CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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[TENTATIVE] WASTE DISCHARGE REQUIREMENTS ORDER R5-2023-####

ORDER INFORMATION

Order Type(s):	Waste Discharge Requirements (WDRs)
Status:	TENTATIVE
Program:	Non-15 Discharges to Land
Region 5 Office:	Fresno
Discharger(s):	Cutler-Orosi Joint Powers Wastewater Authority
Facility:	Wastewater Treatment Facility
Address:	40401 Road 120, Cutler, CA 93615
County:	Tulare County
Prior Order(s):	R5-2018-0011, R5-2013-0047, R5-2006-0092

CERTIFICATION

I, PATRICK PULUPA, Executive Officer, hereby certify that the following is a full, true, and correct copy of the order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____ [Month] 2023.

_____

PATRICK PULUPA,
Executive Officer

TABLE OF CONTENTS

TABLE INDEX ..... **iv**

GLOSSARY ..... **v**

FINDINGS **1**

Introduction 1

Regulatory History 1

Facility and Discharges 2

Existing Facility and Discharges 2

Land Application Areas 4

Industrial Pretreatment Considerations 5

Water Recycling Considerations 6

Site-Specific Conditions 6

Topography, Climate and Land Use 6

Groundwater and Subsurface Conditions 7

Statutory Authority 10

Basin Plan Implementation 11

Beneficial Uses of Water 11

Water Quality Objectives 11

Salt and Nitrate Control Programs 12

Antidegradation Policy 13

California Environmental Quality Act 16

Other Regulatory Considerations 16

Water Code Section 13149.2 16

Human Right to Water 17

Table of Contents

Threat-Complexity Rating 18

Title 27 Exemption 18

Stormwater 18

Sanitary Sewer Overflows 19

Biosolids 19

Scope of Order 19

Procedural Matters 19

REQUIREMENTS 20

A. Standard Provisions 20

B. Discharge Prohibitions 20

C. Flow Limitations 21

D. Effluent Limitations 21

E. Salinity Action Level 23

F. Discharge Specifications 23

G. Groundwater Limitations 25

H. Water Recycling Specifications 26

I. Ultraviolet Disinfection System Operating Specifications 30

J. Solids Disposal Specifications 31

K. Other Provisions 32

ENFORCEMENT 37

ADMINISTRATIVE REVIEW 37

ATTACHMENT A—Site Location Map 38

ATTACHMENT B—Flow Schematic 49

Table of Contents

ATTACHMENT C—Recycled Water Signage 50

ATTACHMENT D—REQUIREMENTS FOR MONITORING WELL INSTALLATION WORK PLANS AND MONITORING WELL INSTALLATION REPORTS 51

INFORMATION SHEET 56

TABLE INDEX

Table 1 – Influent Flow (mgd) 3

Table 2 – BOD and TSS data 4

Table 3 – Effluent Salinity Data 4

Table 4 – Source Water Quality 7

Table 5 – Groundwater Monitoring Network 8

Table 6 – Average Groundwater Monitoring Results for 2021 9

Table 7 – Constituents with Potential for Degradation 14

Table 8 – Effluent Limits 21

Table 9 – Use of Ultraviolet Light Disinfection 22

Table 10 – Minimum Setbacks for Recycled Water Use Areas and Impoundments 28

GLOSSARY

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 [BASIN]
Bgs	Below Ground Surface
BOD[5]	[Five-Day] Biochemical Oxygen Demand at 20° Celsius
BPTC	Best Practicable Treatment or 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
IPP	Industrial Pretreatment Program
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
mJ/cm2	Millijoules per Square Centimeter
ORP	Oxygen Reduction Potential
N	Nitrogen
ND	Non-Detect
NE	Not Established
NM	Not Monitored
Recycled Water Policy	Policy for Water Quality Control for Recycled Water, State Water Board Resolution 2009-0011, as amended per Resolutions 2013-0003 and 2018-0057
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

GLOSSARY

Unified Guidance	Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (USEPA, 2009)
USEPA	United States Environmental Protection Agency
VOC[s]	Volatile Organic Compound[s]
WDRs	Waste Discharge Requirements
WQO[s]	Water Quality Objective[s]

FINDINGS

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

Introduction

1. Cutler Public Utility District and Orosi Public Utility District form the Cutler-Orosi Joint Powers Wastewater Authority (Discharger) for the purpose of owning and operating the Wastewater Treatment Facility (Facility), which is located approximately one mile west of Cutler in Tulare County, Section 19, Township 16 S, Range 24 E, 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 Tulare County Assessor Parcel Numbers (APNs): 032-005-17 and 032-003-13.

3. As the 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 and incorporated as part of this Order:

   a. ATTACHMENT A – Site Location Map

   b. ATTACHMENT B – Flow Schematic

   c. ATTACHMENT C – Recycled Water Signage

   d. ATTACHMENT C – Recycled Water Signage

   e. Standard Provisions & Reporting Requirements dated 1 March 1991 (SPRRs)

   f. Information Sheet

5. Also attached is **Monitoring and Reporting Program R5-2023-####** (MRP), which requires monitoring and reporting for discharges regulated under these WDRs. The Discharger shall comply with the MRP and subsequent revisions thereto as ordered by the Executive Officer.

Regulatory History

6. WDRs Order R5-2018-0011 (NPDES No. CA0081485) was adopted by the Central Valley Water Board on 5 April 2018. WDRs Order R5-2018-0011 currently regulates the Facility and authorizes an average daily dry weather

discharge of 1.5 MGD of undisinfected and disinfected secondary treated domestic wastewater to two evaporation/percolation ponds (hereinafter referred to as wastewater ponds) and 118 acres of cropland (Fields A, B, C, D, and E). WDRs Order R5-2018-0011 is also a joint NPDES permit, which allowed the discharge of disinfected secondary-treated domestic wastewater to Sand Creek.

7. WDRs Order R5-2018-0011 is set to expire 31 May 2023. On 16 February 2023, the Discharger submitted a Report of Waste Discharge (ROWD) prepared by Keller & Wegley Engineering for renewal of its WDRs. In the ROWD, the Discharger proposes to no longer utilize its NPDES discharge point to Sand Creek. Instead, the entirety of the effluent will be disposed of in the two evaporation/percolation ponds and the cropland use area.

8. The Discharger has not utilized its NPDES discharge point since 2001. Since 2001, all effluent has been discharged to the two evaporation/percolation ponds or to cropland for the irrigation of fodder, fiber, and seed crops adjacent to the Facility.

Facility and Discharges

Existing Facility and Discharges

9. The Discharger provides sewerage service for the communities of Cutler, Orosi, East Orosi, Yettem, Seville, and Sultana and serves a population of approximately 15,700.

10. The treatment system at the Facility consists of mechanical screens; an influent pump station; trickling filter treatment train consisting of two primary clarigesters, two trickling filters, and a recirculation pump station; an oxidation ditch treatment train consisting of an oxidation ditch, secondary clarifier, and return and waste activated sludge pump stations; an ultraviolet light disinfection system; an effluent pump system; two unlined treated wastewater evaporation/percolation ponds; and cropland for application of treated wastewater. Raw wastewater is split between the trickling filter treatment train and the oxidation ditch treatment train. The trickling filter treatment train typically handles a fixed flow of 0.5 MGD, and the oxidation ditch treatment train receives the remainder. Effluent from the trickling filter treatment train is then sent to the head of the oxidation ditch treatment train. A treatment process flow schematic is in **Attachment B**.

11. Treated wastewater is discharged to two unlined wastewater ponds or to cropland. The unlined wastewater ponds allow for storage, percolation, and evaporation of treated effluent and together have a capacity of approximately 21.5 million gallons. The recycled water use area includes 118 acres of cropland (Fields A, B, C, D, and E) Field A is no longer accepting treated effluent in order to maintain well setback distances from the domestic supply well on the northern

edge of Field A. Changes in Field A irrigation infrastructure would be needed in order for the Discharger to begin using Field A again. Without the use of Field A, the recycled water use area includes 106 acres of irrigated cropland for the irrigation of fiber, fodder, and seed crops. In recent years crops include feed grains, green-chopped silage, and sudan grass.

12. Solids handling at the Facility includes four Deskins lined sludge drying beds, two newly constructed lined sludge drying beds, eight unlined sludge drying beds, and two unlined sludge lagoons. The Discharger historically had excess sludge that exceeded the capacity of the lined sludge treatment/storage surfaces, causing the Discharger to utilize unlined areas. Additionally, dried scum was historically stored on unlined surfaces, as noted in the recent 13 April 2021 Notice of Violation. The Discharger addressed the Notice of Violation by constructing two new lined sludge drying beds and storage areas. The new beds are intended for dried scum storage as well as dried sludge storage from the existing Deskins sludge drying beds. According to the Discharger's 4 March 2019 Solids Management and Storage Work Plan, the Discharger is considering pursuing mechanical dewatering methods to supplement the Deskins lined sludge drying beds, pending funding.

13. If the groundwater elevation is within five feet of the ground surface where wastewater is applied to recycled water Use Area or within five feet of the bottom of the treated wastewater ponds, the effluent must also be disinfected with ultraviolet light. Table 9 of this Order provides a table for determination of which irrigation fields must receive disinfected wastewater based on the groundwater monitoring results. The direction of groundwater flow is primarily to the southwest with depth to groundwater approximately 50 to 60 feet below ground surface.

