CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2017-XXXX

WASTE DISCHARGE REQUIREMENTS

FOR
MCCLOUD COMMUNITY SERVICES DISTRICT
WASTEWATER TREATMENT/DISPOSAL PONDS
SISKIYOU COUNTY

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

1. On 11 May 2016, McCloud Community Services District (McCloud CSD) submitted a Report of Waste Discharge (RWD) to apply for a renewal of Waste Discharge Requirements (WDRs) for an existing publically owned Wastewater Treatment Plant (WWTP), which serves the City of McCloud. Additional information to complete the RWD was submitted on 7 December 2016 and the RWD was deemed complete on 20 December 2016.

2. McCloud CSD (hereafter "Discharger") owns and operates the McCloud Wastewater Treatment/Disposal Ponds (Facility) and is responsible for compliance with these WDRs.

3. The facility is located at Squaw Valley Rd in the city of McCloud (Section 18, T17N, R3E, MDB&M). The facility occupies Assessor's Parcel Numbers (APN) 49-06-22, 49-07-05, and 28-44-41 as indicated on Attachment A, which is attached hereto and made part of this Order by reference.

4. WDRs Order 97-083, adopted by the Central Valley Water Board on 25 April 1997, prescribes requirements for the facility. Order 97-083 allows an average dry weather flow of up to 300,000 gallons per day (gpd). The Discharger is not proposing any changes to the treatment system or an increase in capacity. However Order 97-083 has passed its renewal date and is due for revision. Therefore, Order 97-083 will be rescinded and replaced with this Order.

## Background Information

5. The Facility receives, on average, 155,000 gallons per day (gpd) of raw domestic sewage from approximately 700 connections in the City of McCloud; population approximately 1,300. Peak flows of 4 to 5 million gallons per month occur in June, July and August.

6. Wastewater historically has been discharged to one of four percolation/evaporation ponds and an overland flow/land application area west of the ponds. The discharge of wastewater to the overland flow/land application area was conducted generally during the summer month when evapotranspiration was the highest and threat of discharge to Squaw Valley Creek was the lowest.

7. Due to the discharge of wastewater percolating into open fractures in the east end of Pond 2 the Central Valley Water Board issued Cease and Desist Order (CDO) 93-248 which was adopted on 3 December 1993. The Discharger modified the inlet structure, constructed new berms, and sealed the fractures in Pond 2 and 3; constructed a new Pond 4; and constructed an overland flow area.

8. Due to failures of the Facility's wastewater collection system the Central Valley Water Board issued CDO R5-2000-0109, which was adopted on 15 June 2000 to address the aging and failing system. As a result the collection system was fully replaced between 2002 and 2006; at a cost of 11 million dollars.

## Existing Facility and Discharge

9. The system consists of inlet structures (flume, ultrasonic flow meter, and two distribution boxes), and four ponds. A previously permitted overland flow/ land application area will be decommissioned as indicated in Provision 1.F.c, of this order. Inlet flow can also be diverted to Pond 2 or Pond 3 to allow drying and cleanout of Pond 1. Pond 2 is segmented by an earthen berm dividing the pond into an east and west cell. Pond 4 is considerably smaller than the others and is intended for use in emergency situations. Pond areas are approximately 8.3, 6.9, 4.8, and 0.9 acres for Ponds 1 through 4, respectively.

10. Wastewater receives essentially no treatment before entering the Facility's pond system. Treatment in the ponds consists of natural aeration and decomposition.

11. In response to Central Valley Water Board CDO R5-2000-0109 the existing collection system was fully replaced between 2002 and 2006.

## Site-Specific Conditions

12. The Facility's wastewater treatment ponds are at elevations of approximately 3,175 to 3,190 feet mean sea level (MSL). The overall topography at the Facility slopes to the west with a grade of approximately 2 to 3%, towards Squaw Valley Creek. Squaw Valley Creek flows southward in the watershed and is a tributary to the McCloud River (Attachments A and B).

13. The Facility is located within the 100-year flood plain of Squaw Valley Creek (Attachment B). Located in Zone AE; the base flood elevation ranges from 3,178 to 3,186 feet MSL.

14. The Facility is located 8 miles south of the base of Mt. Shasta, within the Cascade Range geologic province of northern California, predominantly comprised of Tertiary age volcanic rocks. Geologic formations exposed or underlying the Facility are mapped as Quaternary-age alluvium and basalt. The treatment ponds are constructed over alluvium consisting of mud flow and glacial deposits originating from the slopes of Mt. Shasta. The Facility is underlain by fractured andesitic basalt and dense gray pyroxene andesite.

