

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

ORDER 97-062

WASTE DISCHARGE REQUIREMENTS FOR:

TRADITION GOLF CLUB, LLC
SAN JOSE, SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Board, finds that:

1. Tradition Golf Club, LLC (hereinafter Discharger) submitted a Report of Waste Discharge, dated February 10, 1997, for the construction and operation of subsurface waste treatment and disposal systems at a golf course located on a 347-acre site off McKean Road at the southern end of the City of San Jose (Figure 1). The project will include the construction of a 27-hole golf course, a driving range, clubhouse, parking area, maintenance facility, security/caretaker complex, water storage lakes and tank, three septic systems and an entry road.
2. The project site consists of 347 acres of rolling hills and meadows in the Pine Tree Canyon drainage, a tributary to the Calero Reservoir. (Figure 2). The site is estimated to receive average annual rainfall of about 22.4 inches, occurring mainly between the months of November through April. Stormwater runoff concentrates in two seasonal drainages which flow generally from south to north, ultimately leaving the site, crossing McKean Road and entering the southeastern arm of Calero Reservoir.

TREATMENT AND DISPOSAL SYSTEMS

3. Tradition Golf Club proposes to discharge a maximum of 7,650 gallons per day (gpd) to three separate septic waste treatment and disposal systems as described below:

a. Waste 001 (Clubhouse System):

Up to 6,000 gpd of sanitary sewage would be generated from the Clubhouse complex, which includes the proshop, restrooms, offices, a restaurant, snack shack, and practice range. The wastewater treatment facilities consist of a 6,000-gallon septic tank for primary treatment, a 5,000-gallon grease interceptor to handle kitchen wastes, a 6,000 gpd recirculating sand filter for secondary treatment and nitrogen removal and a 5,000-gallon recirculation tank to collect wastes from the Clubhouse and snack shack prior to dosing the sand filter.

A pressure-dosed dual system leachfield will be located in the "rough" area between the 7th and 9th holes on the second nine of the golf course. Flows to the leachfield are regulated by a series of dosing siphons which serve to alternate the flow to different sections of the leachfield as needed to optimize the performance of the system. The leachfield will be divided into four quadrants of 500 lineal feet each (ten 50-foot laterals). Two quadrants will be active during winter months, receiving alternating doses from the two dosing siphons; during this time the other two quadrants will be inactive (i.e., "resting"). During the summer months, the flow will be switched to the other two quadrants (with alternating doses), and the "winter" quadrants will convert to a "rest" cycle.

b. Waste 002 (Maintenance Building System)

This system handles up to 1350 gpd of sewage wastes from the maintenance building, the security/caretaker's complex and two of the on-course restrooms (Second and Third Nine). The wastewater treatment facilities will consist of separate 1,500 gallon septic tanks for treatment at each of the buildings

A common dual, gravity leachfield system will be located adjacent to the Clubhouse leachfield system in the area alongside the 9th hole fairway on the Second Nine of the golf course. It will be divided into two equal fields of 450 lineal feet, with each field having a capacity for 100 per cent of the daily design flow of 1,350 gpd. A diversion valve will allow the flow to be switched from one field to the other every six months.

c. Waste 003 (First Nine Restroom)

This system will handle up to 300 gpd of sewage wastes from the First Nine restroom, located near the south end of the golf course. The projected use of this restroom is up to 100 golfers per day. The wastewater treatment facility will consist of a 1,500 gallon septic tank.

The disposal facility will consist of conventional gravity trenches, located immediately downslope of the restroom, and a curtain drain (i.e., sub-drain) located upslope of the leachfield to intercept and drain perched lateral ground water flow from the hillside.

GROUNDWATER ISSUES

4. Ground water underlying the project site occurs in two distinct zones:

a. Shallow Ground Water Zone

This is a shallow alluvium which fluctuates seasonally and is not a reliable water source. Four shallow agricultural water wells on the project site have been sealed per Santa Clara Valley Water District specifications.

b. Deeper Ground Water Zone

This zone occurs in a fractured Franciscan formation, extending hundreds of feet into the bedrock. The ground water in this deeper zone is generally potable. An on-site production well for the domestic supply draws from the bedrock and is located in the extreme southeast corner of the property, more than 2/5-mile from the wastewater disposal areas.

