CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

3 August 2018

Jeff Gonzalez, President
Stratford Public Utility District
19681 Railroad Street
P.O. Box 85
Stratford, CA 93266

Jon Demsky, General Manager
Stratford Public Utility District
19681 Railroad Street
P.O. Box 85
Stratford, CA 93266

NOTICE OF APPLICABILITY (NOA), STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2014-0153-DWQ-R5288, GENERAL WASTE DISCHARGE REQUIREMENTS FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS, STRATFORD PUBLIC UTILITY DISTRICT, WASTEWATER TREATMENT FACILITY, KINGS COUNTY

On 30 July 2018, Stratford Public Utility District was issued a Notice of Applicability for coverage under the State Water Resources Control Board Water Quality Order 2014-0153-DWQ *General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems*. You were incorrectly assigned enrollee number 2014-0153-DWQ-R5277.

You are now assigned enrollee number **2014-0153-DWQ-R5288**. Please refer to this number in any correspondence regarding this project.

If you have any questions regarding this matter, contact Denise Soria at (559) 444-2488 or by email at dsoria@waterboards.ca.gov.

Clay L. Rodgers

for Patrick Pulupa
Executive Officer

cc: Nichole Morgan, State Water Resources Control Board, Division of Financial Assistance, Sacramento
Mehreen Siddiqui, State Water Resources Control Board, Division of Financial Assistance, Sacramento (via email)
Kings County Environmental Health Services Department, Hanford
Kings County Public Works Department, Hanford
James Wegley, Keller/Wegley Consulting Engineers, Visalia
James Blair, Keller/Wegley Consulting Engineers, Visalia

30 July 2018

Jeff Gonzalez, President
Stratford Public Utility District
19681 Railroad Street
P.O. Box 85
Stratford, CA 93266

CERTIFIED MAIL
7018 0040 0000 1911 5432

Jon Demsky, General Manager
Stratford Public Utility District
19681 Railroad Street
P.O. Box 85
Stratford, CA 93266

CERTIFIED MAIL
7018 0040 0000 1911 5449

NOTICE OF APPLICABILITY (NOA), STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2014-0153-DWQ-R5277, GENERAL WASTE DISCHARGE REQUIREMENTS FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS, STRATFORD PUBLIC UTILITY DISTRICT, WASTEWATER TREATMENT FACILITY, KINGS COUNTY

On 13 October 2016, Stratford Public Utility District (District) submitted a Report of Waste Discharge (RWD) for proposed upgrades to the wastewater treatment facility (WWTF) signed and stamped by James H Wegley (RCE 24383). Based on the information provided, the system treats and disposes of less than 100,000 gallons per day (gpd), and is therefore eligible for coverage 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). This letter serves as formal notice that the General Order is applicable to your system and the wastewater discharge described below. You are hereby assigned General Order **2014-0153-DWQ-R5277** for your system. Coverage under the General Order takes effect after Waste Discharge Requirements (WDRs) Order 82-068 have been rescinded.

You should familiarize yourself with the entire General Order and its attachments enclosed with this letter, which describe mandatory discharge and monitoring 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 attached Monitoring and Reporting Program (MRP) 2014-0153-DWQ-R5277. This MRP was developed after consideration of your waste characterization and site conditions described in the attached memorandum.

DISCHARGE DESCRIPTION
WDRs Order 82-068 regulates the discharge of the District's WWTF and allows a discharge of up to 0.15 million gallons per day (mgd) to 20 acres of evaporation/percolation ponds.

The WWTF is at the southeast corner of Empire Street and 5th Avenue in Section 17, Township 20 South, Range 20 East, Mount Diablo Base & Meridian in Kings County. The proposed upgrades to the WWTF include a new headworks, four facultative ponds, two storage ponds, and five evaporation/percolation ponds. Based on data from 2015 through 2017, flows at the WWTF average about 60,000 gpd, and range from 10,000 gpd (minimum) to 123,000 gpd (maximum).

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-R5277, with all attachments, and MRP 2014-0153-DWQ-R5277.

