



# Central Valley Regional Water Quality Control Board

6 February 2020

Mike Sidley, Owner LIWW, LLC Lake Isabella WWTF 2940 Westwood Boulevard Los Angeles, California 90064 CERTIFIED MAIL: 7018 1830 0001 0015 4472

## NOTICE OF APPLICABILITY (NOA), STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2014-0153-DWQ-R5313; GENERAL WASTE DISCHARGE REQUIREMENTS FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS; LIWW, LLC; LAKE ISABELLA WASTEWATER TREATMENT FACILITY; KERN COUNTY

On 15 May 2019, Aqua Operations, Inc., submitted a Report of Waste Discharge (RWD) on behalf of the owner LIWW, LLC (Discharger), a California limited liability company, for coverage of the Lake Isabella Wastewater Treatment Facility (WWTF) under the State Water Resources Control Board (State Water Board) Water Quality Order 2014-0153-DWQ *General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems* (General Order). The RWD was stamped and signed by Matthew J. Willbanks (RCE 66845) and included a completed and signed Form 200, WWTF information, and CEQA documentation.

At the request of Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff, additional effluent monitoring data was submitted to the Central Valley Water Board on 14 November 2019 to supplement the information in the May 2019 RWD. Based on the information provided and a review of the available information, the system treats and disposes of less than 100,000 gallons of domestic wastewater per day and is therefore eligible for coverage under the General Order. This letter serves as formal notice that the General Order is applicable to your system and the wastewater discharge described below upon the rescission of Waste Discharge Requirements (WDRs) Order 84-149. You are hereby assigned General Order **2014-0153-DWQ-R5313** for your system.

You should familiarize yourself with the entire General Order and its attachments enclosed with this letter, which describe mandatory discharge and monitoring

KARL E. LONGLEY ScD, P.E., CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

LIWW, LLC Lake Isabella WWTF WQ Order 2014-0153-DWQ-R5313

requirements. Sampling, monitoring, and reporting requirements applicable to your treatment and disposal methods must be completed in accordance with the appropriate treatment system sections of the General Order and the enclosed *Monitoring and Reporting Program* (MRP) No. **2014-0153-DWQ-R5313**. This MRP was developed after consideration of your waste characterization and site conditions described in the attached memorandum.

## **DISCHARGE DESCRIPTION**

The Discharger owns the Lake Isabella WWTF that is about 1.5 miles south of the auxiliary dam for Lake Isabella in Kern County as shown in **Attachment A**, which is incorporated by reference and considered part of this Notice of Applicability (NOA). The WWTF and leachfield are in Section 31, Township 27 South, Range 33 East, Mount Diablo Base & Meridian in Kern County. The Discharger contracts the operation of the WWTF to Aqua Operations, Inc. (Aqua).

The WWTF is currently regulated by Waste Discharge Requirements (WDRs) Order 84-149, which specifies a 30-day average dry-weather flow limitation of 0.05 million gallons per day (mgd) of treated domestic effluent to an onsite leachfield system. The WWTF was constructed in 1984 and consists of a sanitary sewer collection system, two lift stations, a treatment plant, and a leachfield. The wastewater treatment system consists of flow equalization, flow control, two-stage trickling filtration, intermediate and final clarification, effluent pumping, and sludge storage.

While the WWTF was designed to discharge up to 0.05 mgd, actual flows from the WWTF are much less. Flows to the WWTF in 2018 averaged just under 19,000 gallons per day (gpd) and the flow decreased slightly to about 18,500 gpd through September 2019. Mr. Mike Popichak of Aqua indicated in a January 2020 phone conversation that the flows at the end of 2019 have continued to decrease and are averaging around 18,000 gpd halfway through January 2020. Mr. Popichak also stated that with the decreasing flows that a 20,000 gpd flow limit was appropriate for the WWTF. The average discharge from the WWTF to the leachfield from 2018 through September 2019 is listed in the Table below.

Year	Daily Average Flow (gallons per day)		
2018	18,986		
2019 (through September)	18,506		

## Table 1 - Average Daily Flow January 2018 – September 2019

## FACILITY SPECIFIC REQUIREMENTS

The Discharger will maintain exclusive control over the discharge and shall comply with the terms and conditions of this NOA, General Order 2014-0153-DWQ, with all attachments, and MRP No. **2014-0153-DWQ-R5313**.

The Discharger shall comply with all the prohibitions in the General Order, specifically, Prohibition A.1. that prohibits the direct or indirect discharge of any wastewater to surface waters or surface water drainage courses.