15. The soil types encountered at the Facility included silt, fine to medium sand, and silty to sandy gravel. These soils are underlain by volcanic (andesitic) bedrock from approximately 12 to 18 feet below ground surface (bgs). A grading analysis run on soils collected from the bottom of Pond 2 classified the soil as fine silty sand. A typical permeability value for fine silty sand is $3 \times 10^{-5}$ centimeter/second.

16. Annual Precipitation in the area is approximately 50 inches with an annual pan evaporation of approximately 55 inches.

17. In the immediate vicinity of the Facility, land uses consist of timberland production, open space, rural residential, and commercial (golf course).

## Groundwater Conditions

18. Generally, the volcanic units in this area have variable groundwater yields, with production zones at a depth of approximately 200 feet bgs. The Facility is located within the Squaw Creek Hydrologic Area (505.10) that lies within the McCloud Hydrologic Unit (505.00) which is part of the Sacramento Hydrologic Basin as delineated by the California Department of Water Resources (DWR). The Facility lies to the north of the Redding Basin, the northernmost sub basin of the Sacramento Valley basin.

19. In response to CDO 93-248 the Discharger conducted various investigations in support of required corrective actions. From these investigations it was determined that the upper surface of volcanic bedrock underlying the Facility is unsaturated and serves as an aquitard in some locations, but as a conduit in other locations. Groundwater was absent in several test borings, drilled to less than two feet bgs below Pond 2 before encountering bedrock.

20. In 1979, a dye study was performed by Central Valley Water Board staff from the wastewater ponds and indicated no observed impacts in the nearby Squaw Valley Creek or other areas of known/suspected groundwater surfacing/discharge. Additionally coliform analysis of samples taken from Squaw Valley Creek were collected above and below the ponds also indicated no observed impacts from the wastewater ponds.

21. According to DWR information, data gathered from 19 domestic well logs in the area, indicate an average total depth of wells to be approximately 120 feet bgs, with an average depth to static water of 34 feet bgs. Information also obtained from DWR indicated well yields ranged from 10 to 100 gallons per minute (gpm). The distance from the ponds to the closest water supply well(s) is unknown; however there are no wells within a half mile downgradient of the ponds, as this property is owned by the Discharger.

22. Four monitoring wells were installed in February 2016 in response to the Central Valley Water Board's request for a new RWD. Groundwater gradient is to the south-southwest, generally following surface topography. Depth to groundwater in onsite monitoring wells ranged from approximately 2 to 5 feet bgs.

23. Shallow groundwater beneath the site is likely seasonal or precipitation dependent. Groundwater levels in onsite monitoring wells declined approximately 2.8 to 3.3 feet between March and May 2016 monitoring events.

24. Based on onsite monitoring wells, shallow groundwater quality is good. None of the measured parameters exceeded their respective maximum contaminant levels (MCLs). Effluent quality is poorer than the shallow groundwater, but also did not exceed MCLs for the measured parameters in the March 2016 sampling event.

25. Percolating effluent moves into fractured bedrock underlying the ponds and migrates into underlying strata. The exact quality of the effluent that moves through fractured bedrock is unknown, but it is reasonable to assume that it is of similar quality to that observed in the Facility's shallow groundwater monitoring wells, which meets Water Quality Objectives (WQOs) for the constitutions of concern. Thus, the discharge (pond percolation) does not appear to adversely affect groundwater quality, nor should it cause WQOs to be exceeded.

## Basin Plan, Beneficial Uses, and Regulatory Considerations

26. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins,* Fourth Edition, revised July 2016 (hereafter Basin Plan) designates beneficial uses, establishes WQOs, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. Pursuant to California Water Code section13263(a), waste discharge requirements must implement the Basin Plan.

27. Local drainage is to Squaw Valley Creek a tributary of the McCloud River. The beneficial uses of the McCloud River, as stated in the Basin Plan, are Municipal and Domestic Supply (MUN), Hydropower Generation (POW), Water Contact Recreation (REC-1) and Non-contact Water Recreation (REC-2); including canoeing and rafting, Cold Freshwater Habitat (COLD), Spawning, Reproduction, and/or Early Development (SPWN), Wildlife Habitat (WILD) and other aquatic resources.