In accordance with the requirements of the General Order, discharges with flow rates greater than 20,000 gpd must be evaluated as described in Attachment 1 of the General Order to determine if nitrogen effluent limits are required. The attached memorandum includes a nitrogen effluent limit evaluation. Based on the evaluation, the impact of the WWTF's discharge to underlying groundwater is unknown at this time. The Discharger is required to submit a Salt and Nutrient Management Plan that determines how nitrogen in the effluent affects underlying groundwater.

In accordance with Section B.1.a of the General Order, wastewater discharged to the WWTF's headworks **shall not exceed 100,000 gpd as a monthly average**.

The General Order states in Section B.1.l that the Discharger shall comply with the setbacks described in Table 3. This table summarizes different setback requirements for wastewater 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:

Site Specific Applicable Setback Requirements		
Equipment or Activity	**Domestic Well**	**Property Line**
Treatment System	150 ft. [1]	5 ft.[2]
Impoundment (undisinfected wastewater)	150 ft.[3]	31 ft.[4]

1 Setback established by Onsite Wastewater Treatment System Policy, section 7.5.6
2 Setback established by California Plumbing Code, Table K-1.
3 Setback established by California Code of Regulations, title 22, section 60310(d).
4 Instead of the minimum setback distance of 50 feet listed in the General Order, the Discharger proposed a minimum setback distance of 31 feet for the proposed evaporation ponds. A minimum setback distance of 31 feet is satisfactory provided the Discharger includes appropriate means to preclude public access to the ponds (i.e., fencing) and conducts the required monthly observations of the ponds to determine if nuisance conditions are present.

The Discharger shall comply with all of the pond system requirements specified in Section B.5 of the General Order.

As discussed in the attached memorandum, the *Water Quality Control Plan for the Tulare Lake Basin*, Second Edition, revised July 2016 (Tulare Lake Basin Plan) includes more stringent effluent limitation for biochemical oxygen demand (BOD). Therefore, this NOA includes the advance primary treatment effluent limitation required by the Basin Plan for BOD. The Discharger shall not exceed the following effluent limitations, as summarized in the following table:

Effluent Limitations for the Wastewater Treatment System[1]		
Wastewater Pond or Trickling Filter (not including residential recirculating sand filters)		
Constituent	**Units**	**Limit**
BOD	mg/L	70 (monthly average)

BOD denotes biochemical oxygen demand
mg/L denotes milligrams per liter
1 Once the proposed upgrades are completed, the limitation included in this table applies to the treated effluent after treatment and prior to discharge to the evaporation/percolation ponds. Until then, the effluent limitation applies at the southeast corner of evaporation/percolation Pond 6.

Provision E.1 of the General Order requires dischargers enrolled under the General Order to prepare and implement the following reports within **90 days** after the NOA becomes effective with the rescission of WDRs Order 82-068:

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

The General Order requires the Sludge Management Plan to be submitted to the Central Valley Water Board within 90 days after the NOA becomes effective with the rescission of WDR Order 82-068.

6 months after the NOA becomes effective with the rescission of WDRs Order 82-068, the Discharger shall prepare and submit a Salt and Nutrient Management Plan (Plan) (pursuant to Provision E.1.d) to ensure that the overall impact of treated wastewater does not degrade groundwater. The Plan shall identify and address sources of salinity from the WWTF, including, but not limited to: 1) the chemicals used for drinking water and wastewater treatment, 2) the contribution of salinity from sewer users, and 3) the source water (i.e., potable water supply wells). For nitrogen, the Plan shall evaluate the Facility's impact on underlying groundwater and determine if nitrogen reduction is required or if implementation measures to protect groundwater quality such as lining the ponds with a synthetic or low permeability liner is required.

If the proposed upgrades to the WWTF necessitate the temporary groundwater monitoring wells (B-3, B-5, B-6, B-7, and B-9) be destroyed and abandoned as part of the construction of the proposed upgrades, the Discharger shall submit a work plan for Executive Officer approval that describes the measures the Discharger will implement to properly destroy and abandon the wells. The destruction of the wells shall comply with appropriate standards as described in California Well Standard Bulleting 74-90 (June 1991) and Water Well Standards: State of

California Bulleting 74-81 (December 1981), and any more stringent standards adopted by the State or County pursuant to Water Code section 13801.

