

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2012-0125

WASTE DISCHARGE REQUIREMENTS

FOR
HUME LAKE CHRISTIAN CAMPS, INC.
WASTEWATER TREATMENT FACILITY
FRESNO COUNTY

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

1. On 22 July 2002, Hume Lake Christian Camps, Inc., submitted a Report of Waste Discharge (RWD) that describes the use of recycled wastewater from an existing privately owned wastewater treatment facility (WWTF) for irrigation of lawn areas having unrestricted public access. Additional information to complete the RWD was submitted on 31 December 2002. On 1 September 2009, Hume Lake Christian Camps, Inc., submitted another RWD that describes a proposed increase to the permitted flow rate of the WWTF.
2. Hume Lake Christian Camps, Inc., (hereafter "Discharger") owns and operates the WWTF and is responsible for compliance with these Waste Discharge Requirements (WDRs).
3. The WWTF is at 64144 Hume Lake Road in Hume (Section 15, T13S, R28E, MDB&M). The WWTF occupies Assessor's Parcel Number (APN) 165-230-30, and is shown on Attachment A, which is attached hereto and made part of this Order by reference.
4. WDRs Order 94-106, adopted by the Central Valley Water Board on 22 April 1994, prescribes requirements for the WWTF. Order 94-106 allows an average dry weather flow of up to 0.146 million gallons per day (mgd) and a daily maximum discharge of 0.200 million gallons to either evaporation/percolation ponds or leach trenches. The Discharger modified its treated effluent distribution system to irrigate lawn areas used for recreation activities at the camps. The Discharger also improved the WWTF by installing an influent equalization tank and additional blowers and fine bubble diffuser racks in the sequencing batch reactors (SBRs). These improvements increased the design flow rate of the WWTF from 0.200 mgd to 0.275 mgd. Due to these changes, Order 94-106 will be rescinded and replaced with this Order.

Existing Facility and Discharge

5. The WWTF consists of a 110,000-gallon flow equalization tank, head works, bar screen, two SBR's, an aerobic digester, a vacuum-assisted sludge drying floor, a decant balance tank for decanted clear liquor, a tertiary disk filter and a chlorine contact basin. The WWTF is also equipped with a 200,000-gallon emergency storage tank. Solids removed by the bar screen are bagged and placed in the municipal waste dumpster at the site. Disinfection is achieved by adding sodium hypochlorite (12.5%) to the treated wastewater in the chlorine contact basin. The contact basin is a 48-inch diameter reinforced concrete pipe approximately 36 feet long and has insufficient capacity to achieve a 90 minute modal time. The contact basin is beneath the floor slab of the WWTF, upstream of the effluent pumps, and cannot be reasonably extended to gain additional volume for chlorine contact time. The required volume to achieve a 90 minute modal time is provided by the effluent force main, which is approximately 1,680 linear feet of 6-inch diameter pipe and an existing 21,000 gallon effluent storage tank near the percolation ponds.

6. The WWTF receives untreated sewage from various dormitories, single family residences, offices, laundry facilities, and a cafeteria. The camp hosts approximately 25,000 people annually during the months of June, July, and August. The influent wastewater analytical results for 2012, required by Monitoring and Reporting Program (MRP) No. 94-106 are summarized below.

Parameter	Units	Number of Samples	Mean Result
Biochemical oxygen demand (BOD)	mg/L	20	128
Total suspended solids (TSS)	mg/L	20	85
Settleable Solids (SS)	ml/L	12	1.2

7. The Discharger regularly monitors treated effluent in accordance with the MRP. Effluent monitoring data for 2012 are summarized below.

Parameter	Units	Number of Samples	Mean Result
BOD	mg/L	23	ND
TSS	mg/L	23	ND
SS	ml/L	155	ND
Total Coliform	MPN/100mL	23	<2
Electrical Conductivity (EC)	umhos/cm	5	230
Nitrate as N	mg/L	2	2.3

8. Treated effluent is discharged to percolation/evaporation ponds in summer through early fall and to leach trenches in late fall through spring. Historically there were twelve evaporation/percolation ponds connected in series by gravity pipelines that are at least 2 feet below the top of the pond sidewalls. Ponds 5 and 6 have been combined and ponds 8 and 9 have been combined. Surface aerators are in ponds 1 and combined pond 5/6. Total capacity of the pond system is 25.7 acre feet (8.374 million gallons). There are a total of 69 leach trenches, each 100 feet long. The leach trenches are 10 feet deep and 2 feet wide. A 4-inch perforated PVC pipe is buried 2 feet below ground surface with 1.5-inch gravel below and native backfill above the pipe.
9. Treated effluent from the evaporation/percolation ponds is used to sprinkler-irrigate a 3.2-acre reclamation area (also referred to as sprayfield) of grass (50-50 mix of Blue Grass and Perennial Rye Grass) and native vegetation. Approximately two acres of the grass portion of the sprayfield is used for softball or other similar recreational activities and a heliport for the U.S. Forest Service and Life Flight helicopters. The remainder of the sprayfield consists of native vegetation on cut or fill slopes and natural terrain. The sprayfield overlays approximately 40 leach trenches. Discharge to this area alternates between the leach trenches in the late fall through spring and to the sprayfield in summer through early fall when the ponds are in use. Discharge via the leach trenches and sprayfield do not occur simultaneously.
10. The Discharger continuously monitors the chlorine dose used for disinfection and collects a sample of effluent (following disinfection) on a daily basis and analyzes the sample for residual chlorine levels.
11. Sludge from the SBR's is pumped into an aerobic digester where a polymer is added to aid in flocculation. Clear liquid is decanted from the digester and returned to the SBR's. The remaining sludge in the digester is pumped to a vacuum-assisted drying floor within the main WWTF building. Following drying, the sludge is transported via front loader and truck to the sludge storage area where it is spread on bare ground for further drying by the sun. The Discharger turns the spread sludge every few days until it is dry enough to crumble instead of smear. Following this procedure, the sludge is stockpiled at the same location. A composite sample of dried sludge is analyzed twice per year for classification. The Discharger indicates dried sludge from 2010 and 2011 has been classified as Class A biosolids. Dried sludge is used as a soil amendment at the site or hauled off-site.
12. Surface waters are protected from runoff of effluent by a minimum of 2-feet of freeboard in each percolation/evaporation pond, rotation of discharge to leach trenches to allow for periods of rest, inspection and preventative maintenance of leach trench distribution boxes, sprinkler irrigation of sprayfield in summer and early fall at rates that preclude standing water, and covering biosolid stockpiles with tarp.

Planned Changes in the Facility and Discharge

13. The Discharger is exploring the logistics of accepting wastewater flows from the nearby Hume Subdivision, which currently discharges domestic waste to individual septic systems. In order to accommodate the camp's peak seasonal monthly discharge and potential wastewater flows from the subdivision, the Discharger submitted the RWD requesting an increase of the permitted flow rate to 0.275 mgd.
14. Peak flows at the camp and Hume Subdivision are during June, July, and August. The average daily flows during this period are 110,000 gallons per day (gpd) for the camps and 162,900 gpd for the Hume Subdivision.
15. The discharge infrastructure of the WWTF will be modified so that treated effluent can be discharged directly to the sprayfield when recycled water is needed and to preclude discharge of treated effluent from the evaporation/percolation ponds to the sprayfield.

