CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 91-056
NPDES NO. CA0029815

GENERAL WASTE DISCHARGE REQUIREMENTS FOR:

DISCHARGES OF EXTRACTED AND TREATED GROUNDWATER RESULTING FROM THE CLEANUP OF GROUNDWATER POLLUTED BY FUEL LEAKS AND OTHER RELATED WASTES AT SERVICE STATIONS AND SIMILAR SITES

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

1. States may request authority to issue general National Pollutant Discharge Elimination System (NPDES) permits pursuant to 40 Code of Federal Regulations (CFR) 122.28. On June 8, 1989, the State Water Resources Control Board (hereinafter State Board) submitted an application to the United States Environmental Protection Agency (hereinafter EPA) requesting revisions to its NPDES program in accordance with 40 CFR 122.28, 123.62 and 403.10. The application included a request to add general permit authority to its approved NPDES program. On September 22, 1989, the EPA, Region IX, approved the State Board's request and granted authorization for the State to issue general NPDES permits.

2. Title 40 CFR 122.28 provides for the issuance of general permits to regulate discharges of waste which result from similar operations, are the same types of waste, require the same effluent limitations, require similar monitoring, and are more appropriately regulated under a general permit rather than individual permits.

3. A general permit for existing and proposed discharges of extracted and treated groundwater to surface waters of the San Francisco Bay Region (except for direct discharges to the Pacific Ocean) from groundwater cleanup projects meets the requirements of 40 CFR 122.28. The discharges and proposed discharges: (a) result from similar operations (all involve extraction, treatment, and discharge of groundwater), (b) are the same types of waste (all are groundwater containing petroleum hydrocarbons and other related wastes due to leaks and spills from service stations and similar sites), (c) require similar effluent limitations for the protection of the beneficial uses of surface waters in the San Francisco Bay Region (this general permit does not cover direct discharges to the Pacific Ocean), (d) require similar monitoring, and (e) are more appropriately regulated under a general permit rather than individual permits. Therefore, this Order establishes a general permit regulating extracted and treated groundwater discharges resulting from the cleanup of groundwater polluted by fuel leaks and other related wastes at service stations and similar sites.

4. Approximately 4000 underground fuel storage tanks within the San Francisco Bay Region are known to be currently leaking or have leaked in the past. Fuel is also discharged to groundwater from other sources (surface spills, pipeline breaks or leakages, etc.). Some of the groundwater aquifers in

the Region contain a mixture of fuel, metals, and solvent pollution. Discharges of extracted and treated groundwater which contain less than 10 grams per day (1 gram/day for mercury or selenium) of any metal are not expected to adversely affect the beneficial uses of the receiving water.

5. Within the next five years, a large number of these petroleum and/or petroleum mixed with metals and/or solvents sites will be conducting groundwater cleanups. It is anticipated that many of these cleanups will require waste discharge requirements for discharge to surface waters. These cleanups will far exceed the capacity of available staff to develop and bring individual tentative waste discharge requirements to the Board for adoption. These circumstances create the need for an expedited system to process the anticipated numerous requests. The adoption of a general NPDES permit and/or general waste discharge requirements would: expedite the processing of requirements; enable the Board to better utilize limited staff resources; and permit cleanups to begin sooner.

6. Entities subject to this Order (service stations and similar sites which discharge treated groundwater polluted by fuel leaks and other related wastes) are hereinafter referred to as discharger(s).

7. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986, and the State Board approved it on May 21, 1987. The Basin Plan was updated by the Board on March 15, 1989. The update was subsequently approved by the State Board.

8. The Basin Plan contains water quality objectives for surface waters and groundwaters within the San Francisco Bay Region. The beneficial uses of these waters are shown in the following attachments: Table 2-1 ("Existing and Potential Beneficial Uses of Surface Waters"), Table II-2 ("Significant Tributaries to Major Streams, Creeks, and Reservoirs"), Table II-3 ("Beneficial Uses of Marshes"), and Figure II-1 ("Principal Surface Waters of Basin 2").

9. The existing and potential beneficial uses of the groundwater basins in the Region are:

    Municipal and Domestic Supply (as defined in Regional Board Resolution No. 89-039 and State Board Resolution No. 88-63)
    Industrial Process Supply
    Industrial Service Supply
    Agricultural Supply

10. The Board adopted Resolution No. 88-160 on October 19, 1988. The Resolution urges dischargers of extracted groundwater from site cleanup projects to reclaim their effluent and that when reclamation is not technically and/or economically feasible, to discharge to a publicly owned treatment works (POTW). If neither reclamation nor discharge to a POTW is technically or economically feasible and if beneficial uses of the receiving water are not adversely affected, it is the intent of the Board to authorize the discharge of treated extracted groundwater in accordance with the requirements of this Order

11. The Basin Plan prohibits discharge of "wastewater which has particular

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, or into any nontidal water, dead-end slough, similar confined waters, or any immediate tributaries thereof" and (b) at any point in "San Francisco Bay south of the Dumbarton Bridge".

12. The Basin Plan allows for exceptions to the prohibitions referred to in Finding 11 above when it can be demonstrated that a net environmental benefit can be derived and the discharge will not result in unacceptable adverse impacts on the beneficial uses of the receiving waters. Exceptions to the above prohibitions are warranted because the discharges allowed under this Order are an integral part of a program to clean up polluted groundwaters and thereby produce an environmental benefit, and because receiving water concentrations are expected to be below levels that would affect beneficial uses.

13. The Basin Plan also prohibits discharge of "all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, to waters of the Basin." Prior to discharge, the dischargers must demonstrate to the satisfaction of the Executive Officer that their groundwater extraction and treatment systems and associated operation, maintenance, and monitoring plans constitute acceptable programs for minimizing the discharge of toxic substances to waters of the State.

14. The Water Quality Act of 1987 added Section 304(L) to the Clean Water Act. This section requires states to adopt lists of impaired waterbodies, including a list of surface waters which do not meet applicable water quality standards due entirely or substantially to point source discharges of toxic substances. For waters identified on this list, known as the Section 304(L) "short list", the state must identify certain point sources and amounts of pollutants causing a toxic impact, and develop individual control strategies for each point source. Section 304(L) provides that the individual control strategy must produce a reduction in the discharge of toxic substances from the identified point sources through the establishment of effluent limitations under Section 402 and water quality standards under Section 303(c)(2)(B) of the Act. The reduction must be sufficient, in combination with existing controls on point and nonpoint sources of pollution, to achieve the applicable water quality standard not later than three years after the date of establishment of the strategy.

15. Impaired waterbodies within this region on the 304(L) short list include San Pablo Bay, Carquinez Strait, and Suisun Bay (impaired due to selenium), Peyton Slough (impaired due to copper, lead, zinc, and cadmium), and South San Francisco Bay below the Dumbarton Bridge (impaired due to cadmium, copper, lead, mercury, nickel, selenium, and silver). Dischargers in compliance with the provisions and requirements of this Order are not expected to significantly contribute to violations of the applicable water quality standards in the impaired waterbodies.

16. Pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (collectively "antidegradation policies"), the Regional Board shall ensure that any increase in pollutant loading to a receiving water meets the requirements stated in the foregoing policies. At a minimum,

permitting actions shall be consistent with the following:

a. Existing instream water uses and the level of water quality necessary to protect existing beneficial uses shall be maintained and protected;

b. Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, the quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located;

c. Where high quality waters constitute an outstanding national resource, such as waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected; and

d. In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Clean Water Act.