Within **6 months of destroying the monitoring wells**, the Discharger shall submit a technical report signed by a registered professional that includes destruction details of the wells and certifies the wells were destroyed in accordance with applicable regulations.

Failure to comply with the requirements in this NOA, General Order 2014-0153-DWQ-R5277, with all attachments, and MRP 2014-0153-DWQ-R5277 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.

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.

The Central Valley Water Board has gone to a Paperless Office System. All regulatory documents, submissions, materials, data, monitoring reports, and correspondence should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be mailed to: centralvalleyfresno@waterboards.ca.gov. 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: 5D160105001, Facility Name: Stratford Public Utility District, Order: 2014-0153-DWQ-R5277.

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 General Order is available on the State Water Board's web site at:

https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/#General

The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. These programs, once effective, could change how the Central Valley Water Board permits discharges of salt and nitrate.

WDRs Order 87-032 are proposed to be rescinded at the **4/5 October 2018** meeting of the Central Valley Water Board. Upon rescission of your individual WDRs, coverage for your Facility under the General Order shall become applicable subject to this Notice of Applicability.

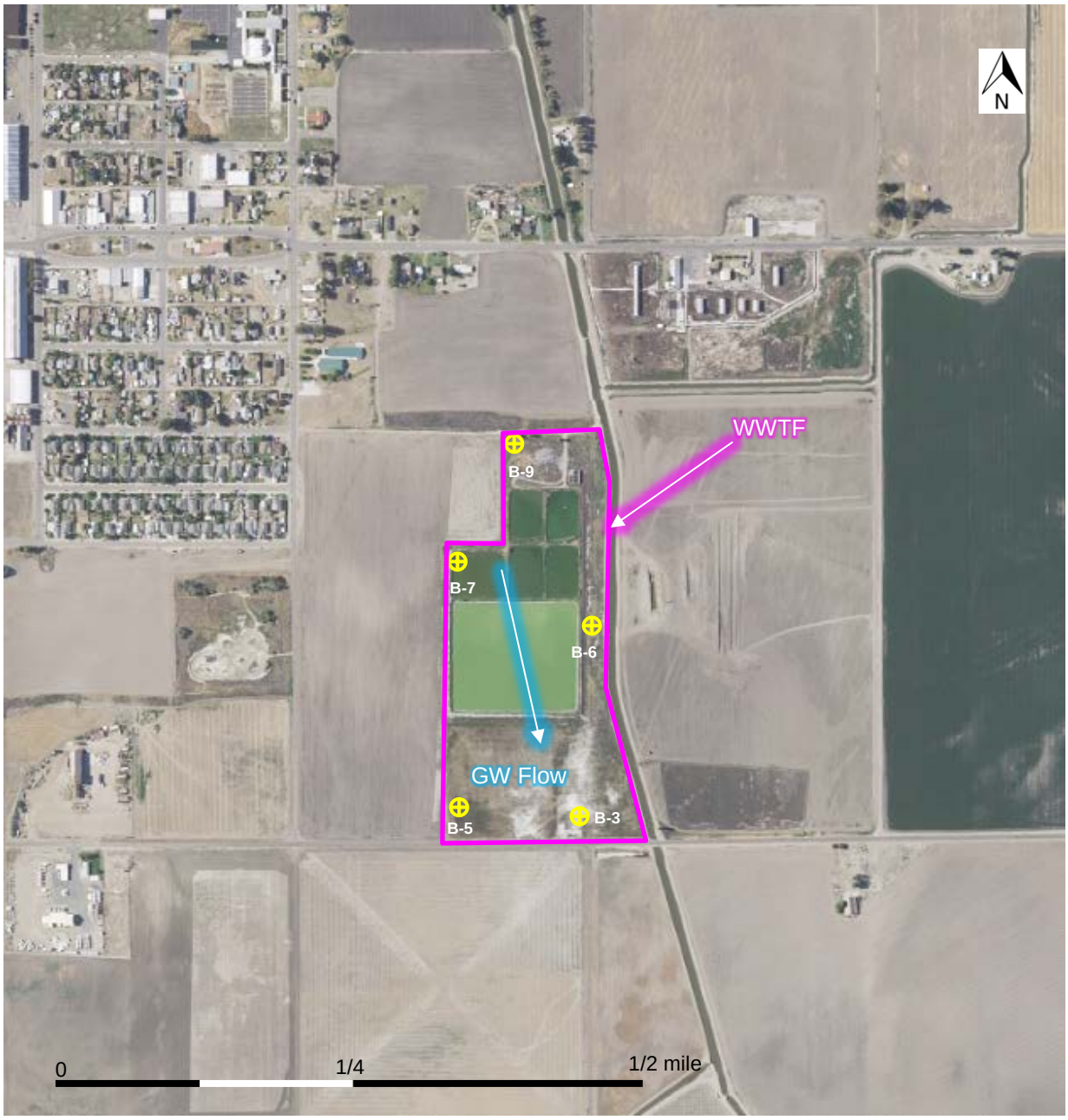
If you have any questions regarding this matter, contact Denise Soria at (559) 444-2488 or by email at dsoria@waterboards.ca.gov.

