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WASTE DISCHARGE REQUIREMENTS ORDER R5-2020-0008 and Monitoring and Reporting Program

ORDER INFORMATION

Program:	Non-15
Order Type(s):	Waste Discharge Requirements (WDRs) and Monitoring and Reporting Program (MRP)
Status:	Tentative
Discharger:	City of Biggs
Facility:	City of Biggs Wastewater Treatment Facility
Address:	2865 West Biggs Gridley Road
County:	Butte County
Prior Order(s):	Order No. R5-2012-0083 (NPDES Order CA0078930)

I, Patrick Pulupa, Executive Officer, hereby certify that the following is a full, true, and correct copy of the orders adopted by the California Regional Water Quality Control Board, Central Valley Region, on 20 February 2020

Patrick Pulupa,
Executive Officer

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GLOSSARY OF COMMON ABBREVIATIONS, ACRONYMS & TERMS

Antidegradation Policy ... *Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Water Board Resolution 68-16

Basin Plan ..... Water Quality Control Plan for Sacramento and San Joaquin River Basins

bgs ..... Below Ground Surface

BOD ..... Biological Oxygen Demand

BPTC ..... Best Practicable Treatment and Control

CEQA ..... California Environmental Quality Act, Public Resources Code section 21000 et seq.

CEQA Guidelines ..... California Code of Regulations, Title 14, section 15000 et seq.

C.F.R. ..... Code of Federal Regulations

COC[s] ..... Constituent[s] of Concern

DO ..... Dissolved Oxygen

DTSC ..... California Department of Toxic Substances Control

DWR ..... California Department of Water Resources

EC ..... Electrical Conductivity

EIR ..... Environmental Impact Report

FDS ..... Fixed Dissolved Solids

FEMA ..... Federal Emergency Management Agency

LAA ..... Land Application Area

lbs/ac/yr ..... Pounds per Acre per Year

µg/L ..... Micrograms per Liter

µmhos/cm ..... Micromhos per Centimeter

GLOSSARY

MG[D] ..... Million Gallons [per Day]

mg/L..... Milligrams per Liter

msl..... Mean Sea Level

MRP ..... Monitoring and Reporting Program

MW..... Monitoring Well

MCL ..... Maximum Contaminant Level per Title 22

ORP ..... Oxygen Reduction Potential

N..... Nitrogen

ND..... Non-Detect

NE..... Not Established

NM..... Not Monitored

R[O]WD ..... Report of Waste Discharge

RCRA..... Resource Conservation and Recovery Act

SPRRs ..... Standard Provisions and Reporting Requirements

SERC ..... State Emergency Response Commission

TDS..... Total Dissolved Solids

Title 22..... California Code of Regulations, Title 22

Title 23..... California Code of Regulations, Title 23

Title 27..... California Code of Regulations, Title 27

TKN..... Total Kjeldahl Nitrogen

TSO..... Time Schedule Order

Unified Guidance..... *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (USEPA, 2009)

GLOSSARY

USEPA.....United States Environmental Protection Agency

VOC[s].....Volatile Organic Compound[s]

WDRs.....Waste Discharge Requirements

WQO[s].....Water Quality Objective[s]

FINDINGS

The California Regional Water Quality Control Board, Central Valley (Central Valley Water Board) hereby finds as follows:

Introduction

1. City of Biggs (Discharger) owns and operates the Biggs Wastewater Treatment Facility (Facility) located at 2865 West Biggs Gridley Road, which is approximately 1/2 mile southwest of Biggs in Butte County, Section 14, T18N, R2E, Mount Diablo Base and Meridian (MDB&M). The Facility's location is depicted on the Site Location Map in **Attachment A**.

2. The Facility is comprised of the following Assessor Parcel Numbers (APN):

Table 1—Facility Parcels

APN(s)	Landowner
022-160-060	City of Biggs
022-140-010	City of Biggs

3. As Facility's owner and operator, the Discharger is responsible for compliance with the Waste Discharge Requirements (WDRs) prescribed in this Order.

4. The following materials are attached to this Order and incorporated herein:

   a. Attachment A—Site Location Map

   b. Attachment B—Site Map

   c. Standard Provisions and Reporting Requirements

   d. Information Sheet

5. Also attached is **Monitoring and Reporting Program R5-2020-0008**, which establishes a Monitoring and Reporting Program (MRP) for discharges regulated under the WDRs prescribed herein. Compliance with the MRP and subsequent revisions thereto.

6. Any additional information set forth in the attached **Information Sheet** is also incorporated herein.

7. On 8 March 2019, the Discharger submitted a Report of Waste Discharge (ROWD) to apply for Waste Discharge Requirements (WDRs) for an existing publicly owned wastewater treatment facility.

Background

8. WDRs Order R5-2012-0083 (NPDES Order CA0078930), adopted by the Central Valley Water Board on 4 October 2012, prescribes requirements for surface water discharges from the Facility. Based upon effluent monitoring, the Discharger is unable to consistently comply with effluent limitations for ammonia, as a result the Central Valley Water Board adopted Time Schedule Order (TSO) R5-2012-0084, which allowed five years to come into compliance. The Discharger decided that discharging to land would be the most viable option for the Facility. The Facility was unable to come into compliance with TSO R5-2012-0084 in 2017 but had made significant efforts to convert the method of disposal from surface water to land, therefore TSO R5-2017-0092 was adopted. TSO R5-2017-0092 gave the Discharger until 30 November 2019 to achieve compliance with effluent limitations or begin discharging to land; the Discharger was granted an extension of the TSO for an additional year. The Facility will be discharging secondary treated effluent to a city owned land application area (LAA).

9. The Facility has a dry weather design flow of 0.38 million gallons per day (MGD) and peak wet weather design flow of 1.0 MGD; past monitoring indicates an average daily flow of 0.19 MGD from 2014-2018.

10. The Facility serves approximately 600-700 households and a small commercial center that includes a grocery store, gas station, and bar.

Facility Description

11. The treatment system consists of headworks, two native clay lined aerated lagoons configured in series, a ballast/polishing pond, three horizontal flow rock filters configured in parallel, a chlorine disinfection injection system, two storage ponds, and LAA.

12. Headworks is located approximately 0.3-miles east of the Facility at the City of Biggs Corp Yard and is equipped with a spiral screen, three pumps, a wet well, and gas-powered backup pump.

13. As part of the conversion from surface water discharge to land application, the Discharger acquired land adjacent to the Facility and has constructed two storage ponds and a 103-acre LAA. The LAA is equipped with berms and tailwater return system that captures any runoff and returns it to the effluent storage ponds.

14. Rotational fodder crops will be grown in the LAA. Crops will be either bailed and transported off site for beef cattle feed or used as irrigated pasture for beef cattle grazing. The LAA is separated into six check basins.

15. Table 2 and 3 below show effluent and influent monitoring results from 2014-2018:

Table 2—Effluent Constituents from 2014-2018

Constituent	Units	Average	Count
Five Day Biochemical Oxygen Demand	milligrams per liter	16.6	103
Total Suspended Solids	milligrams per liter	9.3	99
Nitrate as Nitrogen	milligrams per liter	0.37	45
Ammonia as Nitrogen	milligrams per liter	11.7	516
Electrical Conductivity	micromhos per centimeter	801	59
pH	standard units	7.29	259

Table 3— Influent Constituents from 2014-2018

Constituent	Units	Average	Count
Five Day Biochemical Oxygen Demand	milligrams per liter	128	260
Total Suspended Solids	milligrams per liter	126	254
pH	standard units	7	260

Site Specific Conditions

16. The Facility is approximately 90-feet above mean sea level. Surface topography is relatively flat. Surface water discharges to agricultural drains Hamilton Slough and Lateral K, which discharge to Butte Creek, a tributary of the Sacramento River.