17. The Board, in establishing the requirements contained herein, has taken into consideration the requirements of the State and Federal "antidegradation" policies and has determined that:

a. The conditions and effluent limitations established in this Order for discharges of treated groundwater to surface waters in this Region ensure that the existing beneficial uses and quality of surface waters in this Region will be maintained and protected;

b. Discharges regulated by this Order should not lower water quality if the terms and conditions of this Order are met;

c. Discharge to waters of exceptional recreational or ecological significance, such as Areas of Special Biological Significance, will be prohibited;

d. Thermal discharges potentially impairing water quality are not authorized under the terms and conditions of this Order, thus, Section 316 of the Clean Water Act is not applicable.

18. This Order permits the discharge of treated groundwater to waters of the State subject to the prohibitions, effluent limitations, and provisions of this Order. It does not pre-empt or supersede the authority of municipalities, flood control agencies, or other local agencies to prohibit, restrict, or control discharges of waste to storm drain systems or other watercourses subject to their jurisdiction.

19. Effluent limitations in this Order are based on the Basin Plan, State plans and policies, U.S. EPA guidance, best professional engineering and geologic judgment, and best available technology economically achievable.

20. This Order serves as an NPDES Permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

21. The Board has notified interested agencies and persons of its intent to issue general waste discharge requirements for groundwater dewatering discharges resulting from the cleanup of groundwater polluted by fuel leaks and other related wastes at service stations and similar sites, and has provided them with an opportunity to submit their written views and recommendations.

22. The Board, in a public meeting, heard and considered all comments pertaining to general waste discharge requirements for groundwater dewatering discharges resulting from the cleanup of groundwater polluted by fuel leaks and other related wastes at service stations and similar sites.

IT IS HEREBY ORDERED that dischargers discharging treated groundwater polluted by fuel leaks and other related wastes at service stations and similar sites, their agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Bypass or overflow of untreated or partially treated polluted groundwater to waters of the State either at the treatment system or from any of the collection or transport systems or pump stations tributary to the treatment system is prohibited.

2. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.

3. The discharge shall be limited to extracted and treated groundwater and added treatment chemicals approved by the Executive Officer which do not adversely affect the environment and comply with the requirements of this Order.

4. The discharge to areas designated as being of Special Biological Significance, is prohibited. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.

5. The discharge of oil, trash, industrial waste sludge, or other solids directly to the surface waters in this Region or in any manner which permit it to be washed into the surface waters in this Region is prohibited.

6. The discharge of extracted and treated groundwater from a specific site

in excess of the flow rate specified in each discharger's authorization letter from the Executive Officer is prohibited.

7. The discharge of extracted and treated groundwater polluted by fuel leaks and other related wastes at service stations and similar sites to surface waters in this Region is prohibited unless an application for proposed discharge and the certification report required by Provision D.2 for the discharge have been submitted to, and reviewed by, the Executive Officer and the Executive Officer has provided the discharger with written authorization to initiate the discharge; or an individual NPDES permit has been adopted for the discharge.

B. Effluent Limitations

1. The effluent (at a point after full treatment but before it joins or is diluted by any other waste stream, body of water, or substance) shall not contain constituents in excess of the following INSTANTANEOUS MAXIMUM LIMITS:

	Discharge Area	
Constituents	Drinking Water Areas (1), in ug/l	Other Surface Waters (ug/l)
Purgeable Halocarbons (EPA Method 601)		
Carbon Tetrachloride	0.5	5.0
1,2-Dichloroethane	0.5	5.0
Vinyl Chloride	0.5	5.0
1,1-Dichloroethane	5.0	5.0
1,1-Dichloroethylene	5.0	5.0
(cis + trans)-1,2-Dichloroethylene	5.0	5.0
Methylene Chloride	5.0	5.0
Tetrachloroethylene	5.0	5.0
Trichloroethylene	5.0	5.0
1,1,1-Trichloroethane	5.0	5.0
1,1,2-Trichloroethane	5.0	5.0
Trichlorotrifluoroethane	5.0	5.0
Chloroform	5.0	5.0
Purgeable Aromatics (EPA Method 602)		
Benzene	1.0	5.0
Toluene	5.0	5.0
Ethylbenzene	5.0	5.0
Total Xylenes	5.0	5.0
Volatile Organic Compounds (per constituent, as identified by EPA Method 624 or EPA Methods 601 and 602)	5.0	5.0
Total Petroleum Hydrocarbons (as identified by modified EPA Method 8015)	50.0	50.0

Ethylene Dibromide (as identified by EPA Method 504)	0.02	5.0
Polynuclear Aromatic Hydrocarbons (as identified by EPA Method 610 or 625)	15.0	15.0
Base/Neutral, Acid, and Pesticide Compounds (per constituent, as identified by EPA Method 625)	5.0	5.0

(1) Drinking water areas are defined as surface waters used for municipal and domestic supply; they also include groundwater recharge areas (including recharge areas to maintain salt balance or to halt salt water intrusion into fresh water aquifers).

2. The pH of the discharge shall not exceed 8.5 nor be less than 6.5.

3. Toxicity: The survival of test fish in 96-hour static renewal bioassays of the discharge shall be a three sample moving median of 90% survival and a 90 percentile value of not less than 70% survival.

C. Receiving Water Limitations

1. The discharge shall not cause the following conditions to exist in waters of the State at any place:

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

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, taste, odor, 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 that 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 shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

   a. Dissolved oxygen — For all tidal waters:

      In the Bay downstream of Carquinez Bridge - 5.0 mg/l minimum

      Upstream of Carquinez Bridge - 7.0 mg/l

minimum

For nontidal waters:

Waters designated as cold water habitat - 7.0 mg/l minimum

Waters designated as warm water habitat - 5.0 mg/l minimum

For all inland surface waters, the median of any three consecutive months shall not be less than 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. Dissolved Sulfide — All inland surface waters shall be free from dissolved sulfide concentrations above natural background levels.

c. pH — Variation from natural ambient pH by more than 0.5 pH units.

d. Un-ionized ammonia — 0.025 mg/l as Nitrogen, Annual Median
0.16 mg/l as Nitrogen, Maximum (Central Bay and upstream)
0.4 mg/l as Nitrogen, Maximum (Lower Bay and South Bay)

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 Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. Dischargers shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the dischargers to achieve compliance with the conditions in this Order and in the authorization letters from the Executive Officer. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of this Order and the authorization letters from the Executive Officer. All systems, both those in service and reserve, shall be inspected and maintained on a regular basis. Records shall be kept of the inspection

results and maintenance performed and made available to the Regional Board. All of the above procedures shall be described in an Operation and Maintenance (O & M) Manual. The O & M Manuals shall also contain a description of the safeguards to assure that, should there be reduction, loss, or failure of electric power, the dischargers will be able to comply with the terms and conditions of this Order and the authorization letters from the Executive Officer. The O & M Manuals shall describe preventive (fail-safe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources of accidental loss, untreated or partially treated waste bypass, and polluted drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes shall be considered.