Clay L. Rodgers

for Patrick Pulupa
Executive Officer

Attachments: Attachment A – Groundwater Monitoring Well Location Map
Monitoring and Reporting Program 2014-0153-DWQ-R5277
30 July 2018 Regional Water Board staff memorandum
State Water Resources Control Board Order WQ 2014-0153-DWQ
(Discharger Only)

cc: Nichole Morgan, State Water Resources Control Board, Division of Financial Assistance, Sacramento
Kings County Environmental Health Services Department, Hanford
Kings County Public Works Department, Hanford
James Wegley, Keller/Wegley Consulting Engineers, Visalia
James Blair, Keller/Wegley Consulting Engineers, Visalia



ATTACHMENT A

GROUNDWATER MONITORING WELL LOCATION MAP

STRATFORD PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT
KINGS COUNTY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM 2014-0153-DWQ-R5277
FOR
STRATFORD PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT FACILITY
KINGS COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring a wastewater treatment system. This MRP is issued pursuant to Water Code section 13267. Stratford Public Utility District (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.

Water Code section 13267 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."

Water Code section 13268 states, in part:

> "(a)(1) 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 require by subdivision (b) of section 13399.2, or falsifying any information provided therein, is guilty of a misdemeanor any 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."

The Discharger owns and operates a wastewater treatment facility that is subject to the Notice of Applicability (NOA) of Water Quality Order 2014-0153-DWQ-R5277. The reports 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 monitoring 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 of flow weighted) shall be approved by the 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 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.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration or parameter after at least 12 months of monitoring, the Discharger may request this MRP be revised to reduce the monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

POND SYSTEM MONITORING

Influent Monitoring

Influent samples shall be taken from a location that provides representative samples of the wastewater and flow rate. At a minimum, influent monitoring shall consist of the following:

Constituent	Units[2]	Sample Type	Sample Frequency	Reporting Frequency
Flow Rate[1]	gpd	Meter	Continuous	Quarterly
Total Nitrogen	mg/L	Grab	Monthly	Quarterly
Electrical Conductivity	umhos/cm	Grab	Monthly	Quarterly

1 At a minimum, the total flow shall be measured monthly to calculate the average daily flow for the month.
2 gpd denotes gallons per day; mg/L denotes milligrams per liter; µmhos/cm denotes micromhos per centimeter

Wastewater Pond Monitoring

All wastewater and treated wastewater storage ponds (lined and unlined) shall be monitored as specified below:

Constituent	Units	Sample Type	Sample Frequency	Reporting Frequency
Dissolved Oxygen	mg/L[1]	Grab	Monthly	Quarterly
Freeboard	0.1 feet	Measurement	Monthly	Quarterly
Odors	---	Observation	Monthly	Quarterly
Berm Condition	---	Observation	Monthly	Quarterly
Electrical Conductivity	umhos/cm[2]	Grab	Monthly	Quarterly

1 mg/L denotes milligrams per liter.
2 umhos/cm denotes micromhos per centimeter

Effluent Monitoring

Effluent samples shall be taken after treatment and before the evaporation/percolation ponds once the proposed upgrades are completed, until then, the effluent samples shall be taken at the southeast corner of evaporation/percolation Pond 6. At a minimum, effluent monitoring shall consist of the following:

