

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 94-039

UPDATING WATER REUSE REQUIREMENTS FOR:

NAPA SANITATION DISTRICT
NAPA COUNTY

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

1. The Napa Sanitation District (NSD) operates the Soscol Wastewater Treatment Plant, which consists of the Soscol Oxidation Ponds, a series of four oxidation ponds with 342 acres total surface area, and the Soscol Recycled Water Facility, a physical-chemical treatment plant with a design treatment capacity of 15.4 million gallons per day (MGD).
2. These facilities provide secondary treatment of combined domestic and industrial wastewater from the City of Napa and adjacent unincorporated areas, including the American Canyon area. The Soscol Oxidation Ponds receive untreated wastewater from part of NSD's service area south of Imola Avenue; and primary-treated wastewater from both NSD's Imola Avenue Treatment Plant, and the oxidation ponds of the City of American Canyon. The Soscol Treatment Plant provides algae solids removal and disinfection by physical-chemical processes for secondary-treated effluent from the Soscol Oxidation Ponds.
3. During the wet weather period, typically November 1 through April 30, treated, disinfected wastewater is allowed to be discharged to the Napa River. These discharges to the Napa River are governed by Waste Discharge Requirements in Order No. 94-037, adopted by the Board on March 16, 1994, which also serves as a permit under the National Pollutant Discharge Elimination System (NPDES No. CA00375475).
4. During the dry weather period, typically May 1 through October 31, discharge to the Napa River is prohibited, and wastewater is either stored in the Soscol Oxidation Ponds or treated and beneficially reused for landscape irrigation in industrial parks, golf courses, pasture lands, fodder and fiber crops, and drip irrigation of vineyards. These discharges to land are presently governed by Water Reclamation Requirements in Order No. 91-093, adopted by the Board on June 17, 1991. Order No 91-093 allows discharges of disinfected secondary-treated effluent from the Soscol Plant to grasslands and animal pasture lands owned or leased by the NSD at Somky Ranch, Jameson Canyon Reclamation site, the Napa County Airport, and Chardonnay Golf Course and Vineyards.

5. The Napa Sanitation District (NSD) submitted a Report of Waste Discharge dated September 15, 1992 for reissuance of waste discharge requirements under the National Pollutant Discharge Elimination System (NPDES). The NSD made a verbal request on January 12, 1994 to simultaneously update Water Reuse Requirements for the NSD's dry weather wastewater reuse project.
6. In order to produce reclaimed water acceptable for uses such as golf course and vineyard irrigation, NSD will continue to operate the Soscol Treatment Plant throughout the irrigation season. Thus, reclaimed water distributed to all use areas will be disinfected, secondary-treated effluent from the Soscol Treatment Plant.
7. The titles Producer, User, and Discharger are used throughout this order to identify and delineate which entities are responsible for achieving, maintaining and ensuring compliance with the various requirements of this Order. The Napa Sanitation District is called the Producer of the reclaimed water. The Napa Sanitation District and all other users of the reclaimed water identified in Finding 8 below are collectively called the User. The Producer and User are collectively called the Discharger.
8. The reclaimed water use areas, uses and users are described below. Additional Users may be added to the project in the future, with written authorization of the Board's Executive Officer. Maps showing locations of the use areas listed below are included as Attachment A of this Order.
 - (a) Somky Ranch - A 295 acre site, with 213 irrigable acres, located adjacent to the Soscol Oxidation Ponds, north of the County Airport, and south of Soscol Road. Irrigation is by travelling, large-volume spray 'guns', of cattle pasture. Reclaimed water is delivered to the site from the Soscol Treatment Plant through a 24-inch pressure line. The site is owned by NSD, and operated under lease from NSD. User: The current lessee and operator is Mr. Duane Chamberlain.
 - (b) Jameson Canyon Reclamation Site - A 648 acre site, with 330 acres currently under irrigation, located east of Highway 29 and north of Highway 12. This site was formerly known as the Kirkland Ranch site. Irrigation of cattle pasture is by fixed sprinkler system. The site is owned by NSD, and operated under lease from NSD. User: The site is currently leased and operated by Chamberlain Farms, Inc.

Reclaimed water is delivered to the site by NSD through the 24-inch pressure line from Soscol Plant which also supplies the Somky Ranch site. Sheehy Creek, a seasonal creek, runs through the site. During the irrigation season, runoff is captured in the creek behind a flashboard structure installed at the tidegate where Sheehy Creek enters the Napa River at Ratto's Landing, and pumped back into the Soscol Ponds.

8. (continued)

- (c) Napa County Airport and Fagundes Ranch - A 768 acre site with 150 irrigable acres, located around the Napa County Airport, southeast of the Soscol Oxidation Ponds. This site includes the 65-acre Fagundes Ranch site, with 50 irrigable acres, which is located immediately southeast of the Soscol Oxidation Ponds. Fagan Creek, tributary to tidally-influenced Fagan Slough and the Napa River, runs through the site. The Fagundes Ranch site is owned by NSD, whereas the remaining use area is leased by NSD from the County Airport. User: The site is currently farmed by Chamberlain Farms, Inc.

This site is currently being dry farmed until either a temporary or permanent reclaimed water main is installed from the irrigation pump station. This main will convey disinfected secondary effluent from the Soscol Plant. Irrigation will be by wheel line, hand movable sprinklers and a fixed sprinkler system. After irrigation water is available, crops to be grown are fodder or fiber crops. Animal grazing is not allowed due to the proximity of this site to the airport runways.

- (d) Chardonnay Golf Course & Vineyards - A 460 acre site, with 320 irrigable acres (200 acres of golf course and 120 acres of vineyards), located east of Highway 29 and south of Highway 12. The site is bordered on the west by South Kelly Road, on the north by NSD property (presently unirrigated) and Highway 12, and on the east and south by open land used primarily for beef cattle grazing. Fagan Creek, which includes some well-developed riparian vegetation and habitat, runs east-west through the golf course. User: The site is owned and operated by Chardonnay Golf Club, Inc. (Chardonnay).

