CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 83-21
NPDES NO. CA0037575
WASTE DISCHARGE REQUIREMENTS FOR:

NAPA SANITATION DISTRICT,
AMERICAN CANYON COUNTY WATER DISTRICT, AND
NAPA-AMERICAN CANYON WASTEWATER MANAGEMENT AUTHORITY,
NAPA COUNTY

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

1. Napa Sanitation District has applied for waste discharge requirements and a permit to discharge wastes from its treatment plant located near Ratto Landing on the Napa River under the National Pollutant Discharge Elimination System (NPDES) by application dated December 10, 1982.

2. The Napa Sanitation District, American Canyon County Water District, and Napa-American Canyon Wastewater Management Authority (hereinafter collectively known as Dischargers) presently discharge mixed domestic and industrial wastewater containing pollutants into the Napa River, a water of the United States. The point of discharge is adjacent to Ratto Landing with discharge through an outfall located at 38°, 13', 45" N latitude and 122°, 17', 00" W longitude.

3. The wastewater is treated and discharged as follows:

   a. Waste from the City of Napa and adjacent incorporated areas serving a current population of 60,000 persons is conveyed to the Imola treatment plant south of the City of Napa, where it receives primary clarification followed by secondary treaatment with trickling filters.

   b. Effluent from the Imola treatment plant is conveyed some 3 1/2 miles south to 342 acres of oxidation ponds. These ponds also receive waste effluent from American Canyon County Water District, population 6,000, where a series of four waste stabilization ponds provide secondary treatment prior to transport some 5 miles north to the Napa oxidation ponds. The four Napa Sanitation District oxidation ponds provide between 65 and 150 days of detention time.

   c. Oxidation pond secondary treated effluent is currently discharged to the Napa River through the dischargers' outfall during the wet weather period of November 1 through April 30. This discharge does not receive a minimum initial dilution of 10:1.

   d. For discharge during the dry weather period of May 1 through October 31, the oxidation pond secondary effluent receives further treatment at a 15.4 million gallon per day (mgd) physical-chemical treatment plant using lime-polymer coagulation followed by recarbonization and chlorination before dual media filtration.

e. Sludge generated at the physical-chemical plant is currently being applied to farmland adjacent to the oxidation ponds and is regulated by a separate NPDES Permit.

4. The Dischargers have developed and are implementing a pretreatment program in accordance with regulations adopted by the Environmental Protection Agency in 40 CFR 403.

5. The Board adopted a revised Water Quality Control Plan (Basin Plan) for the San Francisco Bay Region on July 21, 1982. The Basin Plan contains water quality objectives and defines beneficial uses of the Napa River.

6. The beneficial uses of the Napa River in the vicinity of the discharge include:

   a. Navigation
   b. Water Contact Recreation
   c. Non-Contact Water Recreation
   d. Warm Freshwater Habitat
   e. Wildlife Habitat
   f. Fish Migration
   g. Fish Spawning
   h. Preservation of Rare and Endangered Species

7. The Basin Plan prohibits the discharge of wastewater which has characteristics of concern to beneficial uses:

   a. At any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, and

   b. Into any dead-end slough or similar confined water areas or their immediate tributaries. The Napa River is such a confined water body.

8. The Basin Plan provides for exceptions to the discharge prohibitions listed in Finding 7., where a discharge in wet weather is approved as part of a reclamation project in dry weather months.

9. The Napa Sanitation District currently reclaims a portion of the dry weather effluent on lands of the Napa Airport comprising of some 180 acres. The District further reports that it is currently in the design phase of a water reclamation system for the 290 acre District-owned Somky Ranch adjacent to the physical-chemical treatment plant. The District also reports that it has recently acquired the 490 acre Kirkland Ranch located southeast of the physical-chemical plant and oxidation pond system. The District proposes to ultimately reclaim all wastewater effluent during the dry weather period of May 1 through October 31.

10. The Board finds that the water reclamation program proposed by the District complies with the exception provision of the Basin Plan, and hereby grants an exception for wet weather flows discharged to the Napa River after secondary treatment through the current outfall facilities.

11. The Dischargers are currently regulated by waste discharge requirements contained in Order Nos. 82-62, 78-98, and 78-46, adopted by the Board on November 17, 1982, November 21, 1978, and June 20, 1978, respectively, which allow for discharge to the Napa River.

12. As this project approval is an NPDES Permit, this Board, pursuant to Water Code Sectin 13389, is not required to comply with the provisions of Chapter 3 of Division 13 of the Public Resources Code (California Environmental Quality Act).

13. The Board has notified the Dischargers and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

14. The Board, at a public meeting, heard and considered all comments and recommendations concerning this discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provisions of the Federal Water Pollution Control Act, as amended, and regulations and guidelines adopted thereunder, that the Dischargers shall comply with the following:

A. Prohibitions

1. The average dry weather flow shall not exceed 15.4 mgd. Average shall be determined over three consecutive months each year.

2. There shall be no bypass or overflow of untreated wastewater to waters of the United States, either at the treatment plants or from the collection system.

3. The discharge of wastewater to the Napa River is prohibited for the period May 1 through October 31 of each year. The Executive Officer may authorize a discharge prior to October 31 and/or after May 1 of any year in which rainfall has caused an upset in the normal wastewater irrigation schedule.

