

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

ORDER NO. R4-2005-0073
WASTE DISCHARGE REQUIREMENTS
FOR
YOUNG MEN'S CHRISTIAN ASSOCIATION of GLENDALE
(Camp Fox)
(File No. 04-060, CI-8983)

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) finds:

FACILITY OWNER AND LOCATION

1. Young Men's Christian Association of Glendale (hereinafter Discharger) operates a camping facility known as Camp Fox (Facility) located at One Fox Landing, Avalon, Los Angeles County, California. Santa Catalina Island Conservancy which owns the Facility, has been leasing the Facility to the Discharger since January 1, 1967. The Facility is on 3.5 acres of land. Its approximate latitude is 33°24'23" and longitude is 118°22'4". The Facility location is shown on Figures 1 and 2.

PURPOSE OF ORDER

2. On March 25, 2004, the Discharger filed a report of waste discharge for discharges of commercial wastewater from the Facility. The Regional Board has never issued Waste Discharge Requirements (WDRs) for the Facility. The Discharger plans to replace the existing unpermitted and failing septic system with the proposed wastewater treatment system.
3. On December 11, 2003, the County of Los Angeles Department of Health Services (LADHS) directed the Discharger to cease operation of the Facility because of violations pertaining to the sewage disposal system. On February 11, 2004, LADHS allowed the Discharger to operate the Facility under the condition that the Facility would only operate with a maximum of 125 campers and 40 staff members until the proposed wastewater treatment system is in compliance with requirements of the Regional Board and LADHS.

FACILITY DESCRIPTION

4. The Facility is immediately adjacent to the Pacific Ocean and located approximately 5 miles north of the City of Avalon. The neighboring parcels to the west and north are vacant, while the parcel one mile to the south is also utilized for recreational purposes leased by Balboa Yacht Club. There are no blue line streams within 100 feet of the discharge point and the distance between the Pacific Ocean and the discharge point is approximately 175 feet.

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September 23, 2005

5. The Facility is located in an unsewered area within a remote coastal canyon along the eastern shore of Santa Catalina Island. Connection to the City of Avalon sewer system is cost prohibitive. The City of Avalon is approximately 5 miles from the Facility and at an estimated average cost of \$300.00 per linear foot of piping and trenching over rugged mountainous terrain, the cost would be almost \$8 million for the piping alone. There will be added costs for pump stations, easements and environmental considerations.
6. The Discharger acquired the Facility in 1924. Most of the structures at the Facility were constructed during the 1960's. Since 1970, the Discharger has refurbished existing buildings and added a hotel, a tractor shed, a 2,100-gallon water tank and a stand-alone staff quarters.
7. Presently, the Facility consists of a 400 person camp with fifteen beach front villas, nine dormitory style cabins, a staff quarters, a cooks' quarters, a centralized dining facility with a kitchen, a four -room hotel, two centralized restrooms and shower facilities, an infirmary, the Camp Directors' quarters, Sharpe's Lodge, and the Cabin on the Hill. Sharpe's Lodge and the Cabin on the Hill are two more lodging facilities at the Facility. There are also recreation areas, maintenance facilities and general purpose areas on site.
8. The beach front villas are sleeping quarters that do not have walls and are equipped with a sink in each villa. The dormitory style cabins are only sleeping quarters without bathroom facilities. The Cabin on the Hill has a sink, a shower, and a toilet. The staff quarters have nine showers and sinks and six toilets and house camp personnel who supervise the campers. The Camp Directors' quarters have two showers, two toilets and three sinks. The building referred to as the hotel has four sleeping quarters each with a shower, a toilet and a sink. The hotel is used by the members of the Board of the YMCA and their families and guests when they come to visit the camp. The kitchen has four sinks and the infirmary has two sinks, a toilet and a bath tub shower. The two centralized restrooms have a total of 15 showers, 16 sinks and 16 toilets. The Facility plan is shown as Figure 3.
9. The Discharger does not have meters for wastewater flow. Only potable water use is metered. Southern California Edison provides the potable water used on Facility. The Discharger has projected a maximum daily flow of 20,000 gallons per day (gpd) based on the Uniform Building Code estimate of 50 gpd per person in a summer and seasonal camp.
10. All wastewater from the Facility would be classified as commercial wastewater and is disposed through the wastewater treatment system. The Discharger indicated that the proposed wastewater treatment plant's influent will have less than 400 milligrams per liter (mg/L) for Biochemical Oxygen Demand (BOD) and less than 400 mg/L for Total Suspended Solids (TSS).
11. Groundwater was encountered at a depth of 8.5 feet below ground surface during a limited engineering investigation conducted on February 3, 2003. The groundwater at the Facility is influenced by tidal fluctuations due to the proximity of the Facility to the Pacific