Wastewater Collection System

16. The sanitary sewer system collects wastewater and consists of sewer pipes, manholes, and/or other conveyance system elements that direct raw sewage to the treatment facility. A "sanitary sewer overflow" (SSO) is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the treatment facility. Temporary storage and conveyance facilities (such as wet wells, regulated impoundments, tanks, highlines, etc.) may be part of a sanitary sewer system and discharges to these facilities are not considered SSOs, provided that the waste is fully contained within these temporary storage/conveyance facilities.
17. SSOs consist of varying mixtures of domestic and commercial wastewater, depending on land uses in the sewage collection system. The most common causes of SSOs are grease blockages, root blockages, debris blockages, sewer line flood damage, manhole structure failures, vandalism, pump station mechanical failures, power outages, storm or groundwater inflow/infiltration, lack of capacity, and/or contractor-caused blockages.
18. SSOs often contain pathogenic organisms, toxic pollutants, nutrients, oxygen demanding organic compounds, oil and grease, suspended solids, and other pollutants. SSOs to surface waters can cause temporary exceedances of applicable water quality objectives, pose a threat to public health, adversely affect aquatic life, and impair recreational use and aesthetic enjoyment of surface waters in the area.
19. The Discharger is not required to obtain coverage under State Water Board Order 2006-0003-DWQ because neither the sewer system nor the WWTF is publicly owned. Therefore, the Discharger is expected to take all necessary steps to

adequately maintain, operate, and prevent overflows from its sanitary sewer system, and to comply with this Order with regard to responding to and reporting all SSOs.

Site-Specific Conditions

20. The potable water supply comes from seven wells, Long Meadow Creek, and Hume Lake. Based on a water supply monitoring event during May 2012, the chemical character of the potable water supply is summarized below.

Parameter	Units	Average of Seven Wells	Long Meadow Creek	Hume Lake
TDS	mg/L	109	55	52
EC	umhos/cm	156	56	59
Total Hardness	mg/L	38	18	19
Calcium	mg/L	12	5.3	5.7
Magnesium	mg/L	1.9	1.1	1.1
Sodium	mg/L	18	4.7	4.9
Potassium	mg/L	<2.0	<2.0	<2.0
Total Alkalinity	mg/L	66	32	33
Sulfate	mg/L	2.0	<2.0	<2.0
Chloride	mg/L	9.0	2.0	2.6
Nitrate as NO ₃	mg/L	<2.0	<2.0	<2.0
Ammonia as NO ₃	mg/L	0.13	<0.10	<0.10
pH	pH units	7.5	7.4	7.4
Iron	ug/L	4,141	210	340
Boron	ug/L	133	<100	<100
Orthophosphate	mg/L	<0.6	<0.6	<0.6

The weighted average TDS and EC for water supply monitoring in May 2012 were 64 mg/L and 76 umhos/cm, respectively.

21. The WWTF is approximately 60 miles east of Fresno in the Sierra Nevada Mountains at an elevation of approximately 5,300 feet above mean sea level (MSL). The area around the site is uneven with drainage to the northeast towards Hume Lake, which is an artificial lake, approximately 87 acres in size. Hume Lake is a tributary to the Kings River.

22. The WWTF is surrounded by national forest lands with the Hume Subdivision to the east and Hume Lake to the northeast. Annual precipitation in the vicinity averages approximately 40 inches, the 100-year total annual precipitation is approximately 79 inches, and the reference evapotranspiration rate is approximately 57 inches per year.

Groundwater Considerations

23. A technical report submitted with the RWD summarized field activities conducted in and around the sprayfield in order to determine infiltration rates. The technical report indicates the geology of the sprayfield consists of 2 to 6 feet of silty sand overlying 17 to 40 feet of decomposed granite overlying more resistant granitic bedrock. No fractures were visible in any of the test pits that were excavated as part of the field activities. Depth to groundwater is greater than 15 feet below ground surface. No bedrock outcrops exist on the surface.
24. Groundwater monitoring is not required as part of the current MRP. However, groundwater can be characterized by analytical data collected from water supply wells in the vicinity of the WWTF and summarized in [Finding 20](#).

Basin Plan, Beneficial Uses, and Regulatory Considerations

25. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition*, revised January 2004 (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, 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 Water Code section 13263(a), waste discharge requirements must implement the Basin Plan.
26. Local drainage is to Hume Lake, which is tributary to the Main Fork of the Kings River. The beneficial uses of this reach of the Kings River, as stated in the Basin Plan, are municipal and domestic supply; fresh water replenishment; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; wildlife habitat; rare, threatened, or endangered species; and spawning, reproduction, and/or early development.
27. The Basin Plan designates the beneficial uses of underlying groundwater as municipal and domestic supply, agricultural supply, and industrial supply.
28. The Basin Plan establishes narrative water quality objectives for chemical constituents, tastes and odors, and toxicity in groundwater. The Toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated 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.

29. The Basin Plan's narrative water quality objective for chemical constituents, at a minimum, requires 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.
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 identifies the greatest long-term problem facing the entire Tulare Lake Basin as the increase in salinity in groundwater, which has accelerated due to the intensive use of soil and water resources by irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until a valley-wide drain is constructed to carry salts out of the basin. Until the drain is available, the Basin Plan establishes several salt management requirements, including:
 - a. The incremental increase in salts from use and treatment must be controlled to the extent possible. The maximum electrical conductivity (EC) in the discharge shall not exceed the EC of the source water plus 500 umhos/cm. When the source water is from more than one source, the EC shall be a weighted average of all sources.
 - b. Discharges to areas that may recharge good quality groundwater shall not exceed an EC of 1,000 umhos/cm, a chloride content of 175 mg/L, or a boron content of 1.0 mg/L.

Antidegradation Analysis

32. State Water Resources Control Board Resolution 68-16 ("Policy with Respect to Maintaining High Quality Waters of the State") (hereafter Resolution 68-16) prohibits degradation of groundwater unless it has been shown that:
 - a. The degradation is consistent with the maximum benefit to the people of the state.
 - b. The degradation will not unreasonably affect present and anticipated future beneficial uses.
 - c. The degradation does not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives, and

- d. The discharger employs best practicable treatment or control (BPTC) to minimize degradation.
33. Degradation of groundwater by some of the typical waste constituents associated with discharges from a municipal wastewater facility, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state.
 34. The Discharger aids in the economic prosperity of the region by direct employment and provides a tax base for county government. Provided the discharge from the WWTF complies with State and Central Valley Water Board plans and policies, limited degradation that may occur due to the continued operation of the WWTF is to the maximum benefit to the people of the State.
 35. Constituents of concern that have the potential to cause degradation of high quality waters include, in part, organics, nutrients, and salts.
 - a. To reduce the organic load of the discharge, the WWTF includes two SBR's that provide aerobic biological treatment of the raw wastewater which is expected to prevent odor and nuisance conditions and preclude degradation of groundwater from organic loading.
 - b. For nitrogen, the discharge has an average nitrate as nitrogen concentration of 2.3 mg/L which should not cause degradation of groundwater.
 - c. For salinity, the discharge with an average EC of 230 umhos/cm meets the Basin Plan limit of source water EC plus 500 umhos/cm or a maximum EC of 1,000 umhos/cm for discharges to areas that may recharge good quality groundwater and is not anticipated to degrade groundwater such that it exceeds water quality objectives.
 36. This Order establishes terms and conditions to ensure that any degradation that results from the discharge does not reasonably affect present and anticipated uses and does not result in water quality less than that prescribed in State and regional policies and complies with applicable water quality objectives.
 37. The Discharger provides treatment and control of the discharge that incorporates: tertiary treatment and disinfection of wastewater; wastewater treatment for BOD and nitrogen removal; sludge dewatering; sludge used agronomically on site or shipped off-site; compliance with the State Water Board's Operator Certification Program for private WWTF's; and source water and effluent monitoring. These treatment or control practices can be considered "best practicable treatment or control" for the purposes of Resolution 68-16.

38. The discharge and the potential for groundwater degradation allowed in this Order is consistent with the Antidegradation Policy since: (a) the limited degradation is of maximum benefit to people of the State, (b) the limited degradation allowed by this Order will not unreasonably affect present and anticipated beneficial uses of groundwater, or result in water quality less than water quality objectives, and (c) the Discharger has implemented “best practicable treatment or control” to minimize degradation.