Constituent	Units	Sample Type	Sample Frequency	Reporting Frequency
Biochemical Oxygen Demand	mg/L[1]	Grab	Monthly	Quarterly
Total Suspended Solids	mg/L[1]	Grab	Monthly	Quarterly
Electrical Conductivity	umhos/cm[2]	Grab	Monthly	Quarterly
Total Nitrogen	mg/L[1]	Grab	Monthly	Quarterly

1 mg/L denotes milligrams per liter.
2 umhos/cm denotes micromhos per centimeter

SOLIDS 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

Consistent with the Business and Professions Code, groundwater monitoring reports, wells construction workplans, etc. shall be prepared under the supervision of a California licensed civil

engineer or geologist. Prior to construction of any new groundwater monitoring wells, the Discharger shall submit plans and specification to the Regional Water Board's staff for review and approval. Once installed, all monitoring wells designated as part of the monitoring network shall be sampled and analyzed according to the schedule below.

Analysis of the data and groundwater flow directions shall be performed at least annually and shall be performed under the supervision of a California licensed professional (as described above). The Discharger may request a reduced monitoring and reporting schedule once adequate data has been collected to characterize the site.

Prior to sampling, groundwater elevations shall be measured 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. Depth to groundwater shall be measured to the nearest 0.01 feet. Groundwater elevations shall be calculated. Samples shall be collected using approved USEPA methods. Groundwater monitoring at each of the monitoring wells shown in Attachment A of NOA 2014-0153-DWQ-R5277 (Monitoring Wells B-3, B-5, B-6, B-7, and B-9), and any new groundwater monitoring wells, shall include, at a minimum, the following:

Constituent	**Units**	**Sample Type**	**Sample Frequency**	**Reporting Frequency[3]**
Groundwater Elevation[1]	0.01 Feet	Calculated	Semi-Annually	Annually
Depth to Groundwater	0.01 Feet	Measurement	Semi-Annually	Annually
Gradient	Feet/Feet	Calculated	Semi-Annually	Annually
Gradient Direction	Degrees	Calculated	Semi-Annually	Annually
pH	Std. Units	Grab	Semi-Annually	Annually
Total Dissolved Solids	mg/L	Grab	Semi-Annually	Annually
Electrical Conductivity	µmhos/cm	Grab	Semi-Annually	Annually
Nitrate as Nitrogen (as N)	mg/L	Grab	Semi-Annually	Annually
Total Nitrogen	mg/L	Grab	Semi-Annually	Annually
General Minerals[2]	mg/L	Grab	Semi-Annually	Annually
Sodium	mg/L	Grab	Semi-Annually	Annually
Chloride	mg/L	Grab	Semi-Annually	Annually
Total Coliform Organisms	MPN/100 mL	Grab	Semi-Annually	Annually

MPN/100 mL denotes most probable number per 100 mL sample.
Std. Units denotes standard units.
mg/L denotes milligrams per liter.
1 Groundwater elevation shall be based on depth to water using a surveyed measuring point elevation on the well and a surveyed reference elevation.
2 General minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).
3 Analysis of data by a California licensed professional is required at least annually.

If groundwater monitoring wells are destroyed and/or abandoned due to upgrades at the WWTF, the Discharger shall submit a work plant as required by the NOA. The well(s) shall be destroyed and abandoned following written Executive Officer approval of the work plan.

REPORTING

In reporting monitoring date, 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 discernible. 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 mailed to: centralvalleyfresno@waterboards.ca.gov. 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: 5D160105001, Facility Name: Stratford Public Utility District, Order: 2014-0153-DWQ-R5277.

A. Quarterly Monitoring Reports

Quarterly reports shall be submitted to the Central Valley 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 1st). The reports shall bear the certification and signature of the Discharger's authorized representative. At a 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. If requested by staff, copies of laboratory analytical report(s) and chain of custody form(s).

B. Annual Report

Annual Reports shall be submitted to the Central Valley 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 facility, including discussion of capacity issues, nuisance conditions, system problems, and a forecast of the flows anticipated in the next year. A flow rate evaluation as described in General Order (Provision E.2.c) shall also be submitted.