17. The Federal Emergency Management Area designates the location of the Facility and LAA as flood zone x, which indicates that the Facility and LAA are outside the 500-year floodplain with minimal risk of flooding.

18. The Facility is in a Mediterranean climate characterized by dry summers and wet winters; the rainy season is typically from November through April. Average annual pan evaporation is 67.19 inches in Chico, which is located approximately 25-miles north of the Facility, according to data in the *Technical Report NWS 34, Mean Monthly, Seasonal, and Annual Pan Evaporation for the United States,* which was published by the United States Department of Commerce, National Oceanic and Atmospheric Administration. The average annual precipitation in Biggs is 22.54 inches and the 100-year annual precipitation is 47.49 inches.

19. Land uses in the area is agricultural, predominately rice crops according to the Department of Water Resources online land use viewer.

20. Soils underlying the Facility and approximately half of the LAA are classified as Esquon-Neerdobe, which is poorly drained with high runoff. The remaining soils in the LAA are classified as Boga-Loemstone and Neerdobe clay loam; Boga Loemstone is moderately well drained with medium runoff and Neerdobe clay loam is poorly drained with very high runoff according to the United States Department of Agriculture’s Natural Resources Conservation web soil survey.

Groundwater Conditions

21. Groundwater at the site is approximately 7-11 feet below ground surface (BGS) and flows towards the southwest with a relatively flat gradient. The LAA and Facility are surrounded by agricultural drainages with the potential to change regional shallow groundwater hydrology.

22. The City of Biggs municipal water source comes from two groundwater supply wells. Table 4 below shows constituent monitoring of the municipal water supply from 2014-2018:

Table 4— Average Municipal Water Supply Monitoring Results from 2014-2018

Constituent	Units	Average	Count
Electrical Conductivity	micromhos per centimeter	307	5
Total Dissolved Solids	milligrams per liter	207	5
Manganese	micrograms per liter	0.47	5

23. In 2015, the Discharger installed a groundwater monitoring well network with six monitoring wells. The Facility has one upgradient and one downgradient monitoring well, and the LAA has one upgradient, one cross gradient, and two downgradient monitoring wells. The Discharger has performed 15 groundwater sampling events since the installation of the monitoring wells, the results from 15 sampling events are summarized in table 5 below:

Table 5— Average Groundwater Monitoring Results From 2015-2019

Constituent (Units)	Units	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6
Electrical Conductivity	micromhos per centimeter	313.1	535.1	809.9	873.9	438.7	665.9
Total Dissolved Solids	milligrams per liter	194.0	325.3	505.3	510.7	274.0	400.0

Constituent (Units)	Units	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6
Nitrate as Nitrogen	milligrams per liter	1.0	0.8	0.1	0.7	0.4	0.4
pH	standard units	7.3	7.4	7.4	7.2	7.8	7.5
Manganese-Dissolved	micrograms per liter	3.3	32	34	29	13.8	33
Arsenic-Dissolved	micrograms per liter	7	5	6	5	9	7

Legal Authorities

24. This Order is adopted pursuant to Water Code section 13263, subdivision (a), which provides in pertinent part as follows:

> The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change in an existing discharge…, with relation to the conditions existing in the disposal area or receiving waters upon, or into which, the discharge is made or proposed. The requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241.

25. Compliance with section 13263, subdivision (a), including implementation of applicable water quality control plans, is discussed in the findings below.

26. The ability to discharge waste is a privilege, not a right, and adoption of this Order shall not be construed as creating a vested right to continue discharging waste. (Wat. Code, § 13263, subd. (g).)

27. This Order and its associated Monitoring and Reporting Program (MRP) are also adopted pursuant to Water Code section 13267, subdivision (b)(1), which provides as follows:

> 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 … 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.

28. The reports required under this Order, as well as under the separately issued MRP, are necessary to verify and ensure compliance with WDRs. The burden associated with such reports is reasonable relative to the need for their submission.

Basin Plan Implementation

29. Pursuant to Water Code section 13263, subdivision (a), WDRs must "implement any relevant water quality control plans…, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241."

30. This Order implements the Central Valley Water Board's *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition, revised May 2018* (Basin Plan), which designates beneficial uses for surface water and groundwater and establishes water quality objectives (WQOs) necessary to preserve such beneficial uses. (See Wat. Code, § 13241 et seq.)

31. Local drainage is to Butte Creek, a tributary of the Sacramento River, the beneficial uses as set forth in the Basin Plan include: agricultural supply (AGR); water contact recreation (REC-1); warm freshwater habitat (WARM); cold freshwater habitat (COLD); wildlife habitat (WILD); migration of aquatic organisms (MIGR); and spawning, reproduction and/or early development (SPAWN).

32. As set forth in the Basin Plan, beneficial uses of underlying groundwater at the Facility are municipal and domestic supply (MUN); agricultural supply (AGR); industrial service supply (IND); and industrial process supply (PRO).

33. The Basin Plan establishes narrative water quality objectives for chemical constituents, tastes and odors, and toxicity in groundwater. It also sets forth a numeric objective for total coliform organisms.

34. The Basin Plan's numeric water quality objective for bacteria requires that the most probable number (MPN) of coliform organisms over any seven-day period shall be less than 2.2 per 100 mL in MUN groundwater.

35. The Basin Plan's narrative water quality objectives for chemical constituents, at a minimum, require waters designated as domestic or municipal supply to meet the MCLs specified in Title 22 of the California Code of Regulations (hereafter Title 22). The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

36. The narrative toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, animal, plant, or aquatic life associated with designated beneficial uses.

37. Quantifying a narrative water quality objective requires a site-specific evaluation of those constituents that have the potential to impact water quality and beneficial uses. The Basin Plan states that when compliance with a narrative objective is required to protect specific beneficial uses, the Central Valley Water Board will, on a case-by-case basis, adopt numerical limitations in order to implement the narrative objective.

Salt and Nitrate Control Programs Reopener

38. The Central Valley Water Board adopted Basin Plan amendments incorporating new strategies for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting as part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative. The Basin Plan Amendments were conditionally approved by the State Water Board on 16 October 2019 and the Office of Administrative Law on 15 January 2020.

39. For nitrate, dischargers that are unable to comply with stringent nitrate requirements will be required to take on alternate compliance approaches that involve providing replacement drinking water to persons whose drinking water is affected by nitrates. Dischargers could comply with the new nitrate program

either individually or collectively with other dischargers. For salinity, dischargers that are unable to comply with stringent salinity requirements would instead need to meet performance-based requirements and participate in a basin-wide effort to develop a long-term salinity strategy for the Central Valley. As these strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of these WDRs to ensure the goals of the Salt and Nitrate Control Programs are met.

Compliance with Antidegradation Policy

40. The *Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Water Board Resolution 68-16 (*Antidegradation Policy*) prohibits the Central Valley Water Board from authorizing degradation of "high quality waters" unless it is shown that such degradation: (1) will be consistent with the maximum benefit to the people of California; (2) will not unreasonably affect beneficial uses, or otherwise result in water quality less than as prescribed in applicable policies; and (3) is minimized through the discharger's best practicable treatment or control (BPTC).

41. Groundwater quality monitoring at the Facility dates to 2015. Given the unavailability of pre-1968[1] water quality information, compliance with the Antidegradation Policy will determined based on existing background water quality (Antidegradation Baseline).