In accordance with Section B.1 of the General Order and the information provided in the attached memorandum, treated wastewater discharged to the Facility's leachfield system **shall not exceed 20,000 gpd as a monthly average**. Compliance with the flow limit shall be determined at the influent to the WWTF.

The General Order states in Section B.1.I. that the Discharger shall comply with the setbacks as described in Table 3 of the General Order. This table summarizes different setback requirements for wastewater treatment system equipment, activities, land application areas, and storage and/or treatment ponds from sensitive receptors and property lines where applicable. The Discharger shall comply with the applicable setback requirements, as summarized in the following table:

Equipment or Activity	Domestic Well	Flowing Stream	Ephemeral Stream Drainage	Property Line	Lake or Reservoir
Treatment System or Collection System	150 feet	50 feet	50 feet	5 feet	200 feet
Leachfield	100 feet	100 feet	50 feet	5 feet	200 feet

Table 2- Olle-Opecific Applicable Delback Requirements
--

The Discharger shall comply with all applicable sections in the General Order, including:

- a. Aerobic Treatment Unit requirements specified in Section B.3 of the General Order;
- b. Subsurface Disposal System requirements specified in Section B.6 of the General Order; and
- c. Sludge/Solids/Biosolids Disposal requirements specified in Section B.8 of the General Order.

As discussed in the enclosed memorandum, the Discharger shall comply with the effluent limitation specified in Table 3 below. Compliance with the effluent limitations shall be determined after all treatment prior to the discharge to the leachfield system. This NOA specifies a flow limitation of 20,000 gpd; therefore, a nitrogen evaluation is not required at this time.

#### Table 3 - Effluent Limitations

Constituent	Units	Monthly Average Limit (see 1 below)
Biochemical Oxygen Demand (BOD)	mg/L	70

1. The monthly average concentration is the arithmetic mean of measurements recorded during a calendar month. If only one sample is collected in a calendar month, then that sample measurement is the monthly average concentration.

Provision E.1 of the General Order requires discharges enrolled under the General Order to prepare and implement the following reports within **90 days** of the issuance of the NOA **(6 May 2020)**:

- Spill Prevention and Emergency Response Plan (Provision E.1.a.).
- Sampling and Analysis Plan (Provision E.1.b).
- Sludge Management Plan (Provision E.1.c).

A copy of the Spill Prevention and Emergency Response Plan, the Sampling and Analysis Plan, and Sludge Management Plan shall be maintained at the treatment facility and shall be presented to the Central Valley Water Board staff upon request. The Sludge Management Plan shall be submitted to the Central Valley Water Board within **90 days** of the issuance of the NOA.

Failure to comply with the requirements in this NOA, General Order 2014-0153-DWQ, with all attachments, and MRP No. 2014-0153-DWQ-R5313 could result in an enforcement action as authorized by provisions of the California Water Code. Discharge of wastes other than those described in this NOA is prohibited. If the method of waste disposal changes from that described in this NOA, you must submit a new Report of Waste Discharge describing the new operation.

As stated in Section E.2.w of the General Order, in the event any change in control or ownership of the Facility or wastewater disposal areas, the Discharger must notify the succeeding owner or operator of the existence of this General Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board Executive Officer.

The required annual fee specified in the annual billing from the State Water Board shall be paid until this NOA is officially terminated. You must notify this office in writing if the discharge regulated by the General Order ceases, so that we may terminate coverage and avoid unnecessary billing.

On 31 May 2018, the Central Valley Water Board adopted Basin Plan amendments incorporating new strategies for addressing ongoing salt and nitrate accumulation in the Central Valley as part of the Central Valley Salinity Alternatives for Long-Term Sustainability (**CV-SALTS**) initiative. Further details of these strategies are discussed in the enclosed memorandum. As these strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of this NOA to ensure the goals of the Salt and Nitrate Control Program are met.

LIWW, LLC Lake Isabella WWTF WQ Order 2014-0153-DWQ-R5313

All monitoring reports and other correspondence should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to: <u>centralvalleyfresno@waterboards.ca.gov</u>. Documents that are 50MB or larger should be transferred to a disk and mailed to the Central Valley Water Board office at 1685 E Street, Fresno, CA 93706. To ensure that your submittals are routed to the appropriate staff, the following information block should be included in any email used to transmit documents to this office:

Program: Non-15 WDID: 5D151091001 Place ID: 236222 Facility Name: Lake Isabella WWTF Order: 2014-0153-DWQ-R5313

In order to conserve paper and reduce mailing costs, a paper copy of the General Order has been sent only to the Discharger. Others are advised that the <u>General Order</u> is available on the State Water Board's website (http://www.waterboards.ca.gov/board\_decisions/adopted\_orders/water\_quality/2014/w qo2014\_0153\_dwq.pdf).

