county of ventura

County Fish and Game Commission

Mr. Raymond J.Nesbit, Executive Officer,
Wildlife Conservation Board,
State Capitol Building,
Sacramento, Calif.

Dear Ray:

On our last meeting with you here, at breakfast at the Lobster Trap, I briefly discussed our project to reestablish the Ventura River as a steelhead/salmon river. Prior to the construction of the water conservation dam at Casitas this river was a very popular steelhead fishery. It could be restored even now by allowing water to flow down stream and we have been talking with the Ventura River Municipal Water District about this.

Then,in the meantime, the owners of the land in the river bottom, comprising some 200 acres, became active in a project to protect this tidal and flood land by building a levee, and with the Army Eng.Corps contributing the levee and the state highways building offramps, they would then be able to develope this land of some 200 acres commercially for ocean lots and residences along the bottoms between the river and the high ground beyond (which belongs to the Taylor Ranch).

The owners, Mrs. Catherine Spencer and Crown-Zellerbach, then formed a development company and obtained the cooperation of the City of San Buenaventura to approve the proposed development along the river. A public hearing was held last month by the City Council. The hundreds of people trying to attend were unable to get into the council rooms and so a week later the meeting was held at Ventura High auditorium before 1500 citizens. There, around midnight, the council held a vote and it was 4 to 3 against approving the development.

This land is therefore unuseable except for what it now is; a lagoon and river bottom which could be bought and used for a wildlife area, and with possibilities of later becoming a steelhead fishing area.All manner of wild life abound in the lowlands and lagoons.

Crown Zellerbach,the paper company, long ago had abandoned its plans to build some commercial plant there. They have indicated they would sell for what they paid for the land, and might even be persuaded to make a charitable conbribution of the land. Mrs. Spencer would probably be interested in selling as now there is now way to develope the land at a profit.

Steelhead were caught this year as far up river as Matilija Creek.Salmmon are again appearing off the river mouth.

Does this interest you as a Wildlife Conservation BUreau project?

If so the chairman of the Ventura River Project, Charles Price,can supply you with maps and information.

Best wishes,

Jack Smalley
Chairman

c/o County Executive, County Office Building, Ventura, California 93001 (805) 648-6131

Board of Directors
The Greater Ventura Chamber of Commerce
Ventura, California

SUBJECT: Formation of a special assessment district on the Spencer-Zellerbach property in the City of Ventura.

FROM: The Governmental Affairs Committee of the Greater Ventura Chamber of Commerce.

The findings of the investigations and studies by the Governmental Affairs Committee together with conclusions and recommendations for action are as follows:

FINDINGS:

1. The San Buenaventura City Council is holding a public meeting May 15, 1972 to consider the formation of a special assessment district covering the 115 acres of the Spencer-Zellerbach property in the Ventura River Flood Plain.

2. The purpose of the special assessment district is to allow the selling of bonds to finance sewer and water improvements for the property and for the long term repayment of the bonds.

3. The improvement installation is proposed to be authorized under the Municipal Improvement Act of 1913 with the authorized bonds issued pursuant to the Improvement Bond Act of 1915.

4. The City Staff is recommending that the formation of the special assessment district be authorized.

5. The City has been committed to paying the total engineering fee for the project if the special assessment district is not formed. The engineering fee will be paid by the assessment district if the formation of the district is authorized.

6. The City will receive from the land owners in return for authorizing the formation of the special assessment district the sum of $200,000.00 in construction and land.

7. The City, without obligating itself now or in future decisions in regards to the Spencer-Zellerbach land, can have the off-ramp within the next 3 to 6 years by agreeing to do two things. First, by purchasing the land on which the State will build the off-ramp and second, realign West Main Street to connect to the proposed off-ramp.

8. The State will construct the off-ramp whether or not the special assessment district is formed.

9. The rock levee will not be constructed if the special assessment district is not formed.

10. A citizen advisory committee is now being formed to assist in the development of a general plan for the long-range comprehensive general guide for the orderly growth of the City. The general plan must be understandable, available, and amendable. The plan will be most concerned with all the needs of the citizens of the City in which the use of land is involved.

11. A decision to deny the formation of a special assessment district before the completion of the proposed general plan is not an irrevocable decision.

12. A decision to allow the formation of a special assessment district before the completion of the proposed general plan could greatly reduce the free choice and considerations for the best and highest use of the land.

13. Committing the subject land to the same variety of high income, highway-oriented use that can be found anywhere else in Southern California could be detrimental to tourist development and the economic stability of the community.

CONCLUSIONS:

As a result of the above findings, the following conclusions were reached by the Governmental Affairs Committee:

1. To assist in the preparation of a large and important parcel of land near enough to have great influence on the orderly growth of a City and yet separated from the City by vacant land, a river and flood plain without knowing what kind of development or land use is proposed for the property is very poor community planning.

2. It is possible that the land use that would be recommended by the citizens committee as compatable with the community as a whole would preclude the expenditure for the proposed improvements and therefore eliminate the need for an assessment district and the City would not receive the $200,000.00 in land and construction.

3. The formation of an assessment district by the City to provide for the land owners to spend up to an estimated $1,700,000.00 on improvements and the City accepting $200,000.00 in construction and land in exchange for the formation of the district, would lend emphasis to the strong argument that the City would be morally obligated to allow whatever the developer proposes in order to financially recover.

4. It is not in the best public interest to authorize the formation of a special assessment district at this time.

RECOMMENDATIONS:

The Governmental Affairs Committee recommends that the Greater Ventura Chamber of Commerce take a strong stand against the formation of the proposed special assessment district until the completion of the formation of the proposed general plan for the City of Ventura.

State of California — The Resources Agency

Memorandum

To : Mr. Raymond M. Hertel, Executive Officer
California Regional Water Quality Control Board
Los Angeles Region
107 So. Broadway, Rm. 4027
Los Angeles, California 90012

Date: June 5, 1973

From : Department of Fish and Game, REGION 5, 350 Golden Shore, Long Beach 90802

Subject: WQ - Waste Discharges into Lower Ventura River - Ventura County

Enclosed is a report concerning present water quality problems in Lower Ventura River. Valuable fish and wildlife resources as well as various other beneficial uses are being threatened by chronic and infrequent discharges of waste to the river.

We feel that in working together we will be able to identify the dischargers and bring them into compliance with the Water Quality Objectives of your Board.

Robert D. Montgomery

Robert D. Montgomery
Regional Manager
Region 5

Encl.

cc: Captain Prosser
Gayland Taylor
Ventura County Fish and Game Commission

BIOLOGICAL IMPACT REPORT ON

LOWER VENTURA RIVER - CHRONIC

AND INFREQUENT WASTE DISCHARGES

by

Michael Martin, Ph. D.
Associate Water Quality Biologist

and

William M. Snider
Junior Aquatic Biologist

California Department of Fish and Game
Region 5

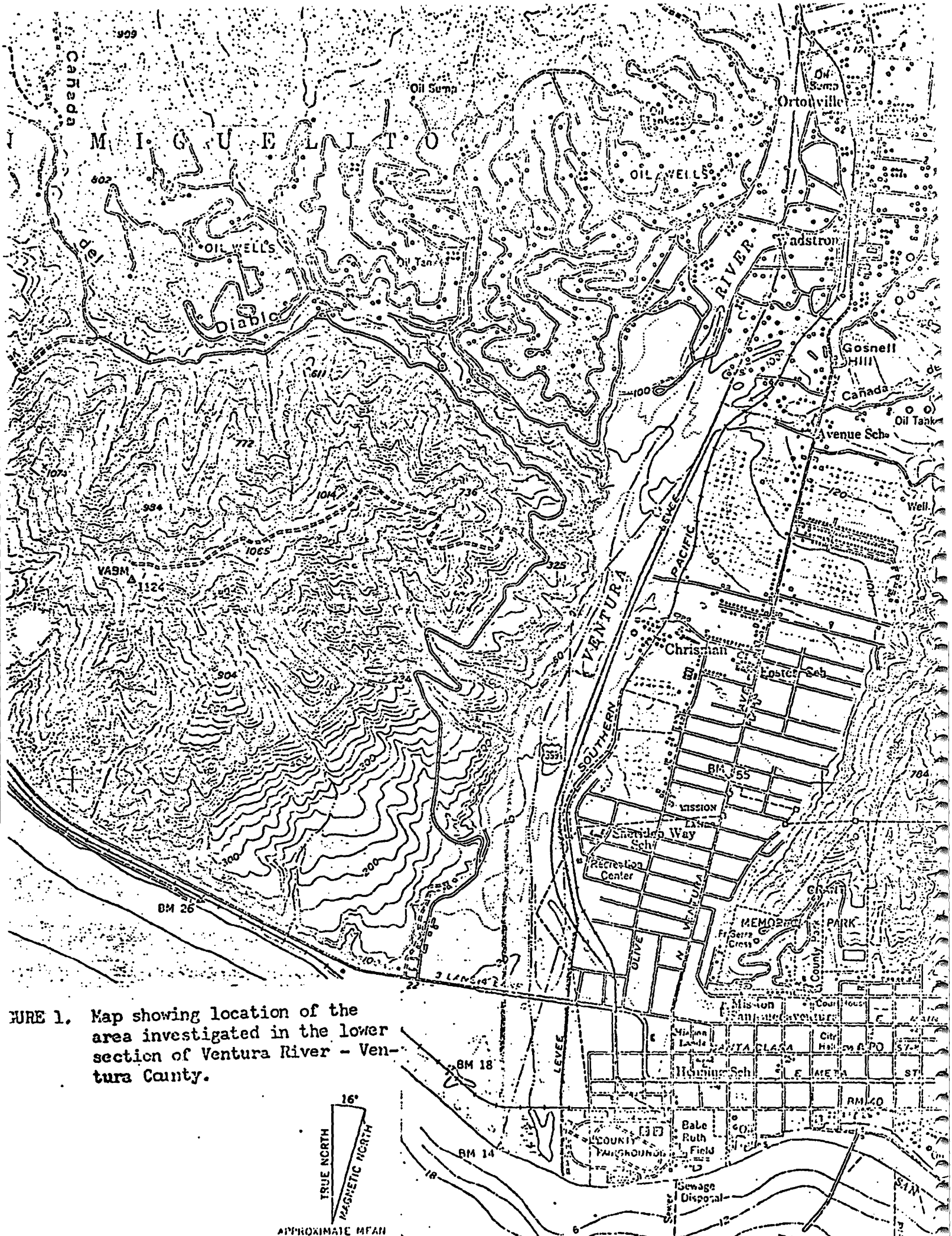
June 4, 1973

INTRODUCTION

The Ventura River is endowed with a wealth of fish and wildlife resources, some unique to southern California. For example, a steelhead (Salmo gairdneri gairdneri) run in the river has been documented. The only other documented steelhead run in southern California in recent times is in Malibu Creek, Los Angeles County.

These fish and wildlife resources, however, are continually threatened by man's activities. Permanent and temporary diversions and impoundments, as well as chronic and infrequent waste discharges, continue to destroy the river's habitat necessary for the existence of these resources. Until recently, the discharge of industrial wastes from the Shell Chemical Plant prevented any life from existing in the river from the point of discharge to the mouth of the river. Discharges present in the lower reach of the river are still damaging to these resources.

During recent surveillance activities within the lower section of the river (Figure 1), effluent from one of the many storm drains which empty into the river, was found to be adversely affecting water quality in the river. The discharge comes from a storm drain that begins at the Rock Lite Company Plant, and collects wastes from other point discharges along its 1.5 mile course. The quality of effluent does not meet the water quality objectives of the California Regional Water Quality Control Board, Los Angeles Region, as stated in the Interim Water Quality Control Plan adopted June, 1971.



URE 1. Map showing location of the area investigated in the lower section of Ventura River - Ventura County.

It is the intent of this report to discuss the discharge and its affect upon the resources of the lower section of the Ventura River and to report to the Board staff for consideration of waste discharge requirements to be prescribed by the Regional Board.

METHODS

Three separate investigations of the drain's outfall were made. The first investigation was made by Shoken Sasaki, Assistant Fishery Biologist, and Warden Gayland Taylor. Observations of the outfall were made and photographs were taken in April, 1973. The second investigation was made April 23, 1973, by G. Taylor and Bill Snider, Junior Water Quality Biologist, Region 5. Samples of the outfall were taken and measurements of pH and temperature were made with a Hach DR-EL field kit. A third investigation was made on May 4, 1973, by Michael Martin, Associate Water Quality Biologist, Bob Prosser, Warden Captain, G. Taylor, and B. Snider. Samples were again taken and an inspection of the drain, including the Rock Lite Plant, was made.

Samples were taken back to the Water Quality Laboratory at Long Beach and were tested for turbidity using a Hach 2100 turbidometer, and for settleable solids according to "Standard Methods". Samples collected on May 4, 1973, were also analyzed for oil, grease, and phenols by the Water Quality Laboratory in Bellflower.

A survey of fish and wildlife using the river was also made. Results demonstrate the valuable fish and wildlife resources of the river which are being impacted by the discharges.

RESULTS

The outfall into the Ventura River carries effluent from the Rock Lite Company Plant as well as the several other point discharges along the 1.5 mile stretch of storm drain. The Rock Lite Company is the major discharger into the ditch and the apparent source of settleable solids and turbidity problems. Evidence, in the form of a deposit of red material more than 3 feet deep, is present in the open section of the drain which leads from the plant. The only discharge into this section of ditch is the Rock Lite Plant. This deposited material is identical to that noted at the plant and collected from the discharge into the river. Sediment deposits derived from the Rock Lite Plant are also present in the river below the outfall. They extend for a distance of 100 to 150 yards downstream from the point of entry and are 2 to 3 feet in depth. These sediments are smothering plant and benthic animal life, key members of river community's food chain.

The discharge was very turbid on all three dates of investigation (Table 1, Plate 1). Turbidity levels ranged from 1100 JTUs to 1700 JTUs on the outfall and from 150 JTUs to 160 JTUs in the river, below the outfall. The river water above the point of discharge had a high level of 1.5 JTUs. The greatest settleable solid level in the effluent was 350 ml/l. The settleable solid level in the river downstream from the discharge was 1.5 ml/l and upstream from the discharge was 0.0 ml/l.

The extremely turbid discharge appears to occur intermittently throughout the day, perhaps when the capacity of the holding facility at the plant is surpassed. The remainder of the time, the Rock Lite discharge consists only of the relatively clean overflow from their pond. This water, however,

TABLE 1.

Sample Description	Date	pH	Turbidity (J.T.U.)	Settleable Solids	Oils & Grease (mg/l)	Phenols (mg/l)
Effluent in ditch	4/23	10.0	1700	350 ml/l	---	---
10 yds. below outfall	4/23	7.9	160	1.5 ml/l	---	---
50 yds. below outfall	4/23	7.9	20	1.0 ml/l	---	---
50 yds. above outfall	4/23	7.9	1.5	0.0 ml/l	---	---
Effluent in ditch	5/4	7.9	1100	38.5 ml/l	---	---
10 yds. below outfall	5/4	7.9	150	1.5 ml/l	---	---
50 yds. below outfall	5/4	7.9	15	<1.0 ml/l	---	---
50 yds. above outfall	5/4	7.9	1.0	0.0 ml/l	---	---

picks up sediment from the deposits in the drainage ditch and is also turbid at the outfall into the river (Plate 2).

Personal communications with the plant manager revealed that hydrated lime is the only additive used in the plant's operation. High pH levels found in the outfall may be a resultant of this chemical additive. The discharge averaging about 50 gallons per minute, however, did not appear to increase the pH level in the river.

On May 4, 1973, oil was observed entering the river from the outfall. Based upon our observation, it appeared that the source of oil was the Rock Lite Plant since the discharge was very turbid as well. However, the source of the oil was not established. Even with a schematic of the area's drain system, obtained from the City of Ventura Public Works, the oil discharger was not located.

The survey of fish and wildlife resources in the area was complemented by the results of a previous survey conducted by Michael Martin during 1972. The results are shown in Table 2.

CONCLUSIONS

The drainage ditch leading from the Rock Lite Company plant to the Ventura River has a chronic discharge which does not meet water quality objectives for the Santa Clara River Basin. Each of the three investigations disclosed that effluent from the drainage is harmful or potentially harmful to the aquatic ecosystem of the river. The effluent from the drain creates a condition in the river which is in conflict with the water quality objectives for turbidity,

TABLE 2.

Fish and Wildlife Noted in the Lower Reach of the Ventura River, Ventura County.

FISH

1.	Salmo gairdneri	rainbow trout
2.	Gasterosteus aculeatus microcephalus	west coast three-spined stickleback
3.	Salmo gairdneri gairdneri	steelhead
4.	Lepomis cyanellus	green sunfish
5.	Lepomis macrochirus	bluegill sunfish
6.	Clevelandia ios	arrow goby
7.	Atherinopsis californiensis	jacksmelt
8.	Mugil cephalus	striped mullet

AMPHIBIA AND REPTILES

1.	Bufo boreas	western toad
2.	Hyla regilla	Pacific treefrog
3.	Rana catesbeiana	bullfrog
4.	Sceloperus occidentalis	western fence lizard

MAMMALS

1.	Procyon lotor	raccoon
2.	Otospermophelus beecheyi	California ground squirrel
3.	Sylvilagus bachmani	bush rabbit
4.	Ondatra zibethica	muskrat
5.	Thomomys bottae	Bolta pocket gopher

BIRDS

1.	Podiceps caspicus	eared grebe
2.	Podilymbus podiceps	pied-billed grebe
3.	Ardea herodias	great blue heron
4.	Anas acuta	pintail
5.	Anas carolinensis	green-winged teal
6.	Anas cyanoptera	cinnamon teal
7.	Aythya marela	greater scaup
8.	Branta nigricans	black brant
9.	Bucephala albeola	bufflehead
10.	Oxyura jamaicensis	ruddy duck
11.	Accipter cooperii	Cooper's hawk

BIRDS (cont.)

12.	Fulica americana	American coot
13.	Charadrius vociferus	killdeer
14.	Charadrius semipalmatus	semi-palmated plover
15.	Himantops mexicanus	black-necked stilt
16.	Cathartes aura	turkey vulture
17.	Elanus leucurus	white-tailed kite
18.	Larus spps.	seagull
19.	Catoptrophorus semipalmatus	willet
20.	Zenaidura macroura	mourning dove
21.	Recurvirostra americana	avocet

bottom deposits, and settleable material as stated in the Regional Board's Interim Water Quality Control Plan.

APPENDIX

QUALITY WATER LABORATORY

9145 ROSE AVENUE BELLFLOWER, CA. 90706 Phone: (213) 531-6926

May 29, 1973

State of California
Department of Fish and GAme
350 Golden Shore
Long Beach, California 90802

Attention: Mr. William Snider

Subject: Water Analysis as requested P.O.#358

Gentlemen:

Attached is the results of the chemical analysis performed on the effluent water samples submitted on May 24, 1973.

All tests were performed in accordance with the Standard Methods for the Examination of Water and Wastewater, 13th Edition, 1971.

If there are any further questions, please contact me.

Thank you for the opportunity of dealing with your department.

Sincerely

Albert B. Jacard
Laboratory Director

ABJ/ap
Enc.

REPORT

QUALITY

WATER LABORATORY

9145 ROSE STREET BELLFLOWER, CALIFORNIA 90706

Phone: (213) 531-6926

"Meaningful Interpretation of Results"

WATER ANALYSIS FOR:

- Problem Water
- Drinking
- Residential
- Conservation
- Industrial
- Waste Disposal

DATE SAMPLED: As noted below

DATE SUBMITTED: 5/24/73

DATE ANALYZED: 5/25/73

LABORATORY NO.: 2600 - 2601

REFERENCE: #358

CLIENT: State of California
Dept. of Fish and Game
350 Golden Shore
Long Beach, Calif. 90802
Attn: Mr. William Snider

SAMPLE: Effluent Waters

INVESTIGATION: Chemical Analysis

RESULTS

Test	Values	
QWL Number	2600	2601
Marking on Sample Containers	Sample V-1, Effluent In Drainage Ditch 5/3/73 at 1430	Sample V-2, Point of Discha in River, 5/3/73 at 1445
pH, @ 25°C	7.7	7.8
Specific Conductance, @ 25°C (Kx10^6)	3100	1370
Total Dissolved Solids Calculated, mg/l	2170	960
Settleable Matter, by volume, ml/l	38.5	1.5
Turbidity, Visual Candle Method, Turbidity Units	1100	150
Oil and Grease, Hexane Extraction, mg/l	2007	51.3
Phenol, mg/l	0.32	0.10

R.A. Dunaetz
Laboratory Chemist

PLATE 1. Ventura Riverbed showing the turbidity of the effluent before and as it enters the river.

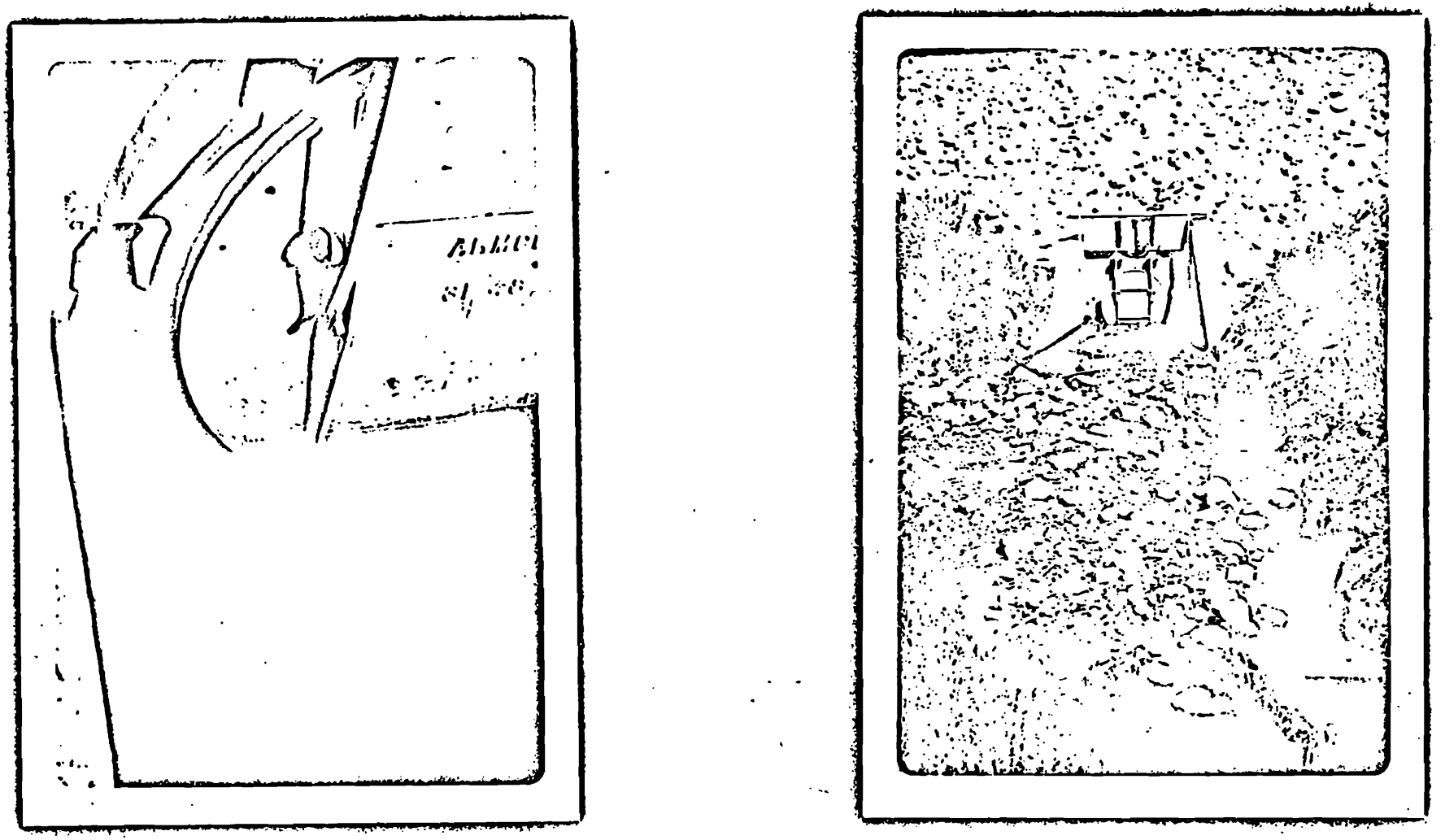
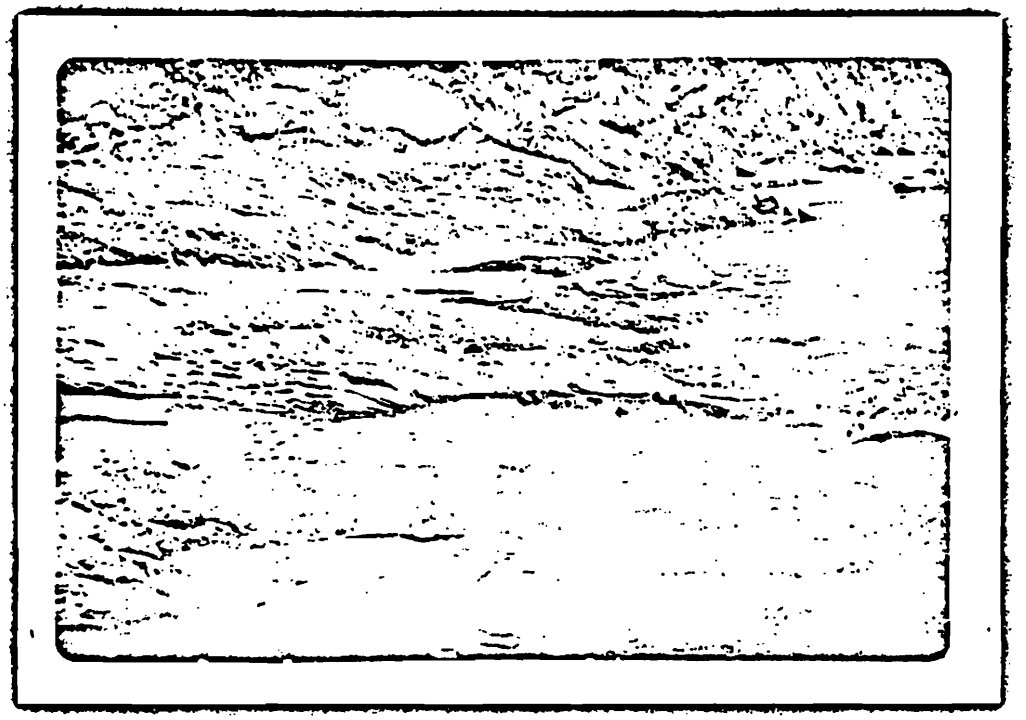
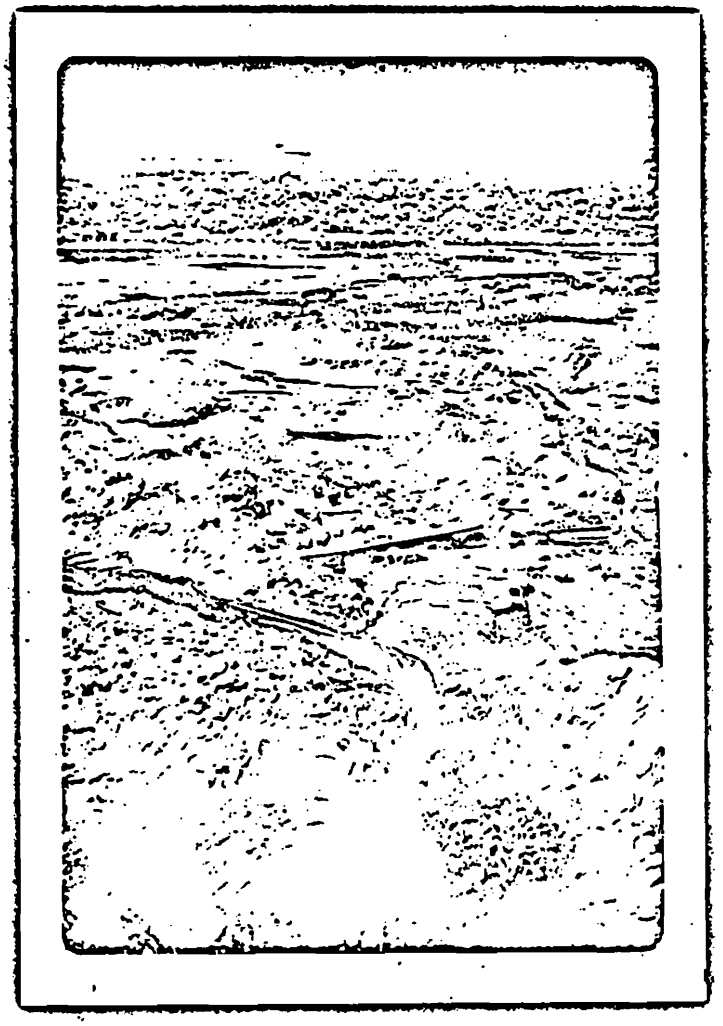


PLATE 2. Drainage ditch opening into the Ventura Riverbed showing the deposited sediment and turbidity due to the Rock Lite Company plant.





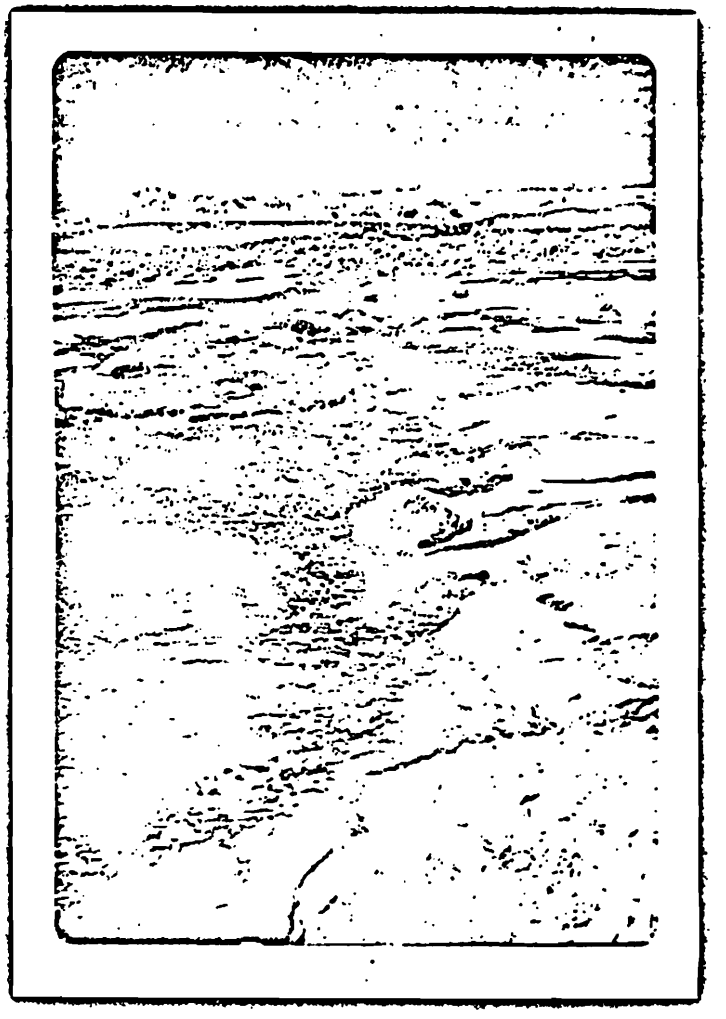


PLATE 3. Ventura River showing the effect of the turbid discharge upon the water quality of the river.

County of Ventura

County Fish and Game Commission

Joe Bravo, Jr.
Mark Capelli
James Donlon
Harry Lechler
Charles Price
Jack Smalley
Thor Willsrud
Commissioners

June 10, 1973

Edgar E. Henke
3433 Woodstock Lane
Mountain View, California
94040

Edgar:

Enclosed please find a copy of a memo and report we recently received from the State Fish and Game regarding the impact of waste discharges on the fish and wildlife of the lower Ventura River.

The phone bill last month was larger than the rent, hence no phone this month.