Chardonnay purchases reclaimed water from NSD by contract. The water is metered and delivered to Chardonnay by NSD through a buried pipe, originating from the pressure main at the Jameson Canyon Reclamation site. The supply line passes under Highway 12 through a 20-inch bore, and then South about 1700 feet across NSD and Chardonnay property, to two irrigation water storage ponds (Lake 3 and Lake 5) on the golf course which also serve as golf course 'water hazards.' Lake 5 is connected in parallel to third storage pond, Lake 4. Irrigation water is drawn from Lakes 3 and 4 which each have an irrigation pump station owned and operated by Chardonnay. Storage pond capacities are: Lake 3 = 23.8 acre-feet (AF); Lake 4 = 16.2 AF; and Lake 5 = 22 AF.

The golf course is irrigated by a fixed sprinkler system. Runoff is controlled by using partial-rotation sprinkler heads along Fagan Creek and the property boundaries, and by timed irrigation of discrete areas of the course. Vineyard irrigation is by drip irrigation after passing through a pressure sand filter. Irrigation around the clubhouse is with potable water purchased from the City of Vallejo water supply system.

8. (continued)

- (e) Kohnan Sake Factory (Hakusan) - A 22.8 acre site with approximately 10 acres of vineyards and 5 acres of landscaping. The site is located northeast of the intersection of Highways 12 and 29, bordered by Executive Way on the north and Kelly Road on the east. Reclaimed water is authorized for use for sprinkler irrigation of landscaping around the industrial site and for drip irrigation of vineyards. User: The site is owned and operated by Hakusan Sake Factory.

Reclaimed water is supplied to the site via a tap off the 24-inch force main that supplies water to the Jameson Canyon Reclamation site.

- (f) Napa Corporate Park - An 11 acre industrial site with approximately 5 irrigable acres located immediately north of Kohnan Sake Factory. Reclaimed water is authorized for use for sprinkler and drip irrigation of industrial park landscaping. User: The site is owned and operated by CDI Development and Realty Company.

Reclaimed water is supplied to the site via a tap off the 24-inch force main that supplies water to the Jameson Canyon Reclamation site.

Los Carneros Water District Users

The following vineyards are located within the boundaries of the Los Carneros Water District in the Carneros Region of the Napa Valley. These vineyards are to be irrigated using a drip irrigation system. See Attachment A for maps of their exact locations.

Each user located within the boundaries of the Los Carneros Water District will be supplied with reclaimed water through a series of force mains located primarily within the public right-of-way. The main supply line will leave the Soscov Plant at a point north of the plant. The 24- to 30-inch line will be installed under the Napa River by horizontal boring. Once across the river, the pipeline will branch off to supply the various users.

- (g) Robert Mondavi Vineyards, Carneros - This user plans to irrigate up to 485 acres of vineyards planted with various wine grapes. The site includes a 52 acre-foot off-stream reservoir which may store a combination of winter runoff and reclaimed water. This reservoir has a surface area of 3.92 acres. During the spring, the typical operational mode for irrigation will be to pump the reservoir water through pressure sand filters and into the drip irrigation system. The operational mode in summer and fall, when NSD is not discharging to the Napa River, will be to take the reclaimed water directly from the reclaimed water force main, bypassing the reservoir, and to put it directly into the sand filters and then the drip irrigation system.
- (h) Wineworld Estates Company - This user plans to irrigate approximately 202 acres of vineyards planted with various wine grapes. The site includes a 34 acre-foot

8. (continued)

off-stream reservoir which is used for the storage of winter runoff, which during the spring may be combined with reclaimed water from the Soscot Plant. This runoff and/or blended water is then pumped through pressure sand filters before entering the drip irrigation system. Typical operational mode during the summer or fall, after the grapes have been harvested, is piping the reclaimed water directly to the pressure sand filters and then the drip irrigation system.

- (i) Beckstoffer Vineyards V - Carneros Lake - This user plans to irrigate approximately 334 acres of vineyards planted with various wine grapes. The site includes two (2) on-stream storage reservoirs. Reservoir number 1 has a capacity of 44 acre-feet, and Reservoir number 2 has a capacity of 9 acre-feet. These reservoirs are used to store winter runoff from their respective watersheds, which is then used for irrigation as necessary during the growing season. These reservoirs are also used to blend reclaimed water with stored runoff water. Water from the reservoirs is pumped through a pressure sand filter before entering the drip irrigation system. Summer and post-harvest irrigation will typically be accomplished by piping the reclaimed water directly from the reclaimed water force mains to the pressure sand filters and then the drip irrigation system, thereby bypassing the reservoirs.
- (j) Acacia Winery - This user plans to irrigate approximately 42 acres of vineyards planted with wine grapes. The site includes an off-stream storage reservoir that collects surface runoff for irrigation. Because the reservoir also serves as a water source for in-door fire protection, it will not be used for storage of reclaimed water. Reclaimed water will be taken directly from the reclaimed water force main operated by the Napa Sanitation District and put through sand filters prior to entering the drip irrigation system. Typically irrigation will occur during the summer or late fall.

9. Current and potential reclaimed water users and use areas have been identified as listed below and shown in Attachment A. Users are not required to limit the quantity of use to the estimated usage listed below. Other potential users may be identified in the future and added to the following list, with authorization from the Board's Executive Officer.

<u>USE AREA</u>	<u>IRRIGABLE</u>	<u>ESTIMATED USE</u>
	<u>ACREAGE</u>	<u>(MG/Yr)</u>
<u>Pasture Irrigation</u>		
Somky Ranch (NSD owned)	213	191
Jameson Canyon Site (NSD owned)	330	296
Napa Co. Airport (NSD leased)	100	90
Fagundes Ranch (NSD owned)	<u>50</u>	<u>45</u>
Subtotal	693	622

Landscape and Vineyard Irrigation

Chardonnay Golf Course	200	200
Chardonnay Vineyards	120	11
Kohnan Sake Factory	15	5.0
Napa Corporate Park	5	1.8
Wineworld Estates Company	202	12*
Robert Mondavi Vineyards - Carneros	485	29*
Beckstoffer Vineyards V - Carneros Lake	334	20*
Acacia Winery	<u>42</u>	<u>3.25</u>
	Subtotal	<u>1403</u>
	<i>TOTAL</i>	<i>2096</i>
		<i>904</i>

*Estimated use only. Amount used each year will be included in sales agreement between the Producer and the named User.

