

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 84-22

NPDES NO. CA0038059

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

AQUIFER RECLAMATION / SALINITY BARRIER WELLS  
ALAMEDA COUNTY WATER DISTRICT  
FREMONT AND NEWARK, ALAMEDA COUNTY

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

1. The Alameda County Water District, by application dated February 29, 1984, has submitted a report of waste discharge for reissuance of NPDES Permit No. CA0038059 to discharge wastes under the National Pollutant Discharge Elimination System (NPDES).
2. The discharger is currently rehabilitating the Niles Cone Ground Water Basin aquifers by removing saline water which has intruded from San Francisco Bay and creating a barrier controlling further intrusion. The extracted brackish water is pumped from a total of 16 wells to six discharge locations in the Fremont - Newark area for a total flow of up to 30 mgd (monthly average) and returned to the Bay as locations shown in the chart below. (The discharge serial and well site numbers are those used in the discharger's application.) Maps showing the facilities are appended at ATTACHMENT A, hereinafter a part of this Order.

Effluent Stream #	Discharge Serial #	Highest Monthly Average Flow and Discharge Location	Well Site
E-07	01	2 mgd to Alameda Creek Flood Control Channel	S.B.P. "E"
E-08	02	2 mgd to Alameda Creek Flood Control Channel	S.B.P. "D"
E-01	03	3.3 mgd to Alameda Creek Flood Control Channel	Lowry Well
E-05	04	7.3 mgd (total) to Newark Slough	Darvon 1
E-05			Darvon 2
E-09			Willow St.
E-10			S.B.P. "C"
E-06	05	9.9 mgd (total) to Plummer Creek	Willowood 1
E-06			Willowood 2
E-02			Cedar 1
E-02			Cedar 2
E-11			Enterprise

Effluent Stream #	Discharge Serial #	Highest Monthly Average Flow and Discharge Location	Well Site
E-03	06	5.3 mgd (total) to Mowry Slough	Bellflower
E-12			S.B.P. "B"
E-04			Farwell
E-13			S.B.P. "A"

4. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on July 21, 1982. The Basin Plan contains water quality objectives for Lower San Francisco Bay and contiguous waters.
5. The existing and potential beneficial uses of South San Francisco Bay and contiguous water bodies are:
  - o Water contact and Non-contact water recreation
  - o Wildlife Habitat
  - o Preservation of Rare and Endangered Species
  - o Estuarine Habitat
  - o Fish migration and spawning
  - o Industrial service and process supply
  - o Shellfish Harvesting
  - o Navigation
  - o Commercial and Sport Fishing
  - o Warm and Cold Water Habitat
6. This Order serves as reissuance of an NPDES Permit, adoption of which is exempt from the provision 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.
7. The discharger and interested agencies and persons have been notified of the Board's intent to reissue waste discharge requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.
8. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the discharger, 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. The discharge of effluent other than described in the Permit application is prohibited.
2. The utilization of these wells in the clean-up of manufactured toxic pollutants as a result of leaks, spills, or other incidents is prohibited without the prior approval of the Executive Officer.

B. Receiving Water Limitations

1. The discharge of waste 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, 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 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. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 79-53. Order No. 79-53 is hereby rescinded.
2. The discharger shall comply with all sections of this Order immediately upon adoption.
3. The discharger shall comply with the attached self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.
4. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977 with the exception of Provision A.12. and Reporting Requirements B.2, B.3., and B.5.
5. This Order expires June 19, 1989. The discharger 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.