It is the end of the quarter and I am very pressed for time. Will write more later.

Sincerely,

Mark H. Capelli

Mark H. Capelli

P.S. I will send additional copies of the Ventura River Report as soon as possible.

c/o County Executive, 168 North Brent Street, Room 202, Ventura, California 93003 (805) 648-6131

STATE OF CALIFORNIA—RESOURCES AGENCY RONALD REAGAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION
107 SOUTH BROADWAY, SUITE 4027
LOS ANGELES, CALIFORNIA 90012

July 17, 1973

County of Ventura
County Fish and Game Commission
c/o County Executive
168 North Brent Street, Room 202
Ventura, California 93003

ATTENTION: Mr. Mark H. Capelli

Subject: Rocklite Products, Ventura

Gentlemen:

This is in response to your letter of June 7, 1973.

Rocklite Products never filed a report of waste discharge with this Board, and we became aware of their discharge only recently.

They have now stopped most of their waste discharge to the Ventura River, and are considering the feasibility of recycling their entire water flow to prevent any discharge. Our staff is working closely with the company. Our most recent inspection on June 29, 1973, indicated that the quality of the residual discharge of about 3 gpm has improved. We have advised them that any waste discharge other than to a community sewage system will be subject to stringent waste discharge requirements. We have also requested that they file a report of waste discharge or take all necessary measures to eliminate all waste discharge except to the sewer.

Your agency will be placed on the mailing list for any waste discharge requirements prescribed by the Board for Rocklite Products.

Thank you for your interest in this matter.

Very truly yours,

Richard A. Hall

for RAYMOND M. HERTEL
Executive Officer

Attorney General OPINIONS

(1) **EVELLE J. YOUNGER**
Attorney General
California

Following are the holdings of recent opinions rendered by the Office of the California Attorney General. The full texts of all Attorney General Opinions, including analysis, appears in the Sacramento Legal Press, 1115 H Street, Sacramento 95814.

FISH & GAME CODE SECTION 1602 IS APPLICABLE TO ACTIVITY WITHIN ANNUAL HIGH WATER MARK OF STREAM, RIVER, OR LAKE AND ALL AREAS WITHIN LEVEED SYSTEM.

NO. SO 73-15, Aug. 28, 1973

By Denis Smaage, Deputy Attorney General

The Honorable G. Ray Arnett, Director of the Department of Fish and Game, has requested an opinion on the following question:

Would the provisions of Fish and Game Code section 1602 be applicable to the following hypothetical situations:

1. An aggregate operator removing gravel within a flood channel adjacent to a river or stream,

2. The construction of a settling pond in a dry streambed tributary to live stream or river within a few hundred yards,

3. A person diverting water from a stream by means of a pump?

The conclusions are:

1. Fish and Game Code section 1602 is applicable to activity within the annual high water mark of a stream or river or lake and all areas within a leveed system.

2. Section 1602 is applicable to activities within a dry streambed which will or may result in altering a river bed or streambed to which it is tributary.

3. Section 1602 is applicable to pump diversions if such diversion is singly or in combination with other diversions capable of substantially diverting the natural flow of a stream.

ANALYSIS

The first sentence of Fish and Game Code section 1602 -1- broadly describing activities to which the section applies reads as follows:

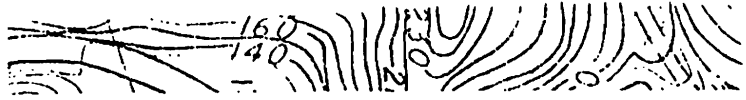
-1- All section references are to the Fish and Game Code unless otherwise specified.

"Any person who substantially diverts or obstructs the natural flow or substantially changes the bed, channel or bank of any river, stream or lake, or uses any material from the streambeds, shall notify the department of such operations, except when the department has been notified pursuant to Section 1601 . . ."

The section then provides for the Department of Fish and Game to investigate and make recommendations for fish and wildlife protection where an existing fish or game resource may be substantially adversely affected by the proposed operation.

Section 1602 is part of Chapter 6, Division 2 of the Fish and Game Code, which chapter is entitled "Fish and Wildlife Protection and Conservation". The Legislature at section 1600 declares the purpose of the chapter as follows:

"The protection and conservation of the fish and wildlife resources of this State are hereby declared to be of utmost public interest. Fish and wildlife are the property of the people and provide a major contribution to the economy of the State as well as providing a significant part of the



SOUTHERN PACIFIC MILLING COMPANY
3555 VINEYARD AVE., OXNARD, CALIF. 93030 • PHONE (805) 485-3101 / 642-3221
READY-MIX CONCRETE ROCK & SAND ASPHALTIC CONCRETE

October 10, 1973

County of Ventura
Planning Department
52 North California Street
Ventura, California

Gentlemen:

Re: Conditional Use Permit No. 1088 - EA No. PL-330

In response to your instructions and in the form outlined in "Contents of Environmental Impact Reports", we hereby submit the following information:

1. Description of Project

   A. Location and boundary maps are included with this submittal.

   B. The objective is continued excavation and processing of rock and sand products.

   C. This operation is conducted by excavating raw material from the riverbottom and flood plain area. This is accomplished with the use of a mechanical loader or dragline; then, the material is transported by dump trucks to the plant site for processing. The process includes crushing, screening, washing, and stockpiling the finished product.

Rock, sand, and road base materials are loaded from the stockpiles into trucks for weighing and delivery to construction jobsites.

This location is closer to a large segment of the market which results in economic benefit to both public and private construction projects.

Our excavation is primarily in the riverbed, which can have a beneficial affect in channelization of the river.

2. Description of Environmental Setting

This project has been in operation for approximately ten years; prior to that, it was river bottom and flood plain. Our prior years excavations have been refilled on a frequency, depending on rainfall and flood stage of the Ventura River.

The river bottom extends upstream through the Shell Oil field area and downstream past the railroad and highway bridges to the ocean.

The easterly side of the property is bound by the Ventura County Flood Control Levee and Ojai Freeway, Route 33.

The westerly side is riverbank and undeveloped ranch property.

In past years, other rock and sand excavations have been conducted, both up and downstream from this site. Material has been used for various County and State projects. At the present time, there are no other excavating or material

producing operations being conducted in this immediate area.

3. The Environmental Impact of the Proposed Action

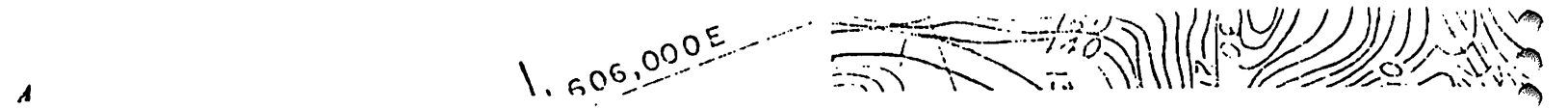
Both dust and noise result from the excavating and processing operation. The short range effects are minimal, and there are no long range effects.

The area involved in excavation is primarily within the river channel and/or flood plain. The excavations are made to an approximate depth of five feet. When winter rains create a sufficient runoff the excavations are refilled, and the operation starts over again when the water subsides. During low-flow runoff, excavations are made in areas where the water is not flowing or the low-flow can be diverted around the area of excavation.

Due to the location of this project, it has no effect on population concentration, and the subject property is not suited for commercial nor residential development. The undeveloped ranch and mountainous area on the westerly side belongs to the same owner who owns the subject property.

4. Any Adverse Environmental Effects Which Cannot be Avoided if Proposal is Implemented

There are no long-range adverse effects that cannot be avoided. The short-range effects of dust and noise can be minimized and reduced to acceptable standards.



which will preserve the natural aesthetics of the area.

5. Mitigation Measures Proposed to Minimize the Impact

Installation of turbo chargers and mufflers on mechanical equipment; rubber belting at certain contact points and over the tops of screens at the rock plant, to reduce noise levels. Use of water trucks on surface roads with spray bars at critical points in the rock plant and stockpile areas, to reduce dust to a level below Air Pollution Control District standards.

6. Alternatives to the Prcposed Action

The operation at this location has continued on an intermittent basis for approximately ten years. It was chosen because of the deposit of raw materials and the proximity to the Ventura, Ojai, and Santa Barbara markets.

The alternate of "No Project" would be to supply these markets with materials from deposits in the Santa Clara River area where there is already a serious depletion problem. A transfer such as this would increase the haul by approximately 160,000 roadway miles per year, adding to the traffic pollution as well as the cost factors involved in providing these products to public and private projects.

7. The Relationship Between Local, Short Term Uses of Man's Environment and the Maintenance and Enhancement of Long Term Productivity

and the rehabilitation of the other areas outside the channel, there will be no long term adverse affect on the environment, and the project will pose no long term risk to health and safety.

Continuance of this operation will allow for salvage through excavation and refill of an important, critical product that will otherwise be lost through flooding into the Pacific Ocean. In addition, it will preserve or extend remaining deposits in the Santa Clara River area for use in other parts of the County.

8. Any Irreversible Environmental Changes Which Would be Involved in the Proposed Action Should it be Implemented

Since the excavations are subject to refill during flood stage and low-flow runoffs maintained at their natural level, no irreversible environmental changes and/or environmental accidents will result from this operation.

9. The Growth Inducing Impact of the Proposed Action

The continued operation of this project will not, in itself, foster additional growth in the immediate or surrounding area. It will contribute in an economic way to road building and other engineering construction projects in the Ventura, Ojai, and Santa Barbara general areas. The products produced at this location are not used directly in the construction of homes.

No impact on County or City service facilities will result from this project; and, other than the economic contributions

to construction projects, it will create no significant affect on the environment.

Respectfully submitted,

B. W. Hamilton
Vice President

ep

COUNTY OF VENTURA

PLANNING DEPARTMENT

32 North California Street

Ventura, California 93001

(805) 648-6131

Victor R. Husbands

Planning Director

DATE: November 19, 1973

CASE NUMBER: 3988

ASSESSOR'S PARCEL NUMBER: 63-140-40

ZONE: M-3

Chem-O-Lene Company
P.O. Box 1357
Ventura, Calif. 93001

Gentlemen:

You may not be aware that you are in violation of one of the regulations of the Ventura County Ordinance Code. The following violation has been observed at 42[illegible] Crooked Palm Rd. in Ventura: Maintaining a salvage and disposal yard and junk which are not permitted uses on property zoned M-3.

In an endeavor to keep the residential and commercial areas of Ventura County attractive, safe and pleasant places in which to live and work, we would like to ask your cooperation in correcting this situation. Would you please take the following action: Remove junk and apply for CUP for salvage operation. It is suggested you contact Public Works relative to land fill.

If you have any questions concerning this matter, please call the Zoning Enforcement Section of the Ventura County Planning Department for information and assistance.

Thank you very much for your cooperation.

Sincerely yours,

Donald G. Wright
Senior Zoning Inspector
DGW:hw
CC:Robert Rogers, Chem-O-Lene Co.
Enclosure

Ed- this concerns a large land-fill on the flood plain below Shell Chemical. The planning department has historically put a stop

Steve Copy To Pete Brown

VENTURA COUNTY CITIZENS' ADVISORY COMMITTEE
ON BEACH EROSION PROBLEMS
597 E. Main Street
Ventura, California 93001

Mr. Vic Husbands, Director
Ventura County Planning Department
52 North California Street
Ventura , California 93001

Dear Mr. Husbands:

On October 17, 1973, Mr. H.C. Bauman of your staff sent our committee a copy of an environmental impact report related to a requested conditional use permit for a sand and gravel extraction operation on the Ventura River (ref EA-330), and asked that we provide your department with comments on the effects of the project on local beaches. Our comments, which follow, were considered and adopted at our meeting on December 13th.

1. On page 5 of the submitted EIR is the following statement: "Continuance of this operation will allow for salvage through excavation and refill of an important critical product that would otherwise be lost through flooding into the Pacific Ocean." This statement does not reflect the fact that the Ventura River is a significant source of sand to Ventura County beaches.

2.) According to a report prepared by the Corps of Engineers published on June 25, 1962, the Ventura River watershed (including the Matilija and Coyote watersheds) annually (on the average) generates 635,000 cubic yards of sand. Of this 635,000 yard total, the Corps estimated that an average of about 150,000 cubic yards per year actually reaches the beaches. This esti estimate includes the effects of the reservoirs on Matilija and Coyote creeks.

3.) At the Citizens' Advisory Committee meeting held on July 12, Mr. Al Robles, Chief of the Corps of Engineers Hydraulics Section, was asked about the impact on beach sand supplies of sand and gravel extraction operations in Ventura County. In his opinion, these operations could be a significant problem. He noted that the Corps has been concerned with such operations

STATE OF CALIFORNIA—RESOURCES AGENCY

EDMUND G. BROWN JR., Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION
107 SOUTH BROADWAY, SUITE 4027
LOS ANGELES, CALIFORNIA 90012

JAN 22 1974

Friends of the Ventura River
63 South Olive Street
San Buenaventura, California 93001

ATTENTION: Mr. Mark H. Capelli, Chairman

Re: Mission Linen Supply Company - NPDES No. CA0056111

Gentlemen:

Reference is made to your letter of January 14, 1975, requesting information on the subject waste discharge.

The wastes are discharged to a storm drain in Julian Street which eventually empties near the mouth of the Ventura River just north of the Southern Pacific railroad tracks. The wastes are from the regeneration and flushing out of sodium zeolite water softeners. This Board has not prescribed any previous requirements for this discharge.

We are enclosing copies of the adopted requirements for three discharges to the Ventura River. Your name is being added to the mailing list for two additional dischargers whose adopted requirements are now being typed and for all future dischargers to the Ventura River.

Very truly yours,

Raymond M. Hertel

RAYMOND M. HERTEL
Executive Officer

Enclosures

Friends of the Ventura River

A NON-PROFIT ORGANIZATION

May 3, 1974

William G. Frank
Chief of Engineering
Ventura County Flood Control District
597 East Main Street
San Buenaventura, California
93001

Bill---

Attached are several photographs of the land-fill on the Chem-O-Lene site in the Ventura River bottom that we discussed Friday afternoon.

Sincerely,

MARK H. CAPELLI
Chairman

OFFICE: 63 SOUTH OLIVE STREET, SAN BUENAVENTURA, CALIFORNIA 93001 (805) 647-3497

May 15, 1974

Mr. W. O. (Bill) King
Chem-O-Lene Company
P.O. Box 1357
Ventura, California 93003

Subject: VENTURA RIVER, WATERCOURSE ENCROACHMENT, VENTURA, ZONE I

Dear Mr. King:

At a meeting on May 9, 1974, at your Chem-O-Lene plant site, you were informed that a Flood Control District Watercourse Permit was required for the fill and brick salvage operation being conducted on your property. We observed that the area being filled beyond the existing fence north of the plant is approximately two feet higher than the parking area adjacent to the plant and also that the scattered piles of brick rubble are four or five feet in height.

Information contained in the Corps of Engineers Flood Plain Information Report for the Ventura River dated June, 1971, indicates that the area being filled is subject to at least eight foot inundation for a 100 year flood. This flood information was based on topography existing in January, 1970. The narrowing of the watercourse in this reach causes a rise in water surface of approximately six feet for a 100 year flood, and any further restrictions could cause an additional rise in the water surface.

You are hereby notified that the fill and brick rubble placed on your property without a permit is in violation of Watercourse Ordinance WC 18 and application for permit should be submitted to the Flood Control District Office as soon as possible so that the situation can be thoroughly investigated and proper restrictions placed on the activity.

If you have any questions regarding permit procedures, please feel free to call Don Hauser at 648-6131, extension 2004.

Very truly yours,

J. B. Quinn, Deputy Director
Flood Control and Drainage Division

WGF:dd

county of ventura

County Fish and Game Commissio

May 17, 1974

H. C. Bauman
Planner, County of Ventura
Environmental Resources Agency
535 East Santa Clara Street
Ventura, California 93001

Dear Mr. Bauman:

Re: CUP 1088, Southern Pacific Milling, Ventura River

We have reviewed the DRAFT ENVIRONMENTAL IMPACT REPORT for the SOUTHERN PACIFIC MILLING COMPANY's Ventura River operation and have the following comments:

1- In addition to the fish and wildlife listed in the DRAFT and the DEPARTMENT OF PUBLIC WORKS MEMORANDUM of May 14, 1974, the following species should be included: MAMMALS- Opossum Didelphis marsupials, Coyote Canis latrans, Gray fox Urocyon cinereoargenteus. BIRDS- California valley quail Lophortyx californicus, Roadrunner Geococcyx californianus, Spotted dove Streptopelia chinensis, Sparrow hawk Falco sparverius, White-Tailed kite Elanus lecurus, Great horned owl Bubo virginianus, Belted kingfisher Megaceryle alcyon. All of these species were observed in the field on the project site.

2- It would strengthen the the EIR considerably if a more detailed description of the flora of the project area was included, identifying the basic plant communities effected by the project, along with several indicator plants. The following four basic plant communities with associated indicator plants presently exist on the project site: LOTIC- Green Algae, Chara sp., Closterium sp., Blue-green Algae Anabaena sp., Euglinoids Euglena sp. RIPARIAN- Water cress Nasturtium officinale, Seep willow Baccharis glutinosa, Black willow Salix laevigata, Black cottonwood Populus trichocarpa. FRESH-WATER MARSH- Tule Scripus robostus, Cat-tail Typha latifolia. COASTAL SAGE SCRUB- Laurel

sumac Rhus integrifolia, Elderberry Sambucus mexicana, California sagebrush Artemisia californica, Salt bush Atriplex lentifomas, Anise Pimpinella anisum. Several of these species are also associated with chaparral communities, but the dominant species of that community are not found on the project site except as isolated plants.

3- Because of the rapid disappearance of suitable habitat in Ventura County, particular attention should be given to the impact of the project on the several species of anadromous fishes which utilize the Ventura River drainage. These include the Pacific lamprey Entosphenus tridentatus and the Steelhead rainbow trout Salmo gairdnerii gairdnerii. A recent publication issued by the California Department of Fish and Game establishes the range of the Pacific lamprey "From the Ventura River northward . . ." (ANADROMOUS FISHES OF CALIFORNIA, Donald H. Fry, Jr., 1973) Regarding the range of the Steelhead rainbow trout, a field survey released by the California Department of Fish and Game indicates that "The Ventura River is probably the southern most stream supporting a run in most years." (STEELHEAD MANAGEMENT IN CALIFORNIA WITH EMPHASIS ON THE YEARS, 1969-1972, L. B. Boydstun, 1972) A recent report on waste discharges into the lower Ventura River prepared by the California Department of Fish and Game further indicates that the only other documented run of steelhead in southern California in recent times is in Malibu Creek, Los Angeles County (BIOLOGICAL IMPACT REPORT ON LOWER VENTURA RIVER- CHRONIC AND INFREQUENT WASTE DISCHARGES, Michael Martin & William M. Snider, June 4, 1973).

4- The impact of the proposed operation should be more clearly indicated. There are at least five major impacts on fish and wildlife populations generated by the proposed sand and gravel operation:

(1) Reduction of wildlife habitat as a result of stripping away vegetative cover.

(2) Siltation of the stream bottom and downstream estuary, covering spawning gravels and smothering aquatic insect larvae (See Almo J. Cordone, et al, THE INFLUENCE OF INORGANIC SEDIMENT ON THE AQUATIC LIFE OF STREAMS in California Fish and Game, Vol 47, No. 2 April 1961).

(3) Increased water temperatures due to removal of riparian vegetation providing shade and cover to the stream channel. This factor a-

lone may render the stream uninhabitable for several species of fish.

(4) Reduction of aquatic and terrestial insects due to removal of riparian and adjacent vegetation, thus diminishing an important food source for fishes and water-associated birds.

(5) Removal of spawning gravels utilized by anadromous fishes. A recent California Attorney General's Opinion (No. SO 73-15, August 28, 1973) points out the relationship between sand and gravel operations and the reproduction of anadromous fishes: "Many gravel operations occur throughout California within a flood plain or flood channel of rivers used by steelhead and salmon for spawning. Indeed, the same factor which provides for steelhead and salmon spawning beds is that which attracts aggregate companies, an abundance of gravel . . . . Many spawning riffles that are used by salmon and steelhead during high flows are completely dry and exposed during low summer flows. King salmon will even spawn in intermittent streams. . . . Aggregate companies during the long summer months can and do operate in these dry areas located in the flood plain and remove such gravel used for spawning in the winter."

5- In addition to the mitigation outlined in the DRAFT, the following should also be considered:

(1) A silt catchment basin be constructed to trap all wash water used in processing the sand and gravel. Preferably some distance back from the low flow channel to mimimize the disruption of the riparian and adjacent plant communities.

(2) Any diversion of the stream be done in such a manner as to carry the stream free from silt, mud, and debris around the excavated site. In addition, the annual diversion of the low flow should be conducted as early in the spring as possible to allow the riparian vegetation to reestablish itself along the new channel.

(3) A buffer zone adjacent to and along both banks of the low flow channel of not less than 40 feet be maintained at all times to provide adequate stream cover and reduce siltation.

(4) Where operations require crossing the low flow channel, a culvert be installed to prevent downstream siltation and be placed in such a manner as to not impair water flow or impede the upstream and downstream passage of fishes.

6- While the above mitigations would reduce the impact of the proposed operation on aquatic resources, they would have little effect on the over-all reduction of wildlife habitat resulting from the proposed sand and gravel operation.

7- We note that the Open Space and Conservation Elements of the VENTURA COUNTY RESOURCES PLAN AND PROGRAM adopted by the Board of Supervisors June 27, 1973 indicates that "the lower reaches of the Ventura River from Foster Park to the ocean have a very high potential for future water related recreational activities." The past operation of this project is one of several industrial and municipal activities which have not only adversely impacted the biological resources of the area, but reduced its recreational value. It should be pointed out that this Commission has recommended to the Board of Supervisors that further removal of material from the Ventura River channel for commercial purposes be prohibited (THE VENTURA RIVER RECREATIONAL AREA AND FISHERY: A PRELIMINARY REPORT AND PROPOSAL, March 1, 1973). This recommendation evolved from aesthetic and recreational considerations as well as biological concerns, and is based on the assumption that recreational and educational use of the lower Ventura River and its immediate environs is the highest and best use of the area.

We hope these comments have been helpful. If you have additional questions, please contact us.

Sincerely,

CHARLES PRICE
Secretary

County of Ventura

Planning Department
Victor R. Husbands
Planning Director

May 20, 1974

Oakview Sanitary District
63 E. Portal
Oakview, California

Attn: Mr. Lee Bennett:

Dear Mr. Bennett:

An inspection was conducted on 5/10/74 of the work at the Sanitary Plant in Ventura.

The sludge drying beds, dirt work, and rock sorting operation are beyond the boundaries of your CUP-1743.

Please contact this office within 5 days for a Modification to your CUP-1743. Mr. Don Sperling processes conditional use permits.

Sincerely yours,

Victor R. Husbands
Planning Director

Fabien Dufau
Planner

FD:ld
cc: Flood Control
Don Sperling

county of ventura

County Fish and Game Commission

May 27, 1974

W. Martin Roche
Supervisory Sanitary Engineer
U.S. Bureau of Reclamation
2800 Cottage Way
Sacramento, California 95825

Dear Mr. Roche:

Re: Ventura County Water Management Project

Enclosed please find a copy of THE VENTURA RIVER RECREATIONAL AREA AND FISHERY: A PRELIMINARY REPORT AND PROPOSAL (March 1, 1973) prepared by this Commission.

You will note that we have indicated that one of the requirements for rehabilitating the Ventura River involves "Upgrading the water released from the Oak View Biofiltration Sewage Treatment Plant and returning the treated water to the Ventura River." (page 16) We have also suggested that replacing the Oak View facility with a tertiary treatment plant on the upper reaches of the San Antonio Creek, a tributary to the Ventura River rising in the Ojai Valley, would even better serve the sewage treatment needs of the area and the recreational potential of the Ventura River system.

Also enclosed is a copy of a report prepared by the California Department of Fish and Game concerning waste discharges into the lower Ventura River and their effects on the river's fish and wildlife resources.

We hope this information will be helpful. If you have any questions regarding this project, please feel free to contact me.

Sincerely,

CHARLES PRICE,
Secretary

c/o Channel Islands Harbor, 3900 Pelican Way, Oxnard, California 93030 (805) 487-5511

INFORMATION ONLY

City of

San Buenaventura

MISSION SAN BUENAVENTURA · Founded 1782

July 24, 1974

Regional Water Quality Control Board
107 South Broadway
Room 9026
Los Angeles, California 90012

Attention Raymond M. Hertel, Executive Officer

The City Council of San Buenaventura on July 22, 1974 did endorse the Basin 4A plan in concept and would like to make the following comments. In the Sanitation phase of the report they endorsed the concept of the Montalvo and Saticoy Treatment Plant abandonments, the building of the Santa Clara River interceptor, the VRCSD accepting the responsibility of operation of the various plants around the County, as well as the major interceptors. They questioned the limit of incineration of sludge as the only viable process as this material may have other uses. The City Council feels that to limit the effluent from the Eastside plant to the single use of recharging the underground is wrong in that the water quality (TDS) will not be such that it can be used for that purpose for many years, if ever. Secondly, the report does not address some of the other uses this water could be put to such as freeway landscaping, golf course irrigation, agricultural irrigation, recreational ponds and lakes, green hillsides, maintaining fisheries in both rivers, and for the injection through wells for secondary recovery in the oil fields.

Lastly, consideration ought to be given to additional facilities at Oak View Treatment Plant so that its effluent will support all types of activities and fisheries in the Ventura River.

In the fresh water phase of the report the City Council does endorse in concept the following. The quality management pipeline as outlined in the report and not necessarily as outlined by UWCD, the transferance of the 5,000 acre foot entitlement that UWCD now holds to Casitas Municipal Water District, the building of a treatment plant at Castaic Lake in company with the Castaic Lake water agency, that ground water be mixed with State M and I water for better overall quality, that regeneration type softeners be eliminated, that water quality standards be met for drinking water the City's goal being 500 TDS or better, and that the VRCSD and the Flood Control Districts be the coordinators.

We do take exception though to the requirement in the report that the City obtain a permit to divert water in the Ventura River. Our rights go back to the Mission days and we would not want to see the law changed to accomplish this purpose. We understand the needs of conjunctive uses of water in this river system and will cooperate as much as possible.

Lastly, we question the report's recommendation of moving approximately 11,000 acre feet of water annually into the Ojai Basin for recharge from Lake Casitas and exporting 10,000 acre feet annually in a brine line to the ocean. The river system simply does not have that much water available for that purpose. In addition there are no other sources of water to replace it with.

Thank you for allowing us to comment on this report.

Paul E. Owen
Director of Intergovernmental Projects

PEO/vv/3/5/347

NOTICE OF APPEAL

ON Modification of CUP NO. 1088

TO: Board of Supervisors
County of Ventura
Court House
Ventura, California

In accordance with the provisions of law, I hereby appeal the decision of the Planning Commission, , which was given on August 1 19 74.

The decision was as follows: Granted a CUP for a three year period to S. P. Milling to continue the use of a sand and gravel quarry and processing plant.

The grounds of appeal are:

The City Council has recently formed a Ventura River Committee comprised of citizens at large, and representatives of the Oak View Sanitary District, Casitas Municipal Water District, Friends of the Ventura River and Ventura City Council. The City Council recognized the Ventura River and adjacent flood plain as a unique resource for which a plan should be developed for purposes of its enhancement. The City Council has asked the Ventura River Committee to look not only at the "Live River" concept, but at other potential enhancement measures such as the future elimination of land uses which are contrary to the use of the Ventura River and its environs for public enjoyment. It is hoped that attention will be focused on creation in the future of hiking and riding trails and other public uses along the Ventura River. The City Council expects recommendations from the Ventura River Committee on these items in the next few months. Accordingly, it feels that Southern Pacific Milling should not be granted a CUP for more than a one year period as doing so would limit the possibility of eliminating or changing the sand and gravel quarry and processing plant in the near future if its presence is found to be counter productive to other goals for the enhancement of the Ventura River.

I request that the Board of Supervisors take the following action:

Grant the CUP for a one year period only.

Name of Appellant City Council, City of San Buenaventura

Address of Appellant P. O. Box 99, Ventura, Ca. 93001
(Street, City, Zone, State)

Telephone Number of Appellant 648-7881, Ex. 213

Is the appellant a party in the application? No. If not, state basis for filing appeal as an "aggrieved person".

The City's basic interest in protecting the Ventura River as a natural resource.

City Council, City of San Buenaventura

By
City Manager

NOTE: This form must be completed by the appellant in triplicate and filed with the Clerk of the Board of Supervisors not later than 10 calendar days after the date of decision by the Planning Commission. The Clerk shall forward a copy of this appeal to the Planning Commission and the District Attorney.

This appeal will be heard on the date as scheduled, unless it is in the public interest for such matter to be continued to a later date. Testimony will be taken; and failure of the appellant or his representative to present testimony may be cause for denial.

Appeal and $30 filing fee received by Clerk of Board of Supervisors at
(Time)

on 19.

ROBERT L. HAMM, County Clerk

people's food supply and therefore their conservation is a proper responsibility of the State. This chapter is enacted to provide such conservation for these resources."

Statutory enactments should be construed in a manner which will achieve the objective of the legislation. Friends of Mammoth v. Bd. of Supervisors, 8 Cal. 3d 247, 259 (1972). In that case the Supreme Court relied upon the legislative declaration of purpose in interpreting the California Environmental Quality Act and stated ". . . we conclude that the Legislature intended the EQA to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." Thus the provisions of this chapter should be construed to achieve the legislative objective of "protection and conservation of the fish and wildlife resources of this State." Section 1600.

With this principle in mind we shall now analyze the hypothetical fact situations presented to us.

1. The first factual situation presented is that of an aggregate operator removing gravel within an area adjacent to a stream or river which area will be inundated at higher winter flows.

Many gravel operations occur throughout California within a flood plain or flood channel of rivers used by steelhead and salmon for spawning. Indeed, the same factor which provides for steelhead and salmon spawning beds is that which attracts aggregate companies, an abundance of gravel. The Legislature was specifically concerned over the protection of salmon and steelhead spawning gravels from adverse aggregate operations when sections 1600 through 1603 were originally enacted in 1961. See Report of Senate Permanent Fact Finding Committee on Natural Resources, section 1, Appendix to Journal of the Senate, Reg Sess. 1961, Vol. 2 "Aggregate Removal From Streambeds". In that repor at page 13 the committee stated:

"It was the general consensus of the committee members that the hearings served to clarify the problems involved in this subject and to bear out the concern of not only the sportsmen and commercial fishing interests affected but also of the gravel industry in general over the possibility of salmon populations being in jeopardy."

and later on the same page,

"One basic issue at stake is the preservation and enhancement of the anadromous fishery, primarily salmon and steelhead. This issue is naturally of vital interest to all of the segments of our economy which receive major support from and whose well being is reflected in the stability of these fisheries. As was so aptly stated by those testifying at the hearings, salmon and steelhead represent a 'continuing and renewable resource' which must most be jeopardized by activities resulting in the destruction of the very element necessary for the perpetuity of tha resource."

The committee then recommended legislation which ultimately became sections 1600-1603. (Pages 14, 28, 29, Senate Fact Finding Committee on Natural Resources, supra.)

Section 1505 giving the Department of Fish and Game the power to manage spawning areas as specified for a list of named rivers wa enacted for the same reasons. (Pages 19, 22, 29, Senate Fact Finding Committee on Natural Resources, supra.)

Gravel operations frequently result in excavations of pits which are much deeper than the adjacent river at summer flow. (See page 17 Senate Fact Finding Committee on Natural Resources, supra.) At high winter-spring flows or flood flows the course of the river is often changed due to such excavations. Such changed course can divert a river from a productive spawning riffle into a new course consisting of deep holes with no spawning riffles. Since section 1602 makes specific reference to any person who "substantially diverts . . . the natural flow," it necessarily applies to any gravel operation which could alter the course of a river.

Such substantial alteration of the course of the river would also result in substantial "changes in the bed, channel or bank" of the river. Therefore, any gravel operation in the flood plain adjacent to a river would fall within that provision of section 1602 as well.