10. The Producer will permit specific reuse projects located within the areas identified in Finding 8 of this Order by obtaining Reclaimed Water Use Agreements with individual Users. The Producer will design and incrementally install reclaimed water transmission facilities to serve these projects. The User will maintain as-built construction plans for each individual project at its facility. Where appropriate, Users will submit reports describing each individual project to the Producer for approval.
11. The Producer, as purveyor of the reclaimed water to the use areas, is responsible for the operation and maintenance of the treatment plant and major transmission facilities (pump stations, pipes, etc.), and ensuring that reclaimed water distributed to the use areas is of acceptable quality in compliance with this Order. The User is responsible for ensuring compliance with this Order for all reclaimed water operations and facilities under the User's control.
12. Reclaimed water distributed to several use areas for different uses through a common transmission pipeline(s) is required to be of a quality acceptable for all uses.
13. The Board amended its Water Quality Control Plan (Basin Plan) for the San Francisco Bay Region on September 16, 1992, and the State Board approved it on April 27, 1993. The goals to be used in regulating water quality as set forth in the Basin Plan include maximum feasible reclamation or reuse of municipal, industrial and agricultural wastewaters. The Basin Plan also identifies beneficial uses of surface and ground waters in the region to be protected.
14. The beneficial uses identified in the Basin Plan for the Napa River in the vicinity of this project include:
 - a. Fish Spawning and Migration
 - b. Contact and Non-contact Water Recreation

- c. Navigation
 - d. Warm Fresh Water Habitat
 - e. Cold Fresh Water Habitat
 - f. Wildlife Habitat
 - g. Preservation of Rare and Endangered Species
15. The beneficial uses identified in the Basin Plan for groundwaters in the Napa Valley region include:
- a. Municipal Supply
 - b. Agricultural Supply
 - c. Industrial Supply
 - d. Industrial Process Water Supply
16. Section 13523 of the California Water Code provides that a Regional Board, after consultation with and reception of recommendations from the State Department of Health Services, and if it determines such action to be necessary to protect the public health, safety or welfare, shall prescribe water reuse requirements for water which is used or proposed to be used as reclaimed water. The use of reclaimed water for the purposes specified in Findings 8 and 9 could affect the public health, safety, or welfare, and requirements for those uses are, therefore, necessary in accordance with the California Water Code.
- California Water Code Section 13512 states that it is the intention of the legislature that the State undertake all possible steps to encourage development of water reuse facilities so that reclaimed water may be made available to help meet the growing water demands of the State.
- In Section 13550, the Legislature defines the use of potable domestic water for the irrigation of greenbelt areas, including but not limited to cemeteries, golf courses, parks, and highway landscaped areas, as a waste or an unreasonable use of such water within the meaning of Section 2 of Article X of the California Constitution when suitable reclaimed water is available.
- Section 13576(e) states that the use of reclaimed water has proven to be safe from a public health standpoint and that the State Department of Health Services is updating regulations for the use of reclaimed water.
17. These water reuse requirements are in conformance with the statewide reuse criteria established by the State Department of Health Services as prescribed in Title 22, Sections 60301 through 60355, California Code of Regulations.
18. The Napa Sanitation District approved an Environmental Impact Report (EIR) for the Napa-American Canyon Wastewater Reuse Program in 1979, and a Negative Declaration for the Kirkland Ranch (Jameson Canyon) irrigation project dated

September 25, 1984, in accordance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.). The projects as described in the EIR and Negative Declaration will not have adverse impacts on the environment, with proper implementation of the mitigation measures identified in these documents.

19. The Board has notified the Discharger, and interested agencies and persons of its intent to prescribe water reuse requirements for the uses listed in Findings 8 and 9.
20. The Board, in a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, that the Discharger shall comply with the following:

A. Prohibitions

1. The treatment, storage, distribution or reuse of reclaimed water shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. No reclaimed water shall be allowed to escape from the authorized use area by airborne spray; nor by surface flow except in minor amounts associated with good irrigation practices.
3. The use of reclaimed water shall not cause the degradation of groundwater used for domestic purposes or cause any change in a quality parameter which would make the groundwater unsuitable for irrigation use.
4. The discharge of toxic substances into ponds used for treatment or storage of wastewater which will disturb the normal biological mechanisms of the ponds is prohibited.
5. Reclaimed water shall not be applied to any reclaimed water use area when soils are saturated to the extent that runoff or excessive ponding is likely to occur, during rainfall, or when rainfall is expected to occur within 24 hours.
6. Reclaimed water shall not be sprayed on any walkways, passing vehicles, buildings, domestic water or food handling facilities, or areas not under the direct control of the user.
7. Reclaimed water shall not be used as a domestic or livestock animal water supply.
8. Fodder, fiber and seed crops shall not be harvested when wet from spraying with reclaimed water.

9. For the Napa County Airport/Fagundes Ranch site, use of reclaimed water is prohibited within 50 feet of the Fagan Marsh, and within 50 feet along both sides of Fagan Creek.
10. There shall be no irrigation or impoundment of reclaimed water within 100 feet of any well used for domestic or irrigation water supply, unless it can be demonstrated to the Executive Officer's satisfaction that special circumstances justify lesser distances to be acceptable, as is the case with drip irrigation practices.
11. There shall be no cross-connection between potable water supply and piping containing reclaimed water. Supplementing reclaimed water with domestic supply water shall not be allowed except through an air-gap separation.