42. Constituents of concern (COCs) that have the potential to degrade groundwater include total dissolved solids, electrical conductivity, manganese, and arsenic, as discussed below and in Table 6:

[1] The *Antidegradation Policy* was adopted by the State Water Board in 1968.

Table 6—Average Concentrations for Constituents with a Potential for Degradation (2014-2019; 15 Sampling Events)

Constituent	Units	MW-1 Upgradient LAA	MW-2 Cross Gradient LAA	MW-3 Upgradient Facility	MW-4 Downgradient Facility	MW-5 Downgradient LAA and Storage Ponds	MW-6 Downgradient LAA
Total Dissolved Solids	milligrams per liter	194	325.3	505.3	510.7	274.0	400.0
Electrical Conductivity	micromhos per centimeter	313.1	535.1	809.9	873.9	438.7	665.9
Manganese	micrograms per liter	3.3	32	34	29	13.8	33
Arsenic	micrograms per liter	7	5	6	5	9	7

a. **Total Dissolved Solids (TDS).** Monitoring wells MW-3 and MW-4 reported exceedances of the MCL for TDS with maximum concentrations that range from 500 mg/L to 550 mg/L.

b. **Electrical Conductivity (EC).** No monitoring wells except reported exceedances of the MCL for EC.

c. **Manganese.** Exceedances of the MCL for manganese has been reported in monitoring wells MW-2, MW-3, and MW-4 with maximum concentrations that range from 53 ug/L to 307 ug/L. Rice farming is the predominate crop grown in the area and can cause reducing conditions in the shallow aquifer which can cause elevated levels of manganese in groundwater.

d. **Arsenic.** Exceedances of the MCL for arsenic has been reported in monitoring wells MW-5 and MW-6, with maximum concentrations that range from 10 ug/L to 12 ug/L. Both monitoring wells are located downgradient of the land application area indicating that this is not a condition due to discharge based on predischarge monitoring. Arsenic in groundwater is likely to be a regional occurrence.

43. This Order prescribes Effluent Limitations and Groundwater Limitations to ensure that Facility discharges will not threaten the present and anticipated beneficial uses of surface water and groundwater or result in water quality less than applicable WQOs.

44. This Order will not result in water quality less than established WQOs, with the following consideration:

a. With respect to TDS, EC, manganese, and arsenic, the existing discharge does not threaten to degrade water quality relative to the Antidegradation Baseline.

Compliance with CEQA

45. In accordance with the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq., on 14 January 2014, the City of Biggs certified a final Environmental Impact Report (EIR) in connection with its wastewater treatment plant enhancement project, the “project” includes the following pertinent elements:

a. Purchase of 160-acres of farmland; 37-acres will be used for two effluent storage ponds, 12-acres encompass existing facilities, and the remaining acreage will be used for land disposal of secondary treated effluent;

b. A pipeline was constructed under Hamilton Slough to convey wastewater treatment plant effluent to the storage ponds and LAA; and

c. The LAA includes a tailwater return system to ensure wastewater remains within the treatment and disposal system.

46. The Central Valley Water Board was consulted with in the development of the EIR, and the discharges and other activities authorized under this Order fall within the scope of the project as contemplated in the EIR. Additionally, there are no substantial changes to either the proposed project or the attendant circumstances under which it will be undertaken, and no new information requiring revision of the Environmental Impact Report (EIR). The Environmental Impact Report (EIR) is therefore conclusively presumed compliant with CEQA for use by the Central Valley Water Board as a "responsible agency" under CEQA. Accordingly, no further environmental review is required under CEQA. (See Cal. Code Regs., tit. 14, § 15162.)

47. This Order implements all applicable mitigation and monitoring measures specified in the EIR.

Other Regulatory Considerations

48. Pursuant to Water Code section 106.3, subdivision (a), it is "the established policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." Although this Order is not subject to Water Code section 106.3, as it does not revise, adopt or establish a policy, regulation or grant criterion, (see § 106.3, subd. (b)), it nevertheless promotes the policy by requiring discharges to meet maximum contaminant levels (MCLs) for drinking water, which are designed to protect human health and ensure that water is safe for domestic use.

49. For the purposes of California Code of Regulations, title 23 (Title 23), section 2200, the Facility has a threat-complexity rating of 2-B, where:

a. Threat Category "2" reflects waste discharges that can impair receiving water beneficial uses, cause short-term water quality objective violations,

cause secondary drinking water standard violations, and cause nuisances; and

b. Complexity Category "B" reflects any discharger not included in Category A, with either (1) physical, chemical or biological treatment systems (except for septic systems with subsurface disposal), or (2) any Class II or Class III WMUs.

50. This Order, which prescribes WDRs for discharges of wastewater, is exempt from the prescriptive requirements of California Code of Regulations, title 27, section 20005 et seq. (See Cal. Code Regs., tit. 27, § 20090, subd. (b).)

51. Statistical data analysis methods outlined in the USEPA's 2009 *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (*Unified Guidance*) are appropriate for determining compliance with Groundwater Limitations of this Order. Other methods may be appropriate as well.

52. This Order does not cover stormwater and other discharges that are subject to the Clean Water Act's National Pollution Discharge Elimination System (NPDES). With respect to stormwater, the Facility is currently covered under the statewide General Permit for Storm Water Discharges Associated with Industrial Activities, State Water Board Order 2014-0057-DWQ, NPDES General Permit CAS000001 (Industrial General Permit).

53. The Facility is subject to the statewide General Waste Discharge Requirements for Sanitary Sewer Systems, State Water Board Order 2006-0003-DWQ (SSO General Order), which requires that all public agencies owning or operating sanitary sewer systems with total system lengths in excess of one mile.

54. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 74-81* (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.

Scope of Order

55. This Order is strictly limited in scope to those waste discharges, activities and processes described and expressly authorized herein.

56. Pursuant to Water Code section 13264, subdivision (a), the Discharger is prohibited from initiating the discharge of new wastes (i.e., other than those described herein), or making material changes to the character, volume and timing of waste discharges authorized herein, without filing a new Report of Waste Discharge (ROWD) per Water Code section 13260.

57. Failure to file a new ROWD before initiating material changes to the character, volume or timing of discharges authorized herein, shall constitute an independent violation of these WDRs.

58. This Order is also strictly limited in applicability to those individuals and/or entities specifically designated herein as "Discharger," subject only to the discretion to designate or substitute new parties in accordance with this Order.

Procedural Matters

59. All the above information, as well as the information contained in the attached **Information Sheet** (incorporated herein), was considered by the Central Valley Water Board in prescribing the WDRs set forth below.

60. The Discharger, interested agencies and other interested persons were notified of the Central Valley Water Board's intent to prescribe the WDRs in this Order, and provided an opportunity to submit their written views and recommendations at a public hearing. (Wat. Code, § 13167.5.)

61. At a public meeting, the Central Valley Water Board heard and considered all comments pertaining to the discharges regulated under this Order.

62. The Central Valley Water Board will review and revise the WDRs in this Order as necessary.

Requirements

IT IS HEREBY ORDERED, pursuant to Water Code sections 13263 and 13267 that the Discharger shall comply with the following.

A. Discharge Prohibitions

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

2. Discharge of waste classified as 'hazardous', as defined in the California Code of Regulations, title 22, section 66261.1 et seq, is prohibited.

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

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

5. The Discharger shall not allow toxic substances to be discharged into the wastewater treatment system such that biological treatment mechanisms are disrupted.