Water Recycling Regulatory Considerations

39. Undisinfected domestic wastewater contains human pathogens that are typically measured using total or fecal coliform organism as indicator organisms. The California Department of Public Health (DPH), which has primary statewide responsibility for protecting public health, has established statewide criteria in Title 22, section 60301 et seq. for the use of recycled water.
40. A 1996 Memorandum of Agreement (MOA) between DPH and the State Water Board on the use of recycled water establishes basic principles relative to the agencies and the regional water boards. In addition, the MOA allocates primary areas of responsibility and authority between these agencies, and provides for methods and mechanisms necessary to assure ongoing, continuous future coordination of activities relative to the use of recycled water in California. This Order implements the applicable portions of the Title 22 water recycling regulation in accordance with the MOA.
41. The Discharger submitted a *Title 22 Engineering Report* in July 2002 to the Central Valley Water Board and DPH pursuant to Title 22 for water recycling of disinfected tertiary recycled water. DPH provided comments to the *Engineering Report* on 6 August 2002 that included a requirement for continuous monitoring of chlorine residual levels. The Discharger submitted a revised Engineering Report, with DPH comments incorporated, to the Central Valley Water Board in January 2010. The revised report was approved by DPH on 26 September 2012.
42. As noted in [Finding 10](#), the Discharger does not continuously monitor chlorine residual levels following disinfection. This Order includes a Provision for the Discharger to install equipment to monitor chlorine residual levels in accordance with DPH and Title 22 requirements.

Other Regulatory Considerations

43. Based on the threat and complexity of the discharge, the plant is determined to be classified as 2B 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 water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance.”

- b. Category B complexity, defined as: “Any discharger not included in Category A that has physical, chemical, or biological treatment systems (except for septic systems with subsurface disposal), or any Class 2 or Class 3 waste management unit.”

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 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.

...

(h) Reuse - Recycling or other use of materials salvaged from waste, or produced by waste treatment, such as scrap metal, compost, and recycled chemicals, provided that discharges of residual wastes from recycling or treatment operations to land shall be according to applicable provisions of this division.

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. The evaporation/percolations ponds and leach trenches are exempt pursuant to Title 27, section 20090(b) because:
 - 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 and leach trenches does not need to be managed as hazardous waste.
- b. The discharge to the sprayfield is also exempt pursuant to Title 27, section 20090(h) because the wastewater has been treated to make it suitable for direct beneficial reuse and is discharged in a manner consistent Title 22 requirements for disinfected tertiary recycled water.
46. The State Water Board adopted Order 97-03-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 less than 1.0 mgd; therefore, the Discharger is not required to obtain coverage under NPDES General Permit CAS000001.

47. 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 R5-2012-0125 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.

48. 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.
49. 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.

50. 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.

CEQA

51. On 23 June 2011, the County of Fresno, Department of Public Works and Planning adopted a Mitigated Negative Declaration (MND) for Initial Study No. 6246 to allow for the expansion of the camp to include construction of new buildings and structures and expansion of the WWTF (including an additional sequencing batch reactor as needed).

Public Notice

52. 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.
53. The Discharger 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.
54. All comments pertaining to the discharge were heard and considered in a public hearing.

IT IS HEREBY ORDERED that Order 94-106 is rescinded except for purposes of enforcement, and, pursuant to Water Code sections 13263 and 13267, the Discharger, 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 23, section 2510 et seq., is prohibited.
3. Discharge of waste classified as 'designated', as defined in Water Code section 13173, is prohibited.
4. 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*.

5. Discharge of waste at a location or in a manner different from that described in the Findings is prohibited.
6. Discharge of toxic substances into the wastewater treatment system such that biological treatment mechanisms are disrupted is prohibited.
7. Once the Discharger has satisfied Provision G.6, discharge from the evaporation/percolation ponds to the sprayfield is prohibited.

B. Discharge Specifications

1. The maximum daily discharge from the WWTF shall not exceed 0.275 mgd.
2. No waste constituent shall be released, discharged, or placed where it will be released or discharged, in a concentration or in a mass that causes violation of the Groundwater Limitations of this Order.
3. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.
4. The discharge shall remain within the permitted waste treatment/containment structures and discharge areas at all times.
5. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.
6. Public contact with wastewater shall be prevented through such means as fences, signs, or acceptable alternatives.
7. Objectionable odors shall not be perceivable beyond the limits of the WWTF property at an intensity that creates or threatens to create nuisance conditions.
8. The 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.
9. On or about **1 October** of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specification 8.
10. Until the Discharger has satisfied Provision G.6, the turbidity of the filtered effluent shall not exceed 2.0 NTU as a daily average; shall not exceed 5 NTU more than 5 percent of the time during a 24 hour period; and shall never exceed 10 NTU when

discharge is occurring to the evaporation/percolation ponds or sprayfield. Once the Discharger has satisfied Provision G.6, this effluent limit for turbidity is only applicable when discharge is occurring to the sprayfield.

11. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes.
12. 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.
13. The Discharger shall periodically monitor sludge accumulation in the ponds and shall remove sludge annually to maintain adequate storage capacity.

C. Effluent Limitations

1. Effluent discharged to the leach trenches, evaporation/percolation ponds, and sprayfield shall not exceed the following limits:

Constituent	Units	Average Monthly	Average Weekly	Maximum Daily
Settleable Solids	ml/L	0.1	--	0.2
BOD ₅ ¹	mg/L	10	15	20
Total Suspended Solids	mg/L	10	15	20

¹ 5-day biochemical oxygen demand at 20°C.

2. The 12-month rolling average EC of the discharge shall not exceed the 12-month rolling average EC of the source water plus 500 umhos/cm or a maximum of 1,000 umhos/cm, whichever is more stringent. When source water is from more than once source, the EC shall be a weighted average of all sources.
3. Until the Discharger has satisfied Provision G.6, the median concentration of total coliform bacteria measured in the disinfected effluent shall not exceed a most probable number (MPN) of 2.2 per 100 mL utilizing the bacteriological results of the last seven days for which analyses have been completed; the number of total coliform bacteria does not exceed an MPN of 23 per 100 mL in more than one sample in any 30-day period; and no sample shall exceed an MPN of 240 total coliform bacteria per 100 mL when discharge is occurring to the evaporation/percolation ponds or sprayfield. Once the Discharger has satisfied Provision G.6, this effluent limit for total coliform bacteria is only applicable when discharge is occurring to the sprayfield.

4. Once the Discharger has satisfied Provision G.6, the median concentration of total coliform bacteria in the disinfected effluent shall not exceed an MPN of 23 per 100 mL utilizing the bacteriological results of the last seven days for which analyses have been completed and the number of total coliform bacteria does not exceed an MPN of 240 per 100 mL in more than one sample in any 30-day period when discharge is occurring to the evaporation/percolation ponds.
5. No wastewater contained in any pond shall have a pH of less than 6.5 or greater than 9.5.

D. Water Recycling Specifications

1. For the purpose of this Order, "use area" means an area with defined boundaries where recycled water is used or discharged.
2. Notwithstanding the following requirements, the production, distribution, and use of recycled water shall conform to an Engineering Report prepared pursuant to Title 22, section 60323 and approved by the California Department of Public Health.
3. The use of recycled water shall not cause pollution or nuisance, as defined by Water Code Section 13050.
4. Application of recycled water shall be confined to the sprayfield identified in [Finding 9](#) and Attachment A.
5. The recycled water shall be at least disinfected tertiary recycled water as defined in Title 22, section 60301.
6. Recycled water shall be used in compliance with Title 22, section 60304(a).
7. The CT value (product of total chlorine residual and modal contact time measured at the same point) shall be at least 450 mg-min/mL at all times with a modal contact time of at least 90 minutes based on peak dry weather design flow.
8. Tailwater runoff and spray of recycled water shall not be discharged outside of the use areas except in minor, incidental amounts that cannot reasonably be eliminated by implementation and good maintenance of best management practices.
9. If total coliform is detected as present in the presence/absence field testing of the effluent as required in the attached MRP, the Discharger shall cease irrigating the use area with effluent from the WWTF and commence daily sampling and analysis for total coliform by multiple tube fermentation (MTF). The cause of total coliform presence in the effluent shall be investigated and corrected. Use area irrigation with treated effluent and daily field testing for the presence/absence of total

coliform may resume once the results of the MTF analysis is less than 2.2 MPN/100mL.