All documents, including responses to inspections and written notifications, submitted to comply with this General Order shall be directed, via the paperless office system, to the Compliance and Enforcement Unit, attention to Russell Walls. Mr. Walls can be reached at (559) 488-4392 or <u>Russel.Walls@waterboards.ca.gov</u>. Questions regarding the permitting aspects of the General Order, and notification for termination of coverage under the General Order, shall be directed, via the paperless office system, to the WDR Permitting Unit, attention Jeff Pyle. Mr. Pyle can be reached at (559) 445-5145 or by email at Jeffrey.Pyle@waterboards.ca.gov.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board to review the action in accordance with California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Resources Control Board must receive the petition by 5:00 p.m., 30 days after the date of this NOA, 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 Resources Control Board by 5:00 p.m. on the next business day. <u>Copies of the law and regulations applicable to filing petitions</u> may be found on the internet or will be provided upon request (http://www.waterboards.ca.gov/public notices/petitions/water quality).

WDRs Order 84-149 is tentatively proposed to be rescinded at the 16/17 April 2020 meeting of the Central Valley Water Board. Upon rescission of your individual WDRs, coverage for your Facility under the General Order shall become applicable under this Notice of Applicability.

## LIWW, LLC Lake Isabella WWTF WQ Order 2014-0153-DWQ-R5313

If you have any questions regarding this matter, please contact Jeff Pyle by phone at (559) 445-5145 or by email at <u>Jeffrey.Pyle@waterboards.ca.gov</u>..

*Original Signed by Scott Hatton for:* Patrick Pulupa, Executive Officer

Attachments:	<ul> <li>Attachment A – Site Vicinity Map</li> <li>Attachment B – Site Map</li> </ul>
Enclosures:	<ul> <li>Monitoring and Reporting Program 2014-0153-DWQ-R5313</li> <li>15 January 2020 Regional Water Board Staff Memorandum</li> </ul>
	State Water Resources Control Board Order WQ 2014-0153-DWQ (Discharger Only)
CC:	• Fresno County Department of Public Health, Environmental Health

• Russell Walls, Central Valley Regional Water Quality Control Board



## ATTACHMENT A – SITE VICINITY MAP

NOTICE OF APPLICABILITY 2014-0153-DWQ-R5313 FOR LIWW, LLC LAKE ISABELLA WASTEWATER TREATMENT FACILITY KERN COUNTY



## ATTACHMENT B – SITE MAP NOTICE OF APPLICABILITY 2014-0153-DWQ-R5313 FOR LIWW, LLC LAKE ISABELLA WASTEWATER TREATMENT FACILITY KERN COUNTY

## CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD CENTRAL VALLEY REGION

## MONITORING AND REPORTING PROGRAM NO. 2014-0153-DWQ-R5313 FOR LIWW, LLC LAKE ISABELLA WASTEWATER TREATMENT FACILITY KERN COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring the LIWW, LLC (Discharger), Lake Isabella Wastewater Treatment Facility (Facility or WWTF). This MRP is issued pursuant to Water Code section 13267, the Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) or Executive Officer.

Section 13267 of the California Water Code states, in part:

"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."

#### Section 13268 of the California Water Code states, in part:

"(a) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of Section 13399.2, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b).

(b)(1) Civil liability may be administratively imposed by a regional board in accordance with article 2.5 (commencing with section 13323) of chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs."

## LIWW, LLC Lake Isabella WWTF MRP No. 2014-0153-DWQ-R5313

The Discharger owns the WWTF that is subject to Notice of Applicability (NOA) 2014-0153-DWQ-R5313, which enrolls the WWTF under State Water Resources Control Board (State Water Board) Water Quality Order 2014-0153-DWQ *General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems* (General Order). The reports and monitoring required in this MRP are necessary to ensure that the Discharger complies with the NOA and General Order. Pursuant to Water Code section 13267, the Discharger shall implement this MRP and shall submit the reports described herein.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The name of the sampler, sample type (grab or composite), time, date, location, bottle type, and any preservative used for each sample shall be recorded on the sample chain of custody form. The chain of custody form must also contain all custody information including date, time, and to whom samples were relinquished. If composite samples are collected, the basis for sampling (time or flow weighted) shall be approved by Central Valley Water Board staff.