5. Nitrate loading from on-site wastewater disposal systems can potentially degrade ground water supplies and contribute nutrient enrichment of surface water bodies. With respect to the wastewater for the golf course project, shallow ground water and Calero Reservoir downgradient of the project site could potentially be affected by nitrate additions. The nitrate loading analyses shows a projected concentration of nitrate-nitrogen of 3.2 mg/l in the shallow zone in the Clubhouse area as compared with a general background level as high as 4.5 mg/l. Fertilizer applications to the golf course will also add nitrate to the soil and ground water. Although it is not anticipated that these sources will have a significant impact on the deep ground water zone or Calero reservoir, nitrate-nitrogen levels should be monitored in the shallow groundwater zone and in surface streams leaving the site.

BASIN PLAN AND BENEFICIAL USES

6. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on June 21, 1995. This updated and consolidated plan is the Board's master water quality control planning document. The revised plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20 and November 13, 1995, respectively. The Basin Plan prohibits the discharge of any untreated sewage or any waste failing to meet waste discharge requirements to any waters of the state. The Basin Plan also requires that existing ground water quality be maintained unless otherwise provided by the State Board. A summary of regulatory provisions is in California Code of Regulations, Title 23, Section 3912.
7. The Basin Plan defines beneficial uses and water quality objectives for waters of the State within the San Francisco Bay Region, including surface and ground waters.

8. The beneficial uses identified in the Basin Plan for the Calero Reservoir include:
 - a. Municipal and domestic water supply
 - b. Ground water recharge
 - c. Warm freshwater habitat
 - d. Fish spawning
 - e. Wildlife habitat
 - f. Water contact and noncontact recreation
9. The beneficial uses identified in the Basin Plan for ground water in the San Jose area include:
 - a. Industrial service and supply
 - b. Municipal and domestic supply
 - c. Agricultural supply

REGULATORY ACTIONS AND MITIGATIONS

10. On October 1, 1996 the San Jose City Council (Resolution 66899.1) found the golf course project is consistent with and will implement the goals and policies of the San Jose 2020 General Plan . The Council approved the Environmental Impact Report and its mitigation measures in accordance with California Environmental Quality Act (Public Resources Code Section 2100 et. seq.).
11. The project as approved by the City of San Jose and as regulated by this Order will not have an adverse impact on water quality.
12. The proposed project will result in the direct loss of approximately 1.6 acres of riparian vegetation, 4.58 acres of seasonal wetlands and 0.32 acres of seasonal drainage channels. The Discharger will prepare a Riparian Restoration Plan and a Wetland Restoration Plan outlining mitigation measures to offset these losses.
13. On December 18, 1997 this Board recommended that this project be granted Water Quality Certification from the State Water Resources Control Board. The approval was conditioned on the implementation of the 1) mitigation measures proposed in the Draft Environmental Report (EIR) (July 22, 1996) to mitigate adverse impacts to beneficial uses of waters of the State; 2) the environmental Management Plan (Questa Engineering Corp., June 20, 1996); and 3) the Mitigation and Monitoring Plan (H.T. Harvey and Associates, August 6, 1996) as amended by California Department of Fish and Game (stream Bed Alteration Agreement number 812-96, November 1, 1996).
14. The Discharger will be required to submit a Notice of Intent for the Board's non-stormwater NPDES General Permit and a Stormwater Pollution Prevention Plan that addresses both construction and post-construction periods and specifies erosion and sediment control measures, waste disposal controls, maintenance responsibilities.
15. The Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with the opportunity for a public hearing and opportunity to submit their written views and recommendations.
16. The Board, in a properly noticed public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Tradition Golf Club, LLC, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A Prohibitions

1. There shall be no surfacing of wastewater effluent at any time.
2. Wastewater shall not be discharged to waters of the State, via either surface flow or surfacing after percolation.
3. The volume of wastewater discharged to the leachfields shall not exceed the following (monthly average of weekly flows):
 - a. Waste 001: 6,000 gpd
 - b. Waste 002: 1,350 gpd
 - c. Waste 003: 300 gpd

B. Discharge Specifications

1. The treatment or disposal of waste shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. The disposal of waste shall not cause degradation of ground or surface water suitable for domestic water supply or cause an increase in any water quality parameter that would impair beneficial uses listed in Findings 8 and 9 of this Order.
3. Nitrate-nitrogen concentrations in the ground water at the Golf Course property line down gradient of the wastewater disposal leachfields shall not significantly exceed levels of 7.0 mg/l nitrate-nitrogen.