3. If requested by staff, copies of laboratory analytical report(s) and chain of custody form(s).

4. 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.

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

6. The name and contact information for the wastewater operator responsible for operation, maintenance, and system monitoring.

7. A discussion/update on the implementation of the Salt and Nutrient Management Plan and the progress in reduction/minimization of salinity and nitrate in the Facility's discharge.

8. 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 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 the 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 rescission of Order 82-068.

Ordered by: Clay L. Rodgers
for PATRICK PULUPA, Executive Officer

7/30/2018
(Date)

Central Valley Regional Water Quality Control Board

TO: Scott J. Hatton
Supervising Engineer
RCE No. 67889

FROM: Alexander S. Mushegan
Senior Engineer
RCE No. 84208

Denise Soria
Staff Engineer

DATE: 30 July 2018

SUBJECT: **APPLICABILITY FOR COVERAGE UNDER STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2014-0153-DWQ, GENERAL WASTE DISCHARGE REQUIREMENTS FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS, STRATFORD PUBLIC UTILITY DISTRICT, WASTEWATER TREATMENT FACILITY, KINGS COUNTY**

Waste Discharge Requirements (WDRs) 82-068 regulates the discharge of the Stratford Public Utility District (District) wastewater treatment facility (WWTF) for a flow of up to 0.15 million gallons per day (mgd) to 20 acres of evaporation/percolation ponds.

The existing WWTF consists of three aeration tanks (no longer in use), one secondary clarifier, and 20 acres of evaporation/percolation ponds. In the late 1980's the District abandoned the treatment plant and converted one of the evaporation/percolation ponds into an aeration pond. According to the Chief Plant Operator at the WWTF, the two aerators in the aeration pond have not been working for several years. The WWTF is in need of major improvements. The internal levees at the WWTF have been breached and repairs are not possible because the ponds are consistently full. The current conditions of the WWTF do not allow proper management of the evaporation/percolation ponds.

On 25 October 2016, the District submitted a Report of Waste Discharge (RWD) for proposed upgrades to the WWTF. The RWD included a Form 200 and a technical report signed and stamped by James H. Wegley (RCE 24383) with Dennis R. Keller/James H. Wegley Consulting Engineers.

WDRs Order 82-068 needs to be updated to ensure the discharge is consistent with Central Valley Water Board plans and policies. WDRs Order 82-068 will be rescinded and replaced with enrollment of the discharge 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 proposed upgrades to the WWTF include a new headworks, four facultative ponds, two storage ponds, and five evaporation/percolation ponds.

Monthly flows at the WWTF range from 10,000 gallons per day (gpd) to 123,000 gpd and average about 60,000 gpd according to 2015 through 2017 Self-Monitoring Reports. Monthly flows at the WWTF are tabulated in Table 1.

Table 1. Wastewater Flows

		2015			2016			2017		
Month	Units	Min	Max	Ave	Min	Max	Ave	Min	Max	Ave
January	gpd	46,000	86,000	62,484	52,000	84,000	63,226	46,000	85,000	63,226
February	gpd	41,000	82,000	61,107	47,000	80,000	64,276	47,000	90,000	65,250
March	gpd	11,000	93,000	60,387	35,000	91,000	64,871	41,000	86,000	64,935
April	gpd	52,000	83,000	64,000	51,000	77,000	66,033	43,000	89,000	64,467
May	gpd	10,000	106,000	61,903	30,000	79,000	66,000	49,000	76,000	63,935
June	gpd	54,000	83,000	63,267	53,000	92,000	67,700	45,000	111,000	70,333
July	gpd	51,000	83,000	64,387	52,000	84,000	70,774	50,000	79,000	64,419
August	gpd	52,000	88,000	65,129	56,000	91,000	72,419	48,000	86,000	64,613
September	gpd	54,000	79,000	67,933	34,000	86,000	68,400	49,000	97,000	71,600
October	gpd	57,000	72,000	62,806	26,000	87,000	63,677	24,000	123,000	69,710
November	gpd	39,000	85,000	64,200	46,000	93,000	65,733	55,000	81000	67,400
December	gpd	52,000	75,000	62,484	44,000	78,000	59,742	17,000	104,000	63,097

Starting in July 2013, the District began special influent and effluent monitoring (collected at the southeast corner of evaporation/percolation Pond 6) at the WWTF for one year to characterize the wastewater. Collected data are tabulated in Table 2 and Table 3.

