CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2011-0019

CEASE AND DESIST ORDER
FOR
CITY OF IONE WASTEWATER TREATMENT FACILITY
AMADOR COUNTY

TO CEASE AND DESIST
FROM DISCHARGING CONTRARY TO REQUIREMENTS

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

1. On 26 May 1995, the Central Valley Water Board adopted Waste Discharge Requirements Order 95-125 (the "WDRs") for a wastewater treatment and disposal facility owned and operated by the City of Ione (hereafter referred to as "Discharger").

2. The City of Ione wastewater treatment facility ("WWTF") is in Amador County in Section 26, T6N, R9E MDB&M. The WWTF treats domestic wastewater from the City of Ione, filter backwash water from a water treatment plant operated by Amador Water Agency, and domestic wastewater from Preston Youth Authority's administration buildings. In addition to treated effluent from its own treatment plant, the Discharger accepts secondary effluent from Preston Reservoir[1] for disposal in the WWTF's percolation/evaporation ponds.

3. The WWTF consists of seven unlined ponds covering approximately 28 acres. The first four ponds provide secondary treatment via aeration and settling and the remaining three ponds provide disposal of treated effluent via percolation and evaporation. The seventh pond is not permitted under the WDRs. The capacity of the treatment plant is 0.55 MGD as an average daily dry weather flow[2] and the disposal capacity is 0.75 MGD as an average daily flow[3].

4. The unlined ponds are constructed in alluvial deposits overlaying a clay formation. Groundwater at the site and surrounding properties is very shallow (approximately 5 to 25 feet below ground surface). The Discharger has been monitoring shallow groundwater since 2002.

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1 Preston Reservoir is an effluent storage reservoir operated by the Amador Regional Sanitation Agency (ARSA). Whenever possible, this effluent receives tertiary treatment at a separate treatment plant that is operated by the City of Ione for the express purpose of providing recycled water to irrigate the Castle Oaks Golf Course. Effluent from the Preston Reservoir is only discharged to the Discharger's percolation evaporation ponds for disposal to the extent that the golf course cannot accept more recycled water.

2 City of Ione Wastewater Master Plan, June 2009.

3 Report of Waste Discharge, 22 March 2010.

5. Prohibition A.1 of the WDRs states:

Discharge of wastes to surface waters or surface water drainage course is prohibited.

6. The Groundwater Limitations of the WDRs state:

The discharge shall not cause the underlying groundwater to:

1. *Be degraded.*
2. *Contain chemicals, heavy metals, or trace elements in concentrations that adversely affect beneficial uses or exceed maximum contaminant levels specified in 22 CCR, Division 4, Chapter 15.*
3. *Contain taste or odor-producing substance in concentrations that cause nuisance or adversely affect beneficial uses.*
4. *Contain concentrations of chemical constituents in amounts that adversely affect agricultural use.*

2001-2003 Enforcement Actions

7. Sutter Creek flows from east to west approximately 100 feet north of the northernmost WWTF ponds. Beginning in September 2000, Board staff observed seepage entering the creek along the southern bank of Sutter Creek. Staff was concerned that the observed seepage was a discharge of effluent from the WWTF's ponds to Sutter Creek. However, creek water analyses completed by both the Discharger and staff did not conclusively show evidence of wastewater in the seepage. During a 21 September 2001 inspection, staff observed that the Discharger had begun construction of the seventh percolation pond without submitting a Report of Waste Discharge ("RWD"). Staff advised the Discharger that the WDRs would have to be revised before any wastewater was discharged into the pond. However, the Discharger began using the pond without obtaining regulatory coverage for the expanded facility.

8. On 9 October 2001, the Executive Officer issued an Order pursuant to Water Code section 13267 (the "13267 Order"), requiring the Discharger to submit technical reports, because the Discharger had not yet submitted a RWD. The 13267 Order required the Discharger to submit a groundwater monitoring well installation workplan by 1 December 2001; a monitoring well installation report by within 60 days of Board staff's approval of the workplan; and a complete RWD (to address the new pond) by 15 April 2002 . The Discharger installed the monitoring wells but did not submit the RWD.

9. On 21 January 2003, the Discharger submitted a *Hydrogeologic and Geotechnical Report.* The report documented installation of groundwater monitoring wells and provided an assessment of potential seepage to Sutter Creek. Based on the subsurface investigation, groundwater levels, and in situ hydrogeologic testing, the report stated that shallow groundwater immediately adjacent to and downgradient of the ponds exhibited increased mineral concentrations[4]. At the time of the investigation, seepage was

[4] Wallace Kuhl Associates, Hydrogeologic and Geotechnical Report, page 2.

observed in Sutter Creek[5]. The report estimated the seepage rate to be approximately 173 gallons per day[6] into the creek. The report concluded that, at times of very low flow or no flow, there is a potential for groundwater to flow from the area underlying the wastewater treatment facility to the creek[7]. The report did not include recommendations for further evaluation, nor did it propose facility improvements to stop the seepage discharge into the creek.

