

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401**

WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2014-0025
Waste Discharger Identification No. 3 4410145333

For

**MISSION SPRINGS CHRISTIAN CAMP AND CONFERENCE CENTER
WASTEWATER TREATMENT PLANT
SANTA CRUZ COUNTY**

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

FACILITY OWNER AND LOCATION

1. Mission Springs Christian Camp and Conference Center, Inc. (hereafter "Mission Springs") is a religious, non-profit organization that owns and operates a full-service conference center, commercial and residential units, and the Mission Springs Wastewater Treatment Plant (hereafter "Facility"). Mission Springs is located in the San Lorenzo River watershed, approximately two miles northeast of Felton, at 1050 Lockhart Gulch Road, Scotts Valley, Santa Cruz County.
2. The Facility is located on the eastern side of the ridge between Frontier Ranch and Ruins Creek. Access to the site is through Nelson Road over a bridge at Ruins Creek. Mission Springs is responsible for providing wastewater collection, treatment, and disposal services to the conference center, camps, and a limited number of single family residences (up to 20 homes owned by the Mission Springs). The existing facilities and residences were constructed with individual, standard baffled septic tanks and gravity flow leachfields. Combining the wastewater flows from all these structures produces a peak summer flow estimated at 36,300 gallons per day (gpd).

PURPOSE OF ORDER

3. The primary objective of this order is to permit the discharge of treated domestic wastewater and prescribe requirements for the protection of water quality.
4. Mission Springs has been in existence since 1926 as a summer camp. Individual septic systems have been installed over the years to manage wastewater. Due to age, some failures of the septic systems, and the need to reduce total nitrogen in the effluent, there is a need for a new wastewater collection system, multi-stage biological wastewater treatment system, and a disposal system.
5. On September 19, 2013, Water Board staff received the Discharger's Report of Waste Discharge (ROWD), which staff deemed incomplete. The Discharger submitted a complete ROWD on November 13, 2013.

6. Staff's review of existing conditions at the site indicates an advanced treatment centralized system for the 45-acre site will benefit the health of the local water resources and replace aging and failing individual disposal septic systems.
7. Santa Cruz County is moving forward with regional plans to reduce nitrate loading to the San Lorenzo River watershed. The Water Board supports these efforts.

FACILITY DESCRIPTION

Treatment Facility and Wastewater Disposal

8. The new collection system includes the installation of over 3,000 linear feet of gravity and pressurized sewer mains to convey sewage up to Frontier Lodge and then to the new wastewater treatment system.
9. The new treatment system is an enhanced, recirculating, multi-stage wastewater treatment plant (three-stage trickling filter) located at the bottom of the Biblar Trail.
10. Raw wastewater enters a 30,000 gallon primary anaerobic baffled reactor (ABR) tank. The ABR is a series (plumbed in parallel) of three 10,000 gallon, six-chamber, baffled fiberglass reinforced plastic tanks. A drop-pipe at the inlet of each baffle forces the wastewater to enter through the anaerobic lower portion of the chamber. Water from the clarifier portion of the tank is evenly distributed over the trickling filter media, which is plastic, random trickling filter media that allows a fixed film of biological organisms to grow and process the waste products in the water.
11. Wastewater from the ABR flows into a 3,000 gallon equalization (EQ) tank. A pump draws wastewater from the EQ tank and into the first of three Acqualogic (AQL) biofilters for treatment. The EQ tank has a second emergency gravity overflow outlet, which is connected to several leachfields adjacent to the treatment system.
12. The pumps are controlled using a programmable logic controller (PLC) that turns the pumps on and off based on a prescribed time interval.
13. Once to twice a year, solids will be removed from the lift station and ABR tank, as required.
14. The Facility does not have an on-site, portable emergency generator in case of power failure to operate pumps and other treatment system components. In case of power failure, all wastewater will flow by gravity to emergency overflow leachfields.

Current Capacity

15. Wastewater flow measurements taken in September 2007 indicate that the daily average and peak flows are 7,840 gpd and 23,670 gpd, respectively. Extrapolated average per capita flow rate per occupant at Mission Springs is 55 gallons per capita-day.
16. The advanced treatment system is designed to treat a peak flow of 36,300 gpd. There are five new independent leachfield zones. The new treatment plant area will have two zones, Wild Oak will have one zone, the Parking Area will have one zone, and the Girls Camp will have one zone. The total collective disposal capacity of all five zones is estimated to be 36,355 gpd.

The historic leachfields will be used as a backup disposal system, which have an estimated disposal capacity of 30,036 gpd.