28. The beneficial uses of underlying groundwater as set forth in the Basin Plan are Industrial Process, Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Industrial Service Supply (IND), Industrial Process Supply (PRO).

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

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

31. The Basin Plan's narrative WQOs for chemical constituents, at a minimum, require waters designated as domestic or municipal supply to meet the MCLs specified in Title

22 of the California Code of Regulations (hereafter Title 22). The Basin Plan recognizes that the Central Valley Water Board may apply limits more stringent than MCLs to ensure that waters do not contain chemical constituents in concentrations that adversely affect beneficial uses.

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

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

34. In the absence of specific numerical water quality limits, the Basin Plan methodology is to consider any relevant published criteria. General salt tolerance guidelines, such as *Water Quality for Agriculture* by Ayers and Westcot and similar references indicate that yield reductions in nearly all crops are not evident when irrigation water has an EC less than 700 µmhos/cm. There is, however, an eight- to ten-fold range in salt tolerance for agricultural crops and the appropriate salinity values to protect agriculture in the Central Valley are considered on a case-by-case basis. It is possible to achieve full yield potential with waters having EC up to 3,000 µmhos/cm if the proper leaching fraction is provided to maintain soil salinity within the tolerance of the crop.

## Antidegradation Analysis

35. State Water Resources Control Board Resolution 68-16, the Statement of Policy with Respect to Maintaining High Quality of Waters in California (*Antidegradation Policy*) generally prohibits the Central Valley Water Board from authorizing activities that will result in the degradation of high-quality waters unless it has been shown that:

    a. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more WQOs;

    b. The degradation will not unreasonably affect present and anticipated future beneficial uses;

    c. The discharger employs Best Practicable Treatment or Control (BPTC) to minimize degradation; and

    d. The degradation is consistent with the maximum benefit to the people of the state.

36. Prior to 2016 the Discharger was not required to monitor groundwater quality at the Facility. Although current data is limited to two sampling events, shallow groundwater shows limited degradation (which may or may not have been caused by the operation of the WWTP), but no exceedances of an applicable WQO. Shallow groundwater is likely only present seasonally or after significant precipitation events. As discussed previously,

local groundwater supplies are derived from fractured volcanic bedrock – wells are typically screened to 120 feet bgs with a static water level of 34 feet.

37. Constituents of concern that have the potential to degrade groundwater include salts (primarily TDS, sodium, and chloride), nutrients and coliform organisms, as discussed below.

| Constituent | Concentration (mg/L) | | | | |
|---|---|---|---|---|---|
| | Influent (Pond sample) | Effluent [1] | Background Groundwater [2] | Downgradient Groundwater [3] | Potential Water Quality Objective |
| TDS | 320 | 110 | 55 | 47 | 450 [4] to 1,500 [8] |
| Nitrate (N) | <0.02 | <0.02 | 0.1 | 0.73 | 10 [6] |
| Ammonia Nitrogen | 16 | *NA* | 0.056[J] | 0.028[J] | -- |
| Sulfate | 5.8 | 0.54[J] | 1.6 | 0.91[J] | 250 [7] |
| Sodium | 24 | 13 | 12 | 4.9 | 69 [4] |
| Chloride | 16 | 8.35 | 3.2 | 0.90 | 106 [4] - 600 [8] |
| Manganese | *NA* | 0.316 | *NA* | *NA* | 0.050 [7] |
| Iron | *NA* | 12.9 | *NA* | *NA* | 0.300 [7] |
| Arsenic | *NA* | 0.001 | *NA* | *NA* | 0.010 [6] |

*NA* denotes Not Analyzed, [J] - Below reporting limits, estimated value

[1] EFF- 1, placed in berm of Pond 1, sampled 5/26/16
[2] MW-1, upgradient well, sampled 3/16/16
[3] MW-3, downgradient well, sampled 3/16/16
[4] Lowest agricultural water quality goal.
[6] Primary Maximum Contaminant Level.
[7] Secondary Maximum Contaminant Level.
[8] Secondary Maximum Contaminant Level range

a. **Total Dissolved Solids.** The influent TDS concentration is approximately 320 mg/L, which is low for a typical domestic wastewater treatment facility and appears to drop to 110 mg/L after percolating through the vadose zone below the pond as indicated by Effluent sample above. This appears to indicate that the Discharger's current treatment practices are effective. The background groundwater concentration is 55 mg/L and downgradient concentration is 47 mg/L. Therefore, the discharge is not likely to degrade groundwater quality due to increased salinity and a TDS effluent limit is not required to protect groundwater quality.