2. Each discharger shall submit to the Executive Officer, as part of the application for proposed discharge, a report certifying the adequacy of each component of the proposed treatment facilities along with the associated O & M Manual. This certification report shall contain a requirement-by-requirement analysis, based on accepted engineering practice, of how the process and physical design of the treatment facilities will ensure compliance with this Order. Each report shall also certify that (a) all treatment facility startup and operation instruction manuals are adequate and available to operating personnel, (b) adequate treatment facility maintenance and testing schedules are included in the treatment facility O & M Manual, and (c) influent and effluent sampling locations or ports are located in areas where samples representative of the waste stream to be monitored can be obtained. The design engineer shall affix his/her signature and engineering license number to this certification report.

3. The application for proposed discharge shall contain the following information:

   a. An effluent reclamation feasibility study and if the local POTW refuses to accept the treated effluent, a copy of a letter confirming their position;

   b. Completed EPA application forms 1 (General Information) and 2D (New Sources and New Dischargers);

   c. Chemical analysis of the untreated groundwater;

   d. A discussion of the proposed cleanup project in general terms including a review of the extraction system design and the status of definition of free product and dissolved product plumes;

   e. The certification report and associated O & M Manual as described in Provisions D.1. and D.2.;

   f. A map showing the path from the point of initial discharge to the ultimate location of discharge;

   g. The estimated average and maximum daily flow rates;

h. A list of known or suspected leaking underground tanks and other facilities or operations which have, or may have impacted the quality of the underlying groundwaters;

i. A discussion of the quality of the proposed receiving waters;

j. A discussion of the proximity of the proposed discharge to Areas of Special Biological Significance;

k. A discussion of plans for the prevention of run-on, interception and diversion of run-off, and prevention of infiltration and runoff from contaminated soils stored on-site, if the discharge is associated with a groundwater remediation project and soils containing petroleum products or other pollutants will be maintained on-site;

l. A discussion of why the proposed discharge is consistent with the type of discharge covered by this general permit (Order No. 91-056); and

m. Any other information deemed necessary by the Executive Officer.

4. Upon receipt of a complete application for proposed discharge, the Executive Officer will review the application to determine whether the proposed discharger has shown it will comply with the following criteria and is eligible to discharge waste under this general permit: (a) the proposed discharge results from the cleanup of groundwater polluted by fuel leaks and other related wastes at a service station or a similar site; (b) the proposed discharge is to surface waters of the San Francisco Bay Region (except for direct discharges to the Pacific Ocean); (c) the proposed discharger has met the provisions of Resolution No. 88-160; (d) the proposed treatment system and associated operation, maintenance, and monitoring plans are capable of ensuring that the discharge will meet the provisions, prohibitions, effluent limitations, and receiving water limitations of this Order; and (e) the proposed discharge will not have any adverse impact on waters of exceptional recreational or ecological significance.

5. If the Executive Officer determines that the proposed discharger is eligible to discharge waste under this general permit, the Executive Officer may (a) authorize the proposed discharge or (b) require the discharge proponent to obtain an individual NPDES permit prior to any discharge to inland surface waters in the San Francisco Bay Region. If the Executive Officer authorizes the discharge, a "discharge authorization letter" will be transmitted to the discharge proponent (now an "authorized discharger") authorizing the initiation of the discharge subject to the conditions of this Order and any other conditions necessary to protect the beneficial uses of the receiving waters. The discharge authorization letter from the Executive Officer will specify the maximum allowed discharge flow rate (which also limits the mass loading rate for each pollutant listed in Effluent Limitation B.1 of this Order) and the Self-Monitoring Program for this Order. The discharge authorization letter may be terminated or revised by the Executive Officer at any time.

6. Dischargers shall comply with the Self-Monitoring Program as adopted by

the Board and as amended by the Executive Officer. The sampling and analysis schedule in the attached Self-Monitoring Program is the program expected to be followed for six months. After six months, the results will be reviewed, if requested by the dischargers, and the Executive Officer may modify the Self-Monitoring Program to cover constituents of concern. If the groundwater extraction and/or treatment system(s) described in the application for proposed discharge and certification report is modified, the schedule of monitoring specified in Part B, Table 1, of the Self-Monitoring Program will be reviewed for possible modification.

7. This Order may be modified by the Board prior to the expiration date to include effluent or receiving water limitations for toxic constituents determined to be present in significant amounts in discharges regulated by this general permit (through the comprehensive monitoring program included as part of this Order).

8. Dischargers shall comply with all applicable items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986 except Items A.10, B.2, B.3, C.8 and C.11. Item C.10(b)(C) shall be modified by substituting instantaneous maximum for maximum daily.

9. If pursuant to Section IV.B. of the Self-Monitoring Program, more than 10 grams per day (1 gram/day for mercury or selenium) of any metal (arsenic, cadmium, chromium, copper, lead, nickel, silver, or zinc) or cyanide is discharged to the receiving water, the discharger shall indicate in writing (within 30 days) to the Board which of the following actions will be taken:

   a. Investigate, as specified in Section IV.B. of the Self-Monitoring Program, and show that the discharge does not adversely affect the beneficial uses of the receiving water;

   b. Reduce the amount of the metal or cyanide discharged to less than 10 grams per day (1 gram/day for mercury or selenium) [e.g. through upgrading the treatment system, source removal, pretreatment, waste minimization, etc.]; or

   c. Provide an alternate method of disposal (truck to a POTW, truck to reclamation, etc.).

10. Upon receipt of the Executive Officer's discharge authorization letter, the discharger(s) shall comply with all conditions and limitations of this Order and the discharge authorization letter. Any permit noncompliance constitutes a violation of the Clean Water Act and the California Water Code and is grounds for enforcement action; for permit or authorization letter termination, revocation and reissuance, or modification; the issuance of an individual permit; or for denial of a renewal application.

11. The EPA Administrator may request the Regional Board Executive Officer to require any discharger authorized to discharge waste by the general permit to subsequently apply for and obtain an individual NPDES permit. The Executive Officer of the Board may require any discharger

authorized to discharge waste by a general permit to subsequently apply for and obtain an individual NPDES permit. An interested person may petition the Executive Officer or the Regional Administrator to take action under this provision. Cases where an individual NPDES permit may be required include the following:

a. The discharger is not in compliance with the conditions of this Order or the discharge authorization letter from the Executive Officer;

b. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;

c. Effluent limitation guidelines are promulgated for point sources covered by the general NPDES permit;

d. A water quality control plan containing requirements applicable to such point sources is approved; or

e. The requirements of 40 CFR 122.28(a) are not met.

12. This Order expires on April 17, 1996. Dischargers must file an application for proposed discharge and a certification report as described in Provision D.2. not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

13. This Order shall serve as a general National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the 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, 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 April 17, 1991.