4. The collection, storage, treatment, or disposal of wastewater shall not cause a nuisance as defined in Section 13050 (m) of the California Water Code.

B. Effluent Limitations

1. The discharge of an effluent containing constituents in excess of the following limits is prohibited for the discharge period of November 1 through April 30:

Constituents	Units	30-day Average	7-day Average	Maximum Daily	Instantaneous Maximum
a. Settleable Matter	ml/l-hr	0.1	-	-	0.2
b. BOD	mg/l	30	45	60	-
c. Suspended Solids	mg/l	30	45	60	-
d. Grease and Oil	mg/l	10	-	20	-
e. Chlorine Residual	mg/l	-	-	-	0.0

2. For the waste as discharged, or at some point in the treatment process, the total coliform bacteria concentration for a median of 5 consecutive samples shall not exceed a most probable number (MPN) of 240 per 100 milliliters.

3. The discharge shall not have a pH of less than 6.0 nor greater than 9.0.

4. In any representative set of samples, the waste as discharged shall meet the following toxicity limit: the survival of acceptable test organisms in 96 hour bioassays of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

5. The arithmetic mean of the biochemical oxygen demand and suspended solids values, by weight, for effluent samples of wastewater discharged to the Napa River that are collected in a period of 30 consecutive calendar days, shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85% removal).

6. Representative samples of the effluent shall not exceed the following limits more than the percentage of time indicated: (1)

Constituent	Unit of Measurement	50% of time	10% of time
Arsenic	mg/l	0.01	0.02
Cadmium	mg/l	0.02	0.03
Total Chromium	mg/l	0.03	0.06
Copper	mg/l	0.2	0.3
Lead	mg/l	0.1	0.2
Mercury	mg/l	0.001	0.002
Nickel	mg/l	0.1	0.2
Silver	mg/l	0.02	0.04
Zinc	mg/l	0.3	0.5
Cyanide	mg/l	0.1	0.2
Phenolic Compounds	mg/l	0.5	1.0
Total Identifiable Chlorinated Hydrocarbons	mg/l (2)	0.002	0.004

(1) These limits are intended to be achieved through secondary treatment source control and application of pretreatment standards.

(2) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

C. Interim Dry Weather Effluent Limitations

Prior to compliance with Prohibition A.3 of this Order, the following effluent limits shall apply:

1. The discharge of an effluent containing constituents in excess of the following limits is prohibited during the interval May 1 through October 31:

Constituents	Units	30-day Average	7-day Average	Maximum Daily	Instantaneous Maximum
a. Settleable Matter	ml/l-hr	0.1	-	-	0.2
b. BOD	mg/l	10	15	20	-
c. Suspended Solids	mg/l	20	30	40	-
d. Grease and Oil	mg/l	10	-	20	-
e. Chlorine Residual	mg/l	-	-	-	0.0
f. Turbidity	JTU	-	-	-	10

2. The waste as discharged, or at some point in the treatment process, shall meet the following limits of bacteriological quality:

The total coliform bacteria for a median of 7 consecutive samples shall meet a most probable number (MPN) of 2.2 per 100 milliliters.

D. Pond Limitations

1. Wastewater within one foot of the surface of all ponds shall meet the following limits at all times:

a. Dissolved Oxygen 2.0 mg/l minimum

b. Dissolved Sulfide 0.1 mg/l maximum

2. A minimum freeboard of at least 2 feet shall be maintained in all ponds.

3. All ponds shall be protected against erosion, washout and flooding from a flood having a predicted frequency of once in 100 years.

E. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the United States at any place.

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the United States in any place within one foot of the water surface:

a.	Dissolved oxygen	5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
b.	pH	Variation from natural ambient pH by more than 0.2 pH units.
c.	Un-ionized Ammonia as N	0.025 mg/l, Annual Median 0.4 mg/l, Maximum

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

F. Provisions

1. The Dischargers shall comply with the following time schedule for tasks proposed to achieve compliance with Prohibition A.3. of this Order:

Task	Completion Date
a. Complete Design, Somky Ranch irrigation system	July 1, 1983
b. Complete Construction and begin irrigation on Somky Ranch	May 1, 1984
c. Complete Design of Conveyance System, Kirkland Ranch	July 15, 1984
d. Complete Design, Kirkland Ranch irrigation system	July 15, 1985
e. Complete Construction, Kirkland Ranch conveyance system	July 16, 1986
f. Complete Construction and begin irrigation on Kirkland Ranch	May 1, 1988
g. Full Compliance with Prohibition A.3	May 1, 1988

2. Order Nos. 82-62, 78-98 and 78-46 are no longer applicable and are hereby rescinded.

3. The Dischargers shall submit to the Executive Officer a contingency plan for the continuous operation of facilities for the collection, treatment and disposal of waste pursuant to Regional Board Resolution No. 74-10.

4. The Dischargers shall submit a report to the Board on or before each compliance report date detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Dischargers will be in compliance. The Dischargers shall notify the Board by letter when compliance with the time schedule has been achieved.

5. The Dischargers shall comply with a Self-Monitoring Program as ordered by the Board's Executive Officer.

6. The Dischargers shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977.

7. This Order expires June 15, 1988. The Dischargers must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9, of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

8. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Fred H. Dierker, 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 June 23, 1983.

FRED H. DIERKER
Executive Officer

Attachments:
Standard Provisions, Reporting
Requirements and Definitions (April 1977)