14. Monthly influent flows at the Facility from 2018 through 2021 are shown in **Table 1** below.

Table 1 – Influent Flow (MGD)

Year	Minimum Monthly Flow	Maximum Monthly Flow	Average Monthly Flow
2018	0.920	1.02	0.968
2019	0.937	1.06	0.996
2020	0.906	1.03	0.982
2021	1.00	1.09	1.03

15. Monitoring data collected from 2018 through 2021, shown in **Table 2** below, indicates that the Facility provides, on average, 98 percent reduction for BOD and 95 percent reduction for TSS.

Table 2 – BOD and TSS data

Year	BOD Influent (mg/L)	BOD Effluent (mg/L)	BOD Removal (%)	TSS Influent (mg/L)	TSS Effluent (mg/L)	TSS Removal (%)
2018	267	8.3	97	247	7.4	97
2019	208	11	98	123	7.7	94
2020	230	7.8	97	174	5.5	97
2021	239	10	98	236	8.9	93

16. Effluent annual averages for salinity constituents from 2018 through 2021 are shown in **Table 3** below.

Table 3 – Effluent Salinity Data

Constituent	Units	2018	2019	2020	2021
TDS	mg/L	540	515	480	511
EC	µmhos/cm	808	792	777	759
Chloride	mg/L	67	67	69	67
Sodium	mg/L	73	71	69	68

Land Application Areas

17. Treated wastewater is collected in two unlined wastewater ponds, allowing for storage, percolation, and evaporation. Together, the ponds have an approximate capacity of 21.5 million gallons.

18. Treated wastewater from the wastewater ponds can also be discharged to the recycled water Use Area. The Use Area includes 118.8 acres of cropland (Fields A, B, C, D, and E) with principal crops of feed grains, green-chopped silage, and

sudan grass. The Discharger currently utilizes only 106 acres of cropland (Fields B, C, D, and E) and may in the future add additional acres to the irrigated cropland.

19. This Order requires disinfection of treated wastewater when discharging to the wastewater ponds and groundwater is less than five feet from the bottom of the ponds or when actively discharging to the recycled water use area and groundwater is less than five feet below the surface of cropland where wastewater is applied.

Industrial Pretreatment Considerations

20. Certain industrial wastes, when discharged to wastewater treatment facilities without adequate controls, may cause one or more of the following problems:

    a. **Interference or Upset.** Discharges of high volumes or concentrations of certain waste constituents can inhibit or interfere with proper operations, thereby impairing the WWTF's ability to treat wastewater—and potentially preventing compliance with WDRs.

    b. **Sludge Management.** Industrial wastes, particularly metals and other toxic constituents, can limit available sludge management alternatives, thereby increasing the cost of sludge management and disposal. Contaminated biosolids may also be unsuitable as a soil amendment.

    c. **Pass-Through.** Some industrial wastes may not receive adequate treatment and pass through the treatment system in concentrations that can could unreasonably degrade groundwater quality and/or prevent recycling of domestic wastewater.

    d. **Other Hazards.** Additionally, the discharge of explosive, reactive, or corrosive wastes can cause damage to the wastewater collection system or the treatment works, as well as threaten the safety of workers and/or the general public.

21. Currently, there are no significant industrial wastes being discharged, and/or proposed for discharge, to the Facility. Consequently, an Industrial Pretreatment Program will not be required at this time. However, this Order requires the Discharger to report any proposed new industrial discharges and, if directed by the Executive Officer, to develop an Industrial Pretreatment Program regulating such discharges. Additionally, this Order also may be subsequently revised to require compliance with an approved program, if necessary.

Water Recycling Considerations

22. Undisinfected domestic wastewater contains human pathogens that are typically measured using total or fecal coliform organism as indicator organisms.

23. The State Water Board's Division of Drinking Water (DDW), which is charged with establishing drinking water quality standards for the protection of public health, has promulgated criteria for the use of recycled water throughout California, codified as California Code of Regulations, title 22 (Title 22), section 60301 et seq.

24. In accordance with Title 22, on 30 July 2009, the Discharger submitted to DDW an Engineering Report for the recycling of "undisinfected secondary recycled water." (See Title 22, § 60301.230 [defining term].) A copy of the Engineering Report was also submitted to the Central Valley Water Board.

25. The discharges authorized herein are consistent with the State Water Board's *Policy for Water Quality Control for Recycled Water* (Recycled Water Policy), Resolution 2009-0011, as amended per Resolutions 2013-0003 and 2018-0057; and Central Valley Water Board Resolution R5-2009-0028 (*Resolution in Support of Regionalization, Reclamation, Recycling and Conservation for WWTPs*).

Site-Specific Conditions

Topography, Climate and Land Use

26. The soil beneath the WWTF and Use Areas are mainly Hanford sandy loam and Exeter loam, according to the Web Soil Survey published by the United States Department of Agriculture, Natural Resources Conservation Service. Exeter loam and Hanford sandy loam have irrigated land capabilities classifications of 1 and 3s, respectively. Soils with "Class 1" have slight limitations that restrict their use. Soils with "Class 3" have severe limitations that restrict their choice of plants or that require special conservative practices, or both. Soils with subclass "s" have limitations within the root zone, such as shallowness of the root zone, a high content of stones, a low available water capacity, low fertility, and excessive salinity or sodicity.

27. The Facility is bordered by Sand Creek, a water of the United States, on the east and south edges. Sand Creek is an intermittent stream that mainly carries local storm water runoff southerly to Cottonwood Creek and ultimately Cross Creek.

28. The climate at the WWTF and Use Areas are characterized by dry summers and mild winters.

29. The rainy season typically extends from October to April. The Facility has an annual average precipitation of 12.65 inches, according to the Western Regional

Climate Center. Average annual pan evaporation in the discharge area is about 81 inches, according to data in *National Oceanic and Atmospheric Administration Technical Report NWS 34, Mean Monthly, Seasonal, and Annual Pan Evaporation for the United States*, published by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration.

30. According to National Oceanic and Atmospheric Administration (NOAA) Precipitation Frequency Atlas 14, Vol. 6 (rev. 2014), 100-year and 1,000-year, 24-hour rainfall events are estimated to result in 4.11 and 6.15 inches of precipitation, respectively.[1]

31. According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (https://msc.fema.gov/portal), the Facility is not located within a 100-year floodplain.

32. Land uses in the vicinity are primarily agriculture and include citrus, peaches, nectarines, plums, prunes, and apricots, according to the Department of Water Resources Land Use Surveys. North of the WWTF boundary is Prima Wawona, a fruit packing facility.

Groundwater and Subsurface Conditions

33. The communities of Cutler, Orosi, East Orosi, Yettem, Seville, and Sultana obtain their source water from groundwater supply wells. Average source water quality data from these communities from the latest available Consumer Confidence Reports are presented in **Table 4** below.

Table 4 – Source Water Quality

Constituent	Units	Cutler (2021)	Orosi (2021)	East Orosi (2020)	Yettem (2021)	Seville (2020-2021)	Sultana (2021)
EC	µmhos/cm	545	390	610	428	495	524
TDS	mg/L	375	280	320	265	315	355
Nitrate (as N)	mg/L	7.2	4.8	9.29	7.4	7.2	7.8

[1] Source: NOAA Precipitation Frequency Data Server (https://hdsc.nws.noaa.gov/hdsc/pfds)

Constituent	Units	Cutler (2021)	Orosi (2021)	East Orosi (2020)	Yettem (2021)	Seville (2020-2021)	Sultana (2021)
Iron	µg/L	--	33	54	240	--	--
Sulfate	mg/L	20	8.5	19	16.3	23	24.8
Chloride	mg/L	30.5	16	18	20	51	28

34. Groundwater flow is primarily to the southwest. Depth to groundwater is typically between 50 to 60 feet below ground surface (bgs). However, in recent years, groundwater levels have decreased, and depth to groundwater has been greater than 70 feet bgs for all of 2022.

35. The Facility has a network of eight monitoring wells that monitor shallow groundwater in and around the WWTF and Use Area. MW-C has a damaged casing at 39 feet, such that sampling below a depth of 39 feet is not possible.

36. The Facility's groundwater monitoring network currently consists of the monitoring wells identified in **Table 5**.

Table 5 – Groundwater Monitoring Network

Monitoring Well	Alternative name	2022 Depth to water (feet bgs)	Screen Interval (feet bgs)
MW-A	BAd	>70	50-70
MW-B	MBd	>70	50-70
MW-C	MCd	>70	50-70
MW-D	SDd	>70	50-70
MW-E	MEd	>70	50-70
MW-G	MGd	>74	55-74
MW-H	SAd	>70	50-70
MW-I	BBd	>70	50-70

37. MW-A and MW-I are located north and northeast of the Facility as background (upgradient) wells. MW-B, MW-C, MW-E, and MW-G are located in and around the Use Area on the west and southwest side of the Facility. MW-D and MW-H are located downgradient of the Facility and also located in agricultural fields. Quarterly data from January to September 2021 are summarized in **Table 6** below.