Field test instruments (such as those used to test pH, dissolved oxygen, and electrical conductivity) may be used provided that they are used by a State Water Resources Control Board, Environmental Laboratory Accreditation Program (ELAP) certified laboratory, or:

- 1. The user is trained in proper use and maintenance of the instruments;
- 2. The instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer;
- 3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
- 4. Field calibration reports are maintained and available for at least three years.

# TREATMENT SYSTEM MONITORING

## Influent Monitoring

Influent samples shall be taken from a location that provides representative samples of the wastewater quality, prior to any treatment or return flows. At a minimum, influent monitoring shall consist of the following:

Constituent	Units	Sample Type	Sample Frequency	Reporting Frequency
Flow Rate	gpd	Meter	Continuous	Quarterly
BOD₅	mg/L	Grab	Monthly	Quarterly

## Table 1 - Influent Monitoring Requirements

# **Effluent Monitoring**

Effluent samples shall be taken from a location that provides representative samples of the wastewater after treatment, but prior to discharge into the leachfield. At a minimum, effluent monitoring shall be monitored as specified in Table 2 below.

Table 2	- Effluent	Monitoring	Requ	irements

Parameter	Units	Sample Type	Sampling Frequency	Reporting Frequency
BOD <sub>5</sub>	mg/L	Grab	Monthly	Quarterly
EC	µmhos/cm	Grab	Monthly	Quarterly
Total Nitrogen (as N)	mg/L	Grab	Quarterly	Quarterly

## SUBSURFACE DISPOSAL AREA MONITORING

Monitoring shall be sufficient to determine if wastewater is evenly applied, the disposal area is not saturated, burrowing animals and/or deep-rooted plants are not present, and odors are not present. Inspection of dosing pump controllers, automatic distribution valves, etc. is required to maintain optimum treatment in the disposal area. Monitoring shall include, at a minimum, the following:

Table 3 - Subsurface	Disposal Monitoring
----------------------	---------------------

Constituent	Inspection Frequency	Reporting Frequency
Pump Controllers, Automatic Valves, etc. (see 1. below)	Quarterly	Quarterly
Nuisance Odor Condition	Quarterly	Quarterly
Saturated Soil Conditions (see 2. below)	Quarterly	Quarterly
Plant Growth (see 3. below)	Quarterly	Quarterly
Vectors or Animals Burrowing (see 4. below)	Quarterly	Quarterly

- 1. All pump controllers and automatic distribution valves shall be inspected for proper operation as recommended by the manufacturer.
- 2. Inspect a disposal area for saturated conditions.
- 3. Shallow-rooted plants are generally desirable, dep-rooted plats such as trees shall be removed as necessary.
- 4. Evidence of animals burrowing shall be immediately investigated, and burrowing animal populations controlled as necessary.

# SLUDGE/BIOSOLIDS DISPOSAL MONITORING

The Discharger shall report the handling and disposal of all solids (e.g., screenings, grit, sludge, biosolids, etc.) generated at the wastewater system. Records shall include the name/contact information for the hauling company, the type and amount of waste transported, the date removed from the wastewater system, the disposal facility name and address, and copies of analytical data required by the entity accepting the waste. These records shall be submitted as part of the annual monitoring report.

## **GROUNDWATER MONITORING**

The WWTF currently consists of three monitoring wells. Two of the wells, MW-1 and MW-2, were installed as downgradient wells, while MW-3 was intended to be an upgradient well. However, the May 2019 Report of Waste Discharge states that MW-3 was installed within the leachfield and the results appear to confirm that as discussed in the memorandum enclosed with the NOA. **By 6 October 2020**, the Discharger shall submit a work plan that proposes well(s) to provide an adequate groundwater monitoring well network to monitor the upgradient and downgradient groundwater conditions to evaluate the WWTF's overall impact to underlying groundwater. The Discharger shall construct all groundwater monitoring wells to meet or exceed the standards stated in the Department of Water Resources' Bulletins 74-81, 74-90, and any subsequent revisions.