2003 Cease and Desist Order

10. On 11 July 2003, the Central Valley Water Board issued Cease and Desist Order R5-2003-0108 (the "2003 CDO") as a result of wastewater-impacted seepage to Sutter Creek, degradation of groundwater quality, and failure to submit a RWD as required by the 13267 Order.

11. Item 1 of the 2003 CDO required that the Discharger come into compliance with Discharge Prohibition A.1 and the Groundwater Limitations of the WDRs no later than 30 December 2005. The 2003 CDO also required that the Discharger comply with a schedule for submittal of certain technical reports, as discussed below.

12. Item 6 of the 2003 CDO states:

> *By **1 January 2004**, the Discharger shall submit a Facility Guidance Document designed to address certain water quality policies, and their application to the discharge from the City of Ione's wastewater treatment plant. The document shall address both NPDES and Anti-Degradation issues, specifically:*
>
> *a. Is an NPDES permit necessary due to the seepage from the treatment/storage ponds into Ione Creek? If yes, and if the City does not desire to apply for an NPDES permit, then what modifications would the City need to make such that an NPDES permit is no longer necessary?*
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> *b. Is the discharge complying with the directives of State Board Resolution No. 68-16 (the "Anti-Degradation Policy")? If not, what changes are necessary? If the groundwater has been degraded above background concentrations, then what reasonable Best Practicable Treatment and Control (BPTC) measures may be implemented to reduce the degradation to the extent possible? If the groundwater has been degraded above water quality objectives, what BPTC measures may be implemented to reduce the degradation to less than the objectives?*
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> *The document shall discuss the range of alternatives for facility modifications and BPTC measures necessary to comply with State policies, and shall provide a general discussion of the pros/cons of each one, as they pertain to this facility.*

13. The Discharger submitted a Facility Guidance Document on 26 January 2004. The report stated that the preponderance of evidence from a review of other site permits and situations, as cited in the report, indicates that an NPDES permit is not needed for the Discharger's ponds; however, the report stated that many of the reviewed situations

[5] Wallace Kuhl Associates, Hydrogeologic and Geotechnical Report, Plate 6.

[6] Wallace Kuhl Associates, Hydrogeologic and Geotechnical Report, pages 3-7.

[7] Wallace Kuhl Associates, Hydrogeologic and Geotechnical Report, page 10

involved disinfection of effluent, greater setbacks, or greater separations between effluent and surface water. The report suggested that the Discharger should line all ponds within 200 feet of Sutter Creek or backfill all the ponds within 200 feet. The report evaluated alternatives for facility modifications and Best Practicable Treatment and Control ("BPTC") measures, and concluded that due to the limited sampling/analysis performed for the study (i.e., one sampling event), further research should be done. The report stated that based on the results of further research, modifications to the facilities must be completed to eliminate groundwater degradation in excess of water quality objectives. Staff approved the report on 18 March 2004.

14. Item 7 of the 2003 CDO states:

> *By **30 November 2004,** the Discharger shall submit a Final Wastewater Master Plan. The master plan shall describe all facility improvements needed to:*
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> *a. Accommodate reasonable growth projections;*
>
> *b. Provide for sufficient containment for the 100-year total annual precipitation event;*
>
> *c. Provide for appropriate maintenance schedules to ensure stable effluent disposal capacity and prevent significant erosion of Sutter Creek along the ponds;*
>
> *d. Reduce infiltration and inflow to acceptable levels;*
>
> *e. Prevent sanitary sewer overflows;*
>
> *f. Prevent seepage discharges to surface water (or obtain an NPDES permit to regulate those discharges); and*
>
> *g. Evaluate and implement Best Practicable Treatment and Control measures to ensure that any groundwater degradation complies with State Board Resolution No. 68-16.*
>
> *The master plan shall set forth a specific, detailed scope and schedule for studies, design, permitting, and construction of facility expansions and other improvements needed to comply with this Order and protect water quality.*

15. The Discharger submitted a Wastewater Master Plan on 30 November 2004, a draft Wastewater Master Plan in August 2009, and a final Wastewater Master Plan on 22 March 2010. Staff had been advised that the 30 November 2004 report was preliminary, and so did not provide comments. On 5 November 2010, staff informed the Discharger that the final Master Plan did not comply with the 2003 CDO because it did not demonstrate that the proposed WWTF modifications would prevent seepage discharges to Sutter Creek. Additionally, the final Master Plan did not include BPTC measures to mitigate the conditions that are degrading groundwater beneath the WWTF.