Table 6 – Average Groundwater Monitoring Results for 2021

Constituent	Units	MW-A	MW-B	MW-D	MW-E	MW-G	MW-H	MW-I	MCL
Chloride	mg/L	33	64	90	78	36	91	35	250-500
EC	µmhos/cm	577	**935**	**915**	870	550	**1,000**	770	900-1,600
Nitrate as N	mg/L	7.1	**12**	7.5	**20**	7.9	**40**	**13.5**	10
TKN	mg/L	0.8	2	1.1	2.5	1.5	1.7	1.8	
Total Coliform Organisms	MPN/100 mL	<1	<1	<1	2	<1	<1	<1	2.2
TDS	mg/L	417	**655**	**615**	**605**	390	**720**	**560**	500-1,000
Sodium	mg/L	15	54	53	74	43	35	49	
Sulfate	mg/L	34	98	55	56	27	70	83	250-500
Iron (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	0.3
Manganese (Dissolved)	mg/L	ND	0.015	ND	ND	ND	ND	ND	0.05
Arsenic (Dissolved)	mg/L	ND	ND	ND	ND	ND	ND	ND	10

38. The monitoring data shows EC, TDS, and nitrate above MCLs in several wells, including a background well. The highest concentrations are found in one of the downgradient wells MW-H, which itself is within an agricultural field not considered part of the Use Area. Deviations from the water quality objectives for these constituents are addressed by the CV-SALTS Salt and Nitrate Control Programs, as discussed later in Findings 54 through 57.

Statutory Authority

39. 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.*

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

41. 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).)

42. 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:

> *[T]he 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.*

43. 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

44. 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."

Beneficial Uses of Water

45. This Order implements the Central Valley Water Board's Water Quality Control Plan for the Tulare Lake Basin (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.)

46. Local drainage is to the Sand Creek, the beneficial uses of which (per the Basin Plan) include: agricultural supply (AGR); industrial process supply (PRO); industrial service supply (IND); groundwater recharge (GWR); rare, threatened, or endangered species (RARE); water contact recreation (REC-1); non-water contact recreation (REC-2); warm freshwater habitat (WARM); and wildlife habitat (WILD).

47. Per the Basin Plan, beneficial uses of underlying groundwater at the Facility are: municipal and domestic supply (MUN); AGR; IND; PRO; REC-1; REC-2; and WILD.

Water Quality Objectives

48. The numeric WQO for bacteria is expressed as the most probable number (MPN) of coliform organisms per 100 mL of water. For MUN-designated groundwater, the objective is an MPN of 2.2 organisms over any seven-day period.

49. The narrative WQO for chemical constituents in groundwater generally provides that groundwater shall not contain constituents in concentrations adversely affecting beneficial uses. For MUN-designated waters, the Basin Plan further provides that water, at a minimum, meet the primary and secondary maximum contaminant levels (MCLs) specified in California Code of Regulations, title 22 (Title 22).[2] (See Title 22, §§ 64431, 64444, 64449.)

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[2] 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.

50. The narrative WQO for toxicity provides that groundwater shall be maintained free of toxic substances in concentrations producing detrimental physiological responses in human, animal, plant or aquatic life associated with designated beneficial uses.

51. To the extent necessary, narrative WQOs are quantified, on a site-specific basis, as numeric limits for constituents with potential to adversely impacted designated uses. In determining a site-specific numeric limit, the Central Valley Water Board considers relevant published criteria.

52. In determining a numeric limit for salinity protective of agricultural supply (AGR), the Central Valley Water Board is relying on general salt tolerance guidelines, which indicate that although yield reductions in nearly all crops are not evident when irrigation water has an electrical conductivity (EC) of less than 700 µmhos/cm, there is an eight- to ten-fold range in salt tolerance for agricultural crops. (See, e.g., Ayers & Westcot, *Water Quality for Agriculture* (1985), § 2.3.) For this reason, appropriate salinity values are considered on a case-by-case basis. It is possible to achieve full yield potential with groundwater EC up to 3,000 µmhos/cm, if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.

53. The list of crops in the findings is not intended as a definitive inventory of crops that are or could be grown in the area where groundwater quality is potentially affected by the discharge, but it is representative of current and historical agricultural practices in the area.

Salt and Nitrate Control Programs

54. 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 (Salt and Nitrate Control Programs). The Basin Plan amendments became effective on 17 January 2020 and were revised by the Central Valley Water Board in 2020 with Resolution R5-2020-0057 (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf).

55. For the Salt Control Program, dischargers that are unable to comply with stringent salinity requirements will instead need to meet performance-based requirements and participate in a basin-wide effort known as the Prioritization and Optimization Study (P&O Study) to develop a long-term salinity strategy for the Central Valley. The Discharger was issued a Notice to Comply for the Salt Control Program on 5 January 2021 (**CV-SALTS ID: 3310**). On 29 June 2021, the Central Valley Water Board received a Notice of Intent for the Facility. The Discharger elected to participate in the P&O Study. In the interim, to maintain

existing salt discharges and minimize salinity impacts, this Order does the following:

a. Requires the Discharger to continue efforts to control salinity in its discharge to the extent feasible; and

b. Sets a Salinity Action Level of 1,000 µmhos/cm.

56. For the Nitrate Control Program, 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 may comply with the new nitrate program either individually (Pathway A) or collectively with other dischargers (Pathway B). The Facility is within Groundwater Sub-Basin 5-22.08 (San Joaquin Valley – Kings County), which is a Priority 1 Basin. On 22 December 2022, the Discharger submitted an updated Notice of Intent for the Facility. The Discharger elected to comply with the Nitrate Control Program via Pathway B, the Management Zone Permitting Approach. Under Pathway B, the Facility is included in the Kings Water Alliance Management Zone. The Discharger will collaborate with the Management Zone to implement the nitrate requirements and provide safe drinking water where needed.

57. As these strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of these WDRs. As such, this Order may be amended or modified to incorporate any newly applicable requirements to ensure the goals of the Salt and Nitrate Control Programs are met.

Antidegradation Policy

58. The *Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Water Board Resolution 68-16 (Antidegradation Policy), which is incorporated as part of the Basin Plan, 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).

59. Groundwater quality monitoring at the Facility dates to 2001. Given the unavailability of pre-1968 water quality information, compliance with the Antidegradation Policy will determined based on existing background water quality (Antidegradation Baseline).

60. Constituents of concern (COCs) that have the potential to degrade groundwater include electrical conductivity, total dissolved solids, nitrate, and total nitrogen as discussed below and in **Table 7**.

Table 7 – Constituents with Potential for Degradation

Constituent	Effluent (2018-2022)	Upgradient (2018-2021)	Down-gradient (2018-2021)	WQOs
Electrical Conductivity (µmhos/cm)	487-1,049	500-890	890-1,000	700
Total Dissolved Solids (mg/L)	410-630	360-640	590-810	500-1,000
Nitrate as Nitrogen (mg/L)	ND - 34	6-21	6-45	10
Total Nitrogen (mg/L)	1.6-41	7-21	7-45	--
Total Coliform Organisms	1.8-79	<1-140	<1-53	2.2

a. **Salinity: Electrical Conductivity (EC) and Total Dissolved Solids (TDS).** The Facility's annual average EC was 792, 777, and 759 µmhos/cm in 2019, 2020, and 2021, respectively. These concentrations are above the 700 µmhos/cm numeric value to protect the AGR beneficial use. Based on available source water EC in Table 4, the net increase is up to 300 µmhos/cm as an annual average. The Discharger selected to participate in the Prioritization and Optimization (P&O) Study for the Salt Control Program. To help ensure the Discharger continues to implement salinity reduction measures, this Order includes a Salinity Action Level of 1,000 µmhos/cm. Furthermore, this Order requires the Discharger to comply with the new Salinity Control Program (i.e., to participate in the P&O Study).

b. **Nitrate (as Nitrogen) and Total Nitrogen.** Background groundwater quality shows existing high nitrate concentrations in groundwater. The CV-SALTS *Region 5: Updated Groundwater Quality Analysis and Resolution Mapping for the Central Valley Salt Management Plan, June 2016*

indicates a mean nitrate concentration of 17.33 mg/L for the upper zone in the northern Kings Basin. While at times the effluent nitrate concentration is below water quality objectives, effluent from the Facility has the potential to degrade water quality with respect to nitrate. This Order incudes continued monitoring for nitrate and nitrogen. Furthermore, the Discharger has elected to participate in CV-SALTS Pathway B for a Local Management Zone to work collectively with other Pathway B permittees to implement best management practices and nitrogen management plans.

c. **Total Coliform Organisms.** Groundwater monitoring data indicate that total coliform organisms are not consistently detected in the monitoring well network. Sampling events for upgradient wells and downgradient wells were non-detect for total coliform organisms for 77% and 73% of the results, respectively. Results for the effluent are from undisinfected effluent. However, in the event groundwater is within 5 feet from the surface of the recycled water use area or within 5 feet from the bottom of the wastewater ponds, the effluent would be disinfected.

61. This Order establishes terms and conditions to ensure that the authorized discharge from the Facility will not excessively degrade groundwater quality, contribute to existing pollution, or unreasonably affect present and anticipated future beneficial uses.

62. Generally, limited degradation of groundwater by some of the typical constituents of concern (e.g., EC and nitrate) released with the discharge from a municipal wastewater utility after effective source control and treatment is consistent with the maximum benefit to the people of the state. The technology, energy, water recycling, and waste management advantages of a municipal utility service far exceed any benefits derived from a community otherwise reliant on numerous concentrated individual wastewater systems, and the impacts on water quality will be substantially less. Accordingly, to the extent that any degradation occurs as the result of the Facility's continued operation, such degradation is consistent with the maximum interest of the people of the State of California.