B. Flow Limitations

Table 7—Flow Limitations

Flow Measurement	Flow Limit
Average Dry Weather Daily Flow	0.38 million gallons per day
Peak Wet Weather Daily Flow	million gallons per day

C. Effluent Limitations

Table 8—Effluent Limitations

Constituent	Units	Limit
5-Day Biochemical Oxygen Demand	milligram per liter	30 (30-Day Average) 45 (7-Day Average)
Total Suspended Solids	milligram per liter	30 (30-Day Average) 45 (7-Day Average)
Total Nitrogen	milligram per liter	50% Reduction calculated monthly from influent and effluent samples

D. Discharge Specifications

1. No waste constituent shall be released, discharged, or placed where it will cause a violation of the Groundwater Limitations of this Order.

2. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.

3. The discharge shall always remain within the permitted waste treatment/containment structures and land application areas.

4. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.

5. All conveyance, treatment, storage, and disposal systems shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

6. Public contact with wastewater at the WWTF shall be prevented through such means as fences, signs, or acceptable alternatives.

7. Objectionable odors shall not be perceivable beyond the limits of the WWTF property at an intensity that creates or threatens to create nuisance conditions.

8. As a means of ensuring compliance with Discharge Specification **D.7**, the dissolved oxygen (DO) content in the upper one foot of any of the two wastewater storage ponds shall not be less than 1.0 mg/L for three consecutive sampling events, unless it can be demonstrated to the Central Valley Water Board staff's satisfaction that concentrations less than the 1.0 mg/L concentration will not result in the generation of nuisance odors or vectors. Notwithstanding the DO monitoring frequency specified in the monitoring and reporting program, If DO in any single pond is below 1.0 mg/L for any single sampling event, the Discharger shall implement daily DO monitoring of that pond until the minimum DO concentration is achieved for at least three consecutive days. If DO in any single pond is below 1.0 mg/L for three consecutive days, the Discharger shall report the findings to the Regional Water Board in accordance with General Reporting Requirement B.1 of the Standard Provisions and Reporting Requirements. The written notification shall include a specific plan to resolve the low DO results within 30 days of the first date of violation. DO levels in the three treatment ponds shall be maintained at a level that will not cause nuisance odors or 1.0 mg/L.

9. The Discharger shall design, construct, operate, and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. The operating freeboard in any pond shall never be less than **two** feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.

10. Wastewater treatment, storage, and disposal ponds or structures shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring compliance with all requirements of this Order. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

11. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications E.10.

12. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes.

13. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.

14. Weeds shall be minimized through control of water depth, harvesting, or herbicides.

15. Dead algae, vegetation, and debris shall not accumulate on the water surface.

16. The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.

17. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer.

18. The Discharger shall monitor sludge accumulation in the wastewater treatment/storage ponds at least every five years beginning in 2025 and shall periodically remove sludge as necessary to maintain adequate storage capacity. The Discharger's engineer recommends that a maximum of twenty percent of the estimated volume in the reservoir is sufficient to maintain adequate storage capacity and hydraulic retention time. If the estimated volume of sludge in the reservoir exceeds twenty percent of the permitted reservoir capacity, the Discharger shall complete sludge cleanout within 12 months after the date of the estimate.

E. Groundwater Limitations

1. All compliance monitoring wells, MW-3, MW-4, MW-5, and MW-6, shall not exceed a total coliform organism level of 2.2 most probable number/100 milliliter over any seven-day period.

2. All compliance monitoring wells shall not contain constituents in concentrations statistically greater than current background water quality or that exceed the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations, whichever is greater.

3. All compliance monitoring wells shall not contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

F. Land Application Area Specifications

1. Tailwater runoff and spray of wastewater shall not be discharged outside of the LAAs.

2. Vegetation (which may include fodder crops) shall be grown in the LAA.

3. Land application of wastewater shall be managed to minimize erosion within the LAAs.

4. The LAAs shall be managed to prevent breeding of mosquitoes or other vectors.

5. LAAs shall be designed, maintained, and operated to comply with the following setback requirements:

Table 9— Land Application Area Setback Requirements

Setback Definition	Minimum Irrigation Setback
Edge of use area to property boundary	25-feet
Edge of use area to public road right of way	30-feet
Edge of use area to manmade or natural surface water drainage	25-feet
Edge of use area to domestic water supply well	100-feet

6. Irrigation of the LAAs shall occur only when appropriately trained personnel are on duty.

7. LAAs shall be inspected periodically to determine compliance with the requirements of this Order. If an inspection reveals noncompliance or threat of noncompliance with this Order, the Discharger shall temporarily stop recycled water use immediately and implement corrective actions to ensure compliance with this Order.

8. Spray irrigation with wastewater is prohibited when wind speed (including gusts) exceeds 30 mph.

9. Sprinkler heads shall be designed, operated and maintained to create a minimum amount of mist.

10. Discharge of storm water runoff from the LAAs to off-site land or surface water drainage courses is prohibited.

11. Public contact with wastewater at the LAAs shall be controlled using fences, signs, and other appropriate means.

G. Solids Disposal Specifications

1. Sludge, as used in this document, means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the WWTF. Biosolids refers to sludge that has been treated and tested and shown to be capable of being

beneficially used as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities pursuant to federal and state regulations.

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

3. Any handling and storage of residual sludge, solid waste, and biosolids at the WWTF shall be temporary (i.e., no longer than six months) and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate the groundwater limitations of this Order.

4. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27, division 2. Removal for further treatment, disposal, or reuse at disposal sites (i.e., landfills, WWTFs, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a Regional Water Board will satisfy this specification.

5. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a regional water board or the State Water Board except in cases where a local (e.g., county) program has been authorized by a regional water board. In most cases, this will mean the General Biosolids Order (State Water Resources Control Board Water Quality Order 2004-0012-DWQ, “General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities”). For a biosolids use project to be covered by Order 2004-0012-DWQ, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.

6. Use and disposal of biosolids shall comply with the self-implementing federal regulations of 40 Code of Federal Regulations part 503, which are subject to enforcement by the U.S. EPA, not the Central Valley Water Board. If during the life of this Order, the State accepts primacy for implementation of part 503, the Central Valley Water Board may also initiate enforcement where appropriate.

7. Any proposed change in sludge use or disposal practice shall be reported in writing to the Executive Officer at least 90 days in advance of the change.

H. Provisions

1. The following reports shall be submitted pursuant to Water Code section 13267 and shall be prepared as described in Provision L.5:

    a. Within six months of the adoption of this Order the Discharger shall submit a *Groundwater Limitations Compliance Assessment Plan*. The Plan shall propose and justify the values to be used to determine "current groundwater quality" (as defined in Groundwater Limitations E.2) for each of the compliance wells listed in the Monitoring and Reporting Program (MRP). In addition, the plan shall propose and justify the statistical methods used to evaluate compliance with the Groundwater Limitation of this Order for the compliance wells and constituents specified in the MRP. Compliance shall be determined using appropriate statistical methods that have been selected based on site-specific information and the U.S. EPA Unified Guidance document cited in Finding 59 of this Order. The report shall explain and justify the selection of the appropriate statistical methods.

2. At least 180 days prior to any sludge removal and disposal, the Discharger shall submit a Sludge Cleanout Plan. The plan shall include a detailed plan for sludge removal, drying, and disposal. The plan shall specifically describe the phasing of the project, measures to be used to control runoff or percolate from the sludge as it is drying, and a schedule that shows how all dried biosolids will be removed from the site prior to the onset of the rainy season (1 October). If the Discharger proposes to land apply biosolids at the effluent recycling site, the report shall include a Report of Waste Discharge and filing fee to apply for separate waste discharge requirements.

3. A discharger whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the discharger shall notify the Central Valley Water Board by 31 January.

4. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and

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

5. The Discharger shall submit the technical reports and work plans required by this Order for consideration by the Executive Officer and incorporate comments the Executive Officer may have in a timely manner, as appropriate. Unless expressly stated otherwise in this Order, the Discharger shall proceed with all work required by the foregoing provisions by the due dates specified.

6. The Discharger shall comply with Monitoring and Reporting Program R5-2020-0008, which is part of this Order, and any revisions thereto as ordered by the Executive Officer. The submittal dates of Discharger self-monitoring reports shall be no later than the submittal date specified in the MRP.

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

8. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, the Discharger shall submit the specified document to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then the Discharger shall state the reasons for such noncompliance and provide an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board in writing when it returns to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.

9. The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by the Discharger when the operation is necessary to achieve compliance with the conditions of this Order.

10. The Discharger shall use the best practicable cost-effective control technique(s) including proper operation and maintenance, to comply with this Order.

11. As described in the Standard Provisions, the Discharger shall report promptly to the Central Valley Water Board any material change or proposed change in the character, location, or volume of the discharge.

12. The Discharger shall comply with the requirements of the Statewide General Waste Discharge Requirements (General WDRs) for Sanitary Sewer Systems (Water Quality Order 2006-0003), the Revised General WDRs Monitoring and Reporting Program (Water Quality Order 2008-0002-EXEC), and any subsequent revisions thereto. Water Quality Order 2006-0003 and Order 2008-0002-EXEC require the Discharger to notify the Central Valley Water Board and take remedial action upon the reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow.

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

14. At least 90 days prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this Order, the Discharger shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.

15. In the event of any change in control or ownership of the WWTF, the Discharger must notify the succeeding owner or operator of the existence

of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

16. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the Water Code. If approved by the Executive Officer, the transfer request will be submitted to the Central Valley Water Board for its consideration of transferring the ownership of this Order at one of its regularly scheduled meetings.

17. A copy of this Order including the MRP, Information Sheet, Attachments, and Standard Provisions, shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.

18. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. The State Water Board must receive the petition by 5:00 p.m. on the 30th day after the date of this Order; if the 30th day 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 are available on the internet:

(https://www.waterboards.ca.gov/public_notices/petitions/water_quality/), and will be provided upon request.

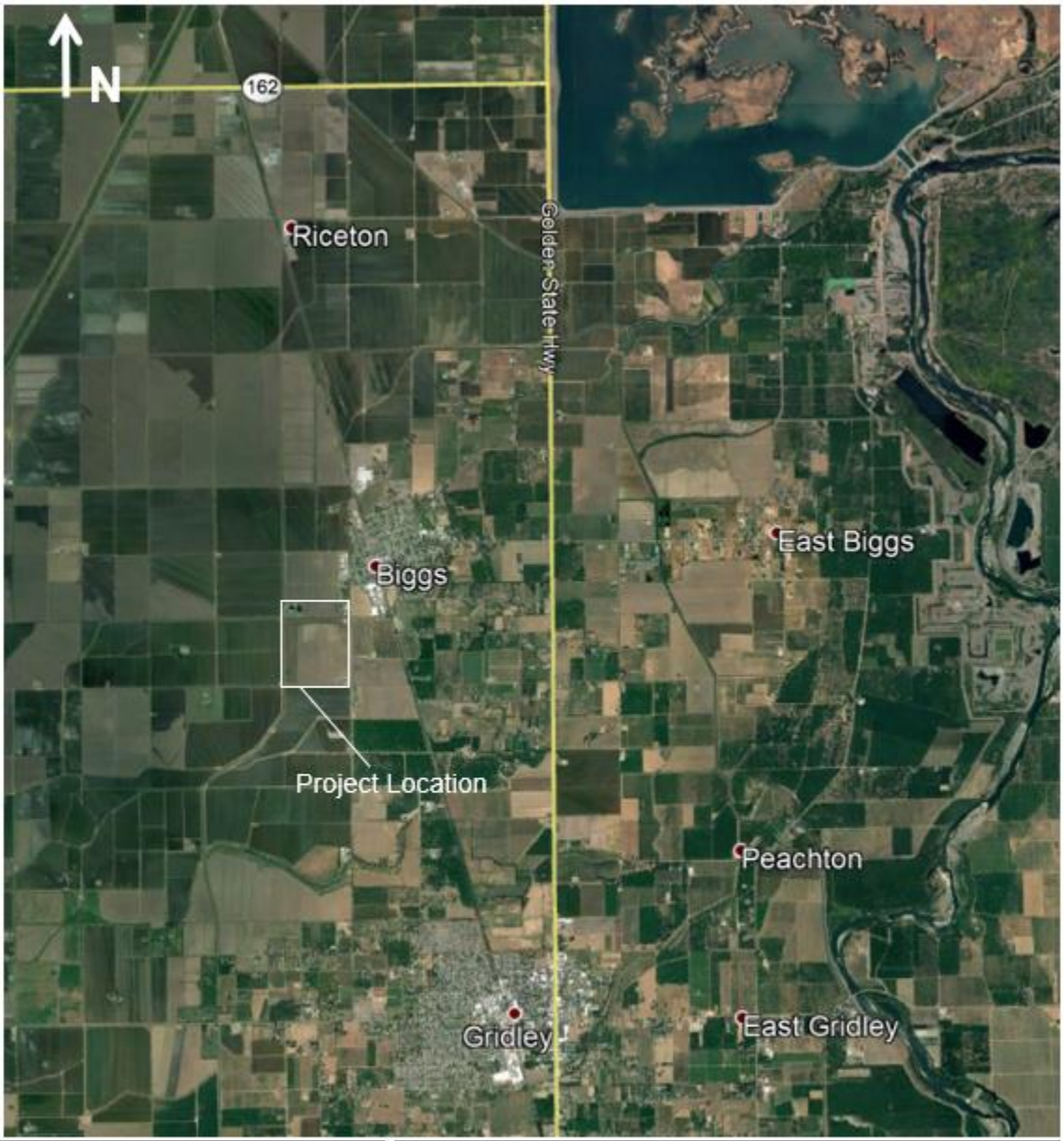
Attachments:

Attachment A—Location Map
Attachment B—Site Map
Information Sheet
Monitoring and Reporting Order
Standard Provisions and Reporting Requirements

ATTACHMENT A—SITE LOCATION MAP

(see map on next page)

ORDER R5-2020-0008 **ATTACHMENT A – SITE LOCATION MAP**



DRAWING REFERENCE: GOOGLE EARTH MAP DATA: © 2018 GOOGLE NO SCALE	SITE LOCATION MAP CITY OF BIGGS WASTEWATER TREATMENT FACILITY BUTTE COUNTY

ATTACHMENT B—FACILITY MAP

(see map on next page)

ORDER R5-2020-0008 **ATTACHMENT B - FACILITY MAP**

DRAWING REFERENCE: GOOGLE EARTH MAP DATA: © 2019 GOOGLE NO SCALE	LOCATION MAP CITY OF BIGGS WASTEWATER TREATMENT FACILITY BUTTE COUNTY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2020-0008

WASTE DISCHARGE REQUIREMENTS
FOR

CITY OF BIGGS
CITY OF BIGGS WASTEWATER TREATMENT FACILITY

BUTTE COUNTY

INFORMATION SHEET

The City of Biggs (Discharger) owns and operates a municipal wastewater treatment facility (Facility). The Facility serves approximately 1,700 residents and a small commercial center that includes a grocery store, gas station, and bar; Sun West Mill is the only industrial user in the city and only discharges domestic wastewater to the Facility. Between 2014-2018 the Facility's average daily flow was 0.19 million gallons per day (mgd). The Facility's current average dry weather flow is 0.38 mgd and peak wet weather flow is 1.0 mgd.