10. Crops (which may include athletic field grasses, native grasses, and/or ornamental landscaping) shall be grown on the use areas, and cropping activities shall be sufficient to take up all of the nitrogen applied, including any fertilizers.
11. No recycled water used for irrigation, or soil that has been irrigated with recycled water, shall come into contact with the edible portion of food crops that may be eaten by humans.
12. Irrigation of the use areas shall be performed by appropriately trained personnel. The use of locked irrigation timers that are set by appropriately trained personnel and use area inspections performed by appropriately trained personnel that occur the morning following a recycled water irrigation event are sufficient to satisfy this Specification.
13. Use areas shall be inspected as frequently as necessary to ensure continuous compliance with the requirements of this Order.
14. Use areas where public access is allowed shall be irrigated during periods of minimal use (typically between 9 p.m. and 6 a.m.). The use of locked irrigation timers that are set by appropriately trained personnel and use area inspections performed by appropriately trained personnel that occur the morning following a recycled water irrigation event are sufficient to satisfy this Specification.
15. Irrigation using recycled water shall not be performed within 24 hours of forecasted rain, during rainfall, within 24 hours after any measurable rainfall event, or when the ground is saturated.
16. With the exception of retained storm water, the volume of recycled water applied to the use areas on any single day shall not exceed reasonable agronomic rates based on the vegetation grown, pre-discharge soil moisture conditions, and weather conditions.
17. Hydraulic loading of recycled water and supplemental irrigation water shall be at reasonable agronomic rates designed to:
 - a. Maximize crop nutrient uptake;
 - b. Maximize breakdown of organic waste constituents in the root zone; and
 - c. Minimize the percolation of waste constituents below the root zone.

18. The irrigation with recycled water shall be managed to minimize erosion within the use areas.
19. The use areas shall be managed to prevent breeding of mosquitoes. In particular:
 - a. There shall be no standing water 48 hours after irrigation ceases;
 - b. Tailwater ditches shall be maintained essentially free of emergent, marginal, and floating vegetation; and
 - c. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store recycled water.
20. Irrigation with disinfected tertiary recycled water shall not take place within 50 feet of any domestic water supply well unless all of the following conditions have been met:
 - a. A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from the ground and the surface.
 - b. The well contains an annular seal that extends from the surface into the aquitard.
 - c. The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities.
 - d. The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well.
 - e. The owner of the well approves of the elimination of the buffer zone requirement.
21. Spray irrigation with recycled water is prohibited when wind speed (including gusts) exceeds 30 mph.
22. Sprinkler heads shall be of the type approved for recycled water and shall create a minimum amount of mist.
23. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.
24. All drinking fountains within the use areas shall be protected by location and/or structure from contact with recycled water spray, mist, or runoff.
25. Public contact with recycled water shall be controlled using fences, signs, or other appropriate means.

26. 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 B, 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”**

27. All recycling equipment, pumps, piping, valves, and outlets shall be marked to differentiate them from potable water facilities. All recycled water distribution system piping shall be purple pipe or adequately wrapped with purple tape.
28. Recycled water controllers, valves, and similar appurtenances shall be affixed with recycled water warning signs, and shall be equipped with removable handles or locking mechanisms to prevent public access or tampering.
29. Quick couplers, if used, shall be different than those used in potable water systems.
30. Hose bibs and unlocked valves, if used, shall not be used in areas accessible to the public.
31. 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.
32. There shall be at least a ten-foot horizontal and a one-foot vertical separation between all pipelines transporting recycled water and those transporting domestic supply, and the domestic supply pipeline shall be above the recycled water pipeline.
33. 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.
34. 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).

35. 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 California Health and Safety Code section 4049.54.
36. Any backflow prevention device installed to protect a public water system shall be inspected and maintained in accordance Title 17, section 7605.

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 WWTF. Biosolids refers to sludge that has been treated and tested and shown to be capable of being beneficially used as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities pursuant to federal and state regulations .

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 WWTF 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. The storage of residual sludge, solid waste, and biosolids at the WWTF for longer than two years may be allowed only after the Discharger makes a demonstration consistent with Section 503.20, Subpart C – Surface Disposal of Part 503 in Title 40 of the Code of Federal Regulations and the additional time is authorized by the Executive Officer.
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, 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 the requirements and limits of Subpart B – Land Application of Part 503 in Title 40 of the Code of Federal Regulations.
5. 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. Groundwater Limitations

1. Release of waste constituents associated with the discharge shall not cause or contribute to groundwater:
 - a. Containing constituent concentrations in excess of the concentrations specified below or natural background quality, whichever is greater:
 - i. Nitrate as nitrogen of 10 mg/L (instantaneous concentration).
 - ii. Total coliform organisms equal to or greater than 2.2 MPN/100mL over any 7-day period .
 - iii. For constituents identified in Title 22, the MCLs quantified therein^{1, 2}.
 - ¹ Primary MCLs applied as an instantaneous concentration.
 - ² Secondary MCLs applied as an annual average concentration.
 - b. Containing taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

G. Provisions

1. The Discharger shall comply with Monitoring and Reporting Program R5-2012-0125, 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.
2. 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 a part of this Order. This attachment and its individual paragraphs are commonly referenced as "Standard Provisions."
3. **By 1 July 2013**, the Discharger shall provide written documentation that continuous chlorine residual level monitoring equipment has been installed and approved by DPH.
4. **By 30 July 2013**, the Discharger shall submit a Solids Management Plan that demonstrates how compliance with the Solids Disposal Specifications and monitoring requirements of this Order will be achieved.
5. **By 30 September 2013**, the Discharger shall submit a Salinity Management Plan, with salinity source reduction goals and a proposed implementation time schedule for Executive Officer approval. The control plan shall identify any additional methods, if any, that could be used to further reduce the salinity of the discharge to the maximum extent feasible (i.e., switch from a sodium based to a potassium

based cleaner, use of liquid detergents at laundry facilities, community outreach), and provide a description of the tasks, cost, and time required to investigate and implement various elements in the Salinity Control Plan. The Discharger shall implement the plan in accordance with the approved schedule.

6. **Upon completion**, the Discharger shall submit documentation that the effluent infrastructure of the WWTF has been modified so that treated effluent can be discharged directly to the sprayfield when recycled water is needed and to preclude discharge of treated effluent from the evaporation/percolation ponds to the sprayfield. The effluent infrastructure modifications and documentation must be completed by or under the direct supervision of a Civil Engineer registered in California or other persons registered to practice in California pursuant to California Business and Professions Code, and approved by the Executive Officer.
7. 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.
8. 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.
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 a means of discerning compliance with Discharge Specification 7, the dissolved oxygen (DO) content in the upper one foot of any evaporation/percolation 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.
14. 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)
15. 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.
16. Upon the reduction, loss, or failure of the sanitary sewer system resulting in a sanitary sewer overflow, the Discharger shall take any necessary remedial action to (a) control or limit the volume of sewage discharged, (b) terminate the sewage discharge as rapidly as possible, and (c) recover as much as possible of the sewage discharged (including wash down water) for proper disposal. The Discharger shall implement all applicable remedial actions including, but not limited to, the following:
 - a. Interception and rerouting of sewage flows around the sewage line failure.
 - b. Recovery of sanitary sewer overflows and wash-down water.