63. The Discharger implements, or will implement, as required by this Order the following BPTC measures, which will minimize the extent of water quality degradation resulting from the Facility's continued operation:

a. Providing secondary treatment of wastewater;

b. Recycling of water for crop irrigation;

c. Complying with limitations for BOD_5, TSS, and flow;

d. Complying with a Salinity Action Level of 1,000 µmhos/cm;

e. Complying with the Salt and Nitrate Control Programs;

f. Using certified operators to ensure proper operation and maintenance of the WWTF;

g. Off-site disposal of dried sludge to a landfill or composting facility; and

h. Implementing influent, effluent, and groundwater monitoring.

64. Based on the foregoing, the adoption of this Order is consistent with the State Water Board's Antidegradation Policy.

California Environmental Quality Act

65. The issuance of this Order, which prescribes requirements and monitoring of waste discharges at an existing facility, with negligible or no expansion of its existing use, is exempt from the procedural requirements of the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq., pursuant to California Code of Regulations, title 14, section 15301 (CEQA Guidelines). The discharges authorized under this Order are substantially within parameters established under prior WDRs, particularly with respect to character and volume of discharges.

66. To the extent that the construction of any new basins, ponds and/or surface impoundments are authorized under this Order, such features involve minor alterations to land, which are exempt from CEQA procedural requirements pursuant to California Code of Regulations, title 14, section 15304 (CEQA Guidelines).

67. This Order is further exempt from CEQA procedural requirements insofar as it is adopted for protection of the environment and does not authorize construction activities or the relaxation of standards allowing for environmental degradation, in accordance with California Code of Regulations, title 14, section 15308 (CEQA Guidelines).

Other Regulatory Considerations

Water Code Section 13149.2

68. These WDRs regulate a facility that may impact a disadvantaged community and tribal community and includes an alternative compliance path that allows the Discharger time to come into compliance with water quality objectives (i.e., salinity and nitrate). The Discharger has selected the Alternative Salinity Permitting Approach for the Salt Control Program, which provides an alternative approach for compliance with salinity limits through implementation of specific requirements (i.e., support facilitation and completion of the Salinity P&O Study).

The Discharger has also selected Pathway B for the Nitrate Control Program, the Management Zone Permitting Approach for collective work between other Pathway B permittees to implement best management practices and nitrate management plans. The Central Valley Water Board has satisfied the outreach requirements set forth in Water Code section 189.7 by conducting outreach in affected disadvantaged and tribal communities through its notice and comment procedures. Pursuant to Water Code section 13149.2, and as discussed in the following finding, the Central Valley Water Board reviewed readily available information and information raised to the Board by interested persons concerning anticipated water quality impacts in disadvantaged or tribal communities resulting from adoption of these WDRs. The Board also considered environmental justice concerns within the Board's authority previously raised by interested persons with regard to those impacts.

69. The Central Valley Water Board anticipates that the issuance of these WDRs will result in water quality impacts within the scope of the Board's authority. Specifically, these WDRs authorize the continued discharge of wastewater with salinity and nitrate concentrations above applicable water quality objectives. The Facility's effluent, based on limited date, has an annual average EC around 792 µmhos/cm, a TDS annual average around 515 mg/L, and an annual nitrate around 13 mg/L in 2021. While these concentrations exceed the agricultural water quality goals for EC and TDS and the water quality objectives for MUN (municipal and domestic supply) for TDS and nitrate, groundwater data upgradient of the discharge indicates salinity and nitrate exceeding water quality criteria outside of the Facility's influence. The Central Valley Water Board has identified the following measures available and within the scope of its authority to address the impacts of the Facility to the nearby disadvantage communities in Tulare County: 1) requiring active participation in the P&O Study and compliance with the Salt Control Program, which is intended to identify long-term salinity management and control practices and/or technologies, 2) maintaining current discharge concentrations for salt (e.g., establishing a performance-based salinity limit), 3) requiring active participation in the Kings Water Alliance Management Zone for the cooperative management zone approach to the Nitrate Control Program, 4) requiring application of wastewater to crops at agronomic rates with irrigation of supplemental water as needed, and 5) requiring the preparation and implementation of Salinity Evaluation and Minimization Plan to establish goals for potentially reducing salinity concentrations in the Facility's discharge. All of these measures are implemented by these WDRs.

Human Right to Water

70. 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 MCLs for drinking water (excluding salinity and nitrate), which are designed to protect human health and ensure that water is safe for domestic use. For salinity and nitrate, this Order requires compliance with the Salt Control Program and Nitrate Control Program, respectively. Although the Basin Plans' Exceptions Policy for Salinity, Nitrate, and/or Boron allows participants in these Programs to obtain limited-term exceptions from MCLs for salinity, nitrate, and/or boron, these Programs are consistent with the Human Right to Water Policy because their over-arching management goals and priorities include short-term provision of safe drinking water to impacted users and long-term restoration of impacted groundwater basins and sub-basins where reasonable, feasible, and practicable.

Threat-Complexity Rating

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

    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

    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.

Title 27 Exemption

72. This Order, which prescribes WDRs for discharges of domestic sewage or treated effluent from a municipal treatment plant, is exempt from the prescriptive requirements of California Code of Regulations, title 27 (Title 27), section 20005 et seq. (See Cal. Code Regs., tit. 27, § 20090, subd. (a) - (b).)

Stormwater

73. This Order does not cover stormwater and other discharges that are subject to the Clean Water Act's National Pollution Discharge Elimination System (NPDES). Stormwater at the Facility is captured and returned to the headworks. Because all stormwater at the Facility is collected and disposed of onsite, the Discharger is not required to obtain coverage 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) at this time.

Sanitary Sewer Overflows

74. 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.

Biosolids

75. The United States Environmental Protection Agency (US EPA) has promulgated biosolids reuse regulations in Code of Federal Regulations (CFR), title 40, part 503, Standards for the Use or Disposal of Sewage Sludge (Part 503), which establishes management criteria for protection of ground and surface waters, sets limits and application rates for heavy metals, and establishes stabilization and disinfection criteria. The Central Valley Water Board is not the implementing Agency for Part 503 regulations. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to the US EPA.

Scope of Order

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

77. 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.

78. 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.

79. 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

80. All of 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.

81. 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. (See Wat. Code, § 13167.5.)

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

83. 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 WDRs Order R5-2018-0011 (NPDES NO. CA0081485) is rescinded (except for enforcement purposes); and that the Discharger and their agents, employees and successors shall comply with the following.

A. Standard Provisions

Except as expressly provided herein, the Discharger shall comply with the Standard Provisions and Reporting Requirements dated 1 March 1991 (SPRRs), which are incorporated herein.

B. Discharge Prohibitions

1. Waste classified as “hazardous” (per Cal. Code Regs., tit. 22, §66261.1 et seq.), shall not be discharged at the Facility under any circumstance.

2. Waste constituents shall be not be discharged or otherwise released from the Facility (including during treatment and storage activities) in a manner that results in:

   a. Violations of the Groundwater Limitations of this Order; or

   b. Conditions of “nuisance” or “pollution,” as defined per Water Code section 13050.

3. Except as otherwise expressly authorized in this Order, sewage and other waste shall not be discharged to surface waters or surface water drainage courses (including irrigation ditches outside of Discharger's control).

4. Except as provided in Section E.2 of the SPRRs, incorporated herein, untreated wastes and partially treated wastes shall not bypass the treatment system.

5. Waste shall not be discharged from the Facility in a manner other than as described in this Order.

6. Discharge of treated effluent to any site other than the recycled water use areas described in the Findings is prohibited.

7. Discharge of treated wastewater outside of the Use Area identified in this Order is prohibited.

8. Toxic substances shall not be discharged into the wastewater treatment system such that biological treatment mechanisms are substantially disrupted.

C. Flow Limitations

1. Influent flows to the Facility, monitored at Monitoring Location INF-001 (as defined in the MRP), shall not exceed a monthly average dry weather flow of 1.5 million gallons per day (MGD).

D. Effluent Limitations

1. Effluent discharged to the wastewater ponds or the Use Area, monitored at Monitoring Location EFF-001 (as defined in the MRP), shall not exceed the limits specified in **Table 8** below.

Table 8 – Effluent Limits

Constituent	Unit	Monthly Average	Daily Maximum
BOD_5	mg/L	30	60
Total Suspended Solids	mg/L	30	60

2. The arithmetic mean of BOD_5 and TSS in effluent samples (EFF-001) collected over a monthly period shall not exceed 15 percent of the arithmetic mean of the values for influent samples (INF-001) collected at approximately the same times during the same period (i.e., minimum of 85 percent removal).

3. Effluent shall be disinfected when actively discharging to the wastewater ponds and groundwater is less than five (5) feet below the bottom of the treated wastewater ponds or when actively discharging to the recycled

water Use Area and groundwater is less than five (5) feet below ground surface of cropland where wastewater is applied.

i. Determination of groundwater levels requiring ultraviolet light disinfection for effluent discharged to the wastewater ponds or the Use Area shall be determined based on **Table 9** below.