The Facility was previously regulated under Waste Discharge Requirements (WDRs) Order R5-2012-0083 (NPDES No. CA 0078930) which allows discharge to agricultural drain Lateral K, which drains to Butte Creek a tributary of the Sacramento River. The Facility was unable to meet effluent limitations for ammonia, therefore time schedule order (TSO) R5-2012-0084 was issued, which provided a time schedule for meeting effluent limitations for ammonia by 4 October 2017. The discharger implemented a two-phase plan for upgrades to the Facility that would eliminate surface water discharges, which would be redirected to land discharge. The first phase of this plan included the purchase of land for the land application of treated wastewater. The Discharger completed phase one but required additional time to purchase property and complete phase two construction. TSO Order R5-2017-0092 was adopted on 11 August 2017 and gives the Discharger until 30 November 2019 to come into compliance with the current NPDES permit or begin land application of treated effluent. The Discharger received a year extension on TSO Order R5-2017-0092, which now expires on 30 November 2020.

Wastewater Disposal

The treatment system consists of two clay-lined aerated lagoons configured in series, a ballast/polishing pond, three horizontal flow rock filters configured in parallel, a chlorine contact basin, and a dechlorination basin. As the Facility transitions from surface water discharge to land discharge, the chlorine contact and dechlorination basins will be

removed and replaced with chlorine injection. After chlorine injection, treated effluent will be conveyed to one of two clay lined effluent storage ponds, where effluent will be stored until it is pumped to the land application area. The land application area is equipped with a tailwater return system which captures any runoff and returns it to the storage ponds.

Treated effluent will be used to irrigate approximately 103-acres of irrigated land located south of the Facility. The land application area is separated into six check basins. Rotational fodder crops for beef cattle will be grown in the land application area.

Additional Groundwater Considerations

The Facility is in the Butte Basin Hydrologic Area (No. 520.40) of the Colusa Basin Hydrologic Unit, as depicted on hydrologic maps prepared by the Department of Water Resources (DWR) in August 1986. The average annual precipitation in the City of Biggs is approximately 22.54 inches and the 100-year annual precipitation is approximately 47.48 inches.

The City of Biggs installed a groundwater monitoring network in 2015 to monitor groundwater quality beneath the treatment facility and land application area. Groundwater monitoring results indicated groundwater at the site is a depth of approximately 7-11 feet below ground surface, with a southeastern gradient.

Antidegradation and Additional Regulatory Considerations

The Discharger has been monitoring groundwater quality at the site since December 2015. Based on available data, it is not possible to determine pre-1968 shallow groundwater quality. Therefore, determination of compliance with Resolution 68-16 for this facility must be based on existing background shallow groundwater quality.

Groundwater data from 2014-2018 shows exceedances of water quality objectives (WQOs) of electrical conductivity, total dissolved solids, manganese, and arsenic in both upgradient and downgradient monitoring wells for both the Facility and land application area. The Facility has yet to discharge to the land application area. These results indicate that elevated constituents may be a condition of the regional shallow aquifer. Surrounding land use in the area is predominantly rice farming, which can cause reduced conditions in the groundwater.

The discharge and the potential for groundwater degradation allowed in this Order is consistent with the Antidegradation Policy since; (a) the limited degradation allowed by this Order will not result in water quality less than the water quality objectives (WQOs) as defined in the Basin Plan, or unreasonably affect present and anticipated beneficial uses, (b) the Discharger has implemented BPTC to minimize degradation, and (c) the limited degradation is of the maximum benefit to the people of the State.

Salt and Nitrate Control Regulatory Program Considerations

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 (17 January 2020). Upon receipt of the Notice to Comply, the City of Biggs 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). The level of participation required of dischargers whose discharges do not meet stringent salinity requirements will vary based on factors such as the amount of salinity in the discharge, local conditions, and type of discharge. For the Nitrate Control Program, when the Notices to Comply will be sent out depends on the groundwater basin in which they are located. The CV-SALTS initiative will result in regulatory changes that will be implemented through conditional prohibitions and modifications to many WDRs regionwide, including the WDRs that regulate discharges from the Facility. More information regarding the CV-SALTS regulatory planning process can be found at the following link: (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/).

Legal Effect of Rescission of Prior WDRs or Orders on Existing Violations

The Board's rescission of prior waste discharge requirements and/or monitoring and reporting orders does not extinguish any violations that may have occurred during the time those waste discharge requirements or orders were in effect. The Central Valley Water Board reserves the right to take enforcement actions to address violations of prior prohibitions, limitations, specifications, requirements, or provisions of rescinded waste discharge requirements or orders as allowed by law.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION
MONITORING AND REPORTING ORDER R5-2020-0008

MONITORING AND REPORTING PROGRAM
FOR
CITY OF BIGGS
CITY OF BIGGS WASTEWATER TREATMENT FACILTIY
BUTTE COUNTY

Separately issued pursuant to Water Code section 13267, subdivision (b)(1), this Order establishes a Monitoring and Reporting Program (MRP) for waste discharges regulated under Waste Discharge Requirements Order R5-2020-0008 (WDRs Order). Each of the Findings set forth in the WDRs Order, including those pertaining to the need for submission of reports, are hereby incorporated as part of this MRP Order.

This MRP is issued pursuant to Water Code section 13267. The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts, or the Executive Officer issues, a revised MRP.

This MRP Order may be separately revised by the Executive Officer, in accordance with their delegated authority under Water Code section 13223.

A. General Monitoring Requirements

Flow Monitoring

Hydraulic flow rates shall be measured at the monitoring points specified in this MRP. Central Valley Water Board staff shall approve any proposed changes to flow monitoring locations prior to implementation of the change. All flow monitoring systems shall be appropriate for the conveyance system (i.e., open channel flow or pressure pipeline) and liquid type. Unless otherwise specified, each flow meter shall be equipped with a flow totalizer to allow reporting of cumulative volume as well as instantaneous flow rate. Flow meters shall be calibrated at the frequency recommended by the manufacturer; typically, at least once per year and records of calibration shall be maintained for review upon request.

Monitoring and Sampling Locations

Samples shall be obtained at the monitoring points specified in this MRP. Central Valley Water Board staff shall approve any proposed changes to sampling locations prior to implementation of the change.

The Discharger shall monitor the following locations to demonstrate compliance with the requirements of this Order:

Monitoring Location Name	Monitoring Location Description
INF	Location where a representative sample of wastewater entering the Facility can be obtained
EFF	Location where a representative sample of wastewater leaving the Facility can be obtained
PND-1, PND-2, PND-3, PND-4, and PND-5	Two treatment ponds (PND- 1 and PND-2) One ballast pond (PND-3) Two storage ponds (PND-4 and PND-5)
DIS	Location where a representative sample downstream of the disinfection system
MW-01, MW-02, MW-03, MW-04, MW-05, and MW-06	Groundwater monitoring sample locations

Sampling and Sample Analysis

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. Except as specified otherwise in this MRP, grab samples will be considered representative of water, wastewater, soil, solids/sludges and groundwater.

The time, date, and location of each sample shall be recorded on the sample chain of custody form. All analyses shall be performed in accordance with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements*, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as those used to measure pH, electrical conductivity, dissolved oxygen, wind speed, and precipitation) may be used provided that:

- The operator is trained in proper use and maintenance of the instruments;
- The instruments are field calibrated at the frequency recommended by the manufacturer;

- The instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and

- Field calibration reports are submitted as described in the "Reporting" section of this MRP.