**b. Nitrate**. For nutrients such as nitrate, the potential for degradation depends not only on the quality of the treated effluent, but the ability of the vadose zone below the effluent disposal ponds to provide an environment conducive to nitrification and denitrification to convert the effluent nitrogen to nitrate and the nitrate to nitrogen gas before it reaches the water table. The effluent nitrate concentration was reported to be less than the laboratory reporting limit of 0.02 mg/L and the background concentration was reported at 0.1 mg/L. Downgradient nitrate concentrations were reported at 0.73 mg/L. The nitrate effluent quality of the existing WWTP is expected to remain the same. Therefore, the discharge is not likely to degrade groundwater quality due to increased nitrate and a nitrate effluent limit is not required to protect groundwater quality.

c. **Total Coliform Organisms.** For coliform organisms, the potential for exceedance of the Basin Plan's numeric water quality objective depends on the ability of vadose zone soils below the effluent storage/disposal ponds and saturated soils within the shallow

water bearing zone to provide adequate filtration. Historically, total coliform organisms have not been sampled at the Facility. The approximate 2-10 foot unsaturated zone consisting of silt, fine to medium sand, and silty to sandy gravel below primary Ponds 1 and 2 West is expected to be sufficient to filter out coliform organisms and to prevent groundwater degradation.

38. This Order establishes effluent and groundwater limitations for the WWTP that will ensure that discharges from the WWTP will not unreasonably threaten present and anticipated beneficial uses or result in groundwater quality that exceeds WQOs set forth in the Basin Plan.

39. The Discharger provides treatment and control of the discharge that includes: Upgraded collection system (all lines replaced 2002-2006), flow, liquid depth, freeboard and DO management, control of pond scum, weeds, & floating solids; berm inspection and maintenance. Additionally fresh water is pumped/sprayed into pond for oxygenation, circulation, and to help break-up any accumulation floating materials. For this Facility, the Board considers these measures to be best practical treatment or control (BPTC) for the treatment and disposal of wastewater at this location.

40. Degradation of groundwater by some of the typical waste constituents associated with discharges from a municipal wastewater utility, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state. The technology, energy, water recycling, and waste management advantages of municipal utility service far exceed any benefits derived from reliance on numerous, concentrated individual wastewater systems, and the impact on water quality will be substantially less. The economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, and provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order.

41. This Order is consistent with the *Antidegradation Policy* since; (a) the limited degradation allowed by this Order will not result in water quality less than water quality objectives, or unreasonably affect present and anticipated beneficial uses, (b) the Discharger has implemented BPTC to minimize degradation, and (c) the limited degradation is of maximum benefit to people of the State.

## Other Regulatory Considerations

42. In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

43. Based on the threat and complexity of the discharge, the facility is determined to be classified as 2C as defined below:

a. Category 2 - threat to water quality: "Those discharges of waste that could impair the designated beneficial uses of the receiving water, cause short-term violations of WQOs, cause secondary drinking water standards to be violated, or cause a nuisance."

b. Category C - Any discharger for which waste discharge requirements have been prescribed pursuant to Section 13263 of the Water Code not included in Category A or Category B as described above. Included are dischargers having no waste treatment systems or that must comply with best management practices, dischargers having passive treatment and disposal systems, or dischargers having waste storage systems with land disposal**.**"

44. Title 27 of the California Code of Regulations (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to provisions that exempt domestic sewage, wastewater, and reuse. Title 27, section 20090 states in part:

> The following activities shall be exempt from the SWRCB-promulgated provisions of this subdivision, so long as the activity meets, and continues to meet, all preconditions listed:
>
> …
>
> (b) Wastewater - Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:
>
> (1) the applicable RWQCB has issued WDRs, reclamation requirements, or waived such issuance;
>
> (2) the discharge is in compliance with the applicable water quality control plan; and
>
> (3) the wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

45. The discharge authorized herein (except for the discharge of residual sludge and solid waste), and the treatment and storage facilities associated with the discharge, are exempt from the requirements of Title 27 as follows:

a. Ponds 1, 2, 3, and 4 are exempt pursuant to Title 27, section 20090(b) because they are wastewater percolation ponds and:

i. The Central Valley Water Board is issuing WDRs.

ii. The discharge is in compliance with the Basin Plan, and;

iii. The treated effluent discharged to the ponds does not need to be managed as hazardous waste.