Table 2. Influent Wastewater Data

Date	EC umhos/cm	BOD mg/L	TKN mg/L	TN mg/L	TSS mg/L
7/19/2013	2,131	150	44	44	90
7/26/2013	2,189	150	43	43	73
8/7/2013	2,887	190	49	49	100
8/23/2013	2,061	200	46	46	110
9/20/2013	2,095	180	47	47	140
10/30/2013	2,459	200	---	---	110
11/25/2013	2,215	240	5	5	110
12/27/2013	2,395	300	---	---	270
1/29/2014	2,378	150	---	---	100
2/28/2014	2,466	520	---	---	1,100
3/20/2014	2,215	200	66	66	140
4/23/2014	---	230	---	---	280
5/21/2014	---	200	---	---	390
6/26/2014	2,238	160	57	57	180
Average	2,311	219	45	45	228

Table 3. Effluent Wastewater Data

Date	EC umhos/cm	BOD mg/L	TKN mg/L	TN mg/L	TSS mg/L
7/19/2013	7,041	120	33	33	250
7/26/2013	7,240	67	27	27	230
8/7/2013	7,405	63	20	20	99
8/23/2013	7,879	83	30	30	120
9/20/2013	8,401	---	---	---	---
10/30/2013	7,821	---	---	---	---
11/25/2013	7,453	---	---	---	---
12/27/2013	6,725	---	---	---	---
1/29/2014	6,325	---	---	---	---
2/28/2014	5,712	---	---	---	---
3/20/2014	5,604	21	13	13	92
4/23/2014	---	---	---	---	---
5/21/2014	---	---	---	---	---
6/26/2014	6,935	62	67	67	160
Average	7,045	69	32	32	160

POTENTIAL THREAT TO WATER QUALITY

In 2014, the District installed five temporary groundwater monitoring wells (B-3, B-5, B-6, B-7, B-9) at the WWTF (see Attachment A). Groundwater below the WWTF ranges from 6.29 to 8.09 feet below ground surface (bgs) based on the temporary groundwater monitoring wells. Groundwater roughly flows in the southeast direction.

In 2015, the newly installed groundwater monitoring wells were sampled for pH and EC. Analytical data is shown in Table 4. The District has not continued to monitor the groundwater monitoring wells due to the expense of sampling.

Table 4. Groundwater Quality from Wells at the WWTF

Date	B-3[2]		B-5[2]		B-6[2]		B-7[1]		B9[1]	
	pH pH Units	EC umhos/cm	pH pH Units	EC umhos/cm	pH pH Units	EC umhos/cm	pH pH Units	EC umhos/cm	pH pH Units	EC umhos/cm
1/22/2015	6.18	2,135	7.49	9,521	7.23	5,067	7.05	3,489	7.29	3,678
5/6/2015	5.87	2,078	7.51	9,751	6.82	4,976	7.25	3,512	7.37	3,393
6/15/2015	7.45	29,690	7.73	13,120	7.99	5,210	9.12	3,466	8.69	3,769
9/11/2015	6.02	>21,000	6.54	18,860	6.85	5,103	7.81	4,996	7.63	4,097

1 Upgradient
2 Downgradient

The groundwater data above demonstrates that underlying groundwater is of poor quality with EC ranging from 2,078 umhos/cm to 29,690 umhos/cm.

The Corcoran Clay layer is found below the domestic WWTF at a depth ranging from 550 to 600 feet bgs in section 17 of Township 20 South, Range 20 East, MDB&M according to the *Depth to Top of Corcoran Clay* map published by the Department of Water Resources in 1981.

Historical groundwater data from wells within a four-mile radius from the WWTF are shown in Table 5. Groundwater data was obtained from the United States Geological Survey National Water Information System: Mapper and US Geological Survey, Open-File Report 94-334, *Water-Quality, Lithologic, and Water-Level Data for Wells in Tulare Basin, Kings, Kern, and Tulare Counties, California, August 1990 to February 1993*.