STEVEN R. RITCHIE
Executive Officer

Attachments:

Standard Provisions & Reporting Requirements, December 1986
Self-Monitoring Program, Parts A and B
Tables 2-1, II-2 and II-3
Figure II-1

TABLE 2-1. EXISTING AND POTENTIAL BENEFICIAL USES OF SURFACE WATERS

	MUN	AGR	IND	PROC	GWR	FRSH	NAV	REC 1	REC 2	COMM	WARM	COLD	ASBS	WILD	RARE	MAR	MIGR	SPWN	SHELL	EST
001 Pacific Ocean			x				x	x	x	x			x	x	x	x	x	x	x	
002 South Bay			x				x	x	x	x				x	x		x	o	x	x
003 Lower Bay			x				x	x	x	x				x	x		x	o	x	x
004 Central Bay			x	x			x	x	x	x				x	x		x	x	x	x
005 Richardson Bay			x				x	x	x	x				x	x		x	x	x	x
006 San Pablo Bay			x				x	x	x	x				x	x		x	x	x	x
007 Carquinez Strait			x				x	x	x	x				x	x		x	x		x
008 Suisun Bay			x				x	x	x	x				x	x		x	x		x
009 Delta	x	x	x	x	x		x	x	x	x				x	x		x	x		x
Alameda County																				
101 Alameda Creek		x			x			x	x		x	x		x			x	x		
102 Alameda Creek Quarry Ponds					x			x	x		x	x								
103 Aquatic Park (Berkeley)								x	x					x			x	o		x
104 Arroyo De La Laguna					x			x	x		o	o		x			x	x		
105 Arroyo Del Valle	x				x			o	o			x		x			o	x		
106 Calaveras Reservoir	x							b	x		x	x		x				x		
107 Cull Canyon Reservoir								x	x		x	x		x				x		
108 Del Valle Reservoir	x							a	x		x	x		x				x		
109 Don Castro Reservoir								x	x		x	x		x				x		
110 Elizabeth Lake									x		x	x		x				x		
111 Lake Chabot	x							a	x		x	x		x				x		
112 Lake Merritt								x	x					x				x		x
113 Lake Temescal								x	x		x	x		x				x		
114 San Antonio Reservoir	x							b	x		x	x		x				x		

x = existing beneficial use o = potential beneficial use a = fishing from shore or boat allowed; no other recreational use permitted

b = beneficial use prohibited by local regulation

TABLE 2-1. EXISTING AND POTENTIAL BENEFICIAL USES OF SURFACE WATERS

	MUN	AGR	IND	PROC	GWR	FRSH	NAV	REC 1	REC 2	COMM	WARM	COLD	ASBS	WILD	RARE	MAR	MIGR	SPWN	SHELL	EST
115 San Leandro Creek						x		o	o		o	x		x			o	o		
116 Upper San Leandro Reservoir	x							b	o		x	x		x				x		
117 San Lorenzo Creek	x				x	x		x	x		x	x		x			x	x		
118 Shadow Cliffs Reservoir								x	x		x	x		x				x		
Contra Costa County																				
201 Anza Lake								x	x		x	x		x						
202 Briones Reservoir	x							b	o		x	x		x				x		
203 Jewel Lake								x	x		x	x		x						
204 Lafayette Reservoir	x							a	x		x	x		x				x		
205 Mallard Reservoir	x	x	x	x				b	o		x			x				x		
206 Mt. Diablo Creek								x	x		x	x		x			x	x		
207 Pine Creek								x	x		x	x		x				x		
208 Pinole Creek								o	o		x	x		x			x	x		
209 Rodeo Creek								o	x		x			x				x		
210 San Pablo Creek									x		x			x			x	x		
211 San Pablo Reservoir	x							a	x		x	x		x				x		
212 Walnut Creek								o	o		x	x		x			x	x		
213 Wildcat Creek									x		x			x			x	x		
Marin County																				
301 Abbotts Lagoon								x	x					x		x				
302 Alamere Creek								o	x			x		x						
303 Alpine Lake	x							a	x		x	x		x				x		
304 Arroyo Corte Madera Del Presido								o	x			x		x				x	x	

TABLE 2-1. EXISTING AND POTENTIAL BENEFICIAL USES OF SURFACE WATERS

	MUN	AGR	IND	PROC	GWR	FRSH	NAV	REC 1	REC 2	COMM	WARM	COLD	ASBS	WILD	RARE	MAR	MIGR	SPWN	SHELL	EST
305 Bolinas Lagoon								x	x	x				x	x	x	x	x	x	
306 Bon Tempe Lake	x							a	x		x	x		x				x	x	
307 Coast Creek								x	x			x		x				x		
308 Corte Madera Creek								o	x		x	x		x	x		o	o		
309 Coyote Creek									x		x	x		x				x		
310 Crystal Lake								o	o		x			x	x	x		x	x	
311 Drakes Estero								x	x	x				x				x	x	
312 First Valley Creek								o	x			x		x						
313 Fish Hatchery Creek																			x	
314 Gallinas Creek								o	x		x	x		x	x					
315 Kent Lake	x								x		x	x		x				x		
316 Lagunitas Creek		x						a	x		x	x		x	x			x		
317 Lake Lagunitas	x							x	x					x		x		x	x	
318 Limantour Estero								x	x	x				x	x		x	x		
319 Miller Creek								x	x		x	x		x			x	x		
320 Nicasio Creek	x					x		x	x			x		x				x		
321 Nicasio Reservoir	x					x		a	x		x	o		x	x		o	o		
322 Novato Creek	x							o	o		o	o		x			x	x		
323 Olema Creek								x	x		x	x		x				o		
324 Pacheco Pond									o		x	x		x				x		
325 Phoenix Lake	x							a	x		x	x		x			x	x		
326 Pine Gulch Creek	x								x		x	x		x				x	x	
327 Redwood Creek	x	x				x		x	x		x	x		x	x	x		x		
328 Rodeo Creek								x	x			x		x			o	o		
329 San Antonio Creek								o	o		x	x		x						
330 San Rafael Creek							x		x		x	x		x						
331 Soulajoule Reservoir	x							a	x		x			x				x		
332 Stafford Lake	x					x		a	x		x	x		x						

TABLE 2-1. EXISTING AND POTENTIAL BENEFICIAL USES OF SURFACE WATERS

	MUN	AGR	IND	PROC	GWR	FRSH	NAV	REC 1	REC 2	COMM	WARM	COLD	ASBS	WILD	RARE	MAR	MIGR	SPWN	SHELL	EST
333 Tomales Bay								x	x	x				x	x	x	x	x	x	
334 Walker Creek								o	o		x	x		x	x		x	x		
Napa County																				
401 Chiles Creek	x					x		o	o		x	x		x				x		
402 Conn Creek	x					x		x	x			x		x			x	x		
403 Dry Creek	x	x						x	x		x	x		x			x	x		
404 Kimball Reservoir	x							a	x		x			x				x		
405 Lake Curry	x							a	x		x			x				x		
406 Lake Hennessey	x							a	x		x	x		x				x		
407 Lake Marie		o						x	x		o	o		x				x		
408 Milliken Reservoir	x							b	o		x	x		x	x		x	x		
409 Napa River	x	x					x	x	x		x	x		x				x		
410 Rector Reservoir	x							b			x	x		x				x		
411 Sage Creek	x					x		o	o		x	x		x			x	x		
412 York Creek								o	o			x		x						
San Francisco County																				
501 Golden Gate Park Lakes									x		x			x				x		
502 Lake Merced	o							a	x		x	x		x						
San Mateo County																				
601 Crystal Springs Lakes	x								x		x	x		x	x			x		
602 Denniston Creek	x	x						x	x		x	x		x	x		x	x		
603 Felt Lake		x						x	x		x			x				x		
604 Frenchmans Creek		x						x	x		x	x		x	x		x	x		
605 Lobitas Creek		x						x	x		x	x		x	x		x	x		
606 Pescadero Creek	x	x						x	x		x	x		x	x		x	x		