16. Item 8 of the 2003 CDO states:

> ***Within 60 days of staff's written approval** of the Final Wastewater Master Plan, the Discharger shall submit a Report of Waste Discharge to allow WDRs to be revised to require the implementation of the items in the Master Plan.*

17. The Discharger submitted a RWD on 1 November 2005. Between that date and September 2010, the Discharger submitted numerous revisions to the RWD, but has not

yet submitted a complete RWD that proposes facility changes that will bring the WWTF into compliance with the 2003 CDO. The history of RWD submittals is summarized below:

a. The Discharger submitted a revised RWD on 12 June 2006. In a 19 March 2007 letter, the Discharger agreed to submit a second revised RWD by 12 March 2008. However, the revised RWD was not submitted until March 2010.

b. On 22 March 2010, the Discharger submitted a RWD which proposed to replace the existing WWTF with a tertiary treatment system with UV disinfection. Treatment would take place in concrete tanks, and the four existing treatment ponds would be backfilled. The three existing percolation/evaporation ponds would continue to be used, and an additional percolation/evaporation pond would be built. The two northeastern percolation/evaporation ponds would be partially filled to provide a 200-foot setback from Sutter Creek. The project would increase the WWTF's treatment capacity to 0.8 MGD, and the disposal capacity would be increased to 0.90 MGD. The RWD stated that the project would be completed by August 2012.

c. On 28 June 2010, staff informed the Discharger that the RWD was inadequate because it would not eliminate the seepage and would likely cause additional seepage into adjacent ditches, as well as surfacing of effluent-impacted groundwater at the southern end of the WWTF site. On 17 August 2010, staff issued a Notice of Violation because the RWD was still incomplete in violation of the 2003 CDO.

d. The Discharger submitted another revision to the RWD on 7 September 2010. This submittal included the Final Environmental Impact Report ("EIR"), the Final Wastewater Master Plan, and the results of a numeric model that predicts the effects of the planned expansion on groundwater elevations and gradients. The groundwater model shows that the proposed WWTF expansion would still create seepage discharges to Sutter Creek, even with a 200-foot setback from the creek. The model also shows that the expanded facility would cause the local water table to rise as much as two feet, and would result in seasonal surfacing of groundwater at the south end of the WWTF. Neighboring landowners have already expressed concern about the high water table near the WWTF.

e. On 5 October 2010, the Discharger submitted the results of a second numeric groundwater model for the planned expansion. This model included extraction of groundwater along the southern edge of the proposed new percolation/evaporation pond to control surfacing groundwater and conveyance of the extracted groundwater to the percolation/evaporations ponds for disposal. Although the report states that the Discharger could mitigate surfacing groundwater by pumping groundwater to the WWTF ponds, the RWD's capacity analysis does not account for the additional influent flows, and the seepage to the creek was not addressed. On 5 November 2010, staff again informed the Discharger that the RWD was incomplete.

Violations of the 2003 CDO

18. In summary, the Discharger has not come into compliance with Discharge Prohibition A.1 of the WDRs by 30 December 2005, in violation of Item 1 of the 2003 CDO. The

technical studies and monitoring completed since adoption of the 2003 CDO show that the unlined treatment and disposal ponds have created a localized groundwater "mound" that causes shallow groundwater beneath the WWTF ponds to flow towards Sutter Creek, where it seeps into the creek channel during periods when natural flows in the creek are low.

19. The Discharger has not come into compliance with the Groundwater Limitations of the WDRs, in violation of Item 1 of the 2003 CDO. The Discharger's groundwater monitoring data and technical reports show that the shallow groundwater contains elevated concentrations of iron and manganese downgradient of the WWTF. Specifically, monitoring wells MW2 and MW3A are downgradient of the WWTF ponds, as well as directly adjacent to, and upgradient of, Sutter Creek. These wells consistently have dissolved iron and manganese concentrations greater than the background well (MW1). The following table summarizes dissolved iron and manganese concentrations since 2008[8]:

Dissolved Iron and Manganese Concentrations in Groundwater (µg/L)

	Monitoring Well and Location			
Constituent	**MW1 (Background)**	**MW2 (Downgradient)**	**MW3A (Downgradient)**	**Secondary MCL**
Dissolved Iron				
Range of Results	<5 to 31	25 to 2,600	<50 to 6,800	300
Mean Results	14.3	1,810	3,643	
Dissolved Manganese				
Range of Results	<5 to 28	2,600 to 4,500	5,000 to 7,200	50
Mean Result	8.3	3,704	5,832	

These results show that the discharge has caused dissolved iron and manganese in shallow groundwater to exceed the secondary MCLs, in violation of the groundwater limitations. Although iron and manganese are not present in the WWTF effluent at high concentrations, the presence of degradable organic matter in the wastewater depletes oxygen, which creates reducing conditions in the groundwater mound beneath the WWTF ponds. Reducing conditions promote dissolution of iron and manganese. These minerals are naturally present in the soil beneath the ponds. This mechanism of groundwater degradation was acknowledged in the December 2009 Final EIR, which states:

[8] Prior to 2008, groundwater samples were not filtered before analysis for metals. Without filtration to remove clay and silt particles, analytical results for metals would include any metals contained within the minerals that form the soil. As discussed further below, iron and manganese are naturally present in the soil that underlies the wastewater ponds. Therefore, any assessment of groundwater degradation should be based on filtered samples, which would contain only the metals that were already dissolved in the groundwater.