17. Between the new leachfields and the historic leachfields, the system can accommodate 180% of the peak dry season flow and over 200% of the average daily flows. The leachfields discharge to the San Lorenzo River watershed basin.
18. The Facility is designed to serve a maximum population of 660 persons and permitted to have a daily flow of 25,400 gallons (70% of designed maximum) averaged over each month (30-day average).

Compliance History

19. Mission Springs does not have a compliance history with the Water Board. The County of Santa Cruz regulated the individual septic systems at this facility prior to the installation of the new advanced treatment system.

Treatment Efficiency

20. Mission Springs provided a performance evaluation of a similar enhanced treatment system operating at the Prunedale Shopping Center (PSC) located in Prunedale, California. The enhanced treatment system at the PSC is an anaerobic digester and three-stage recirculating trickling filter system, which is fundamentally the same as the enhanced treatment system installed at Mission Springs.
21. Removal or reduction of biological oxygen demand, total suspended solids, and fats, oils, and grease were consistently at 97% or more based on 20 consecutive sampling events at the PSC enhanced treatment system. The average percent removal rate for total nitrogen over the same period was calculated to be 61%.

SITE DESCRIPTION

Land Uses

22. Mission Springs is situated in the Santa Cruz Mountains and encompasses 53 parcels totaling 176.9 acres of dense tree canopy, meadows, and brush. The entire facility is in an area labeled Urban and Built-up Land by the California Land Conservancy Farmland Mapping and Monitoring Program (FMMP). The vast area of land surrounding the facility is vacant and nonagricultural land, with sparse residential and open space labeled Other Land by the FMMP.

Geographic Setting & Geology¹

23. The geological area south of the Zayante fault line and east of the Ben Lomond fault is made up of sandstones and shales, which form erodible soils that tend to be either very sandy or clay-rich. In the Ben Lomond area, the hills generally have steep slopes.

¹ 1909, Santa Cruz folio, California – Folio 163. Branner, John Casper, Newsom, J.F., Arnold, Ralph. US Geological Survey. Gov't Doc Number: I19.5/1:163.

24. The Mission Springs facility is located on Tertiary age Santa Margarita formation, which is composed of unconsolidated sands and shales.
25. Six test pits were excavated within the proposed subsurface drainage areas at Mission Springs on March 20, 2008. The lithology observed at each test pit was very similar. Loam is generally present between 0 to 5-feet below surface, silt present between 4 to 9-feet below surface, and clayey silt with rock fragments between 9 to 14-feet below surface.

Surface Water

26. Mission Springs is bounded by two streams, Lockhart Gulch on the west and Ruins Creek on the east. The new wastewater treatment system is located on the eastern side of the ridge, between Frontier Ranch and Ruins Creek.
27. Lockhart Gulch is a 303(d) listed (impaired water body) for low dissolved oxygen and pH. Ruins Creek has not been assessed by the State and Regional Water Boards. Bean Creek lies immediately east of Ruins Creek and is an impaired water body for sedimentation and siltation.
28. No other major surface water bodies are near the Facility. The next nearest major surface water bodies are Zayante Creek and Carbonera Creek, both approximately two miles away.

Groundwater

29. The Facility is not located within any California Groundwater Bulletin 118 (update 2003) groundwater basin but lies immediately north of the Scotts Valley (3-27) groundwater basin.
30. Piezometers installed at the Facility in November 2009 indicate that depth to groundwater ranges between 2.9 to 13.5 feet below ground surface during the winter wet weather season.
31. The Discharger submitted a groundwater monitoring well installation plan for the Mission Springs wastewater facility by March 14, 2014. Staff finds the proposed monitoring well installation locations appropriate for observing potential groundwater impacts at Mission Springs.

BASIN PLAN

32. The Water Board has adopted the *Water Quality Control Plan for the Central Coastal Basin* (the Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for receiving waters within the Region.
33. The Basin Plan designates the existing and anticipated beneficial uses of groundwater in the vicinity of the Facility to include:
 - a) Domestic and municipal water supply
 - b) Agricultural water supply
34. The Basin Plan designates existing and anticipated beneficial uses of Bean Creek and Ruins Creek that could be affected by the discharge to include:
 - a) Municipal and Domestic Supply