In accordance with the phraseology of the first question, we have regarded the flood plain as being distinguished from the streambed. There is authority, however, for treating all the land which would be inundated by high winter flows as constituting the streambed. Thus, it is stated in Miller and Lux v. Madera Canal Etc. Co., 155 Cal. 59, 78 (1909).

"Whether high or low, the entire volume at any time constitutes the water of the river at such time, and the land over which its current flows must be regarded as its channel; so that when, swollen by rains and melting snows it extends and flows over the bottom in its course, that is its flood channel, and when by drouths it is reduced to its minimum, that is its low water channel."

A sound basis exists for concluding that such definition was intended by the Legislature in enacting section 1602.

Salmon and steelhead return from the ocean to enter their home fresh water streams and rivers to spawn during the high fall and winter flow periods. See, State of California Department of Fish and Game

Please turn to page 7

California's Living Marine Resources and Their Utilization (1971), pp. 44-45. Many spawning riffles that are used by salmon and steelhead during high flows are completely dry and exposed during low summer flows. King salmon will even spawn in intermittent streams.

"When many kings are looking for spawning sites, some will enter any small tributary that is carrying an adequate flow, thus in a wet fall, there may be salmon in streams that are usually dry at that time of year . . . Normally the fall-run reaches the spawning grounds late enough so that a suitable supply of cool water is available. (Egg survival is very poor if temperatures are over 57 degrees F.). Fall-run salmon are able to perpetuate their runs in some relatively warm areas because the adults enter and spawn after the streams cool off, and the young leave before the water warms up or the stream goes dry." (Page 45, California's Living Marine Resources and Their Utilization, supra.)

Aggregate companies during the long summer months can and do operate in these dry areas located in the flood plain and remove such gravel used for spawning in the winter. It is clear that a legislative purpose of section 1602 was to protect gravels used by salmon and steelhead for spawning from aggregate operations.

Section 1602 applies to "any person who . . . uses any material from the streambeds . . ." Therefore, any gravel removal from land which would be inundated by high winter flows would fall within the purview of section 1602. All gravel operations within a leveed system would be subject to the provisions of section 1602 since levees are designed to carry flood flows between them.

2. A second factual situation is the construction of a sediment settling pond in a dry streambed which is tributary to a live stream, river, or lake. Settling ponds are customarily used in mining operations, including aggregate processing. Such ponds are used to store toxic by-products of mining activities as well as sediment.

The Senate Fact Finding Committee on Natural Resources in its report, supra, also described the problems of siltation from gravel operations at page 17, as follows:

"Aggregate removal can seriously affect a spawning area in two ways: the physical removal of gravel to a depth below that suitable for spawning reduces the total area available, and the siltation caused by the roiling effect of a dragline or bucket operation and, to a more serious extent the siltation resulting from gravel washing can suffocate downstream eggs and fry and also destroy the organisms necessary in the water for fish survival. The Merced River has been seriously affected in this manner. The American River is in jeopardy, and certain portions of the Tuolumne River have been rendered useless for spawning. Potentially many other streams with valuable spawning areas face such a fate." (Emphasis added.)

and again on page 18,

"Department personnel stated that siltation caused by washing aggregate wherein the unfiltered washwaters are directed back into the streams causes a condition very detrimental to spawning and may even completely destroy a spawning area. The department explained that the fines resulting from the gravel washing action are heavier, and since the waters move considerably slower in the late Spring, Summer and Fall months these fines precipitate out quickly and continuously, compacting any gravel areas immediately below such operations."

It seems obvious that by selecting a dry streambed for locating a settling pond, sooner or later the accumulated contents of the pond will be flushed down the "dry streambed" by periodic water runoff. Such occasions would result in a change or alteration of the live stream, river, or lake below by silt deposit in the receiving body water.

Applying the rule of construction seeking to carry out the legislative objective of preserving fish and wildlife together with the knowledge that selection of such sites will eventually result in flushing material into a stream dictates the conclusion that section 1602 does apply to such situations. In the statutory language the material flushed into the stream would "change the bed (or) channel" of the river through siltation and compaction of gravel areas. Also such an operation could be one that "substantially diverts or obstructs the natural flow" of the stream.

3. The third factual situation presented is the diversion of water from a stream by means of a pump rather than a diversion dam.

Section 1602 applies to "any person who substantially diverts . . . the natural flow . . . of any river, stream . . ."

Of course this provision applies to any method of diversion. The difficult question is what constitutes a "substantial" diversion of the natural flow. At least two possible detrimental effects on fish and wildlife resources come to mind. Pump diversions can divert all of the flow of a stream thus dewatering the area downstream. Pump diversions can also suck in small fish.

Any pump diversion or series of pump diversions that are capable of dewatering a stream at extreme low summer flows or greater flows, or could result in detriment to fishlife in the stream because of flow reduction would constitute substantial diversion of the natural flow and thus come within the purview of section 1602.

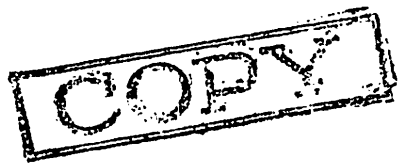
All pump diversions are capable of diverting small fish, fry and eggs out of a stream, river, or lake but a general rule cannot be laid down for what would constitute a substantial diversion, because of the innumerable factual variations.

Friends of the Ventura River

A NON-PROFIT ORGANIZATION

October 11, 1974

M. S. Zschomler
Field Supervisor, Bureau of Sport
Fisheries & Wildlife
Division of River Basin Studies
2855 East Coast Highway, Room 232
Corona del Mar, California 92625



Dear Mr. Zschomler:

Re: Southern Pacific Milling Company Sand and Gravel Operation, Ventura River

Enclosed is a copy of the Environmental Impact Report prepared by the County of Ventura for the Southern Pacific Milling Company sand and gravel operation in the lower Ventura River.

As far as I was able to determine the U.S. Army Corps of Engineers did not issue a formal permit for this project; however, the Corps did submit comments and recommendations regarding excavations along the levee which lays easterly of the river (see pages 12-13 of the EIR).

I hope this information is helpful.

Sincerely,

Mark H. Capelli

MARK H. CAPELLI
Chairman

OFFICE: 63 SOUTH OLIVE STREET, SAN BUENAVENTURA, CALIFORNIA 93001 (805) 647-3497

Santa Clara River Basin 4-A Plan. The advantages presented by consolidation are significant: including the elimination of a major flood hazard on the Ventura River, the removal of an important source of pollution in the lower reaches of the river and tidal lagoon, and a more cost-effective program of sewage treatment in the medium and long run. This alternative to the present project, however, was given little serious consideration.

Secondly, the design of the levee raised around the plant has apparently created a number of potential flood and related environmental problems. In discussions with members of the Ventura County Flood Control District staff we have been told that the narrow gap created by the levee may be inadequate to pass major flood flows, and therefore cause ponding upstream and additional erosion along the west bank of the river, which is currently planted to oranges in this area. The necessity of maintaining maxium channel capacity in this location will probably require periodic cleaning of the channel and consequent disturbance of riparian vegetation and degradation of important fish habitat. (Discussions with personnel from the California Department of Fish and Game have raised the possibility of additional flood control measures upstream such as baffles or spurs to direct flows away from the sludge ponds.) Ultimately, realignment of the river itself may be required, necessitating further disturbance of the river's natural hydrolics and removal of additional riparian vegetation.

Thirdly, we have been informed that the Oak View Sanitary District presently has no plans to protect their sludge ponds against flooding; apparently it is the District's intent to allow the ponds to wash out in high waters, restoring them with material available in the river bottom. This would, of course, mean that sludge would enter the river, as well as the estuary downstream, and possibly wash back up on shore on state and county beaches. (Sludge would not necessarily be carried far out to sea during high flows, as has been suggested, but may be deposited along the banks of the river or in the estuary in much the same manner that mud and other debris is deposited along a river's course during flood stage, thus creating a potential health hazard or public nuisance.) It should be noted that the discharge requirements set by the Los Angeles Regional Water Quality Control Board for the Oak View plant specify that no sludge shall be discharged into the river or its tributaries, or be placed in a position where it could reach these waters. Significantly, the Board's apparent approval of the location of these sludge ponds was given without reviewing any plans or drawning, none having ever been prepared. We are also concerned that the leaching of the liquid sludge stored in these ponds may

Friends of the Ventura River

A NON-PROFIT ORGANIZATION

October 16, 1974

COPY

Paul De Falco, Jr.
Regional Administrator
U.S. Environmental Protection Agency
Region IX
100 California Street
San Francisco, California 94111

Dear Mr. De Falco:

Re: Oak View Sewage Treatment Plant, Ventura County

We have been following for some time and with considerable interest the work being performed at the Oak View Sanitary District Sewage Treatment Plant on the Ventura River.

This work is being funded with a number of grants issued in November of 1973 totaling $843,827, a major portion of which has been in the form of an Environmental Protection Agency grant of $633,000 (Clean Water Project C-06-0758-010). Most of these funds have been used to construct a levee around the treatment plant in an effort to provide protection against a 100 year flood; additionally, the project calls for the installation of back-up equipment, and the preparation of a sludge disposal area immediately north of the plant site on the flood plain of the Ventura River (see enclosed project description).

A number of items concern us. First, we have been advised by the staff of the Los Angeles Regional Water Quality Control Board that the monies used to continue this facility on the flood plain of the Ventura River would have been sufficient to finance the abandonment of the plant and the construction of a trunk line connecting the Oak View trunk line with the City of San Buenaventura's trunk line to allow treatment of the District's wastes at the city's new Eastside Treatment Plant. Such a consolidation has been recommended in the past by the Ventura County Regional Sanitation District and the Los Angeles Regional Water Quality Control Board in its interim

lead to a build up of residues in the river's acquifer and thereby result in a long term degradation of both surface and ground water supplies.

The Los Angeles Regional Water Quality Control Board in its Santa Clara River Basin 4-A Plan has recognized for the first time Cold Fresh-Water (COLD), Migration (MIGR), and Spawning (SPWN) as existing beneficial uses of the lower Ventura River. Given the fact that the Oak View Sanitary District is presently operating under a Cease and Desist Order from the Regional Board for chronic failure to meet old discharge requirements, it seems doubtful that the District under the current arrangement will be able to meet any new discharge standards imposed to protect these belatedly recognized beneficial uses.

Lastly, we have learned that none of the requisite local or state permits have been issued for the sludge disposal phase of the project, though the sludge ponds were constructed several months ago and are presently in use: there is no county Conditional Use Permit to allow the use of the 7½ acre sludge disposal site; no encroachment permit from the Ventura County Flood Control District as stipulated in the county's Flood Control Ordinance #18; nor a stream alteration permit as mandated by section 1601 of the State Fish and Game Code. All permits issued in connection with the project cover only work performed south of Weldon Canyon barranca, while the sludge disposal area is situated north of the barranca.

As a result of our inquiries, the Oak View Sanitary District has applied for a modification of its Conditional Use Permit #1743 to allow the operation of its sludge ponds (see enclosed correspondence). However, the Environmental Impact Report prepared by the District deals in a perfunctory and wholly unsatisfactory way with the environmental issues raised by the project (copy of EIR enclosed). At our prompting, the Ventura County Flood Control District has directed a letter to the Los Angeles Regional Water Quality Control Board (copy enclosed) expressing concern over the location and design of the District's sludge ponds. The California Department of Fish and Game is also concerned with the potential impact of these facilities and has informed us that they will be monitoring both the effects of high winter flows on the ponds and flood control structures and the quality of the plant's effluent.

In view of these irregularities, and the numerous evasive and misleading statements issued by the District in connection with Clean Water Project C-060-0758-010, we are requesting the Environmental Protection Agency to conduct a formal audit to determine if these monies have been administered and spent in accordance with all ap-

applicable federal laws and regulations.

Our organization has been actively involved in the protection of the fish and wildlife and general recreational values of the Ventura River and its tributaries and believe that the public's interest in this unique resource warrants a full and complete investigation.

Sincerely,

Mark H. Capelli

MARK H. CAPELLI
Chairman

MHC: mc

Encl.

cc: M.S. Zschomler, U.S. Bureau of Sport Fisheries and Wildlife
Donald Lollock, California Department of Fish and Game
Patricia Weinberger, Citizens to Preserve the Ojai
Audrey Vincent, Environmental Coalition of Ventura County
E.D. Marshall, Sierra Club
Mark Kerridge, Federation of Fly Fishermen
Richard H. May, California Trout
David Loomis, South Central Coast Regional Commission

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

Division of River Basin Studies
2055 E. Coast Highway, Room 232
Corona del Mar, California 92625

October 28, 1974

Mr. Mark H. Capelli
c/o Friends of the Ventura River
63 South Olive Street
San Buenaventura, Ca. 93001

Dear Mr. Capelli:

Re: NPDES Permit CA0002283 for the Southern Pacific Milling Company

We understand that your organization has some concerns regarding the NPDES permit listed above for discharge of wastewater to the Ventura River.

If you feel we should consider this problem before the permit is adopted, please forward the particulars to this office as soon as possible.

Sincerely yours,

M. S. Zschomler

M. S. Zschomler
Field Supervisor

RCW:gr

cc: Regional Office, Portland, Or.

City of
San Buenaventura
MISSION SAN BUENAVENTURA · FOUNDED 1782

October 28, 1974

Mark Capelli
c/o Great Pacific Iron Works
325 West Santa Clara
Ventura, CA 93001

Dear Mark:

You spoke of a "chalk hole" between the Avenue Treatment Plant and the River and I expressed that I thought it was the floc which we use in water treatment.

This turns out to be somewhat correct. However, it is not alum, but lime and soda ash combined with other minerals from the water. Back in the 1930's, it was common to use this for water treatment. At that time too, the waste product was sold for a filler in the manufacture of paint. This occurred long before either Paul Owen or Dick Dettloff was here, but when the plant was under the Federal WPA.

The residual material which is now exposed did therefore pre-date the 1969 flood and many others. This is by way of explanation only; I wouldn't propose to take any action on it.

Sincerely,

George G. Appel
Administrative Assistant Public Works

GGA/5/3/

post office box 99 · ventura, california · 93001 (805) 648-7881

Friends of the Ventura River

A NON-PROFIT ORGANIZATION

November 6, 1974

M. S. Zschomler
Field Supervisor, U.S. Fish and Wildlife Service
Division of River Basin Studies
2855 East Coast Highway, Room 232
Corona del Mar, California 92625

Dear Mr. Zschomler:

Re: NPDES Permit CA0002283 for Southern Pacific Milling Company

Thank you for your letter of October 28, 1974 concerning our interest in the above NPDES permit for discharge of wastewater to the Ventura River.

We understand that the discharge from the Southern Pacific Milling Company will consist of tailing water from its sand and gravel washing operation. Our review of the waste discharge requirements set by the Los Angeles Regional Water Quality Control Board (File 60-56 enclosed) indicates that waste discharge requirements for this operation have not been established in quantitative terms.

We are concerned that the discharge from this operation be of sufficient quality to protect all the recognized beneficial uses of the lower Ventura River, including Cold Fresh-Water, Migratory, and Spawning habitat.

If appropriate, we would like to see specific requirements set for turbidity, TDS, temperature, pH, and settleable and suspended solids, as well as specific means (e.g., settling ponds) established for meeting these requirements.

We would appreciate it very much if your office could review this matter before the NPDES permit is adopted.

Sincerely,

Mark H. Capelli

MARK H. CAPELLI
Chairman

OFFICE: 63 SOUTH OLIVE STREET, SAN BUENAVENTURA, CALIFORNIA 93001 (805) 647-3497

DOROTHY L. SCHLICHTER
County Counsel
R. THOMAS HARRIS
Assistant County Counsel
Courthouse
Ventura, California 93001
Telephone: (805) 648-6131

Attorneys for Defendant-Respondent
and Cross-Complainant
County of Ventura

SUPERIOR COURT OF THE STATE OF CALIFORNIA

FOR THE COUNTY OF VENTURA

SCHMIDT CONSTRUCTION, INC., a California Corporation, Plaintiff-Petitioner and Cross-Defendant, vs. VENTURA COUNTY MUNICIPAL COURT; VENTURA COUNTY DISTRICT ATTORNEY; COUNTY OF VENTURA AND DOES I THROUGH V, Defendants-Respondents and Cross-Complainant.	NO. SP 47408 DECLARATION OF MARK H. CAPELLI Hearing Date: November 8, 1974

I, MARK H. CAPELLI, state and declare:

I am the chairman of an unincorporated association of approximately 200 members known as the Friends of the Ventura River. Over a period of approximately 20 years, I have made personal observations of the condition of fish and natural vegetation on the north fork of the Ventura River (also referred to as the north fork of Matilija Creek) immediately above its confluence with the main stem of the Matilija Creek and the Ventura River in Ventura County. Such observations

have been made during many hours spent fishing along this section of the north fork as well as while passing by the site on trips up Highway 33 to the Ventura County back country. In addition, I have examined this area (while serving as a Ventura County Fish and Game Commissioner from January, 1973 to June, 1974) in connection with a project undertaken by the Ventura County Fish and Game Commission to rehabilitate the fish resources of the Ventura River system.

Within the last five years, I have witnessed a dramatic change in the condition of the north fork stream and adjoining hillside to the east of the stream near the intersection of Highway 33 and Hot Springs Road as a result of the operation of the Schmidt quarry. Over the past year, I have visited this site approximately 20 times in order to observe the effects of the quarry operations on the stream. Serious damage has been done to the stream at the site of the quarry, as well as to sections of the Ventura River below the quarry site. Some of the adverse consequences of the operation of the quarry which I have observed are as follows:

1. The elimination of numerous deep pools which were characteristic of this section of the stream through filling and/or removal of rock material from the stream bed. The destruction of these pools has meant that important habitat for trout and other fish, as well as other aquatic life, has been substantially degraded, and in some cases completely eliminated.

2. The generation of silt by this operation has had a marked effect on the stream bottom adjacent to the quarry site,

and also down stream for several thousand yards. The deposit of silt into the stream has smothered aquatic insects which serve as important food sources for fish, and has reduced the suitability of this area for spawning purposes.

3. The frequent deposit of large boulders from the quarry into the stream has severely impeded the passage of fish up and down stream, and in some instances completely blocked fish passage. I have personally observed fish trapped in holes below passages which have been blocked by rocks from the quarry.

4. The continued operation of the quarry has prevented the natural establishment and fluorishing of native riparian vegetation which serves a number of critical functions such as providing shade and cover to maintain water temperatures suitable for sensitive cold water species such as Rainbow Trout, supporting insect populations which are important food sources for fish, and providing suitable habitat for other forms of wild life which are normally associated with mountain streams.

Aside from its direct adverse effects upon the stream, the Schmidt quarry operation has seriously degraded the scenic and recreational values of the area. Prior to the recent expansion and encroachment of the quarry into the stream, this section of the north fork was one of the most productive and popular trout fishing sites along the Ventura River system. Fishing was for both native and planted trout. The deep pools were used as

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swimming holes by residents and visitors during the summer months. Because of the quarry operation, such recreational uses are no longer possible.

Executed at Ventura, California, on October 29, 1974.

I declare under penalty of perjury that the foregoing is true and correct.

Mark H. Capelli

MARK H. CAPELLI

county of ventura

Planning Department
Victor R. Husbands
Planning Director

October 30, 1973

Mr. James Donlon, Chairman
Ventura County Fish and Game Commission
244 Grandview Circle
Camarillo, California 93010

Dear Mr. Donlon:

The Ventura County Planning Department has received a preliminary Environmental Impact Report from the Southern Pacific Milling Company, preparatory to their application for renewal of Conditional Use Permit No. 1088, for sand and gravel extraction in the Ventura River.

It is requested that your organization review the attached report and provide a written comment to be used in preparation of the County E.I.R. for the project. Specific items which would be of interest are:

1. Effect of the project on local wildlife.

2. Inventory of flora and fauna in the area.

3. Any other information that you feel are relevant to the subject project.

It is expected that the County E.I.R. will be started during the week ending November 16, 1973. Inputs to the report should be made before that date, if possible. The project is designated as EA-#330.

A copy of the Ventura County E.I.R. Guidelines are attached for your use. Should you require any other information or have any questions, please call me on 648-6131, Extention-2497. Thank you.

Sincerely yours,

Victor R. Husbands
Planning Director

H.C. Bauman
Planner

cc: Fish & Game Commission Members (6)

HCB:ld
Attachment

52 North California Street, Ventura, California 93001 (805) 648-6131

Friends of the Ventura River

A NON-PROFIT ORGANIZATION

November 13, 1974

Robert Montgomery
Regional Manager, Region 5
California Department of Fish and Game
350 Golden Shore
Long Beach, California 90802

Dear Bob---

Re: Lime and Soda Ash Deposites along the Ventura River

During a recent tour of the Ventura River with officials from the Bureau of Reclamation some rather large deposits of a white powdery material were observed along the river immediately opposite the Oak View Sanitary District Treatment Plant. Some members of the party suggested that the material was a flocking agent used in the treatment of drinking water.

An inquiry with the City of San Buenaventura which operates a water treatment facility adjacent to the Oak View plant produced the attached response.

Since this material turns out to be lime and soda ash which could cause an alkalinity problem in the river during low flows, we would appreciate it if your agency could investigate the situation.

Sincerely,

Mark H. Capelli

MARK H. CAPELLI
Chairman

MHC/mc

Enclosure

OFFICE: 63 SOUTH OLIVE STREET, SAN BUENAVENTURA, CALIFORNIA 93001 (805) 647-3497

Friends of the Ventura River

A NON-PROFIT ORGANIZATION

November 16, 1974

Ken Lindsay
Conservation Chairman
Sierra Pacific Flyfishers
14423 Burbank Boulevard
Van Nuys, California 91408

Dear Mr. Lindsay:

We noted an item in the recent issue of the Sierra Pacific Flyfishers' bulletin indicating your organization is interested in getting involved in the program the Friends of the Ventura River are pursuing to rejuvenate the trout and steelhead fisheries of the Ventura River.

Naturally, we welcome the support of all sportsman's and environmental groups, but particularly those in the Southern California area which have a direct interest in restoring and preserving this regional resource.

Perhaps we could present a slide show to your organization at a regular meeting to illustrate the problems and potentials of this project. Our schedule is quite hectic at the moment, but maybe around the first of the year we could set a definite date.

Enclosed for your information is a set of recommendations we recently presented to the Bureau of Reclamation for inclusion in their water management study for Ventura County. The reaction from the Bureau so far has been encouraging and we are hopeful that something positive will come from the study.

Sincerely,

Mark H. Capelli

MARK H. CAPELLI
Chairman

OFFICE: 63 SOUTH OLIVE STREET, SAN BUENAVENTURA, CALIFORNIA 93001 (805) 647-3497

Friends of the Ventura River

A NON-PROFIT ORGANIZATION

November 18, 1974

Raymond M. Hertel
Executive Officer
California Regional Water Quality Control Board,
Los Angeles Region
107 South Broadway - Room 4027
Los Angeles, California 90012

Dear Mr. Hertel:

Re: Oak View Sanitary District Discharge Requirements

We have been notified of an application for waste discharge requirements (NPDES CA0053961) for the Oak View Sanitary District Sewage Treatment Plant on the Ventura River.

We would appreciate receiving as soon as possible copies of the report of waste discharge, related documents, tentative requirements, and comments received regarding this permit.

Sincerely,

Mark H. Capelli

MARK H. CAPELLI
Chairman

OFFICE: 63 SOUTH OLIVE STREET, SAN BUENAVENTURA, CALIFORNIA 93001 (805) 647-3497

Friends of the Ventura River

A NON-PROFIT ORGANIZATI

November 18, 1974

Janet Lyders,
Ventura County Planning Department
625 East Santa Clara Street
San Buenaventura, California 93001

Dear Ms. Lyders:

Re: Draft EIR - Pradera Del Sol - Z2104

We have reviewed the draft EIR for the proposed Pradera Del Sol development and found it to be generally adequate in its treatment of potential impacts on the wildlife resources of the area.

One issue, however, does concern us: the possibility of urban run-off adversely affecting water quality in the Ventura River. This problem normally stems from oil and grease accumulations being washed loose from streets and roads during winter rains and from miscellaneous discharges due to car washings, etc.

We could not tell from the project description or the accompanying maps where the storm drainages were to be located, or into what watercourse they would drain. Will separate storm culverts be installed, and if so will they drain west or south directly into the Ventura River or discharge into existing drainages to the north?

If possible, we would suggest that urban run-off be directed away from environmentally sensitive areas or some type of trap or filtering system be incorporated into the drainage design to alleviate this problem.

We appreciate having the opportunity to comment on this project.

Sincerely,

Mark H. Capelli

MARK H. CAPELLI
Chairman

OFFICE: 63 SOUTH OLIVE STREET, SAN BUENAVENTURA, CALIFORNIA 93001 (805) 647-3497

STATE OF CALIFORNIA RESOURCES AGENCY
RONALD REAGAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION
107 SOUTH BROADWAY, SUITE 4027
LOS ANGELES, CALIFORNIA 90012

(CERTIFIED MAIL-RETURN RECEIPT REQUESTED 462122)

NOV 1 8 1974

Oak View Sanitary District
P.O. Box 638
Oak View, California 93022

ATTENTION: Mr. Leland G. Bennett

RE: Tentative Waste Discharge Requirements (NPDES Permit CA0053961)

Gentlemen:

Reference is made to your completed application to this Board for a permit to discharge wastes under the National Pollutant Discharge Elimination System (NPDES).

Pursuant to the Federal Water Pollution Control Act, as amended in 1972, and in accordance with the California Administrative Code, tentative waste discharge requirements have been prepared.

Enclosed are copies of the following:

1. Tentative requirements, consisting of:

    a. Board Order
    b. Standard Provisions
    c. Reporting Requirements
    d. General Monitoring and Reporting Provisions
    e. Monitoring and Reporting Program

2. Instruction sheet for Public Notice

3. Public Notice (5 copies)

4. Statement of Posting Notice

In accordance with administrative procedures, this Board at a public hearing to be held on December 16, 1974, at 10:00 a.m., 107 South Broadway, Room 1138, Los Angeles, California, will consider the enclosed tentative requirements and comments submitted in writing regarding any or all portions thereof. The Board will hear any testimony pertinent to this discharge and the tentative requirements. It is expected that the Board will take action at the hearing; however, as testimony indicates, the Board at its discretion may order further investigation.

With respect to the public notice, in accordance with the Federal Water Pollution Control Act, as amended in 1972, and the California Administrative Code, you are required to follow the enclosed instructions for publication and posting of the notice not later than November 11, 1974.

Failure to publish the notice will prevent the adoption of waste discharge requirements; to discharge without requirements subjects you to civil penalties of up to $10,000 for each day in which such discharge occurs. Failure to publish the notice by the above date will force us to reschedule this item for a later hearing and will require the publication and posting of a second notice. Please notify this Board by telephone when the notice has been published and submit the proof of publication as required in the enclosed instructions.

Proof of posting and publication of the notice must be submitted to the Executive Officer of this Regional Board by November 26, 1974.

If you have any questions, please call us at (213) 620-4460.

Very truly yours,

Raymond M. Hertel

RAYMOND M. HERTEL
Executive Officer

cc: Environmental Protection Agency, Region IX,
Regional Administrator, Attention: Permits Branch
United States Army Corps of Engineers
State Water Resources Control Board
Department of Fish and Game, Region 5
Department of Health, Water Sanitation Section
Department of Water Resources
Natural Resources Defense Council, Inc.
~~Commerce Clearing House, Incorporated~~
~~Soil Conservation Service, Davis~~
~~Clean Water Project~~
United States Department of the Interior,
Division of River Basin Studies
~~Interstate Electronics Corporation~~
City of San Buenaventura
Ventura County Department of Environmental Health
Ventura County Department of Public Works
NOAA, National Marine Fisheries Service
~~Friends of the Ventura River~~

Enclosures

State of California
Resources Agency
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION

ORDER NO. _____

NPDES NO. CA0053961

WASTE DISCHARGE REQUIREMENTS
FOR

OAK VIEW SANITARY DISTRICT

The California Regional Water Quality Control Board, Los Angeles Region, finds:

1. Oak View Sanitary District has filed a report of waste discharge and has applied for a permit to discharge wastes under the National Pollutant Discharge Elimination System.

2. Oak View Sanitary District discharges wastes from the Oak View Sanitary District Sewage Treatment Plant under requirements contained in Order No. 71-26, adopted by this Board on July 21, 1971.

3. Oak View Sanitary District Sewage Treatment Plant, 5891 North Ventura Avenue, Ventura, California, with a design flow of 3.0 mgd (million gallons per day), currently discharges an average flow of 1.45 mgd of municipal wastewater to navigable waters or tributaries thereto (Ventura River).

4. The quality of the discharge is as follows:

Constituent	Discharge Rate (lbs/day)	Annual Average Effluent Concentration
BOD_5 20°C	121	10 mg/l
Suspended solids	121	10 mg/l
Ammonia nitrogen	197	16.3 mg/l
Nitrate nitrogen	90	3.3 mg/l
Total coliform	---	2.2 MPN/100 ml

5. The discharge point is at Latitude 34°20'33", Longitude 119°17'26" (Discharge Serial No. 001).

6. The Board adopted an Interim Water Quality Control Plan for Santa Clara and Los Angeles River Basins on June 10, 1971, and updated that Plan on December 13, 1972. The Interim Basin Plan contains water quality objectives for surface waters of the Santa Clara River Basin, including the Ventura River.

7. The beneficial uses of the receiving waters are: water-contact recreation, non-water-contact recreation, agricultural supply, groundwater recharge, industrial service supply and industrial process supply, cold freshwater habitat, wildlife habitat, and (within the tidal prism) saline water habitat, marine habitat, commercial ocean and sport fishing, and shellfish harvesting.

8. Effluent limitations, national standards of performance, toxic and pretreatment effluent standards established pursuant to Sections 208(b), 301, 302, 303(d), 304, 306, and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharges to navigable waters and tributaries thereto.

9. There is public contact in the downstream areas, and the quality of wastewater discharged to the Ventura River must be such that no public health hazard will be created.

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

The Board in a public hearing heard and considered all comments pertaining to the discharge and to the tentative requirements.

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 take effect at the end of ten days from the date of its adoption, provided the Regional Administrator, EPA, has no objections.

IT IS HEREBY ORDERED, that Oak View Sanitary District, in order to meet the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Effluent Limitations

1. Wastes discharged shall be limited to treated municipal wastewater, as proposed.

2. The discharge of an effluent in excess of the following limits is prohibited:

Parameter	Units	30-Day average	7-Day average	Daily maximum
BOD_5 20°C	lbs/day	500	750	750
	mg/l	20	30	---
Suspended solids	lbs/day	750	1,130	1,130
	mg/l	30	45	---
Fecal coliform	MPN/100 ml	200	400	2,000

(For BOD and suspended solids, the arithmetic average shall be used; for fecal coliform, the geometric mean shall be used).

Parameter	Units	Average	Maximum
Oil and grease	lbs/day	250	375
	mg/l	10	15
Settleable solids	ml/l	0.1	0.2
Surfactants (as MBAS)	mg/l	---	0.5
Turbidity	TU	---	10
Residual chlorine	mg/l	---	0.1
Total dissolved solids	lbs/day	37,500	37,500
	mg/l	---	1,500
Chloride	lbs/day	4,375	4,375
	mg/l	---	175
Chloride plus sulfate	lbs/day	12,500	12,500
	mg/l	---	500
Boron	lbs/day	37.5	37.5
	mg/l	---	1.5

3. The discharge of an effluent in excess of the following limits after July 1, 1978, is prohibited; provided, however, if it can be conclusively demonstrated by any discharger to ocean water tributaries that the treatment process required by Water Code Section 13379 (a and b), plus source control, will not result in complete compliance with the following limits by July 1, 1978, the State Board may allow additional time for compliance not to exceed July 1, 1983:

Constituent	Discharge Rate (lbs/day) Maximum Daily	30-Day Average	Concentration Limit (mg/l) Average	Maximum
Arsenic	0.500	0.250	0.01	0.02
Cadmium	0.751	0.500	0.02	0.03
Total chromium	0.250	0.125	0.005	0.01
Copper	7.51	5.00	0.2	0.3
Lead	5.00	2.50	0.1	0.2
Mercury	0.050	0.025	0.001	0.002
Nickel	5.00	2.50	0.1	0.2
Silver	1.00	0.500	0.02	0.04
Zinc	12.5	7.51	0.3	0.5
Cyanide	5.00	2.50	0.1	0.2
Phenols	5.0	2.50	0.1	0.2
Total identifiable chlorinated hydrocarbons	0.100	0.050	0.002	0.004
Toxicity concentration	--	--	1.5 *	2.0 *
Fluoride	25.0	25.0	--	1.0
Total nitrogen	1,000	751	30	40

* In toxicity units

4. The daily discharge rate shall be obtained from the following calculation for any calendar day:

$$\text{Daily discharge rate (lb/day)} = \frac{8.34}{N} \sum_{1}^{N} Q_i \, C_i$$

in which N is the number of samples analyzed in any calendar day. Q_i and C_i are the flow rate (MGD) and the constituent concentration (mg/l) respectively, which are associated with each of the N grab samples which may be taken in any calendar day. If a composite sample is taken, C_i is the concentration measured in the composite sample and Q_i is the average flow rate occurring during the period over which samples are composited.