> *Dissolved iron and manganese levels* [in shallow groundwater] *are likely a result of anaerobic decomposition of biological material. This decomposition occurs either in the anaerobic zone at the bottom of the existing treatment ponds or subsurface as effluent enters the groundwater at the percolation ponds*.[9]

Combined with the fact that MW2 and MW3A are approximately 100 feet upgradient of the portion of Sutter Creek where groundwater has been observed seeping into the creek, these data show that it is likely that the seepage contains constituents that are present as a consequence of the treatment and discharge of waste in unlined ponds. The Discharger's WDRs do not allow these impacts to occur; the Discharger must eliminate the processes that result in the discharge of degraded groundwater to the creek in violation of Resolution 68-16. This could be accomplished by eliminating the groundwater degradation or by eliminating the seepage itself.

20. Despite numerous requests, the Discharger has not complied with Task 8 of the 2003 CDO, which requires submittal of a complete RWD that proposes improvements that will bring the facility into compliance with the WDRs and the 2003 CDO. Board staff concurs that the proposed tertiary treatment in lined ponds, followed by disinfection with ultraviolet light, will greatly improve the quality of the effluent discharged to the percolation/evaporation ponds, and may reduce the level of groundwater degradation caused by the discharge. However, the Discharger has not shown that the design would stop the seepage of degraded groundwater into Sutter Creek, and has not shown that the proposed improvements will result in significantly lower concentrations of iron and manganese in the shallow groundwater. Therefore, this Order requires that the Discharger demonstrate compliance with the Clean Water Act and applicable state regulations and policies, including Resolution 68-16, and to submit a new RWD that reflects the Discharger's compliance plan. In order to give the Discharger options to prevent surfacing wastewater or other impacts associated with raising the water table, this Order also allows the Discharger to propose an alternative to the proposed new percolation/evaporation pond and/or direct discharge of either groundwater or treated effluent to Sutter Creek, if the Discharger demonstrates that such discharge will comply with applicable regulations and policies.

Basis for Reduced Flow Limit

21. As discussed above, it is appropriate to issue a revised CDO because the Discharger has not complied with the 2003 CDO. Additionally, it is appropriate to restrict flows into the treatment facility and disposal ponds to that which the facility has been designed to accommodate.

22. Discharge Specification 2.1 of WDRS Order 95-125 states:

> *The monthly average dry weather discharge flow shall not exceed 1.2 million gallons/day.*

[9] City of Ione Wastewater Treatment Facility Final EIR, pages 2-36.

However, as noted in Finding No. 3, the Discharger's documents state that the capacity of the treatment plant is 0.55 MGD as an average daily dry weather flow, and the disposal capacity is 0.75 MGD as an average daily flow. Therefore, the flow limit that currently applies to the WWTF exceeds its actual capacity. At a minimum, the flow limit must be revised to reflect the actual treatment and disposal capacity.

23. Between September 2007 and October 2010, average monthly influent flows to the treatment plant ranged from 0.31 to 0.47 MGD and averaged 0.35 MGD, which is below the treatment capacity of 0.55 MGD. During the same period, average monthly effluent flows to the percolation/evaporation ponds ranged from 0.31 to 0.84 MGD, as compared to the disposal capacity of 0.75 MGD. The City exceeded its disposal capacity once (November 2007) and was at capacity or close to capacity five times (October 2007, December 2007, June 2009, October 2009, July 2010). For the remainder of the time, the City was significantly below its disposal capacity. The City should be able to comply with revised flow limits that reflect actual capacity.

Regulatory Considerations

24. The Central Valley Water Board's *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*, Fourth Edition, revised September 2009 (the "Basin Plan"), designates beneficial uses, includes water quality objectives to protect the beneficial uses, and includes implementation plans to implement the water quality objectives.

25. Surface water drainage from the facility is to Sutter Creek, a tributary of the Cosumnes River. The beneficial uses of the Cosumnes River, as stated in the Basin Plan, are municipal and domestic supply, irrigation, stock watering, contact recreation, canoeing and rafting, other noncontact recreation, warm and cold freshwater habitat, warm and cold migration, warm and cold spawning, and wildlife habitat.