Ocean. The highest anticipated level of groundwater will coincide with the high tide. The Discharger concluded that that the groundwater should not rise to within five feet of the bottom of the leachfield.

12. Since there is not a 10-foot vertical separation between the bottom of the subsurface drip disposal system and the groundwater, Regional Board staff are concerned that the existing discharge may need additional treatment, such as disinfection, to protect receiving water quality. The Regional Board, in Order No. 01-031 "*General Waste Discharge Requirements for Small Commercial and Multifamily Residential Subsurface Sewage Disposal Systems*," adopted on February 22, 2002, noted in footnote c) in Section E.3. that "in areas of shallow groundwater and coastal regions where a minimum of ten feet of vertical separation cannot be maintained between the bottom of the disposal system and the historic high or anticipated high groundwater level ... effluent shall be disinfected to levels consistent with the beneficial uses of groundwater and the nearest surface water body." The proposed treatment system includes supplemental disinfection treatment in order to meet the receiving water limitations for coliform that are included herein.

FACILITY AND TREATMENT PROCESS DESCRIPTION

13. The Discharger acquired the Facility in 1924 and claims no accurate records of the existing septic system, which is composed of septic tanks and leachfields, are available.
14. The proposed wastewater treatment system (Plant) will have three fiberglass septic tanks, two 15,000 gallon tanks (Septic Tank 1 and Septic Tank 3) and one 8,000 gallon tank (Septic Tank 2), and one 20,000 gallon two-compartment fiberglass grease interceptor. The kitchen waste flow goes into the grease interceptor and then into Septic Tank 1 where it is mixed with the effluent from the North Shower House, the Staff Quarters, and the Infirmary.
15. The process flow chart as shown on Figure 4 illustrates that the influent to the Plant from the fifteen villas, the South Shower House, the Cabin on the Hill, Sharpe's Lodge, and the Directors' Cabin flow into Septic Tank 2 and the waste from the Hotel flows to Septic Tank 3. The partially treated effluent from the three septic tanks flows into a 10,000 gallon equalization fiberglass tank and then on to the 15,000 gallon three compartment fiberglass treatment tank with the four tower trickling filters.

The tower trickling filter will be composed of a cylindrical cone-bottomed polyethylene chemical storage tank filled with polyvinylchloride (PVC) cross flow trickling filter media. The media modules are fabricated from PVC sheets and completely corrugated at an angle of 60 degrees from the horizontal to form a cross-corrugated pattern between adjacent sheets, creating a continuous and horizontal redistribution of air and wastewater. The details of the trickling tower filter are shown on Figure 5.

- 15.a. The trickling filter is a device for reducing BOD, suspended solids and ammoniac nitrogen in the effluent. Spray nozzles distribute the effluent on the surface of the media.

so that it percolates down through the media while air rises through it. A complex community of bacteria, fungi, protozoa and algae establishes on the media. The most aerobic zone lies at the base of the media where the well treated effluent meets with the incoming air and the least aerobic zone lies just below the surface of the filter. The system will have four trickling towers that are 8 ft in diameter with 8 ft deep media.