Table 9 – Use of Ultraviolet Light Disinfection

When Depth of Groundwater is Less Than Five Feet Below Ground Surface in this Well	Ultraviolet Light Disinfection of Effluent is Required For Discharge to This Location
Well MW-A	Field E
Well MW-C	Field D
Well MW-E	Field C
Well MW-F	Field A and B
Well MW-G	Field A and B
Well PBs	PND-001 and PND-002

ii. Effluent discharged to the wastewater ponds shall be disinfected with ultraviolet light when the groundwater potentiometric surface map generated from depth to groundwater data collected from the groundwater monitoring well network, or other groundwater monitoring wells approved by the Executive Officer, indicate groundwater is within 5 feet from the bottom of the wastewater ponds.

iii. When ultraviolet light disinfection is required as detailed in sections D.2.i and D.2.ii above, effluent shall be disinfected such that the total coliform organisms in the disinfected effluent do not exceed:

(A) 23 most probable number (MPN) per 100 mL, as a 7-day median. If discharge occurs for less than 7 days, the median shall be evaluated of all samples collected during the period of discharge; nor

(B) 240 MPN per 100 mL, at any time.

E. Salinity Action Level

1. To comply with the Salinity Control Program, the Discharger selected the Alternative Salinity Permitting Approach (i.e., participation in the Prioritization and Optimization [P&O] Study). Therefore, as discussed in Finding 55 these WDRs establish a Salinity Action Level for annual average electrical conductivity of 1,000 µmhos/cm. As part of the Annual Monitoring Report required per the MRP, the Discharger shall evaluate the Facility's annual average effluent electrical conductivity concentration (monitored at Monitoring Location EFF-001) to the Salinity Action Level. If the Facility's discharge exceeds the Salinity Action Level, the Discharger shall submit a Salinity Action Level Report **by 1 March** of the year following the exceedance of the Salinity Action Level. The Salinity Action Level Report shall, at a minimum, include the following:

    a. An evaluation of the Facility's salinity effluent levels. This evaluation shall discuss any changes to the source water for the area served by the WWTF, any new industrial dischargers discharging to the WWTF, any increased conservation efforts implemented within the WWTF service area (with flow data demonstrating decreased flows to the WWTF), and any other changes to the WWTF's collection or treatment system that could have contributed to the increased salinity concentrations.

    b. If additional time is needed to investigate the source(s) of the salinity in the Facility's discharge, the Salinity Action Level Report shall include a detailed work plan describing what actions the Discharger will conduct (with completion dates) to investigate the source(s) of salinity and report its findings to the Central Valley Water Board. The findings from the investigations shall be submitted to the Central Valley Water Board **no later than October 1st** of the year following the exceedance of the Salinity Action Level.

    c. The Salinity Action Level Report shall evaluate the potential impact the increased salinity concentrations could have on underlying groundwater and downgradient users. If additional time is needed for this evaluation, the Salinity Action Level Report shall propose a submittal date (**no later than October 1st** of the year following exceedance of the Salinity Action Level).

F. Discharge Specifications

1. Waste discharges shall remain within authorized Use Area and authorized waste treatment and/or containment structures, except as provided in in Section I.5 of this Order (Water Recycling Specifications).

2. All systems and equipment shall be operated to optimize discharge quality.

3. 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.

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

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

6. As a means of ensuring compliance with Discharge Specification D.5, the dissolved oxygen (DO) content in the upper one foot of any wastewater treatment or storage pond shall not be less than 1.0 mg/L for three consecutive sampling events. Notwithstanding the DO monitoring frequency specified in the monitoring and reporting program, if the 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 the DO in any single pond is below 1.0 mg/L for three consecutive days, the Discharger shall report the findings to the Central Valley Water Board in accordance with **Section B.1** of the SPRRs. The written notification shall include a specific plan to resolve the low DO results within 30 days of the first date of violation.

7. 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.

8. 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.

9. On or about 1 October of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications E.7 and E.8.

10. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:

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

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

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

    d. 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.

11. 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.

12. Wastewater contained in any unlined pond shall not have a pH less than 6.0 or greater than 9.0.

13. The Discharger shall monitor sludge accumulation in the wastewater treatment/storage ponds at least every five years, and shall periodically remove sludge as necessary to maintain adequate storage capacity. Specifically, if the estimated volume of sludge in the reservoir exceeds five percent of the permitted reservoir capacity, the Discharger shall complete sludge cleanout within 12 months after the date of the estimate.

G. Groundwater Limitations

Release of waste constituents from any treatment, reclamation, or storage component associated with the WWTF shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or in excess of natural background quality, whichever is greater:

1. Total coliform organism level of 2.2 MPN/100 mL over any seven-day period.

2. Constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations, excluding salinity and nitrate.

3. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

Compliance with these limitations shall be determined annually as specified in the MRP using approved statistical methods.

H. Water Recycling Specifications

1. All recycled water generated by the Facility shall be produced, distributed and used in accordance with the Engineering Report, as referenced in Findings 17 to 19, or alternative Engineering Report subsequently approved by DDW. (See Title 22, § 60323.)

2. The quality of recycled water generated by the Facility and applied to the permitted Use Areas[3] shall at least be equivalent to undisinfected secondary recycled water, as defined by Title 22, section 60301.900.

3. Recycled water shall be used for irrigation at the Use Areas in accordance with subdivision (d) of Title 22, section 60304.

4. Tailwater runoff and spray of recycled water shall not be discharged outside of Use Areas. (See Title 22, § 60310, subd. (e)(1).)

5. Application rates of recycled water to the use area shall be reasonable and shall consider soil, climate, and plant demand. In addition, application of recycled water and use of fertilizers shall be at a rate that takes into consideration nutrient levels in recycled water and nutrient

[3] For the purpose of this Order, "**Use Area**" means an area with defined boundaries where recycled water is used or discharged. (Cal. Code Regs., tit. 22, § 60301.920.)

demand by plants.[4] As a means of discerning compliance with this requirement:

a. Crops or landscape vegetation shall be grown on Use Areas, and cropping activities shall be sufficient to take up the nitrogen applied, including any fertilizers and manure.

b. Hydraulic loading of recycled water and supplemental irrigation water (if any) shall be managed to:

i. Provide water only when water is needed and in amounts consistent with that need,

ii. Maximize crop nutrient uptake;

iii. Maximize breakdown of organic waste constituents in the root zone; and

iv. Minimize the percolation of waste constituents below the root zone.

6. Recycled water used for irrigation, or soil that has been irrigated with recycled water, shall not come into contact with edible portions of food crops that may be eaten raw by humans. (Title 22, § 60304, subd. (e).)

7. Use Areas shall only be irrigated with recycled water when appropriately trained personnel are on duty.

8. The Discharger shall conduct periodic inspections of the recycled water use areas 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.

9. Grazing of milking animals within the use areas is prohibited. [ref: Cal. Code Regs., tit. 22, § 60304(c)(5)]

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[4] The Central Valley Water Board recognizes that some leaching of salts is necessary to manage salt in the root zone of crops for production. Such leaching shall be managed to minimize degradation of groundwater, maintain compliance with the groundwater limitations of this Order, and prevent pollution.

10. The irrigation with recycled water shall be managed to minimize erosion within the use areas.

11. The use areas shall be managed to prevent breeding of mosquitoes or other vectors.

12. Use areas and recycled water impoundments shall be designed, maintained, and operated to comply with the following setback requirements:

Table 10 – Minimum Setbacks for Recycled Water Use Areas and Impoundments

Setback	Distance (ft.)
Edge of Use Area to Manmade or Natural Surface Water Drainage Course	50 (see 1 below)
Edge of Use Area to Domestic Water Supply Well	150
Toe of Recycled Water Impoundment Berm to Domestic Water Supply Well or Irrigation Well	150
Edge of Use Area to Any Irrigation Well	50

[1] A 10-foot setback may be maintained, in lieu of a 50-foot setback, between Tout Ditch (canal adjacent to Road 120) and the Use Area if a double berm is constructed and maintained as a containment feature to ensure recycled water does not enter Tout Ditch.

13. Recycled water shall not be applied with spray irrigation when wind gusts exceed 30 mph.

14. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities. (See Title 22, § 60310, subd.(e)(2).)

15. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff. (Title 22, § 60310, subd. (e)(3).)

16. Public contact with recycled water shall be controlled using fences, signs, and other appropriate means.

17. Use Areas that are accessible to the public shall be posted with signs that are visible to the public and no less than four inches high by eight inches wide. Signs shall be placed at all areas of public access and around the perimeter of all use areas and at above-ground portions of recycled water conveyances to alert the public of the use of recycled water. All signs shall display an international symbol similar to that shown in **Attachment C**, which is attached and forms part of this Order, and shall include the following wording:

"RECYCLED WATER – DO NOT DRINK" "AGUA DE DESPERDICIO RECLAMADA – NO TOME"

Alternative language will be considered by the Executive Officer if approved by DDW. (See Title 22, § 60310, subd. (g).)

18. All recycling equipment, pumps, piping, valves, and outlets shall be marked to differentiate them from potable water facilities. Quick couplers, if used, shall be different than those used in potable water systems. (See Title 22, § 60310, subd. (i).)

19. Recycled water controllers, valves, and similar appurtenances shall be equipped with removable handles or locking mechanisms to prevent public access or tampering.

20. Hose bibs and unlocked valves, if used, shall not be accessible to the public. (See Title 22, § 60310, subd. (i).)

21. No physical connection shall exist between recycled water piping and any potable water supply system (including domestic wells), or between recycled water piping and any irrigation well that does not have an approved air gap or reduced pressure principle device. (See Title 22, § 60310, subd. (h).

