

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

MONITORING AND REPORTING PROGRAM NO. R3-2016-0007
Waste Discharger Identification No. 3 421015001

**For
DUNN SCHOOL
SANTA BARBARA COUNTY**

1. SEPTIC TANK MONITORING

All septic tanks using leach fields or dry wells for disposal shall be monitored on a rotating basis as detailed in the table below.

Table 1 - Septic Tank Monitoring Rotation

Tank Number	Year
11, 14, 17, 20, 28	1
12, 15 ¹ , 18, 21, 24, 29	2
13, 16, 19, 22, 25, 27	3

1 – Tank 15 receives wastewater from the Dunn School chemistry laboratory (building 24).

Starting with year four and subsequent years, the three-year cycle shall be repeated. Representative samples of wastewater discharged from each tank shall be collected and analyzed for the following parameters:

Table 2 - Septic Tank Monitoring

Constituent	Units	Type of Sample	Sampling Frequency
Daily Flow	Gallons per day	Estimate ²	Monthly
Biochemical Oxygen Demand, 5-Day	mg/L	Grab	Annually (March)
Total Suspended Solids	mg/L	Grab	“ “
pH	units	Grab	“ “
Ammonia (as N)	mg/L	Grab	“ “
Nitrate (as N)	mg/L	Grab	“ “
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	“ “
Total Nitrogen	mg/L	Calculated	“ “
Total Dissolved Solids	mg/L	Grab	“ “
Total Organic Carbon	mg/L	Grab	“ “
Sodium	mg/L	Grab	“ “
Chloride	mg/L	Grab	“ “
Boron	mg/L	Grab	“ “
Sulfate	mg/L	Grab	“ “

2 - Flow estimates may be obtained from water meter readings.

2. PRESSURE DISPERSAL FIELD AND RECIRCULATING SAND FILTER MONITORING

Representative samples of wastewater discharged to the pressure dispersal field (PDF) from the recirculating sand filter (RSF) shall be collected and analyzed for the following constituents:

Table 3 - Pressure Dispersal Field/Recirculating Sand Filter Monitoring

Constituent	Units	Type of Sample	Sampling Frequency
Daily Flow	Gallons per day	Estimate ³	Monthly
Biochemical Oxygen Demand, 5-Day	mg/L	Grab	Quarterly (April, June, Sept, Dec)
Total Suspended Solids	mg/L	Grab	" "
pH	units	Grab	" "
Ammonia (as N)	mg/L	Grab	" "
Nitrate (as N)	mg/L	Grab	" "
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	" "
Total Nitrogen	mg/L	Calculated	" "
Total Dissolved Solids	mg/L	Grab	Annually (March)
Total Organic Carbon	mg/L	Grab	" "
Sodium	mg/L	Grab	" "
Chloride	mg/L	Grab	" "
Boron	mg/L	Grab	" "
Sulfate	mg/L	Grab	" "

3 - Flow estimates may be obtained from water meter readings.

3. ADVANTEX PACKAGE TREATMENT SYSTEM MONITORING

Representative samples of wastewater discharged to the pressure dispersal field (PDF) and recirculating sand filter (RSF) shall be collected and analyzed for the following constituents:

Table 4 - Pressure Dispersal Field and Recirculating Sand Filter Monitoring

Constituent	Units	Type of Sample	Sampling Frequency
Daily Flow	Gallons per day	Estimate ⁴	Monthly
Biochemical Oxygen Demand, 5-Day	mg/L	Grab	Quarterly (April, June, Sept, Dec)
Total Suspended Solids	mg/L	Grab	" "
pH	units	Grab	" "
Ammonia (as N)	mg/L	Grab	" "
Nitrate (as N)	mg/L	Grab	" "
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	" "
Total Nitrogen	mg/L	Calculated	" "
Total Dissolved Solids	mg/L	Grab	Annually (March)
Total Organic Carbon	mg/L	Grab	" "
Sodium	mg/L	Grab	" "
Chloride	mg/L	Grab	" "
Boron	mg/L	Grab	" "
Sulfate	mg/L	Grab	" "

4 - Flow estimates may be obtained from water meter readings.

4. MAINTENANCE AND INSPECTION

- I. Septic tanks shall be inspected and pumped as described below. An inspection is not required during the year a septic tank is pumped.