- b) Agricultural Water Supply
 - c) Industrial Service Supply
 - d) Groundwater Recharge
 - e) Water Contact Recreation
 - f) Non-Contact Water Recreation
 - g) Wildlife Habitat
 - h) Cold Freshwater Habitat
 - i) Migration of Aquatic Organisms
 - j) Spawning, Reproduction, and/or Early Development
 - k) Commercial and Sport Fishing.
35. For receiving waters with designated beneficial uses of municipal and domestic water supply, the Basin Plan establishes the primary drinking water maximum contaminant levels (MCLs), listed at Title 22 of the California Code of Regulations, Sections 64431 (inorganic compounds) and 64444 (organic compounds), as applicable water quality objectives.
36. Water Board Resolution 95-04 amended the Basin Plan to incorporate the “Wastewater Management Plan for the San Lorenzo River Watershed, County of Santa Cruz” and “San Lorenzo Nitrate Management Plan Phase II Final Report” by reference and requires individual onsite wastewater disposal systems to comply with both plans. Chapter 8 of the Nitrate Management Plan, Section 8.2.1, management measure 7, requires the Water Board to enforce reduction of nitrogen in discharges in accordance with standards in the Nitrate Management Plan. These standards require a minimum of 50% reduction of nitrogen when discharges equal or exceed 2,000 gallons per day.
37. This Order requires a 50% reduction of nitrogen in effluent, consistent with Resolution No. 95-04^{BP}.

ANTI-DEGRADATION

38. State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (Resolution No. 68-16) requires Regional Water Boards, in regulating the discharge of waste, to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in a Regional Water Board’s policies (e.g., quality that exceeds applicable water quality standards). Resolution No. 68-16 also states, in part:

Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in best practicable treatment and control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

The discharges regulated by this Order are subject to waste discharge requirements that will result in best practicable treatment or control, the prevention of pollution and nuisance, and maintenance of the highest water quality consistent with maximum benefit to the people of the State.

MONITORING PROGRAM

39. Monitoring and Reporting Program No. R3-2014-0025 (MRP) is a part of the proposed Order. The MRP requires routine water supply, influent, effluent, groundwater, and facility monitoring to verify compliance and ensure protection of groundwater quality.

RECYCLED WATER POLICY

40. The Strategic Plan Update 2008-2012 for the Water Boards includes a priority to increase sustainable local water supplies available for meeting existing and future beneficial uses by 1,725,000 acre-feet per year, in excess of 2002 levels, by 2015, and ensure adequate water flows for fish and wildlife habitat. The State Water Resources Control Board adopted the Recycled Water Policy via Resolution No. 2009-0011 on February 3, 2009². The Recycled Water Policy is intended to support the Strategic Plan priority to Promote Sustainable Local Water Supplies. Increasing the acceptance and promoting the use of recycled water is a means towards achieving sustainable local water supplies and can result in reduction in greenhouse gases, a significant driver of climate change. The Recycled Water Policy is also intended to encourage beneficial use of, rather than solely disposal of, recycled water.
41. The Recycled Water Policy calls for the development of regional groundwater basin/sub-basin salt/nutrient management plans. The State Water Resources Control Board recognizes that, pursuant to the letter from statewide water and wastewater entities³ dated December 19, 2008, and attached to Resolution No. 2009-0011 adopting the Recycled Water Policy, the local water and wastewater entities, together with local salt/nutrient contributing stakeholders, will fund locally driven and controlled, collaborative processes open to all stakeholders that will prepare salt and nutrient management plans for each basin/sub-basin in California, including compliance with CEQA and participation by Water Board staff.
42. It is the intent of the Recycled Water Policy that salts and nutrients from all sources be managed on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of beneficial uses. The State Water Resources Control Board finds that the appropriate way to address salt and nutrient issues is through the development of regional or subregional salt and nutrient management plans rather than through imposing requirements solely on individual projects. The Water Board finds that a combination of regional management plans and individual or programmatic project requirements may be necessary to protect beneficial uses.
43. One of the primary components of the required regional salt/nutrient management plans is the development and implementation of groundwater basin/sub-basin monitoring programs. As specified in the Recycled Water Policy, salt/nutrient contributing stakeholders will be responsible for conducting, compiling, and reporting the monitoring data once the regional groundwater monitoring programs are developed.

² http://www.swrcb.ca.gov/board_decisions/adopted_orders/resolutions/2009/rs2009_0011.pdf

³ http://www.waterboards.ca.gov/board_info/agendas/2009/feb/020309_7_%20rw_policy_funding_letter.pdf

44. A large number of technical reports and data contained within Water Board files document widespread and increasing salt and nutrient impacts within the groundwater basins throughout the Central Coast Region, including the San Lorenzo River watershed basin.