B. Reclaimed Water Use Specifications

Producer

1. The Producer shall assure that the reclaimed water is at all times an adequately oxidized, disinfected water which meets the following quality limits prior to being distributed or applied to the reclaimed water use areas:

In any grab or composite sample:

- | | |
|----------------------------|--|
| a. BOD ₅ , 20°C | 30 mg/l, monthly average maximum
40 mg/l, daily maximum |
| b. Suspended Solids | 30 mg/l, monthly average maximum
40 mg/l, daily maximum |

In any grab sample:

- | | |
|-----------------------|------------------|
| c. Dissolved Oxygen | 1.0 mg/l minimum |
| d. Dissolved Sulfides | 0.1 mg/l maximum |

- e. At any point downstream of the disinfection facilities where adequate contact with the disinfectant is assured:

- (i). The median number of total coliform organisms shall not exceed 23 MPN/100 ml as determined from the bacteriological results of the last seven days for which analyses have been completed; and
- (ii). The number of total coliform organisms shall not exceed 240 MPN/100 ml in any two consecutive samples.

2. The Producer shall discontinue the distribution of reclaimed water to use areas during any period in which the Producer has reason to believe that the limits specified in B.1 above are not being met. The distribution of reclaimed water shall not be resumed until all conditions which caused the limits specified in B.1 above to be violated have been corrected.

User

3. The User is responsible for ensuring compliance with the requirements of this Order for all reclaimed water operations and facilities under the User's control. The User's reclaimed water facilities shall be operated, maintained and repaired in accordance with the conditions of this Order, in order to prevent public health hazards, pollution or nuisance conditions. A User Supervisor responsible for ensuring compliance with this Order should be appointed at each reclaimed water use area.
4. The User shall manage reclaimed water uses so as to prevent ponding or saturated conditions which could provide breeding conditions for mosquitoes or other vectors of public health significance, and to prevent odors or nuisance conditions.
5. Irrigation of the golf course, or any other areas with similar public exposure, shall occur only when members of the public are absent and wind velocity is minimal. Any exceptions to this specification must be approved in writing by the Executive Officer.
6. Following irrigation, golf course grounds and other areas with similar public exposure should have maximum opportunity to dry before being used by the public.
7. The User shall provide adequate means of notification to inform the public that reclaimed water is being used. Warning signs shall be posted at adequate intervals around the reclaimed water use area and reclaimed water storage ponds informing the public that the water is not safe for drinking or contact. Signs shall be of sufficient size and proper wording in order to be clearly read.
8. Golf course score cards shall be printed or stamped with notices stating that reclaimed water is used for irrigation.
9. For drip irrigation on wine grape vineyards, soils shall be allowed to dry prior to harvesting. Other types of irrigation using reclaimed water shall be suspended at least 15 days prior to harvesting, in order to allow the soils to dry.

Reclaimed Water Storage (Producer and User)

10. Water at the surface of any pond containing reclaimed water shall meet the following quality limits at all times, in any grab sample:
 - a. Dissolved Oxygen 2.0 mg/l, minimum
 - b. Dissolved Sulfide 0.1 mg/l, maximum
 - c. pH 6.0, minimum; 9.0, maximum
11. In order to prevent the threat of overflows, a minimum freeboard of two (2) feet shall be maintained at all times in any pond containing reclaimed water, except during extreme rainfall events, or with prior written authorization by the Board's Executive Officer.
12. All ponds shall be adequately protected from erosion, washout and flooding from a rainfall event having a predicted frequency of once in 100 years.

Reclaimed Water System (Producer and User)

13. All drinking water facilities and domestic water supply wellheads within 500 feet of any reclaimed water use area shall be protected from direct or wind-blown reclaimed water spray.
14. All domestic (potable) water service connections to reclaimed water use areas shall be equipped with an air-gap separation. A Reduced Pressure Principle Backflow Prevention Device may be provided in lieu of an Air-gap Separation, if approved by the California State Department of Health Services and the water supplier.
15. Vineyard drip irrigation system emitters shall be installed in a way that minimizes the possibility of fruit being sprayed with reclaimed water if emitters become plugged, broken or removed. The drip irrigation lines and emitters shall be periodically inspected to ensure proper operation and compliance with this specification.
16. The downslope perimeters and drainage swales of reclaimed water use areas shall be bermed or equipped with a tail-water (irrigation runoff) collection system, if necessary to prevent off-site runoff of reclaimed water.
17. There shall be at least a ten-foot horizontal and a one-foot vertical separation between all pipelines transporting reclaimed water and those transporting domestic supply water, with domestic water pipelines above reclaimed water pipelines.
18. All equipment, including pumps, piping, valves, etc. with public access which may at any time contain reclaimed water shall be adequately and clearly identified with

signs and the Discharger shall make all necessary provisions, in addition, to inform the public that the liquid contained is reclaimed water which is unfit for human consumption.

General (Producer and User)

19. The Discharger shall maintain in good working order and operate, as efficiently as possible, any facility, equipment or control system installed, or as modified, to achieve compliance with this Order.
20. The Discharger should provide inspections of use areas, and supervision and training for User staff in order to assure proper operation of the reuse facilities and to provide proper worker protection. Records of inspections and training should be maintained by the Discharger.

C. Provisions

1. The Producer and User shall comply with all applicable sections of this Order immediately upon adoption by the Board.
2. The Producer and User shall comply with the Self-Monitoring Program as adopted by the Board and as may be amended by the Board's Executive Officer.
3. The use of reclaimed water under this Order shall be limited to the Users and uses identified in Findings 8 and 9 of this Order, and additional Users and uses for which written authorization has been obtained by the Producer from the Board's Executive Officer.
4. Each year, prior to the irrigation season, the Producer's contingency plan shall be reviewed and, as necessary, updated by the Producer. Any revisions shall be submitted to the Board.
5. In the event that either the Producer or User is unable to comply with any of the conditions of this Order due to:
 - a. Breakdown of transmission or treatment equipment;
 - b. Accidents caused by human error or negligence; or
 - c. Other causes such as acts of nature,

the Producer or User (or agents) shall notify the Board by telephone as soon as they have knowledge of the incident. The User will be responsible for notification of the incident only if the event is originally observed by the User (or agents) and/or if it is related to equipment under the User's control. Written notification of such incidents shall be submitted by the Producer within two weeks of the

incident, unless directed otherwise by Board staff. Written notice shall include pertinent information explaining the reasons for the non-compliance, and what steps were taken or are planned in order to correct the problem and prevent the problem from recurring.