C. Provisions

1. The Discharger shall comply with all sections of this Order immediately upon commencement of discharge.
2. The Discharger shall install leachfield monitoring well systems to monitor the performance of the disposal systems and their impacts on water quality. A proposed monitoring plan shall be submitted to the Regional Board for approval by the Executive Officer by July 15, 1997.
3. A computerized irrigation control system with an on-site weather station shall be designed and installed in order to provide irrigation applications consistent with turf grass evapotranspiration requirements, and avoidance of over-watering.
4. The Discharger shall maintain in good working order and operate as efficiently as possible any treatment, disposal, and monitoring facility or control system installed by the Discharger to achieve compliance with these waste discharge requirements.
5. The Discharger shall comply with the attached self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.
6. The Discharger shall notify the Board, in writing, at least 60 days before making any material change in the character, location, or volume of the wastewater treatment or disposal practices regulated by this Order, except in emergencies, in which case the Board shall be notified as soon as possible.

7. The Discharger shall provide employee training to ensure proper operation of waste discharge operation of the facilities. All personnel responsible for operation and maintenance of the wastewater treatment and disposal facilities shall be provided with a copy of the Operation and Maintenance Manual furnished by the designer of the waste discharge facilities.
8. The Discharger shall permit the Regional Board or its authorized representative in accordance with California Water Code Section 13267(c):
 - a. Entry upon premises in which an effluent source is located or in which any required records are kept.
 - b. Access to copy any records required to be kept under the terms and conditions of this Order.
 - c. Inspection of monitoring equipment or records, and
 - d. Sampling of any discharge.
9. In the event of any change in control or ownership of the land or the waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by a letter, a copy of which shall be forwarded to the Board.
10. This Board will review this Order periodically and may revise the requirements as necessary.

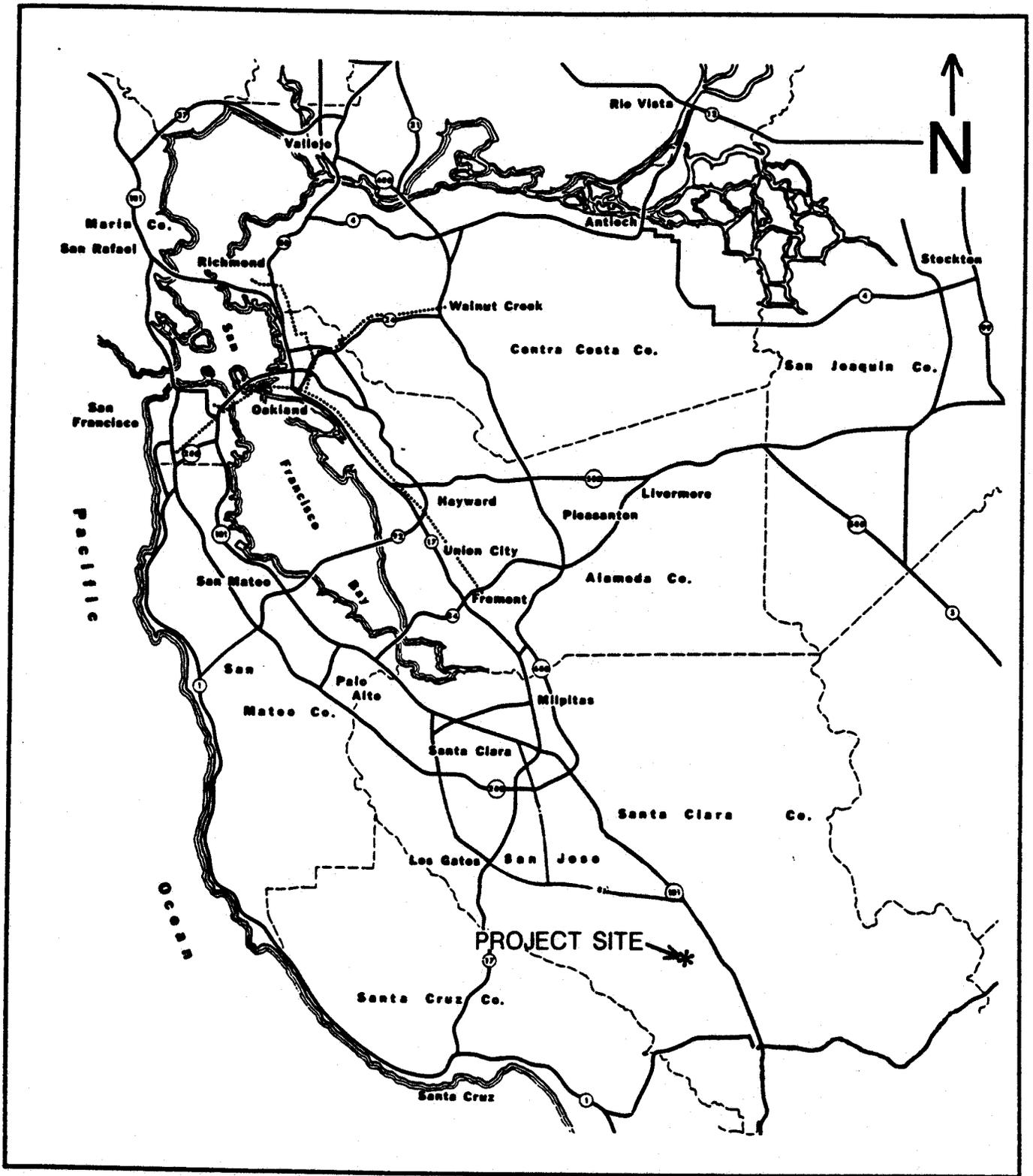
I, Loretta K. Barsamian Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on May 21, 1997.