ENVIRONMENTAL ASSESSMENT

California Environmental Quality Act (CEQA)

45. The Santa Cruz County Environmental Health Department (Environmental Health) is the lead agency in making a CEQA determination for this Facility since it is the first to act on the Discharger's request for project approval. Environmental Health cited approved Use Permit 75-1060-U as an existing permit allowing the occupancy of the Facility; therefore, its approval of the project was non-discretionary. By definition of a non-discretionary project, CEQA does not apply due to ministerial action.

46. These waste discharge requirements are for an existing facility and are exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et. seq.) in accordance with Section 15301, Article 19, Chapter 3, Division 6, Title 14 of the California Code of Regulations.

Total Maximum Daily Load

47. California's 2010 303 (d) list of impaired water bodies, which was approved by USEPA in October 2011, identifies the San Lorenzo River as being impaired for chlorpyrifos, pathogens, sediment, and nitrate.

48. Three San Lorenzo River Total Maximum Daily Load (TMDL) projects for pathogens, sediment, and nitrate, which includes many of the tributaries, have been adopted by the Water Board. The TMDL for fecal coliform prohibits all fecal coliform loading from human sources to the San Lorenzo River and tributaries defined in the TMDL. The TMDL for sediment allocates sediment loading by source categories with an overall 27% reduction target. The TMDL for nitrate required Santa Cruz County to develop a Nitrate Management Plan, as described in Finding Nos. 35 and 36.

49. This Order includes requirements of all TMDLs that are applicable to the Facility.

EXISTING ORDERS AND GENERAL FINDINGS

50. All wastewater discharges from this Facility have been historically regulated by the SCC-EHD since the site discharged to several smaller onsite wastewater septic systems and leachfields.

51. Since the Discharger's wastewater flows are less than one million gallons per day (MGD), storm water discharges from the facility are not subject to the State Water Resources Control Board's General Industrial Activities Storm Water Permit.

52. Discharge of waste is a privilege, not a right, and authorization to discharge is conditional upon the discharger's complying with provisions of Division 7 of the California Water Code and any more stringent effluent limitations necessary to implement water quality control plans, to protect beneficial uses, and to prevent nuisance. Compliance with this order should ensure this and mitigate potential adverse changes in water quality due to the discharge.

53. On August 4, 2014, the Water Board notified Mission Springs and interested parties of its intent to issue waste discharge requirements for the discharge and has provided them with a copy of the proposed Order and an opportunity to submit written views and comments.
54. After considering all comments pertaining to this discharge during a public hearing on November 13-14, 2014, this Order was found consistent with the above findings.
55. Any person affected by this action of the Board may petition the State Water Resources Control Board to review the action in accordance with Section 13320 of the California Water Code and Title 23 of the California Code of Regulations, Section 2050. The State Water Resources Control Board must receive the petition within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request.

IT IS HEREBY ORDERED, that to meet the provisions contained in division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. Pursuant to authority in Sections 13263 and 13267 of the California Water Code, Mission Springs, its agents, successors, and assigns, may discharge waste at the above-described Facility providing compliance is maintained with the following:

Throughout these requirements footnotes are listed to indicate the source of requirements specified. Requirement footnotes are as follows (requirements without footnotes are BPJ unless otherwise noted):

BPJ	Best Professional Judgment of Regional Water Quality Control Board Staff
ROWD	The Discharger's Report of Waste Discharge
40CFR	Title 40 Code of Federal Regulations
BP	Central Coast Regional Water Quality Control Plan
T22	Title 22 CCR, Division 4, Chapter 3, Water Reclamation Criteria
PC	Porter-Cologne Water Quality Control Act (California Water Code)

A. DISCHARGE PROHIBITIONS

1. Discharge of treated wastewater to areas other than the treatment and disposal areas shown in Attachment "A" is prohibited.
2. Discharge of any wastes including overflow, bypass, seepage, or overspray from transport and treatment, or disposal systems to adjacent drainage ways or onto adjacent properties is prohibited.
3. Bypass of the treatment facility and discharge of untreated or partially treated wastes is prohibited.^{PC}
4. A discharge of sludge, residues, or any other wastes into surface waters or into any area where it may be washed into surface water is prohibited.^{PC}
5. Discharge of waste classified as "hazardous" or "designated" as defined in CCR, Title 23, Chapter 15, Section 2521 (a) and CWC Section 13173, respectively, to any part of the wastewater disposal system is prohibited.

6. The treatment and disposal of wastes at the facility shall not cause pollution, contamination, or nuisance as defined in CWC Section 13050.