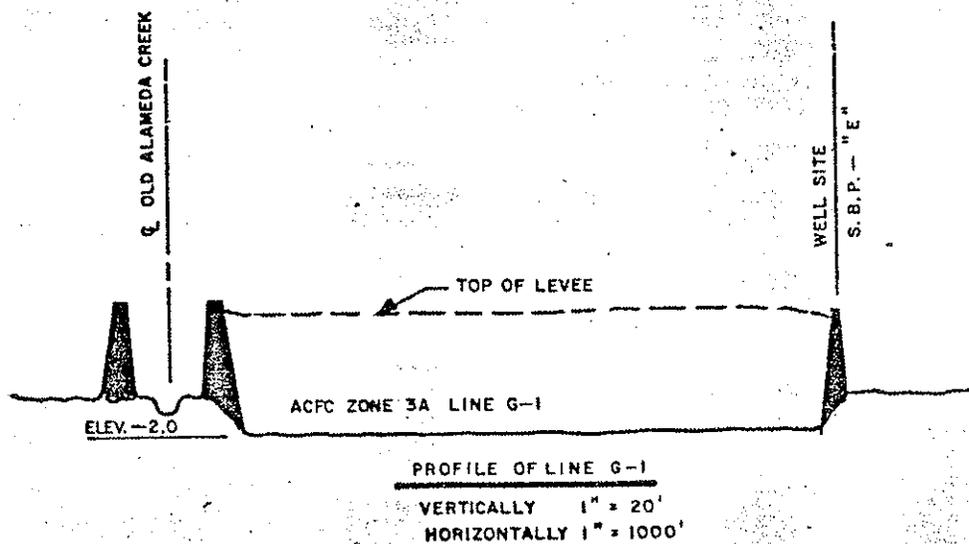
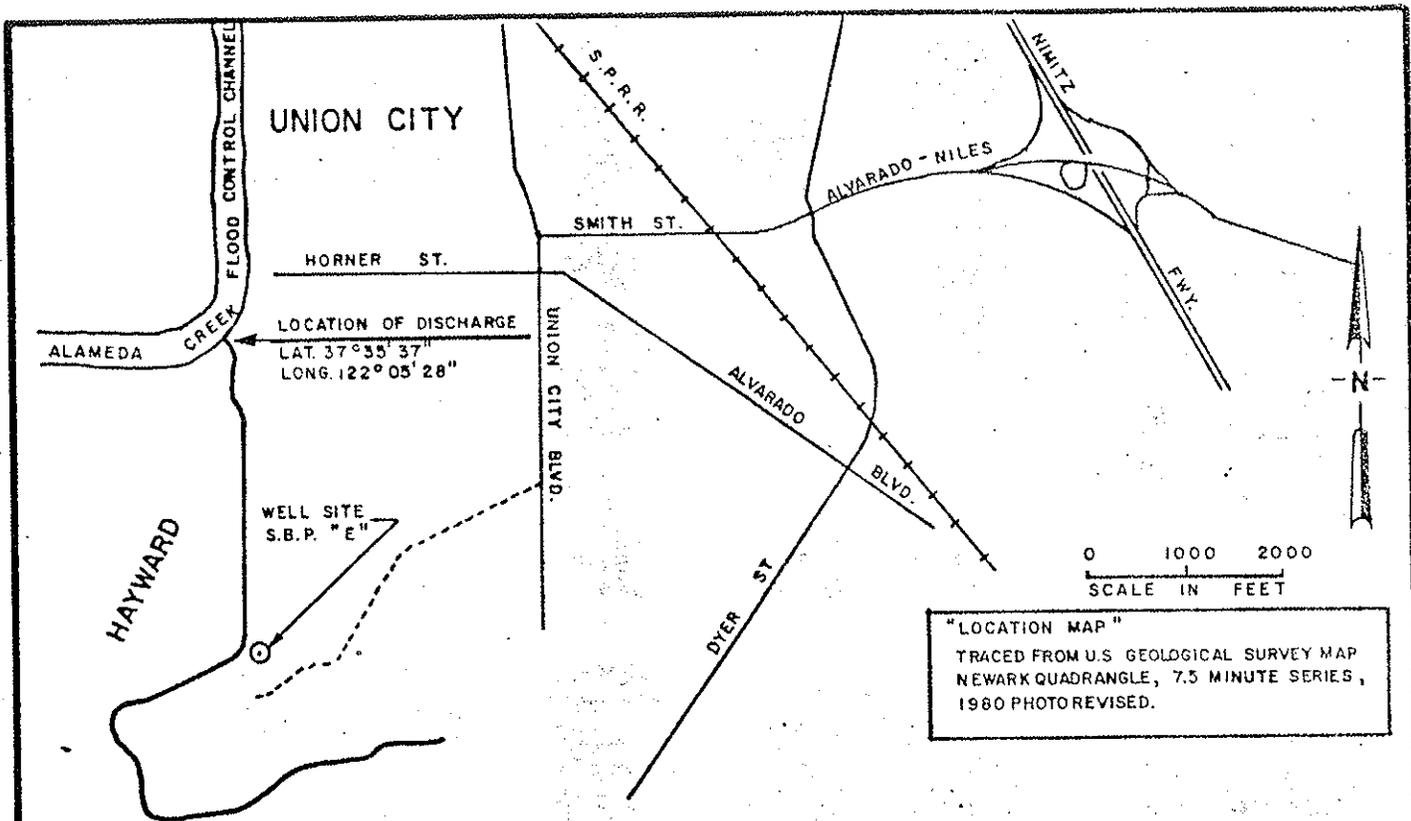
6. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection.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

I, Roger B. James, 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 20, 1984.