Prior to sampling, groundwater elevations shall be measured to the nearest one hundredth of a foot and the wells shall be purged of at least three well volumes and until pH and electrical conductivity have stabilized. No-purge, low-flow, or other sampling techniques are acceptable if they are described in an approved Sampling and Analysis Plan. Groundwater elevations shall be calculated. Samples shall be collected using approved USEPA methods. Groundwater monitoring at MW-1, MW-2, MW-3, and any other future monitoring wells added to the WWTF's network shall include, at a minimum, the following:

Constituent	Units	Sample Type	Sampling/Reporting Frequency (see 1 below)
Depth to Groundwater (see 2 below)	0.01 Feet	Measurement	Quarterly
Groundwater Elevation	Feet	Calculated	Quarterly
рН	Standard pH Units	Grab	Quarterly
Electrical Conductivity	umhos/cm	Grab	Quarterly
Nitrate (as N)	mg/L	Grab	Quarterly
Total Nitrogen (as N)	mg/L	Grab	Quarterly
Total Coliform Organisms	MPN/100 mL	Grab	Quarterly

 Table 4 – Groundwater Monitoring Requirements

Constituent	Units	Sample Type	Sampling/Reporting Frequency (see 1 below)
Zinc (see 3 below)	mg/L	Grab	Semiannually
Phenol (see 3 below)	mg/L	Grab	Semiannually
Formaldehyde (see 3 below)	mg/L	Grab	Semiannually

1 Analysis of data by a California licensed professional is required at least annually.

- 2 Groundwater elevation shall be based on depth to water using a surveyed measuring point elevation on the well and a surveyed reference elevation.
- 3 Monitoring for zinc, phenol, and formaldehyde is only required when recreational vehicles were allowed to discharge to the WWTF in the previous 12 months.

## REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, solids, etc.), and reported analytical or visual inspection results are readily discernable. The data shall be summarized to clearly illustrate compliance with the General Order and NOA as applicable. The results of any monitoring done more frequently than required at the locations specified in the MRP shall be reported in the next regularly scheduled monitoring report and shall be included in calculations as appropriate.

The Central Valley Water Board has gone to a Paperless Office System. All regulatory documents, submissions, materials, data, monitoring reports, and correspondence shall be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to: <u>centralvalleyfresno@waterboards.ca.gov</u>. Documents that are 50MB or larger should be transferred to a disk and mailed to the appropriate Regional Water Board office, in this case 1685 E Street, Fresno, CA 93706.

To ensure that your submittals are routed to the appropriate staff, the following information block should be included in any email used to transmit documents to this office:

Program: Non-15, WDID: 5D151091001 Place ID: 236222, Facility Name: Lake Isabella WWTF Order: 2014-0153-DWQ-R5313

## A. Quarterly Monitoring Reports

Quarterly reports shall be submitted to the Regional Water Board on the **first day of the second month after the quarter ends** (e.g., the January-March Quarterly Report is due by May 1<sup>st</sup>). The reports shall bear the certification and signature of

the Discharger's authorized representative. At the minimum, the quarterly reports shall include:

- 1. Results of all required monitoring.
- 2. A comparison of monitoring data to the discharge specifications, applicable effluent limits, disclosure of any violations of the NOA and/or General Order, and an explanation of any violation of those requirements. (Data shall be presented in tabular format).
- 3. Copies of laboratory analytical report(s) and chain of custody form(s).

## **B. Annual Report**

Annual Reports shall be submitted to the Regional Water Board by **March 1st following the monitoring year.** The Annual Report shall include the following:

- 1. Tabular and graphical summaries of all monitoring data collected during the year.
- 2. An evaluation of the performance of the wastewater treatment system, including discussion of the capacity issues nuisance conditions, system problems and a forecast of the flows anticipated in the next year. A flow rate evaluation as described in the General Order (Provision E.2.c), shall also be submitted.
- 3. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into compliance with the NOA and/or General Order.
- 4. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.
- 5. The name and contact information for the wastewater operator responsible for operation, maintenance, and system monitoring.
- 6. A groundwater monitoring report prepared by a California licensed professional. This report may be prepared separately from the rest of the Annual Report. The report shall contain an analysis of groundwater data collected during the year. The analysis shall include a description of the sample events, copies of the field logs, purge method and volume, groundwater elevation and trend, a groundwater elevation map for each sample event, summary tables showing results for parameters measured, comparison of groundwater quality parameters to standards in the NOA, chain-of-custody forms, calibration logs for field equipment used, and a general evaluation of any impacts the wastewater discharge is having on groundwater quality.

A letter transmitting the monitoring reports shall accompany each report. The letter shall report violations found during the reporting period, and actions taken or planned to correct the violations and prevent future violations. The transmittal letter shall contain

## LIWW, LLC Lake Isabella WWTF MRP No. 2014-0153-DWQ-R5313

the following penalty of perjury statement and shall be signed by the Discharger or the Discharger's authorized agent:

"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 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."