5. The 7-day and 30-day average discharge rates shall be the arithmetic average of all the values of daily discharge rate calculated using the results of analyses of all samples collected during any 7 and 30 consecutive calendar day periods, respectively. If fewer than four samples are collected and analyzed during any 30 consecutive calendar day period, compliance with the 30-day average discharge rate limitation shall not be determined. If fewer than three samples are collected and analyzed during any 7 consecutive calendar day period, compliance with the 7-day average discharge rate limitation shall not be determined.

6. The arithmetic mean of BOD_5 20°C and suspended solids values for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent by weight, of the arithmetic mean of values for influent samples collected at approximately the same times during the same period.

7. The pH of wastes discharged shall at all times be within the range 6.5 to 9.0.

8. Wastes discharged to watercourses shall at all times be adequately disinfected. For the purpose of this requirement, the wastes shall be considered adequately disinfected if the median most probable number of total coliform organisms at some point in the treatment process does not exceed 2.2 per 100 milliliters. The median value shall be determined from samples taken on seven sampling days each week, at least one sample per sampling day, collected at a time when wastewater flow and characteristics are most demanding on the treatment facilities and disinfection procedures. Wastes discharged to watercourses shall have received treatment equivalent to that of a filtered wastewater. A filtered wastewater means an oxidized wastewater in which the finely divided suspended matter has been agglomerated by the addition of a suitable chemical or by an equally effective method and has passed through a filter media, such as sand or diatomaceous earth, so that the final turbidity does not exceed ten (10) Turbidity Units. (Sections 8032 and 8033, California Administrative Code, Title 17).

Nothing herein shall be construed to prevent the use of any alternative treatment process(es) provided that they can be demonstrated to the satisfaction of the Executive Officer to achieve compliance with the effluent limitations and requirements.

9. The temperature of the wastes discharged shall not exceed 100°F.

10. Radioactivity in the effluent shall not exceed the limits specified in Title 17, Section 5, Subchapter 4, Group 3, Article 3. Section 30269 of the California Administrative Code.

11. The diversion or bypass of any discharge from facilities utilized by the permittee to maintain compliance with the terms and conditions of this permit is prohibited, except (1) where unavoidable to prevent loss of life or severe property damage, or (2) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the terms and conditions of this permit. The permittee shall immediately notify the Board by telephone and in writing of each such diversion or bypass in accordance with the procedures established in this permit.

B. General Requirements

1. Standby or emergency power facilities and/or storage capacity or other means shall be provided so that in the event of plant upset or outage due to power failure or other cause, discharge of raw or inadequately treated sewage does not occur.

2. The discharge of wastes to watercourses shall not result in problems due to breeding of mosquitoes, gnats, midges or other pests.

3. Neither the discharge nor any treatment of waste shall cause pollution or nuisance.

4. This discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional 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.

5. The wastes discharged shall not contain any substances in concentrations which would impart odors, color, foaming, or other objectionable characteristics to receiving waters.

6. The wastes discharged shall not cause receiving waters to contain any substance in concentrations toxic to human, animal, plant, or fish life.

7. The wastes discharged shall not cause the appearance of grease, oil, or oily slick, persistent foam, discoloration, sludge banks, or other visible matter of waste origin in the Ventura River at or downstream of the point of discharge.

8. Odors of sewage origin shall not be perceivable beyond the limits of the treatment plant.

9. Wastes discharged shall not damage flood control structures or facilities.

10. Wastes discharged shall not contain nitrates, phosphates, or other nutrients in concentrations capable of causing undue proliferation of plankton or other undesirable biotic growths in the receiving waters.

11. The discharger shall institute a program to eliminate by December 31, 1975, the use of chromium compounds for corrosion treatment in cooling towers, boilers, or other such facilities that discharge to this system.

C. Provisions

1. This Order includes the attached "Standard Provisions".

2. This Order includes items 1, 2, 4, 5, and 6 of the attached "Reporting Requirements".

3. This Order includes the attached "Industrial Wastewater Pretreatment Requirements".

4. This Order includes the attached "General Monitoring and Reporting Provisions".

5. This Order expires on October 31, 1979, and Oak View Sanitary District must file a Report of Waste Discharge in accordance with Title 23, California Administrative Code, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

6. A copy of these waste discharge specifications shall be maintained at the discharge facility so as to be available at all times to operating personnel.

7. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify this Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Board.

8. Any discharge of wastes to navigable waterways or tributaries thereto at any point(s) other than specifically described in this permit is prohibited, and constitutes a violation of the permit.

9. Discharger shall file on or before January 1, 1978, a report comparing the quality of the discharge to the effluent quality requirements contained in effluent limitation A-3 of this Order. The report shall contain a description of the treatment process and the efficiencies of each unit with regard to the removal of the parameters listed in effluent limitation A-3. The report shall outline the source control and pretreatment measures instituted by the discharger to achieve compliance with the effluent limitations contained in A-3.

   If the discharge does not comply with any effluent limitations in A-3, the discharger shall discuss the reason for such noncompliance and outline steps which may be taken to achieve compliance with the effluent limitations and provide an estimate of the cost to achieve full compliance.

10. The discharger shall ensure compliance with any existing or future pretreatment standard promulgated by EPA under Section 307 of the FWPCA or amendments thereto, for any discharge to the municipal system.

TENTATIVE

11. The discharger shall comply with the following time schedule to assure full compliance with the residual chlorine effluent limitation of this Order:

Task	Completion Date	Report of Compliance Due
Full compliance	March 31, 1975	April 15, 1975

The discharger shall submit to the Board, on or before the compliance report date, a report detailing his compliance or noncompliance with the 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 discharger will be in compliance.

Friends of the Ventura River

A NON-PROFIT ORGANIZATION

November 21, 1974

Raymond M. Hertel
Executive Officer
California Regional Water Quality Control Board
Los Angeles Region
107 South Broadway - Room 4027
Los Angeles, California 90012

Dear Mr. Hertel:

Re: Tentative Discharge Requirements, Oak View Sanitary District

We have received a copy of the tentative discharge requirements for the Oak View Sanitary District Sewage Treatment Plant on the Ventura River and will be submitting detailed comments to your office within the next few weeks.

We would like to bring to your attention at this time, however, an important omission regarding the recognized beneficial uses of the lower Ventura River.

The tentative discharge requirements (page 1) list Cold Fresh-Water Habitat as among the existing beneficial uses of the receiving waters, but have omitted Spawning and Migratory Habitat.

As we have pointed out previously, the Ventura River presently supports a run of migratory anadromous fishes, primarily steelhead and pacific lamprey. Because the recognized beneficial uses of receiving waters have a direct bearing on the specific discharge requirements set for waste discharges, we believe it is important that this omission be corrected at the outset of these proceedings.

Sincerely,

Mark H. Capelli

MARK H. CAPELLI
Chairman

MHC/mc

OFFICE: 63 SOUTH OLIVE STREET, SAN BUENAVENTURA, CALIFORNIA 93001 (805) 647-3497

STATE OF CALIFORNIA—RESOURCES AGENCY

RONALD REAGAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION

107 SOUTH BROADWAY, SUITE 4027
LOS ANGELES, CALIFORNIA 90012

December 4, 1974

Reference is made to our recent letter transmitting a copy of tentative waste discharge requirements with the advice that they would be considered by this Board at a public hearing to be held on December 16, 1974, at 10:00 a.m., 107 South Broadway, Room 1138, Los Angeles, California. Enclosed is a revision of these tentative requirements; please substitute the enclosed page(s) for the corresponding page(s) originally forwarded to you. The revised tentative permit will still be considered at the December 16, 1974, public hearing.

Very truly yours,

Raymond M. Hertel

RAYMOND M. HERTEL
Executive Officer

cc: Mailing list, this file

see next page

State of Cal rnia
Resources Ag cy
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION

ORDER NO. _____

NPDES NO. CA0053961

WASTE DISCHARGE REQUIREMENTS
FOR

OAK VIEW SANITARY DISTRICT

The California Regional Water Quality Control Board, Los Angeles Region, finds:

1. Oak View Sanitary District has filed a report of waste discharge and has applied for a permit to discharge wastes under the National Pollutant Discharge Elimination System.

2. Oak View Sanitary District discharges wastes from the Oak View Sanitary District Sewage Treatment Plant under requirements contained in Order No. 71-26, adopted by this Board on July 21, 1971.

3. Oak View Sanitary District Sewage Treatment Plant, 5891 North Ventura Avenue, Ventura, California, with a design flow of 3.0 mgd (million gallons per day), currently discharges an average flow of 1.45 mgd of municipal wastewater to navigable waters or tributaries thereto (Ventura River).

4. The quality of the discharge is as follows:

Constituent	Discharge Rate (lbs/day)	Annual Average Effluent Concentration
BOD_5 20°C	121	10 mg/l
Suspended solids	121	10 mg/l
Ammonia nitrogen	197	16.3 mg/l
Nitrate nitrogen	90	3.3 mg/l
Total coliform	---	2.2 MPN/100 ml

5. The discharge point is at Latitude 34°20'33", Longitude 119°17'26" (Discharge Serial No. 001).

6. The Board adopted an Interim Water Quality Control Plan for Santa Clara and Los Angeles River Basins on June 10, 1971, and updated that Plan on December 13, 1972. The Interim Basin Plan contains water quality objectives for surface waters of the Santa Clara River Basin, including the Ventura River.

7. The beneficial uses of the receiving waters are: water-contact recreation, non-water-contact recreation, fish spawning and migration, agricultural supply, groundwater recharge, industrial service supply and industrial process supply, cold freshwater habitat, wildlife habitat, and (within the tidal prism) saline water habitat, marine habitat, commercial ocean and sport fishing, and shellfish harvesting.

An in-situ bioassay shall be conducted quarterly by the discharger directly in receiving waters at the time receiving water monitoring is conducted. Three-spine stickleback (Gosterosteus aculeatus microcephalus) shall be used as the test fish. Ten (10) stickleback shall be placed in a perforated, non-metallic container (live car) no smaller than one cubic foot. Perforations shall be of sufficient size and number so as to retain test fish 20 to 50 millimeters long (total length) and to permit nearly unrestricted flow through the live car. One live car shall be placed at Station R-1 or in the near vicinity upstream of the discharge. A second live car shall be placed at Station R-2. The live car at Station R-2 shall be located specifically where the diluted waste effluent continuously flows through the test container. The bioassay test shall be conducted for a 96-hour duration. Survival counts shall be made and the numbers of surviving fish reported for the 24, 48, 72, and 96-hour exposure periods. The results of these in-situ bioassays shall be reported to the Board in each monthly report.

Additional Specifications

1. Average daily flow of the Ventura River above the discharge shall be estimated at least at monthly intervals at the time of sampling and reported to the Board.

2. The presence of foam in the Ventura River shall be reported to the Board by telephone within 24 hours of the occurrence. A color photograph which clearly shows the presence (or absence) of foaming shall be taken monthly. Each photograph shall be described and interpreted in detail. Photographs shall be submitted to the Board with each monthly report.

3. At least two color photographs of algal growth and substrate shall be taken at each Station R-1, R-2, R-3, R-4 at the time monthly sampling is conducted. Photographs shall be described and interpreted in detail and submitted to this Board with each monthly report.

Hauling Reports

A statement shall be included in each monthly monitoring report indicating the amount of solid and/or liquid waste hauled and its final point of disposal.

Friends of the Ventura River

A NON-PROFIT ORGANIZATION

December 9, 1974

Edgar Henke
3433 Woodstock Lane
Mountain View, California
94040

Dear Ed---

Re: Proposed Waste Discharge Requirements - Oak View Sanitary District

The Los Angeles Regional Water Quality Control Board is scheduled to adopt new discharge requirements (copy enclosed) for the Oak View Sanitary District's sewage treatment plant on the Ventura River on December 16, 1974.

We are recommending more stringent standards to assure the protection of the recognized beneficial uses of the lower Ventura River (see attachment) and are requesting the support of various environmental organizations for these recommended changes.

Comments should be received by the Board by December 12 to allow the staff and Board to review them before the December 16 hearing; there is a possibility that this hearing may be continued so that if you are unable to get in a letter by the 12th, it may still be considered at a subsequent hearing. We realize this is extremely short notice, however, we were ourselves notified of these proceedings only a week or so ago.

Any correspondence you could generate in support of these recommended discharge requirements would be appreciated.

Sincerely,

Mark

MARK H. CAPELLI
Chairman

MHC/mc

Enclosures

OFFICE: 63 SOUTH OLIVE STREET, SAN BUENAVENTURA, CALIFORNIA 93001 (805) 647-3497

RECOMMENDED CHANGES IN TENTATIVE WASTE DISCHARGE REQUIREMENTS FOR THE OAK VIEW SANITARY DISTRICT

CHLORINE RESIDUAL - proposed discharge requirements stipulate that the waste effluent be disinfected and the residual chlorine not exceed a level of 0.1 mg/l. We recommend the following provision regarding dechlorination of the waste effluent before passing into the Ventura River: "The discharge shall not have a chlorine residue which is detectable by standard methods of analysis."

TOXICITY CONCENTRATION - proposed discharge limitations specify a toxicity concentration of 1.5 toxicity units, with a maximum allowable limit of 2.0 toxicity units. This is essentially an ocean outfall standard which presumes the discharge of waste effluent is made to a large body of water where the volumetric ratio of effluent to receiving water is 1:100. The Department of Fish and Game has recommeneded that the toxicity concentration be reduced to .59 toxicity units to protect the indigenous species of fishes in the lower Ventura River.

pH LEVELS - proposed discharge requirements stipulate that the pH of wastes discharged shall at all times be within the range of 6.5 to 9.0. We recommend that the range be limited to 6.5 to 8.5. (This pH range conforms to the Water Quality Objectives for Fresh Surface Waters outlined in the Water Quality Control Plan for the Santa Clara River Basin, 4A.) Furthermore, we support the suggestion made by the Department of Fish and Game that a series of tests be conducted in the lower Ventura River using native species of fishes, including rainbow trout, to determine the tolerance of various species to rapid changes in pH. In the interim, we recommend that the pH level not be allowed to fluctuate more than .2 of a pH unit per hour.

TEMPERATURE - proposed discharge requirements set a limit on the waste effluent of 100°F. This temperature limitation is not adequate to protect the recognized beneficial uses of the lower Ventura River, which include cold freshwater habitat. We recommend that the temperature of the waste discharge not be allowed to increase the temperature of the receiving waters. (This tempature limitation is also in conformance with the Water Quality Objectives for Fresh Surface Waters suitable for cold water species such as trout as outlined in the Water Quality Control Plan for the Santa Clara River Basin, 4A.)

DISSOLVED OXYGEN - proposed discharge requirements contain a general BOD limitation of 10 mg/l, but no specific effluent limitation for dissolved oxygen. Because this is a critical factor in the maintenance of cold freshwater species of fishes, we recommend that the following stipulation be added: "The dissolved oxygen level in the receiving waters shall not be depressed below 7 mg/l by the discharge at any time; when natural factors cause lesser concentrations, then controllable water quality factors shall not cause further reduction." (Cf National Technical Advisory Committee on Water, U.S. Department of Interior, 1968.)

TOTAL DISSOLVED SOLIDS - proposed discharge requirements specify that the TDS level shall not exceed 1,500 mg/l. Because high concentrations of dissolved solids can have significant osmotic effects on fishes, it is generally recommended that the TDS level not be increased by more than 1/3 of the level that is characteristic of the natural conditions of the receiving waters. Accordingly, we suggest that the level of TDS not be raised above 1,064 mg/l as a result of the waste effluent until it can be demonstrated that higher levels will not adversely affect the recognized beneficial uses of the lower Ventura River, including but not limited to cold freshwater and spawning habitat. (Assuming a TDS level at Casitas Vista Road = 300 mg/l, then .33 X 800 = 264 + 800 = 1,064 mg/l.)

SEWAGE SLUDGE - proposed discharge requirements contain no proviso for controlling the sludge drying operation adjacent to the Oak View plant. We recommend that the provision contained in the present discharge requirements be retained: "No treated or untreated sewage sludge shall be discharged to the Ventura River or its tributaries, or placed where it could reach these waters."

NITROGEN - proposed discharge requirements contain no specific limitations for ammonia nitrogen or nitrate nitrogen, but combine these under the single heading of nitrogen, with a limit of 30 (average) and 40 (maximum) mg/l. Because ammonia nitrogen in concentrations of greater than 2.3 mg/l is toxic to many species of fishes, we recommend that a separate concentration limit set below this level be added for this constituent. In order to prevent undesirable algae blooms and maintain normal stream conditions the total combined nitrogen level should not exceed 12.3 mg/l. The BOD level should reflect this total combined nitrogen limitation as well.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
100 CALIFORNIA STREET
SAN FRANCISCO, CALIFORNIA 94111

Mr. Mark H. Capelli, Chairman
Friends of the Ventura River
63 South Olive Street
San Buenaventura CA 93001

DEC 24 1974

Dear Mr. Capelli:

In response to your October 16, 1974 letter regarding the Oakview Sanitation District Wastewater Treatment Facility and your request for a formal audit by this Agency, it is our standard procedure to conduct an audit of the project upon completion of construction and before final payment is released. The final inspection and audit of grant requirements will be conducted in coordination with the California State Water Resources Control Board and any apparent irregularities in the project construction or fiscal management will be investigated at that time.

We apologize for not responding promptly; however, your letter did help us to become aware of the problem of sludge disposal and precipitated a meeting on the status of the project. The meeting was held on November 19 between EPA, State Water Resources Control Board, Regional Water Quality Control Board, Los Angeles Region, the Ventura County Flood Control District, and Oakview Sanitary District. Agreement was reached on the method of protecting the sludge disposal area from the 50-year flood at a nominal cost. Further administrative action on this proposed change will be coordinated with the State Water Resources Control Board in the near future.

Of the total project cost of $843,827, $669,200 is the actual construction contract of which $205,000 is directly related to dike construction and grading for the sludge disposal site. Any changes to the sludge disposal area will be in addition to the $205,000.

Regarding your comments on consolidation and nonconformance with basin planning, this project is consistent with the Interim Water Quality Control Plan for the Santa Clara River Basin 4-A, June 1971. The program of implementation for facilities as adopted by the California Regional Water Quality Control Board, Los Angeles Region provided for the continued operation of the Oakview Plant as wastewater reclamation facility. At the time of project review, consolidation with the City of San Buenaventura wastewater treatment facility was not favored by the agencies involved.

Bull-shit!

We hope this letter has addressed some of your concerns and we thank you for your interest. If you have any further questions on the status of the project, please do not hesitate to call.

Sincerely,

Sheila M. Prindiville
Director, Water Division

cc: State Water Resources Control Board
California Regional Water Quality
Control Board, Los Angeles Region

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION
107 SOUTH BROADWAY, SUITE 4027
ANGELES, CALIFORNIA 90012

DEC 19 1974

DEC 30 1974

Honorable Omer L. Rains
Senator, Twenty-Fourth Senatorial District
State Capitol, Room 4081
Sacramento, California 95814

RE: Oak View Sanitary District (NPDES No. CA0053961)

Dear Senator Rains:

This is in response to your letter dated December 11, 1974, enclosing the comments and recommendations made by Mr. Mark H. Capelli of the Friends of the Ventura River with respect to waste discharge requirements for the subject agency. Mr. Capelli also sent a copy of these comments to this office.

At its public hearing on December 16, 1974, this Board adopted the waste discharge requirements basically as contained in the tentative permit version. However, based on the letter from the Friends of the Ventura River as well as on recommendations by the Board's staff and the California Department of Fish and Game, the requirement limiting the toxicity of effluent was strengthened considerably.

These requirements were adopted without prejudice and the Board expressed its intention of reconsidering them at an early date in 1975, at which time Mr. Capelli's recommendations will be reviewed in more detail than we had the opportunity of doing at this hearing. On the basis of staff review to date, however, we believe the requirements as adopted are sufficiently stringent to protect fully the beneficial uses of the Ventura River. The Department of Fish and Game has concurred with these requirements.

We will advise you when these requirements will be scheduled for rehearing by the Board.

Very truly yours,

Richard A. Hares

RAYMOND M. HERTEL
Executive Officer

STATE OF CALIFORNIA—RESOURCES AGENCY

RONALD REAGAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION

1[illegible] SOUTH BROADWAY, SUITE 4027
[illegible]NGELES, CALIFORNIA 90012

DEC 13 1974

County of Ventura
Department of Public Works
597 East Main Street
Ventura, California 93001

ATTENTION: Mr. A. P. Stokes, Director

Gentlemen:

Reference is made to your letter dated September 5, 1974, in regard to the flood protection of the existing dry weather disposal area of the Oak View Sanitary District

A meeting, which was attended by members of your staff James Quinn and Don Hauser, was held at the Oak View Sanitary District office on November 19, 1974, to discuss a solution to the problem associated with the flood protection of the Sanitary District's sludge bed.

The meeting recommended the expansion of the existing 50-year flood protected sludge bed area and its year round operation, until more data are available to determine the adequacy of the western section of the sludge bed. I concur with this recommendation.

Enclosed for your information is a copy of the confirmation letter of the November 19, 1974 meeting.

Very truly yours,

Raymond M. Hertel

RAYMOND M. HERTEL
Executive Officer

cc: Oak View Sanitary District
Attn: Mr. Leland G. Bennett

STATE OF CALIFORNIA—RESOURCES AGENCY RONALD REAGAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION

[illegible] SOUTH BROADWAY, SUITE 4027
LOS ANGELES, CALIFORNIA 90012

DEC 13 1974

Oak View Sanitary District
P.O. Box 538
Oak View, California 93022

ATTENTION: Mr. Leland G. Bennett, Chief Engineer & General Manager

Gentlemen:

This is to confirm the conclusions reached at the meeting held at your office on November 19, 1974, relative to the problems associated with the flood protection of your Districts' sludge drying bed. Currently your Districts' sludge drying bed does not meet the requirements as set forth in my letter of March 29, 1972.

The meeting was attended by:

James B. Quinn: Ventura County Flood Control District
Don Hauser: Ventura County Flood Control District
Daryl G. DeRuiter: Environmental Protection Agency
Joe Rodriguez: State Water Resources Control Board, Contract Supervisor
Eric Torguson: State Water Resources Control Board, Project Evaluator
Leland G. Bennett: Oak View Sanitary District
Tom Yi: California Regional Water Quality Control Board, Los Angeles Region.

At the meeting it was agreed that the Oak View Sanitary District would take the following actions:

Enlarge the existing 50-year flood-protected sludge bed by dismantling its northerly levee and by extending its westerly levee to the northerly levee of the existing 10-year flood-protected area. The effect of this construction will devide the entire sludge bed into an eastern section and a western section.

Protect the eastern section from the 50-year flood by raising the entire levee of the eastern section to not less than elevation 199.5.

Raise the sludge bed level of the newly added portion of the eastern section to a grade matching that of the existing portion of the eastern section.

Operate the eastern section year round, and study soil characteristics, optimum operation mode, effects of flooding on the drying bed, etc. Prior to the eastern section reaching its capacity and/or when sufficient data have been compiled, the representatives of the above organizations will meet and determine the conditions, if any, necessary to operate the western section of the sludge bed, and make recommendations thereof to the Regional Board.

Correct any damages incurred to the entire sludge bed and related structures.

The Oak View Sanitary District will estimate and furnish this Board by December 17, 1974, the optimum life of the eastern section and the cost of the proposed construction which will be incorporated in the construction contract change order as a part of Clean Water Project C-06-0758-010.

Very truly yours,

Raymond M. Hertel

RAYMOND M. HERTEL
Executive Officer

cc: County of Ventura Flood Control and Drainage Division
Attn: James B. Quinn
Environmental Protection Agency
Attn: Steve Pardieck
State Water Resources Control Board, Division of Water Quality
Attn: Mr. Eric Torguson, Joe Rodriguez

STATE CAPITOL, ROOM 4081
SACRAMENTO, CA 95814
(916) 445-5405

DISTRICT ADDRESS
STUDIO 129, EL PASEO
SANTA BARBARA, CA 93101
(805) 963-0634

500 ESPLANADE DRIVE, SUITE 800
OXNARD, CA 93030
(805) 485-2136 • 647-8428

OMER L. RAINS
TWENTY-FOURTH SENATORIAL DISTRICT
SANTA BARBARA AND VENTURA COUNTIES

COMMITTEES:
JUDICIARY
NATURAL RESOURCES AND WILDLIFE
ELECTIONS AND REAPPORTIONMENT
JOINT COMMITTEE FOR REVISION OF THE ELECTIONS CODE

CALIFORNIA LEGISLATURE

Senate

CHAIRMAN, SENATE SUBCOMMITTEE ON
POLITICAL REFORM

January 3, 1975

Mr. Mark H. Capelli, Chairman
Friends of the Ventura River
63 South Olive Street
San Buenaventura, California 93001

Dear Mark:

Enclosed is a copy of the response to my letter of December 11, 1974.

I will be glad to discuss this further with you.

Sincerely,

JAMES A. BROWNING, JR.
Field Coordinator

JAB:jp
Enclosure

SACRAMENTO ADDRESS
STATE CAPITOL, ROOM 4081
SACRAMENTO, CA 95814
(916) 445-5405

STATE SENATOR
OMER L. RAINS
TWENTY-FOURTH DISTRICT
VENTURA AND SANTA BARBARA COUNTIES

DISTRICT ADDRESSES
STUDIO 129, EL PASEO
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(805) 963-0634
365 ESPLANADE DRIVE, SUITE 204
OXNARD, CA 93030
(805) 485-2136
(805) 647-8428

California Legislature
Senate

January 10, 1975

Mr. Mark D. Capelli, Chairman
Friends of the Ventura River
63 South Olive Street
San Buenaventura, California 93001

Dear Mark:

Thanks for your memo of January 3, 1975 forwarding information on Oak View Sanitary District sludge bonds.

Effective with the first of this year, I am the Consultant to the Senate Committee on Elections and Reapportionment, which Omer chairs, which will mean I will be based in Sacramento.

I am turning the material over to Bob Borrego who is in charge of this office.

Sincerely,

JAMES A. BROWNING, JR.

JAB:jp

STATE CAPITOL, ROOM 4081
SACRAMENTO, CA 95814
(916) 445-5405

DISTRICT ADDRESS
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OMER L. RAINS
TWENTY-FOURTH SENATORIAL DISTRICT
SANTA BARBARA AND VENTURA COUNTIES

COMMITTEES:
JUDICIARY
NATURAL RESOURCES AND WILDLIFE
ELECTIONS AND REAPPORTIONMENT
JOINT COMMITTEE FOR REVISION OF THE ELECTIONS CODE

CALIFORNIA LEGISLATURE

Senate

CHAIRMAN, SENATE SUBCOMMITTEE ON POLITICAL REFORM

January 3, 1975

Mr. Mark H. Capelli, Chairman
Friends of the Ventura River
63 South Olive Street
San Buenaventura, California 93001

Dear Mark:

Enclosed is a copy of the response to my letter of December 11, 1974.

I will be glad to discuss this further with you.

Sincerely,

JAMES A. BROWNING, JR.
Field Coordinator

JAB:jp
Enclosure

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LOS ANGELES REGION
107 SOUTH BROADWAY, SUITE 4027
LOS ANGELES, CALIFORNIA 90012

DEC 19 1974

DEC 30 1974

Honorable Omer L. Rains
Senator, Twenty-Fourth Senatorial District
State Capitol, Room 4081
Sacramento, California 95814

RE: Oak View Sanitary District (NPDES No. CA0053961)

Dear Senator Rains:

This is in response to your letter dated December 11, 1974, enclosing the comments and recommendations made by Mr. Mark H. Capelli of the Friends of the Ventura River with respect to waste discharge requirements for the subject agency. Mr. Capelli also sent a copy of these comments to this office.

At its public hearing on December 16, 1974, this Board adopted the waste discharge requirements basically as contained in the tentative permit version. However, based on the letter from the Friends of the Ventura River as well as on recommendations by the Board's staff and the California Department of Fish and Game, the requirement limiting the toxicity of effluent was strengthened considerably.

These requirements were adopted without prejudice and the Board expressed its intention of reconsidering them at an early date in 1975, at which time Mr. Capelli's recommendations will be reviewed in more detail than we had the opportunity of doing at this hearing. On the basis of staff review to date, however, we believe the requirements as adopted are sufficiently stringent to protect fully the beneficial uses of the Ventura River. The Department of Fish and Game has concurred with these requirements.

We will advise you when these requirements will be scheduled for rehearing by the Board.

Very truly yours,

Richard A. Harris

RAYMOND M. HERTEL
Executive Officer

Friends of the Ventura River

A NON-PROFIT ORGANIZATI

May 19, 1975

Chairman
State Water Resources Control Board
1416 Ninth Street
Sacramento, California 95814

Dear Mr. Chairman:

Re: Petition to Review Adoption of Waste Discharge Requirements (NPDES Permit #CA0053961)

On April 21, 1975 the California Regional Water Quality Control Board- Los Angeles Region adopted a set of waste discharge requirements for the Oak View Sanitary District.

We believe that these discharge requirements do not conform to the Water Quality Control Plan for the Santa Clara River Basin, 4A (adopted by the Regional Board on March 13, 1975) in important respects and do not adequately protect the recognized beneficial uses of the lower Ventura River, which include: water-contact recreation, non-contact water recreation, fish spawning and migration, cold freshwater habitat, wildlife habitat, and (within the tidal prism) saline water habitat, marine habitat, commercial and sport ocean fishing, and shellfish harvesting.

As a result of the previous and the current discharge requirements valuable fish and wildlife resources, and the recreational activities associated with them, have been and will continue to be adversely impacted and seriously degraded.

It must be emphasized that the Ventura River supports a wide variety of fish and wildlife, some unique in southern California such as the steelhead rainbow trout and the tide-water goby. The Ventura River is also one of the few rivers in southern California where it is still possible angle for resident rainbow trout immediately above the river's tidal prism. (see enclosures)

For these reasons, we are requesting the State Water Resources Control Board to set aside the Regional Board's Order #75-55 and to direct the Regional Board to incorporate and adopt the following recommended changes in connection with the NPDES Permit #CA0053961:

pH - current discharge requirements stipulate that the pH of the discharge shall at all times be within the range of 6.5 to 9.0. This range should be

OFFICE: 63 SOUTH OLIVE STREET, SAN BUENAVENTURA, CALIFORNIA 93001 (805) 643-6074

modified to conform to the fresh water standards set forth in the Water Quality Control Plan for the Santa Clara River Basin, 4A which specifies that the pH shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. This change will serve to protect acquatic resources in the immediate vicinity of the discharge. Additionally, we support the suggestion made by the California Department of Fish and Game that a series of tests be conducted in the lower Ventura River using native species of fishes, including rainbow trout to determine the tolerance of the various species to rapid changes in pH. In the interim, we recommend that the discharge requirements stipulate that the pH level not be allowed to fluctuate more than .2 of a pH unit per hour.