B. SPECIFICATIONS

Effluent Limitations

1. Effluent discharge rate shall not exceed a 30-day running average of 25,400 gpd.^{ROWD}
2. Odors associated with the treatment and disposal of wastewater shall not be perceivable beyond the limits of the Discharger's property boundary.
3. Effluent discharged to leachfield zones shall not exceed the following limitations:^{BPJ}

Table 1: Effluent Limitations

Parameter	Max. 30-day Average (mg/L)
5-day Biological Oxygen Demand	30
Total Suspended Solids	30

4. Effluent discharged to the leachfields shall have a pH between 6.5 and 8.4.^{BP/BPJ}
5. Effluent Total Nitrogen shall be reduced by at least 50 percent prior to subsurface disposal.^{BP} Compliance will be determined from samples taken at points before and after extended treatment.

Groundwater Limitations

6. The discharge shall not cause total nitrogen concentrations in the groundwater affected by disposal activities to exceed 5 mg/L as N or shall not cause a statistically significant increase of total nitrogen concentrations in underlying groundwater, whichever is more stringent.
7. Wastewater discharged to the leachfield zones shall not cause groundwater to contain taste- or odor-producing substances in concentrations that adversely affect beneficial uses.^{BP}
8. Discharge shall not cause the median concentration of human fecal coliform organisms in groundwater over any seven-day period to be more than 2.2/100 ml.
9. The discharge shall not cause a statistically significant increase of mineral or organic pollutant concentrations in underlying groundwater, as determined by statistical analysis of samples collected from wells in the vicinity of the treatment and disposal area.^{BP}
10. To protect the municipal and domestic supply beneficial uses of groundwater underlying the leachfields, treated wastewater discharged from the Facility shall not cause groundwater to:
BP/BPJ/T22
 - a) exceed the Primary Maximum Contaminant Levels for organic chemicals set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5.5, Section 64444.
 - b) exceed the Primary Maximum Contaminant Levels for inorganic chemicals set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64431.

- c) exceed the levels for radionuclide set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5, Section 64443.
11. The discharge shall not cause radionuclide to be present in groundwater in concentrations that are deleterious to human, plant, animal, or aquatic life, or result in the accumulation of radionuclide in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.^{BP}

System Operation

12. The treatment area shall be fenced and posted (English and Spanish) to advise the public that the Facility contains domestic wastewater.
13. Solids accumulation in each septic tank shall be regularly measured as stated in Monitoring and Reporting Program (MRP) No. R3-2014-0025 and the appropriate tank cleaned when it appears a) the bottom of the scum layer is within 4 inches of the bottom of the outlet device before the next scheduled inspection or b) the sludge level will be within 10 inches of the outlet device before the next scheduled inspection.
14. All solids generated from the screening and treatment process must be reclaimed or disposed of in a manner acceptable to the Executive Officer.
15. High water alarms, readily audible or visible to maintenance personnel, shall be installed at each raw wastewater pumping station.
16. Stand-by power or portable pumps shall be available for use if wastewater pumping facilities and back-up gravity fed leachfields begin to fail.
17. The Facility shall be enrolled in the State of California Office of Operator Certification program and shall be maintained and operated by a California State certified Grade II Wastewater Treatment Plant Operator.
18. Ponding on filter media shall be controlled so as not to cause excessive biological growth.
19. All equipment must be tested and calibrated as recommended by the equipment manufacturer.

Wastewater Disposal

20. The primary leachfield system is designed as a pressure-dosed leachfield, and the application of wastewater is alternated continuously to maximize the disposal areas, rest leachfields, and to maximize the life of the system.
21. An additional 100% disposal zone is available to maximize disposal rates, rest leachfields, perform maintenance when needed, and to maximize life of disposal capacity.
22. Wastewater shall be confined to land owned or controlled by the Discharger.^{BPJ}
23. Effluent shall not be discharged within 100 feet of any existing water supply well.
24. Effluent application rates shall be consistent with accepted engineering practice.^{BPJ}

25. The Facility shall be managed so as to minimize mosquito-breeding habitat. ^{BPJ}

C. SALT AND NUTRIENT MANAGEMENT PROGRAM

1. The Discharger shall submit its first Salts and Nutrient Management Program to the Water Board by **January 30, 2017**.
2. The Discharger shall maintain an ongoing salt and nutrient management program with the intent of reducing mass loading of salts and nutrients (with an emphasis on nitrogen species) in treated effluent to a level that will ensure compliance with effluent limitations and protect beneficial uses of groundwater.
3. Salt reduction measures shall focus on all potential salt contributors to the collection system.
4. Nutrient reduction measures shall focus on optimizing wastewater treatment processes for nitrification and denitrification, or other means of nitrogen removal. Reduction measures may also include source control as appropriate.
5. As part of the salt and nutrient management program, the Discharger shall submit an annual report of salt and nutrient reduction efforts. This salt and nutrient management report shall be included as part of the annual report described in Monitoring and Reporting Program No. R3-2014-0025. The report shall be submitted by January 30th, and shall include (at a minimum):