The Discharger shall implement the above monitoring program upon the first month following the rescission of Order 84-149. Upon rescission of Order 84-149, this MRP replaces MRP 84-149.

Ordered by:

Original Signed by Scott Hatton for: PATRICK PALUPA, Executive Officer

> 6 February 2020 (Date)

GLOSSARY	
BOD <sub>5</sub>	Five-day biochemical oxygen demand
CaCO3	Calcium carbonate
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
TDS	Total dissolved solids
TKN	Total Kjeldahl nitrogen
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
24-hr Composite	Samples shall be a flow-proportioned composite consisting of at least eight aliquots over a 24-hour period.
Daily	Every day except weekends or holidays.
Twice Weekly	Twice per week on non-consecutive days.
Weekly	Once per week.
Twice Monthly	Twice per month during non-consecutive weeks.
Monthly	Once per calendar month.
Quarterly	Once per calendar quarter.
Semiannually	Once every six calendar months (i.e., two times per year) during non-
consecutive quarter	S.
Annually	Once per year.
mg/L	Milligrams per liter
mg/kg	Milligrams per kilogram
mL/L	Milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
gpd	Gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters





# Central Valley Regional Water Quality Control Board

TO: Scott J. Hatton Supervising Water Resource Control Engineer

FROM: Alexander S. Mushegan Senior Water Resource Control Engineer RCE 84208

> Jeffrey S. Pyle Engineering Geologist PG 7375

DATE: 6 February 2020

## APPLICABILITY OF COVERAGE UNDER STATE WATER RESOURCES CONTROL BOARD ORDER WQ-2014-0153-DWQ-R5313; GENERAL WASTE DISCHARGE REQUIREMENTS FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS; LIWW, LLC, LAKE ISABELLA WASTEWATER TREATMENT FACILITY, KERN COUNTY

Waste Discharge Requirements (WDRs) Order 84-149 regulates the discharge of treated domestic wastewater from the Lake Isabella wastewater treatment facility (WWTF) for a 30-day average daily dry-weather flow limitation of 0.05 million gallons per day (mgd). On 15 May 2019, Aqua Operations, Inc., submitted a Form 200 and a Report of Waste Discharge (RWD) on behalf of the owner LIWW, LLC (Discharger). WDRs Order 84-149 needs to be updated to ensure the discharge is consistent with Central Valley Water Board plans and policies. This memorandum provides a summary of Central Valley Water Board staff's review of the RWD and the applicability of the discharge to be covered under State Water Resources Control Board (State Water Board) Water Quality Order 2014-0153-DWQ, *General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems* (General Order).

# **DESCRIPTION OF DISCHARGE**

The Discharger owns the Lake Isabella WWTF which is about 1.5 miles south of the dam that forms Lake Isabella in Kern County. The Discharger contracts the operation of

the WWTF to Aqua Operations, Inc. The WWTF was constructed in 1984 and consists of a sanitary sewer collection system, two lift stations, a treatment plant and a leachfield. The treatment plant consists of flow equalization, flow control, two-stage trickling filtration, clarification, effluent pumping, and sludge storage.

The WWTF provides sewerage service to 54 active mobile home connections, 19 inactive connections, an 86-unit adult living facility, and a shopping center. The shopping center contains a grocery market, a drug store, variety stores, two restaurants, a California Department of Motor Vehicles office, and a gasoline station. The average daily flow in 2018 and through September of 2019 was 18,819 gpd (18,986 gpd for 2018, and 18,506 gpd through September 2019).

WDRs Order 84-129 states that the Kern County Planning Department, as the lead agency, adopted a Negative Declaration in accordance with the California Environmental Quality Act in 1984.

## POTENTIAL THREAT TO WATER QUALITY

Monitoring and Reporting Program (MRP) 84-149 does not require sampling of the influent or effluent, but four influent and effluent samples were collected between March and April 2019 by Aqua Operations staff. A summary of the data is shown below. Besides the pH data, the average value is listed first, with the range of detections show in the parentheses below.

Constituent	Units	Influent	Effluent
рН	mg/L	7.3 – 7.57	7.22 – 7.43
Biochemical Oxygen Demand (BOD)	mg/L	518 (400 – 780)	88 (80 – 100)
Total Suspended Solids (TSS)	mg/L	420 (220 – 930)	
Sodium	mg/L	71 (66 – 78)	
Chloride	mg/L	51 (46 – 53)	
Electrical Conductivity	umhos/cm	944 (890 – 968)	992 (950 – 1040)

## Table 4 - March/April 2019 Data

The March/April 2019 data shows significant variability in BOD and TSS data, with concentrations well above expected values. The variability of the results is likely the result of the shopping centers various restaurants. The RWD indicates that the grocery market, drug store, and food establishments were all constructed with a grease trap/interceptor. The grease traps are pumped by the owners of the establishment and are inspected periodically.