6. The Producer or User shall permit the Board or its authorized representatives:
 - a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;
 - b. Inspection at reasonable times of any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order;
 - c. Access to and copy of, at reasonable times, any records that must be kept under the conditions of this Order; and
 - d. To photograph, sample and monitor at reasonable times, for the purpose of assuring compliance with this Order.
7. This Order is subject to review and updating by the Board, as necessary to comply with changing State and Federal laws, regulations, policies, or guidelines; changes in the Board's Basin Plan; or changes in the discharge characteristics. This Order will be reviewed to determine the need for updating no more than five years from the date of adoption.
8. 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 of this Order;
 - b. Obtaining the Order by misrepresentation, or failure to disclose fully all relevant facts;
 - c. A change in any condition that requires either a temporary or permanent change in the authorized reuse; or
 - d. Endangerment to public health or environment that can only be regulated to acceptable levels by modification or termination of this Order.
9. Reuse facilities shall be operated in conformance with the California Department of Health Services' "Guidelines for Use of Reclaimed Wastewater for Irrigation and Impoundment" and "Guidelines for Worker Protection at Reclamation Use Areas" and the American Water Works Association, California-Nevada Section's

Guidelines for the Distribution of Non-potable Water.

10. The Water Reuse Requirements prescribed by this Order supersede the requirements prescribed by Order No. 91-093. Order No. 91-093 is hereby rescinded.

I, Steven R. Ritchie, 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, San Francisco Bay Region on March 16, 1994.



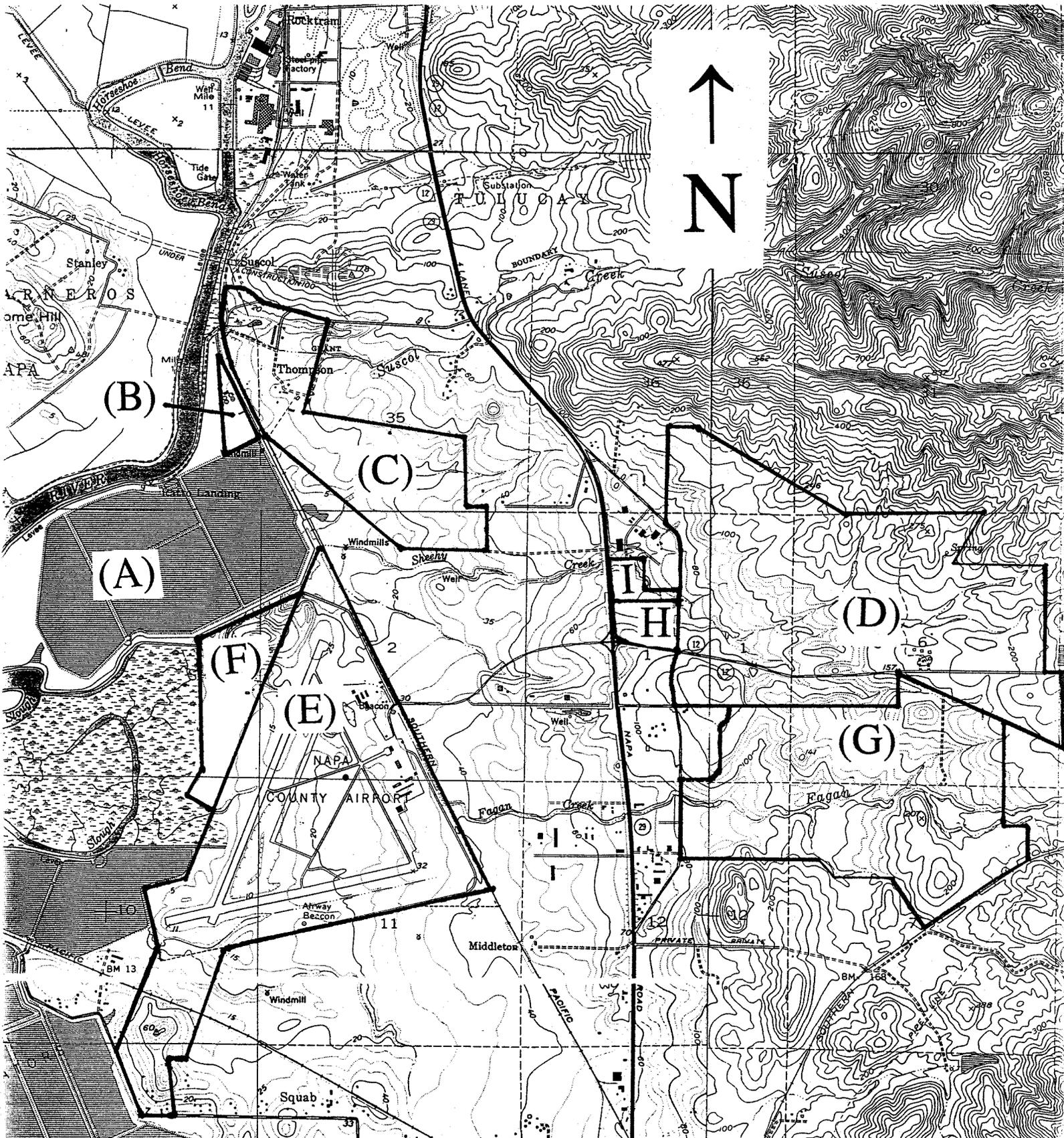
STEVEN R. RITCHIE
Executive Officer

Attachments:

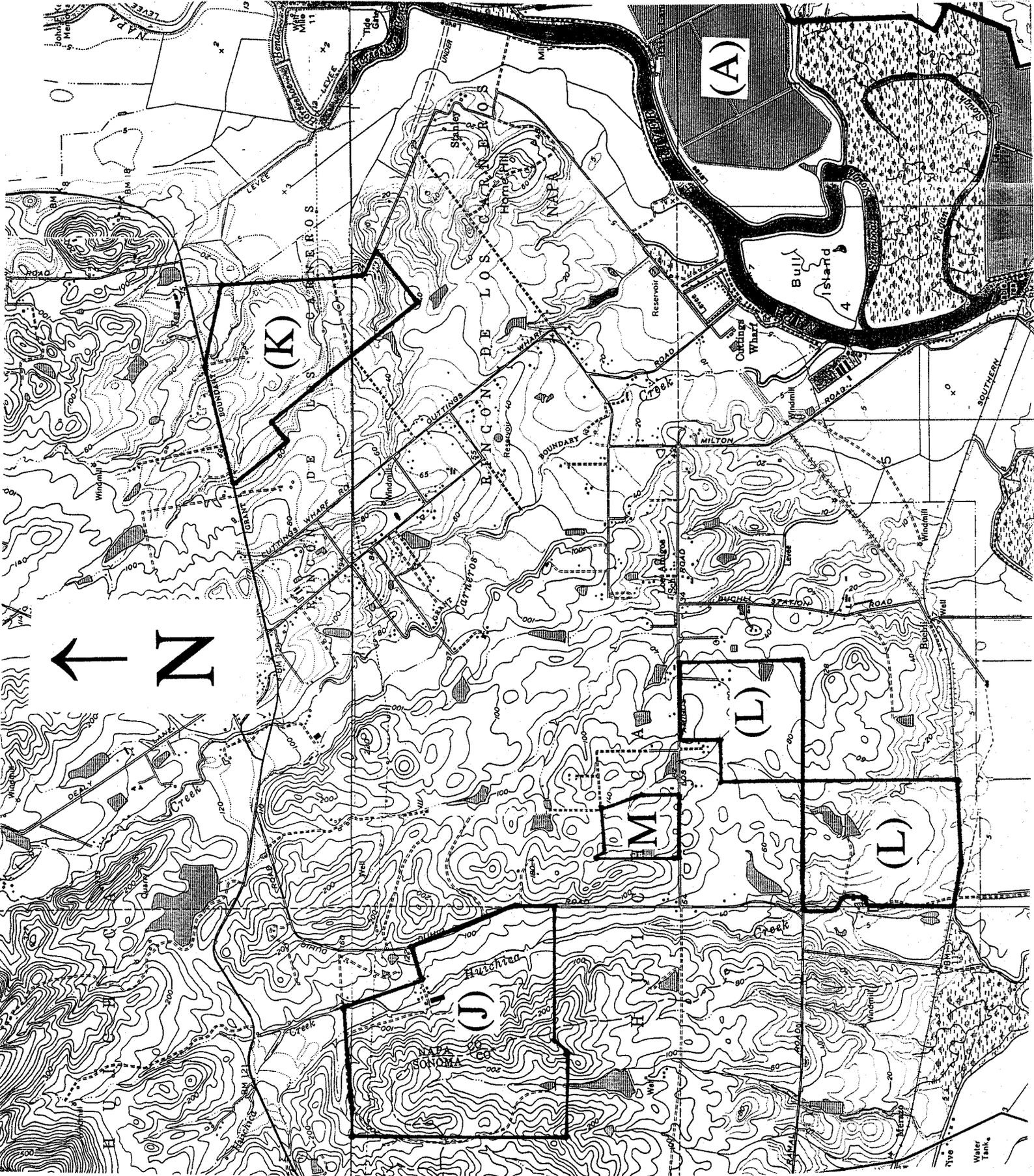
- A. Location Maps: Reclaimed Water Use Areas
- B. Self-Monitoring Program
- C. State DHS Guidelines for Use of Reclaimed Wastewater for Irrigation and Impoundment
- D. State DHS Guidelines for Worker Protection at Reclamation Use Areas

[File No. 2139.3009] [Orig. SMM, Rev. BDA, TCW]

ATTACHMENT A1 - NSD Water Reuse Areas, Eastern Part



ATTACHMENT A2 - NSD Water Reuse Areas, Western Part



LEGEND
for Attachment A

- (A) Soscol Oxidation Ponds
- (B) Soscol Water Recycling Facility
- (C) Somky Ranch
- (D) Jameson Canyon Reclamation Site
- (E) Napa County Airport
- (F) Fagundes Ranch
- (G) Chardonnay Golf Course and Vineyards
- (H) Kohnan Sake Factory
- (I) Napa Corporate Park
- (J) Robert Mondavi Vineyards
- (K) Wine World Estates Co.
- (L) Beckstoffer Vineyards
- (M) Acacia Winery

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

NAPA SANITATION DISTRICT

NAPA COUNTY

ORDER NO. 94-039

SELF-MONITORING PROGRAM

NAPA SANITATION DISTRICT AND NAPA SANITATION DISTRICT RECLAIMED WATER USERS

I. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

The principle purposes of a monitoring program by a waste discharger or reclaimed water producer or user, also referred to as a self-monitoring program, are:

- A. To document compliance with waste discharge requirements and prohibitions established by this Regional Board; and
- B. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge or water reuse.

II. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to Code of Federal Regulations Title 40, Section 136 (40 CFR 136), or other methods approved and specified by the Executive Officer of this Regional Board.

Water and wastewater analyses shall be performed by a laboratory approved for these analyses by the State Department of Health Services (DOHS), or a laboratory waived by the Executive Officer from obtaining a DOHS certification for these analyses.

The director of the laboratory whose name appears on the certification, or his/her laboratory supervisor who is directly responsible for the analytical work performed shall supervise all analytical work including appropriate quality assurance/quality control procedures in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

III. DEFINITION OF TERMS

A. SAMPLES

1. A grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples represent only conditions existent at the time of sample collection. Grab samples are used primarily in determining compliance with daily or instantaneous maximum limits.
2. A flow sample is the accurate measurement of the average flow volume over a given period of time, using a properly calibrated and maintained flow measuring device. Flows calculated from properly maintained pump usage records for an accurately calibrated pump are acceptable.
3. A composite sample is a sample composed of individual grab samples taken from a single sampling location, mixed in proportions to the instantaneous rate of waste flow corresponding to each grab sample (with proportions varying by not more than plus or minus five percent from the instantaneous rate), and collected at regular intervals not greater than one hour, or collected by the use of continuous automatic sampling devices capable of attaining the proportional accuracy stipulated above throughout the sampling period (e.g., 24 hours).
4. Freeboard is the vertical distance between the water surface and the lowest elevation of the top of the water containment structure (perimeter dike, levee, berm, dam, etc.).