- c. Use of portable aerators where complete recovery of the sanitary sewer overflows are not practicable and where severe oxygen depletion is expected in surface waters.
 - d. Cleanup of sewage-related debris at the overflow site.
17. 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.
 18. 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.
 19. 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.
 20. 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.
 21. 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.
 22. If the Central Valley Water Board determines that the discharge has a reasonable potential to cause or contribute to an exceedance of a water quality objective, or to create a condition of nuisance or pollution, this Order may be reopened for consideration of additional requirements.

23. The Central Valley Water Board is currently implementing the CV-SALTS initiative to develop a Basin Plan amendment that will establish a salt and nitrate management plan for the Central Valley. Through this effort the Basin Plan will be amended to define how the narrative water quality objectives are to be interpreted for the protection of agricultural use. If new information or evidence indicates that groundwater limitations different than those prescribed herein are appropriate, this Order will be reopened to incorporate such limits.
24. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

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

Any person aggrieved by this 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 the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 7 December 2012.

Original signed by:

PAMELA C. CREEDON, Executive Officer

Order Attachments:

- A. Site Location Map
- B. Recycled Water Signage

Monitoring and Reporting Program R5-2012-0125
Information Sheet

Standard Provisions (1 March 1991) (separate attachment to Discharger only)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2012-0125

FOR
HUME LAKE CHRISTIAN CAMPS, INC.
WASTEWATER TREATMENT FACILITY
FRESNO COUNTY

This Monitoring and Reporting Program (MRP) is required pursuant to Water Code section 13267.

The Discharger shall not implement any changes to this MRP unless and until the Central Valley Water Board adopts, or the Executive Officer issues, a revised MRP. Changes to sample location shall be established with concurrence of Central Valley Water Board staff, and a description of the revised stations shall be submitted for approval by the Executive Officer.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. All analyses shall be performed in accordance with **Standard Provisions and Reporting Requirements for Waste Discharge Requirements**, dated 1 March 1991 (Standard Provisions).

Field test instruments (such as pH) may be used, provided that the operator is trained in the proper use of the instrument and each instrument is serviced and/or calibrated at the recommended frequency by the manufacturer or in accordance with manufacturer instructions.

Analytical procedures shall comply with the methods and holding times specified in the following: *Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater* (EPA); *Test Methods for Evaluating Solid Waste* (EPA); *Methods for Chemical Analysis of Water and Wastes* (EPA); *Methods for Determination of Inorganic Substances in Environmental Samples* (EPA); *Standard Methods for the Examination of Water and Wastewater* (APHA/AWWA/WEF); and *Soil, Plant and Water Reference Methods for the Western Region* (WREP 125). Approved editions shall be those that are approved for use by the United States Environmental Protection Agency or the California Department of Public Health's Environmental Laboratory Accreditation Program. The Discharger may propose alternative methods for approval by the Executive Officer.

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

A glossary of terms used within this MRP is included on page 8.

INFLUENT MONITORING

Influent samples shall be collected prior to treatment and shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Weekly	BOD ₅	mg/L	24-hr Composite
Weekly	TSS	mg/L	24-hr Composite
Weekly	SS	ml/L	24-hr Composite

EFFLUENT MONITORING

Effluent samples shall be collected after treatment and shall be collected on the same day as influent samples for direct comparison. Effluent monitoring shall include at least the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Continuous	Flow ¹	mgd	Meter
Continuous	Turbidity	NTU	Meter
Continuous	Chlorine Dose ¹	mg/L	Meter
Continuous ²	Chlorine Residual ²	mg/L	Meter ³
Daily ⁴	CT ⁴	mg-min/L	Calculation
Daily	SS	ml/L	24-hr Composite
Biweekly	BOD ₅	umhos/cm	24-hr Composite
Biweekly	TSS	mg/L	24-hr Composite
Various ⁵	Total Coliform Organisms	MPN/100mL	Grab
Monthly	EC	umhos/cm	Grab
Quarterly	Nitrate as N	mg/L	Grab

- Flow and chlorine dose measured prior to disinfection.
- Chlorine residual measured after disinfection with at least a 90 minute modal contact time. Until the Discharger has satisfied Provision G.6, continuous monitoring of chlorine residual is required when discharge is occurring to the evaporation/percolation ponds or sprayfield. Once the Discharger has satisfied Provision G.6, continuous monitoring of chlorine residual is only required when discharge is occurring to the sprayfield and daily monitoring of chlorine residual via grab sample is sufficient when discharge is occurring to the evaporation/percolation ponds. At no time is chlorine residual monitoring required when discharge is occurring to the leach trenches.
- Continuous monitoring of chlorine residual to commence in accordance with the time schedule of Provision G.3.
- CT = the product of total chlorine residual and modal contact time measured at the same point. Until the Discharger has satisfied Provision G.6, daily calculation of CT is required when discharge is occurring to the evaporation/percolation ponds or sprayfield. Once the Discharger has satisfied Provision G.6, daily calculation of CT is only required when discharge is occurring to the sprayfield and no calculation of CT is required when discharge is occurring to the evaporation/percolation ponds. At no time is calculation of CT required when discharge is occurring to the leach trenches.
- Total Coliform Organisms monitored daily in the field for presence/absence when irrigating sprayfield with effluent from WWTF. Total Coliform Organisms monitored biweekly for quantitative analysis with MTF year-round.

SOURCE WATER MONITORING

Source water monitoring shall consist of the following.

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Quarterly	Flow-Weighted EC ¹	µmhos/cm	Computed average
Annually	General Minerals ²	mg/L	Grab

- For each source (either well or surface water supply), the Discharger shall calculate the flow-weighted average concentrations for EC utilizing flow data and the most recent annual chemical analysis. Alternatively, the Discharger may establish representative sampling stations within the distribution system serving the same area as is served by the WWTF.
- General minerals include: TDS, pH, alkalinity (as CaCO₃), aluminum, bicarbonate (as CaCO₃), boron, calcium, carbonate (as CaCO₃), chloride, copper, hardness (as CaCO₃), iron, magnesium, manganese, phosphate, potassium, sodium, and sulfate. General minerals analysis results shall include a cation/anion balance. Samples collected for metals shall be filtered with a 0.45 micron filter prior to preservation, digestion, and analysis.

SPRAYFIELD MONITORING

The Discharger shall perform the following routine monitoring and loading calculations for the sprayfield when it is in use. In addition the Discharger shall keep a log of routine monitoring observations for example: areas of ponding, broken irrigation pipes, odors and/or flies within the sprayfield. Data shall be collected and presented in tabular format and shall include the following:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Daily	Application Area	Acreage	n/a
Daily	Wastewater flow	Gallons	Metered
Daily	Wastewater loading	inches/day	Calculated
Daily	Supplemental irrigation	Gallons	Metered
Daily	Precipitation	inches	Rain gage ¹

¹ National Weather Service data from the nearest weather station is acceptable.

EVAPORATION/PERCOLATION POND MONITORING

Pond monitoring shall be in effect so long as the ponds contain wastewater and shall include at least the following:

<u>Frequency</u> ¹	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Daily	Visual Inspection ²	--	--
Daily	Freeboard	feet	Measured
Daily	Dissolved Oxygen	mg/L	Grab
Weekly	pH	pH units	Grab

- The frequency of monitoring shall be performed only when safe access to the ponds is permissible.
- Visual inspections shall include observing the pond sides and surface area from items such as: weeds, algae, animal holes, and erosion.

LEACH TRENCH MONITORING

Leach trenches shall be visually inspected on a daily basis so long as discharge to the leach trenches is occurring and only when safe access to the leach trenches is permissible. Visual inspections shall include observing the leach trenches for wastewater above ground surface, weeds, animal holes, and erosion.