- 15.b. The treated wastewater will then go to the disinfection unit. The system's disinfection unit will be a Norweco® Bio-Dynamic® Chlorine Tablet feeder using Bio-Sanitizer® Disinfecting tablets, which release chlorine as the liquid erodes the chlorine tablets. Bio-Neutralizer® Dechlorination Tablets will be used to remove the residual chlorine in the water. Bio-Neutralizer® Dechlorination Tablets, which contain sodium sulfite as an active ingredient, are formulated to effectively remove both free and combined chlorine from treated wastewater. A schematic diagram of the chlorination unit is shown as Figure 6.
- 15.c. The Discharger will dispose the treated wastewater using Geoflow Wasteflow® Subsurface Drip Systems. The system will dispose of effluent through ½" pressurized pipes buried a minimum of 12 inches below the surface. The treated wastewater shall be pumped from a dosing/surge tank to the dispersal zones. The loading of the different dispersal zones is based on the allowable loading rates determined by a percolation test documented in a percolation test report dated August 4, 2003. The disposal rate shall be controlled utilizing a head works systems and solenoid valves.

The Discharger calculated the total dispersal area to be 63,150 square feet divided into seven dispersal zones summarized as follows:

Dispersal Zone 1 is 9,050 square feet (ft²) in area with allowable application rate of 0.3 gallons per square foot per day (gpsfd) and dispersal capacity of 2,715 gallons per day (gpd).

Dispersal Zone 2 is 9,010 ft² in area with allowable application rate of 0.3 gpsfd and dispersal capacity of 2,700 gpd.

Dispersal Zone 3 is 9,000 ft² in area with allowable application rate of 0.3 gpsfd and dispersal capacity of 2,700 gpd.

Dispersal Zone 4 is 3,420 ft² in area with allowable application rate of 0.55 gpsfd and dispersal capacity of 1,880 gpd.

Dispersal Zone 5 is 5,530 ft² in area with allowable application rate of 0.55 gpsfd and dispersal capacity of 3,040 gpd.

Dispersal Zone 6 is 7,550 ft² in area with allowable application rate of 0.55 gpsfd and dispersal capacity of 4,150 gpd.

Dispersal Zone 7 is 9,900 ft² in area with allowable application rate of 0.5 gpsfd and dispersal capacity of 4,950 gpd.

APPLICABLE PLANS, POLICIES, AND REGULATIONS

16. On June 13, 1994, the Regional Board adopted a revised *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) which was

amended on January 27, 1997 by Regional Board Resolution No. 97-02. The Basin Plan (i) designates beneficial uses for surface waters and groundwaters, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state antidegradation policy (*Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Water Resources Control Board [State Board] Resolution No. 68-16, October 28, 1968), and (iii) describes implementation programs to protect all waters in the Region. In addition, the Basin Plan incorporates by reference applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. This Order implements the plans, policies, and provisions of the Basin Plan.

17. The Basin Plan designates municipal and domestic supply and agricultural supply as the existing beneficial uses of groundwater for San Pedro Channel Islands (Santa Catalina Island) Subunit. It also designates beneficial uses for coastal waters for Island Nearshore Zones (Santa Catalina Island) that includes water contact recreation, non-contact water recreation, commercial and sport fishing, and shellfish harvesting.
18. On November 16, 2000, the State Water Resource Control Board (State Board) adopted a revised *Water Quality Control Plan for the Ocean Waters of California* (Ocean Plan). The State of California Office of Administrative Law and the USEPA approved the Ocean Plan on July 9, 2001 and December 3, 2001, respectively. The Ocean Plan contains water quality objectives for coastal waters of California. The beneficial uses of the ocean waters of the State that shall be protected include industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; rare and endangered species; marine habitat; fish migration; fish spawning; and shellfish harvesting. This Order includes receiving water limitations, prohibitions, and provisions that implement the objectives of the Ocean Plan.
19. The Facility is located on Button Shell Beach which is within the Santa Catalina Island groundwater basin as identified in the Basin Plan. The discharge point is located 175 feet from the Ocean's mean high tide. The Basin Plan's statement that the beneficial use for this ground water is municipal and domestic supply (MUN) does not apply because of the Plant's close proximity to the ocean. However, the groundwater underlying the Facility is in hydraulic connection to the nearby surface water and at this location, the receiving surface water is the Pacific Ocean. This Order includes receiving water limitations to protect the beneficial uses of the ocean which include water contact and non-contact recreation, including aesthetic enjoyment; commercial and sport fishing, fish spawning; and shellfish harvesting. The requirements contained in this Order, as they are met, will be in conformance with the goals of the Basin Plan.
20. Button Shell Beach where the Facility is located is not designated as impaired under section 303(d) of the Clean Water Act (33 U.S.C. § 1313(d)). Avalon Beach, which is 4.5 miles southeast of the Facility, is listed as impaired for bacteria.
21. An effluent monitoring program, with the compliance point being the wastewater treatment system end of pipe, is necessary to evaluate the effectiveness of the treatment system. Inshore water quality monitoring program is necessary to evaluate any impacts from the