B. STANDARD OBSERVATIONS

1. Reclaimed Water Use Areas

- (a) Evidence of reclaimed water escaping the reclaimed water use area through surface runoff or airborne spray (Show affected area on a sketch).
- (b) Nuisance Odor from Use Area: If present, indicate apparent cause, characterization, direction of travel, and any public use area or off-site facility affected.
- (c) Evidence of prolonged ponding of reclaimed water, or of mosquitoes breeding within the use area due to ponding.
- (d) Warning signs properly posted to inform public that water being used for irrigation is reclaimed water which is not safe for drinking or contact.
- (e) Evidence of reclaimed water sprayed on vehicles, buildings, domestic water

facilities, food handling facilities, or surface waterways.

2. Reclaimed Water Storage Pond Areas

- (a) For each storage pond, measure and report the freeboard at the lowest elevation point of the perimeter levee.
- (b) Evidence of seepage from the pond (show affected area on a sketch, and estimate volume lost).
- (c) Nuisance Odor from pond: If present, indicate apparent cause, characterization, direction of travel, and any public use area or off-site facility affected.
- (d) Warning signs properly posted to inform public that pond contains reclaimed water which is not safe for drinking or contact.

3. Overflows and Bypasses

- (a) Location of overflow or bypass, and description of any surface water or land area affected (show on map or sketch of area).
- (b) Date and time when overflow or bypass started, and when overflow or bypass ceased.
- (c) Estimated total volume discharged, or flow rate and duration of event.
- (d) Explanation of cause, and corrective actions taken.

IV. DESCRIPTION OF SAMPLING AND OBSERVATION STATIONS

NOTE: A sketch showing locations of all stations described below shall accompany the first monitoring report, and subsequent reports when locations are changed or a violation is reported.

A. RECLAIMED WATER TREATMENT AND DISTRIBUTION FACILITIES (PRODUCER)

1. TREATMENT PLANT EFFLUENT

<u>Station</u>	<u>Description</u>
E-1	Located at any point in the effluent from the Soscol Treatment Plant where all reclaimed water tributary to the reclaimed water

distribution system is present, prior to being distributed to users.
(NOTE: May be the same as E-1-D)

E-1-D Located at any point in the effluent from the Soscol Treatment Plant disinfection facilities at which point adequate contact with the disinfectant is assured.

2. RECLAIMED WATER DISTRIBUTION SYSTEM

RD - 1 Located at a point in the distribution system for each reclaimed
through water use area, suitable for measuring the total flow of reclaimed
RD - n water distributed to the use area.

B. RECLAIMED WATER USE AREAS (USER)

Station Description

1. USE AREA PERIMETER

UP - 1 Points located at about 1000 foot intervals
through around the perimeter of each reclaimed water
UP - n use area.

2. USER STORAGE POND WATER

SW - n In each storage pond, within one foot of the
water surface, and no less than two feet from
the bank, representative of the pond water.

3. USER STORAGE POND PERIMETER

SP - 1 Points located at the mid-points of the
through perimeter levees around each storage pond.
SP - n

C. OVERFLOWS AND BYPASSES (PRODUCER OR USER)

OV - n Any point in the treatment, distribution, storage or use area
facilities where an overflow or bypass occurs (e.g., manholes,
pipes, valves, pumps, ponds, etc.).

V. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSES

- A. The Producer and User of the reclaimed water are required to perform observations, sampling, measurements and analyses according to the schedule given in Table 1 and Table 1 Footnotes (Attachment A).
- B. This Self-Monitoring Program is applicable during any period when reclaimed water is distributed to any reclaimed water storage pond, or used at any reclaimed water use area.

VI. REPORTS TO BE FILED WITH THE REGIONAL BOARD

A. Self-Monitoring Reports

Written reports shall be filed regularly for each calendar month during any month when reclaimed water is produced, distributed or used. Reports shall be submitted to this Regional Board's office no later than the fifteenth day of the following month, and shall include the following:

1. Letter of Transmittal

The letter of transmittal shall include the following:

- The Discharger's name, address, phone number and contact person(s);
- The monitoring period being reported, by month and year;
- The name of the responsible Regional Board staff member;
- Discussion of all requirement violations found during the monitoring period, including the causes of the violations and corrective actions taken or planned in order to prevent future violations (References to reports previously submitted describing corrective actions and/or implementation schedules are acceptable.);
- and
- When applicable, discussion of any special or unusual events pertinent to maintaining compliance with waste discharge requirements, such as failure, repair, replacement or installation of major equipment, or significant operational changes or improvements.

The transmittal letter shall contain a statement by the Discharger, or the Discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

2. Results of Analyses and Observations

- Tabulations of the results from all required measurements and analyses

specified in Table 1 and Table 1 Footnotes (Attachment A) by date, time, sample type and station.

- Reclaimed Water User's Report (Attachment B) for each use area, and Reclaimed Water Storage Pond Report (Attachment C) for each storage pond (or equivalent reports of required measurements and observations).

Report of any required observations not included in the above reports, and any additional sampling, measurements or analyses conducted characterizing the reclaimed water.

B. Report of Permit Violation

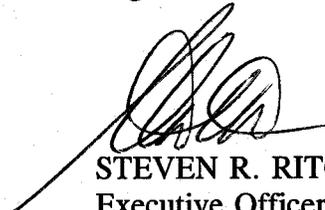
In the event the Discharger violates, or threatens to violate the conditions of the waste discharge requirements and prohibitions due to:

1. Maintenance work, power failure, or breakdown of wastewater transport or treatment equipment;
2. Accidents caused by human error or negligence; or
3. Other causes such as acts of nature,

the Discharger shall notify the Regional Board office by telephone as soon as the Discharger or the Discharger's agents have knowledge of the incident. A written report shall be submitted within two weeks of the non-compliance event, unless directed otherwise by Regional Board staff. The written report shall include a description of the event, results of any sampling conducted during the event, an explanation of the reasons for non-compliance, actions taken to correct the problem and the dates thereof, and actions being taken to prevent the problem from recurring.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order 94-039.
2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.