TEMPERATURE - current discharge requirements set a limit on the discharge of 100° F. This temperature limitation will not meet the water quality objectives for fresh surface water contained in the Water Quality Control Plan for the Santa Clara River Basin, 4A which specifies that waste discharges to streams or lakes shall not cause an increase in temperature, and is inadequate to protect the recognized beneficial uses of the lower Ventura River which includes cold freshwater habitat. Discharges at the maximum allowable temperature under the current requirements during periods of low flow would have a substantial adverse impact on the cold-water fishery supported by the receiving waters. We therefore recommend that the discharge not be allowed to raise the temperature of the receiving waters more than 5° F, and in no case should the discharge temperature exceed 80° F.

DISSOLVED OXYGEN - current discharge requirements contain a general BOD limitation of 10 mg/l, but no specific limitation for dissolved oxygen. Because this is an extremely critical factor in the maintenance of cold freshwater species of fishes such as rainbow trout and juvenile steelhead, we recommend that the following requirement be added: "The dissolved oxygen level in the receiving waters shall not be depressed below 5.0 mg/l at any time as the result of the waste discharge." This standard is based upon and is consistent with the water quality objectives for fresh surface waters contained in the Water Quality Control Plan for the Santa Clara River Basin, 4A. Additionally, during the spawning season for trout and steelhead (January through May) the dissolved oxygen level should not be allowed to be depressed below 7 mg/l as a result of the waste discharge. This standard is based on the limitations for dissolved oxygen set forth in the Water Quality Criteris Report of the National Technical Advisory Committee to the Secretary of the Interior, April 1, 1968.

TOTAL DISSOLVED SOLIDS - current discharge requirements stipulate that the TDS level shall not exceed 1,500 mg/l. However, TDS levels measured immediately upstream from the Casitas Vista Bridge ranged from 450 mg/l to 900 mg/l during the past year. The Water Quality Control Plan for the Santa Clara River Basin, 4A sets the mineral quality objective for the Ventura River at the Casitas Vista Bridge at 800 mg/l. Under the current discharge requirements, therefore, the TDS level would be allowed to nearly double as a result of the Oak View Sanitary District's discharge. We believe that this is an unwarranted degradation of the surface and ground waters of the lower Ventura River and recommend that the discharge requirements stipulate that the TDS levels not be increased by more than 1/3 the level of the receiving waters. Assuming an average TDS level at the Casitas Vista Bridge of 800 mg/l, then .33 x 800 equals 264, plus 800 equals 1,064. However, it seems preferable to set the maximum TDS limit on a variable upstream TDS level rather than on a fixed value of 800

mg/l so that the fluctuations in the quality of the discharge could be correlated with the fluctuations in the natural occuring TDS levels upstream.

SEWAGE SLUDGE - current discharge requirements contain no special provisions for controlling the 7 1/2 acres of sewage sludge ponds which were recently contructed adjacent to the Oak View Sanitary District facility without the required state or county permits. The construction of these sewage sludge ponds has been surrounded by controversy, and a large number of questions regarding the environmental impacts of the ponds have been raised by the Ventura County Environmental Resources Agency. The Ventura County Flood Control District has determined that these ponds are situated on alluvial material at the outside of a tight turn on the flood plain of the Ventura River and are structurally incapable of withstanding moderate flood flows from the Ventura River. (see enclosures) We do not believe that the stipulations contained in the General Requirements #5 and #7 provide adequate control over this aspect of the Oak View Sanitary District's operation and therefore recommend that the prohibition contained in the original discharge permit (Order #71-26) be retained: "No treated or untreated sewage sludge shall be discharged to the Ventura River or its tributaries, or placed where it could reach these waters."

AMMONIA NITROGEN - current discharge requirements set the annual average effluent concentration of ammonia nitrogen at 16.3 mg/l. Because ammonia nitrogen in concentrations greater than 2.3 mg/l is toxic to many species of fishes, we recommend that the limits of this constitutent be reevaluated to insure that the protection of indegenous species of fishes. The BOD level should reflect any changes in ammonia nitrogen limits.

BIOASSAY - current monitoring program specifies the use of the three-spined stickleback (Gasterosteus aculeatus macrocephalus) for the insitu bioassay. It is generally recognized, however, that this species has an appreciably higher tolerance to environmental stress - such as temperature, pH, and toxicity concentrations - than do cold-water species such as rainbow trout and steelhead. We therefore recommend that juvenile rainbow trout (Salmo gairdnerii) be used in place of the three spined stickleback as the test species in the insitu bioassay.

The current requirements also indicate that the toxicity of the effluent shall be such that a minimum of 90 percent of the test organisms in a standard bioassay shall survive in undiluted effluent at least 50 percent of the time, and 70 percent shall survive at least 90 percent of the time. We recommend that the survival standard contained in the requirements which were adopted on December 16, 1974 (Order #71-515) be retained: "The toxicity of the effluent shall be such that at least 90 percent of test organisms in a standard bioassay shall survive in undiluted effluent." There appears to be no justifiable reason for altering this requirement to allow for a greater expiration of test organisms and we urge the Board to reinstate the original survival standard.

A copy of this petition for review has been transmitted to the Oak View Sanitary District and the California Regional Water Quality Control Board- Los Angeles Region.

If you should have any questions regarding this petition for review or require

additional documentation in support of these recommended changes, please do not hesitate to contact us.

Sincerely,

Mark H. Capelli

MARK H. CAPELLI
Executive Director

MHC/mc
enclosures

cc: Oak View Sanitary District
California Regional Water Quality Control Board- Los Angeles Region
California Department of Fish and Game
U.S. Fish and Wildlife Service

NEWS RELEASE - Calif. Dept. Fish & Game, Long Beach - June 16, 1975

INVESTIGATION CONTINUES ON FISH KILL

Department of Fish and Game wardens and biologists are awaiting results of laboratory tests of water and mud samples in their continuing investigation of a fish kill on the lower Ventura River early this month.

The kill, which occurred June 4 in the area below the Oak View sanitation outfall and the mouth of the river, included several thousand sticklebacks and substantial numbers of sunfish, bluegill and chubs as well as a few trout. A small number of marine fish also were found dead in the lagoon at the mouth of the river, according to Warden Gayland Taylor who conducted the first investigation of the fish losses.

Initial investigation steps included placing live sticklebacks in cages below the outfall from the sanitation plant, as well as gathering samples of the water and of bottom sediments for laboratory analysis.

DFG water quality biologists reported that 8 out of 10 sticklebacks in the test cages died within 24 hours. The exact cause of their deaths, however, has not been determined.

At the DFG's Sacramento laboratory, tests are being run to check for presence of pesticides or heavy metals.

Additional investigations also are under way to determine the extent of damage to invertebrate marine organisms of the streambed and lagoon.

No decision on issuance of citations will be made until laboratory tests have been completed and wardens and biologists have had the opportunity to examine the results, DFG Inspector Jack Traub said.

Additional investigations are being conducted by the Los Angeles Regional Water Quality Control Board to determine if discharges into the river have complied with standards set by the board.

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Fish kill prompts study of river

The State Department of Fish and Game started a long-term study of the Ventura River Friday to try to find out if it's in danger from a continuing pollution source.

The study, which is expected to take several weeks, is the outgrowth of a June 4 fish kill between the Oak View Sanitary District sewage treatment plant and the mouth of the river.

Local Fish and Game Warden Gayland Taylor said the kill was one of the worst he has ever seen. Several thousand sticklebacks and a number of game fish were killed by a still unknown substance.

"We don't know (if pollution is continuing)," said Ralph L. Young, fish and game information officer in Long Beach. "We know that fish have died in the live cars at the (plant's) outfall itself."

A live car is a plastic box which water can flow through. Fish are put into the box and the box is put into the river for 24 hours to determine the effects of the water on the fish.

Sticklebacks are among the hardiest of small fish and are often used in such tests.

Water Quality Biologist Perry Herrgesell will supervise the tests, which will include taking water samples and putting live cars up river from the Oak View Sanitary District outfall, at the outfall and downriver from it. The plant is off Ventura Avenue near Mill School.

Results of lab tests on water samples taken soon after the fish kill and on bodies of the fish are still not available.

The new tests, Young said, will be "more complete than anything we've done so far."

Fish and game water quality officials "will be up there periodically to make these tests," Young said. "At least this gives us good continuing information."

The tests could be key factors in a couple of projects now under way concerning the river.

The fish and game department is considering stocking the river with fish again, but it doesn't want to do so if the fish have no chance to survive. The tests should indicate whether stocking could work.

The department is also considering setting special fishing regulations for the river. It could set up a regular stocking program, a fishing season and limits which would be more strict than the rules which apply generally to Southern California.

Now, the river is open to fishing all year round, and several local fishermen report regular catches in the Ventura River and its tributaries. The limit is five trout caught during a day or in the possession of a fisherman. That means if a fisherman has three trout at home in the freezer he can legally catch only two more, Young said.

Setting special regulations and a season is "in the talking stage now. We're looking at it. We'd like to get steelhead restarted in there," said Bill Richardson, the department's superintendent of inland fishing.

"It looks like a good possibility of a chance for steelhead to make it if we stocked it (Ventura River) with fingerlings or small fish," he said.

Ventura River fish kill JUL 1975

Sanitation district may face charges

The State Department of Fish and Game will ask the Ventura County district attorney's office to file a misdemeanor action against the Oak View Sanitary District because of the June 4 fish kill.

"We will go ahead and ask the district attorney's office for a complaint because fish did die," said Information Officer Ralph L. Young, Long Beach.

That action will be taken regardless of results of tests of the water and mud from the river which are being made, Young said.

Test results are expected Thursday or Friday.

"A fish kill did occur and it occurred from that point (the Oak View Sanitary District Plant) on. That evidence strongly suggests it was a discharge of something from the plant," Young said.

The maximum fine for a misdemeanor is $500. Civil action is also possible, he said.

The State Regional Water Quality Control Board and the Oak View Sanitary District still disagree about the cause of the kill.

The fish kill was one of the worst he ever saw, Fish and Game Warden Gayland Taylor said. It killed several thousand sticklebacks, many sunfish, bluegill, chubs, a few trout and some sea life at the lagoon at the mouth of the Ventura River.

The kill occurred between the Oak View Sanitary District Plant, near Mill School off Ventura Avenue, and the mouth of the river.

The Regional Water Quality Control Board, Los Angeles, still believes chlorine from the plant caused the fish deaths. The board has told the district to prepare a report on what it's doing to prevent similar events.

If the report isn't satisfactory, the board could take some enforcement action, but that isn't likely, said Miller E. Chambers, chief field engineer.

"We're fairly certain (of chlorine), but we can't prove it," he said. "We like to have things air tight before we go into a board action."

"We're pretty well convinced that it was just a slug of toxic material that somebody dumped in somewhere," said Leland G. Bennett, Oak View's chief engineer-general manager. "It just couldn't have been chlorine."

He said there are 9,000 to 10,000 spots where someone could dump a toxic material into the district's sewers and said it's impossible to guard them all. They range from manholes to toilets in homes.

"I'm under the gun to get a report into the regional board," Bennett said, adding he's not sure what it's going to say. The report is due Wednesday.

The Department of Fish and Game's tests included putting live sticklebacks in cages below the outfall of the sanitation plant and gathering samples of the water and of bottom sediments for lab analysis.

The department said 8 of 10 sticklebacks in the test cages died within 24 hours, but the cause of their deaths has not been determined.

The department is making tests in its Sacramento laboratories to check for pesticides or heavy metals. Other investigations are being made to determine the extent of damage to invertebrate marine organisms.

State may crack down on Oak View discharge

JUL 10 1975

A state order telling the Oak View Sanitary District to stop violating its waste discharge requirements may be issued by the State Regional Water Quality Control Board, Los Angeles.

The board establishes requirements for the discharge of waste water into streams and rivers.

The board will hold a hearing on the proposed cease and desist order at 10 a.m., July 21, at 107 S. Broadway, Los Angeles.

If the order is issued, it will tell the district not to violate the discharge requirements set by the state. Such an order could be issued even if the district said it had not violated requirements.

The hearing is an outgrowth of the June 4 fish kill in the Ventura River. Something — the regional board believes chlorine — got into the river and caused one of the worst fish kills local Fish and Game Warden Gayland Taylor has seen.

Fish were killed in an area from the discharge outlet of the Oak View plant, which is near Mill School, to the mouth of the river.

District officials have said it was not their chlorine, although they believe the kill was caused by something which went through the plant.

"There probably is no way for us to prove it (was chlorine) beyond all shadow of a doubt," said Lawrence Meyerson, supervising water quality control engineer for the regional board. "If it went through their plant, they're responsible for it. The presumptive evidence is that it probably was some chlorine."

The district attorney is still trying to decide whether the sanitary district can be prosecuted in municipal court. Deputy District Attorney Barry Klopfer said he hopes for a decision sometime today.

Meanwhile, the State Department of Fish and Game is still running tests on the river. The most recent tests have not shown any toxicity, and fish in live carts (boxes in which fish are placed while the river flows through them) are surviving.

The water quality control board hearing is open to the public. If the cease and desist order is issued and the district violates requirements after that, it's subject to fines of at least $6,000 per day.

Friends of the Ventura River

A NON-PROFIT ORGANIZAT

April 5, 1976

Oak View Sanitary District
P.O. Box 338
Oak View, California 93022

Attn: Mr. Leland G. Bennett, General Manager-Chief Engineer

Re: Draft Environmental Impact Report, Treatment Plant Improvements to Meet NPDES Requirements, Oak View Sanitary District, Ventura County, California, March 1976

We have reviewed the above document and wish to make the following comments and suggestions for changes. All numbered references are to the chapters and pages in the above document.

II-5 How do the long range annual operating costs of treating the District's effluent at the City of San Buenaventura's Eastside treatment facility (operating at maximum capacity) compare with the long range annual operating costs of treating the District's effluent at the existing Oak View treatment facility (operating at maximum capacity)? If possible, these costs should be expressed in volumetric units to identify any economies of scale which might be realized by treating the District's effluent at a regional treatment facility.

II-8 It is not clear whether the special diatomaceous earth filtration plant in Alternative #5 will be located at the existing Oak View treatment facility or elsewhere; also, who is responsible for the construction and maintenance of these facilities, the District or the oil companies utilizing the treated waste water.

II-10 The EIR indicates that the diatomaceous earth used to filter the treated waste water before use in secondary oil recovery operations is non-renewable, and therefore would have to be disposed of along with the digested sludge produced at the existing Oak View treatment facility. It is our understanding that the Shell Oil Company presently uses diatomaceous earth in its secondary oil recovery operations and is recycling this material as land fill in abandoned sumps. Perhaps similar use could be made of diatomaceous earth wastes generated in the process of treating the District's effluent.

We note that the proposed percolation ponds in Alternative #6 would

be formed by earthen dikes. Federal guidelines for Clean Water Grants require that protection from flooding be provided for such facilities; as a general rule essential plant structures should be above the 100 year or intermediate regional flood elevation or flood protection be provided for the structures. The EIR indicates that the ponds at location #B lie entirely within the 100 year flood plain, and would therefore seem to require substantial flood protection. We are concerned about this aspect of Alternative #6 because any alteration of the natural configuration of the river bed or banks could reduce riparian vegetation along the affected section of the river and eliminate pools, pockets, or other topographic features which provide essential habitat for fish and other acquatic life. (See also comments below at IV-33)

II-11 The EIR indicates that the percolation ponds proposed in Alternative #6 be equipped with emergency overflow pipes to the Ventura River to allow for discharges to the river in the event of a plant upset or some other contingency. The California Administrative Code (Title 23, Chapter 23, Section 2235.1) requires that any person discharging waters that could effect the quality of the surface or ground waters of the state file a report with the Regional Water Quality Control Board having jurisdiction over the area in which the discharge will occur. Given the recognized beneficial uses of the surface waters in the lower Ventura River, we question whether the discharge of effluent from the percolation ponds with significant amounts of toxicants would be permitted by the Los Angeles Regional Water Quality Control Board. (See also comments below at IV-27)

Does the capitol cost assigned to Alternative #6 include the cost of land acquisition necessary for siting the percolation ponds and the costs of constructing and maintaining flood control facilities adequate to protect the percolation ponds at location #B against a 100 year or intermediate regional flood?

III-17 Since the flood hazards associated with the District's existing waste water treatment plant are considerable, a more detailed accounting of the damages incurred in past floods would be appropriate. We note, for example, that the U.S. Army Corps of Engineers reported that the facilities suffered damages estimated at $330,000 during the floods of 1969 (U.S. Army Corps of Engineers, Report on Floods of January and February 1969 in Ventura County, Appendix C).

III-34 Band-tailed pigeons Columba fasciata and Black-tailed deer Odocoileus hemious are commonly associated with Oak Woodland in the study area; also, the riparian habitat along the lower Ventura River

supports sizable populations of Herons Ardea herodias, Butorides virescens, and Florida caerulea and Kingfishers Megaceryle alcyon.

III-36 There is a small resident population of Beldings savannah sparrows Passerculussandwhichensis beldingi presently inhabiting the stands of pickleweed Salicornia spp. at the first mouth of the Ventura River immediately below the U.S. 101 bridge and at the second mouth of the Ventura River in the vicinity of the Southern Pacific Railroad bridge.

III-42 While degraded air quality and periodic heavy traffic are aesthetic detractions, oild field and related industrial operations constitute the most obvious and significant adverse visual impacts in the study area.

Also, we cannot agree with the claim that the District's existing waste water treatment plant rarely emits odors noticable in the immediate vicinity of the plant; the plant's effluent imparts odors to the receiving waters in the Ventura River which are readily detectable downstream at least as far as the Shell Road bridge.

III-45 A number of important recreational facilities, both existing and planned, along the lower Ventura River should be acknowledged in the section on recreation. The City of San Buenaventura presently owns and maintains a small small park known as Seaside Wilderness Park at the mouth of the Ventura River. The California Department of Parks and Recreation is preparing a development plan for the recently expanded Emma Wood State Beach, which includes the upper end of the lagoon at the mouth of the Ventura River. The plan emphasizes the protection and interpretation of biological resources associated with the area, but will also introduce additional numbers of visitors and therefore increase the incidence of body contact with the waters of the lower Ventura River. The California Coastal Plan also contains the following recommendation relating to the recreational use of the lower Ventura River: "Manage, protect, and restore the fishery and encourage water-related recreation by improving water quality through control of upstream discharges." Recently the State Coastal Commission recommended to the Governor that an additional 124 acres along the lower Ventura River be purchased for recreationaland related uses. Finally, the FRIENDS OF THE VENTURA RIVER have developed a general recreational plan for the lower Ventura River which includes provisions for horse-back riding, nature study, pinicking, as well as fishing. All of these recreational facilities and plans could be affected by the various proposals to dispose of the District's effluent.

In addition to providing significant recreational opportunities, the lower Ventura River is used by instructors in the Ventura County schools for research and educational purposes. The biology staff at Ventura College, for example, has indicated that "roughly 1500 students at Ventura College directly or indirectly benefit by the use of the Ventura River through individual class field trips and biological materials utilized for instruction and research. Courses that regularly incorporate materials from the Ventura River and its environs include biology, natural resources, botany, economic entomology and independent studies dealing with the distribution of fishes, and stream data collection and interpretation." (See enclosed letter from Dr. Thomas O'Neill, June 11, 1975)

III-47 The statement regarding the contribution of the District's effluent to the surface flow of the lower Ventura River is misleading. We suggest deleting the phrase beginning "most of" and ending "the year." and substituting the following: "a significant percentage of the surface flow in the lower Ventura River during the summer and fall months in years of below average rainfall and runoff." (See also comments below at IV-2)

III-50 Concerning the Los Angeles Regional Water Quality Control Board's approval of the District's sewage sludge ponds, it should be noted that subsequent on-site investigation by representatives of the Regional Board and other governmental agencies resulted in the temporary abandonment of a portion of the ponds and the alteration of those presently in use.

III-53 The FRIENDS OF THE VENTURA RIVER have petitioned the State Water Resources Control Board to review the Los Angeles Regional Water Quality Control Board's Order No. 75-55 adopting NPDES permit #CA0053961. We are requesting the State Board to strengthen specific discharge requirements, including those for temperature, pH, dissolved oxygen, TDS, toxicity concentration, bioassay survival, and sewage sludge disposal. These changes could alter significantly the feasibility of several disposal alternatives being considered by the District.

III-66 There are additional archeological sites within the study area not listed in the Ventura County Open Spane and Conservation Element which could be affected by several of the disposal alternatives; these include a Chumash indian site in the vicinity of Mills School which lies along the route of the proposed pipelines outlined in Alternatives #2 and #5.

III-77 California live oaks Quercus agrifolia constitute a major

component of the flora of the Canada de Aliso.

III-78 The comments regarding surface flows to the ocean during drought years do not reflect actual conditions. Rainfall in the Ventura River watershed during this past season, which was about 50% below normal, for example, produced runoff sufficient to sustain surface flows to the ocean for several months. We therefore suggest deleting the sentence beginning "During drought" and ending "Pacific Ocean." and substituting the following: "However, even during years of extreme drought, such as the 1947-48 season, surface flows are sufficient to breach the sand bar at the mouth of the river and reach the ocean, though this discharge may be sustained for only one or two weeks." Also, the surface diversion operated by the City of San Buenaventura has not significantly impeded winter flows to the ocean since the intake is capable of handling only about 20 cubic feet per second and the surface diversion is usually begun during the early spring. We therefore suggest omitting the sentence beginning "In wet" and ending "of Ventura.".

III-79 Surface flows measured at 0.0 cubic feet per second at the guaging stations on the Ventura River at Foster Park and on San Antonio Creek at Casitas Springs do not reflect the presence of rising water above and below the guaging stations which forms pools fed by subsurface flows. These water conditions prevail in the lower Ventura River and San Antonio Creek even in drought years and enable native populations of fishes to survive through the summer and fall months; as a result of the below normal rainfall this past season, this condition presently exists in the lower Ventura River.

III-81 As indicated above, there is no time when surface flows are completely absent in the lower Ventura River, though conditions have been such that the District's effluent constituted a significant percentage of the surface flows in the lower Ventura River. We therefore suggest deleting the sentence beginning "However, during" and ending "Ventura River." and substituting the following: "However, the District's waste water discharge would constitute a significant percentage of the total surface flow in the lower Ventura River during the summer and fall months in years of below normal rainfall and runoff."

III-82 The FRIENDS OF THE VENTURA RIVER are not directly involved in the Ventura River Water Quality Surveillance Program; the actual monitoring is being conducted by the Inglewood Fly Fishermen in conjunction with the Southwest Council of the Federation of Fly Fishermen.

III-84 As indicated elsewhere in the EIR, the Ventura River still supports important biological resources. We therefore suggest deleting the sentence beginning "The Ventura" and ending "fifty years." and substituting the following: "The native biological resources of the Ventura River have been substantially reduced during the past fifty years.". Also, the reference to (Capelli, 1972) is not cited in the list of references found at the end of the EIR.

III-85 The reference to a former discharge to the Ventura River from a sand and gravel operation is incorrect; the reference should be to a small concrete block production plant and quarry located on the east side of the Ventura River.

III-87 The reference to (Swift, 1975) is not cited in the list of references found at the end of the EIR. Also, the common name of the Tidewater goby Eucyclogobius newberryi has been changed to Lagoon goby.

III-87 It should be noted that juvenile steelhead migrate to the ocean during the early spring (March-May)and are therefore susceptible to even small discharges of toxicants because of the relatively low dilution factor during this period.

III-90 We question the statement that no direct evidence was found to substantiate the claim that the District was responsible for a major fish kill in the Ventura River in June 1975. On July 21, 1975 the Los Angeles Regional Water Quality Control Board adopted Order No. 75-62 which found that the fish kill was "the result of a toxic substance or other pollutant discharged to Ventura River in the effluent from Oak View Sanitary District Sewage Treatment Plant. Plant records show the effluent contained 1.0 mg/l of residual chlorine on June 4, 1975; this could have accounted for the fish kill." We would also point out that Mr. Meral Short, the District's superindent of operations and maintenance, was quoted in the Ventura County Star Free-Press as saying "We're are reasonably sure that it (whatever killed the fish) came through the plant." (See enclosed Ventura County Star Free-Press article, June 11, 1975)

The discussion regarding the recreational use of the lower Ventura River should reflect the comments made above at III-45.

IV-2 The statment that the Ventura River would be completely dry during the low flow months without the constant discharge from the District's waste water treatment plant is incorrect. As indicated above at III-79, the lower reaches of the Ventura River normally maintain a small surface flow during the summer and fall months, though this

flow is reduced to a series of pools fed by subsurface flows during years of below normal rainfall and runoff. This surface and subsurface water originates in the San Antonio Creek watershed and the mainstem of the Ventura River. Flows are able to reach the lower Ventura River by passing around the City of San Buenaventura's uncompleted submerged dam at Foster Park through a 300 foot gap between the east end of the dam and adjacent hillside. Even these marginal water conditions are capable of sustaining resident trout and other fishes in limited numbers. We therefore suggest deleting the sentance beginning "It is" and ending Oak View." and substituting the following: "This discharge could contribute a significant portion of the surface flow in the lower Ventura River during the summer and fall months in years of below normal rainfall and runoff; without the constant discharge from the District's waste water treatment plant, it is probable that the lower Ventura River would be reduced to a series of pools fed by subsurface flows during these dry periods."

IV-6 Would continued discharge from the District's waste water treatment plant pose a health hazard to people eating fish caught in the Ventura River below the point of discharge?

IV-10 Removal of the District's discharge would not eliminate sumer low flows or substantially moderate year-round flows as indicated. We therefore suggest deleting the sentence beginning "The removal" and ending "low rainfall." and substituting the following: "The removal of the District's discharge would reduce surface water in the lower Ventura River to a series of pools fed by subsurface flows during years of below normal rainfall and runoff."

The impacts associated with the proposals contained in the U.S. Bureau of Reclamation's VENTURA COUNTY WATER MANAGEMENT PROJECT should be clarified. The Bureau is not proposing the enlargement of the Casitas Dam as indicated in the EIR. Also, the proposals to enlarge the Robles Diversion dam and construct a new Matilija Dam are highly tentative; however, it should be understood that both proposals would provide more, not less, surface flow in the lower Ventura River. We therefore suggest deleting the sentence beginning "If the" and ending "Lower River." and substituting the following: "If the proposals outlined in the U.S. Bureau of Reclamation's VENTURA COUNTY WATER MANAGEMENT PROJECT relating to the enhancement of fish and wildlife resources in the lower Ventura River are implemented, the District's discharge would play a less important role in the maintenance of year-round surface flows in the lower Ventura River."

IV-12 The discussion of the effects of eleminating the District's dis-

charge on the river's steelhead resources contains several errors and should be redrafted. We suggest the following as a guide: A flow regimen necessary to sustain a viable steelhead run in the Ventura River would require (1) winter flows (November-February) to the ocean sufficient to allow for the migration of adult steelhead to their spawning grounds and return to the ocean; these flows should be between 50-100 cubic feet per second; (2) spring flows (March-May) to the ocean to permit the downstream migration of juvenile steelhead to the ocean; these flows should be between 20-30 cubic feet per second; (3) summer and fall flows to sustain juvenile steelhead which usually spend from one to two years in the stream before passing to the ocean; these summer and fall flows may be only several cubic feet per second, as water temperature, dissolved oxygen, and stream topography are more critical than the amount of flow. (See enclosed Western Outdoor News article, August 8, 1975)

The Ventura River normally maintains adequate winter and spring flows to allow for the migration of adult and juvenile steelhead. The river's discharge to the ocean is not, as indicated in the EIR, dependent upon the spilling of the Casitas Reservoir, which has not spilled since its completion in 1958.

Since the District's discharge amounts to only 1.6 cubic feet per second (with a possible maximum of 4.6 cubic feet per second) it should be clear that it does not significantly effect the river's winter or spring flows which are responsible for initiating a steelhead run and sustaining suitable conditions for steelhead migration. Assuming it is of adequate quality, the District's discharge can be significant in maintaining fish and wildlife resources during the summer and fall months in years of below normal rainfall and runoff; however, it should be recognized that a majority of the steelhead recruitment takes place above the District's outfall in the mainstem of the Ventura River between Foster Park and the confluence of San Antonio Creek, and in the lower reaches of San Antonio Creek.

In summary, the District's discharge contributes little directly to the maintenance of the steelhead resources in the Ventura River, but can be significant in maintaining other types of fish and wildlife, providing it is of adequate quality. Its actual importance will vary from year to year, depending upon the rainfall pattern in the watershed.

IV-13 We do not agree that the elimination of the District's discharge to the Ventura River would reduce the water surface area of Ventura River lagoon during the summer and fall. Water in the lagoon is supplied primarily by tidal action; reduction of surface

flows would tend to extend the length of time the lagoon remained full by postponing the over-topping and consequent breaching of the sand bar at the mouth of the river. We therefore suggest deleting the sentence beginning "Elimination of" and ending "least tern." and substituting the following: "Elimination of the District's district's discharge to the Ventura River would tend to extend the length of time the lagoon remained full during the summer and fall months by postponing the over-topping and resultant breaching of the sand bar at the mouth of the river. Increased salinity as a result of reduced inflows of fresh water may affect the population of Lagoon gobies Eucyclogobiusnewberryi at the mouth of the river which prefer less than 20 o/oo salinity. The effect on such rare and endangered species as the California least tern Sterna albifrons browni, California clapper rail Rallus longirostris obsoletus, or the Belding's savannah sparrow Passerculussandwhichensis beldingi is uncertain."

Elimination of the District's discharge would remove the unsightly detergent foaming in the river and the disagreeable ordor resulting from the discharge which is readily detectable along the river from the point of discharge downstream at least as far as the Shell Road bridge.

Is the total annual cost of Alternative #2 an on-going operational cost?

IV-23 The sentence begining "The potential" and ending "are enlarged." should be amended to reflect the comments made above at IV-10.

The paragraph beginning "Continued discharge" and ending "endangered avifauna." should be amended to reflect the comments made above at IV-13.

We suggest changing the word "eventual" to "continuing" in the sentence beginning "Continuance of" and ending "history study." to reflect the comments made above at III-45.

IV-27 We have some concern about the proposed operational proceedure in Alternative #5 whereby effluent unsuitable for secondary oil recovery operations would be periodically discharged to the Ventura River, and question whether such a proceedure, given the recognized beneficial uses of the waters of the lower Ventura River, would be permitted by the Los Angeles Regional Water Quality Control Board.

Consistent with comments made above at III-47, III-78, III-79, IV-2, IV-10, and IV-12 we suggest deleting the sentence beginning

"This will" and ending "early November." and substituting the following: "Elimination of the District's discharge would significantly reduce surface flow in the lower Ventura River during the summer and fall in years of below normal rainfall and runoff."

IV-32 If effluent from the percolation ponds in Alternative #6 moves laterally and appears as seepage along the banks of the Ventura River as suggested, this would constitute a discharge to the surface waters of the river and, we believe, be subject to NPDES requirements similar to those now governing the District's discharge. It may therefore be necessary to upgrade the District's existing waste water treatment plant to control those constituents which are presently found in excessive amounts and which would not be removed or adequately reduced by the percolation process. We would also point out that an NPDES permit is required for discharges to ground waters as well as surface waters. (See comments above at II-11)

The EIR indicates that the effects on water quality resulting from emergency discharges of effluent to the Ventura River would be limited to the duration of the discharge period. However, the biological impacts of such discharges may continue for months or even years. An emergency discharge of effluent containing significant amounts of toxicants during the spring when juvenile steelhead are passing through the lower reaches of the river, for example, could eliminate a whole generation of fish, comprising several years of runs. The effect on species such as the Lagoon goby Eucyclogobius newberryi which cannot reestablish themselves once they are extirpated would be permanent, unless reintroduced artificially.

IV-33 In addition to eliminating 20 acres of productive lemon trees the flood control facilities required to protect the percolation ponds at location #B in Alternative #6 would involve the removal of considerable riparian vegetation which provides significant wildlife habitat and serves as buffer between the river and the adjacent agricultural operation. This riparian vegetation performs a number of important biological functions, such as maintaining suitable water temperatures for cold-water species of fishes, providing habitat for many forms of insects having high food value for fish and other aquatic life, and supplying cover for fish and wildlife. Additionally, the root systems of riparian plants trap significant amounts of silt generated by storm runoff, regulate stream flows by absorbing runoff during periods of heavy precipitation and releasing moisture during the summer and fall months, and trap important nutrients such as phosphorus which contributes to the eutrophication of surface waters.