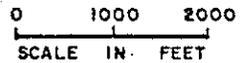
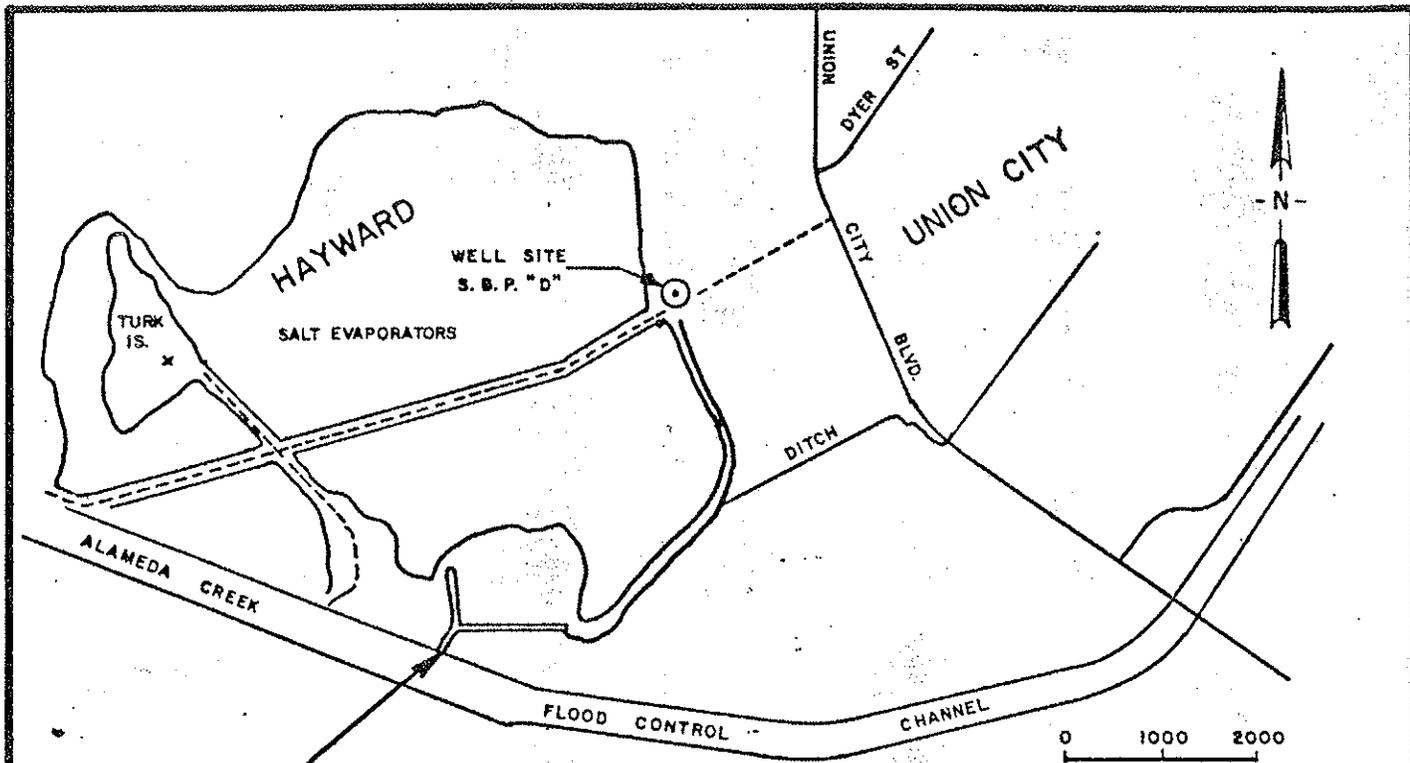
ROGER B. JAMES  
Executive Officer

Attachments:

- Standard Provisions &  
Reporting Requirements, April 1977
- Self-Monitoring Program
- Attachment A - Location Maps (6) of ACWD Wells and Discharge Locations.



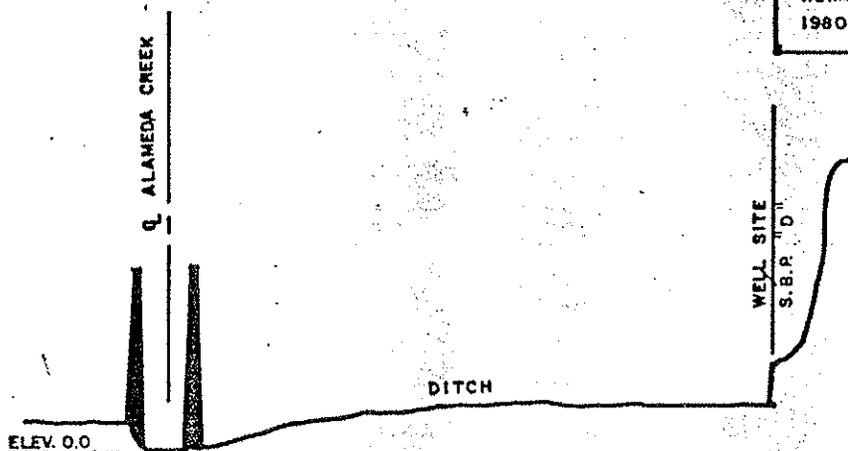
NPDES PERMIT CA 0038059  
DISCHARGE SERIAL NO. 001  
WASTEWATER DISCHARGE OF A.C.W.D.  
AQUIFER RECLAMATION / SALINITY BARRIER  
WELL SITE S.B.P. - E INTO OLD  
ALAMEDA CREEK AT HAYWARD  
ALAMEDA COUNTY, CA.  
FEBRUARY 23, 1984 PAGE 1 OF 1