Even though the influent data is high for BOD and TSS, the effluent BOD data shows an 83 percent reduction when compared to the influent. The effluent was not tested for TSS; therefore, a similar reduction for TSS is assumed. Aqua Operations staff indicated concerns that the effluent samples were incorrectly collected from an area where sludge is returned to the treatment system, and that may have affected the BOD effluent results. Central Valley Water Board staff requested additional samples be collected and analyzed for nitrogen in addition to BOD. Aqua Operation staff collected samples for five weeks beginning on 26 September 2019 and the results are summarized below.

Constituent	Units	INFLUENT	EFFLUENT		
BOD	mg/L	286 (100 – 590)	42 (22 – 62)		
Nitrate (as N)	mg/L	0.33 (0.1 - 0.77)	1.5 (0.43 – 2.2)		
Total Nitrogen (as N)	mg/L	31 (25 – 43)	38 (33 – 41)		

SEPTEMBER/NOVEMBER	2019 WASTEWATER SAMPLING
JLF I LIVIDLN/INUVLIVIDLN	2019 WASILWATLK SAWFLING

The September/November 2019 influent BOD results still showed high variability but the dataset average (286 mg/L) was significantly lower than the March/Aril 2019 dataset average of 518 mg/L. Furthermore, the effluent BOD results decreased significantly (88 mg/L compared to 42 mg/L). Table 4 of the General Order establishes a technology performance effluent limitation of 90 mg/L for trickling filter systems. However, as discussed in further detail below, the Tulare Lake Bain Plan specifies more stringent limitations for domestic discharges to land.

The RWD does not address setback distances to nearby streams, wells, or impoundments. However, the areas served by the Lake Isabella WWTF meet the applicable setback requirements for treatment systems and leachfield listed in Table 3 of the General Order. The nearest surface water is the Lake Isabella Hot Springs, which is located about 850 feet north of the wastewater treatment system and about 1,200 feet west of the leachfield. The nearest domestic well is located about 300 feet upgradient of the leachfield disposal system. Water is supplied to the adjacent mobile home park and shopping center by the Erskine Creek Water District, whose wells are about 1.5 miles south of the Lake Isabella WWTF. The auxiliary dam for Lake Isabella is about 1.5 miles north of the WWTF.

# **Groundwater Data**

The Discharger monitors a three well groundwater monitoring network. Groundwater monitoring wells MW-1 and MW-2 were installed as downgradient wells, while MW-3 was intended as an upgradient well. However, MW-3 was installed directly adjacent and possibly within the leachfield system. The RWD notes on page 17, that there are *"no monitoring wells upgradient of the leaching field."* The direction of groundwater flow is to the west/southwest. Results from June 2018 to September 2019 (five sampling events) are shown in the following table.

Constituent	Units	Jun-18	Sep 18	Jan-19	Apr-19	Sep-19	Average
Depth to water	feet bgs	Dry	Dry	8.1	8.6	8.3	8.3
EC	umhos/cm	Dry	Dry	717	711	705	711
Nitrate as N	mg/L	Dry	Dry	17	18	21	19
Chloride	mg/L	Dry	Dry	39	38	41	39

## Table 5 - MW-1 Data

# Table 6 - MW-2 Data

Constituent	Units	Jun-18	Sep-18	Jan-19	Apr-19	Sep-19	Average
Depth to water	feet bgs	10.8	10.8	10.8	10.2	10.5	10.6
EC	umhos/cm	435	507	620	606	360	506
Nitrate as N	mg/L	15	14	16	16	12	15
Chloride	mg/L	22	28	35	31	15	26

# Table 7 - MW-3 Data

Constituent	Units	Jun-18	Sep-18	Jan-19	Apr-19	Sep-19	Average
Depth to water	feet bgs	5.7	5.1	3.8	4.4	5.4	4.9
EC	umhos/cm	1,070	1,000	1,059	1,281	952	1,072
Nitrate as N	mg/L	17	0.26	0.8	4.6	2	4.9
Chloride	mg/L	61	49	25	82	54	54