46. The U.S. EPA published *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (hereafter "Unified Guidance") in 2009. As stated in the Unified Guidance, the document:

> …is tailored to the context of the RCRA groundwater monitoring regulations …

> [however, t]here are enough commonalities with other regulatory groundwater monitoring programs … to allow for more general use of the tests and methods in the Unified Guidance… Groundwater detection monitoring involves either a comparison between different monitoring stations … or a contrast between past and present data within a given station… The Unified Guidance also details methods to compare background data against measurements from regulatory compliance points … [as well as] techniques for comparing datasets against fixed numerical standards … [such as those] encountered in many regulatory programs.

The statistical data analysis methods in the Unified Guidance are appropriate for determining whether the discharge complies with Groundwater Limitations of this Order.

47. The State Water Board adopted Order 2014-0057-DWQ (NPDES General Permit CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, and requiring submittal of a Notice of Intent by all affected industrial dischargers. The wastewater treatment facility has a design capacity of 0.30 MGD. The Discharger is therefore not required to obtain coverage under NPDES General Permit CAS000001.

48. On 2 May 2006, the State Water Board adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems General Order 2006-0003-DWQ (the General Order). The General Order requires all public agencies that own or operate sanitary sewer systems greater than one mile in length to comply with the Order. The Discharger's collection system exceeds one mile in length and the Discharger is enrolled under the General Order.

49. Water Code section 13267(b) states:

> In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge within its region … shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports 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.

The technical reports required by this Order and the attached Monitoring and Reporting Program (MRP) R5-2017-XXXX are necessary to ensure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.

50. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981). These standards, and any more stringent standards adopted by the state or county pursuant to Water Code section 13801, apply

to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.

51. All wastewater management systems at the facility have already been installed and are currently in use. This Order places additional requirements on the continued operation of the facility in order to ensure the protection of waters of the state. The issuance of this Order is therefore exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) in accordance with California Code of Regulations, title 14, section 15301, which exempts the "operation, repair, maintenance, [and] permitting … of existing public or private structures, facilities, mechanical equipment, or topographical features" from environmental review.

52. The United States Environmental Protection Agency (EPA) has promulgated biosolids reuse regulations in 40 CFR 503, *Standard for the Use or Disposal of Sewage Sludge,* which establishes management criteria for protection of ground and surface waters, sets application rates for heavy metals, and establishes stabilization and disinfection criteria.

53. The Central Valley Water Board is using the Standards in 40 CFR 503 as guidelines in establishing this Order, but the Central Valley Water Board is not the implementing agency for 40 CFR 503 regulations. The Discharger may have separate and/or additional compliance, reporting, and permitting responsibilities to the EPA.

54. Pursuant to Water Code section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

**Public Notice**

55. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.

56. The Discharger(s) and interested agencies and persons have been notified of the Central Valley Water Board's intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity to submit written comments and an opportunity for a public hearing.

57. All comments pertaining to the discharge were heard and considered in a public hearing.

**IT IS HEREBY ORDERED** that Order 97-083 is rescinded except for purposes of enforcement, and, pursuant to Water Code sections 13263 and 13267, the McCloud CSD, its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the Water Code and regulations adopted hereunder, shall comply with the following:

## A. Discharge Prohibitions

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

2. Discharge of waste classified as 'hazardous', as defined in the California Code of Regulations, title 22, section 66262.1 et seq., is prohibited.

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

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

5. The discharger shall not allow toxic substances to be discharged into the wastewater treatment system or land application areas such that biological treatment mechanisms are disrupted.

6. Discharge to the overland flow/land application area is prohibited unless approved by the Executive Officer.

7. The discharge of offsite waste transported to the WWTP for disposal is prohibited unless approved by the Executive Officer.

## B. Flow Limitations

1. **Effectively immediately**, influent flows to the WWTP shall not exceed the following limits:

| Flow Measurement | Flow Limit |
|---|---|
| Total Annual Flow [1] | 62 MG |
| Average Dry Weather Flow [2] | 0.16 MGD |

[1] As determined by the total flow for the calendar year.

[2] As determined by the total flow for the months of August through October, inclusive, divided by 92 days.

## C. Discharge Specifications

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

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

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

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

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

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

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

8. As a means of discerning compliance with Discharge Specification C. 7, 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. If the DO in any single pond is below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings to the Regional Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.