22. Horizontal and vertical separation between pipelines transporting recycled water and those transporting potable water shall comply with Title 22, section 64572, except to the extent that DDW has specifically approved a variance.

23. No physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water or auxiliary water source system.

24. A public water supply shall not be used as backup or supplemental source of water for a recycled water system unless the connection between the two systems is protected by an air gap separation which

complies with the requirements of California Code of Regulations, title 17, sections 7602(a) and 7603(a).

25. All recycled water piping and appurtenances in new installations and appurtenances in retrofit installations shall be colored purple or distinctively wrapped with purple tape in accordance with Health and Safety Code section 116815.

26. Any backflow prevention device installed to protect a public water system shall be inspected and maintained in accordance with Title 17, section 7605.

27. The perimeter of the Use Area shall be graded to prevent ponding along public roads or other public areas.

I. Ultraviolet Disinfection System Operating Specifications

The ultraviolet light (UV) disinfection system must be operated in accordance with an operations and maintenance program that assures adequate disinfection while discharging when groundwater is within 5 feet of the bottom of the treated wastewater ponds or within 5 feet of ground surface of cropland where wastewater is applied. During these situations, the following specifications apply:

1. The Facility's UV disinfection system shall provide continuous, reliable monitoring of flow, UV transmittance, and UV power.

2. The lamp sleeves and cleaning system components shall be visually inspected per the manufacturer's operations manual for physical wear (scoring, solarization, seal leaks, cleaning fluid levels, etc.) and to check the efficacy of the cleaning system.

3. The lamp sleeves shall be cleaned periodically as necessary to comply with these requirements.

4. Lamps shall be replaced per the manufacturer's operations manual, or sooner, if there are indications the lamps are failing to provide adequate disinfection. Lamp age and lamp replacement records shall be maintained.

J. Solids Disposal Specifications

1. Sludge[5] and Solid Waste[6] shall be removed from screens, sumps, ponds, and clarifiers as needed to ensure optimal plant operation.

2. Onsite handling and storage of Residual Sludge,[7] Solid Waste, and Biosolids[8] shall be temporary (6 months or less); 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.

3. Residual sludge, biosolids, and solid waste shall be disposed of in a manner approved by the Central Valley Water Board 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.

4. 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 2004-12-DWQ, “General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land

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[5] For the purposes of this section, “**sludge**” means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes.

[6] For the purposes of this section, “**solid waste**” includes grit and screenings generated during preliminary treatment at the Facility.

[7] For the purposes of this section, “**residual sludge**” means sludge that will not be subject to further treatment at the Facility.

[8] For the purposes of this section, “**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.

Reclamation Activities"). For a biosolids use project to be covered by Order 2004-12-DWQ, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.

5. 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.

6. Any proposed change in sludge use or disposal practice shall be reported in writing to the Central Valley Water Board at least 90 days in advance of the change.

K. Other Provisions

1. The reports/submittals required in this section shall be submitted pursuant to Water Code section 13267 and shall be prepared as described in Provisions K.9, 10, and 11.

2. By **<3 years from adoption>**, the Discharger submit a Groundwater Monitoring Well Installation Work Plan that evaluates the adequacy of the current groundwater monitoring network and proposes a time schedule to install additional monitoring wells, as needed, to provide adequate coverage of its Facility and recycled water Use Areas. Specifically, the work plan shall propose the necessary groundwater monitoring wells to ensure the network can adequately characterize upgradient and downgradient conditions and evaluate if additional monitoring wells are needed around the Facility. The Work Plan should propose to replace at least Monitoring Wells MW-A, MW-C, MW-E, MW-G, and MW-I or provide an analysis supporting an alternative monitoring well network capable of providing adequate coverage of the Facility and its recycled water Use Areas. The Work Plan shall be prepared in accordance with, and include the items listed in the first section of Attachment D (Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports) incorporated herein. The groundwater monitoring wells shall be designed to yield samples representative of first-encountered groundwater underlying the wastewater ponds and recycled water Use Area.

3. Upon Executive Officer approval of the Groundwater Monitoring Well Installation Work Plan required per Provision K.2., the Discharger shall begin implementing the Work Plan. If applicable, the Discharger shall submit a Groundwater Monitoring Well Installation Report for all new

groundwater monitoring wells constructed to comply with Provision K.2. in accordance with the approved time schedule. The report shall be prepared in accordance with, and including the items listed in, the second section of Attachment D (Requirements for Monitoring Well Installation Workplans and Monitoring Well Installation Reports). The report shall describe the installation and development of all new monitoring wells and explain any deviation from the approved workplan.

4. By <**2 Years From Adoption>,** the Discharger shall submit a Sludge Management Work Plan for Central Valley Water Board approval to address the Facility's method of compliance with Provision J.2. The Discharger previously submitted a Solids Management and Storage Work Plan on 19 March 2019 which, in part, identified mechanical dewatering as the best long term solution for solids handling at the Facility. The Sludge Management Work Plan should further explore implementing the option of mechanical dewatering or other long-term solutions for sludge management. The Work Plan shall include an implementation plan and schedule for actions.

5. By <**3 Years From Adoption>**, the Discharger shall submit an Unlined Sludge Surfaces Closure Work Plan for Central Valley Water Board approval which must propose actions to permanently decommission the unlined sludge drying beds and the unlined sludge lagoons such that they no longer threaten to violate Provision J.2. The Work Plan shall include an implementation plan and schedule for actions.

6. Beginning in 2025, the Discharger shall submit annual sludge progress reports in follow-up to actions proposed in the Solids Management Work Plan and the Unlined Sludge Surfaces Closure Work Plan. The annual sludge progress reports shall continue until a long-term solution for sludge management is in place and a decommissioning plan for unlined sludge surfaces is implemented.

7. If the Discharger proposes to receive hauled-in anaerobically digestible material for injection into an anaerobic digester, the Discharger shall notify the Central Valley Water Board and develop and implement standard operating procedures (SOPs) prior to initiation of the hauling. The SOPs shall address material handling (including unloading, screening, and other processing) prior to anaerobic digestion; transportation; spill prevention; and spill response. In addition, the SOPs shall address avoidance of the introduction of materials that could cause interference, pass-through, or upset of the treatment processes; avoidance of prohibited material; vector control; odor control; operation and maintenance; and the disposition of any solid waste segregated from the material prior to its introduction to the digester. The Discharger

shall provide training to its staff on the SOPs and shall maintain records for three years of each load received, describing the hauler, waste type, and quantity received. In addition, the Discharger shall maintain records for a minimum of three years for the disposition solid waste segregated from the digester feed material and hauled off-site, including the disposal site location and quantity of solids transferred to each location.

8. 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.

9. 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.

10. The Discharger shall submit the technical reports and work plans required by this Order for consideration by the Central Valley Water Board, and incorporate comments the Central Valley Water Board 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.

11. The Discharger shall comply with Monitoring and Reporting Program R5-2023-####, 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.

12. 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.

13. 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 includes 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.

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

15. The Discharger shall provide certified wastewater treatment plant operators in accordance with Title 23, division 3, chapter 26.

16. 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.

17. Until 5 June 2023, 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) and the Revised General WDRs Monitoring and Reporting Program (Water Quality Order 2008-0002-EXEC). Commencing 5 June 2023, the Discharger shall comply with new General WDRs for Sanitary Sewer Systems (Order WQ 2022-0103-DWQ). These General WDRs for Sanitary Sewer Systems 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.

18. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986."

19. 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.

20. 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 ensure 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 ensure full compliance with this Order.

21. 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.

22. 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.

23. 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.

ENFORCEMENT

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.

ADMINISTRATIVE REVIEW

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 (at the address below) and will be provided upon request.