Salt Component

- a. Calculations of annual salt mass discharged to (influent) and from (effluent) the wastewater treatment facility with an accompanying analysis of contributing sources;
- b. Analysis of wastewater evaporation/salt concentration effects;
- c. Analysis of groundwater monitoring results related to salt constituents;
- d. Analysis of potential impacts of salt loading on the groundwater basin;
- e. A summary of existing salt reduction measures; and
- f. Recommendations and time schedules for implementation of any additional salt reduction measures.

Nutrient Component

- a. Calculations of annual nitrogen mass (for all identified species) discharged to (influent) and from (effluent) the wastewater treatment facility with an accompanying analysis of contributing sources;
 - b. Analysis of wastewater treatment facility ability to facilitate nitrification and denitrification, or other means of nitrogen removal;
 - c. Analysis of groundwater monitoring results related to nitrogen constituents;
 - d. Analysis of potential impacts of nitrogen loading on the groundwater basin;
 - e. A summary of existing nitrogen loading reduction measures; and,
 - f. Recommendations and time schedules for implementation of any additional nitrogen loading reduction measures.
6. As an alternative to the salt and nutrient management program requirements described above, upon Executive Officer approval, the Mission Springs may submit documentation and a summary of participation in a regional salt and nutrient management plan implemented under the provisions of State Water Resources Control Board Resolution No. 2009-0011 (Recycled Water Policy).

7. **The salt and nutrient management reports are due biennially (every two years) on January 30th** and may be included as part of the annual monitoring report. The first biennial salt and nutrient management report is due January 30, 2017.

D. GENERAL PROVISIONS

1. The Discharger shall comply with MRP No. R3-2014-0025, as specified by the Executive Officer. The Executive Officer is authorized to revise the MRP at any time during the Permit term.
2. All technical and monitoring reports submitted pursuant to this Order are required pursuant to Section 13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality acceptable to the Executive Officer, may subject the discharger to enforcement action pursuant to Section 13268 of the California Water Code.
3. The Discharger shall comply with all applicable items of the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated December 5, 2013.
4. Physical facilities shall be designed and constructed according to accepted engineering practices and shall be capable of full compliance with this Order when properly operated and maintained. Operation and maintenance of the wastewater system shall conform to the Operations and Maintenance Plan, which shall be periodically reviewed, and, if appropriate, revised. The Operations and Maintenance Plan is subject to review by the Executive Officer, who shall be provided a current copy within ten days of any significant revision.
5. All discharges from the Facility shall comply with lawful requirements of the municipalities, counties, irrigation districts, drainage districts, and other local agencies regarding discharges of waste to land and surface waters within their jurisdiction.
6. **Biennially, by January 30th**, the Discharger shall submit an engineering technical report to the Executive Officer that evaluates the performance and capacity of the wastewater treatment and disposal system. The report shall contain a hydraulic balance analysis of facility inputs and outputs including influent flow, precipitation, infiltration/percolation, and evaporation and shall quantify disposal capacity of the Facility based on actual operating data. The first annual engineering technical report is due January 30, 2017.
7. The Discharger shall give advance notice to the Water Board of any planned changes in the permitted facility or waste management activities that may result in noncompliance with this Order.
8. This Order may be reopened to address any changes in State or Federal plans, policies, or regulations that would affect the requirements for the discharge.
9. In the event of any change in control or ownership of land or facilities presently owned or utilized by the Discharger, the Discharger shall notify the succeeding owner(s) or operator(s) of the existence of this Order by letter, a copy of which shall be forwarded to the Water Board.

10. Groundwater Monitoring Wells: The Discharger shall install or locate monitoring wells upgradient and downgradient of the disposal area by April 30, 2015, as described by the groundwater monitoring well installation plan. The Discharger shall determine the direction of groundwater flow and depth to groundwater to determine the appropriate location and
11. depth of upgradient and downgradient wells. The monitoring wells shall meet or exceed well standards contained in the Department of Water Resources Bulletins 84-81 and 74-90. The Discharger shall also comply with the monitoring well reporting provisions of Sections 13750 through 13755 of the California Water Code.
12. The Discharger shall file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9, of the California Administrative Code given a material change in the character, location, or volume of the discharge. Material changes warranting submittal of a Report of Waste Discharge include, but are not limited to, the following:
 - a) Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.
 - b) Significant change in disposal method, e.g., change from a land disposal to a direct discharge to water, or change in the method of treatment which would significantly alter the characteristics of the waste.
 - c) Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area potentially causing different water quality or nuisance problems.
 - d) Increase in flow beyond that specified in the waste discharge requirements.