Discussions with staff members of the Ventura County Flood Control

District have disclosed that the narrow gap created by the levee around the District's existing waste water treatment plant may be inadequate to pass major flood flows, therefore causing ponding upstream and increased erosion along the west bank of the river. The further constriction of the river channel through the construction of the proposed percolation ponds and flood control facilities in Alternative #6 at location #B could necessitate the maintenance of maximum channel capacity at this location, and therefore the periodic removal of riparian vegetation. We believe that that these potential impacts should be addressed as stipulated in Section 15143 of the California Environmental Quality Act.

Regarding the aesthetic impact of the percolation ponds in Alternative #6, we note that the topographic map used in the EIR indicates that the elevation of the Ojai Freeway is 35 feet higher than the elevation of the percolation ponds at location #B, and 31 feet higher than the elevation of the percolation ponds at location #A. The ponds would therefore be highly visable from the Oaji Freeway and have a definite negative aesthetic impact unless properly screened.

A-10 The correct scientific name for the Belding's savannah sparrow is Passerculus sandwhichensis beldingi.

A-13 The correct scientific name for the California brown pelican is Pelecansus occidentalis californicas.

A-11 The correct scientific name for the Black brant is Branta nigricans.

We hope the above comments and suggestions will be useful in finalizing the Environmental Impact Report for this project. If you should have any question regarding our comments or suggestions, please do not hesitate to contact us.

Sincerely,

Mark H. Capelli

MARK H. CAPELLI
Executive Director

MHC/mc
enclosures

cc: California Department of Fish and Game, Region 5
Los Angeles Regional Water Quality Control Board
U.S. Fish and Wildlife Service

Ventura County Board of Supervisors
Ventura County Environmental Resources Agency
Ventura County Department of Public Works
Ventura County Fish and Game Commission
Ventura River Valley Municipal Advisory Council
Ventura Regional County Sanitation District
City of San Buenaventura
City of Ojai
Meiners Oak Sanitary District
Ventura Avenue Sanitary District
U.S. Environmental Protection Agency
California Water Resources Control Board
Boyle Engineering Corporation

ADDENDUM

IV-16 Any grading which involves the removal of native vegetation such as chaparral on slopes would increase the rate of erosion and siltation in the Ventura River unless properly controlled. The development of additional agriculture in the Canada Larga associated with Alternative #3 therefore could have significant adverse environmental impacts on the fish and wildlife resources of the Ventura River. (For a general discussion of these impacts see Almo J. Cordone, et al "The Influence of Inorganic Sediments on the Aquatic Life of Streams" in California Fish and Game, April 1961, vol. 47, no. 2.) This problem could be aggravated by the fact that Ventura County presently does not have an agricultural grading ordinance governing the removal of brush or other types of vegetation from steep slopes. These secondary impacts must be addressed in accordance with Section 15143, subsection (a) of the California Environmental Quality Act which stipulates that the direct and indirect impacts of projects must be described, including changes induced in the human use of the land.

SACRAMENTO ADDRESS
STATE CAPITOL, ROOM 5082
SACRAMENTO, CA 95814
(916) 445-5405

State Senator
OMER L. RAINS
EIGHTEENTH DISTRICT
SANTA BARBARA AND VENTURA COUNTIES

DISTRICT ADDRESSES
STUDIO 127, EL PASEO
SANTA BARBARA, CA 93101
(805) 963-0634
500 ESPLANADE DRIVE, SUITE 840
OXNARD, CA 93030
(805) 485-2136 • 647-3428

October 28, 1976

TO: Mark Capelli, Executive Director,
Friends of the Ventura River

FROM: Bruce Rosenthal

Enclosed you will find a copy of Legislative Counsel's bill digest and language to remove municipal immunity from criminal liabilities for toxic discharges under the Fish and Game Code.

Please review and send me your comments.

BR/ca

Enclosure

OCT 25 1976
Req. #15681

An act to add Section 5650.5 to the Fish and Game Code, relating to pollution.

The people of the State of California do enact as follows:

SECTION 1. Section 5650.5 is added to the Fish and Game Code, to read:

5650.5. Sections 5650 and 5652 shall also be applicable to any city, county, district, the state, or any department or agency thereof.

SEC. 2. Notwithstanding Section 2231 of the Revenue and Taxation Code, there shall be no reimbursement pursuant to this section nor shall there be any appropriation made by this act because the Legislature recognizes that during any legislative session a variety of changes to laws relating to crimes and infractions may cause both increased and decreased costs to local government entities and school districts which, in the aggregate, do not result in significant identifiable cost changes.

Req. #15681
Rains

Legislative Counsel's Digest

Water pollution: criminal liability.

Existing law makes it a misdemeanor to deposit in, permit to pass into, or place where it can pass into the waters of this state specified substances, including any substance or material deleterious to fish, plant life, or bird life, or to deposit, permit to pass into, or place where it can pass into the waters of the state, or to abandon, dispose of, to throw away, within 150 feet of the high-water mark of the waters of the state, any cans, bottles, garbage, rubbish, or the viscera or carcass of any dead mammal, or the carcass of any dead bird.

This bill would make such provisions also applicable to any city, county, district, the state or any department or agency thereof.

The bill would also provide that neither appropriation is made nor obligation created for the reimbursement of any local agency for any costs incurred by it pursuant to this bill for a specified reason.

Vote: majority. Appropriation: no. Fiscal committee: yes. State-mandated local program: yes.

Friends of the Ventura River

A NON-PROFIT ORGANIZATION

August 2, 1976

Senator Omer L. Rains
State Senator, 18th Senatorial District
State Capitol Building
Sacramento, California 95814

Dear Senator Rains:

Re: Proposed Legislation Establishing Criminal Liability of Public Entities

Last October I wrote you expressing concern about an apparent gap in existing state law which exempts public entities such as sewerage and irrigation districts from criminal liability and suggesting the need for legislation to correct this situation. By copy of my letter of October 13, 1975 I also asked Assemblyman J. K. (Ken) MacDonald to consider similar legislation.

You may recall that this situation came to our attention as a result of an effort by the Ventura County District Attorney's Office to bring criminal charges against the Oak View Sanitary District for discharging toxic wastes into the lower Ventura River.

On September 12, 1975 the court sustained a demurrer filed by the District alleging that it was a political subdivision, rather than a corporation, and therefore immune from criminal prosecution. As Mr. Barry B. Klopfer of the Ventura County District Attorney's Office has indicated in a letter of September 19, 1975, "The implications of this decision are obvious: a corporate form business that causes pollution can be prosecuted; a "public entity" can escape all criminal liability."

In a letter dated November 5, 1975 one of your Administrative Assistants, Mr. Robert Borrego, indicated that you would be willing to introduce the suggested legislation if Assemblyman MacDonald did not. Several weeks after receiving Mr. Borrego's letter Assemblyman MacDonald sent me a copy of an analysis prepared by Legislative Counsel regarding the remedies available to prevent waste discharges to rivers under existing law and the

OFFICE: 63 SOUTH OLIVE STREET, SAN BUENAVENTURA, CALIFORNIA 93001 (805) 643-6074

possibility of enacting legislation which would make it possible to impose criminal penalties upon local public agencies for discharging raw wastes into rivers. After reviewing this analysis I had a telephone conversation with Assemblyman MacDonald about the matter. He agreed that the analysis was inconclusive and in fact did little to support the criminal liability of public entities.

Because of the legal complexity of the issues raised by the Oak View decision and the political difficulties inherent in altering the concept of criminal liability, Assemblyman MacDonald suggested that you would be better able to research and sponsor such legislation as would be necessary to make criminal prosecution of public entities possible.

I would very much like to know whether you are still interested in pursuing such legislation.

Sincerely,

Mark H. Capelli

MARK H. CAPELLI
Executive Director

MHC/mc
enclosures

cc: Claire T. Dedrick, Secretary for Resources
John Bryson, Chairman, State Water Resources Control Board
Assemblyman J. K. (Ken) MacDonald
Charles Fullerton, Director, California Department of Fish and Game
Donald Llock, Chief, Environmental Services Branch, California Department of Fish and Game
Robert D. Montgomery, Regional Manager, Region 5, California Department of Fish and Game

STATE OF CALIFORNIA—THE RESOURCES AGENCY

EDMUND G. BROWN JR., Governor

STATE WATER RESOURCES CONTROL BOARD

P. O. BOX 100 • SACRAMENTO 95801

(916) 322-3580

NOV 26 1976

In Reply Refer to: 224:DJ

Mr. Mark H. Capelli
Executive Director
Friends of the Ventura River
63 South Olive Street
San Buenaventura, CA 93001

IN THE MATTER OF THE PETITION OF FRIENDS OF THE VENTURA RIVER FOR REVIEW OF ORDER NO. 75-55, CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION. OUR FILE NO. A-107.

Enclosed is a copy of Order No. 76-22 which was adopted by the State Board at its regular business meeting on November 18, 1976.

William R. Attwater
Chief Counsel

Enclosure

cc: Oak View Sanitary District
P. O. Box 338
Oak View, CA 93022

A/G 7

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of The Friends of Ventura River for Review of Order No. 75-55 (NPDES Permit No. CA0053961) of the California Regional Water Quality Control Board, Los Angeles Region	Order No. WQ 76-22

BY THE BOARD:

On April 21, 1975, the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) adopted Order No. 75-55 (NPDES Permit No. CA0053961) providing waste discharge requirements for the Oak View Sanitary District's (discharger) discharge to the Ventura River.

On May 20, 1975, the Friends of the Ventura River (petitioner) filed a petition for review of Order No. 75-55. The petition raises both technical and legal issues.

I. BACKGROUND

The petitioner "...is a citizens organization whose principal objective is the protection and rehabilitation of the fish and wildlife resources of the Ventura River...for use and enjoyment of current and future generations."[1/] The discharger operates a sewage treatment plant located at 5891 North Ventura Avenue, Ventura, California, which discharges an average daily flow of 1.45 mgd of treated municipal wastewater to the Ventura River. "The treatment plant serves a sewered population of approximately 15,600 and an area of about 13 square miles which

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1/ Supplement to the petition filed July 15, 1976.

includes the Oak View, Meiners Oaks, and Ventura Avenue Sanitary Districts and the City of Ojai. Practically all of the sewage reaching the treatment plant is of a domestic origin. The existing facility is a secondary treatment plant which provides biological treatment and anaerobic sludge digestion...."[2/]

The beneficial uses of the receiving waters include water-contact recreation, non-water contact recreation, fish spawning and migration, agricultural supply, groundwater recharge, industrial service supply and industrial process supply, cold freshwater habitat, wildlife habitat, and (within the tidal prism) saline water habitat, marine habitat, commercial ocean and sport fishing, and shellfish harvesting.[3/]

II. CONTENTIONS AND FINDINGS

The contentions of the petitioner and our findings relative thereto are as follows:

1. Contention: The petitioner requests that Effluent Limitation A.7 of Order No. 75-55, providing that the pH of discharged waste shall be 6.5 to 9.0[4/], be changed to a range of 6.5 to 8.5 in conformity with the applicable Water Quality Control Plan[5/] and that the pH not be permitted to fluctuate more than 0.2 pH units per hour.

Findings: The pH limitations prescribed by the Water

2/ Part II, Chapter 16, Page 50, Water Quality Control Plan Report, Santa Clara River Basin (4A)

3/ Table 2-3, Present and Potential Beneficial Uses in the Santa Clara River Basin, Chapter 2, Water Quality Control Plan Report, Santa Clara River Basin (4A)

4/ Effluent Limitation A.7 provides:
"The pH of wastes discharged shall at all times be within the range of 6.5 to 9.0."

5/ Water Quality Control Plan Report, Santa Clara River Basin (4A), Part I, Chapter 4.

Quality Control Plan for the receiving waters of the lower Ventura River provide:

> "The pH shall not be depressed below 6.5, nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.2 units in waters with designated marine (MAR) or saline (SAL) beneficial uses nor 0.5 units in fresh waters with designated COLD or WARM beneficial uses."

The current effluent limitations on Ph of 6.5 to 9.0 have historically resulted in compliance with the foregoing receiving water objectives.[6/] While the petitioner requests that the pH level not be allowed to change more than 0.2 units per hour the Water Quality Control Plan allows pH changes of 0.5 units from ambient receiving waters. This limitation is adequate in terms of pH fluctuations inasmuch as most fish species can tolerate large, rapid changes in pH without adverse effects.[7/]

However, there is no mention in the Order of the receiving water limitation for pH. While General Requirement B.4[8/], of Order No. 75-55 provides that the discharge of waste shall not result in a violation of any applicable water quality objective for receiving waters, the Order should specifically provide that:

> The pH of the receiving waters shall not be depressed below 6.5, nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 units.

6/ See Table No. 16-15, Water Quality Control Plan Report, Santa Clara River Basin (4A), and Oak View Sanitary District's monthly self-monitoring data for 1974 and 1975.

7/ See Water Quality Criteria, second edition, McKee and Wolf, Publication 3-A, California State Water Resources Control Board, pp. 235-237.

8/ General Requirement, B.4, provides:
"This discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional 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." (Emphasis added.)

2. Contention: The petitioner contends that Effluent Limitation A.9 of Order No. 75-55 providing that the temperature of discharged wastes shall not exceed 90°F.,[9] will not protect the cold freshwater habitat and requests that the discharge not be allowed to raise the temperature of the receiving waters more than 5°F. and that the maximum temperature of discharged wastes not exceed 80°F.

Findings: The temperature limitation required by the Water Quality Control Plan for the receiving waters provide:

> "At no time or place shall the temperature of any COLD water be increased by more than 5°F. above natural receiving water temperature."[10]

General Requirement B.4, of Order No. 75-55 makes the foregoing requirement applicable to discharger. Due to the natural variations in both the flow and temperature of the Ventura River it would be difficult to establish a specific maximum temperature for the discharger's effluent that would not result in a receiving water temperature increase of more than 5°F. at any given time. Inasmuch as the requested 10°F. reduction in the effluent limitation for temperature is only an additional method for assuring that which is already required by General Requirement B.4 of the Order, we find that Order No. 75-55 is appropriate as it stands. However, for purposes of clarity the following limitation should be included in the permit to implement the provisions of the Water Quality Control Plan:

9/ Effluent Limitation A.9 provides:

"The temperature of the wastes discharged shall not exceed 90°F."

10/ See Footnote 5.

> At no time or place shall the temperature of the receiving water be increased by more than 5°F.

3. Contention: The petitioner asserts that Order No. 75-55 contains no limitation for dissolved oxygen (D.O.) and requests that the Order be modified to provide that the D.O. level shall not be depressed below 7 mg/l during the spawning season.

Findings: The D.O. limitations required by the Water Quality Control Plan for the receiving waters provide:

> "The mean annual dissolved oxygen concentration shall be greater than 7 parts per million (ppm) provided that no single determination shall be less than 5.0 ppm, except when natural conditions cause lesser concentrations. Additionally, for cold surface streams and cold water spawning streams the dissolved oxygen content shall not fall below 6.0 and 7.0 mg/l respectively, as the result of waste discharge."11/

Since the lower Ventura River is classified as both a cold surface stream and a cold water spawning stream, the foregoing requirement is incorporated in Order No. 75-55 by General Requirement B.4, providing that the discharge shall not cause a violation of applicable receiving water objectives. However, as indicated above, significant receiving water limitations should be placed in the Order. Therefore, the Order should specifically provide:

> The dissolved oxygen concentration of the receiving waters shall not be depressed below 7 parts per million except when natural conditions cause lesser concentrations.

Given the importance of the D.O. parameter in the receiving waters, the variability of the flow in the lower Ventura River and in order to evaluate the effect of the waste discharge on the D.O. level in the receiving water during the river's annual cycle, the monitoring requirements for the discharger should be amended to require monthly receiving water monitoring for D.O. for

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11/ See Footnote 5, supra.

not less than a twelve-month period. The Order is not otherwise inappropriate regarding this contention.

4. Contention: The petitioner contends that Effluent Limitation A.2 providing that total dissolved solids (TDS) shall not be discharged in concentrations exceeding 1,500 mg/l,[12] will degrade the receiving waters and requests that Order No. 75-55 be modified to provide that receiving water TDS not be increased by more than one-third of that which exists above the point of discharge.

Findings: The Water Quality Control Plan objective for TDS in the Ventura River receiving waters is 800 mg/l at Casitas Vista Road, several miles above the discharger's outfall, and 1,500 mg/l at Shell Road, several miles below the outfall.[13] It is apparent that the 1,500 mg/l TDS effluent limitations will satisfy the 1,500 mg/l TDS limitations at the Shell Road monitoring station several miles downstream from the outfall.

Because of the large seasonal variations in the flow and in the water quality of the Ventura River, the petitioner's request that the TDS limitation be based on the variable upstream TDS concentration by more than 1/3 would result in an unreasonable limitation in that it would require frequent, if not continuous monitoring of the upstream TDS levels. The discharge requirement of 1,500 mg/l for TDS should not adversely affect the beneficial use of the receiving waters. TDS levels of up to 2,000 mg/l should not interfere with freshwater fish and aquatic life.[14]

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[12] Effluent Limitation, A.2, provides:

"The discharge of an effluent in excess of the following limits is prohibited:

"Parameter	Units	Average	Maximum
Total dissolved solids	lbs/day	37,500	37,500
	mg/l	---	1,500"

[13] See Footnote 5, supra.

[14] See Footnote 7, supra.

We conclude that Order No. 75-55 is sufficient to achieve the TDS objective in the Water Quality Control Plan and to protect the beneficial uses of the receiving water even under conditions of no natural flow in the Ventura River and is appropriate in its present form.

5. Contention: The petitioner maintains that Order No. 75-55 does not adequately control sewage sludge and requests the insertion of the following language in the permit -- "No treated or untreated sewage sludge shall be discharged to the Ventura River..."

Findings: Provision C.8 of Order No. 75-55 provides that the discharge of wastes at any location other than provided by the permit constitutes a violation of the permit[15/] and Effluent Limitation A.1 prohibits the discharge of wastes other than as provided by the permit.[16/] Order No. 75-55 does not allow for the discharge of treated or untreated sewage sludge by the discharger and any such discharge would constitute a violation of the Order. We conclude that no additional language regarding the discharge of sludge need be included in Order 75-55.

6. Contention: The petitioner asserts that the level of ammonia nitrogen in the discharger's effluent is toxic to aquatic life and requests that provision be made in Order No. 75-55 to assure the protection of aquatic life.

15/ Provision C.8 provides:

"Any discharge of wastes to navigable waterways or tributaries thereto at any point(s) other than specifically described in this permit is prohibited, and constitutes a violation of the permit."

16/ Effluent limitation A.1 provides:

"1. Wastes discharged shall be limited to treated municipal wastewater, as proposed."

Findings: There is no effluent limitation for ammonia nitrogen in Order No. 75-55 and Finding No. 4 of the Order indicates that the annual average concentration of ammonia nitrogen in the discharger's effluent is 16.3 mg/l. Depending upon the pH, temperature and presence of total dissolved solids in the blended effluent and receiving waters, ammonia nitrogen will form varying amounts of un-ionized ammonia.[17/] A survey of technical literature indicates that in order to protect aquatic life, concentrations of un-ionized ammonia in receiving waters should not exceed 0.02 mg/l to 0.025 mg/l. Calculations based upon the dischargers self-monitoring data for the receiving waters in the Ventura River[18/] reveals concentrations of ammonia in the receiving waters in excess of the foreoing values downstream of the dischargers outfall over a thirteen-month period.[19/] There is no record of toxic concentrations of ammonia nitrogen nor is there any record of fish kills upstream of the discharge. Discharger "Self-Monitoring" reports for the upstream receiving water station are of little value because of the limitations in analysis for low concentrations of ammonia nitrogen.

17/ The term "ammonia nitrogen" and the test outlined for ammonia nitrogens set forth in Standard Methods for the Examination of Water and Wastewater, 13th Edition, includes ammonia (NH_3), the hydrated form of ammonia (NH_3; nH_2O) and ammonium ions (NH_4+). The toxic form of ammonia nitrogens is the un-ionized ammonia species [(NH_3) and (NH_3;nH_2O)]. The quantity of ammonia nitrogen which will form toxic ammonia will vary with the temperature and pH of the mixing effluent and receiving water and the toxicity of ammonia nitrogen can change markedly while the concentration of ammonia nitrogen remains at a constant value.

18/ See Appendix A

19/ November 1974 through November 1975.

Order No. 75-55 limits the discharge of ammonia nitrogen by General Requirement B.6 which provides that "waste discharged shall not cause receiving waters to contain any substance in concentrations toxic to...fishlife". However, because of the potential toxicity of ammonia nitrogen a specific limitation of 10 mg/l average concentration of ammonia nitrogen(N) should be included in Order No. 75-55. This limitation is based on the allowable un-ionized ammonia concentration in the receiving waters of 0.02 mg/l and the receiving waters' ability to accept un-ionized ammonia providing for reservation of 25 percent of the available assimilative capacity of the receiving waters.

The 10 mg/l ammonia(N) effluent limitation is a technically achievable limit utilizing a nitrification treatment process.

7. Contention: The petitioner asserts that specification of the Three-spine Stickleback in Monitoring and Reporting Program No. 4245,[20/] is inappropriate because this species is more tolerant of stress than other species (e.g., Trout) indigenous to the Ventura River and recommends the use of juvenile Rainbow Trout as the test species.

20/ Monitoring and Reporting Program No. 4245 requires:

> An in-situ bioassay shall be conducted quarterly by the discharger directly in receiving waters at the time receiving water monitoring is conducted. Three-spine stickleback (Gosterosteus aculeatus microcephalus) shall be used as the test fish. Ten (10) stickleback shall be placed in a perforated, non-metallic container (live car) no smaller than one cubic foot. Perforations shall be of sufficient size and number so as to retain test fish 20 to 50 millimeters long (total length) and to permit nearly unrestricted flow through the live car. One live car shall be placed at Station R-1 or in the near vicinity upstream of the discharge. A second live car shall be placed at Station R-2. The live car at Station R-2 shall be located specifically where the diluted waste effluent continuously flows through the test container. The bioassay test shall be conducted for a 96-hour duration. Survival counts shall be made and the numbers of surviving fish reported for the 24, 48, 72, and 96-hour exposure periods. The results of these in-situ bioassays shall be reported to the Board in each monthly report.

Findings: While it is commonly recognized that Rainbow Trout are more sensitive then the Stickleback and, therefore, a more desirable test fish for purposes of in-situ bioassays, trout fry are not commercially available in small quantities in Southern California and it is not feasible to transport trout fry over long distances or maintain trout fry for long periods prior to their use for bioassay purposes. Under these circumstances, we believe the specification of Stickleback in Monitoring and Reporting Program No. 4245 is appropriate.

8. Contention: The petitioner maintains that Effluent Limitation A.12, of Order No. 75-55 providing that "...a minimum of 90 percent of the test organisms in a standard bioassay shall survive in undiluted effluent at least 50 percent of the time, and 70 percent shall survive at least 90 percent of the time..." should be more stringent.

Findings: In a standard toxicity bioassay, ten fish are usually tested. If a 90 percent survival rate is required (as requested by the petitioner) at all times, only one fish may expire in any given test. This requirement would place an unreasonable burden on the discharger because it does not allow for deaths which may occur because of inconsistencies in the test fish and problems which can arise in the transportation and storage of the test fish. The statistical approach to survival rates as adopted in Order No. 75-55 is the approach which has been recognized by the State Board in the Water Quality Control Policy for the Enclosed Bays and Estuaries of California and we find that the survival rates specified in Effluent Limitation A.12 of Order No. 75-55 are not inappropriate.

III. CONCLUSIONS

After review of the record, and for the reasons heretofore expressed, we have reached the following conclusions:

1. To clarify Order No. 75-55 the Regional Board shall modify the Order to include specific receiving water and effluent limitations as discussed for pH, temperature, dissolved oxygen, and ammonia nitrogen.

2. The Executive Officer of the Regional Board should modify the monitoring program for D.O. as discussed under Contention 3 of this Order.

IV. ORDER

IT IS HEREBY ORDERED, that Order No. 75-55 is remanded to the California Regional Water Quality Control Board, Los Angeles Region, for amendment of the monitoring program and for further investigation in accordance with this Order.

Dated: NOV 18 1976

/s/ John E. Bryson
John E. Bryson, Chairman

/s/ W. Don Maughan
W. Don Maughan, Vice Chairman

/s/ W. W. Adams
W. W. Adams, Member

/s/ Roy E. Dodson
Roy E. Dodson, Member

ABSENT
Jean Auer, Member

APPENDIX A

Oak View Sanitary District - Receiving Water Data From Self-Monitoring Reports, November 1974 to November 1975

STATION RW2 50 ft. below discharge point

Date	Ammonium Nitrogen Concentration mg/l	pH	Temperature $^{o}_{F}$**	Temperature ^{o}C	Calculated Ammonia (NH_3) Concentration mg/l*
11/26/74	7.0	7.5	58	14.44	.05
12/30/74	3.6	8.1	55	12.78	.089
1/28/75	4	7.9	57	13.89	.068
2/25/75	<0.1	8.2	62	16.67	<.004
3/25/75	1	8.4	68	20	.080
4/29/75	8	8.2	69	20.56	.432
5/27/75	3.6	7.9	64.5	18.05	.083
6/24/75	6.2	7.8	68	20	.133
7/29/75	<1	8.2	71	21.67	<.058
8/26/75	7	7.5	73	22.78	.092
9/30/75	6	7.5	72	22.22	.076
10/28/75	8	7.5	63	17.22	.070
11/18/75	10	7.5	60	15.56	.078

*Assume TDS concentration of 750 mg/l
**Reported as $^{o}_{F}$

Calculated ammonia concentration based on tables provided in: Tables of the Fraction of Ammonia in the Undissociated Form for pH 6 to 9, Temperature 0-300, TDS 0-3000 mg/l, and Salinity 5-35 g/kg, H.P. Skarheim, Sanitary Engineering Research Laboratory, College of Engineering, School of Public Health, University of California, Berkeley, SERL Report No. 73-5, June 1973.

APPENDIX A(cont.)

Station RW4 1000 yds. below discharge point

Date	Ammonium Nitrogen Concentration mg/l	pH	Temperature ^{o}F**	Temperature ^{o}C	Calculated Ammonia Concentration mg/l*
11/26/74	4.6	7.5	61	16.11	.037
12/30/74	2.4	8.2	54	12.22	.071
1/28/75	2	8.1	59	15	.058
25/75	< .1	8.2	62	16.67	< .004
3/25/75	2	8.3	64	17.78	.111
4/29/75	2	8.2	71	21.67	.117
5/27/75	1.6	7.9	64	17.78	.036
6/24/75	2.0	8.0	68	20	.067
/29/75	< 1	8.2	73	22.78	< .063
8/26/75	2	7.1	74	23.33	.011
9/30/75	5	7.4	71	21.67	.049
10/28/75	6	7.5	65	18.33	.058
11/18/75	8	7.6	59	15	.075

* Assume TDS concentration of 750 mg/l

** Reported as ^{o}F

APPENDIX A (cont.)

Station RW3 400 yds. below discharge point

Date	Ammonium Nitrogen Concentration mg/l	pH	Temperature ^{o}F**	Temperature ^{o}C	Calculated Ammonia (NH_3) Concentration mg/l
11/26/74	5.4	7.3	61	16.11	.028
12/30/74	3.4	8.1	55	12.78	.084
1/28/75	3	8.1	59	15	.087
2/25/75	< .1	8.5	62	16.67	< .008
3/25/75	2	8.5	68	20	.197
4/29/75	2	8.5	70	21.11	.211
5/27/75	2.6	8.1	64	17.78	.093
6/24/75	3.8	7.9	68	20	.101
7/29/75	< 1	8.3	73	22.78	< .078
8/26/75	3	7.6	75	23.89	.054
9/30/75	7	7,5	71	21.67	.085
10/28/75	6	7.5	65	18.33	.058
11/18/75	8	7.6	59	15	.075

* Assume TDS concentration of 750 mg/l

** Reported as ^{o}F

STATE OF CALIFORNIA—RESOURCES AGENCY EDMUND G. BROWN JR., *Governor*

STATE WATER RESOURCES CONTROL BOARD
P.O. BOX 100, SACRAMENTO, CALIFORNIA 95801
(916) 322-4505

JAN 25 1978

In Reply Refer
to: 401:JAN

Mr. Mark H. Capelli
Executive Director
Friends of the Ventura River
63 South Olive Street
San Buenaventura, CA 93001

PROPOSAL FOR VENTURA 208 WORKPLAN ELEMENT ON FLOOD CONTROL ACTIVITIES

In response to your request and rather perceptive and persuasive arguments, I, as a member of the State/EPA 208 workplan negotiation team, have requested that EPA consider providing the County of Ventura $15,000.00 to develop Best Management Practices (BMPs) for flood control activities. The BMPs should be developed by the County Flood Control District. If the District chooses not to develop the practices under the County's 208 program, we would recommend that the activities of the District, as they might affect beneficial uses in the Ventura River, be reviewed by the Los Angeles Regional Water Quality Control Board for possible action under the authority of that Board.

I appreciate the efforts displayed by the Friends and encourage their involvement in the Ventura 208 program. If you have any questions on this matter, please contact me at (916) 322-4505.

James George Giannopoulos
Planning Branch
Division of Planning and Research

cc: Mr. Allan S. Abramson
Environmental Protection Agency
215 Fremont Street
San Francisco, CA 94105

PLEASE RESPOND TO:
STATE CAPITOL, ROOM 5082
SACRAMENTO, CA 95814
(916) 445-5405

DISTRICT ADDRESSES:
STUDIO 127, EL PASEO
SANTA BARBARA, CA 93101
(805) 963-0634

301 POLI STREET, ROOM 200
VENTURA, CA 93001
(805) 654-4648 • 647-8505

OMER L. RAINS

EIGHTEENTH SENATORIAL DISTRICT
SANTA BARBARA AND VENTURA COUNTIES

CALIFORNIA LEGISLATURE

Senate

Chairman, Senate Majority Caucus

COMMITTEES
ELECTIONS AND REAPPORTIONMENT
PUBLIC UTILITIES, TRANSIT AND ENERGY
TRANSPORTATION

CHAIRMAN, SENATE SELECT COMMITTEE ON POLITICAL REFORM

MEMBER, SUBCOMMITTEE ON ENERGY & POWER PLANT SITING
MEMBER, SUBCOMMITTEE ON MOTOR VEHICLE INSPECTION

MEMBER, COMMISSION OF THE CALIFORNIAS
MEMBER, GEOTHERMAL RESOURCES TASK FORCE
MEMBER, STATE SOLARCAL COUNCIL
MEMBER, INTERAGENCY OIL TANKER TASK FORCE

January 25, 1979

James G. Giannopoulos
Division of Planning and Research
State Water Resources Control Board
P.O. Box 100
Sacramento, California 95801

Dear Mr. Giannopoulos:

I would like to express my support for the request by the Friends of the Ventura River that a work element dealing with flood control activities be included in the Ventura County 208 Work Program.

It is important to recognize that flood control activities can be a significant source of water pollution. The inclusion of a work element concerning flood control activities would be an important step toward reducing the adverse impact of flood control activities on water quality.

I urge your favorable consideration of this proposal.

Sincerely,

OMER L. RAINS

OLR/kkd

PUBLIC WORKS AGENCY

county of ventura

Director
Arthur E Goulet

Deputy Directors
Donald A. Betlach
Road Department
T. M. Morgan
Engineering Services
G. J. Nowak
Flood Control/Water Resources
Donald B. Perry
Management Services
E. D Shinavar
Construction Services

March 27, 1978

Mr. Carl C. Hetrick, Executive Director
South Central Coast Regional Commission
1224 Coast Village Circle, Suite 36
Santa Barbara, CA 93108

Dear Mr. Hetrick:

Thank you for your letter of March 17, 1978 and the accompanying regulations pertaining to the California Coastal Act of 1976.