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

ATTACHMENTS

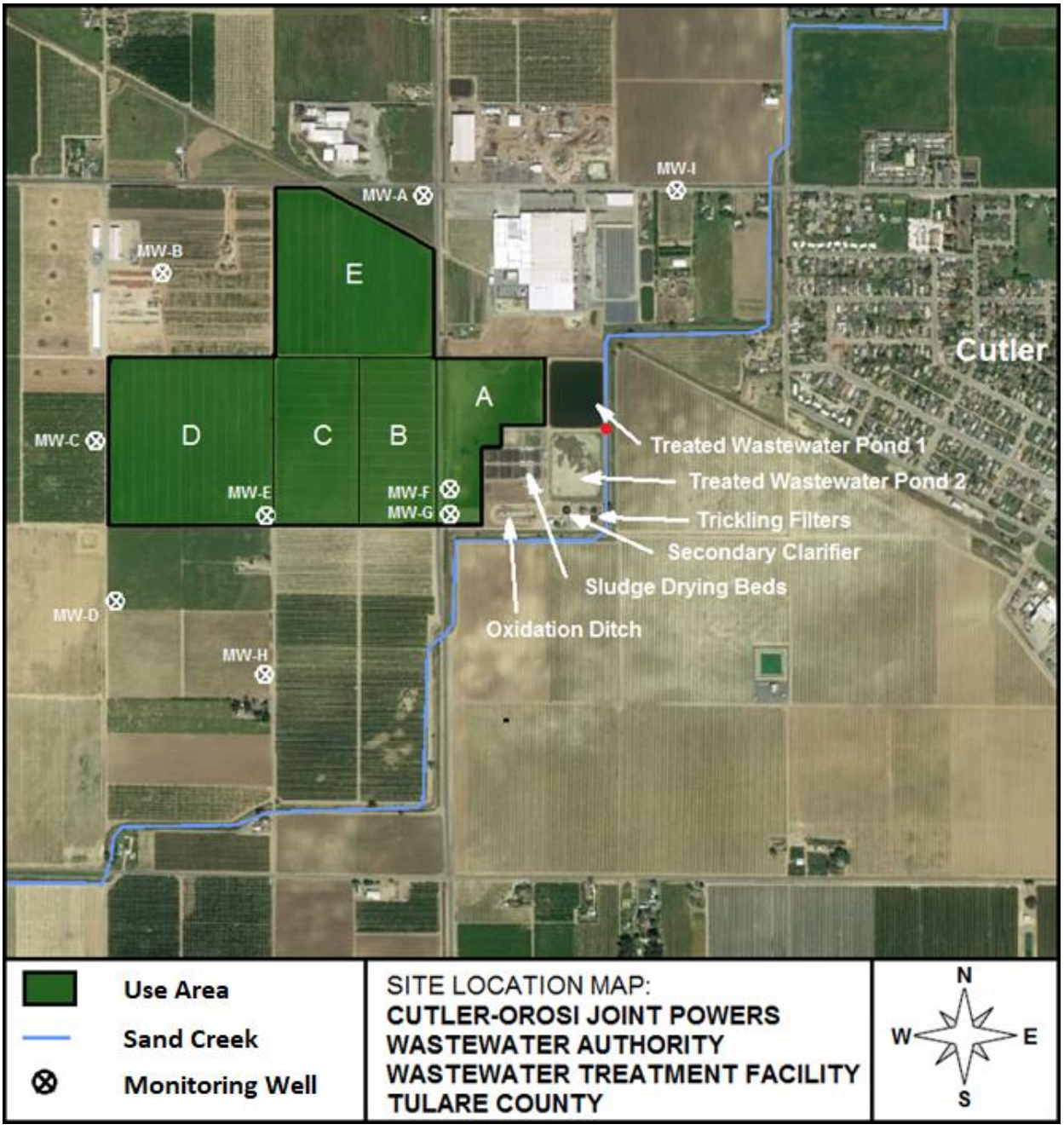
ATTACHMENT A–Site Location Map
ATTACHMENT B–Flow Schematic
ATTACHMENT C–Recycled Water Signage
ATTACHMENT D-Requirements for Monitoring Well Installation Work Plans and Monitoring Well Installation Reports

Standard Provisions & Reporting Requirements

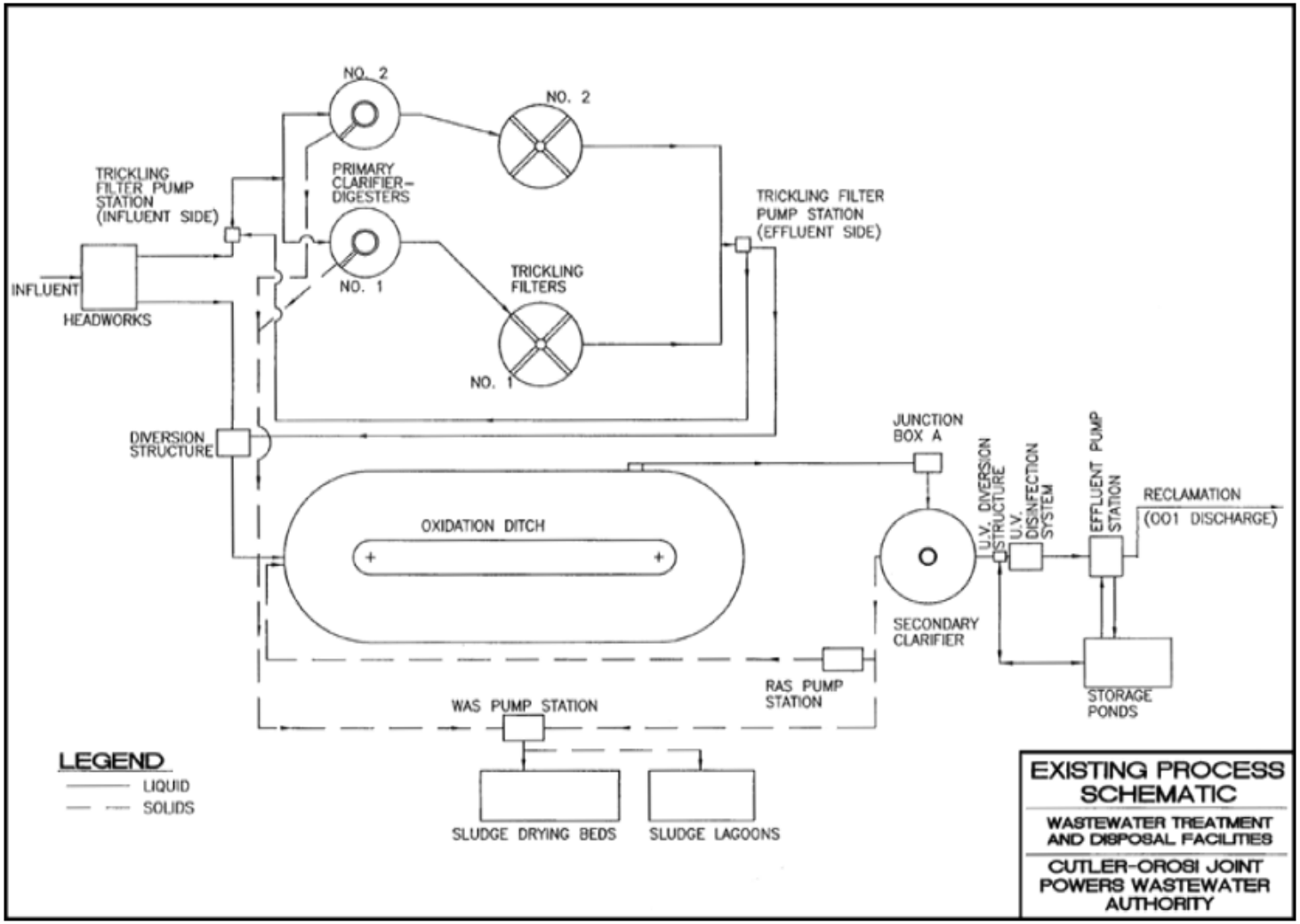
Information Sheet

Monitoring and Reporting Program R5-2023-####

ATTACHMENT A—Site Location Map



ATTACHMENT B—Flow Schematic



ATTACHMENT C—Recycled Water Signage

ATTACHMENT D—REQUIREMENTS FOR MONITORING WELL INSTALLATION WORK PLANS AND MONITORING WELL INSTALLATION REPORTS

Prior to installation of groundwater monitoring wells, the Discharger shall submit a work plan containing, at a minimum, the information listed in Section 1, below. Wells may be installed after staff approve the work plan. Upon installation, the Discharger shall submit a well installation report that includes the information contained in Section 2, below. All work plans and reports must be prepared under the direction of, and certified by, a California registered geologist or civil engineer.

SECTION 1 – Monitoring Well Installation Work Plan and Groundwater Sampling and Analysis Plan

The monitoring well installation work plan shall contain, at a minimum, the following information:

A. General Information:

- Purpose of the well installation project
- Brief Description of local geologic and hydrogeologic conditions
- Proposed monitoring well locations and rationale for well locations
- Topographic map showing facility location, roads, and surface water bodies
- Large-scaled site map showing all existing on-site wells, proposed wells, surface water bodies and drainage courses, buildings, waste handling facilities, utilities, and major physical and man-made features

B. Drilling Details:

- On-site supervision of drilling and well installation services
- Description of drilling equipment and techniques
- Equipment decontamination procedures
- Cutting disposal methods
- Soil sampling intervals (if appropriate); logging methods; number and location of soil samples and rationale; and sample collections, preservation, and analytical methods

C. Monitoring Well Design (in graphic form with rationale provided in narrative form):

- Diagram of proposed well construction details
    - Borehole Diameter
    - Casing and screen material, diameter, and centralizer spacing (if needed)
    - Type of well caps (bottom cap either screw on or secured with stainless steel screws)
    - Anticipated depth of well, length of well casing, and length and position of perforated interval
    - Thickness, position and composition of surface seal, sanitary seal, and sand pack
    - Anticipated screen slot size and filter pack

D. Well Development (not to be performed until at least 48 hours after sanitary seal placement):

- Method of development to be used (i.e., surge, bail, pump, etc.)
- Parameters to be monitored during the development and record keeping technique
- Method of determining when development is complete
- Disposal of development water

E. Well Survey (precision of vertical survey data shall be at least 0.01 foot):

- Identify the Licensed Land Surveyor or Civil Engineer that will perform the survey
- Datum for survey measurements
- List well features to be surveyed (i.e., top of casing, horizontal and vertical coordinates, etc.)

F. Schedule for Completion of Work

G. Appendix: Groundwater Sampling and Analysis Plan (SAP)

The Groundwater SAP shall be included as an appendix to the workplan, and shall be utilized as a guidance document that is referred to by individuals responsible for conducting groundwater monitoring and sampling activities.