BIOSOLIDS MONITORING

The Discharger shall perform the following routine monitoring and loading calculations when biosolids are disposed of on-site:

<u>Frequency</u>	<u>Constituent/Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Annually	Total solids	percent	Composite ¹
Annually	Total nitrogen	mg/kg	Composite
Annually	Total phosphorus	mg/kg	Composite
Annually	Total potassium	mg/kg	Composite
Annually	Total metals ²	mg/kg	Composite
Annually	Fecal coliform	MPN/g	Composite
Annually	Volatile solids	mg/kg	Composite
Daily	Application area	Acreage	n/a
Daily	Biosolids loading	pounds/day	Calculated

1. The composite sample shall provide adequate representation of the biosolids generated.

2. Total metals shall include arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc.

REPORTING

All monitoring results shall be reported in **Quarterly Monitoring Reports** which are due by the first day of the second month after the calendar quarter. Therefore, monitoring reports are due as follows:

First Quarter Monitoring Report: **1 May**

Second Quarter Monitoring Report: **1 August**

Third Quarter Monitoring Report: **1 November**

Fourth Quarter Monitoring Report: **1 February.**

A transmittal letter shall accompany each monitoring report. The transmittal letter shall discuss any violations that occurred during the reporting period and all actions taken or planned for correcting violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions or a time schedule for implementing the corrective actions, reference to the previous correspondence is satisfactory.

The following information is to be included on all monitoring and annual reports, as well as any report transmittal letters, submitted to the Central Valley Water Board:

Discharger: Hume Lake Christian Camps
Facility: Wastewater Treatment Facility
MRP: R5-2012-0125
Contact Information (telephone number and email)

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner that illustrates clearly, whether the Discharger complies with waste discharge requirements.

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

Laboratory analysis reports do not need to be included in the monitoring reports; however, the laboratory reports must be retained for a minimum of three years in accordance with Standard Provision C.3.

All monitoring reports shall comply with the signatory requirements in Standard Provision B.3.

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

At any time henceforth, the State or Central Valley Regional Water Board may notify the Discharger to electronically submit monitoring reports using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>) or similar system. Until such notification is given, the Discharger shall submit hard copy monitoring reports.

A. All Quarterly Monitoring Reports, shall include the following:

Wastewater Reporting

1. The results of influent and effluent monitoring specified on page 2.
2. For each month of the quarter, calculation of the maximum daily flow, monthly average flow, and cumulative annual flow.

3. For each month of the quarter, calculation of the average monthly effluent EC and BOD.

Sprayfield Area Reporting

1. The results of the routine monitoring specified on page 3.
2. Provide a Site Map of the sprayfield showing predominant features and applied acreages.
3. For each month of the quarter, calculation of the monthly hydraulic load on the sprayfield for wastewater and supplemental irrigation water in millions of gallons.
4. A summary of the notations made in the sprayfield monitoring log during each quarter. The entire contents of the log do not need to be submitted.

Pond Monitoring Reporting

1. The results of the routine monitoring specified on page 3.

Leach Trench Monitoring Reporting

1. The results of the routine monitoring specified on page 4.

- B. Fourth Quarter Monitoring Reports**, in addition to the above, shall include the following:

Wastewater Reporting

1. The names and general responsibilities of all persons in charge of wastewater treatment and disposal.
2. The names and telephone numbers of persons to contact regarding the Plant for emergency and routine situations.
3. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibrations (Standard Provision C.4).
4. A summary of any changes in processing that might affect waste characterization and/or discharge flow rates.
5. Demonstration that at least a 90 minute modal contact time for disinfection is maintained at the WWTF.

Biosolids Monitoring Reporting

1. Annual production totals in dry tons or cubic yards.

2. A description of disposal methods, including location, and Order number of regulatory permit (if appropriate). If more than one method is used, include the percentage disposed of by each method.
3. Include the results of monitoring specified on page 4.
4. A demonstration that off-site disposal of biosolids is consistent with Title 27, division 2.
5. A demonstration that on-site disposal of biosolids is in compliance with the requirements and limits of Subpart B – Land Application of Part 503 in Title 40 of the Code of Federal Regulations.

Source Water Reporting

1. Include the results of monitoring specified on page 3.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Original signed by:

PAMELA C. CREEDON, Executive Officer

7 December 2012

(Date)

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand
CBOD	Carbonaceous BOD
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
NTU	Nephelometric turbidity unit
TKN	Total Kjeldahl nitrogen
TDS	Total dissolved solids
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
24-hr Composite	Samples shall be a flow-proportioned composite consisting of at least eight aliquots.
Daily	Samples shall be collected every day except weekends or holidays.
Twice Weekly	Samples shall be collected at least twice per week on non-consecutive days.
Weekly	Samples shall be collected at least once per week.
Twice Monthly	Samples shall be collected at least twice per month during non-consecutive weeks.
Monthly	Samples shall be collected at least once per month.
Bimonthly	Samples shall be collected at least once every two months (i.e., six times per year) during non-consecutive months.
Quarterly	Samples shall be collected at least once per calendar quarter.
Semiannually	Samples shall be collected at least once every six months (i.e., two times per year).
Annually	Samples shall be collected at least once per year. Unless otherwise specified or approved, samples shall be collected in June.
mg/L	Milligrams per liter
mL/L	Milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
mgd	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters
MTF	Multiple tube fermentation

INFORMATION SHEET

ORDER R5-2012-0125
HUME LAKE CHRISTIAN CAMPS, INC.
WASTEWATER TREATMENT FACILITY
FRESNO COUNTY

BACKGROUND

Hume Lake Christian Camps, Inc., (hereafter HLCC or Discharger) is approximately 60 miles east of Fresno in the Sierra Nevada Mountains at an elevation of approximately 5,300 feet above mean sea level. HLCC owns and operates a wastewater treatment facility (WWTF) currently under Waste Discharge Requirements (WDRs) Order No. 94-106 that were adopted on 22 April 1994. As indicated in the WDRs, the monthly average dry weather (May through October) discharge shall not exceed 0.146 million gallons per day (mgd) and the daily maximum discharge shall not exceed 0.200 million gallons. At the time the WDRs were adopted, the design treatment capacity of the WWTF was 0.200 mgd. However, the WWTF was upgraded in 2003 to include a 110,000 gallon equalization tank and two additional blowers and fine bubble diffuser racks for each sequencing batch reactor (SBR). These upgrades allowed for the proper dissolved oxygen levels in the SBR's and increased the design treatment capacity to 0.275 mgd. The WWTF receives untreated sewage from various dormitories, camps, single family residences, offices, laundry facilities, and a cafeteria. Design parameters of the WWTF are:

- average design flow and max design flow: 0.275 mgd;
- influent BOD₅ = 300 milligrams per liter (mg/L) and effluent BOD₅ = 20 mg/L;
- influent total suspended solids (TSS) = 375 mg/L and effluent TSS = 20 mg/L; and
- influent total Kjeldahl nitrogen (TKN) = 50 mg/L

A Report of Waste Discharge (RWD) was submitted in July 2002 requesting modification to the WDRs to allow for discharge of treated effluent from the ponds to a 3.2 acre reclamation area (also referred to as sprayfield) of grass (50-50 mix of Blue Grass and Perennial Rye Grass) and native vegetation via sprinkler irrigation. Following submittal of additional information, the RWD was deemed complete by Water Board staff in a 31 January 2003 letter; however, updated WDRs were not drafted.

As a result of elevated pH measured in Hume Lake by Water Board staff in August 2004 and the presence of abundant algae in the lake that caused it to appear very green, cloudy, and opaque, HLCC was requested to characterize the WWTF effluent for nutrients. As directed, HLCC provided effluent data (three 8-hour composite samples collected at least one week a part during October 2004) for ammonia as N, nitrate as N, total Kjeldahl nitrogen (TKN), phosphate and total phosphorus. In addition, total nitrogen and total phosphorus data were provided for WWTF sludge (annual sampling events for 2002, 2003, and 2004) as well as loading rates of total nitrogen and total phosphorus to effluent ponds and leach trenches, landscaped areas that receive sludge as a soil amendment, and landscaped areas that receive fertilizer. The results of the characterization are summarized below.