Loretta K. Barsamian
Executive Officer

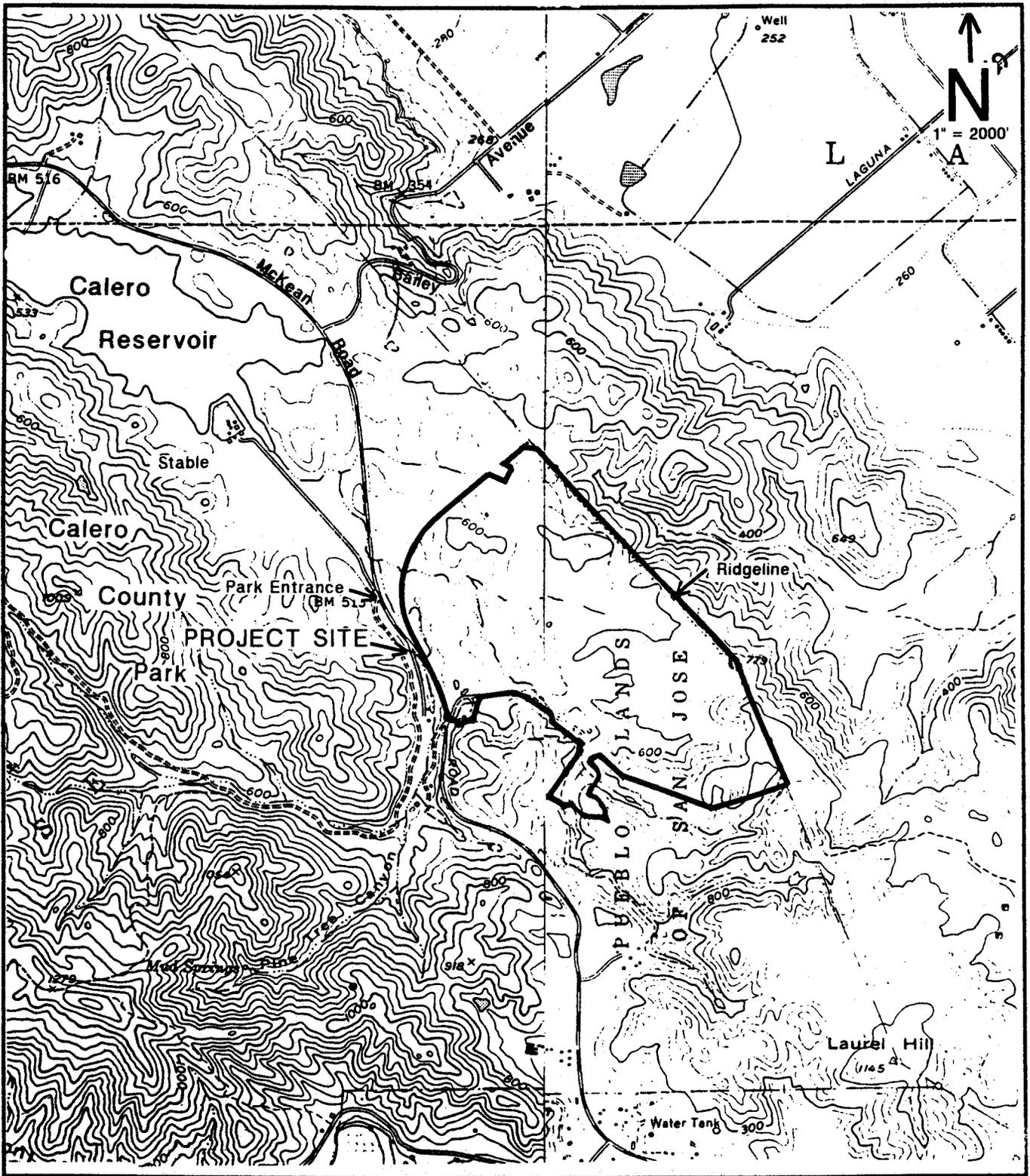
Attachments:

