results show that the discharge of waste is threatening to cause or has caused groundwater to contain waste constituents in concentrations statistically greater than background water quality.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Water Code sections 13267 and 13383 authorizes the Central Valley Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring (MRP, Section III)

1. Influent monitoring is required to collect data on the characteristics of the wastewater.

B. Effluent Monitoring (MRP, Section IV)

1. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.

C. Receiving Water Monitoring (MRP, Section VI)

1. Groundwater

a. Section 13267 of the California Water Code states, in part, *"(a) A Regional Water Board, in establishing…waste discharge requirements… may investigate the quality of any waters of the state within its region*" and *"(b) (1) In conducting an investigation…, the Regional Water Board may require that any person who… discharges… waste…that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports*." In requiring those reports, the Regional Water Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports. The Monitoring and Reporting Program (Attachment E) is issued pursuant to California Water Code Section 13267.

b. The groundwater monitoring and reporting program required by this Order and the Monitoring and Reporting Program are necessary to assure compliance with the waste discharge requirements and to fully characterize:
   - All waste constituents to be discharged;
   - The background quality of the uppermost layer of the uppermost aquifer;
   - The background quality of other waters that may be affected;
   - The underlying hydrogeologic conditions;
   - Waste treatment and control measures;
   - How treatment and control measures are justified as best practicable treatment and control;
   - The extent the discharge will impact the quality of each aquifer; and
   - The expected degree of degradation below water quality objectives.

c. Monitoring of the groundwater must be conducted to determine if the discharge has caused an increase in constituent concentrations, when compared to background. The monitoring must, at a minimum, require a complete assessment of groundwater impacts

including the vertical and lateral extent of degradation, an assessment of all wastewater-related constituents which may have migrated to groundwater, an analysis of whether additional or different methods of treatment or control of the discharge are necessary to provide best practicable treatment or control to comply with Resolution No. 68-16. Economic analysis is only one of many factors considered in determining best practicable treatment or control. If monitoring indicates that the discharge has incrementally increased constituent concentrations in groundwater above background, this permit may be reopened and modified. Until groundwater monitoring is sufficient, this Order contains Groundwater Limitations that allow groundwater quality to be degraded for certain constituents when compared to background groundwater quality, but not to exceed water quality objectives. If groundwater quality has been degraded by the discharge, the incremental change in pollutant concentration (when compared with background) may not be increased. If groundwater quality has been or may be degraded by the discharge, this Order may be reopened and specific numeric limitations established consistent with Resolution 68-16 and the Basin Plan.

d. This Order requires the Discharger to continue groundwater monitoring and includes a regular schedule of groundwater monitoring in the attached Monitoring and Reporting Program. The groundwater monitoring reports are necessary to evaluate impacts to waters of the State to assure protection of beneficial uses and compliance with Regional Board plans and policies, including Resolution 68-16. Evidence in the record includes effluent monitoring data that indicates the presence of constituents that may degrade groundwater and surface water.

D. Other Monitoring Requirements

1. **Discharges to Land – Monitoring Location LND-001 (MRP, Section IV).** Land discharge monitoring is necessary to evaluate compliance with the Land Discharge Specifications for discharges to the Agricultural Fields. This includes requirements for hydraulic loading, total nitrogen loading, biochemical oxygen demand (BOD) loading, and metals loading to the Agricultural Fields.

2. **Reclamation Monitoring (MRP, Section V.A.).** Reclamation monitoring is necessary to assess compliance with Title 22, California Code of Regulations, Section 60301, et. seq.

3. **Effluent Storage Ponds – Wastewater in Storage Ponds Monitoring Locations PND-001 through PND-004 (MRP, Section V.B.).** This Order requires the Discharger to monitor wastewater in the ponds per the attached Monitoring and Reporting Program, which is necessary to assess compliance with groundwater limitations and evaluate degradation of the water quality of the underlying groundwater. In addition, pond monitoring for DO, pH, Freeboard, and Available Storage Volume is required to ensure compliance with Section 13050(m) of the California Water Code.

VII. RATIONALE FOR PROVISIONS

A Special Provisions (Section VI.C.)

1. **Special Studies and Additional Monitoring Requirements**

2. **Construction, Operation, and Maintenance Specifications**

   a. **Effluent Storage Pond Operation Requirements.** Section 13050 of California Water Code (CWC) prohibits wastewater, either discharged or impounded, to create a nuisance. Anaerobic conditions (lacking oxygen) within ponds tend to produce aesthetically undesirable odors, and impounded waters improperly managed can breed mosquitoes. Furthermore, as previously disclosed, the Effluent Storage Ponds are unlined, so impounded wastewater may percolate to the underlying groundwater. Low pH values cause metals to dissolve, allowing them to percolate into the groundwater. Many metals are priority toxic pollutants, and when transported into groundwater, could elevate concentration levels and violate the Basin Plan's groundwater toxicity objective. Therefore, this provision is necessary to comply with CWC Section 13050.

   The previous Order does not contain a pond freeboard limitation, as is usually required and the Discharger occasionally needs to use the full capacity of its unlined storage ponds for winter storage. The pond berms are protected from erosion with geotextile/rock faces and the tops are paved. In addition, water from the ponds can be pumped to the Discharger's treatment system for discharge to Dredger Cut to prevent overflows. However, should the ponds overtop, the flows would remain on site and be returned through the agricultural tailwater system. The Discharger has been making changes to reduce flows directed to the ponds (i.e. sludge fluids and off-site stormwater runoff) and has plans to increase its Recycled Water Program. This Order does not require the ponds to maintain a 2-foot freeboard. The Discharger submitted a report titled "Geotechnical Engineering Evaluation Report, City of Lodi Pond Study, White Slough Water Pollution Control Facility" Wallace-Kuhl, 25 July 2011. The report concluded that the pond berms meet Title 27 criteria for freeboard less than 2 feet.