**LOCATION OF DISCHARGE**

LAT. 37° 33' 52"  
LONG. 122° 05' 35"

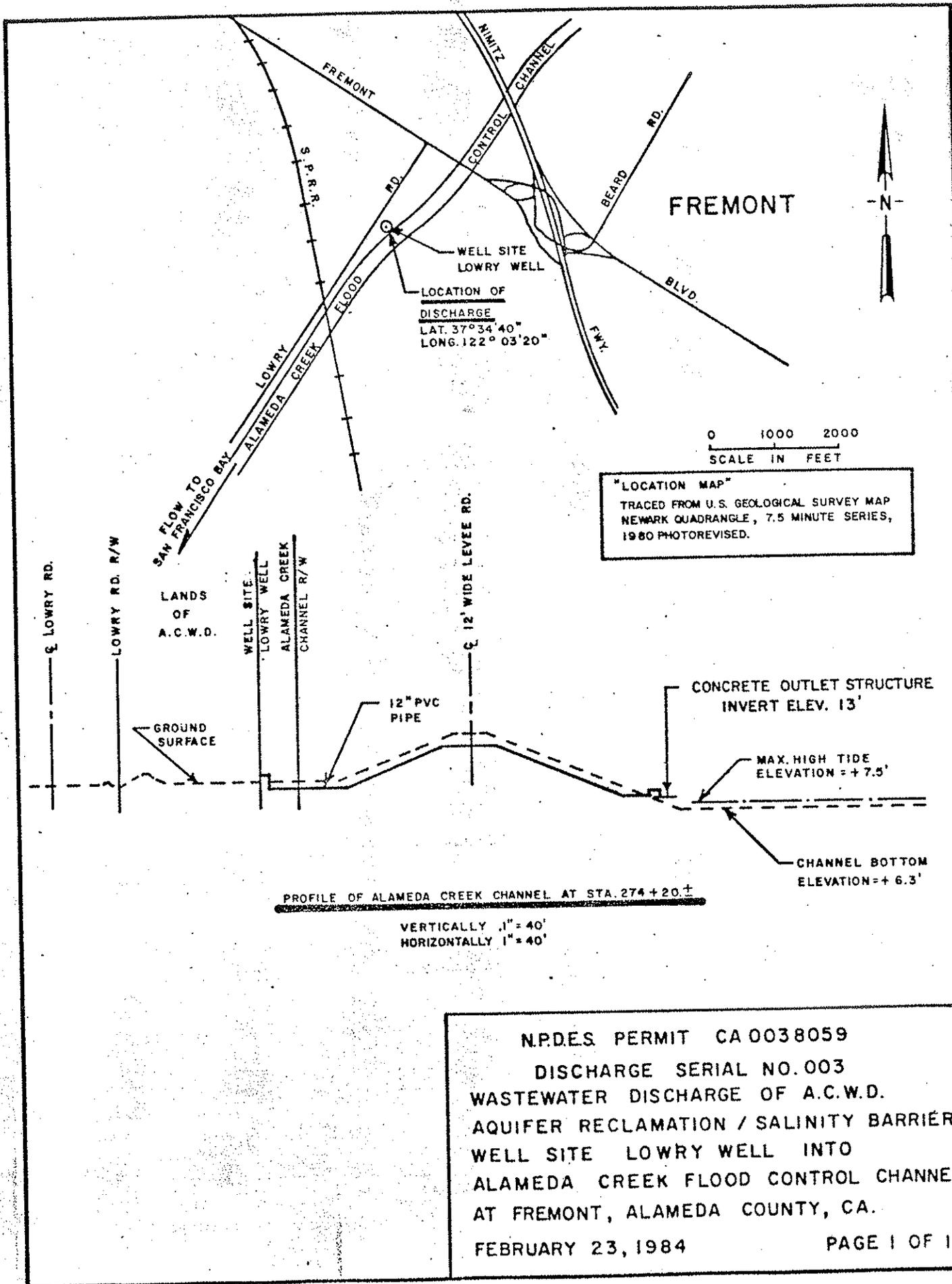
"LOCATION MAP"  
TRACED FROM U.S. GEOLOGICAL SURVEY MAP  
NEWARK QUADRANGLE, 7.5 MINUTE SERIES,  
1980 PHOTOREVISED



**PROFILE OF DRAINAGE DITCH**

VERTICALLY 1" = 20'  
HORIZONTALLY 1" = 2000'

N.P.D.E.S. PERMIT CA 0038059  
DISCHARGE SERIAL NO. 002  
WASTEWATER DISCHARGE OF A.C.W.D.  
AQUIFER RECLAMATION / SALINITY BARRIER  
WELL SITE S.B.P. - D INTO  
ALAMEDA CREEK FLOOD CONTROL CHANNEL  
AT HAYWARD, ALAMEDA COUNTY, CA.  
FEBRUARY 23, 1984 PAGE 1 OF 1