Table 5 - Septic Tank Maintenance and Inspection

Constituent	Units	Type of Sample	Sampling Frequency
Sludge depth and scum thickness in each compartment of each septic tank	Inches	Staff Gauge	Annually (March)
Distance between bottom of scum layer and bottom of outlet-device	Inches	Staff Gauge	Annually (March)
Distance between top of sludge layer and bottom of outlet device	Inches	Staff Gauge	Annually (March)

Septic tanks shall be pumped when any one of the following conditions exists or may occur before the next inspection:

- The combined thickness of sludge and scum exceeds one-third of the tank depth of the first compartment; or,
- The scum layer is within three inches of the outlet device; or,
- The sludge layer is within eight inches of the outlet device.

In lieu of septic tank measuring, the septic tank may be pumped annually.

- II. Tanks serving the Pressure Dispersal Field/Recirculating Sand Filter and the AdvanTex package treatment system shall be inspected, pumped, and maintained as described below.

Table 6 - Pressure Dispersal Field, Recirculating Sand Filter, AdvanTex Tank Monitoring

Constituent	Units	Type of Sample	Sampling Frequency
Liquid Level	Inches	Staff Gauge	Monthly
Elapsed time meter readings for pressure distribution field and recirculating sand filter	Hours	Meter	Monthly
Cycle counter readings for pressure distribution field and recirculating sand filter pumps	Cycles	Meter	Monthly
Sludge depth and scum thickness in each compartment of each septic tank	Inches	Staff Gauge	Annually (March)
Distance between bottom of scum layer and bottom of outlet-device	Inches	Staff Gauge	Annually (March)
Distance between top of sludge layer and bottom of outlet device	Inches	Staff Gauge	Annually (March)
Effluent filters ⁵	---	Visual	Quarterly (Mar, Jun, Sep, Dec)
Squirt height ⁶	Inches	Visual	Semi-annually (Jun, Dec)

Pump(s) operability			
Pressure Dispersal Field/Recirculating Sand Filter and the AdvanTex package treatment system pumps shall be inspected for operability based on campus population. Inspection shall confirm pump operability.			
Campus Population	50 or less	50 or more	
Inspection Schedule	Once per week	Daily	

5 - Effluent filters in the septic tanks serving the PDF and RSF shall be inspected every three months, and cleaned every six months or when necessary.

6 - Squirr height in PDF and RSF laterals shall be inspected every six months, and flushed annually or when necessary to restore adequate pressure.

Tanks shall be pumped when any one of the following conditions exists or may occur before the next inspection:

- a. The sludge depth exceeds 15 inches; or
- b. The scum layer exceeds 8 inches.

In lieu of tank measuring, the septic tank may be pumped annually.

5. DISPOSAL AREA MONITORING

The disposal areas shall be inspected weekly for surfacing effluent, saturated surface areas, and odors. Evidence of any condition of this nature shall be reported to the Executive Officer within 24 hours of knowing of such conditions, and promptly investigated and remedied. A record shall be kept of dates and nature of observations and remedies and of when use of individual leachfields is alternated or suspended.

6. GROUNDWATER MONITORING

- a. Sampling shall begin after executive officer approval of the proposed groundwater monitoring plan.

Representative samples of groundwater shall be collected and analyzed annually from monitoring wells identified in the proposal for monitoring groundwater. Additional wells may be added to the groundwater monitoring program as deemed appropriate by the Executive Officer. The annual samples are to be analyzed in accordance with Table 7. Additionally, samples collected from the downgradient well shall be analyzed for priority pollutants^{1 2} and Total Coliform (MPN/100mL). These annual results shall be reported in the annual summary report.

¹ California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64431

² California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5.5, Section 64444

Table 7 - Groundwater Monitoring

Constituent	Units	Type of Sample	Sampling Frequency
Depth to groundwater	Feet	measure	Annually (March)
Total Suspended Solids	mg/L	Grab	" "
pH	units	Grab	" "
Ammonia (as N)	mg/L	Grab	" "
Nitrate (as N)	mg/L	Grab	" "
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	" "
Total Nitrogen	mg/L	Calculated	" "
Total Dissolved Solids	mg/L	Grab	" "
Total Organic Carbon	mg/L	Grab	" "
Sodium	mg/L	Grab	" "
Chloride	mg/L	Grab	" "
Boron	mg/L	Grab	" "
Sulfate	mg/L	Grab	" "

Monitoring reports shall include tabulated monitoring results and a narrative description of analytical results (general mineral constituents, including all forms of nitrogen, depth to groundwater, and groundwater flow direction) and water quality trends (changes in water quality, impacts from sea water intrusion). Sample procedures and equipment used shall also be reported. Contour maps shall be provided, which include: a) groundwater elevations and flow direction, b) TDS concentrations, and c) nitrate as N concentrations.