26. The beneficial uses of underlying groundwater are municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.

27. Water Code section 13301 states, in relevant part:

> When a regional board finds that a discharge of waste is taking place or threatening to take place in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventive action. In the event of an existing or threatened violation of waste discharge requirements in the operation of a community sewer system, cease and desist orders may restrict or prohibit the volume, type, or concentration of waste that might be added to such system by discharges who did not discharge into the system prior to the issuance of the cease and desist order. Cease and desist orders may be issued directly by a board, after notice and hearing.

28. Water Code section 13267 (b) states:

> 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, … 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.

29. The technical reports required by this Order are necessary to assure compliance with both this Order and the WDRs, and to ensure protection of public health and safety. The Discharger owns and operates the facility that discharges the waste subject to this Order.

30. Issuance of this Order is an enforcement action of a regulatory agency, and therefore, is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code § 21000 et seq.), in accordance with California Code of Regulations, title 14, section 15321(a)(2).

IT IS HEREBY ORDERED that, pursuant to Water Code sections 13301 and 13267, the City of Ione, its agents, successors, and assigns shall implement the following measures necessary to ensure long-term compliance with WDRs Order 95-125, or any superseding permits or orders issued by the Central Valley Water Board.

This Cease and Desist Order rescinds and replaces Cease and Desist Order R5-2003-0108 except for the purpose of enforcing violations that have occurred to date.

Any person signing a document submitted to comply with this Order shall make the following certification:

> *I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.*

1. **Effective immediately**, the Discharger shall comply with all requirements of WDRs Order 95-125 (or subsequent WDRs that may rescind and/or replace Order 95-125), except as specifically noted below.

2. In accordance with the time schedule set forth in this order, the Discharger shall construct facility improvements that will effectively stop the mechanisms that result in the mobilization and discharge of iron and manganese in violation of State Board Resolution 68-16; and either:

a. Stop any indirect discharge (seepage) of degraded groundwater to Sutter Creek that is in violation of the Clean Water Act; or

b. Obtain an NPDES Permit that regulates the indirect discharge of degraded groundwater to Sutter Creek.

If the Discharger demonstrates that a direct discharge to surface water will comply with current regulations and policies applicable to surface water discharges, then either option above may include obtaining an NPDES permit for seasonal or year round direct surface water discharge of treated effluent and/or groundwater that has been degraded as a result of the existing land discharge.

3. By **30 January 2012**, the Discharger shall submit a *Seepage Discharge Compliance Plan.* At a minimum, the plan shall:

a. Specify the selected seepage compliance option, as described in Item 2, above.

b. Provide a conceptual design of the facility improvements required to achieve compliance with this Order and provide sufficient treatment, storage and disposal capacity through 2020.

c. Describe how the improvements/expansion project will be designed to prevent surfacing groundwater or increases in groundwater levels that could adversely impact neighboring land uses.

d. Provide a proposed scope and schedule of all work required for complete implementation of the selected option. The schedule shall include planning, predesign studies, CEQA compliance, project financing, engineering design, permitting, contractor procurement, construction, and startup testing.

e. Provide a preliminary capital cost estimate and a financing plan describing how the improvement project will be funded.

4. **If the selected seepage discharge compliance option does not require an NPDES permit**, the Discharger shall comply with the following requirements:

a. By **30 May 2012**, the Discharger shall submit an RWD or apply for revised WDRs. The RWD shall, at a minimum, address the items listed in Attachment A.

b. If requested by the Executive Officer, the Discharger shall submit a revised RWD that addresses staff's comments within **45 days** of the request.

c. By **30 October 2013**, the Discharger shall submit a technical report certifying that (1) the improvements/expansion project has been completed, (2) the facility does not discharge to Sutter Creek in violation of the Clean Water Act, and (3) any groundwater degradation that occurs due to treatment and disposal of wastewater is consistent with State Water Board Resolution 68-16.

5. **If the selected seepage discharge compliance option requires an NPDES permit** for either direct discharge or continued seepage discharge, the Discharger shall comply with the following requirements:

   a. By **30 January 2012,** the Discharger shall submit and implement a *Pre-Application Monitoring Plan* designed to provide all groundwater and surface water monitoring data required to support the NPDES permit application. The monitoring plan shall specify the media to be monitored, sampling locations and schedule, constituents to be analyzed, and proposed analytical methods. If flow monitoring data is needed to support a request for dilution credits, the monitoring plan shall also specify the proposed flow monitoring method, location, and schedule.

   b. If requested by the Executive Officer, the Discharger shall submit a revised *Pre-Application Monitoring Plan* that addresses staff's comments within **45 days** of the request.

   c. By **30 August 2012**, the Discharger shall submit a complete RWD to apply for an NPDES permit and revised WDRs for the wastewater treatment facility. The RWD shall, at minimum, address the items listed in Attachments A (for the land discharge WDRs) and B (for the NPDES permit).

   d. If requested by the Executive Officer, the Discharger shall submit a revised RWD that addresses staff's comments within 14 **days** of the request.

   e. By **30 March 2013**, the Discharger shall submit a technical report certifying that the improvements/expansion project has been completed and that any discharges to surface water, whether direct or indirect, are regulated under a valid NPDES permit.