Table 5. Groundwater Quality from Nearby Wells

Well Number	Well Depth (feet bgs)	Date Sampled	EC (umhos/cm)	Nitrate as N (mg/L)	Sodium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Magnesium (mg/L)	Manganese (ug/L)
20S20E15M002M[1]	17.7	5/25/1989	9,740	3.68	2,000	95	710	280	640
Drain 20S20E15-1M[1]	---	7/26/1984	9,270	---	1,900	190	---	250	150
	---	12/5/1984	7,090	6.49	1,400	110	580	150	70
20S20E09N001M[1]	16.8	6/1/1989	12,900	0.79	2,600	360	400	630	3,100
20S20E10D001M[1]	15.35	6/7/1989	16,000	4.88	3,900	250	1,900	380	1,600
19S20E29E001M[2]	20	8/9/1990	21,500	12.92	5,200	350	840	510	880
19S20E29E002M[2]	60	8/30/1990	41,700	<0.10	12,000	360	2,000	1,100	2,900
19S20E29E003M[2]	85	8/9/1990	39,000	<0.10	12,000	390	1,800	820	1,200

1 United States Geological Survey National Water Information System: Mapper
2 US Geological Survey, Open-File Report 94-334, *Water-Quality, Lithologic, and Water-Level Data for Wells in Tulare Basin, Kings, Kern, and Tulare Counties, California, August 1990 to February 1993*.

The groundwater data above demonstrates that underlying groundwater is of poor quality with EC ranging from 7,090 umhos/cm to 41,700 umhos/cm. For nitrogen, underlying groundwater appears to be of good quality. The WWTF falls outside of the de-designated boundary of the Tulare Lake Basin Plan Amendment to remove the municipal and domestic supply beneficial use from groundwater. According to the RWD, there are about 28 domestic wells within 16 square miles from the WWTF. According to the Discharger's consultant, Keller/Wegley Engineering, there are approximately nine domestic wells in a five-square mile area with perforations ranging from 200 to 500 feet downgradient of the Facility (assuming 45° projections and excluding the municipal and domestic supply beneficial use de-designated area).

NITROGEN LIMIT EVALUATION

Attachment 1 of the General Order includes five site-specific considerations that shall be considered when evaluating a discharge and the need for nitrogen control. These five site-specific considerations include: flow, groundwater depth, percolation rate, wastewater strength, and if nitrogen is of concern in the area. The proposed flow is greater than 20,000 gpd and, therefore, a nitrogen effluent limit evaluation is required for the Facility.

The effluent total nitrogen concentrations at the WWTF range from 13 to 67 mg/L. These concentrations are generally consistent for typical domestic wastewater, as presented in Finding 8 of the General Order. The October 2016 RWD did not provide a summary of the groundwater quality for nitrogen nor does it provide an evaluation of the WWTF's impacts on groundwater in regards to nitrogen. In addition, the Discharger does not propose to reclaim any of its treated wastewater. All treated wastewater is discharged to evaporation/percolation ponds. Based on the limited information available for the WWTF, the Discharger will be required to submit a Salt and Nutrient Management Plan evaluating its discharge and the potential impacts of nitrogen to groundwater.

WATER QUALITY CONTROL PLAN REQUIREMENTS
The *Water Quality Control Plan for the Tulare Lake Basin*, Second Edition, revised July 2016 (Basin Plan) establishes effluent limitations for discharges of domestic wastewater to land. For advance primary treatment, the Basin Plan requires 60 to 70 percent removal or reduction to 70 mg/L, whichever is more restrictive of both BOD and suspended solids.

General Order, Finding 6 states in part:

> [The] General Order requires Discharger 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 BOD effluent limitation in the Basin Plan of 70 mg/L is more restrictive than the BOD effluent limitation specified in the General Order of 90 mg/L for a wastewater pond system.

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

- Pond System Monitoring;
- Solids Disposal Monitoring; and
- Groundwater Monitoring

COMMENTS
The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting. These programs, once effective, could change how the Central Valley Water Board permits discharges of salt and nitrate.