WELL SITE  
LOWRY WELL  
LOCATION OF  
DISCHARGE  
LAT. 37° 34' 40"  
LONG. 122° 03' 20"

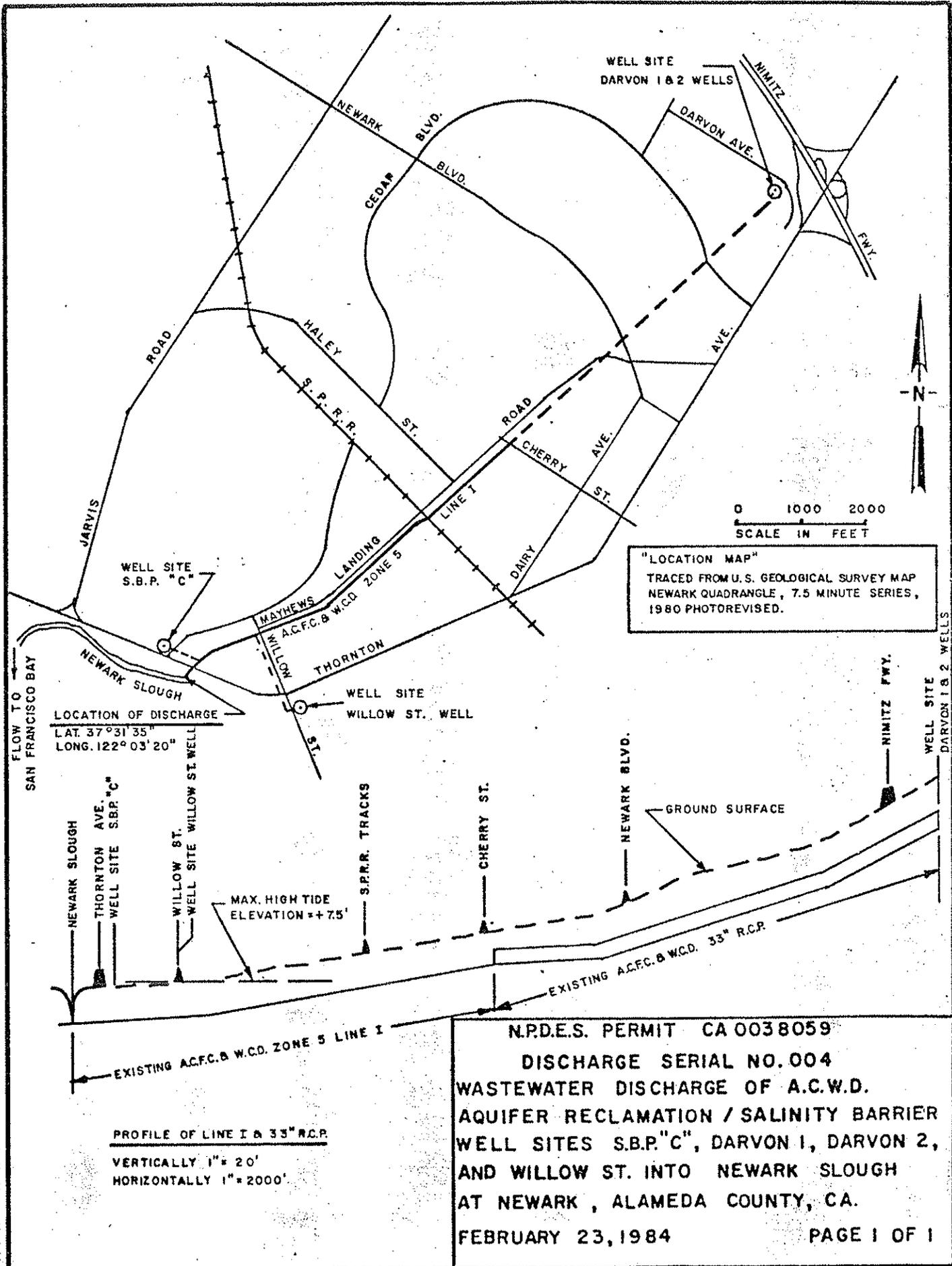
0 1000 2000  
SCALE IN FEET

"LOCATION MAP"  
TRACED FROM U.S. GEOLOGICAL SURVEY MAP  
NEWARK QUADRANGLE, 7.5 MINUTE SERIES,  
1980 PHOTOREVISED.