Interim Flow Limits

6. Influent flows to the wastewater treatment plant shall not exceed 0.55 MGD as a monthly average dry weather flow (based on flows from June through September each calendar year). Total effluent flows to the percolation/evaporation ponds shall not exceed 0.75 MGD as a monthly average flow for any calendar month. For the purpose of this Order, total effluent flow is defined as the sum of the monthly average treatment plant effluent flow plus the monthly average effluent flow accepted from the ARSA system which is directed to the percolation/evaporation ponds.

Quarterly Progress Reporting

7. Beginning **1 August 2011**, and by the first day of the second month following each calendar quarter **(i.e., by 1 February, 1 May, 1 August, and 1 November each year)**, the Discharger shall submit a quarterly progress report describing: (a) the work completed to date regarding each of the reporting requirements described above; (b) a cumulative total since April 2011 of the number of new connections that have been permitted and the number of connections that have been removed from the collection

system in terms of equivalent single family dwelling units (EDUs); and (c) data showing whether or not the Discharger has complied with the interim flow limits contained in this Order.

In addition to the above, the Discharger shall comply with all applicable provisions of the Water Code that are not specifically referred to in this Order. As required by the Business and Professions Code sections 6735, 7835, and 7835.1, all technical reports shall be prepared by, or under the supervision of, a California Registered Engineer or Professional Geologist and signed/stamped by the registered professional.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement or may issue a complaint for administrative civil liability.

Failure to comply with this Order or with the WDRs may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 8 April 2011.

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PAMELA C. CREEDON, Executive Officer

Attachment A Additional Information Requirement for a Report of Waste Discharge (Land Discharge Permits)
Attachment B Application Requirements for NPDES Permits

Attachment A
ADDITIONAL INFORMATION REQUIREMENTS
FOR REPORT OF WASTE DISCHARGE
(LAND DISCHARGE PERMITS)

Please provide a technical report prepared by a California registered Civil Engineer that presents the following information:

1. A narrative description of the existing and planned development that will generate wastewater, and all existing and proposed wastewater conveyance, treatment, and disposal systems.

2. A process flow diagram, scaled treatment plant site plan, and a scaled map showing the limits of all existing and proposed wastewater treatment and effluent storage and reclamation or disposal areas.

3. Chemical characterization of the public water supply, including total dissolved solids; standard minerals (boron, bromide, calcium, chloride, fluoride, magnesium, phosphate, potassium, sodium, sulfate, alkalinity series, and hardness), and metals (aluminum, arsenic, cadmium, copper, lead, iron, manganese, nickel, and zinc). Include supporting analytical data.

4. Chemical characterization of current and future influent and effluent wastewater quality supported by tabulated monitoring data for at least the last five years, including biochemical oxygen demand, total suspended solids, total dissolved solids, and nitrogenous compounds. Include a discussion of seasonal variations, if any, and supporting analytical data. This must be based on water supply and wastewater analytical data.

5. A description of the current and future sources and types of wastewater flowing into the system, design flow rates, and the design capacity of the system. Include an analysis of current and projected infiltration/inflow rates and peaking factors used in design calculations.

6. A description of the following (current and future) supported by tabulated monthly flows for at least the last five years:
   a. Average dry weather flow;
   b. Peak wet weather flow (or other reasonable peak day flow rate); and
   c. Effluent quality at the point of discharge to the disposal system (BOD, total suspended solids, settleable matter, total dissolved solids, sodium, chloride, nitrogenous compounds, electrical conductivity, pH, and total coliform organisms).

7. A description of the existing and proposed sewer system: materials, infiltration/inflow estimate, and lift station details (type, location, capacity, backup systems, and alarm features). Provide a scaled plan of all existing and proposed major conveyance system elements (lift stations, force mains, large gravity mains, etc.) and alarm features.

8. A description of existing and proposed emergency wastewater storage facilities or other means of preventing system bypass or failure during reasonably foreseeable overload

conditions (e.g., power failure, sewer blockage, and illicit sewer discharges). Consider both potential problems at the plant and within the sewer system.

9. Narrative description of expected solids generation rates and handling/storage procedures:
   a. Debris;
   b. Grit and screenings; and
   c. Biosolids.