Laboratory analytical procedures shall comply with the methods and holding times specified in the following (as applicable to the medium to be analyzed):

- *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA);

- *Test Methods for Evaluating Solid Waste* (EPA);

- *Methods for Chemical Analysis of Water and Wastes* (EPA);

- *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA);

- *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and

- *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125).

Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health's Environmental Laboratory Accreditation Program (ELAP). The Discharger may propose alternative methods for approval. Where technically feasible, laboratory reporting limits shall be lower than the applicable water quality objectives for the constituents to be analyzed.

If monitoring consistently shows no significant variation in a constituent concentration or parameter after at least 12 months of monitoring, the Discharger may request this MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency. This monitoring program shall remain in effect unless and until a revised MRP is issued.

B. Specific Monitoring Requirements

Influent Monitoring

Influent flow rates shall be monitored, and influent samples shall be collected upstream of the treatment system. At a minimum, influent shall be monitored as specified below:

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Flow	million gallons per day	Meter Reading	Continuous	Quarterly
BOD	milligrams per liter	Grab	Monthly	Quarterly
Total Suspended Solids	milligrams per liter	Grab	Monthly	Quarterly
Total Nitrogen	milligrams per liter	Grab	Monthly	Quarterly
Total Dissolved Solids	milligram per liter	Grab	Monthly	Quarterly

Effluent Monitoring

Effluent samples shall be collected upstream of the point of discharge to the effluent storage ponds on the same day as influent samples. At a minimum, effluent shall be monitored as specified below:

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
BOD	milligrams per liter	Grab	Monthly	Quarterly
Total Suspended Solids	milligrams per liter	Grab	Monthly	Quarterly
Total Dissolved Solids	milligrams per liter	Grab	Monthly	Quarterly
Total Nitrogen	milligrams per liter	Grab	Monthly	Quarterly
pH	standard units	Grab	Monthly	Quarterly
Nitrate as N	milligrams per liter	Grab	Monthly	Quarterly
Electrical Conductivity	microsiemens per centimeter	Grab	Monthly	Quarterly
Standard Minerals	milligrams per liter	Grab	Monthly	Quarterly

Pond Monitoring

Ponds used for treatment, storage, or disposal of wastewater shall be monitored as specified below. Dissolved oxygen monitoring applies to any pond containing more than two feet of standing water:

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Dissolved Oxygen	milligrams per liter	Grab	Weekly	Quarterly
Freeboard	0.1 feet	Measurement	Weekly	Quarterly
pH	standard unit	Grab	Weekly	Quarterly
Odors	--	Observation	Weekly	Quarterly
Berm Condition	--	Observation	Weekly	Quarterly
Liner Condition	--	Observation	Weekly	Quarterly

Land Application Area Monitoring

The Discharger shall inspect the LAAs at least once daily prior to and during irrigation events, and observations from those inspections shall be documented for inclusion in the quarterly monitoring reports. The following items shall be documented for each check or field to be irrigated that day:

a. Evidence of erosion;
b. Containment berm condition;
c. Condition of above-ground pipes, flow control valves, sprinklers, and/or drip emitters (as applicable);
d. Proper use of valves;
e. Soil saturation;
f. Ponding;
g. Irrigation supply and tailwater ditch condition and potential for runoff to off-site areas;
h. Potential and actual discharge of waste to surface water;
i. Odors that have the potential to be objectionable at or beyond the property boundary; and

j. Insects (e.g., flies, mosquitoes).

k. Any corrective actions taken based on observations made.

A copy of entries made in the log during each month shall be submitted as part of the Quarterly Monitoring Report. If no irrigation with wastewater takes place during a given month, then the monitoring report shall so state.

Disinfection System Monitoring

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Total Coliform Organisms	most probable number/100 milliliter	Grab	Monthly	Quarterly

Groundwater Monitoring

The Discharger shall maintain the groundwater monitoring well network. If a groundwater monitoring well is dry for more than four consecutive sampling events or is damaged, the Discharger shall submit a work plan and proposed time schedule to replace the well. The well shall be replaced following approval of the work plan.

Prior to construction of any groundwater monitoring wells, the Discharger shall submit plans and specifications for approval. Once installed, all new wells shall be added to the groundwater monitoring network. The following table lists all existing monitoring wells and designates the purpose of each well.

Prior to purging or sampling, the groundwater depth shall be measured in each well to the nearest 0.01 feet. Groundwater elevations shall then be calculated to determine groundwater gradient and flow direction.

Low or no-purge sampling methods are acceptable, if described in an approved Sampling and Analysis Plan. Otherwise, each monitoring well shall be purged of at least 3 to 5 casing volumes until pH, electrical conductivity and turbidity have stabilized prior to sampling. Groundwater monitoring for all monitoring wells shall include, at a minimum, the following:

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Depth to Groundwater	0.01 feet	Measurement	Quarterly	Quarterly
Groundwater Elevation	0.01 feet	Calculation	Quarterly	Quarterly
Gradient	feet/feet	Calculation	Quarterly	Quarterly
Gradient Direction	degrees	Calculation	Quarterly	Quarterly
pH	standard unit	Grab	Quarterly	Quarterly
Nitrate as Nitrogen	milligrams per liter	Grab	Quarterly	Quarterly
Total Kjeldahl Nitrogen	milligrams per liter	Grab	Quarterly	Quarterly
Total Dissolved Solids	milligrams per liter	Grab	Quarterly	Quarterly
Total Nitrogen	milligrams per liter	Grab	Quarterly	Quarterly
Total Coliform Organisms	most probable number per 100 milliliters	Grab	Quarterly	Quarterly
Dissolved Oxygen	milligrams per liter	Grab	Quarterly	Quarterly
Oxidation-Reduction Potential	millivolts	Grab	Quarterly	Quarterly
Sodium	milligrams per liter	Grab	Quarterly	Quarterly
Chloride	milligrams per liter	Grab	Quarterly	Quarterly

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Electrical Conductivity	microsiemens per centimeter	Grab	Quarterly	Quarterly
Arsenic	micrograms per liter	Grab	Quarterly	Quarterly
Manganese	micrograms per liter	Grab	Quarterly	Quarterly
Standard Minerals	micrograms per liter	Grab	Annually	Annually
Metals	micrograms per liter	Grab	Annually	Annually

Sludge/Biosolids Monitoring

Sludge and/or biosolids monitoring shall be conducted as required in Title 40 of the Code of Federal Regulations (40 CFR), Part 503.8(b)(4) at the following frequency, depending on volume of sludge and removed from the wastewater treatment system for disposal or treated for beneficial reuse as biosolids:

Disposal Volume (dry metric tons/year)	Monitoring Frequency	Reporting Frequency
0 to 290	Annually	Annually
290 to 1,500	Quarterly	Monthly
1,500 to 15,000	Bimonthly	Monthly
Greater than 15,000	Monthly	Monthly

At a minimum, sludge/biosolids samples shall be analyzed to determine the total concentration in mg/Kg for arsenic, lead, nickel, cadmium, mercury, selenium, copper, molybdenum, zinc, total nitrogen, and total solids.

Sludge and/or biosolids monitoring records shall be retained for a minimum of five years in accordance with 40 CFR, Part 503.17. A log shall be kept of sludge

quantities generated and of handling, application, and disposal activities. The frequency of entries is discretionary; however, the log should be complete enough to serve as a basis to report sludge monitoring.