PROFILE OF ALAMEDA CREEK CHANNEL AT STA. 274+20.±

VERTICALLY 1" = 40'  
HORIZONTALLY 1" = 40'

NPDES PERMIT CA 0038059  
DISCHARGE SERIAL NO. 003  
WASTEWATER DISCHARGE OF A.C.W.D.  
AQUIFER RECLAMATION / SALINITY BARRIER  
WELL SITE LOWRY WELL INTO  
ALAMEDA CREEK FLOOD CONTROL CHANNEL  
AT FREMONT, ALAMEDA COUNTY, CA.  
FEBRUARY 23, 1984  
PAGE 1 OF 1

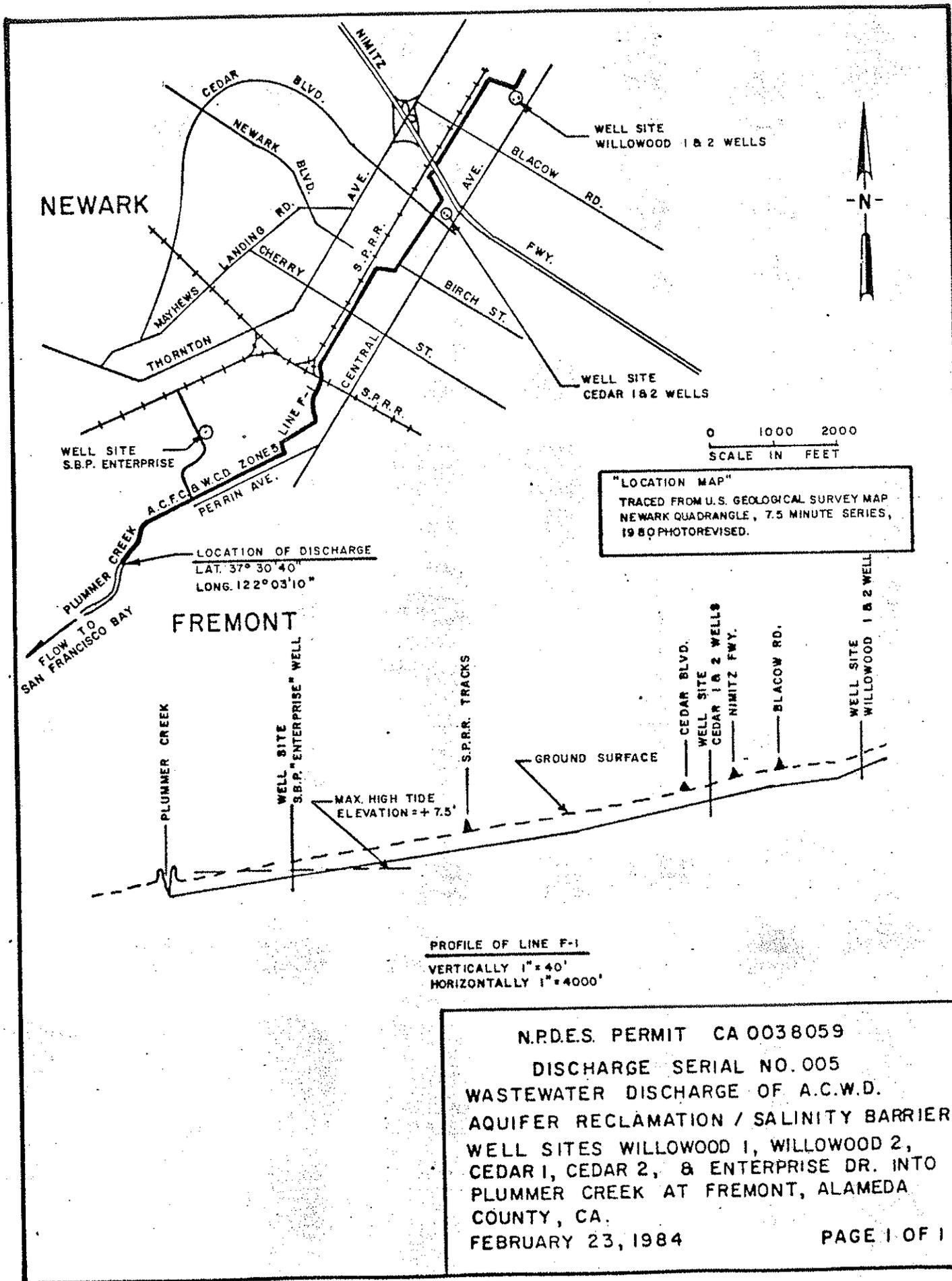


"LOCATION MAP"  
 TRACED FROM U.S. GEOLOGICAL SURVEY MAP  
 NEWARK QUADRANGLE, 7.5 MINUTE SERIES,  
 1980 PHOTOREVISIED.