I, Kenneth A. Harris Jr., 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 Coast Region on November 13, 2014.

Kenneth A. Harris Jr., Executive Officer

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401**

MONITORING AND REPORTING PROGRAM NO. R3-2014-0025

Waste Discharger Identification No. 3 4410145333

November 13, 2014

For

**MISSION SPRINGS CHRISTIAN CAMP AND CONFERENCE CENTER
WASTEWATER TREATMENT PLANT
SANTA CRUZ COUNTY**

Reporting responsibilities are specified in Section 13267(b) of the California Water Code. This Discharge Monitoring and Reporting Program is issued in accordance with Provision D.1 of Central Coast Water Board Order No. R3-2014-0025.

WATER SUPPLY MONITORING

1. Representative samples of the Mission Springs Christian Camp and Conference Center (hereafter "Mission Springs") water supply shall be collected and analyzed for the constituents and at the frequency specified below:

Parameter/Constituent^{a,b,c}	Units	Sample Type	Minimum Sampling and Analyzing Frequency
Total Dissolved Solids	mg/L	Grab	Semiannually (April & October)
Sodium	mg/L	Grab	Semiannually (April & October)
Chloride	mg/L	Grab	Semiannually (April & October)
Sulfate	mg/L	Grab	Semiannually (April & October)
Boron	mg/L	Grab	Semiannually (April & October)
Nitrate (as Nitrogen)	mg/L	Grab	Semiannually (April & October)

Notes:

- a) Sampling results for the Division of Drinking Water may be submitted to satisfy these requirements.
- b) Data shall be reported as individual concentrations for each water supply well sampled and calculated as flow weighted averages to represent as delivered water supply quality.
- c) Sampling for specific analytes may be reduced or discontinued upon Discharger request and Executive Officer approval for parameters/constituents for which additional data provides no benefit.

INFLUENT MONITORING

1. Representative samples of the treatment system influent shall be collected and analyzed for the parameters/constituents and at the frequencies specified in the following table for the Mission Springs wastewater treatment facility:

Parameter/Constituent	Units	Sample Type ^a	Minimum Sampling and Analyzing Frequency
Flow Volume	GPD	Metered	Daily
Maximum Daily Flow	GPD	Metered	Monthly
Average Daily Flow	GPD	Calculated	30-day Running Average
pH	-	Grab	Monthly
BOD ₅	mg/L	Grab	Monthly
Total Suspended Solids	mg/L	Grab	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly
Sodium	mg/L	Grab	Monthly
Chloride	mg/L	Grab	Monthly
Nitrate (as N)	mg/L	Grab	Monthly
Nitrite (as N)	mg/L	Grab	Monthly
Ammonia (as N)	mg/L	Grab	Monthly
Total Nitrogen	mg/L	Grab	Monthly
Sulfate	mg/L	Grab	Monthly
Boron	mg/L	Grab	Semiannually (April & October)

Notes:

- a) Sampling for specific analytes may be reduced or discontinued upon Discharger request and Executive Officer approval for parameters/constituents for which additional data provides no benefit.

EFFLUENT MONITORING

1. Representative samples of wastewater being discharged shall be collected and analyzed for the parameters/constituents and at the frequencies specified in the following table:

Parameter/Constituent ^{a,b}	Units	Sample Type	Minimum Sampling and Analyzing Frequency
pH	-	Grab	Monthly
BOD ₅	mg/L	Grab	Monthly
Total Suspended Solids	mg/L	Grab	Monthly
Total Dissolved Solids	mg/L	Grab	Monthly
Sodium	mg/L	Grab	Monthly
Chloride	mg/L	Grab	Monthly
Nitrite (as N)	mg/L	Grab	Monthly
Nitrate (as N)	mg/L	Grab	Monthly
Ammonia (as N)	mg/L	Grab	Monthly
Total Nitrogen	mg/L	Grab	Monthly
Sulfate	mg/L	Grab	Monthly
Boron	mg/L	Grab	Semiannually (April & October)

Notes:

- a) Effluent samples shall be collected from locations representative of final effluent being discharged to the subsurface.
- b) Sampling for specific analytes may be reduced or discontinued upon Discharger request and Executive Officer approval for parameters/constituents for which additional data provides no benefit.