STEVEN R. RITCHIE
Executive Officer

Effective Date 3/16/94

Attachments:

- A. Table 1 - Schedule for Sampling, Measurements and Analyses;
and Table 1 Footnotes
- B. Reclaimed Water User's Report
- C. Reclaimed Water Storage Pond Report

[File No. 2139.3009] [Orig. SMM, Rev. BDA, RJC]

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS AND ANALYSES¹
(NAPA SANITATION DISTRICT WASTEWATER REUSE PROJECT)

Sampling Stations →	E-1		E-1-D	All RD	All SW	All UP & SP	All OV
Type of Sample →	Flow	G	G	Flow	G	O	O
Parameter (units)	C-24						
Flow Rate (MGD or gpd) ²	Cont.			D			E
Flow Volume (gallons) ²	M			M			E
BOD ₅ , 20°C (mg/l)	3/W						
Total Suspended Solids (mg/l)	3/W						
Oil and Grease (mg/l) ³		M					
Chlorine Residual and Dosage (mg/l & kg/d) ⁴			Cont.				
pH (units)		D			2W ⁶		
Dissolved Oxygen (mg/l)		D			2W ⁶		
Dissolved Sulfides (mg/l) ⁵		D			2W ⁶		
Total Coliform (MPN/100ml)			D				
Ammonia Nitrogen (mg/l)	M						
Nitrate Nitrogen (mg/l)	M						
Total Kjeldahl N (mg/l)	M						
Total Phosphate (mg/l)	M						
All Applicable Standard Observations ⁶						W ⁶	E ⁶

LEGEND:

<u>Type of Sample</u>	<u>Sampling Frequency</u>	
Flow = Flow measurement	Cont = Continuous	E = Each event
C-24 = 24-hour composite	M = Monthly	D = Daily
G = Grab sample	2W = Once every 2 weeks	
O = Observations	W = Weekly	
	3/W = Three days per week	

TABLE 1 FOOTNOTES

- (1) This Self-Monitoring Program is applicable during any period when reclaimed water is distributed to any reclaimed water storage pond, or used at any reclaimed water use area.
- (2) Flow Rate and Volume: Continuous measurement. Report on a daily basis, flow rate in million gallons per day (MGD) or gallons per day (gpd). Report on a monthly basis, the total monthly flow in million gallons (MG) or gallons.
- (3) Oil & Grease: Each sampling shall consist of three grab samples taken at equal intervals during the sampling day, with each grab sample being collected in separate glass containers and analyzed separately. Report results as the weighted average of the three values, with weighting based upon the instantaneous flow rates occurring at the time of each grab sample.
- (4) (a) Chlorine Residual: Continuous or Hourly monitoring. Report on a daily basis, average concentration (mg/l) of residual after adequate contact time has been assured.

(b) Chlorine Dosage: Report on a daily basis, average concentration (mg/l), and total loading (kg/d).
- (5) Dissolved Sulfides: Analysis required only when Dissolved Oxygen is less than 2.0 mg/l.
- (6) Observations must be made while reclaimed water is being used. Users (or designated agent) shall conduct, at the frequency indicated in Table 1, the Standard Observations defined in Part III.B. of this Self-Monitoring Program.

Users (or designated agent) shall submit to the Producer for each month when reclaimed water is distributed or used, a Reclaimed Water User's Report for each use area, and a Reclaimed Water Storage Pond Report for each storage pond (or equivalent reports). Note that the Pond Report requires analyses for dissolved oxygen, pH, and dissolved sulfides (if necessary). The Producer shall include the reports generated by the Users (or agents) as part of the monthly Self-Monitoring Report.

SMP Attachment B (Order No. 94- 039) RECLAIMED WATER USER'S REPORT

1. Name of User: _____

2. Reporting Period (Month/Year): _____

3. Circle dates when reclaimed water was used: 1 2 3 4 5 6 7 8 9 10
 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

4. Total Monthly Flow used (gallons): _____

5. Required Standard Observations (As defined in SMP Part III.B.):

[For each inspection, record date, time, and `yes' or `no' for each observation, according to observed conditions.]

Inspection Date and Time					
Observation Stations Inspected					
Escape of Reclaimed Water from Site					
Nuisance Odors from Reclaimed Water					
Prolonged Ponding of Reclaimed Water					
Mosquito Breeding					
Warning Signs <u>Not</u> Properly Posted					
Spray on Waterways, Vehicles, etc.					

If any of the above observations were yes, a written report containing the following information shall be submitted:

- a. Show location of violation on a sketch of the site.
- b. Explain cause and extent of violation.
- c. Describe corrective actions taken, date(s) compliance was achieved, and date/time reclaimed water use resumed.

6. This report is, to the best of my knowledge, true and correct:

 Signature of User Supervisor

 Date

NOTE: A Reclaimed Water Storage Pond Report must also be completed for each pond.

SMP Attachment C (Order No. 94- 039) RECLAIMED WATER STORAGE POND REPORT

1. Name of User: _____

2. Name of Storage Pond: _____

3. Reporting Period (Month/Year): _____

4. Total Monthly Flow into Pond (gallons): _____

5. Total Monthly Flow out of Pond (gallons): _____

6. Required Standard Observations (as defined in SMP Part III.B.):

[For each inspection, record date, time, pond freeboard, and 'yes' or 'no' for other observations, according to conditions.]

Inspection Date and Time:					
Observation Stations Inspected:					
Freeboard (feet)					
Evidence of Seepage from Pond*					
Nuisance Odors from Pond*					
Warning Signs <u>Not</u> Properly Posted*					
POND WATER ANALYSES:					
pH (units)					
Dissolved Oxygen (mg/l)					
Dissolved Sulfides (mg/l) [if DO < 2.0 mg/l]					

*If any observations were yes, indicating a violation, a written report containing the following information shall be submitted:

- a. Show location of violation on a sketch of the site.
- b. Explain cause and extent of violation.
- c. Describe corrective actions taken, date(s) compliance was achieved, and date/time regular pond use was resumed.

7. This report is, to the best of my knowledge, true and correct:

Signature of User Supervisor

Date