- A. Location Maps, Figures 1 & 2
- B. Self-Monitoring Report

File No. 2189.8538
Originator/RJC



Bay Area Map
Figure 1



Source: Santa Teresa Hills and Morgan Hill Quadrangles

USGS Map
Figure 2

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

for

Tradition Golf Club
City of San Jose
Santa Clara County

ORDER NO. 97-062

May 1997

1. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code.

The principal purposes of a monitoring program by a waste discharger, also referred to as a self-monitoring program, are:

1. To document compliance with wastewater requirements and prohibitions established by this Regional Board; and
2. To facilitate self-policing by the discharger in the prevention and abatement of pollution arising from wastewater treatment and disposal.

II. OPERATION AND MAINTENANCE GUIDELINES

MAINTENANCE

To prolong the life of the on-site systems and assist in early detection of possible problems, the following are recommended:

1. Protect the disposal field areas from vehicle traffic or other activities that might create ruts or excessive compaction of the field;
2. Minimize plantings and watering of the disposal area; grass and shrubbery are okay; do not plant trees in the disposal field;
3. Maintain water use to a minimum; repair leaking fixtures when detected; install ultra-low flush toilets, lavatories and shower heads;
4. Have the septic tanks inspected once every year for solids build-up; pump-out as necessary;
5. Inspect effluent filter in septic tanks for evidence of solids accumulation on the screen; if present, remove filter screen and clean, directing all backwash into septic tank; this work should be undertaken during septic tank pump-out activities; and,
6. Remove any weeds or debris that may collect on top of filter bed as required.

DUAL LEACHFIELDS OPERATION

Dual leachfield systems, each half sized to accommodate 100-percent of the design wastewater flow, with a diversion valve is provided to allow alternating use of the two fields; the diversion valve should generally be switched twice per year to allow **six months** operation and six months resting of each leachfield during the year.

III. SYSTEM PERFORMANCE MONITORING

Tradition Golf Club shall monitor the disposal system performance:

Weekly Monitoring

Water Usage. Maintain accurate weekly records of water usage to determine the degree of loading to the systems. The monthly average of weekly flows shall be the basis of comparison with system design specifications.

Dosing Siphons: Readings shall be taken of the dosing siphon event counters for the 1 eachfield dosing system. Readings on the two counters should be within one number of each other. The discharge to the leachfields will be determined from the combined tally of cycles for both siphons (see Monthly Monitoring).