Candidly, when Mr. Capelli met with our staff concerning the remedial work we were doing in the Ventura River, we wondered why. All of the information which you provided us with your letter has not shed any light on why he was involved, since all of our activity was upstream of the Foster Park Bridge, which is substantially outside the limits of your Commission's jurisdiction.

Even if we would have been engaged in work within the limits of the Commission's jurisdiction, I believe we would have been categorically exempt from the requirement to obtain a Coastal Development Permit. Although we were working in the river because of the emergency flooding situation which existed, our work would clearly have fallen within the category of "repair and maintenance activities which do not result in an addition to or enlargement or expansion of existing facilities." However, this point needn't be debated since our activities were completely beyond the purview of your Act.

Of graver concern to us is the position in which Mr. Capelli placed himself by getting involved in what was going on in the river. As you are no doubt aware, he is a member of the Friends of the Ventura River and, in my opinion, could be accused of furthering his personal philosophies while acting as an official representative of the Regional Commission. I sincerely hope this was not the case in this instance, and I would suggest you take action to insure that he not be assigned any responsibilities which might occasion this question in the future.

Your cooperation will be appreciated.

Yours very truly,

Arthur E. Goulet
Director

AEG:np

cc: Supervisor David D. Eaton

Friends of the Ventura River

A NON-PROFIT ORGANIZATION

December 10, 1978

Larry D. Munsey
Project Manager, Toups Corporation
972 Town & County Road
Orange, California 92667

Dear Mr. Munsey:

Re: OAK VIEW WASTEWATER RECLAMATION ENVIRONMENTAL IMPACT REPORT

We have received your notice to prepare a draft Environmental Impact Report for the proposed Oak View Sanitary District Wastewater Reclamation scheme, and would like to offer the following comments:

The Project Description notes that the State Water Resources Control Board has mandated that the Oak View Sanitary District maintain a 1 cfs discharge to the Ventura River from May through November to protect instream beneficial uses. Presumably this requirement is a reference to an internal Memorandum dated September 15, 1978 from Larry F. Walker, State Board Executive Officer, to Raymond M. Hertel, Regional Board Executive Officer.

There appears to be a discrepancy between this discharge requirement and the discharge schedule endorsed by the State Board subsequently as part of the 208 Areawide Waste Treatment Management Plan for Ventura County. This plan was adopted by the State Board on October 19, 1978 (Resolution 78-63).

The 208 Plan contains management strategies for maintaining and restoring the chemical, physical, and biological integrity of the surface and groundwater resources of Ventura County. Some of the proposals which were developed as part of the U.S. Bureau of Reclamation's Ventura County Water Management Project were incorporated into the 208 Plan to achieve these objectives. Among the proposals contained in the BOR project which were included in the 208 Plan were stream flow maintenance schedules to protect instream beneficial uses recognized in the adopted Santa Clara River Basin 4A Plan. The BOR project provides that the wastewater from the Oak View Sanitary District treatment plant receive advanced treatment at the proposed Oak View wetland and then be discharged to the Ventura River. (See page 270-71)

The discharges to the river would be made according to the following schedule:

Flow in $ft.^3/s$

1985	1990	1995	2000-2085
3.7	3.9	4.1	4.3

These discharges would consume the entire project discharge from the treatment facility and consequently leave no wastewater for off-stream reclamation.

OFFICE 63 SOUTH OLIVE STREET, SAN BUENAVENTURA, CALIFORNIA 93001 (805) 643 6074

It is our understanding that the provisions of the adopted 208 Plan supercede the internal Memorandum of September 15, 1978, and that in order for projects to be eligible for 201 grant funds they must be found consistent with the provisions of the 208 Plan. Before proceding with the draft Environmental Impact Report it would seem advisable to resolve this apparent conflict.

If an off-stream reclamation project is developed for the Oak View Sanitary District, we believe that the following issues must be carefully addressed:

1. Impact of removing all or a portion of the present and projected Oak View discharge on fish and wildlife resources: It is not clear how the State Board staff determined that a 1 cfs discharge from the Oak View treatment facility from May through November would be adequate to protect existing beneficial uses in the lower Ventura River and estuary. Also, the proposal to relate waste discharge requirements to seasonal surface flows fails to recognize that surface flow conditions do not correspond consistently to the seasons of the year. Any analysis of waste discharge requirements to the river should be related to specific surface flow levels, not seasonal periods; this is particularly imperative in streams such as the Ventura River with a highly variable flow regime.

2. Impact of utilizing wastewater to support agricultural development in the Ventura River watershed: The Project Description indicates that the reclaimed wastewater would be used to irrigate tree crops in the Canada Larga Valley, which is tributary to the Ventura River. The proposed agricultural operation would require the removal of large areas of native vegetation (primarily chaparral species and some Coast live oaks) on steep hill sides. We would anticipate a number of significant adverse impacts stemming from such conversions. These would include a) loss of wildlife habitat, b) degradation of water quality in the Canada Larga Creek and the lower Ventura River, and c) increased flood potential in the Canada Larga Creek. Native chaparral and related species provide valuable habitat for a wide variety of birds and mammals; its conversion to crops would consititute a significant loss of habitat. The increased erosion and sedimentation which is often associated with the removal of native vegetative cover from steep slopes could have a major adverse impact on water quality and biological productivity in the Canada Larga Creek and the lower Ventura River. The removal of native vegetative cover can also increase the rate of storm run-off and peak flood flow levels. The problem of flooding in the Canada Larga Creek could be compounded by reducing the carrying capacity of the channel through increased sedimentation.

The State Water Resources Control Board has recently documented the problems of erosion associated with agricultural operations in a publication entitled: A Report on Critical Erosion of Agricultural Sites in California, August 1977. We would also recommend consulting another study dealing specifically with the impacts of sediments on aquatic habitats: The Influence of Inorganic Sediment on the Aquatic Life of Streams by Almo J. Cordone and Don W. Kelley, April 1961.

Enclosed are the following reports on the fish and wildlife resources of the Ventura River which should be useful in preparing the draft Environmental Impact Report:

> Biological Impact Report on Lower Ventura River - Chronic and Infrequent Waste Discharges, Michael Martin & William Snider, California Department of Fish and Game, June 1973.

A Survey of the Wildlife Resources of San Buenaventura, Mark H. Capelli Ventura County Fish and Game Commission, August 1973.

The Status of the Lagoon Goby (Eucyclogobious newberryi) in Southern California, Camm Swift, Theodore Stein, Carolyn Maslow, Los Angeles County Natural History Museum, January 1975.

An Evaluation of Steelhead Rearing Habitat in the Ventura River: Summer-Fall, 1976, Mark Moore and Roger A. Barnhart, California Cooperative Fisheries Unit, Humboldt State University, October 1976.

We appreciate having the opportunity to comment on the issues to be addressed in the Environmental Impact Report forthe Oak View Waste Water Reclamation Project and look forward to reviewing the draft and final documents. If you should have any questions regarding our comments please do not hesitate to contact our office.

Sincerely,

Mark H. Capelli

MARK H. CAPELLI
Executive Director

MHC/mc
enclosures

cc: Larry F. Walker, State Water Resources Control Board
Raymond M. Hertel, Regional Water Quality Control Board, Los Angeles Region
Perry Hergesell, California Department ff Fish and Game, Region 5
Martin Roche, U.S. Bureau of Reclamation
G. Andy Moser, U.S. Fish and Wildlife Service
John Norton, State Water Resources Control Board

STATE OF CALIFORNIA EDMUND G. BROWN JR., Governor
California Coastal Commission
SOUTH CENTRAL COAST REGIONAL COMMISSION
1224 COAST VILLAGE CIRCLE, SUITE 36
NTA BARBARA, CALIFORNIA 93108
)51) 969-5828

March 29, 1978

Arthur E. Goulet
Director, Ventura County Public Works Agency
800 South Victoria Avenue
Ventura, California 93009

Dear Mr. Goulet:

I am in receipt of your letter of March 27, 1978 regarding this staff's participation in two recent public agency meetings in Ventura concerning flood damages and related flood control work in Ventura County.

Because your letter reflects a number of apparent misunderstandings regarding the nature of a particular staff member's participation in these meetings and the role of the Regional Coastal Commission generally in these matters, I am responding in the hope of setting the record straight.

On March 10, 1978 Mark H. Capelli of our planning staff attended an on-site meeting in Ventura with representatives from the U.S. Fish and Wildlife Service, the California Department of Fish and Game, and the Ventura County Flood Control District to discuss on-going and potential flood control operations by private as well as public agencies, both within and outside the Coastal Zone. A second meeting organized by the Ventura County Flood Control District to discuss further these same flood control issues was attended by Mr. Capelli on March 13, 1978 in the Flood Control District's offices. This meeting was attended by representatives of the Federal Disaster Assistance Administration, the U.S. Fish and Wildlife Service, the California Department of Fish and Game, and the U.S. Army Corps of Engineers. The areas discussed in this meeting also included portions of the Coastal Zone. Consequently, both meetings were of legitimate interest to our agency which has a responsibility for managing and protecting coastal resources.

Normally, Mr. Capelli's assignments are limited to San Luis Obispo County. However, the staff planner which has worked Ventura County recently transferred to another Regional Commission office leaving this area temporarily understaffed. While I am well aware of Mr. Capelli's long association with various community environmental organizations in Ventura County, he was chosen by me to represent our agency at the two meetings referred to above precisely because of his familiarity with the natural resources of Ventura County. Recognizing the potential concern for the kind of political conflict to which you allude in your letter, I had Mr. Capelli closely coordinate his involvement with me and have kept abreast of the progress of these meetings and other related discussions. After reviewing this matter with Mr. Capelli I am satisfied that the Regional Commission's interests have been served in a responsible, effective, and professional manner.

Concerning the Regional Commissions permit authority outside the Coastal Zone, it is true, as Mr. Capelli clearly indicated to your staff and the other public representatives at the March meetings, that the Regional Commission does not have direct permit jurisdiction outside of the Coastal Zone. I would like to further point out, however that the California Legislature did recognize in the Coastal Act of 1976 that activities carried on outside of the Coastal Zone can have an impact on resources located within the Coastal Zone. Accordingly, section 30200 of the 1976 Coastal Act stipulates that "All public agencies carrying out or supporting activities outside the Coastal Zone that could have a direct impact on resources within the Coastal Zone shall consider the effect of such actions on coastal zone resources in order to assure that these policies are achieved [emphasis added]." The alteration of upstream water courses, particularly those which discharge to coastal wetlands such as at the mouth of the Ventura River, can have a significant impact on coastal resources.

Certainly I would hope that your agency as well as other public agencies engaged in activities which could potentially affect coastal resources would be cognizant of such impacts and honor both the letter and spirit of the act in this matter. Out staff would be willing to meet with your staff to discuss how such activities may be carried out so as not to jeopardize the resources within the Coastal Zone which the Regional Commission is directly charged by the California Legislature to protect.

Regarding your comments on possible flood control work by your agency within the Coastal Zone, it should be pointed out that while repair and maintenance activities which do not result in an enlargement of the original facility are generally exempt from Regional Commission review, such exemptions may be waived by the Regional Commission if there is a potential for substantial adverse environmental impacts. Needless to say, the performance of flood control activities which involve the removal of riparian vegetation or the channelization of natural meandering water courses at the very least raises the theoretical possibility of potential adverse impacts. As I indicated in my letter of March 17, 1978, emergency permits may be granted immediately for work which does not by its very nature allow for the normal staff and Regional Commission review; this procedure itself can be further abbreviated and expedited under extraordinary circumstances. However, it must be emphasized that it is the Regional Commission and its staff, not the potential applicant, which is legally charged with the responsibility of determining the Regional Commission's permit jurisdiction.

In conclusion, I would like to reiterate that as a full-time permanent member of the Regional Commission's professional staff Mr. Capelli is eligible to work in any area of the region, and will be assigned to carry out responsibilities wherever necessary and appropriate. The responsibility for making

such assignments must remain with this office and cannot be dictated by personal political preferances.

If you have any questions regarding this matter, please feel free to contact me at your earliest convenience.

Sincerely,

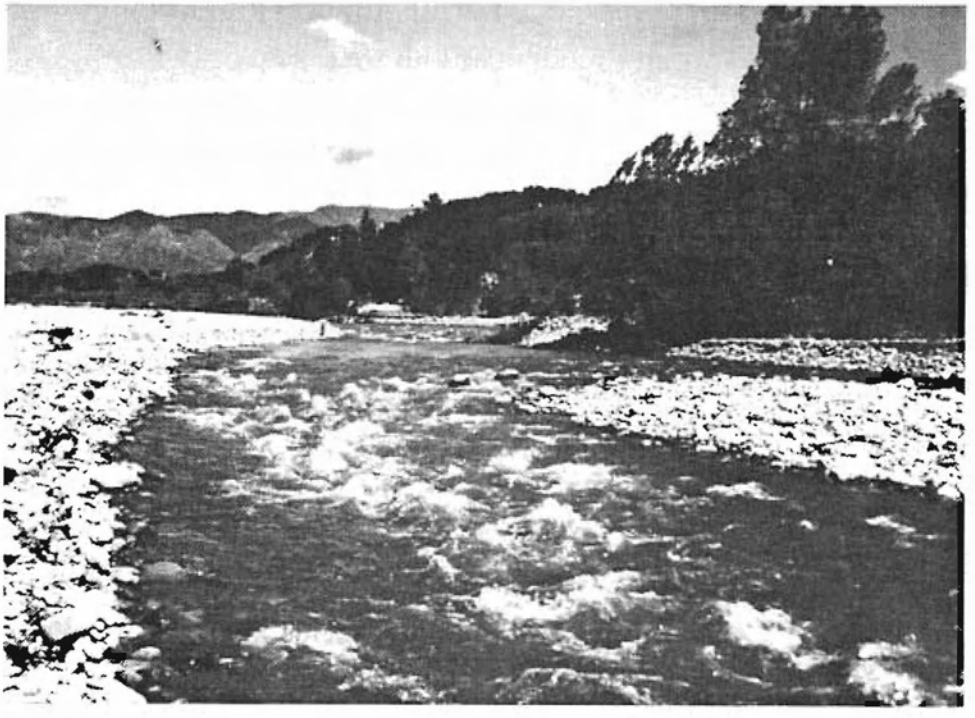
Carl C. Hetrick
Executive Director

CCH/jv
Attachment
cc: Edwin A. Jones, Chairman, Ventura Co. Board of Supervisors
David D. Eaton, Chairman, Regional Commission
All Regional Commissioners
Ken Hoover, Ventura Star Free-Press

COMMENTS ON EMERGENCY FLOOD CONTROL MEASURES

TASK 4.5.4

VENTURA COUNTY 208 AREAWIDE WATER MANAGEMENT PLAN, 1979-1980



DECEMBER, 1980

PREPARED BY THE FRIENDS OF THE VENTURA RIVER

COMMENTS ON EMERGENCY FLOOD CONTROL MEASURES

TASK 4.5.4

VENTURA COUNTY 208 AREAWIDE WATER MANAGEMENT PLAN, 1979-1980

TABLE OF CONTENTS

SUMMARY

Ventura County is situated in a semi-arid region with landforms dominated by drought tolerant chaparral. Its few rivers and streams occupy less than one percent of its total land area; yet these water courses play a critical role in the life histories of many of its fish and wildlife species, serving as a kind of oasis in a desert-like setting.

The riparian forest that is found along both intermittent and perennial water courses provides one of the most important wildlife habitats in Ventura County. Of the twenty-nine habitat types identified by the California Department of Fish and Game, riparian forests exhibited the greatest number and diversity of species. The riparian corridors along Ventura County's rivers and streams constitute less than two percent of the total vegetative cover, yet provide habitat for more than fifty percent of its indigenous species. The degradation or loss of riverine or riparian habitat, consequently, represents a disproportionate loss of the total fish and wildlife habitat of Ventura County.

Despite the exceptional habitat value of rivers, streams, and associated riparian plant communities, these resources are being degraded and lost at an increasingly rapid rate. As a result of the human development of flood plains and flood prone lands, flood control maintenance measures are periodically needed to protect human lives and economic investments from flooding. These activities can adversely impact water quality and instream beneficial uses by introducing abnormal amounts of sediments into the water course, eliminating natural channel features, and disturbing or removing riparian vegetation.

In recognition of the significant adverse impacts which flood control mainte-

nance activities can have on water quality and related instream beneficial uses (such as fish and wildlife maintenance, contact and non-contact recreation, and scientific and educational pursuits), an Emergency Flood Control Work Element (Task 4.5.4) has been added to the Ventura County 208 Areawide Water Management Plan. The basic objective of the Work Element is to minimize the impacts of flood control maintenance activities on water quality and instream beneficial uses. This objective is to be achieved by developing and implementing policies, programs, procedures, and best management practices relating to the performance of flood control maintenance activities.

The Technical Paper prepared by the Ventura County Flood Control District in fulfillment of this Work Element does not adequately address the issues or accomplish the tasks specified in the Final Work Program for the Ventura County 208 Areawide Water Management Plan. In analyzing the practice of flood control maintenance work, the District did not accurately portray fundamental fluvial processes; provided a cursory and seriously misleading evaluation of the biological impacts of channel modifications; and misinterpreted both the legislative intent and legal requirements of such basic environmental statutes as the National Environmental Policy Act and the California Environmental Quality Act, while omitting any discussion of other relevent environmental legislation such as the California Coastal Act. The Technical Paper also failed to identify and analyze in a meaningful way specific policies, programs, procedures, and best management practices which could mitigate the adverse impacts of flood control maintenance activities. As a result of these deficiencies, the recommendations proposed in the Technical Paper do not provide an effective program for reducing the adverse impacts of flood control maintenance activities on water quality and instream beneficial uses.

There are a number of practical measures which could effectively reduce the adverse impacts of flood control maintenance activities; these include, but are not limited to:

1. Incorporating environmental considerations and mitigation requirements into the review and issuance of both the "emergency" and "non-emergency"stream encroachment permits currently required by the Ventura County Flood Control District Ordinance FC-18.

2. Conducting training sessions for county personnel responsible for performing flood control work with the aim of better informing supervisors and equipment operators of the impacts on water quality and instream beneficial uses stemming from such work, and how these impacts could be mitigated.

3. Establishing a policy to coordinate flood control maintenance activities with the U.S. Fish and Wildlife Service and the California Department of Fish and Game.

4. Performing post-project environmental assessements of major flood control maintenance work to determine their impacts on water quality and instream beneficial uses and to identify ways of mitigating such impacts (both of the project under investigation and possible future projects).

5. Developing a set of standard best management practices for the performance of flood control maintenance activities (these could include the use of silt curtains or catchment basins, isolating flood control work from flowing water, utilizing clean, preferably native, materials

for fill, leaving natural morphological features wherever possible, and minimizing the disturbance of riparian vegetation).

6. Preparing and distributing a manual briefly describing the impacts of flood control maintenance activities on water quality and instream beneficial uses; this manual could be made available to other local public agencies and private individuals engaged in flood control maintenance activities.

The following comments provide a detailed critique of the Technical Paper, as well as a substantial amount of technical information which could be used to revise the Technical Paper so that it more successfully carries out its basic objective: the protection of water quality and instream beneficial uses through the regulation of flood control maintenance activities.

COMMENTS ON EMERGENCY FLOOD CONTROL MEASURES

TASK 4.5.4

VENTURA COUNTY 208 AREAWIDE WATER MANAGEMENT PLAN, 1979-1980*

INTRODUCTION

Page 359

Paragraphs 1-3: The description of a flood event suggests that a river or stream in flood is acting in an uncharacteristic manner, and does not reflect fundamental fluvial processes. A river or stream rarely leaves its channel complex, but may occupy one or more sub-channels or the larger flood plain in response to heavy precipatation. As Leopold has observed:

> An understanding of how flood plains are formed should make it obvious that a river channel is not large enough to contain all the water produced by a drainage basin in times of heavy precipatation. To flood (that is, to discharge in excess of channel capacity) is a natural characteristic of rivers. Thus the flood plain is a normal part of the river during times of exceptional discharge. Luna B. Leopold, Water: A Primer, W. H. Freeman and Company, 1974, p. 155.

For a detailed discussion of flood plain formation and function, see "Channel Form and Procesesses" in Fluvial Processes in Geomorphology by Luna B. Leopold, Gordon Wolman, and John P. Miller, W. H. Freeman and Company, 1964, pp. 198-322.

Paragraph 4: Both the extent and the economic value of damage to structures and other human uses resulting from flooding is a function of the level of development and type of uses made of the flood prone lands as much as the magnitude of the flood flows.

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* The full text of the Emergency Flood Control Work Element is reproduced in Appendix A; all page and paragraph references are to this text.

Paragraph 6: The flooding process plays a major role in determining the floral and faunal populations associated with rivers and streams; in fact, the continued biological productivity of a river or stream system is dependent upon periodic flooding. The effects of flooding on natural water courses, while it can adversely impact some instream beneficial uses such as sport fishing, should generally be viewed as a natural process in the evolution of the stream or river. Where these natural impacts have been compounded by human disturbance, or where the instream beneficial uses have special recreational, educational or scientific significance, however, it may be appropriate to seek ways of off-setting the impacts of flooding.

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Paragraph 1: The characterization of emergency repair work as either "temporary" or "permanent" is misleading. Some repairs last longer than others, but inevitably all must be maintained or repaired themselves after subsequent flooding.

Paragraph 2: The attempt to limit the scope of the Technical Paper to those flood control activities conducted during an emergency period (from the onset of flood damages to the conclusion of the rain year) which have an adverse impact on water quality and aquatic resources presupposes that a distinction can be made between emergency flood activities performed during or immediately after a sever storm and non-emergency flood control activities which also entail the modifcation of channel morphology or the removal of lotic and riparian vegetation. However, the environmental impacts stemming from either type of flood control activity can be equally damaging to water quality and related instream beneficial uses; in fact, instream flood con-

trol activities performed during the dry season or during low flows can more severely impact certain species such as rearing juvenile salmonids. The dichotomy between emergency and non-emergency flood control activities upon which the Technical Paper is predicated is therefore biologically illogical , as well.as inconsistent with the basic objective of the Ventura County 208 Areawide Water Quality Management Plan: the protection of water quality and related beneficial uses (including instream beneficial uses) from non-point sources of pollution.

Paragraph 3: While the focus of the Technical Paper should properly be on flood control maintenance activities and not structural flood control projects or flood plain management, these activities and programs are closely related. The Technical Paper should explicitly recognize that the placement of development adjacent to water courses and flood plains has resulted in the need to periodically take emergency measures to protect lives and property from flooding.

In addition to constructing facilities which have lead to a reduction in the need for emergency flood control actions, the Ventura County Flood Control District and other public agencies through their permitting processes have also allowed developments (for example, homes, road, utilities, and sewage treatment facilities) which have reduced the natural flood flow carrying capacity of rivers and streams, and increased the likelihood that these structures and other human uses of flood prone lands will be damaged by future floods. The Technical Paper should also acknowledge that some structures which have been constructed to obviate the need to take emergency flood control actions (for example, dams, concrete channels, check dams, and drop culverts) have been as deleterious, if not more so, to instream beneficial

uses as the emergency flood control activities which they were intended to avoid.

For a detailed discussion of the environmental and econocmic consequences of developing flood plains see "Human Occupance of Flood Prone Lands" in Water in Environmental Planning by Thomas Dume and Luna B. Leopold, W. H. Freeman and Company, 1978, pp. 392-439.

Paragraph 4: The "Introduction" is deficient in several important respects: a) it does not concisely set forth the problem to be addressed: mitigating the adverse impacts of flood control maintenance activities on water quality and related instream beneficial uses; b) it provides a over-simplified and misleading description of the flood event which ignores the basic fact that man-made developments have encroached upon the rivers and streams of Ventura County; rivers and streams have not encroached upon man-made developments; c) it sets up a dichotomy between emergency and non-emergency flood control activities which ignores the basic similarity between the impacts stemming from such activities and serves to subvert the basic purpose of the Ventura County 208 Areawide Water Quality Management Plan.

Given the presence of existing structures and human uses adjacent to some of the rivers and streams of Ventura County, some flood control maintenance work will be required in the future. This work has not been carried out with adequate attention to its impacts on water quality and related instream beneficial uses, or to the effectiveness of the work in providing necessary flood protection. Without a basic understanding of fluvial and biological processes, and man's role in effecting those processess, flood control maintenance work cannot be carried out in an environmentally sound

and economically effective manner.

Finally, we would point out that the FRIENDS OF THE VENTURA RIVER, in proposing this Technical Paper, expressed concern about the impact of routine and emergency flood control work on all of the streams of Ventura County.

CONCLUSIONS AND RECOMMENDATIONS

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Paragraph 1: The relevant scientific literature indicates that artificial modification of stream channels, whether for flood control maintenance or other purposes, often has a substantial and long term adverse impact on water quality and on the floral and faunal resources of the impacted river or stream. These impacts are complex and often synergetic.

The Technical Paper relied primarily on a single article by Elmo Cordone and Don W. Kelley for its analysis of the impacts of flood control maintenance activities on water quality and related instream beneficial uses. ("The Influence of Inorganic Sediments on the Aquatic Life of Streams", in California Fish and Game, Vol. 47, No. 2, April, 1961, pp. 189-228.) This review article dealt with only one consequence of flood control maintenance activities, the increase in turbidity and sedimentation. The article did not focus on any particular source of turbidity, but discussed principally sedimentation resulting from the alteration of the watershed rather than the stream or river channel itself. Nevertheless, the article provided a great deal of useful data which was ignored, over-simplified, or misinterpreed in the Technical Paper. The Technical Paper ignored the substantial literature available regarding the impacts of channel modification for flood control maintenance and other purposes on water quality and aquatic resources, including studies recently conducted on the Ventura and Santa Clara River systems of Ventura County.

Paragraph 2: Turbidity may extend more than one mile donwstream from the point of the instream flood control activity. The distance downstream that turbidity may be experienced from the point of disturbance will depend upon a number of factors, including the nature and extent of the stream disturbance, the volume and velocity of the stream flow (which will be a function of the amount and rate of rainfall, the degree of soil saturation, the type and extent of vegetative cover, and the stream-bed gradient), the nature of the disturbed material (particle size, shape, and density), the amount and type of lotic and riparian vegetation, and the channel morphology. (See additional comments below at pages 44-45.)

Because it takes more energy to erode material than to transport it once it has been dislodged, a river or stream will usually have more energy than is necessary to transport eroded material in suspended and bedloads. Additionally, a river or stream will sort sediments by size and weight as its flow decreases either in velocity or volume, with the heaviest or largest materials settling out first, and the smaller, lighter materials settling out last. As a result of this natural sorting process, the suspended and bedload is dispersed through the river system on a gradient: the steeper reaches containing the largest materials, with the lower reaches exhibiting the heaviest deposits of silty materials. The flora and fauna of a river system have evolved in response to these fundamental physical patterns and will be adversely impacted if they are suddenly modified, either by natural or human agents.

Shaw and Maga observed that erosion and turbidity produced by natural flooding did not adversely effect spawning salmonids because the increased turbid-

dity coincided with high flows which kept the eroded material in suspension and carried it out of the areas used for spawning:

> It is a well known fact that the velocities necessary to dislodge deposited particles are far greater than the velocities required to carry the same particles in suspension. For this reason natural stream turbidity is largely limited to those periods when storm water causes erosion. During these periods stream flows in areas suitable for steelhead, trout, or salmon spawning are sufficient to prevent bottom deposits of natural erosion silt and damage to eggs in the gravel is minimized. Thus, while mining silt may be a natural material, its presence in water ways during non-erosion periods is damaging. P. A. Shaw and J. A. Maga, "The effect of mining silt on yield of fry from salmon spanwing beds", in California Fish and Game. Vol. 29, No. 1, 1943, pp. 29-41.

Instream flood control activities will increase the level of turbidity and sedimentation in a river or stream directly by disloging material which would not otherwise be picked up and introducing it into the stream flow, and indirectly by creating banks which because of their increased slope and reduced vegetative cover are more susceptible to erosion, as well as by increasing the total area of exposed banks. The Technical Paper notes (page 363, paragraph 7) that emergency flood control work is often performed only after flood flows have receded and it is possible to move heavy equipment into the stream. Instream flood control activities performed after flood flows have receded and the river or stream's ability to transport material has been substantially reduced will result in larger deposits of silty material.

The additional turbidity and sedimentation generated by instream flood control activities can profoundly impact water quality and related instream beneficial uses, including fish and wildlife maintenance, contact and non-contact recreation, and scientific and educational studies, by inhibiting algae growth (which is the basis for all aquatic life), smothering the spawn of fish and invertebrates, and directly impairing the functioning of individual

organisms. Instream flood control activities which result in significant alteration of the channel morphology or disruption of lotic and riparian vegetation can also adversely effect important aspects of water quality such as the level of dissolved oxygen and water temperature.

For the reasons noted above, the impacts of instream flood control activities is not limited to work performed in clear running water, but can also effect a naturally turbid river or stream by contributing additional material to the suspended and bedloads.

Instream flood control activities can also impact ephemeral or interrupted streams (i.e., those with a discontinuous surface flow along their course during a portion of the year) which provide important seasonal habitat. Anadromous and resident fishes commonly utilize ephemeral or interrupted streams for spawning and rearing: this is possible because the young are spawned during the winter and early spring months when there are continuous surface flows in most rivers and streams; after the young have been hatched and the stream or stream section begins to dry up, the young may move to other areas with adequate surface flows. A report prepared by the California Department of Fish and Game notes that:

> Many spawning riffles that are used by salmon and steelhead during high flows area completely dry and exposed during low summer flows. King salmon will even spawn in intermittent streams. When many Kings are looking for spawning sites, some will enter any small tributary that is carrying an adequate flow; thus in a wet fall there may be salmon in streams that are usually dry at that time of the year . . . the young leave before the water warms up or the stream goes dry. California Department of Fish and Game, California's Living Marine Resources and Their Utilization, 1971, pp. 41, 45.

Migratory steelhead and resident rainbow trout which are native to the rivers

and streams of Ventura County display a similar ability to maximize suitable habitat which is available during only a portion of the year. Instream flood control activities in ephemeral or interrupted rivers and streams will leave these water courses with greater concentrations of silt; such deposits will impact water quality and instream beneficial uses while there is a surface flow, and may reduce the productivity of the stream channel after flows have ceased. It should also be recognized that sediment deposited in a stream or stream section which ceases to flow during the year will impact the productivity of the stream when flows are resumed, and can be picked up during subsequent floods and re-deposited in lower stream sections which do maintain a continuous surface flow.

Paragraph 3: The phrase "short term" is not given a definite meaning; however, as it is used throughout the Technical Paper it misleadingly suggests that instream flood control activities have no lasting impact on water quality and related instream beneficial uses, and that the recovery of the effected stream from any impacts which may occur is relatively rapid and complete.

The impacts of instream flood control activities can be considerable, and can effect the stability and biological porductivity of the river or stream for many years.

The re-establishment of significant morphological features such as pools, riffles, under-cut banks, and mid-stream boulders which have been eliminated by instream flood control work will depend upon subsequently flooding, which may not occur for several years, or several decades. Such an event could, of course, require additional instream flood control work, thus negating the potential beneficial effects of such flood flows. The repeated disturbance of

of a river or stream will further reduce the biological stability and productivity of the stream, as well as render it more susceptible to other types of impacts from human activities such as grading for urban or agricultural development in the watershed. Repeated disturbance of a stream can also result in the extirpation of a species which is unable to tolerate continual disturbance.

The re-establishment of riparian and lotic vegetation removed during the conduct of instream flood control activities may take many years. The water quality and instream beneficial uses of a river or stream are to a large extend dependent upon the maintenance of a lotic and riparian vegetation. Such vegetation traps nutrients such as phosphorus and pollutants such as sediments originating in the watershed, and provides a shade canopy which dampens water temperature fluctuations and provides cover for fishes. Riparian vegetation is also an important habitat for terrestial wildlife. Of the twenty-nine habitat types identified by the California Department of Fish and Game, riparian woodlands displayed the most wildlife species diversity. (See California Department of Fish and Game, California Fish and Wildlife Plan. Vol. I Summary, Vol. II Fish and Wildlife Plan. Vol. III, part A Inventory of Wildlife and Inland Fish. 1965.