10. Narrative description of proposed solids disposal practices for debris, grit, screenings, and biosolids:
   a. Method of disposal;
   b. Frequency of disposal;
   c. Disposal site/area name(s) and location(s); and

11. For each pond and other waste containment structure, provide the following information. Discuss both existing and proposed ponds:
   a. Identification (name) and function of the pond;
   b. Surface area, depth, and volumetric capacity at two feet of freeboard;
   c. Height (relative to surrounding grade), crest width, interior slope, and exterior slope of each berm or levee;
   d. Materials used to construct each berm or levee;
   e. Description of engineered liner, if any;
   f. Estimated steady state percolation rate for each unlined pond;
   g. Depth to shallow groundwater below the planned base of the ponds;
   h. Overfilling/overflow prevention features; and
   i. Operation and maintenance procedures.

12. A description of emergency wastewater storage facilities or other means of preventing system bypass or failure during reasonably foreseeable overload conditions (e.g., power failure, sewer blockage, and illicit sewer discharges). Consider both potential problems at the plant and within the sewer system.

13. If treated effluent will be recycled, provide a complete description the proposed discharge including:
   a. Effluent disinfection system;
   b. Reclaimed water conveyance systems;
   c. Water reclamation areas;
   d. Cropping plans;

e. Planned reclamation operations (planting and harvest, irrigation method, irrigation frequency, irrigation amounts);

f. Expected nutrient loadings (pounds per acre per year total nitrogen);

g. Expected salt loadings (pounds per acre per year total dissolved solids);

h. Tailwater management methods; and

i. Storm water runoff management methods.

To the extent this information is already presented in the Title 22 Engineering Report, the RWD may incorporate that report by reference.

14. A description of neighboring land uses.

15. A flood hazard assessment (Is the site located in the 100-year flood zone? How are waste containment structures and disposal areas protected from washout or inundation?)

16. A description of the types of soil underlying the existing and proposed ponds and effluent disposal areas (include a copy of the geotechnical report).

17. Projected monthly water balance demonstrating adequate containment capacity for both the average rainfall year and the 100-year return period total annual precipitation, including consideration of at least the following.

    a. A minimum of two feet of freeboard in each pond at all times;

    b. Historical local evaporation data (monthly average values);

    c. Local precipitation data with the 100-year return period annual total distributed monthly in accordance with mean monthly precipitation patterns;

    d. Proposed reclamation area/disposal system loading rates distributed monthly in accordance with expected seasonal variations based on crop evapotranspiration rates; and

    e. Projected long-term I/I rates;

    f. Projected long-term percolation rates (including consideration of percolation from unlined ponds and the effects of solids plugging on all ponds).

18. Proposed flow limits and basis for the limit. Consider dry weather flows vs. peak flows and seasonal variations. Include the technical basis for the proposed flow limit (e.g., design treatment capacity; hydraulic capacity of a main lift station, headworks, or other system element; and demonstrated effluent disposal capacity).

19. A narrative description of plant operation and maintenance procedures to be employed, including those associated with effluent storage and disposal.

Title 27 Exemption and Antidegradation Analysis

The State Water Resources Control Board Resolution No. 68-16 (the Antidegradation Policy) requires that the Regional Water Board, in regulating the discharge of waste, must maintain the high quality of water of the state until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the state, will not unreasonable affect beneficial uses, and will not result in water quality less than that described in the Regional Water Board's policies (e.g. quality that exceeds water quality objectives). Additionally, the WDRs must include detailed findings to justify exempting the facility and discharge from the prescriptive requirements of CCR Title 27.

20. A detailed discussion of the basis for exemption from the prescriptive requirements of CCR Title 27. For each containment structure or other structure through which waste will be conveyed, state the specific subsection(s) of CCR Title 27, section 20090 that apply and describe in detail why the exemption(s) apply.

21. A description of any policies or facility design features that reduce the potential for groundwater degradation (best practicable treatment and control or BPTC measures). Such features might include advanced treatment, disinfection, non-chemical disinfection, concrete treatment structures, and engineered pond lining systems.

22. Discuss the costs and benefits of alternatives for maintaining existing water quality and/or limited degradation of groundwater quality (if limited degradation is consistent with the Antidegradation Policy). Alternatives may include an increase in the usage of the reclamation, advanced treatment, regionalization, pollutant source minimization, and change in source water supply. Discuss environmental and socio-economical benefits for limited degradation of groundwater.

23. Provide a technical report prepared by a Registered Geologist or Certified Hydrogeologist that provides an assessment of existing groundwater degradation caused by the discharge and the potential for the proposed facility to degrade groundwater quality in the future. The assessment must be made based on site-specific data and must provide technically-based answers to the following questions based on historical data and supplemental data to be collected for the purpose of this study:

    a. What is the groundwater elevation and gradient at the existing facility?

    b. What is background shallow groundwater quality for typical municipal waste constituents and naturally occurring constituents that may be released to groundwater as a result of the discharge (e.g., iron and manganese)? Compare to established water quality objectives. [1]

[1] At a minimum, include analyses for the following: BOD, total coliform organisms, electrical conductivity, total dissolved solids, ammonia (as N), total Kjeldahl nitrogen, nitrate (as N), nitrite (as N), sodium and chloride. Total coliform organisms shall be determined using the 15- or 25-tube method.