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

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

11. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications C.9 and C.10.

12. 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.

e. Vegetation management operations in areas in which nesting birds have been observed shall be carried out either before or after, but not during, the bird nesting season, generally between months of April and June.

13. 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.

## D. Groundwater Limitations

Release of waste constituents from any portion of the WWTP shall not cause groundwater to:

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

2. Contain constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations.

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

4. Compliance with these limitations shall be determined annually based on comparison of groundwater concentrations to applicable WQOs.

## E. Solids Disposal Specifications

Sludge, as used in this document, means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the WWTP. 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.

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

2. Any handling and storage of residual sludge, solid waste, and biosolids at the WWTP shall be temporary (i.e., no longer than two years) 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 Executive Officer and consistent with Title 27, division 2. Removal for further treatment, disposal, or reuse at disposal sites (i.e., landfills, WWTPs, 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 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 Executive Officer at least 90 days in advance of the change.

## F. Provisions

1. The following reports shall be submitted pursuant to Water Code section 13267 and shall be prepared as described in Provision Section F.5 of this order:

   a. By **1 July 2019,** the Discharger shall submit a *Water Quality Assessment Report.* This report shall summarize and evaluate water quality data collected from the Facility.

      1) For each monitored constituent identified in the MRP the report shall present a summary of monitoring data and the calculated concentrations of each constituent from each sampling location.
      2) Effluent monitoring data shall be evaluated to assess whether effluent wastewater concentrations are such that underlying groundwater could be impacted.
      3) The report shall also assess background groundwater quality which includes a determination of which wells are the background monitoring well(s) and which well(s) are compliance monitoring point's downgradient of the discharge.

4) The report will also provide any recommendations that may be necessary to address any data gaps in the current monitoring program.

b. By **1 September 2017,** the Discharger shall submit a *Bio-Solids Handling and Disposal Plan.* This plan shall address reuse or disposal of current bio-solids stored at the facility by 1 January 2018. The plan shall include a detailed outline for sludge removal, drying, and disposal. The plan shall specifically describe the phasing of the project, measures to be used to control runoff or percolate from the sludge as it is drying, and a schedule that shows how all dried biosolids will be removed from the Facility prior to the onset of the rainy season **(1 October)**. It will also outline future handling/ treatment of bio-solids at the facility that will comply with section E.2 of this order that specifies no more than 2 years of storage of any bio-solids/sludge removed from the ponds. Additionally the Discharger will also be required to provide written notification at least **180 days** prior to any new sludge removal and disposal as specified in Provision F.3.

c. By **1 September 2017,** the Discharger shall submit an *Overland Flow/Land Application Area Decommissioning Report.* This report shall address activities completed to disconnect infrastructure that allowed wastewater to be diverted from the pond(s) to the former Overland Flow/Land Application Area.

2. If groundwater monitoring results show that the discharge of waste is causing groundwater to contain any waste constituents in concentrations statistically greater than the Groundwater Limitations of this Order, within 120 days of the request of the Executive Officer, the Discharger shall submit a BPTC Evaluation Workplan that sets forth the scope and schedule for a systematic and comprehensive technical evaluation of each component of the facility's waste treatment and disposal system to determine BPTC for each waste constituent that exceeds a groundwater limitation. The workplan shall contain a preliminary evaluation of each component of the WWTP and effluent disposal system and propose a time schedule for completing the comprehensive technical evaluation. The schedule to complete the evaluation shall be as short as practicable, and shall not exceed one year after receipt of the above workplan.

3. At least **180 days** prior to any sludge removal and disposal, the Discharger shall submit a *Sludge Cleanout Plan*. The plan shall include a detailed plan for sludge removal, drying, and disposal. The plan shall specifically describe the phasing of the project, measures to be used to control runoff or percolate from the sludge as it is drying, and a schedule that shows how all dried biosolids will be removed from the site prior to the onset of the rainy season **(1 October)**.

4. 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**.

5. 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.

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

7. The Discharger shall comply with MRP R5-2017-XXXX, 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.

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

9. 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.

10. 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.

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

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

13. 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.

14. 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."

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

16. 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.

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

18. In the event of any change in control or ownership of the WWTP, 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.
19. 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.

20. 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.

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

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

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that the foregoing is a full true, and correct copy of an Order adopted by the California Regional Water Quality Control Board on __

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PAMELA C. CREEDON, Executive Officer