The results indicate the highest EC and chloride results are from MW-3, but the nitrate as nitrogen results from this well are much lower than the results from MW-1 or MW-2. Nitrate (as N) results from MW-1 and MW-2 average 19 mg/L and 15 mg/L, respectively, and all of the samples since June 2018 exceed the primary maximum contaminant level of 10 mg/L. MW-3 is reported to have been installed within the leachfield, and the results seem to verify this as the EC and chloride results from MW-3 are similar to EC and chloride results in the March/April effluent sampling events. Assuming MW-3 is within the leachfield, the general lower concentrations could possible indicate that the percolated effluent nitrogen (primarily in the organic/ammonia form based on available data) has not yet nitrified. Therefore, future groundwater monitoring should include total nitrogen and ammonia.

The lower values/results of EC and chloride in samples collected from MW-1 and MW-2 appear to indicate rapid blending and attenuation with the underlying groundwater. The average EC value in MW-2 (506 umhos/cm) is half of the average EC result in samples collected from MW-3. However, the nitrate as nitrogen results from MW-1 and MW-2 are elevated (three times higher) than nitrate as nitrogen results from MW-3 and appears to indicate that the WWTF is degrading the underlying groundwater with respect to nitrate. However, without a background groundwater monitoring well, it can't be determined if the WWTF is the cause of the elevated nitrate results observed from MW-1 and MW-2

or if the nitrate is from an offsite source. The groundwater monitoring network needs to have an upgradient monitoring well that is not affected by the discharge of wastewater to the leachfield. This Order requires the Discharger to submit a work plan to upgrade the existing groundwater monitoring well network.

Regarding the depth to groundwater, it should be noted that the monitoring wells are set in fractured granitic bedrock and depth to groundwater in fractured environments can be highly variable. The static water level in a well completed in fractured rock is not necessarily the actual first encountered groundwater level since bedrock has discontinuous flow through fractures that often times are under pressure (confining pressures).

Based on available information, including the depth to groundwater, underlying soil conditions, expected strength of the domestic wastewater, and proposed flowrate, the proposed Facility appears to meet the conditions of the Small Domestic General Order.

#### **BASIN PLAN REQUIREMENTS**

General Order, Finding 6 states, in part, that the "General Order requires Dischargers to comply with all applicable Basin Plan requirements, including any prohibitions and/or water quality objectives, governing the discharge. The Discharger must comply with any more stringent standards in the applicable Basin Plan. In the event of a conflict between the requirements of this General Order and the Basin Plan, the more stringent requirement prevails." The Water Quality Control Plan for the Tulare Lake Basin, Second Edition, revised May 2018 (Tulare Lake Basin Plan) in section 4.1.11.5 specifies effluent limitations for discharges of domestic wastewater to land. For advanced primary treatment, the Tulare Lake Basin Plan requires 60 to 70 percent removal or reduction to 70 mg/L, whichever is more restrictive. These levels are more restrictive than the effluent limitations specified in the General Order for a trickling filter system (BOD effluent limitation of 90 mg/L).

#### MONITORING REQUIREMENTS

Monitoring requirements included in the following sections from Attachment C of the General Order are appropriate for this discharge:

- Aerobic Treatment Monitoring,
- Subsurface Disposal Monitoring,
- Solids Disposal Monitoring, and
- Groundwater Monitoring.

## SALT AND NITRATE CONTROL PROGRAMS

As part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative, the Central Valley Water Board adopted Basin Plan amendments (Resolution R5-2018-0034) incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. On 16 October 2019, the State Water Resources Control Board adopted Resolution No. 2019-0057 approving the Central Valley Water Board Basin Plan amendments and also directed the Central Valley Water Board to make targeted revisions to the Basin

Plan amendments within one year from the approval of the Basin Plan amendments by the Office of Administrative Law. The Office of Administrative Law approved the Basin Plan amendments on 15 January 2020 (OAL Matter No. 2019-1203-03).

Pursuant to the Basin Plan amendments, dischargers will receive a Notice to Comply with instructions and obligations for the Salt Control Program within one year of the effective date of the amendments. Upon receipt of the Notice to Comply, the Discharger will have no more than six months to inform the Central Valley Water Board of their choice between Option 1 (Conservative Option for Salt Permitting) or Option 2 (Alternative Option for Salt Permitting). For the Nitrate Control Program, the WWTF falls within Groundwater Basin 5-025 (Kern River Valley) a non-prioritized basin/sub-basin. Implementation within a non-prioritized basin/sub-basin will occur as directed by the Central Valley Water Board Executive Officer.