LOCATION OF DISCHARGE  
 LAT. 37°31'35"  
 LONG. 122°03'20"

PROFILE OF LINE I & 33" R.C.P.  
 VERTICALLY 1" = 20'  
 HORIZONTALLY 1" = 2000'

N.P.D.E.S. PERMIT CA 0038059  
 DISCHARGE SERIAL NO. 004  
 WASTEWATER DISCHARGE OF A.C.W.D.  
 AQUIFER RECLAMATION / SALINITY BARRIER  
 WELL SITES S.B.P."C", DARVON 1, DARVON 2,  
 AND WILLOW ST. INTO NEWARK SLOUGH  
 AT NEWARK, ALAMEDA COUNTY, CA.  
 FEBRUARY 23, 1984 PAGE 1 OF 1



NEWARK

FREMONT

FLOW TO  
SAN FRANCISCO BAY

WELL SITE  
WILLOWOOD 1 & 2 WELLS

WELL SITE  
CEDAR 1 & 2 WELLS

WELL SITE  
S.B.P. ENTERPRISE

LOCATION OF DISCHARGE  
LAT. 37° 30' 40"  
LONG. 122° 03' 10"

"LOCATION MAP"  
TRACED FROM U.S. GEOLOGICAL SURVEY MAP  
NEWARK QUADRANGLE, 7.5 MINUTE SERIES,  
1980 PHOTOREVISED.

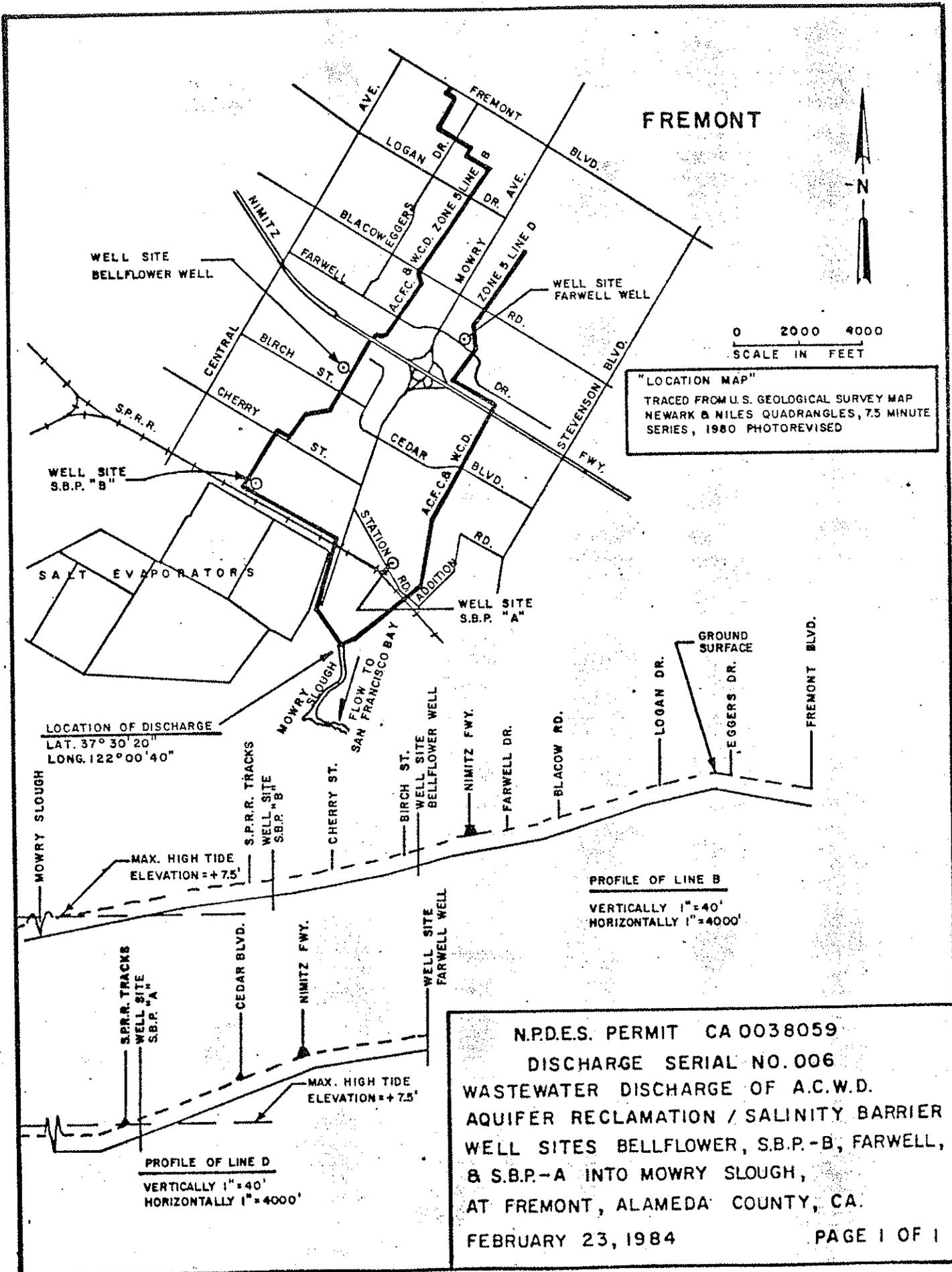
0 1000 2000  
SCALE IN FEET

GROUND SURFACE

MAX. HIGH TIDE  
ELEVATION = + 7.5'