TABLE 2-1. EXISTING AND POTENTIAL BENEFICIAL USES OF SURFACE WATERS

	MUN	AGR	IND	PROC	GWR	FRSH	NAV	REC 1	REC 2	COMM	WARM	COLD	ASBS	WILD	RARE	MAR	MIGR	SPWN	SHELL	EST
607 Pilarcitos Creek	x	x						o	o		x	x		x	x		x	x		
608 Pilarcitos Lake	x							b	x		x	x		x	x			x		
609 Pomponio Creek		x						o	x		x	x		x			x	x		
610 Purisima Creek		x						x	x			x		x	x		x	x		
611 San Andreas Lake	x							b	x		x	x		x	x			x		
612 San Francisquito Creek								o	o		x	x		x			x	x		
613 San Gregorio Creek		x						x	x		x	x		x	x		x	x		
614 San Mateo Creek						x		o	o			o		x	x			x		
615 San Pedro Creek	x								x		x	x		x			x	x		
616 San Vicente Creek	x	x						o	o			x		x	x		x	x		
617 Searsville Lake		x						x	x		x	x		x				x		
618 Tunitas Creek		x						o	o		x	x		x	x		x	x		
Santa Clara County																				
701 Almaden Reservoir	x				x			a	x		x	x		x				x		
702 Anderson Reservoir	x				x			a	x		x	x		x				x		
703 Arroyo Hondo	x					x		x	x		x	x		x				x		
704 Calabazas Creek		x			x		x	x	x		x			x				x		
705 Calero Reservoir	x				x			x	x		x									
706 Campbell Percolation Pond					x			x	x		x	x		x				x		
707 Cherry Flat Reservoir	x	x						b	x		x			x				x		
708 Cotton Wood Lake								x	x		x	x		x				x		
709 Coyote Creek								o	x		x	x		x	x		x	x		
710 Coyote Reservoir	x	x						x	x		x	x		x				x		
711 Guadalupe Reservoir	x				x			a	x		x	x		x				x		
712 Guadalupe River								o	x		x	x		x			o	o		

TABLE 2-1. EXISTING AND POTENTIAL BENEFICIAL USES OF SURFACE WATERS

	MUN	AGR	IND	PROC	GWR	FRSH	NAV	REC 1	REC 2	COMM	WARM	COLD	ASBS	WILD	RARE	MAR	MIGR	SPWN	SHELL	EST
713 Halls VAlley Reservoir								x	x		x			x				x		
714 Lake Elsman	x											x		x						
715 Lexington Reservoir	x							x	x		x	x		x				x		
716 Los Gatos Creek	x				x	x		x	o		x	x		x			o	o		
717 Matadero Creek								x	x		x	x		x			x	x		
718 Permanente Creek								x	x			x		x				x		
719 Sandy Wool Lake									x		x			x				x		
720 San Felipe Creek								o	o		x	o		x				o		
721 Saratoga Creek		x			x	x		x	x		x	x		x						
722 Stevens Creek						x		x	x		x	x		x			x	o		
723 Stevens Creek Reservoir	x				x				x		x	x		x			x	x		
724 Vasona Reservoir					x			x	x		x	x		x				x		
Solano County																				
801 Green Valley Creek						x		x	x		x	x		x				x		
802 Lake Chabot	o	x						a	x		x	x		x				x		
803 Lake Frey	x								o		x	x		x				x		
804 Lake Herman	o		x					a	x		x	x		x				x		
805 Lake Madigan	x	x							o		x	x		x				x		
806 Laurel Creek						x		x	x		x	x		x			x	x		
807 Ledgewood Creek						x		x	x		x	x		x			x	x		
808 Montezuma Slough							x	x	x		x			x	x			x		
809 Suisun Creek						x		o	o		x	x		x			x	x		
810 Suisun Slough							x	x	x		x			x				x		
Sonoma County																				
901 Petaluma River							x	x	x		x	x		x	x	x	x	x		
902 Sonoma Creek								x	x		x	x		x	x		x	x		

Key for Table 2-1

Municipal and Domestic Supply	MUN
Agricultural Supply	AGR
Industrial Process Supply	PROC
Industrial Service Supply	IND
Ground Water Recharge	GWR
Fresh Water Replenishment	FRESH
Navigation	NAV
Water Contact Recreation	REC-1
Non-Contact Water Recreation	REC-2
Ocean Commercial and Sport Fishing	COMM
Warm Fresh Water Habitat	WARM
Cold Fresh Water Habitat	COLD
Preservation of Areas of Special Biological Significance	ASBS
Wildlife Habitat	WILD
Preservation of Rare and Endangered Species	RARE
Marine Habitat	MAR
Fish Migration	MIGR
Fish Spawning	SPWN
Shellfish Harvesting	SHELL
Estuarine Habitat	EST

TABLE II-2
SIGNIFICANT TRIBUTARIES TO MAJOR STREAMS, CREEKS AND RESERVOIRS

Alameda County

104 *Arroyo De La Laguna*
- Arroyo Mocho
- Arroyo De Las Positas
- Alamo Canal
- Tassajara Creek

106 *Calaveras Reservoir*
- Isabel Creek
- Smith Creek
- Sulpher Creek

114 *San Antonio Reservoir*
- LaCosta Creek
- San Antonio Creek

116 *San Leandro Reservoir*
- Kaiser Creek
- Moraga Valley Creek
- Redwood Creek

117 *San Lorenzo Creek*
- Crow Creek
- Palomares Creek

Contra Costa County

202 *Briones Reservoir*
- Bear Creek

212 *Walnut Creek*
- San Ramon Creek
- Tice Creek

Marin County

305 *Bolinas Lagoon*
- Easkoot Creek
- McKennan Gulch Creek
- Morses Gulch Creek
- Pike County Gulch Creek
- Pine Gulch Creek

308 *Corte Madera Creek*
- Cascade Creek
- Ross Creek
- San Anselmo Creek
- Sleepy Hollow Creek

315 *Kent Lake*
- Big Carson Creek

316 *Lagunitas Creek*
- Bear Valley Creek
- Devils Gulch Creek
- Haggerty Gulch Creek
- San Geronimo Creek

321 *Nicasio Reservoir*
- Halleck Creek

325 *Phoenix Lake*
- Bell Williams Creek
- Phoenix Creek

327 *Redwood Creek*
- Bootjack Creek
- Pine Gulch Creek

334 *Walker Creek*
- Arroyo Sausal Creek
- Frink Canyon Creek
- Salmon Creek
- Verde Canyon Creek

Napa County

409 *Napa River*
- Bear Canyon Creek
- Bell Canyon Creek
- Brown's Valley Creek
- Carneros Creek
- Cyrus Creek
- Garnett Creek
- Hopper Creek
- Huichin Creek
- Jericho Canyon Creek
- Milliken Creek
- Napa Creek
- Pickle Creek
- Rector Creek
- Redwood Creek
- Ritchie Creek
- Sarco Creek
- Soda Creek
- Sulphur Creek
- Suscol Creek
- Tulocay Creek

