

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2014-0166

AMENDING WASTE DISCHARGE REQUIREMENTS ORDER R5-2013-0022
FOR
CITY OF IONE AND
GREENROCK RANCH LANDS, LLC
IONE WASTEWATER TREATMENT FACILITY
AMADOR COUNTY

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

1. On 11 April 2013, the Central Valley Water Board adopted Waste Discharge Requirements (WDRs) Order R5-2013-0022, prescribing requirements for City of Ione Wastewater Treatment Facility (WWTF) in Amador County. The City owns and operates the WWTF and certain recycled water land application areas (LAAs). Greenrock Ranch Lands, LLC owns and will operate additional recycled water LAAs. The City and Greenrock Ranch Lands, LLC are hereafter jointly referred to as "Dischargers".
2. The wastewater treatment and disposal facilities consist of Ponds 1 through 7. 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.
3. In order to correct a longstanding storage and disposal capacity issue and provide sufficient capacity for expected growth in the near future, WDRS Order R5-2013-0022 requires that the City complete specific improvements that the City proposed as follows:
 - a. Phase I (to be completed by 30 October 2013) was to include constructing new water recycling land application areas (LAAs) on land owned by the City, including the 11-acre WWTF Field and the 67-acre Town Field; and installing an effluent disinfection system.
 - b. Phase II (to be completed in 2015) was to include constructing a new effluent storage pond (Pond 8) on the location of the 11-acre WWTF Field and adding additional water recycling LAAs totaling 56 acres: the 40-acre Greenrock LAA and the 16-acre Castle Oaks Water Recycling Plant (COWRP) Field.

Phases I and II also included other improvements intended specifically to resolve groundwater pollution caused by the unlined treatment storage and disposal ponds pursuant to a 2011 Cease and Desist Order (CDO R5-2011-0019). Those improvements are not relevant to this Order.

4. The City intended to produce secondary treated disinfected effluent for use as recycled water on the recycled water LAAs, so WDRs Order R5-2013-0022 includes effluent limitations and discharge requirements that implement the statewide criteria for the use of recycled water in Title 22 that are specific to the level of disinfection provided. Specifically:

- a. Effluent Limitation C.2 requires that effluent discharged to the LAAs meet the total coliform criteria for disinfected secondary-23 recycled water (i.e., a monthly median concentration of total coliform bacteria not to exceed 23 MPN/ 100 mL and a maximum of 240 MPN/ 100 mL in any 30-day period).
- b. Water Recycling Specification G.5 requires that the recycled water be at least disinfected secondary-23 recycled water as defined in Title 22, section 60301.225.
- c. Water Recycling Specification G.6 limits the uses of recycled water to those allowed for disinfected secondary-23 recycled water.
- d. Water Recycling Specification G.13 provides for recycled water LAA setbacks that are specific to disinfected secondary-23 recycled water. Land Application Area
- e. Specification F.4 allows off-site discharge of storm water runoff from the LAAs under certain circumstances.

5. The City completed most of the Phase I improvements described in Finding 3. a by 31 December 2013. However, due to construction bids higher than the engineer's estimate, the City was not able to finance all of the work and elected not to install the effluent disinfection system. Effluent disinfection is not necessary to protect groundwater quality, nor is it required by Title 22 if the recycled effluent is only used to irrigate fodder crops, as was proposed by the City in its Title 22 Engineering Report.

On 4 June 2013, the California Department of Public Health Drinking Water Program (now the State Water Board Division of Drinking Water) approved the temporary use of undisinfecting secondary effluent to irrigate fodder crops and pasture for animals not producing milk for human consumption. Because disinfection is not necessary to protect groundwater quality, it is appropriate to amend WDRs Order R5-2013-0022 to remove the disinfection requirement, remove the effluent coliform limit, and change the related discharge requirements cited in Finding 4 to reflect the change to undisinfecting secondary effluent.

6. In accordance with the City's proposed scope of work for the Phase II capacity expansion work, Provision 1.c. of WDRs Order R5-2013-0022 requires that the City submit a Phase II Improvements Completion Report by 30 October 2015 that certifies construction and start-up testing of the new effluent storage pond and Phase II recycling sites have been completed.

7. On 10 September 2014, the City stated that the Phase II expansion project may not be needed to ensure sufficient treatment, storage and disposal capacity for projected flows through 2020. The City cleaned out two of its percolation ponds and deep ripped them to enhance percolation in 2013. The City reports that shallow groundwater levels have declined and percolation rates have increased significantly and those ponds have received little use since the two recycled water LAAs have been in use. Additionally, the City has renewed its efforts to work with the Amador Regional Sanitation Agency on a regional effluent storage and disposal system and filter backwash flows to the WWTF from the Amador Water Agency that may result in reduced influent flows to the WWTF.

Although the City has not demonstrated that the facility has the required capacity, and some of the observed changes in the percolation rates may be at least partly due to the severe drought conditions of the last year, it is reasonable to remove the requirement to complete the specific improvements that were proposed as the Phase II expansion project while retaining the underlying capacity requirement and time schedule. This would allow the City to either demonstrate that compliance with the capacity requirement has already been achieved or achieve compliance through other means, whichever is appropriate. Therefore, it is appropriate to amend Flow Limitation B.2 and Provision 1.c to make these requirements completely performance based.