3. **Special Provisions for Municipal Facilities (POTWs Only)**

   a. **Sludge/Biosolids Treatment or Disposal Specifications (Special Provisions IV.C.4.b and c.)** These provisions are necessary to comply with state regulations Title 27, CCR, Division 2, subdivision 1, section 20005, et seq. and federal regulations CFR Part 503 et seq.

   b. **The Agricultural Fields' Area Specifications (Special Provisions IV.C.4.d.)** This provision requires the Discharger to implement best management practices with respect to land application and disposal, and is necessary to protect public health and safety.

4. **Other Special Provisions**

   a. **Tertiary Treatment.** To protect public health and safety, the Discharger is to comply with DPH reclamation criteria, CCR Title 22, Division 4, Chapter 3.

   b. To protect public health and safety, treatment and storage facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency

   c. **Ownership Change.** To maintain the accountability of the operation of the Facility, the Discharger is required to notify the succeeding owner or operator of the existence of this Order by letter if, and when, there is any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger.

5. **Compliance Schedules**

   a. **Compliance Schedule for Groundwater Limitations V.A and State Water Board Resolution 68-16.**

      The Antidegradation Policy requires that if a discharger is going to degrade a high quality water, then the discharge cannot result in water quality impacts that exceed applicable water quality objectives or background water quality, whichever is greater. Moreover, the waste discharge requirements must result in the implementation of best practicable treatment or control of the discharge to assure a pollution or nuisance will not occur and the degradation is to the maximum benefit of the people of the state. The Discharger's land application activities are a threat to groundwater quality. The Discharger conducted studies to characterize the industrial wastewater, storage pond water and groundwater. The results of the monitoring were provided in a January 2011 report titled, *City of Lodi White Slough Water Pollution Control Facility, Background Groundwater Quality Characterization Report* (additional supporting information was provided as part of the renewal process for this Order). This report shows southeast of the facility is a cone of depression from pumping groundwater that tends to drive groundwater flow easterly. Additionally, the entire area is surrounded by agricultural lands, as well as, confined animal facilities. The groundwater study concluded monitoring wells exceeded background for boron, chloride, electrical conductivity, fixed dissolved solids, manganese, nitrate, sodium, total dissolved solids, phosphorus and potassium. The groundwater study also concluded that boron, manganese, nitrate, phosphorus and potassium exceedances may be the result of the Facility's wastewater application on the Agricultural Fields based on the composition of the irrigation water, and biosolids slurry. To determine compliance with Groundwater Limitations contained in this Order, and to evaluate whether the Discharger is meeting BPTC in accordance with the Antidegradation Policy, the Discharger must continue to fully characterize background groundwater quality as follows:

      The Discharger submitted a December 2010, City of Lodi Water Pollution Control Facility Best Practicable Treatment and Control Evaluation Work Plan. The Work Plan included an initial BPTC evaluation for the storage ponds, irrigation facilities and biosolids application facilities. Several of the recommendations in the Work Plan such as the construction of the biosolids dewatering facilities and additional monitoring for manganese have been completed. Other completed actions to protect groundwater include repair of leaking influent industrial and domestic sewer line into the Facility; elimination of the biosolids supernatant and subnatant discharges to land and instead

redirecting these flows to the Facility headworks; an additional lined sludge lagoon has been constructed; a certified agronomist oversees the irrigation; and the major cannery, PCP screens its cannery waste that reduces the BOD and nitrogen loadings to the land application areas. Additional groundwater monitoring for nitrate since the biosolids construction is needed to determine what if any additional BPTC measures are required. Similarly, additional monitoring and evaluation of elevated levels of manganese is needed to determine what BPTC measures are needed.

The Discharger must comply with Groundwater Limitations V.A and complete the BPTC evaluation and implement the recommendations in accordance with the following schedule:

Task	Compliance Date
Begin Evaluation	1 August 2014
Complete Evaluation	1 December 2014.
Submit BPTC Report	1 February 2015
Submit Corrective Action Plan/Implementation Schedule *The Discharger shall submit to the Central Valley Water Board a corrective action plan and implementation schedule to assure compliance with Groundwater Limitations V.A and compliance with State Water Board Resolution 68-16, which requires implementation of best practicable treatment or control. At minimum, the corrective action plan shall consider treating the industrial influent wastewater.*	1 November 2015
Begin Implementation of BPTC Recommendations	1 May 2015
Progress Reports	1 November, annually, beginning 1 November 2016
Submit report documenting completion of construction of BPTC Recommendations and compliance with Groundwater Limitations V.A	1 May 2020

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Central Valley Region is considering the issuance of waste discharge requirements (WDRs) for White Slough Water Pollution Control Facility. As a step in the WDR adoption process, the Central Valley Water Board staff has developed tentative WDRs. The Central Valley Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through publication in the Lodi News Sentinel, posting at the Facility and the nearest Post Office.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Office at the Central Valley Water Board at the address above on the cover page of this Order.

C. Public Hearing

The Central Valley Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: 3/4 October 2013
Time: 8:30 am
Location: Central Valley Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

Interested persons are invited to attend. At the public hearing, the Central Valley Water Board will hear testimony, if any, pertinent to the WDRs. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is http://www.waterboards.ca.gov/rwqcb5/ where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Central Valley Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Central Valley Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Central Valley Water Board by calling Ms. Kathleen Harder at (916) 464-4778 or Mr. James Marshall at (916) 464-4772.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Central Valley Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Kathleen Harder at (916) 464-4778.