discharge of treated wastewater to the Pacific Ocean. Five inshore water quality sampling stations shall be sampled at ankle depth and on an incoming wave.. Ocean Plan standards have been used for the limitations established herein.

22. The requirements contained in this Order are based on the Basin Plan, Ocean Plan, other state plan, policies, and guidelines, and best professional judgment.

CALIFORNIA ENVIRONMENTAL QUALITY ACT and NOTIFICATION

23. This project involves the issuance of WDRs for an existing facility and, as such, is exempt from the provisions of the California Environmental Quality Act (Public Resources Code section 21000 et seq.) in accordance with California Code of Regulations, title 14, section 15301.
24. The Regional Board has notified the Discharger and interested agencies and persons of its intent to issue WDRs for this discharge, and has provided them with an opportunity to submit their views and recommendations for the requirements.
25. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and to the requirements.
26. Pursuant to California Water Code section 13320, any aggrieved party may seek review of this Order by filing a petition with the State Board. The State Water Resources Control Board, P.O. Box 100, Sacramento, California, 95812 must receive the petition within 30 days of the date of adoption of the Order.

IT IS HEREBY ORDERED that the Young Men's Christian Association of Glendale shall be responsible for and shall comply with the following requirements in all operations at the Facility.

A. INFLUENT LIMITATIONS

1. Waste to the on-site treatment/disposal system shall be limited to commercial wastewater only.
2. The daily flow shall not exceed the design capacities of the on-site wastewater treatment/disposal system. This flow limitation also applies to treated effluent discharged to the subsurface drip disposal system. Treatment system design capacities for average and peaking flows are estimated by the Discharger to be 20,000 gallons per day (gpd).

B. EFFLUENT LIMITATIONS

1. The pH of wastes discharged to the subsurface drip disposal system shall be within the range of 6 to 9.

2. Treated wastewater discharged to the subsurface drip disposal system shall not contain additives or residual chlorine levels such that the biomat layer or the hydraulic capacity of the subsurface drip disposal system is irreparably damaged.

C. RECEIVING WATER LIMITATIONS

1. The compliance point for each parameter is the wastewater treatment system end of pipe, unless otherwise specified. The treated wastewater discharged to the subsurface drip disposal system shall not contain constituents in excess of the following limits:

<u>Constituent</u>	<u>Units</u> ¹	<u>Monthly</u>		<u>Daily</u>
		<u>Mean</u>	<u>Median</u>	<u>Maximum</u>
Total coliform	MPN/100mL	--	70	
Fecal coliform	MPN/100mL	200	--	--
Ammonia ² (expressed as nitrogen)	mg/L	2.4	---	2400
Enterococcus	MPN/100mL		24	--
Total Suspended Solids	mg/L	30		
BOD	mg/L	30		
Residual chlorine	µg/L		----	8

^[1] MPN/100mL: Most Probable Number per 100 milliliter, mg/L: milligrams per liter, µg/L: micrograms per liter

^[2] To be sampled at inshore water quality sampling stations.

2. The treated wastewater discharged to the subsurface drip disposal system shall not contain salts, heavy metals, or organic pollutants at levels that would adversely impact surface waters designated for marine aquatic life, shellfish harvesting or body contact recreation uses.