- Average concentrations of the three effluent samples for ammonia as N, nitrate as N, TKN, phosphate, and total phosphorus were ND, 0.067 mg/L, ND, 0.1 mg/L, and ND, respectively.
- Average concentrations of the three sludge samples for total nitrogen and total phosphorus were 4,600 mg/kg and 1,737 mg/kg, respectively.
- Total nitrogen loading to the ponds, leach trenches, and sprayfield was 3.04 lbs/acre/year, 5.47 lbs/acre/year, and 0.33 lbs/acre/year, respectively.
- Total phosphorus loading to the ponds, leach trenches, and sprayfield was 4.54 lbs/acre/year, 8.17 lbs/acre/year, and 0.49 lbs/acre/year.
- Total nitrogen and total phosphorus loading to landscape areas receiving sludge were 223 lbs/acre/year and 67 lbs/acre/year, respectively.
- Total nitrogen and total phosphorus loading to landscape areas receiving commercial fertilizer were 128 lbs/acre/year and 34 lbs/acre/year, respectively.

HLCC also suggested the following factors may have contributed to the conditions observed at the lake in August 2004: recent drought conditions; a Department of Fish and Game requirement to release 500 gpm from the Hume Lake Dam (estimated 200 gpm coming into the lake); individual septic systems serving the cabins on the south shore of the lake; the influent creek to the lake traverses three public campgrounds and 100+ acres of heavy grazing land; and wildlife, waterfowl, and human activity in the lake.

Another RWD was submitted in September 2009 requesting an increase to the maximum daily discharge from 0.200 to 0.275 million gallons. The requested increase in flow rates will accommodate the peak seasonal month discharge and potential wastewater flows from the nearby Hume Subdivision, which are currently discharged to individual septic systems. The 2009 RWD demonstrated the evaporation/percolation ponds, leach trenches, and sprayfield have sufficient capacity to handle discharges up to 0.275 mgd from the WWTF and total annual precipitation using a return period of 100 years distributed monthly in accordance to historical rainfall patterns. In addition, The RWD indicated that nitrogen in WWTF effluent and fertilizer would be applied agronomically to the sprayfield.

In a 5 November 2009 email to HLCC, Water Board staff indicated no objections to using the treated effluent on the sprayfield provided the WWTF effluent consistently meets the criteria for disinfected tertiary recycled water and HLCC implements monitoring for turbidity and CT (the product of total chlorine residual and modal contact time measured at the same point) as specified in Title 22.

An updated Title 22 report was submitted in January 2010 incorporating comments from the Department of Health Services. The revised report was approved by DPH on 26 September 2012. The Discharger does not continuously monitor chlorine residual levels following disinfection. This Order includes a Provision for the Discharger to install equipment to monitor chlorine residual levels in accordance with DPH and Title 22 requirements.

In November 2011, Water Board staff received an email from Friends of the South Fork of the Kings River inquiring if the State Water Resources Control Board's (State Board) amended

septic system policy was applicable to the septic systems at the cabins on the south shore of Hume Lake and has complained about annual greening of Hume Lake. The State Board's amended septic system policy is not applicable to the WWTF. As depicted by HLCC's 2004 waste characterization report and treated effluent data summarized below, it does not appear that the WWTF is adversely affecting water quality of Hume Lake.

Wastewater

The following data depicts HLCC's treated wastewater concentrations based on analytical data from 2012:

Parameter	Units	Number of Samples	Mean Result
BOD	mg/L	23	ND
TSS	mg/L	23	ND
SS	ml/L	155	ND
Total Coliform	MPN/100mL	23	<2
Electrical Conductivity (EC)	umhos/cm	5	230
Nitrate as N	mg/L	2	2.3

Source Water

Source water is provided by seven wells and surface water from Long Meadow Creek and Hume Lake. Based on a water supply monitoring event during May 2012, the chemical character of the potable water supply is summarized below.

Parameter	Units	Average of Seven Wells	Long Meadow Creek	Hume Lake
TDS	mg/L	109	55	52
EC	umhos/cm	156	56	59
Total Hardness	mg/L	38	18	19
Calcium	mg/L	12	5.3	5.7
Magnesium	mg/L	1.9	1.1	1.1
Sodium	mg/L	18	4.7	4.9
Potassium	mg/L	<2.0	<2.0	<2.0
Total Alkalinity	mg/L	66	32	33
Sulfate	mg/L	2.0	<2.0	<2.0
Chloride	mg/L	9.0	2.0	2.6
Nitrate as NO ₃	mg/L	<2.0	<2.0	<2.0
Ammonia as No ₃	mg/L	0.13	<0.10	<0.10
pH	pH units	7.5	7.4	7.4
Iron	ug/L	4,141	210	340

Parameter	Units	Average of Seven Wells	Long Meadow Creek	Hume Lake
Boron	ug/L	133	<100	<100
Orthophosphate	mg/L	<0.6	<0.6	<0.6

The weighted average TDS and EC for water supply monitoring in May 2012 were 64 mg/L and 76 umhos/cm, respectively.

DISPOSAL METHODS

Solids and Sludge

Solids removed from the influent by bar screens are bagged and placed in the municipal waste dumpster at the site. Sludge is stored on-site and dried between June and September and covered with plastic during the winter months. The dried material is composted then used as a soil amendment at the site or hauled off-site for disposal. The Discharger is currently exploring options to sell the dried sludge as fertilizer. This Order requires the Discharger to submit a Notice of Intent (NOI) to comply with the General Biosolids and a technical report describing the sludge disposal practices utilized at the WWTF to comply with the General Biosolids Order. The Discharger is also required to provide a copy of the Notice of Applicability it receives from the State Water Resources Control Board in response to the NOI.

Treated Wastewater

Treated effluent is discharged directly to evaporation/percolation ponds or directly to leach trenches. Effluent is discharged to the ponds in summer through early fall and to the leach trenches in late fall through spring. Historically, there were twelve evaporation/percolation ponds connected in series by gravity pipelines that are located at least 2 feet below the top of the pond sidewalls. Ponds 5 and 6 have been combined and ponds 8 and 9 have been combined. Surface aerators are located in ponds 1 and combined pond 5/6. Total capacity of the pond system is 25.7 acre feet (8.374 million gallons). Ponds exhibiting declining or poor performance are removed from service during the summer and allowed to dry. After drying, the pond bottom is ripped to loosen and open the infiltration area. There are a total of 69 leach trenches, each 100 feet long. The leach trenches are 10 feet deep and 2 feet wide. A 4-inch perforated PVC pipe is buried 2 feet below the surface with 1.5-inch gravel below and native backfill above the pipe.

Treated effluent from the ponds is also discharged to a 3.2 acre reclamation area (also referred to as sprayfield) of grass (50-50 mix of Blue Grass and Perennial Rye Grass) and native vegetation via sprinkler irrigation. Approximately two acres of the sprayfield is planted in grass is used for softball or other similar recreational activities and a heliport for the U.S. Forest Service and Life Flight helicopters. The remainder of the sprayfield consists of native vegetation on cut or fill slopes and natural terrain. The sprayfield overlays approximately 40 leach trenches. Discharge to this area alternates between the leach trenches in the late fall

through spring and to the sprayfield in summer through early fall when the ponds are in use. Discharge via the leach trenches and sprayfield do not occur simultaneously.

HLCC proposes to modify the WWTF's discharge infrastructure to allow direct discharge from the WWTF to the sprayfield when recycled water is needed and preclude discharge of treated effluent from the evaporation/percolation ponds to the sprayfield. As such, the effluent limitations for turbidity, total coliform and continuous chlorine residual monitoring will only apply when discharge to the sprayfield is occurring.

GROUNDWATER CONDITIONS

Groundwater monitoring is not required by the current WDRs. However, samples are collected on a quarterly basis from nearby water supply wells. Laboratory analytical results from samples collected from the water supply wells from May 2012 are summarized below.