c. What are subsurface conditions at the proposed new disposal site? [2]

d. What is the character of groundwater quality at the proposed new disposal site? [2]

e. Based on site hydrogeology, the nature of the waste, and the proposed disposal method, what level of additional degradation is expected to result from the expansion (if any)?

f. If the proposed expansion will cause additional degradation, how will the degradation be confined or controlled?

g. At a minimum, the report shall include the following:

- Rationale for field investigation approach.
- Description and documentation of all proposed investigational methods and activities.
- Description of the site hydrogeology including stratigraphy, groundwater elevation and gradient, transmissivity, and influence of all recharge and pumping sources (i.e., a site conceptual model).
- Description of fate and transport mechanisms for all monitored constituents.
- Description of data reduction/analysis techniques and results.
- Presentation of historical and supplemental site-specific soil and groundwater data.
- Comparison of groundwater quality data to background groundwater quality and water quality objectives for each constituent.
- An analysis of all data and conclusions regarding each of the above questions.

24. Discuss the costs and benefits of alternatives for maintaining existing water quality and/or limited degradation of groundwater quality (if limited degradation is consistent with the Antidegradation Policy). Alternatives may include an increase in the usage of the reclamation, advanced treatment, regionalization, pollutant source minimization, and change in source water supply. Discuss environmental and socio-economical benefits for limited degradation of groundwater.

[2] This must be based on at least three groundwater monitoring events at least two months apart. If new monitoring wells will be installed, a workplan must first be approved. Use all available historical monitoring data.

Attachment B
APPLICATION REQUIREMENTS FOR NPDES PERMITS

The NPDES permit application package must include the following (see 40 CFR 122.21 for federal requirements for a complete NPDES Application):

1. Completed and signed NPDES Applications:
   a. Report of Waste Discharge (Form 200), plus
   b. Form 1, plus
   c. Form 2A, 2B, 2C, 2D, 2E or 2F (http://www.waterboards.ca.gov/centralvalley/business_help/permit3.html)

2. Filing Fee for new discharges http://www.waterboards.ca.gov/fees/docs/adoptedfeeschedule.pdf

3. Site map and schematic of facility

4. CEQA Documents (EIR, Negative Declaration, etc.), if available for project

5. Description of plans for growth or expansion of facilities, or other modifications planned for the next five years.

6. Recent Facility Upgrades and upgrades anticipated during the next NPDES permit cycle (five to seven years)

7. Anti-Degradation Analysis for new or expanding discharges:
   a. Infeasibility Study for Wastewater Disposal Alternatives
   b. Regionalization and Recycled Water Alternatives

8. California Toxic Rule/National Toxic Rule constituent analyses for effluent and receiving water:
   a. Conducted within last permit cycle for permit renewals

9. Receiving Water Information (For Dilution Credit Requests):
   a. Low flow data (7Q10 and 1Q10)
   b. Evaluation of background constituent concentrations to determine effluent constituents for which dilution may be needed
   c. Upstream and downstream receiving water hardness data (include effluent hardness data if ephemeral stream)
   d. Location of nearest downstream domestic, industrial and irrigation water diversions

10. Studies (as needed for the discharge):
    a. Dilution studies (if dilution is being requested)
    b. Mixing Zone Analysis for aquatic toxicity
    c. Water Effect Ratio Studies (if applicable)
    d. Thermal Plan exemption studies

11. Infeasibility Analysis (as potentially needed for future permit):

a. Evaluation of existing facilities' ability to comply with potential future permit requirements
b. Description of proposed treatment upgrades or controls to be implement to comply with potential future permit requirements
c. Timeline and milestone schedule for proposed upgrades and/or controls

12. Salinity
    a. Electrical conductivity of each water supply for community and annual volume supplied by each water source
    b. Summary and copies of regulations impacting wastewater salinity
    c. Plans and progress for salinity control for wastewater salinity

13. Sludge Management Plan:
    a. Description of onsite and offsite solids and sludge treatment and disposal methods implemented
    b. Disposal method for all solids and sludge produced due to treatment of influent
    c. Monitoring required by entity receiving sludge or biosolids (i.e. landfill or sludge management contractor)
    d. Information on responsible parties for beneficial reuse per Part 503 Regulations
    e. Groundwater monitoring associated with potential impact to groundwater of stored or land-applied sludge to land.

14. Pretreatment:
    a. Full description of pretreatment program implemented by Discharger for industrial flows into collection system

15. Groundwater:
    a. Description of wastewater treatment, storage and/or disposal into ponds or wastewater applied to land
    b. Description of implemented BPTCs (i.e. pond liners) to minimize impact to groundwater
    c. Existing ground water monitoring requirements
    d. Existing groundwater data