D. PROHIBITIONS

1. There shall be no septic/wastewater treatment system overflows or discharge of wastes to waters of the State (including storm drains) at any time.
2. Wastes shall not be disposed of in geologically unstable areas or so as to cause earth movement
3. Wastes discharged shall not impart tastes, odors, color, foaming or other objectionable characteristics to the receiving water.
4. Waste discharged shall not cause any impact on the indigenous marine life and a healthy and diverse marine community.

5. Adequate facilities shall be provided to divert surface and storm water away from the treatment and subsurface drip disposal system and from areas where any potential pollutants are stored.
6. The septic tanks, treatment system, sewer collection system and the subsurface drip disposal system, shall be protected from damage by storm flows or runoff generated by a 100-year 24-hour storm.
7. There shall be no onsite disposal of sludge. Any offsite disposal of sewage or sludge shall be made only to a legal point of disposal. For purposes of this Order, a legal disposal site is one for which requirements have been established by a regional water quality control board and which is in compliance therewith. Any sewage or sludge handling shall be conducted in such a manner as to prevent sewage or sludge from reaching surface waters or watercourses.
8. The treatment system, including the collection system and the subsurface drip disposal system, shall be maintained in such a manner that prevents sewage from surfacing or overflowing at any location.
9. Sewage odors shall not be detectable.
10. The discharge of waste shall not create a condition of pollution, contamination, or nuisance.
11. The direct or indirect discharge of any wastewater to surface waters or surface water drainage courses is prohibited.
12. Under no circumstances shall the vertical separation distance of the subsurface drip disposal system from groundwater be less than five feet.

E. PROVISIONS

1. A copy of this Order shall be maintained at the Facility so as to be available at all times to operating personnel.
2. In the event of any change in name, ownership, or control of the Facility, the Discharger shall notify the Regional Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Regional Board.
3. The Discharger shall file with the Regional Board technical reports on self-monitoring work performed according to the detailed specifications contained in Monitoring and Reporting Program No. CI XXXX attached hereto and incorporated herein by reference, as directed by the Regional Board Executive Officer (Executive Officer). The results of any monitoring done more frequently than required at the location and/or times specified in the Monitoring and Reporting Program shall be reported to the Regional Board.

Monitoring and Reporting Program No. CI XXXX contains requirements, among others, specifying that effluent monitoring program shall be established at the wastewater treatment system end of pipe. An inshore monitoring program shall be designed to evaluate impacts of waste water discharged through the subsurface drip disposal system to the receiving water. An inshore monitoring workplan must be submitted to the Regional Board for review and is subject to approval by the Executive Officer prior to implementation. Although a groundwater monitoring program is not required at this time, the Executive Officer at his discretion may require the Discharger to develop a groundwater monitoring program. If this decision is made, the Discharger must submit a workplan to implement the ground water monitoring program within 45 days of such notification. The workplan is subject to approval by the Executive Officer.

4. The Discharger may not have sufficient land area reserved for possible future 100 percent replacement of the subsurface disposal area. The Discharger shall be required to have a contingency plan to deal with disposal system failure or the loss of soil assimilative capacity.
5. Since there is not a 10-foot vertical separation between the bottom of the drip disposal system and the groundwater, the proposed treatment system shall include supplemental disinfection treatment in order to meet receiving water limitations.
6. Any existing septic tanks requiring removal shall be pumped and crushed and the resulting void filled with local fill material compacted to 95% as specified by ASTM D1557. Sewer pipes from the septic tanks to the leachfields shall be bedded in accordance with specifications of the California Plumbing Code (CPC). Existing leach fields shall be excavated or abandoned in accordance with the specifications of the CPC.
7. The Discharger shall cause the treatment/disposal system to be inspected annually during the life of this Order by a professional inspector to be retained by the Discharger. National Sanitation Foundation standards should be applied where possible to the inspection. The inspector shall also specify the capacity and condition of the treatment system and of the sub-surface drip disposal system and the corrections needed. The Discharger shall provide information regarding the separation distance between groundwater and the sub-surface drip disposal system, information regarding the capacity and adequacy of the treatment system and disposal area to handle the discharge, and establish the contingency measures needed to accommodate disposal system failures or to deal with loss of assimilative capacity of the soils.
8. The Discharger shall notify the Regional Board within 24 hours of any adverse condition resulting from the discharge of wastewater from the Facility and a written confirmation by the Discharger shall follow within one week. The Discharger in the

next monitoring report shall also confirm this information. In addition, the report shall include the reasons for the violations or adverse conditions, the steps being taken to correct the problem (including dates thereof), and the steps being taken to prevent a recurrence.