San Francisco County
None

San Mateo County

606 *Pescadero Creek*
- Boges Creek
- Fall Creek
- Hoffman Creek
- Honsinger Creek
- Jones Gulch Creek
- Lambert Creek
- Little Boulder Creek
- McCormack Creek
- Oil Creek
- Peters Creek
- Slate Creek
- Tarwater Creek
- Waterman Creek
- Woodruff Creek

607 *Pilarcitos Creek*
- Arroyo Leon Creek
- Mills Creek

612 *San Francisquito Creek*
- Bear Creek
- Los Trancos Creek
- West Union Creek

613 *San Gregorio Creek*
- Alpine Creek
- Clear Creek
- El Corte De Madera Creek
- Harrington Creek
- La Honda Creek
- Mindego Creek

Santa Clara County

709 *Coyote Creek*
- Arroyo Aquegia Creek
- Berryessa Creek
- Otis Canyon Creek
- Penitencia Creek
- Silver Creek
- Soda Cprings Canyon Creek

712 *Guadalupe River*
- Barrett Canyon Creek
- Herbert Creek

Solano County

809 *Suisun Creek*
- Wooden Valley Creek

Sonoma County

901 *Petaluma River*
- Adobe Creek
- Willow Creek

902 *Sonoma Creek*
- Agua Caliente Creek
- Arroyo Seco Creek
- Bear Creek
- Calabazas Creek
- Carriger Creek
- Fowler Creek
- Graham Creek
- Nathansen Creek
- Yulupa Creek

TABLE II-3
BENEFICIAL USES OF MARSHES

	REC 1	REC 2	COMM	WILD	RARE	EST	MIGR	SPWN	MAR
ALAMEDA COUNTY									
101 ARROWHEAD	X	X		X	X	X		X	
102 COYOTE HILLS	X	X		X	X	X		X	
103 EMERYVILLE CRESCENT	X	X		X	X	X		X	
104 HAYWARD	X	X		X		X		X	
CONTRA COSTA COUNTY									
201 NORTH CONTRA COSTA COUNTY	X	X		X	X	X		X	
202 POINT EDITH		X		X	X	X		X	
203 SAN PABLO CREEK	X	X		X	X	X		X	
204 WILDCAT CREEK	X	X		X	X	X		X	
MARIN COUNTY									X
301 ABBOTTS LAGOON	X	X		X					X
302 BOLINAS LAGOON	X	X		X					
303 CORTE MADERA	X	X		X	X	X		X	
304 DRAKES ESTERO	X	X		X				X	
305 GALLINAS CREEK	X	X		X	X	X		X	
306 LIMANTOUR ESTERO	X	X		X					X
307 MUZZI	X	X		X		X			
308 NOVATO CREEK	X	X			X	X	X	X	
309 RICHARDSON BAY	X	X		X	X	X		X	
310 RODEO LAGOON	X	X		X					X
311 SAN PEDRO		X	X	X	X	X		X	
312 SAN RAFAEL CREEK	X	X		X	X	X			
313 TOMALES BAY	X	X		X			X	X	X
NAPA COUNTY									
401 MARE ISLAND		X		X		X			
402 NAPA	X	X	X		X	X	X	X	
403 SAN PABLO BAY	X	X	X	X	X	X	X	X	
SAN MATEO COUNTY									
601 BAIR ISLAND	X	X		X	X	X			
602 BELMONT SLOUGH	X	X		X	X	X		X	
603 PESCADERO	X	X		X	X		X	X	X
604 PRINCETON	X	X		X					
605 REDWOOD CITY AREA	X	X		X	X	X			
SANTA CLARA COUNTY									
701 SOUTH SAN FRANCISCO BAY	X	X	X	X	X	X	X	X	
SOLANO COUNTY									
801 SOUTHAMPTON BAY	X	X		X	X	X		X	
802 SUISUN	X	X		X	X	X	X	X	
803 WHITE SLOUGH	X	X		X	X	X	X	X	
SONOMA COUNTY									
901 PETALUMA	X	X	X	X	X	X	X	X	

A—SOURCE: U. S. FISH AND WILDLIFE SERVICE AND CALIFORNIA DEPARTMENT OF FISH AND GAME. *PROTECTION & RESTORATION OF SAN FRANCISCO BAY FISH AND WILDLIFE HABITAT. VOLUME II - HABITAT DESCRIPTION. USE AND DELINEATION.* AUGUST 15, 1979.

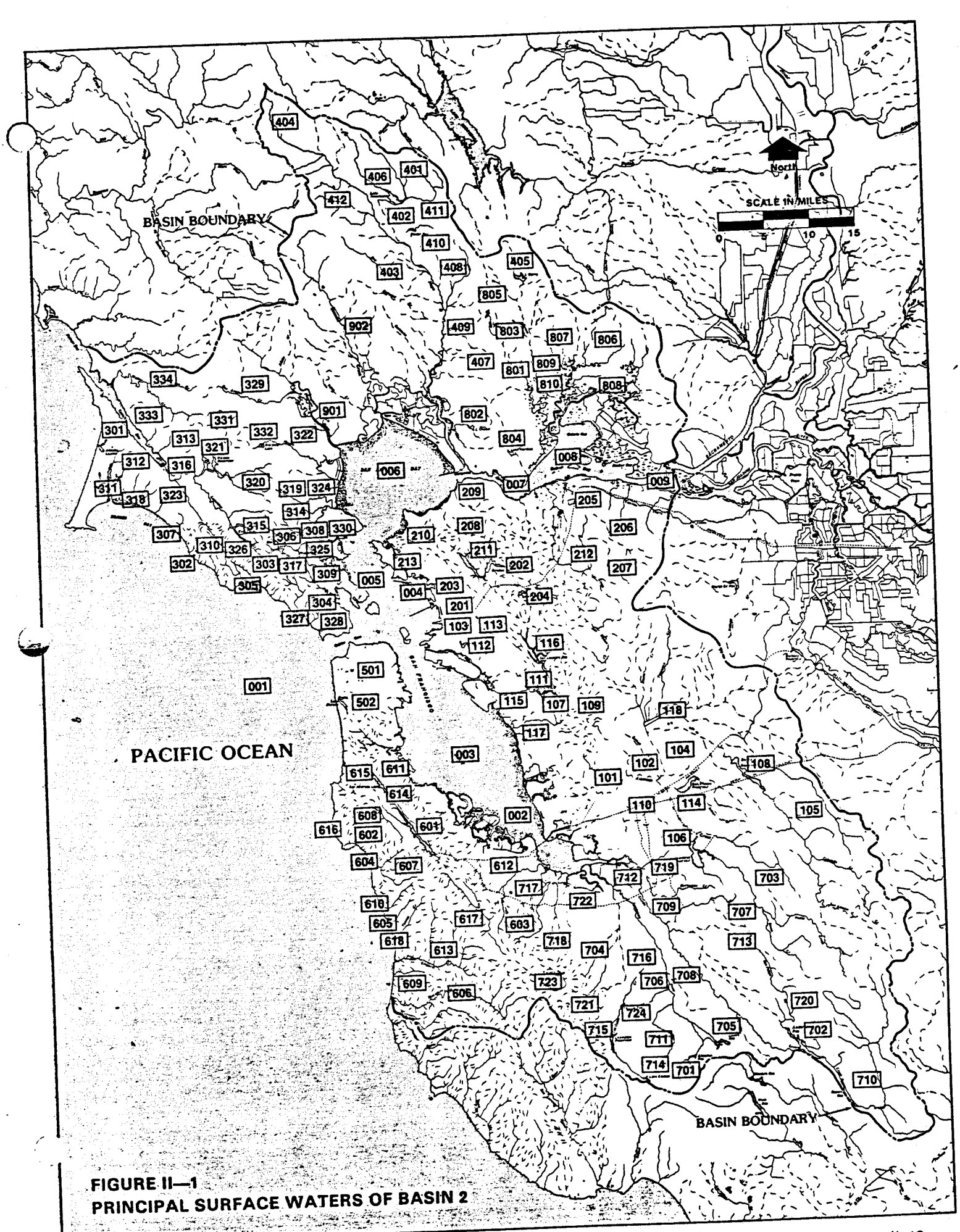

FIGURE II—1
PRINCIPAL SURFACE WATERS OF BASIN 2

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

DISCHARGES OF EXTRACTED AND TREATED GROUNDWATER POLLUTED BY FUEL LEAKS AND OTHER RELATED WASTES AT SERVICE STATIONS AND SIMILAR SITES