GROUNDWATER MONITORING

1. Representative samples of groundwater shall be collected from shallow wells upgradient and downgradient of disposal areas. To ascertain compliance with waste discharge

requirements in establishing new, or verifying existing upgradient and downgradient monitoring wells, the monitoring network shall be supported by sufficient, as determined by the Executive Officer, geologic and hydrogeologic documentation. Samples of groundwater shall be collected and analyzed for the constituents and at the frequencies specified in the following table:

Parameter/Constituent ^a	Units	Sample Type	Minimum Sampling and Analyzing Frequency
Depth to Groundwater	Ft above MSL	Measured	Semiannually (April & October)
pH	-	Grab	Semiannually (April & October)
Total Dissolved Solids	mg/L	Grab	Semiannually (April & October)
Sodium	mg/L	Grab	Semiannually (April & October)
Chloride	mg/L	Grab	Semiannually (April & October)
Nitrite (as N)	mg/L	Grab	Semiannually (April & October)
Nitrate (as N)	mg/L	Grab	Semiannually (April & October)
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	Semiannually (April & October)
Total Nitrogen (as N)	mg/L	Grab	Semiannually (April & October)
Boron	mg/L	Grab	Semiannually (April & October)
Sulfate	mg/L	Grab	Semiannually (April & October)

Notes:

- a) Sampling for specific analytes may be reduced or discontinued upon Discharger request and Executive Officer approval for parameters/constituents for which additional data provides no benefit.

FACILITY MONITORING

- Weekly inspections shall be made of the wastewater treatment area. Quarterly inspections shall be made of the leachfield zones. During the inspection, notes shall be kept of any violations of waste discharge requirements. A log of these inspections shall be maintained and a summary of observations made during the inspections shall be submitted with each semi-annual monitoring report.

REPORTING

- Monitoring reports are required semiannually, by the 30th of January and July**, and shall contain all data collected or calculated over the previous six months. The January 30 report may be combined with the annual report. Data shall be tabulated in a logical and coherent format and be accompanied by laboratory analytical data sheets. Electronic reporting (EDF) is highly encouraged but not required at this time. See the EDF Guidelines at:

http://www.waterboards.ca.gov/ust/electronic_submittal/docs/edf_gr_v1_2i.pdf

- By January 30th of each year** the Discharger shall submit an annual monitoring report Pursuant to Standard Provisions and Reporting Requirements, General Reporting Requirement C.16 which states:

By January 30 of each year, the discharger shall submit an annual report to the Regional Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. The Discharger shall discuss the compliance record and corrective actions taken, or which may be needed, to bring the discharger into full

compliance. The report shall address operator certification and provide a list of current operating personnel and their grade of certification. The report shall inform the Board of the date of the Facility's Operation and Maintenance Manual, of the date the manual was last reviewed, and whether the manual is complete and valid for the current facility.

3. **Biennially, by January 30th** the Discharger shall submit a Salt and Nutrient Management report as specified in provision C.7 of Order No. R3-2014-0025. The first report is due January 30, 2016.
4. If the Discharger monitors any pollutant designated more frequently than is required by this Monitoring and Reporting Program, the results of such monitoring shall be included in the monitoring reports.

PROVISIONS

1. Monthly sampling shall be conducted at regularly scheduled times during each month and consecutive events should be approximately four weeks apart and no less than two weeks apart.
2. All monitoring must be conducted according to test procedures established by 40 Code of Federal Regulations Part 136, entitled, "Guidelines Establishing Test Procedures for Analysis of Pollutants." All sampling analyses shall be conducted at the lowest practical quantitation limits achievable under U.S. EPA specified methodology. In cases where effluent limits are set below the lowest achievable practical quantitation limits, constituents not detected at the practical quantitation limit will be considered in compliance with effluent limitations.
3. All samples collected shall be tracked and submitted under chain of custody and analyzed by a laboratory certified by California Department of Health Services for the specified analysis.
4. This Monitoring and Reporting Program may be revised at any time during the Permit term, as necessary, under the authority of the Executive Officer.

IMPLEMENTATION

This monitoring and reporting program shall be implemented immediately. However, the Discharger will be allowed a two-month grace period to procure equipment and establish new sampling protocols and sampling locations for monthly influent and effluent monitoring. Monthly influent and effluent monitoring shall commence no later than February 1, 2015.

ORDERED BY _____
Kenneth A. Harris Jr.
Executive Officer

DATE _____