In addition, analytical results for water quality data collected from water purveyor wells in the basin shall be reported. Any additional monitoring performed shall be submitted with regular monitoring reports.

7. TIME SCHEDULE MONITORING

Dunn School shall document the wastewater collection system expansion (treatment with the AdvanTex treatment system) according to the following time schedule:

Table 8 – Time Schedule for Connecting Septic Tanks to AdvanTex System

Septic Tank Number	Date for Completion
27, 28, 29	December 2018
23, 25, 26A, 26B	December 2020
11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24,	Connection during construction of facilities detailed in the Dunn School Facilities Master Plan

8. SELF-MONITORING REPORTS (SMRS)

Groundwater Monitoring Plan - By **September 30, 2017**, submit to the executive officer a plan for monitoring groundwater underlying all disposal areas. The plan shall include (at a minimum):

- Depth to groundwater;
- Direction of groundwater flow;
- Appropriate location and depth for upgradient and downgradient wells;
- Timeline for well installation and monitoring.

Salt Management Program – Beginning **January 30th, 2018**, submit as part of the annual report, ongoing salt reduction efforts. The report shall include (at a minimum):

- a. Calculations of annual salt mass discharged to (influent) and from (effluent) the wastewater treatment or recycling 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 Management Program - Beginning **January 30th, 2018**, submit as part of the annual report, ongoing nutrient reduction efforts. The report shall include (at a minimum):

- a. Calculations of annual nitrogen mass (for all identified species) discharged to (influent) and from (effluent) the wastewater treatment or recycling 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.

Quarterly Reports - Reports shall be submitted quarterly by the 30th day of the month following the inspection (**Jan 30th, Apr 30th, July 30th, and Oct 30th**) and shall contain all data collected or calculated over the previous reporting period and a narrative summary of the data. It shall also contain a narrative summary of any surfacing effluent, saturated surface areas, or odors pursuant to Disposal Area Monitoring described above, as well as a statement of the disposal location of waste chemicals generated by science laboratory activities.

Annual Reports - An Annual Report shall be submitted by **January 30th** each year and shall include:

- a. Tabular and graphical summaries of the monitoring data obtained during the preceding year. Duplicate copies of monthly reports are not necessary and do not fulfill requirements for "summaries".
- b. Discussion of any and all incidents of non-compliance and corrective actions taken to ensure compliance is restored.
- c. List of facility staff and corresponding certification levels.
- d. Summary of biosolids monitoring, as described above.
- e. Summary of collection system management plans, or reference report submitted under separate cover as required by this or separate sanitary sewer requirements.
- f. Summary of collection system expansion and decommissioning of septic tanks,

9. ELECTRONIC SUBMITTAL

1. The Discharger must submit electronic Self-Monitoring Reports (eSMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>).
 2. The Discharger shall report in the eSMRs the results for all monitoring specified in this MRP. The Discharger shall submit quarterly and annual eSMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the eSMR. The Discharger shall submit SMR's in accordance with the following requirements:
 - a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
 - b. The Discharger shall include in their CIWQS upload a cover letter to the eSMR. The information contained in the cover letter shall:
 - Clearly identify violations of the WDRs - Identified violations must include a description of the requirement that was violated and a description of the violation;
 - Discuss corrective actions taken or planned;
 - Provide the proposed time schedule for corrective actions; and
 - Be signed and certified as required by the standard provisions.

Laboratory data sheets for the analytical results submitted shall be attached to the cover letter.

 - c. Discharger shall maintain and update, as necessary, a Permittee Entry Tool (PET) to facilitate data entry into the CIWQS system.
3. **Other Reports** - The Discharger shall report the results of any special studies, monitoring, and reporting required by the Order. The Discharger shall submit such reports consistent with dates identified in this MRP.

Ordered by: _____
Executive Officer

Date: _____