NPDES NO. CA0029815

ORDER NO. 91-056

CONSISTS OF

PART A (dated December 1986 Mod. SBTD 1/23/87)

AND

PART B

PART B

SELF MONITORING PROGRAM FOR DISCHARGES OF EXTRACTED AND TREATED GROUNDWATER POLLUTED BY FUEL LEAKS AND OTHER RELATED WASTES AT SERVICE STATIONS AND SIMILAR SITES

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Station	Description
I-1	At a point after groundwater extraction and immediately prior to discharge into the treatment system.

B. EFFLUENT

E-1	At a point after full treatment but before it joins or is diluted by any other waste stream, body of water, or substance.

C. RECEIVING WATERS

C-1	At a point 50 feet downstream from the point of discharge into the receiving water.
C-2	At a point 50 feet upstream from the point of discharge into the receiving water.

II. START UP PHASE AND REPORTING

A. The Board's Executive Officer shall be notified in writing of the date of start up within 7 to 14 days before start up begins.

B. During the original start up for the treatment system, sampling of the effluent must occur on the first and fifth day. On the first day of the original start up, the system shall be allowed to run until at least three to five well volumes are removed and until three consecutive readings for pH, conductivity, and temperature are within five percent of each other; then, the influent and effluent shall be sampled and submitted for analyses. Prior to receipt of the results of the initial samples, all effluent shall be discharged into a holding tank (that is contained, not discharged to the receiving water) or discharged to the sanitary sewer until the results of the analyses show the discharge to be within the effluent limits established in this Order and/or in the authorization letter. The treatment system

may be shut down after the first day's sampling to await the analyses results and, thereby, reduce the amount of storage needed. For the stored effluent, if the results of the analyses show the discharge to be in violation, the effluent shall: (1) be retreated until the retreated effluent is in compliance, or (2) be disposed in accord with the provisions of Chapter 15, Title 23, California Code of Regulations.

If the first day's sampling shows compliance, the treatment system shall be operated for a total of five days with the discharge to the storm sewer or other conveyance system leading to the receiving water, and be sampled again. While the fifth day's samples are being analyzed, the effluent may be discharged to the receiving water as long as the analyses are received within 48 hours of sampling, and then, continue to be discharged to the receiving water if the analyses show compliance. If the treatment system is shut down more than 48 hours during the original start up (awaiting analyses results, etc.), the original start up procedures and sampling must be repeated.

A report on the start up phase shall be submitted to the Regional Board that presents the results of the laboratory analyses, flow rates, chain of custody forms, and describes any changes or modifications to the treatment system. This report shall be submitted to the Regional Board no more than fifteen days after the end of the start up phase.

III. ADDITIONAL REPORTING REQUIREMENTS

A. Dischargers shall notify the Board within one day if the self-monitoring program results exceed effluent limitations, or if any activity has occurred or will occur that would result in a frequent or routine discharge of any toxic pollutant not limited by this Order. If a violation of INSTANTANEOUS MAXIMUM LIMITS should occur (and be confirmed), the discharge shall be directed to a holding tank and contained, or the extraction and treatment system shall be shut down. The content of the holding tank shall be retreated until the retreated effluent is in compliance, or be disposed in accord with the provisions of Chapter 15, Title 23, California Code of Regulations.

If the treatment system is shut down for more than 120 consecutive hours after the start up period (maintenance, repair, violations, etc.) the reason(s) for shut down, proposed corrective action(s) and estimated start up date shall be orally reported to the Board within five days of shut down and a written submission shall also be provided within 15 days of shut down.

If feasible, the corrective action(s) taken and the proposed start up procedures shall be reported to the Board at least 15 days before start up.

B. A report describing the need, method of chemical application and disposal shall be submitted to the Board at least 30 days before the use of any chemicals in the treatment, or operation and maintenance of the treatment units, is to begin. This report shall include toxicity data. The Executive Officer must approve the use of any chemicals prior to the usage of any chemicals in the treatment, operation, and/or maintenance of the treatment units.

C. Dischargers shall submit quarterly reports summarizing work accomplished toward groundwater pollution cleanup. The Executive Officer may waive this requirement if adequate reporting to the local agency(ies) or the Regional Board is already being required. The quarterly reports shall include the following information:

(a) The results of all investigations completed to date to determine the extent of soil and/or groundwater and/or surface water pollution due to the release(s) of hazardous substance(s);

(b) The method of cleanup implemented to date and an assessment as to whether remediation action taken to date has been adequate and its degree of effectiveness;

(c) Groundwater levels, and chemical analysis results presented in tabulated form for all on-site and off-site monitoring wells;

(d) Updated potentiometric surface maps for all water bearing zones, and updated maps and cross-sections depicting isoconcentration and isothickness contours;

(e) Description and schedule of any additional site work and/or modifications anticipated for the coming quarter; and

(f) The method and location of disposal of the released hazardous substance(s) and any polluted soils and/or groundwater and/or surface water (indicate whether a hazardous waste manifest(s) is utilized).

D. Dischargers shall report the total amount of separate phase fuel (free product) removed by the treatment system each month in gallons and the cumulative total amount of separate phase fuel removed to date.

E. The daily status (e.g., personnel onsite, in operation/on

standby, shut down, standard observation results, etc.) of any treatment systems used to achieve compliance with this Order or associated discharge authorization letter from the Executive Officer shall be included in the Self-Monitoring Report submittal. The reason(s) for the treatment system being shut down shall also be included in this submittal.

IV. SCHEDULE OF SAMPLING AND ANALYSES

A. The schedule of sampling and analyses shall be that given in Table 1 (attached) for sampling stations I-1, E-1, and C-1.

B. If the E-1 analyses show more than 10 grams per day (1 gram/day for mercury or selenium) of any metal (arsenic, cadmium, chromium, copper, lead, nickel, silver, or zinc) or cyanide is discharged, the Regional Board shall be notified orally within one day and the sampling and analyses frequency for that constituent(s) at stations I-1, E-1, C-1, and C-2 shall be accelerated to daily until the analyses show:

Case 1 - discharges of less than 10 grams per day (1 gram/day for mercury or selenium) for the constituent(s) of concern for two consecutive days; or

Case 2 - discharges of more than 10 grams per day (1 gram/day for mercury or selenium) of the constituent(s) of concern for any three of six consecutive days.