The Discharger shall demonstrate that treated sludge (i.e., biosolids) meets Class A or Class B pathogen reduction levels by one of the methods listed in 40 CFR, Part 503.32, and shall maintain records of the operational parameters used to comply with the Vector Attraction Reduction requirements in 40 CFR, Part 503.33(b), as well as records of offsite disposal (quantity, date, disposal site).

Residual Solids Monitoring

The Discharger shall monitor the residual solids generated and disposed of on a monthly basis. The following shall be monitored and reported:

1 Volume of Solids Generated. Solids may include pomace, seeds, stems, screenings, pond solids, and sump solids, or other material.

2. Volume Disposed of off-site. Describe the disposal method (e.g. animal feed, land application, off-site composting, landfill, etc.); the amount disposed (tons); and the name of the hauling company.

3. Volume Disposed of On-site. Describe the amount disposed (tons); location of on-site disposal (e.g. land application area field); method of application, spreading, and incorporation; application rate (tons/acre), and weekly grab sample analysis for total nitrogen.

C. Reporting Requirements

All monitoring reports should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to*:* centralvalleyredding@waterboards.ca.gov.

Documents that are 50 MB or larger should be transferred to a CD, DVD, or flash drive and mailed to the following address:

Central Valley Regional Water Quality Control Board
ECM Mailroom
364 Knollcrest Drive, Suite 205
Redding, California 96002

To ensure that your submittal is routed to the appropriate staff person, the following information should be included in the body of the email or transmittal sheet:

Biggs Wastewater Treatment Facility
Butte County
Place ID: 209551

A transmittal letter shall accompany each monitoring report. The letter shall include a discussion of all violations of the WDRs and this MRP during the reporting period and actions taken or planned for correcting each violation. If the Discharger has previously submitted a report describing corrective actions taken and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. Pursuant to Section B.3 of the Standard Provisions and General Reporting Requirements, the transmittal letter shall contain a statement by the Discharger or the Discharger's authorized agent certifying under penalty of perjury that the report is true, accurate and complete to the best of the signer's knowledge.

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, as applicable. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall be reported in the next scheduled monitoring report.

Laboratory analysis reports do not need to be included in the monitoring reports; however, all laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3. For a Discharger conducting any of its own analyses, reports must also be signed and certified by the chief of the laboratory.

In addition to the requirements of Standard Provision C.3, monitoring information shall include the method detection limit (MDL) and the Reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated.

All monitoring reports that involve planning, investigation, evaluation or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1.

In the future, the State Water Board or Central Valley Regional Water Board may require electronic submittal of monitoring reports using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site

(https://www.waterboards.ca.gov/ciwqs/index.html) or similar system. Electronic submittal to CIWQS, when implemented, will meet the requirements of our Paperless Office System.

Quarterly Monitoring Reports

Quarterly monitoring reports shall be submitted to the Board by the first day of the second month after the quarter (i.e. the January-March quarterly report is due by May 1st). Each Quarterly Monitoring Report shall include the following:

1. Results of Influent Monitoring, including calculated values for total flow and average daily flow for each month, and total annual flow to date

2. Results of Effluent Monitoring

3. Results of Pond Monitoring

4. Results of Groundwater Monitoring including:

    a. A narrative description of all preparatory, monitoring, sampling, and sample handling for groundwater monitoring.

    b. A field log for each well documenting depth to groundwater; method of purging; parameters measured before, during, and after purging; sample preparation (e.g., filtering); and sample preservation.

    c. Calculation of the groundwater elevation at each monitoring well, and determination of groundwater flow direction and gradient on the date of measurement.

    d. Summary data tables of historical and current water table elevations and analytical results.

    e. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells, surface waters, and groundwater elevation contours referenced to an appropriate datum (e.g., NGVD).

5. Results of any Sludge/Biosolids Monitoring completed during the quarter, and (if applicable) verification of classification of biosolids as nonhazardous per 22 CCR, Article 11, Criteria for Identification of Hazardous and Extremely Hazardous Waste (California Assessment Manual procedures).

6. Results of Residual Solids Monitoring

7. A comparison of monitoring data to the effluent limitations and discharge specifications and an explanation of any violation of those requirements.

8. Land area application monitoring results

9. A copy of inspection log page(s) documenting inspections completed during the quarter.

10. A copy of calibration log page(s) verifying calibration of all hand-held monitoring instruments performed during the quarter.

The Fourth Quarterly Monitoring Report will serve as an Annual Monitoring Report. The Fourth Quarterly Monitoring Report for each calendar year shall include the following in addition to the items listed above.

1. Total annual influent flow, average monthly flows for each month of the year, and the average dry weather flow compared to the flow limitations of the WDRs.

2. Results of any Sludge/Biosolids Monitoring completed during the year, and (if applicable) verification of classification of biosolids as nonhazardous per 22 CCR, Article 11, Criteria for Identification of Hazardous and Extremely Hazardous Waste (California Assessment Manual procedures).

3. For each discrete LAA, a chronological log of dates of fertilizer application, irrigation, precipitation, and runoff control operations.

4. Concentration v. time graphs for each monitored constituent using all historic groundwater monitoring data. Each graph shall show the background groundwater concentration range, the trigger concentration specified above, and the Groundwater Limitation as horizontal lines at the applicable concentration.

5. An evaluation of the groundwater quality beneath the site and determination of whether any MCLs were exceeded in any compliance well at any time during the calendar year. This shall be determined by comparing the annual average concentration for each well during the calendar year to the corresponding trigger concentration specified above. If any groundwater trigger concentrations were exceeded, include acknowledgment that the technical report described in the Groundwater

Trigger Concentrations section of this MRP will be submitted in accordance with the specified schedule.

6. An evaluation of the groundwater quality beneath the site and determination of compliance of the WDRs based on statistical analysis for each constituent monitored for each compliance well in accordance with the approved *Groundwater Limitations Compliance Assessment Plan*. Include all calculations and data input/analysis tables derived from use of statistical software, as applicable.

Sludge/Biosolids monitoring results, if sludge or biosolids were removed for off-site disposal during the year.

7. A summary of all biosolids/sludge analytical data and verification of compliance with the biosolids/sludge monitoring requirements.

8. A summary of information on the disposal of sludge and/or solid waste during the calendar year.

Other Standard Reporting Requirements

9. An evaluation of the performance of the WWTF, including discussion of capacity issues, infiltration and inflow rates, nuisance conditions, and a forecast of the flows anticipated in the next year, as described in Standard Provision E.4

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

11. A copy of the certification for each certified wastewater treatment plant operator working at the facility and a statement about whether the Discharger is in compliance with Title 23, CCR, Division 3, Chapter 26.

12. Monitoring equipment maintenance and calibration records, as described in Standard Provision C.4.

13. A statement of when the wastewater treatment system Operation and Maintenance Manual was last reviewed for adequacy and a description of any changes made during the year.

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

A letter transmitting the self-monitoring reports shall accompany each report. The letter shall clearly indicate the submitting Discharger's name, facility or site name, county, monitoring period, and type of report (i.e., monthly, quarterly, or annual). The letter shall include a discussion of any requirement violations during the reporting period and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. Pursuant to the Standard Provisions and Reporting Requirements, the transmittal letter shall contain a statement by the Discharger or its authorized agent, under penalty of perjury, that to the best of the signer's knowledge, the report is true, accurate, and complete.

The Discharger shall implement the above monitoring program as of the date of this Order.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. The State Water Board must receive the petition by 5:00 p.m. on the 30th day after the date of this Order; if the 30th day 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 are available on the internet:

(https://www.waterboards.ca.gov/public_notices/petitions/water_quality/),

and will be provided upon request.