PROFILE OF LINE F-1  
VERTICALLY 1" = 40'  
HORIZONTALLY 1" = 4000'

N.P.D.E.S. PERMIT CA 0038059  
DISCHARGE SERIAL NO. 005  
WASTEWATER DISCHARGE OF A.C.W.D.  
AQUIFER RECLAMATION / SALINITY BARRIER  
WELL SITES WILLOWOOD 1, WILLOWOOD 2,  
CEDAR 1, CEDAR 2, & ENTERPRISE DR. INTO  
PLUMMER CREEK AT FREMONT, ALAMEDA  
COUNTY, CA.  
FEBRUARY 23, 1984



FREMONT

0 2000 4000  
SCALE IN FEET

"LOCATION MAP"  
TRACED FROM U.S. GEOLOGICAL SURVEY MAP  
NEWARK & NILES QUADRANGLES, 7.5 MINUTE  
SERIES, 1980 PHOTOREVISED

LOCATION OF DISCHARGE  
LAT. 37° 30' 20"  
LONG. 122° 00' 40"

PROFILE OF LINE B  
VERTICALLY 1" = 40'  
HORIZONTALLY 1" = 4000'

PROFILE OF LINE D  
VERTICALLY 1" = 40'  
HORIZONTALLY 1" = 4000'

N.P.D.E.S. PERMIT CA 0038059  
DISCHARGE SERIAL NO. 006  
WASTEWATER DISCHARGE OF A.C.W.D.  
AQUIFER RECLAMATION / SALINITY BARRIER  
WELL SITES BELLFLOWER, S.B.P.-B, FARWELL,  
& S.B.P.-A INTO MOWRY SLOUGH,  
AT FREMONT, ALAMEDA COUNTY, CA.  
FEBRUARY 23, 1984

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

AMENDED  
SELF - MONITORING PROGRAM  
FOR

AQUIFER RECLAMATION / SALINITY BARRIER WELLS

ALAMEDA COUNTY WATER DISTRICT

FREMONT AND NEWARK, ALAMEDA COUNTY

NPDES NO. CA 0038059

ORDER NO. 84-22

CONSISTS OF

PART A, (DATED 1/78)

AND

PART B, Effective June 6, 1979  
Amended Effective June 20, 1984

Part E

I. DESCRIPTION OF SAMPLING STATIONS

Each of the sixteen effluent streams, E-001 through E-016, shall be sampled at a point between each well and its point of discharge into an adjacent ACFC&WCD flood control channel or into Alameda Creek channel for Station E-001.

II. SCHEDULE OF SAMPLING MEASUREMENT AND ANALYSIS

The schedule of sampling, measurement, and analysis shall be that given as Table I.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure 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. 84-22.
2. Does not include the following paragraphs of Part A:  
E.2.b, E.3, E.4, F.1
3. Does include the following modifications of Part A, Paragraph F.3.:  
"Written reports shall be filed regularly for each calendar quarter (unless specified otherwise) by the fifteenth day of the month following the end of each calendary quarter...."  
"e. ... (Delete requirement to send reports (EPA Form 3320-1, etc.) to EPA).... Reports will be submitted to Regional Board only..."
4. Was adopted by the Regional Board on June 20, 1984. The Board has delegated further amendments to the Executive Officer.
5. May be reviewed at any time subsequent to the date of adoption upon written notice from the Executive Officer or request from the discharger, and revisions may be ordered by the Executive Officer.

ROGER B. JAMES  
Executive Officer

Attachment:  
Table I

TABLE I  
 SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSES  
 ALAMEDA COUNTY WATER DISTRICT  
 AQUIFER RECLAMATION / SALINITY BARRIER WELLS  
 NPDES NO. CA0038059 - ORDER NO. \_\_\_\_\_

SAMPLING STATIONS	All E. Sta
TYPE OF SAMPLES	G
Flow Rate (mgd)	M
Total Dissolved Solids (mg/l)	M
pH (units)	M
Temperature (°C)	M
Chlorides (mg/l)	M
Standard Observations	M
Ethylene Dibromide*	2/Y
Bromoform 1,2 dichloroethane*	2/Y
Dibromochloromethane*	2/Y

LEGEND FOR TABLE

TYPE OF SAMPLE

FREQUENCY OF SAMPLE

G = Grab Sample

M = One sample per month

2/Y = Two samples per year  
 at six month intervals

\*Note: Ethylene Dibromide, Bromoform 1,2 dichloroethane and Dibromochloromethane samples will be taken at E-09 and E-10 only as a check on FMC-Newark cleanup action. No detection is expected at the implementation of this SMP. Sampling is only for precautionary measures.