Monthly Monitoring

Recirculation Tank. Make inspection of the sand filter recirculating pump system to observe the functioning of the pumps and controls. Pump operation is controlled by a timer. Inspect to ensure that pumps and timer routinely cycle on and off. Inspect pump event counters located in control panel. Readings on the two counters should be within one number (i.e., event) of each other. Test pump operation, by activating manual override switches in control panel for each of the pumps. When switched to manual pump operation, flow of water from pump into the sand filter should be audible.

Inspect floating ball valve located in recirculation tank, centered under the inlet access port. Ball mechanism should move freely when water level in tank is below the valve mechanism. Floating ball should firmly seat against invert of check valve assembly under high water conditions. Also, inspect recirculation tank for evidence of solids build-up. If evident, have cleaned by a licensed septic tank cleaning service.

Inspect Pump Chamber for sand filter performance. Effluent in tank should be relatively clear with little or no odors. If strong septic odors are present, this may be an indication of sand filter malfunction or incorrect setting of the pump recirculation system. Contact design engineer for corrective actions.

Bi-Monthly Monitoring

Dosing Siphon: The dosing siphon operates automatically, but requires periodic checking and cleaning. The water level in the siphon chamber should be observed periodically (**every two months**) during an actual dosing event. If the water level moves up slowly and then recedes approximately the siphon draw depth (24 inches) over a short period of time, then it is performing satisfactorily. If the water level remains the same or moves up slowly and then recedes some, the siphon is probably trickling and requires maintenance. It can be recharged by blowing air beneath the bell. Cleaning of the vent tube and any solids buildup in the siphon chamber should also be done at this time. (see Weekly Monitoring).

Leachfield Inspection Wells. Make inspection and recording of water/effluent levels in all leachfield inspection wells. The leachfield is at capacity when the effluent level in the inspection wells rise to a depth of 18 inches in the trenches, as measured from the bottom of the trench/inspection pipe.

Annual Monitoring

Pressure Distribution System. Make inspection of the pressure distribution system of both the sand filter and Clubhouse leachfield. A small spurt of effluent (5 feet or more, as measured from pipe invert) during the dosing cycle should occur at the riser in all trenches. It is recommended that this inspection work be performed by a trained operator, the design engineer or licensed septic tank service during routine septic tank cleaning or inspections.

Grease Interceptor: Make inspection of the grease interceptor serving the Clubhouse kitchen and have the tank cleaned as needed. The grease interceptor is likely to require more frequent pumping than the septic tanks, and it is important that this be done. Carryover of excessive concentrations of grease can be especially damaging to the sand filter and leachfield system.

IV. WATER QUALITY MONITORING

Grab samples from the septic tank, dosing tank, and leachfield monitoring wells shall be collected by Golf Club maintenance staff and delivered to a certified wastewater laboratory for analysis. Analysis for the following constituents shall be made:

<u>Sampling Point</u>	<u>Required Analysis</u>
Septic Tank	Total Kjeldahl Nitrogen (TKN)
Dosing Tank	TKN and Nitrate-Nitrogen
Groundwater Monitoring Wells	Total and Fecal Coliform, Nitrate-Nitrogen
Surface Water Monitoring	Total and Fecal Coliform, Nitrate-Nitrogen

Results of the laboratory analyses will be used to evaluate the nitrogen removal efficiency of the sand filter for comparison with the design objectives, as well as to monitor any nitrate impacts upon groundwater downgradient of the leachfield. Grab samples from each of the wastewater system components shall be collected in accordance with the following:

Quarterly Monitoring:

- **Septic Tank.** Sample shall be collected from within effluent filter cartridge assembly located in the outlet side of septic tank. After removing manhole cover at the outlet end of septic tank, effluent filter assembly will be visible. Remove top of filter cartridge and, using a hand bailer, dip bailer down into cartridge to collect sample. Transfer sample to approved laboratory container and store in an ice chest for delivery to laboratory.
- **Dosing Tank:** Sample shall be collected from within the dosing tank which follows the sand filter, using a hand bailer or approved sampling pump. Transfer sample to an approved laboratory container and store in an ice chest for delivery to laboratory.
- **Ground Water Monitoring Wells.**

Ground water monitoring wells should be installed down gradient of the Clubhouse leachfield and on the northern boundary of the project site, near McKean Road.