8. Discharge Specification E.16 states:

“The City shall monitor sludge accumulation in Ponds 1 through 4 at least every five years beginning in 2016, and shall periodically remove sludge as necessary to maintain adequate storage capacity. Specifically, if the estimated volume of sludge in any pond exceeds five percent of the permitted capacity specified in Finding 7, the City shall complete sludge cleanout for that pond within 12 months after the date of the estimate”.

The City requested that this requirement be amended to clarify that the volume of sludge that would trigger pond cleaning is to be measured as a percentage of the dry volume of the sludge; not as a wet volume.

9. Discharge Specification E.1 states:

“No waste constituent shall be released, discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations of this Order”.

It appropriate to amend this requirement to clarify that the City would not be responsible for the acts of others which are beyond its control.

10. Discharge Specification E.2 states:

“The discharge shall not cause degradation of any water supply”.

The Central Valley Water Board expressly allowed degradation of groundwater quality in WDRs Order R5-2013-0022. It is appropriate to delete this specification because it is contrary to the Board's intent.

Public Notice

11. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to amend waste discharge requirements for this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
12. The Central Valley Water Board, in a public meeting, heard, and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Order R5-2013-0022 is amended solely to allow the use of the new LAAs at the WWTP site and to revise the groundwater limitations. Pursuant to Water Code sections 13263 and 13267, the Discharger, its agents, successors and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted thereunder, shall comply with amended Order R5-2013-0022 as follows:

1. Flow Limitation B.2 shall be amended as follows:

“Effective on the date of Executive Officer approval of the ~~Phase II~~ **2020 Capacity Expansion** Completion Report submitted pursuant to Provision I.1.c, influent flows to the WWTF and total effluent flows to the ~~percolation ponds and storage/disposal ponds~~ shall not exceed the following limits...

...

Influent flows at the headworks shall include domestic wastewater generated from the City of Ione, tertiary filter backwash flows from the COWRP, and filter backwash flows from the AWA water treatment plant **as applicable**. Total effluent flows to the ~~percolation ponds and storage/disposal ponds~~ shall include the influent flows at the headworks and the ARSA secondary effluent flows to the percolation ponds **as applicable**”.

2. Effluent Limitation C.2 shall be deleted and subsequent paragraphs shall be renumbered.
3. Discharge Specification E.2 shall be deleted and subsequent paragraphs shall be renumbered.
4. Discharge Specification E.16 shall be amended as follows:

“...if the estimated volume of **dry** sludge in any pond exceeds five percent of the permitted capacity specified in Finding 7, the City shall complete sludge cleanout...”

5. Land Application Area Specification F.4 shall be amended as follows:

“Any irrigation runoff (tailwater) shall be confined to the LAAs **or collected and recycled at the LAAs**, and shall not enter any surface water drainage course or storm water drainage system. ~~Storm water may be discharged off-site provided that the Dischargers comply with Land Application Area Specification F.5 below.~~”

6. Water Recycling Specification G.5 shall be amended as follows:

“The recycled water shall be at least ~~disinfected~~**undisinfected** secondary recycled water as defined in Title 22, section 60301.~~225900~~”.

7. Water Recycling Specification G.6 shall be amended as follows:

“Recycled water shall be used in compliance with Title 22, sections 60304 and 60307. Specifically, uses of recycled water shall be limited to those set forth in Title 22, sections 60304(~~ed~~) and 60307(~~bc~~)”.

8. The following additional paragraphs shall be inserted after Water Recycling Specification G.11 and subsequent paragraphs shall be renumbered:

“12. All storm water runoff from the LAAs shall be captured and recycled for irrigation or allowed to percolate within the use areas.

13. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.

14. All drinking fountains located within the use areas shall be protected by location and/or structure from contact with recycled water spray, mist, or runoff.

15. Grazing of milking animals within the LAAs is prohibited”.

9. Water Recycling Specification G.13 shall be amended as follows:

“The LAAs and recycled water impoundments shall be designed, maintained, and operated to comply with the following setback requirements:

<u>Setback Definition</u>	<u>Minimum Irrigation Setback (feet)</u>
...	..
Toe of recycled water impoundment berm to domestic water supply well	400 150
...	..."

10. Provision 1.c. shall be amended as follows:

"By 30 October 2015, the City shall submit a **2020 Capacity Expansion Phase II Improvements Completion Report** that certifies construction and startup testing of the new effluent storage pond and Phase II recycling sites of **all improvements needed to provide sufficient treatment, storage and disposal capacity for projected flows through 2020** have been completed, and that the WWTF can comply with the applicable effluent limitations. The report shall include as-built drawings of the WWTF and recycling site **and/or other** improvements...

...

The water balance shall include documentation of, and technical support for, all data inputs used and shall consider at least the following:

- (1) The as-built geometry of all ponds and effluent recycling/**disposal** areas;...
- (5) **Projected Proposed** wastewater generation rates based on historical flows and new development to be served by the expansion distributed monthly in accordance with expected seasonal variations;...
- (8) Projected long-term percolation rates **based on documented percolation test results** (including consideration of percolation from unlined ponds and the effects of solids plugging on all ponds).

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 of this Order, except that if the thirtieth day following the date of this Order 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:

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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 5 December 2014.

Original signed by

PAMELA C. CREEDON, Executive Officer

LF/ALO: 9/22/14