9. The Discharger shall notify the Regional Board within 24 hours, by telephone or electronically, of any bypassing or surfacing of wastes. Written confirmation by the Discharger shall follow within one week and shall include information relative to the location(s), estimated volume, date and time, duration, cause, and remedial measures taken to effect cleanup and measures taken to prevent any recurrence.
10. This Order does not relieve the Discharger from the responsibility to obtain other necessary local, state, and federal permits to construct facilities necessary for compliance with this Order; nor does this Order prevent imposition of additional standards, requirements, or conditions by any other regulatory agency.
11. Any discharge of wastewater from the treatment system (including the wastewater collection system) at any point other than a site with approved waste discharge requirements or specifically described in this Order is prohibited, and constitutes a violation of this Order.
12. Any discharge of wastewater from the treatment system (including the wastewater collection system) at any point other than a site with approved waste discharge requirements or specifically described in this Order is prohibited; and constitutes a violation of this Order.
13. After notice and opportunity for a hearing, this Order may be terminated or modified for cause including, but not limited to:
 - a) Violation of any term or condition contained in this Order;
 - b) Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;
 - c) A change in any condition, or the discovery of any information, that requires either a temporary or permanent reduction or elimination of the authorized discharge
14. The Discharger shall furnish, within a reasonable time, any information the Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Discharger shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.
15. The Discharger shall file a written report within ten days with the Regional Board at such time as the average daily waste flow per month has reached or exceeded 80 percent of the recognized septic system design flow capacity (currently 20,000

gpd) or conditions suggest that the hydraulic or treatment capacity for the treatment/disposal system has been exceeded. The report shall detail proposed provisions to cope with excess flows.

16. The Discharger shall comply with all applicable requirements of chapter 4.5 (commencing with section 13290) of division 7 of the California Water Code.
17. Should monitoring data indicate contamination of groundwater or discharge related violations of receiving water limitations, the Discharger shall submit, within 60 days after discovery of the problem, plans for measures that will be taken, or have been taken, to mitigate any long-term effects that may result from the subsurface disposal of wastes.
18. This Order includes the attached "Standard Provisions Applicable to Waste Discharge Requirements" which is incorporated herein by reference. If there is any conflict between provisions stated herein and the "Standard Provisions," those provisions stated herein will prevail.
19. The WDRs contained in this Order will remain in effect for a period of five years. Should the Discharger wish to continue discharging to groundwater for a period of time in excess of five years, the Discharger must file an updated Report of Waste Discharge with the Regional Board no later than 180 days in advance of the fifth-year anniversary date of the Order for consideration of issuance of new or revised waste discharge requirements. Any discharge of waste five years after the date of adoption of this Order, without filing an updated Report of Waste Discharge with the Regional Board, is a violation of California Water Code section 13264. The Regional Board is authorized to take appropriate enforcement action for any noncompliance with this provision including assessment of penalties.
20. All discharges of waste into the waters of the State are privileges, not rights. In accordance with California Water Code section 13263(g), these requirements shall not create a vested right to continue to discharge and are subject to rescission or modification.

F. REOPENER

This Order may be reopened to delete outdated requirements, or to include additional or modified requirements to address pollutant loading problems verified by monitoring data, Discharger workplans or mitigation plans, or Total Maximum Daily Load (TMDL) schedules, Ocean Plan or Basin Plan mandates.

I, Jonathan Bishop, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region on November 3, 2005.


Jonathan Bishop
Executive Officer