For Case 1, the sampling and monitoring shall revert back to the schedule shown for stations I-1, E-1, and C-1 in Table 1.

For Case 2, the Executive Officer will review the results of the analyses and the discharger's proposed actions pursuant to Provision D.9 of the the general permit to determine if the discharger will be required to submit the following:

1) A workplan and schedule for determining the severity, extent, and source of the metal pollution on the site and whether it is feasible to reduce or eliminate the source of pollution; and

2) A workplan for a three month study evaluating concentrations of the constituent(s) which exceeds ten grams per day (1 gram/day for mercury or selenium) in the discharge (a) in the effluent (E-1), (b) in the storm drain or other conveyance system if more than the effluent is being discharged, (c) upstream in the receiving water (C-2), and (d) downstream in the

receiving water (C-1). The workplan should include, at a minimum, determinations of pH, hardness, total suspended solids, total dissolved solids, receiving water flow and their effect on the analytical results. The workplan should propose that a statistically significant number of water samples (filtered and unfiltered) be obtained from the areas specified.

V. BIOASSAY REQUIREMENT

The fish species to be used for compliance in the 96-hour percent survival static renewal fish toxicity bioassay shall be rainbow trout.

VI. MODIFICATION TO PART A OF THE SELF-MONITORING PROGRAM

A. Delete Sections:

D.1.a., D.2.a., D.2.d., D.2.e., D.2.g., E.4., and F.2.

B. Insert Sections:

D.2.a. Samples of effluent and receiving waters shall be collected at times coincident with influent sampling unless otherwise stipulated. The Executive Officer may approve an alternative sampling plan if it is demonstrated to the Executive Officer's satisfaction that expected operating conditions warrant a deviation from the standard sampling plan.

D.2.d. If analytical results are received showing any instantaneous maximum limit (Effluent Limitation B.1) is exceeded, a confirmation sample shall be taken within 24 hours and results known within 24 hours of the sampling.

D.2.e. If any instantaneous maximum limit for a constituent is exceeded in the confirmation sample described in Section D.2.d., the discharge shall be terminated until the cause of the violation is found and corrected.

E.6. Waste Treatment Facilities

a. Deposits, discolorations, and/or plugging in the treatment system (stripping tower, carbon filters, etc.) which could adversely affect the system reliability and performance.

b. Operation of the float and/or pressure shutoff valves installed to prevent system overflow or bypass.

F.2. Discharge flow rates shall be recorded and average daily flow rates reported for each month.

C. Modify Sections:

F.1. Written reports, strip charts, ... retained for a minimum of five years ....

G.4.b. The report format shall be a format that is acceptable to the Executive Officer.

G.4.d. The report format shall be a format that is acceptable to the Executive Officer.

G.4.e. The report format shall be a format that is acceptable to the Executive Officer. NPDES Discharge Monitoring Report, EPA Form 3320-1, is provided as guidance. Influent and effluent data summary reports shall be submitted only to the Regional Board and do not need to be submitted to the EPA.

Address the copy to the Regional Board as follows:
Executive Officer
California Regional Water Quality Control Board, San Francisco Bay Region
2101 Webster Street, 5th Floor
Oakland, CA 94612

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

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 91-056.

2. Was adopted by the Board on April 17, 1991.

3. May be reviewed at any time subsequent to the effective date

upon written notice from the Executive Officer or request from dischargers, and revisions may be ordered by the Executive Officer or Regional Board.

STEVEN R. RITCHIE
Executive Officer

Attachments: Table 1
Appendices to Part A: A-E

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	I-1	E-1	C-1
TYPE OF SAMPLE	G	G	G
Flow Rate (mgd)		Cont	
BOD, 5-day, 20°C, or COD (mg/l & kg/day)			
Chlorine Residual & Dosage (mg/l & kg/day)			
Settleable Matter (ml/l-hr. & cu. ft./day)			
Total Suspended Matter (mg/l & kg/day)			
Oil and Grease (mg/l & kg/day)			
Coliform (Total or Fecal) (MPN/100 ml) per req't			
Fish Tox'y 96-hr. % Surv'l in undiluted waste		2/Y	
Ammonia Nitrogen (mg/l & kg/day)			
Nitrate Nitrogen (mg/l & kg/day)			
Nitrite Nitrogen (mg/l & kg/day)			
Total Organic Nitrogen (mg/l & kg/day)			
Total Phosphate (mg/l & kg/day)			
Turbidity (Jackson Turbidity Units)			
pH (units)	D/M	D/M	Q/V
Dissolved Oxygen (mg/l and % Saturation)	D/M	D/M	
Temperature (°C)	D/M	D/M	
Electrical Conductivity	D/M	D/M	
Antimony, Total (ug/l & kg/day)	D/M	D/M	
Arsenic, Total (ug/l & g/day)	D/M	D/M	
Beryllium, Total (ug/l & g/day)	D/M	D/M	
Thallium, Total (ug/l & g/day)	D/M	D/M	
Chromium, Total or Hexavalent (ug/l & g/day)	D/M	D/M	
Copper, Total (ug/l & g/day)	D/M	D/M	
Cyanide, Total (ug/l & g/day)	D/M	D/M	
Silver, Total (ug/l & g/day)	D/M	D/M	
Lead, Total (ug/l & g/day)	D/M	D/M	
Selenium, Total by gaseous hydride (ug/l & g/day)	D/M	D/M	

TABLE I (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	I-1		E-1		C-1								
TYPE OF SAMPLE	G		G		G								
Mercury, Total (ug/l & g/day)	D/M		D/M										
Nickel, Total (ug/l & g/day)	D/M		D/M										
Zinc, Total (ug/l & g/day)	D/M		D/M										
Cadmium, Total (ug/l & g/day)	D/M		D/M										
All Applicable Standard Observations			M		M								
EPA 601* (ug/l & g/day)	2/A		2/A		V								
EPA 602 (ug/l & g/day)	D/M		D/M		V								
EPA 8015 as gasoline & diesel (ug/l & g/day)	D/M		D/M		V								
EPA 625 (ug/l & g/day)	2/A-V		2/A-V		V								

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
C-X = composite sample - X hours (used when discharge does not continue for 24-hour period)

TYPES OF STATIONS

I = intake and/or water supply stations
A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations

FREQUENCY OF SAMPLING

D = once each day
W = once each week
M = once each month
Q = quarterly, once in March, June, Sept. and December
2W = every 2 weeks
3M = every 3 months
Cont = continuous

2/Y = Once during the first week of start up; twice per year thereafter.
D/M = Once during the first and fifth day of start up; monthly thereafter.
2/A = Once during the first day of start up; twice per year thereafter.
2/A-V = Twice yearly and whenever there is a violation of benzene, toluene, ethylbenzene, or total xylenes.
V = Sampling should be performed within 24 hours whenever the effluent (E-1) is in violation.
* Concentrations of the ten largest peaks in the chromatogram other than the priority pollutants listed in the method shall be identified.
The maximum method detection limit shall be 5 ug/l for Arsenic, Cadmium, Chromium, Copper, Lead, Selenium, Nickel, Mercury, and Silver.
The maximum method detection limit shall be 10 ug/l for cyanide, zinc, antimony, beryllium, and thallium.
ug/l = microgram per liter
g/day = grams per day