- Determine depth to groundwater as measured from well head and record;
- Using a hand bailer or approved sampling pump, flush well for approximately five minutes prior to sample collection; and,
- Collect groundwater sample in approved laboratory container and store in an ice chest for delivery to laboratory.

Bi-Monthly Monitoring

Surface Water Monitoring.

Sampling from November–April (flow dependent).

Surface water sampling stations should be located on the seasonal stream transversing the project site. One station upgradient of the all disposal systems and one station downgradient of the project site, near McKean Road (see Map).

All sampling, transport, storage, and analysis shall follow standard sampling and analysis protocol as outlined in Standards Methods for the Examination of Water and Wastewater or other approved protocol.

V. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Violation of Requirements

In event Discharger is unable to comply with conditions of the Wastewater requirements and prohibitions the Discharger shall notify the Regional Board in writing within two weeks of the non-compliance. The written report shall include pertinent information explaining reasons for the non-compliance and shall indicate what steps are being taken to prevent the problems from recurring.

2. Self-monitoring Reports

Written reports shall be filed regularly on a quarterly basis; the fifteenth of January, April, July (part of Annual Report) and October. The Reports shall be comprised of the following:

a. Letter of Transmittal

A letter transmitting self-monitoring reports should accompany each report. Such a letter shall include a discussion of violations found during the past quarter related to the Discharger's program and actions taken for correcting violations. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true and correct.

b. Program Information

The following information should be included in the quarterly report:

- a) Violations Summary
- b) System Performance Review & Monitoring
- c) Groundwater Quality Summary
- d) Surface Water Summary

The quarterly report content and format may be changed in consultation with Board staff.

3. Annual Report

An annual report shall be submitted by July 15. This report should summarize for the past fiscal year all the information collected in the quarterly reports. It should also include a discussion of the overall success and weaknesses of the wastewater treatment and disposal, with recommendations for changes or improvements.

VI. CONTINGENCY PLAN

The property owner will be responsible for noting and undertaking any repairs in the event of malfunction, and is encouraged to consult the design engineer prior to undertaking any major corrective action.

The design of the system incorporates the following safety features:

- The use of a recirculating sand filter to provide secondary level treatment prior to effluent discharge to the leaching trenches;
- Dual alternating leachfields each sized to accommodate approximately 100 percent of daily wastewater flows; and,

- Monitoring wells for periodic observation and water quality sampling of system performance and groundwater conditions.

Recognizing the County and the State's interest in the performance and maintenance of the proposed system, the Discharger will assume responsibility for informing the Santa Clara County Health Department and the S.F. Bay RWQCB of problems that arise and corrective actions taken during the course of operating the sand filter and disposal system.

Should nitrate-nitrogen levels exceed 7.0 mg/l in groundwater as determined from water quality monitoring of the leachfield monitoring wells, immediate steps shall be undertaken by the Discharger to incorporate additional measures to increase the removal of nitrogen before discharge to the leachfield. The recommended approach would include modifying the existing treatment system to incorporate additional recirculation of sand filter effluent back through the septic tank to enhance the level of denitrification achieved. According to current literature and field experience, the mixing of septic tank and sand filter effluent provides the necessary nutrient and anoxic conditions for denitrification to occur. It is believed that this approach can be used to optimize nitrogen removal without the need for additional treatment facilities. If this does not effectively eliminate the groundwater-nitrate impact, then other contingency measures may be required such as: (a) adding on additional sand filter in series; or (b) adding a sequencing bath reactor or similar "package" treatment system.

VII. ADDITIONAL REPORTING

The Santa Clara Valley Water District has requested that all reports filed under Sections V. and VI. above also be submitted to them due to the proximity of the project to Calero Reservoir, a drinking water supply. Their address is as follows:

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3686
Ph: (408) 265-2600

I, Loretta K. Barsamian Executive Officer, do hereby certify that the foregoing Self-monitoring Program is effective on the date shown below and may be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Producer, and revisions will be ordered by the Executive Officer.


LORETTA K. BARSAMIAN
Executive Officer

Effective Date: May 21, 1997