Provide a detailed written description of standard operating procedures for the following:

- Equipment to be used during sampling
- Equipment decontamination procedures
- Water level measurement procedures
- Well purging (include a discussion of procedures to follow if three casing volumes cannot be purged)
- Monitoring and record keeping during water level measurement and well purging (include copies of record keeping logs to be used)
- Purge water disposal
- Analytical methods and required reporting limits
- Sample containers and preservatives
- Sampling
    - General sampling techniques
    - Record keeping during sampling (include copies of record keeping logs to be used)
    - QA/QC samples
- Chain of Custody
- Sample handling and transport

SECTION 2 – Monitoring Well Installation Report

The monitoring well installation report must provide the information listed below. In addition, the report must also clearly identify, describe, and justify any deviations from the approved work plan.

A. General Information:

- Purpose of the well installation project
- Number of monitoring wells installed and identifying label(s) for each
- Brief description of geologic and hydrogeologic conditions encountered during well installation
- Topographic map showing facility location, roads, and surface water bodies
- Large-scaled site map showing all previously existing wells, newly installed wells, surface water bodies and drainage courses, buildings, waste handling facilities, utilities, and other major physical and man-made features

B. Drilling Details (in narrative and/or graphic form):

- On-site supervision of drilling and well installation services
- Drilling contractor and driller's name
- Description of drilling equipment and techniques
- Equipment decontamination procedures
- Well boring log (provide for each well)
    - Well boring number and date drilled
    - Borehole diameter and total depth
    - Total depth of open hole (i.e., total depth drilled if no caving or back-grouting occurs)
    - Depth to first encountered groundwater and stabilized groundwater depth

- Detailed description of soils encountered, using the Unified Soil Classification System

C. Monitoring Well Construction Details (provide for each well):

- Well construction diagram including:
  - Monitoring well number and date constructed
  - Casing and screen material, diameter, and centralizer spacing (if needed)
  - Length of well casing
  - Length and position of slotted casing and size of perforations
  - Thickness, position and composition of surface seal, sanitary seal, and sand pack
  - Type of well caps (bottom cap either screw on or secured with stainless steel screws)

D. Well Development (provide for each well):

- Date(s) and method of development
- How well development completion was determined
- Volume of water purged and from well and method of development water disposal

E. Well Survey (provide for each well):

- Reference elevation at the top rim of the well casing with the cap removed (feet above mean sea level to within 0.01 foot)
- Ground surface elevation (feet above mean sea level to within 0.01 foot)
- Horizontal geodetic location, where the point of beginning shall be described by the California State Plane Coordinate System, 1983 datum, or acceptable alternative (provide rationale)
- Present the well survey report data in a table

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

[Tentative] Waste Discharge Requirements Order R5-2023-####
for
Cutler-Orosi Joint Powers Wastewater Authority
Wastewater Treatment Facility
Tulare County

INFORMATION SHEET

BACKGROUND

Waste Discharge Requirements (WDRs) Order R5-2018-0011 (NPDES NO. CA0081485) authorizes the discharge of up to 1.5 million gallons per day (MGD) of undisinfected and disinfected secondary treated wastewater from the Cutler-Orosi Joint Powers Wastewater Authority (Discharger) wastewater treatment facility (WWTF) to treated wastewater ponds and the recycled water use area. WDRs Order R5-2018-0011 also authorizes the discharge of up to 2.0 MGD to Sand Creek, a National Pollutant Discharge Elimination System (NPDES) discharge point, which has not been utilized since 2001. The Discharger no longer wants to retain the option of discharging to Sand Creek. These WDRs remove the NPDES discharge option to Sand Creek and only allows discharge to the treated wastewater ponds or to the recycled water Use Area.

FACILITY AND DISCHARGE

The treatment system at the Facility consists of mechanical screens; an influent pump station; trickling filter treatment train consisting of two primary clarigesters, two trickling filters, and a recirculation pump station; an oxidation ditch treatment train consisting of an oxidation ditch, secondary clarifier, and return and waste activated sludge pump stations; an ultraviolet light disinfection system; an effluent pump system; two unlined treated wastewater ponds; and the recycled water use area for application of treated wastewater. Raw wastewater is split between the trickling filter treatment train and the oxidation ditch treatment train. The trickling filter treatment train typically handles a fixed flow of 0.5 MGD, and the oxidation ditch treatment train receives the remainder. Effluent from the trickling filter treatment train is then sent to the head of the oxidation ditch treatment train.

Treated wastewater is discharged to two unlined wastewater ponds or the recycled water Use Area. The unlined wastewater ponds allow for storage, percolation, and evaporation of treated effluent and together have a capacity of approximately 21.5 million gallons. Treated effluent contained in the wastewater ponds can also be discharged to the recycled water use area. The recycled water use area includes 118.8 acres of cropland (Fields A, B, C, D, and E) with principal crops of feed grains, green-chopped silage, and sudan grass. The Discharger currently utilizes only 106 acres of cropland (Fields B, C, D, and E) and may in the future add approximately 20 additional acres to the irrigated area.

The Facility includes eight unlined sludge drying beds, four Deskins-lined sludge drying beds (constructed in 2010), two concrete-lined sludge drying beds (constructed in 2022), and two unlined sludge lagoons. Dried sludge is hauled off-site for disposal to a landfill or composting facility. The Discharger intends to utilize only the lined sludge drying beds, but has in recent years utilized the unlined beds for drying and storage of excess sludge due to current capacity limitations of the lined sludge drying beds.

If the groundwater elevation is within five feet of the ground surface where wastewater is applied or within five feet of the bottom of the treated wastewater ponds, the effluent must also be disinfected with ultraviolet light. Table 9 of these WDRs provides a table for determination of which irrigation fields must receive disinfected wastewater based on the groundwater monitoring results. The direction of groundwater flow is primarily to the southwest with depth to groundwater typically approximately 50-60 feet below ground surface.

GROUNDWATER CONSIDERATIONS

Groundwater conditions are discussed in Findings 33 to 38 of this Order. A review of the groundwater monitoring network indicates that groundwater is of poor quality for nitrates and salinity, including in background wells. The Discharger has submitted Notices to Comply with the Salinity and Nitrate Control Programs for CV-SALTS to address salinity and nitrate contributions to groundwater, as discussed in Findings 54 to 57 of this Order.

ANTIDEGRADATION

State Water Board Resolution 68-16 (Antidegradation Policy), which is incorporated as part of the Basin Plan, prohibits the Central Valley Water Board from authorizing degradation of “high quality waters” unless it is shown that such degradation: (1) will not unreasonably affect beneficial uses, or otherwise result in water quality less than as prescribed in applicable policies; (2) will be consistent with the maximum benefit to the people of the State; and (3) is minimized through the discharger’s best practicable treatment or control (BPTC).

The antidegradation analysis and conclusions are discussed in Findings 58 through 64 of the Order.

DISCHARGE PROHIBITIONS, LIMITATIONS, DISCHARGE SPECIFICATIONS, AND PROVISIONS

This Order maintains the average dry weather discharge flow, the biochemical oxygen demand, total dissolved solids, and total coliform organisms effluent limitations from Order R5-2018-0011. To address salinity in the discharge, this Order applies the 1,000 µmhos/cm effluent electrical conductivity (EC) limitation as a Salinity Action Level, which triggers a Salinity Action Level Report if the level is exceeded. This Salinity Action Level is based on the current average annual EC plus approximately 25 percent to allow

some flexibility for water conservation efforts. This Order also prescribes groundwater limitations that ensure the discharge does not affect present and anticipated beneficial uses of groundwater.

MONITORING REQUIREMENTS

Section 13267 of the California Water Code authorizes the Central Valley Water Board to require monitoring and technical reports as necessary to investigate the impacts of waste discharges on waters of the State. Water Code Section 13268 authorizes assessment of civil administrative liability where appropriate. The Order includes influent, effluent, pond, source water, groundwater, use area, ultraviolet disinfection system, and sludge/biosolids monitoring requirements. This monitoring is necessary to characterize the discharge and evaluate compliance with the requirements and specifications in the Order.

SALT AND NITRATE CONTROL PROGRAMS REGULATORY 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 Bain 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, the Discharger was issued a Notice to Comply (CV-SALTS ID 3310) with instructions and obligations for the Salt Control Program on 5 January 2020. The Discharger submitted a Notice of Intent on 29 June 2021 informing the Central Valley Water Board of its choice of Option 2 (Alternative Option for Salt Permitting).

For the Nitrate Control Program, the WWTF falls within the Kings groundwater subbasin, a Priority 1 Basin. The Dischargers submitted a Notice of Intent on 22 December 2022 informing the Central Valley Water Board of its choice of Pathway B, the Management Zone Permitting Approach.

REOPENER

The conditions of discharge in the Order were developed based on currently available technical information and applicable water quality laws, regulations, policies, and plans, and are intended to assure conformance with them. The Order sets limitations based on the information provided thus far. If applicable laws and regulations change, or once

new information is obtained that will change the overall discharge and its potential to impact groundwater, it may be appropriate to reopen the Order.

LEGAL EFFECTS OF RECISSION OF PRIOR WDRS OR ORDERS ON EXISTING VIOLATIONS

The Central Valley Water 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 action to address violations of prior prohibitions, limitations, specifications, requirements, or provisions of rescinded waste discharge requirements or orders as allowed by law.