Parameter	Units	Well 2	Well 3	Well 4	Well 5	Well 6	Well 8	Well 19
Total Alkalinity	mg/L	120	47	44	54	48	61	91
Ammonia as NO ₃	mg/L	<0.10	<0.10	<0.10	0.33	0.26	<0.10	0.11
Chloride	mg/L	16	2.5	2.2	3.7	2.7	4.8	31
EC	umhos/cm	290	87	87	110	99	130	290
Nitrate as NO ₃	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
pH	pH Units	8.1	7.2	7.2	7.2	7.2	7.3	8.0
Sulfate	mg/L	3.4	<2.0	<2.0	<2.0	<2.0	<2.0	5.6
TDS	mg/L	170	69	68	90	84	89	190
Boron	ug/L	330	<100	<100	<100	<100	<100	350
Calcium	mg/L	21	8.8	8.3	12	11	14	9.9
Iron	ug/L	<100	11,000	2,000	8,800	1,800	4,500	840
Magnesium	mg/L	2.5	1.4	1.5	2.3	2.1	2.3	1.1
Potassium	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Sodium	mg/L	40	7.7	6.9	6.1	5.5	9.8	53
Hardness	mg/L	63	28	27	38	37	43	29

A technical report was submitted with the September 2009 RWD that summarized field activities conducted in and around the sprayfield in order to determine infiltration rates. The technical report indicates the geology of the sprayfield consists of 2 to 6 feet of silty sand overlying 17 to 40 feet of decomposed granite overlying more resistant granitic bedrock. No

fractures were visible in any of the test pits that were excavated as part of the field activities. Depth to groundwater is greater than 15 feet below ground surface. No bedrock outcrops exist on the surface.

REGULATORY CONSIDERATIONS

Basin Plan

The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition*, revised January 2004 (hereafter Basin Plan) designates beneficial uses, establishes narrative and numerical water quality objectives, contains implementation plans and policies for protecting all waters of the Basin, and incorporates, by reference, plans and policies of the State Water Resources Control Board (State Water Board). Pursuant to Water Code section 13263(a), these requirements must implement the Basin Plan.

The Basin Plan indicates the greatest long-term problem facing the entire Tulare Lake Basin is increasing salinity in groundwater, a process accelerated by man's activities and particularly affected by intensive irrigated agriculture. The Basin Plan recognizes that degradation is unavoidable until there is a long-term solution to the salt imbalance. The Central Valley Water Board encourages proactive management of waste streams by dischargers to control addition of salt through use, and has established an incremental EC limitation of 500 umhos/cm over source water or a maximum of 1,000 umhos/cm, as the measure of the permissible addition of salt constituents through use. In addition, discharges to areas that may recharge good quality groundwater shall not exceed an EC of 1,000 umhos/cm, a chloride content of 175 mg/L, or a boron content of 1.0 mg/L.

Treatment and Control Practices

The WWTF consists of a 110,000-gallon flow equalization tank, head works, bar screen, two SBR's, an aerobic sludge digester, a vacuum-assisted sludge drying floor, a decant balance tank for decanted clear liquor, a tertiary disk filter and a chlorine contact basin. Chemicals used in the treatment process include a polymer added during aerobic digestion of sludge to aid in flocculation and 12.5% sodium hypochlorite for disinfection of treated wastewater. The WWTF is also equipped with a 200,000 gallon emergency storage tank. The existing chlorine contact basin is a 48-inch diameter reinforced concrete pipe approximately 36 feet long and has insufficient capacity to achieve a 90 minute modal time. The contact basin is beneath the floor slab of the WWTF, upstream of the effluent pumps and cannot be reasonably extended to gain additional volume for chlorine contact time. The required volume to achieve a 90 minute modal time is provided in part by the effluent force main, which is approximately 1,680 linear feet of 6-inch diameter pipe and an existing 21,000-gallon effluent storage tank near the ponds. The WWTF is staffed seven days a week and monitored 24 hours a day. Alarm devices are in place to alert staff for loss of power, failure of a biological, filtration, or disinfection treatment process. The facility has both standby power and short term storage. In combination with the requirements of this Order, these treatment and control measures represent best practicable treatment and control (BPTC).

Antidegradation

The antidegradation directives of State Water Board Resolution No. 68-16, "*Statement of Policy With Respect to Maintaining High Quality Waters in California*," or "Antidegradation Policy" require that waters of the State that are better in quality than established water quality objectives be maintained "consistent with the maximum benefit to the people of the State." Policy and procedures for complying with this directive are set forth in the Basin Plan.

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

Title 27

Unless exempt, the release of designated waste is subject to full containment pursuant to Title 27 requirements. Here, the discharge is exempt from the requirements of Title 27 pursuant to the wastewater exemption found at Title 27, section 20090(b) and pursuant to the reuse exemption found at Title 27, section 20090(h).

CEQA

On 23 June 2011, the County of Fresno, Department of Public Works and Planning adopted a Mitigated Negative Declaration (MND) for Initial Study No. 6246 to allow for the expansion of the camp to include construction of new buildings and structures and expansion of the WWTF (including an additional sequencing batch reactor as needed).

PROPOSED ORDER TERMS AND CONDITIONS

Discharge Prohibitions, Effluent Limitations, Discharge Specifications, and Provisions

The proposed Order prohibits discharge to surface waters and drainage courses.

The proposed Order establishes a maximum daily discharge from the WWTF of 0.275 mgd.

The proposed Order sets effluent limits for settleable solids, BOD, TSS, EC, turbidity, and total coliform that are consistent with the Basin Plan. In addition, the use of treated effluent to irrigate the sprayfield shall be in accordance with the requirements of Title 22 for disinfected tertiary recycled water.

The proposed Order would prescribe groundwater limitations that implement water quality objectives for groundwater from the Basin Plan. The limitations require that the discharge not cause or contribute to exceedances of these objectives or natural background water quality, whichever is greater. For constituents identified in Title 22, the MCLs quantified therein also apply as groundwater limitations. For primary MCLs, the groundwater limitation is an instantaneous concentration and for secondary MCLs, the groundwater limitation is an annual average concentration.

Monitoring Requirements

Water Code section 13267 authorizes the Central Valley Water Board to require monitoring and technical reports as necessary to investigate the impact of a waste discharge on waters of the State. In recent years there has been increased emphasis on obtaining all necessary information, assuring the information is timely as well as representative and accurate, and thereby improving accountability of any discharger for meeting the conditions of discharge. Water Code section 13268 authorizes the assessment of administrative civil liability for failure to submit required monitoring and technical reports.

The proposed Order includes sample collection and analysis of influent, effluent, source water, and sludge. In addition, the proposed Order requires visual inspections of the sprayfield, evaporation/percolation ponds, and leach trenches. This monitoring is necessary to characterize the discharge, and evaluate compliance with effluent limitations and discharge specifications prescribed in the Order.

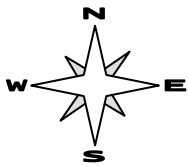
Reopener

The conditions of discharge in the proposed 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. It may be appropriate to reopen the Order if new technical information is provided or if applicable laws and regulations change.



Drawing Reference:
HUME QUADRANGLE
 U.S.G.S TOPOGRAPHIC MAP
 7.5 MINUTE QUADRANGLE
2012
Not to scale

ATTACHMENT A - SITE LOCATION MAP
 WASTE DISCHARGE REQUIREMENTS
 ORDER R5-2012-0125
 HUME LAKE CHRISTIAN CAMPS, INC.
 WASTEWATER TREATMENT FACILITY
 FRESNO COUNTY





ATTACHMENT B

RECYCLED WATER SIGNAGE
WASTE DISCHARGE REQUIREMENTS
ORDER R5-2012-0125
HUME LAKE CHRISTIAN CAMPS, INC.
WASTEWATER TREATMENT FACILITY
FRESNO COUNTY