Although many riparian species are genetically adapted to survive in a naturally dynamic situation (by having developed mechanisms for rapid re-establishment such as sprouting through rhizomes, stolens, and root systems), the complete re-establishment of a disturbed riparian plant community is a complex process involving the re-establishment of a succession of plant species. A completely re-established plant communtiy (known as a climax community) will be comprised of a diverse and stable composition of plant species. Studies

indicate that complete secondary plant succession in disturbed riparian areas may take as long as 50 to 75 years, depending upon the species involved. Even particularly fast growing species such as willows (Salix spp.) which predominate along the banks of many rivers and streams in Ventura County take 15 to 25 years to reach a mature size. It is also important to recognize that the removal or disturbance of a plant community provides an opportunity and often encourages the invasion of non-native species which can successfully compete with the native flora, thus prolonging the time it takes native species to re-establish, or preventing the complete re-establishment of the native plant community. (See W. A. Stiles III, A Brief Review of Natural Re-vegetation in Excavated Stream Channels, 1979 and A Hypothetical Model of Secondary Succession in the Valley Riparian Forests of Santa Clara County, Santa Clara, 1979. Santa Clara Valley Water District, Fresno, California.)

Paragraph 4: The analysis of state and federal environmental statutes such as the California Enviornmental Quality Act and the National Environmental Policy Act misinterprets the underlying intent of these statutes. Additionally, the analysis misconstrues the nature of the exemptions applicable to emergency work, and disregards the definitions of emergency upon which these statutes rely. The exemptions upon which the Technical Paper relies to support the contention that normal environmental considerations are suspended during times of emergency (and therefore to undermine the concept of incorporating environmental mitigations into emergency flood control work) pertain only to the preparation of formal environmental assessments; they do not contemplate or authorize the suspension of all environmental considerations in the performance of emergency activities. Furthermore, the provisions for ex-

exemptions are only put into effect if an emergency is formally declared by either the Governor or the President; such a declaration must be based upon a bona fide emergency as defined in the California Resouces Code or the Federal Disaster Relief Act. The analysis also ignores the environmental considerations which are specifically mandated under emergency situations by other governmental agencies such as the U.S. Army Corps of Engineers, the U.S. Soil Conservation Service, and the California Coastal Commissions.

The Technical Paper also fails to recognize that "man's existing use of streams" includes instream beneficial uses such as fish and wildlife maintenance, contact and non-contact recreation, and scientific and educational activities. These instream beneficial uses are recognized in the Basin 4-A Water Quality Control Plan developed and approved by the Los Angeles Regional Water Quality Control Board and the State Water Resources Control Board. To protect these beneficial uses, the Regional Board establishes point discharge standards for individual dischargers, while the State Board assists dischargers in meeting these requirements through grant awards and sponsoring long range planning programs. (See Appendix B for a tabulation of recognized existing and potential beneficial use for individual rivers and streams in Ventura County.)

In summary, neither the intent of the state or federal legislatures prohibits the Ventura County Flood Control District or any public or private party from taking environmental considerations into account in the performance of emergency flood control maintenance activities; in fact, the legislative intent of basic environmental statutes such as the California Environmental Quality Act and the National Environmental Policy Act, as well as the Federal Water Pollu-

tion Control Act (as ammended, 1972) requires that environmental considerations be incorporated whenever possible.

Paragraph 5: The conclusion that all means of reducing the adverse impacts of emergency flood control maintenance activities, except sensitizing personnel, are in conflict with the legislative intent to facilitate the performance of emergency work appears to be based upon the false assumption that most environmental considerations are prohibitively time consuming; this conclusion also fails to reflect the important fact that emergency situations may vary greatly: from mud on the carpet to an individual stranded on a rooftop in the middle of a swollen stream.

There are other practical means available, in addition to sensitizing Flood Control District personnel, which could be instituted to reduce the adverse impacts on water quality and instream beneficial uses stemming from flood control maintenance activities. Some of these include: 1) limiting instream flood control work to the minimimum necessary to protect lives and property, and avoiding whenever possible performing work in the flowing channel; 2) ensuring that all work performed in rivers and streams is based upon sound fluvial geomorphological principles; 3) incorporating environmental considerations and specific mitigations into the stream encroachment permits currently issued by the Ventura County Flood Control District after the performance of emergency work; 4) developing a program to assess the environmental impacts of instream flood control work conducted during the water year and identify ways of reducing the impacts in problem areas stemming from future flooding; 5) adopting a policy similar to that proposed by the California Department of water Resources to prohibit the re-building of structures which have been de-

stroyed by flooding, or require that such structures be adequately flood-proofed; 6) adopting a policy to cooperate with the California Department of Fish and Game and the U.S. Fish and Wildlife Service in the performance of flood control maintenance activities to ensure the effective protection of water quality and instream beneficial uses; and 7) publishing a broschure or handbook containing information on the effects of instream flood control maintenance activities on water quality and instream beneficial uses and how such impacts can be reduced. Such a publication could be distributed to cities, landowners, permitees, and other interested persons, thus increasing the number of people sensitized to the problem.

Paragraph 6: A review of the recent appraisals of instream flood control maintenance practices indicates that present legislative and regulatory provisions are not adequate to protect water quality and related instream beneficial uses. The California Environmental Quality Act is intended primarily to ensure that adequate environmental information is available to decision-makers; it is not a regulatory statute which sets forth specific mitigations to be incorporated into projects.

In a Bulletin recently published by the California Department of Water Resources entitled California Flood Management: An Evaluation of Flood Damage Prevention Programs, the Department found that insuffecient attention has been paid to instream beneficial uses in the performance of flood control activities and recommended changes in current policies and practices. The Department also established the following flood management principles which explicitly recognize instream beneficial uses:

> To place emphsis upon non-structural solutions, recognizing that sound flood plain management practices hold great future

> promise for providing economically and environmentally feasible flood protection. However, the Department also recognizes that there are developed areas where relocation or structural solutions are needed and necessary. Here, too, care must be taken to prevent encroachment on a floodway below projects which can negate the benefits gained by the project.
>
> To recognize the close relationship among flood management and wetlands, fish and wildlife, and recreation that has been stated by the California Legislature in the California Water Code (Chapter 3.5, Part 6, Division 6), the Fish and Game Code (Sections 1600, 1800 et seq.), and Decision 1460 of the State Water Resources Control Board. (Decision 1460 found that the elimination of a stream segment serving instream beneficial uses by diversion of non-flood flows is both a waste and an unreasonable method of diversion of water.) It is Department policy to carry out its programs in a way that incorporates wetlands, fish and wildlife protection and enhancement, recreational development, and groundwater recharge as integral parts of its flood management efforts. The Department will seek the advise of the Department of Fish and Game in implementing this policy.
>
> To carry out its maintenance responsibilities in a way that will provide and restore as much protection as practicable to stream-side riparian wildlife habitat and to fish habitat in streams.
>
> To recognize the social values of streams in that essentially natural streams frequently give focus or identity to a community, provide opportunities for education and natural history studies, and enhance property values and aesthetics.
>
> To recognize that the traditional "solution" of channel modifications or elimination of a stream is often seen as a bigger "problem" by a community, and to consider flexibility in degree of protection where a community so desires.
>
> To recognize the value of flood forecasting and flood warning as a complement to or a integral part of a flood plain management program, allowing efficiency of operation of flood protection projects. pp. 13-14

As indicated above, the California Department of Water Resources found that current statutory and regulatory programs were inadequate to protect instream beneficial uses; it also found that emergency flood control activities were seldom evaluated with respect to their environmental impact, cost-effective-

ness, or consistancy with State policy. The Department therefore recommended that

> Flood fighting measures should be submitted to a post project analysis of environmental impact, consistency with State policy such as protection of wetland and riparian habitat, and cost effectiveness. Results of these analyses should be used to guide future emergency action and long-term action needed to prevent future damage . . . p 10

While there is universal recognition of the need to protect lives and property presently located on flood prone lands, there is also an increasing recognition of the impacts that such protection can have on water quality and instream beneficial uses, as well as the desirability avoiding such activities whenever possible, or conducting flood control work where it is necessary in the most environmentally sensitive manner.

Paragraph 7: The suggestion that water quality, public or private property, or public health may be jepordized if emergency flood control work is not allowed to be performed presuposes that the choice is between performing or not performing the needed flood protection work.. This presumption sets up a false delemma: the basic purpose of the Technical Paper is to devise ways in which necessary flood control maintenace work can be performed which will minimize its adverse impacts on water quality and instream beneficial uses.

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Paragraph 1: This conclusionary paragraph is contradictory: if there are no significant adverse impacts accociated with the performance of emergency flood control activities, why is it necessary to develop guidelines for the conduct of such work or request the California Department of Fish and Game to provide an educational program to promote awareness of the impacts of such activities

on water quality and instream beneficial uses?

THE EMERGENCY ACTIVITY

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Paragraphs 1-7: The decision to place personnel and equipment in a stream or river channel is often made without adequate professional evaluation of the nature of the problem and the fluvial characteristics of the flood flows; consequently, emergency flood control work is often performed needlessly, or in some cases in a manner which actually exacerbates the immediate problem or contributes to a future flooding problem.

After the floods of 1969, the U.S. Army Corps of Engineers cut a pilot channel in the Ventura River from Baldwin Road to the Foster Park Bridge to study the effectiveness of controlling flood waters with a pilot channel. The Corps of Engineers concluded after monitoring this channel for several years that it would have little influence on the course of flood flows in a major storm. Despite the proven ineffectiveness of such a channel, the Ventura County Flood Control District proceeded to cut another pilot channel through this same section of the Ventura River after the original pilot channel had been destroyed by the heavy flows of 1972. A portion of this section of the Ventura River provides one of the few remaining steelhead spawning and rearing areas in the Ventura River system. The newly created pilot channel resulted in the elimination of natural morphological features such as pools, riffles, and mid-stream boulders, as well as the extensive lotic and riparian vegetation. Significantly, the Ventura County Flood Control District's claim for re-imbursement for the pilot channeling was rejected by the U.S. Army Corps of Engineers on the grounds that the pilot channel provided no substantial public benefits. However, in 1978, following heavy flooding, this

same section was again pilot channeled. The Fish and Wildlife Habitat Damage Report prepared by the U.S. Fish and Wildlife Service following this work made the following observations:

> Destruction of probable spawning beds in the vicinity of Casitas Springs Municipal Water District (sic) headquarters in Casitas Springs was caused as a result of bulldozer work in the middle of the natural channel, and the creation of a semmingly unnecessary pilot channel.
>
> Since the work performed was done largely when no immediate threat to public health or safety existed we do not believe that it can be considered emergency work. Nor does there seem to be any justification for the construction of pilot channels.

Similar observations were made regarding instream flood control work performed by the Ventura County Flood Control District in Santa Paula Creek, a tributary to the Santa Clara River system. The full texts of the U.S. Fish and Wildlife Service's Fish and Wildlife Habitat Damage Reports for the Ventura River, Matilija Creek, Santa Paula Creek, Rincon Creek, Calleagus Creek and Revlon Slough are presented in Appendix D.

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Paragraph 4: Rivers and streams are dynamic systems which are constantly engaged in the processes of erosion and deposition in response to precipitation and run-off. The removal of sedimentation from a channel only temporarily increases its flood carrying capacity. Future floods will re-deposit sediments in the excavated channel thus reducing its flood carrying capacity, and forcing flood flows to cut additional channels or spread out over the larger flood plain in which the low flow channel is situated. A policy to contain flood flows within low flow channels by periodically removing sedimentation in effect creates a permanent maintenance problem

which must be financed at the general tax payer's expense. The observations of the California Department of Water Resources in connection with the extensive damage experienced in Los Angeles County after the January and February floods of 1980 are relevant here:

> Under natural conditions, the heavy run-off would have been carried away by the stream channels, and if the water exceeded what they could handle, it would have overflowed and carved additional channels on the floodplain. But, through the years, the capacity of the natural water courses has been reduced by stream channelization, development encroaching upon the floodplains, the dumping of materials into the stream channels, the eroding of hillsides and river banks, and the paving over of land where water could once percolate into the ground. California Department of Water Resources, California Flood Management: An Evaluation of Flood Damage Prevention Programs, Bulletin 199 (insert), September 1980. (emphasis added)

WHO PERFORMS THE ACTIVITY

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Paragraphs 1-5: While local state and federal regulatory programs usually contain provisions to expidite the performance of emergency actions, such provisions do not exempt emergency flood control measures from all governmental review and control.

The Ventura County Flood Control District, for example, requires that all emergency flood control work be subject to the District's review and approval. Flood Control District Ordinance Number FC-18, Section 6 provides that:

> Section 4 does not prohibit any person from performing emergency maintenance or work within, upon, over, under or through any water course when such work is necessary and proper for the preservation of life or property and when an urgent necessity therefore has arisen, provided that the person performing such emergency work applies for a written permit for such work within fifteen (15) calendar days after the commencement thereof, and complies with all the terms and conditions of the permit so issued. In any action at law, or in equity between the District and the person doing the emergency work, the latter shall have the burden of proving that an emergency existed if such question be in issue. (emphasis added)

An emergency permit from the regional or state Coastal Commissions is required for all emergency work performed within the California Coastal Zone. Public Resources Code Section 30611 provides that:

> When immediate action by a person or public agency performing a public service is required to protect life and public property from imminent danger, or to restore, repair, or maintain public works, utilities, or services destroyed, damaged, or interrupted by natural disaster, serious accident, or in other cases of emergency, the requirements of obtaining any permit under this division may be waived upon notification of the executive director of the commission of the type and location of the work within three days of the disaster or discovery of the danger, whichever occurs first. Nothing in this section authorizes the permanent erection

> of structures valued at more than twenty-five thousand dollars ($25,000). (emphasis added)

The definition of emergency contained in Public Resources Code Section 13009 is relied on for the purpose of carrying out this section:

> . . . a sudden unexpected occurrance demanding immediate action to prevent or mitigate loss or damage to life, health, property or essential services.

If circumstances require it, an emergency permit may be requested or granted in person or by phone rather than in writing. However, the executive director of the regional or state commission must make the following findings:

> a) an emergency exists and requires action more quickly than permitted by the procedures for administrative permits, or for ordinary permits;
>
> b) public comments on the proposed emergency action have been reviewed if time allows; and
>
> c) the work proposed would be consistent with the requirements of the California Coastal Act of 1976.

Emergency permits issued orally can be conditioned to require that the applicant subsequently apply for a regular permit. Such applications are then more thoroughly reviewed to determine if the work performed under emergency conditions is based upon sound engineering principles and is consistent with the relevent development standards and environmental protection policies of the Coastal Act. Regular permits issued for emergency seawalls after construction are frequently conditioned to require the applicant to submit a report by a qualified registered engineer describing the work performed and any feasible alternative which will improve the structural integrity of the work to protect the endnagered structure, or mitigate any environmental impacts; also, a waiver of liability is often required in the form of a deed

restriction on the property which stipulates that:

> a) the applicant understands that the site is subject to extraordinary hazards and the applicant assumes the liability from those hazards;
>
> b) the applicant unconditionally waives any claims of liability on the part of the Commission or any other regulatory agency for any damage from such hazards; and
>
> c) the applicant understands that the construction in the face of these known hazards may make the applicant ineligible for public disaster funds or loans for repair, replacement, or rehabilitation of the property in the event of future disaster.

The South Central Coast Regional Commission (whose jurisdiction includes Ventura County) has issued two permits in connection with flood damages in recent years: an emergency permit for work performed in the Ventura River by the Southern Pacific Transportation Company in 1978; and a regular permit for work performed by the Ventura County Flood Control District under the auspices of the U.S. Soil Conservation Service in Revlon Slough in 1980. The experience in both these cases demonstrates the feasibility and and the advantages of the Commission's procedure: in recognition of the need to respond to an immediate or potential flood hazard, the commision was able to deal with the situations in a timely manner while ensuring that proper environmental mitigations were incorporated into the projects. Examples of emergency and regular coastal development permits issued for flood control work in Ventura County are contained in Appendix E and Appendix F.

In this section and others throughout the Technical Paper there is an assumption that environmental considerations inevitably result in unacceptable delays in the performance of emergency measures. As indicated previously, however, emergency situations vary considerably; consequently the opportunities available to consider the environmental impacts of emergency flood control ac-

tions and possible mitigations will vary greatly. It should also be recognized that much of the work done in response to heavy flooding is clean up work or work done in anticipation of future high flows; as the Technical Paper acknowledges, such work is most often performed after high flows have receded or during the following summer and fall when time constraints could not conflict with environmental considerations.

THE EMERGENCY PERIOD

Ostensibly the object of this section is to define the "emergency period" for the purpose of identifying those emergency flood control activities which are to be addressed in the Technical Paper. The section ultimately arrives at a relatively broad definition of "emergency period" (extending from the initiation of flood damage to the conclusion of the rain season), but does so for the purpose of excluding as much flood control work as possible from environmental review and mitigations, on the grounds that environmental review and mitigations are time consuming and therefore not practical to incorporate into the performance of flood control work under emergency conditions. The Technical Paper attempts to bolster this contention by arguing that various statutory provisions place contraints on the Ventura County Flood Control District and other agencies sponsoring or performing emergency flood control work. In short, the Technical Paper takes the position that it will only consider activities which it has defined, a priori, as beyond environmental review and mitigation, thus creating a catch-22 situation. If the time constraints asssociated with the performance of emergency flood control maintenance activities in fact prohibited the incorporation of enviornmental considerations and mitigations, it would seem reasonable to extend the "emergency period" beyond the rainy period since presumably after this period many of the constraints alluded to in the Technical Paper which limit the consideration of environmental impacts would no longer obtain, thereby giving the Ventura County Flood Control District and other agencies performing flood control maintenance work a greater opportunity to evlauate enviromental impacts and incorporate appropriate mitigations. However, our analysis indicates that the legal and practical contraints which allegedly prohibit the consideration

of environmental impacts and mitigations are misinterpreted or exaggerated.

Characteristics

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Paragraphs 1-3: The Technical Paper attempts to define the scope of the investigation and analysis in terms of a time period, rather than in terms of the nature of the flood control maintenance work. Since it is the nature of the work itself which determines the degree of the impacts on water quality and instream beneficial uses, this approach does not appear to be appropriate. Also, the distinction between "emergency" and "non-emergency" flood control maintenance work which this section attempts to establish serves no purpose other than to subvert the basic objective of the Paper: develop policies, programs, procedures, and best management practices to mitigate the adverse impacts of flood control maintenance activities on water quality and related instream beneficial uses.

Legal Aspects

Pages: 366-367

Paragraphs 4 and 1: The Technical Paper proposes a second approach to defining the "emergency period" based upon the application of environmental impact laws and regulations (that is the requirements for the preparation of environmental impact reports and statements pursuant to the California Environmental Quality Act and the National Environmental Policy Act). According to this approach, flood control maintenance work which is subject to the environmental impact review process does not fall within the "emergency period" and is therefore beyond the scope of the Technical Paper. This proposition is based

on the presumption that projects which have been subjected to an environmental impact review have been given adequate environmental consideration and should not be subjected to additional review or mitigation.

The Technical Paper further proposes that only emergency flood control activities which are exempted from the environmental impact review process should be considered within the scope of the Technical Paper. However, because this exemption is based upon a recognition of the need to perform such work in an expitious manner, it is alleged that this exemption also provides a basis for relieving the Ventura County Flood Control District and others performing flood control work from an obligation to consider the environmental impacts associated with flood control maintenance activities. As noted previously, by only including those activities which are perceived to be by their nature unsusceptible to environmental review and mitigation, the possibility of reducing enviornmental impacts stemming from the performance of those flood control maintenance activities which are within the scope of the Technical Paper is logically precluded.

This second approach to defining the "emergency period" is based upon two fundamental misconceptions: First, both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) are aimed principally at ensuring that adequate environmental information will be available to decision-makers; neither of these statutes establishes a regulatory mechanism which ensures that adequate mitigation measures to mitigate project impacts will be incorporated into projects. The application of CEQA and NEPA requirements to a particular project does not therefore ensure that adequate environmental mitigations will be incorporated into the project. Second, the fact

that a project has been exempted from the formal environmental impact review process of CEQA or NEPA does not preclude or prohibit the Ventura County Flood Control Distirct or any other party from considering environmental impacts and incorporating appropriate mitigations; in fact, some state and federal agencies require that environmental impacts and mitigations be considered in the planning and designing of emergency flood control projects, regardless of the applicability of CEQA or NEPA. These requirements are discussed briefly in the Technical Paper on pages 367-380.

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Paragraphs 2-4: Section 15071 of the California Environmental Quality Act relies on the definition of emergency contained in Section 15025 of the Public Resources Code:

> Emergency means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding, immediate action to prevent or mitigate loss of or damage to life, health, property, or essential public services. Emergency includes such occurrences as fire, flood, earthquake, or other soil, or geological movements, as well as such occurrences as riot, accident, or sabotage.

It is questionable whether natural water courses such as rivers, creeks, and streams are to be considered as flood control facilities for the purposes of interpreting Section 15071 of the California Environmental Quality Act Guidelines. In any event, the exemption from the requirements of the CEQA does not preclude, prohibit, or prevent the Ventura County Flood Control Distirct or any other party from considering environmental impacts, or where appropriate, incorporating environmental mitigations into flood control maintenance activities.; this exemption merely waives the requirement for the preparation of a formal environmental impact report.

The legislative intent of the California Environmental Quality Act requires that all activities carried out by governmental agencies take into account, wherever possible, environmental considerations, regardless of whether or not a formal environmental impact report is prepared. Section 15011 of the CEQA Guidelines for the Implementation of the California Enviornmental Quality Act of 1970 provides:

> The Legislature has declared that it is the policy of the State to (a) Develop and maintain a high-quality environment now and in the future and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the State.
>
> (b) Take all action necessary to provide the people of this State with clean air and water, enjoyment of aethetics, natural, scenic, and historic environmental qualitities, and freedom from excessive noise.
>
> (c) Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representatives of all plant and animal communities and examples of the major periods of California History.
>
> (e) Create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations.
>
> (f) Require governmental agencies at all levels to develop standard procedures to protect environmental quality.
>
> (g) Require governmental agencies at all levels to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs and to consider alternatives to proposed actions affecting the environment.

Finally, Section 15011.5 of the CEQA Guidelines notes that the courts have found the following policy, inter alia, is implicit in the California Environmental Quality Act:

> (f) CEQA was intended to be interpreted in such a manner as to afford the fullest possible protection to the environment within a

reasonable scope of statutory language (Friends of Mammouth v. Board of Supervisors 8 c. 3d 247).

The preparation of an environmental impact report is only one of many possible means contemplated by the California Environmental Quality Act to protect the long term productivity of the environment; it may not be the most appropriate vehicle in every case, as for example in circumstances where the elaborate and time consuming process of developing an environmental impact report is prohibitive. However, there are other methods available to accomplish the same basic objective. Some of these include: routinely incorporating best management practices or special construction designs and techniques into specified types of projects, or into projects situated in environmentally sensitive areas; conducting educational programs to inform persons engaged in the planning or execution of projects about the environmental impacts associated with development activities and the possible mitigation measures which may be utilized; coordinating with governmental and private organizations which have experience and expertise in environmental planning and management techniques.

The Ventura County 208 Plan provides an opportunity to develop additional measures to protect water quality and related instream beneficial uses from the impacts of flood control maintenance activities. The exemption of certypes of projects from the environmental impact review process established by the California Enviornmental Quality Act should not in any way be viewed as a constraint, hinderance, or obstruction to the development of necessary additional protection measures. Such a position is not only not supported by the provisions of CEQA, but is counter to specific provisions, as well as the general legislative intent of the Act.

Page 368

Paragraphs 1-3: Section 405 (codified at 42 U.S.C. 5175) of the Disaster Relief Act of 1974 has been misinterpreted to suggest that flood control activities undertaken pursuant to this section have, by decree, no significant environmental impact, and therefore are not subject to federal requirements regarding environmental review and mitigation. First, this section only applies to a disaster declared by Presidential Order. Second, when such an Order is issued, it generally applies to the restoration of man-made facilities , not the re-construction of natural water courses such as rivers and streams. Third, and most significantly, exemptions granted under this section do not relieve an agency or a person acting under a declared disaster situation from the general provisions of the National Environmental Policy Act requiring the consideration of environmental impacts and mitigations; it merely waives the requirement for the preparation of a formal environmental impact statement. As noted in the Technical Paper at pages 367-369, emergency activities and programs sponsored by the U.S. Army Corps of Engineers or U.S. Soil Conservation Service are subject to the provisions of the U.S. Fish and Wildlife Coordination Act (PL 85-624).

Page 369

Paragraph 5: Exemption from the requirement to enter into an agreement with with the California Department of Fish and Game pursuant to Section 1600-1606 of the Fish and Game Code is not based upon the persistance of a "disaster", but on the existance of a bona fide emergency as defined in Public Resources Code Section 21060.5:

> . . . a sudden unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of lives or damage to life, health, property, or essential public service.

A bona fide emergency must exhibit three basic elements: it must be sudden or unexpected; it must pose a threat to life or property; and it must require immediate action. Without all three of these elements, a bona fide emergency cannot be considered to exist and a stream alteration agreement for significant alteration of designated streams and rivers must be entered into pursuant to Sections 1600-1606 of the Fish and Game Code.

Paragraph 6: The rivers and streams and water courses subject to the jurisdiction of the U.S. Army Corps of Engineers pursuant to Section 404 of the Federal Water Pollution Control Act Amendments of 1972 should be listed and mapped as part of the Technical Paper.

Summary of Legal Aspects

Page 370

Paragraph 1: While useful in determining the level and type of review required (as distinct from prohibited) by various statutes and regulations, the definitions of "emergency" or "emergency period" is not germane to the central task of the Technical Paper: identifying policies, programs, procedures, and best management practices which can be implementented through the Ventura County 208 Plan to mitigate the adverse impacts of flood control maintenance activities on water quality and related instream beneficial uses. As indicated above, the analysis presented in the Technical Paper does not demonstrate that existing statutes and regulations impose requirements which li-

mit, hinder, or constrain the Ventura County Flood Control District in the consideration of environmental impacts associated with emergency flood control activities, or the incorporation of environmental mitigations into such activities; in fact, environmental considerations and mitigations are required in principle, even if a specific mechanism of achieving such mitigations (such as the preparation of an environmental impact report or statement) is not mandated by the California Environmental Quality Act or the National Environmental Policy Act.

Paragraph 4: The central concern of Technical Paper is the adverse impacts flood control activites can have on water quality and related instream beneficial uses through the disruption of channel morphology and associated vegetative cover. Such impacts are not limited to emergency flood control activities, but may result from any kind of stream modification which alters morphology and vegetative cover. Consequently, limiting the scope of the paper to emergency flood control activities and defining the "emergency period" in terms of various legislative provisions which were established for a variety of specific purposes unrelated to the purposes of the 208 planning process, creates an unnecessary confusion which ultimately results in an obfuscation of the central concern of the Technical Paper and a subversion of the basic intent of the 208 plan: the protection of water quality and related beneficial uses (including instream beneficial uses) from non-point sources of pollution.

Contracting Methods

Page 371

Paragraph 1: The relevance of this section to the basic purpose of the Technical Paper is not clear; however, the discussion of different contracting methods confirms what experience has shown: "emergency" situations can vary greatly, from deposits of mud on living room floors to persons stranded on a roof-top in the middle of a swollen stream. Some flood related damage, while it may be of serious concern to the individuals directly involved, does not pose such an imminent threat to life or property as to demand immediate and direct action without regard to the possible environmental impacts.

Paragraph 2: The contention that "non-contract work" is susceptible to public review does not reflect the fact that the negotiations between the potential contractor and the public agency are conducted without formal public hearings or review; there is in fact no allowance made for public input into such negotiations, or mechanism available for challenging either the scope of the work, the choice of the contractor, or the manner in which the work is to be conducted.

Pagragraphs 4-5: The definition of "disaster period" given previously on page 370 ("from the commencement of damage until restoration work is complete") differs from the definiton of "emergency work" given in this section as "force account work", that is work which because of the need to take immediate action in response to imminent danger must be performed outside the bounds of the normal contracting process. The following paragraph, however, indicates that "force account work" may not be of an emergency nature.

Selected Emergency Period

Pages 371-372

In proposing the inclusion of a flood control work element in the Ventura County 208 Plan, the FRIENDS originally recommended that the element deal with the impacts of both routine maintenance and emergency flood control measures. No distinction was made between emergency and routing maintenance because there is no appreciable difference between the impacts on water quality and related instream beneficial uses occasioned by either type of activity: channelizing a river or stream during the fall in anticipation of a flood can be as environmentally damaging as shoring up an eroded bank or pilot channeling a stream section following a flood. Both types of activities can and should be conducted in a manner which minimizes their adverse impacts on water quality and related instream beneficial uses.

There are basicially two possible ways of defining emergency flood control activities: 1) in terms of the nature of the work, or 2) in terms of a set period of time in which such activities are likely to occur. The Technical Paper relies on a combination of the two, limiting the scope of the paper to flood control work of an emergency nature which is performed during the period extending from the initiation of flood related damage to the conclusion of the rain season.

The first approach has the advantage over the second of including work performed during any portion of the year which is a bona fide emergency, regardless of the time period; it has the disadvantage of excluding instream flood control activities which, even though they are not of an emergency nature, can adversely impact water quality and related instream beneficial uses. The second approach has the the advantage over the first of including all work performed during the designated "emergency period", regardless of whether or not it was in response to a bona fide emergency; it has the disadvantage of ex-

cluding flood control work performed outside of the designated "emergency period" which may nevertheless have an adverse impact on water quality and related instream beneficial uses. The approach relied upon in the Technical Paper combines the disadvantages of both, with the advantages of neither.

None of these approaches to defining emergency flood control activities are consistent with the basic purpose of Technical Paper: to reduce the impacts of flood control activities on water quality and related instream beneficial uses. We would therefore recommend that the scope of the Technical Paper be redefined as we had originally proposed to eliminate the awkward and illogical dichotomy between "emergency" and "non-emergency" flood control activities. If such a redefinition of the scope of the Technical Paper is not possible at this time, we would then recommend that the definition of "emergency" flood control activity be expanded for the purposes of this Technical Paper to include all instream flood control work whose purpose is the alleviation or prevention of flood damages. Because the majority of the mitigation policies, programs, procedures, and best management practices would have equal applicability to both "emergency" and "non-emergency"flood control maintenance activities, neither the redefinition of the formal scope of the paper or the redefintion an "emergency" flood control activity would materially effect the level of staff work necessary to address the issues and accomplish the tasks set forth in the original Emergency Flood Control Work Element (Task 4.5.4).

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Paragraphs 1-3: The origin of the flows occuring in the rivers and streams of Ventura County is not relevant to the basic purpose of the Technical Paper: the development of policies, programs, procedures, and best management practices to mitigate the adverse impacts of flood control activities on water quality and instream beneficial uses. We would note, however, that with the few exceptions involving imported water, all flows, including irrigation return flows, releases from dams, and effluent discharges, are naturally occuring waters which have been temporarily diverted for out-of-stream beneficial uses before being returned to the water system of their origin. We would recommed that this discussion be deleted.

Paragraphs 4-5: A river or stream channel which has gone dry, either along its entire length or in stretches, still possesses habitat value. Intermittent streams in the arid southwest typically retain isolated pools which provide summer habitat for fishes and a source of water for other types of wildlife; additionally, the riparian vegetation which persists along dry reaches because of the existence of ground water provides habitat for many terrestial species. All the enumerated impacts of flood control maintenance activities will effect this habitat, including turbidity and consequent sedimentation, pollutants washed from equipment, channges in channel configuration, and increased mineralization.

Paragraph 6: The magnitude of the impacts of instream flood control work is more a function of the nature and extent, rather than the timing of such work, though the work can adversely impact particular species disproportionately if the timing conincides with a particularly crucial por-

tion of their life-cycle. As noted previously, subsequent floods will not automatically and quickly erase the impacts of previously performed flood control work. Obvious physical changes such as a re-establishment of natural morphological characteristics, while important steps in the biological recovery of a disturbed stream section, should not be mistaken for actual restoration. Subsequent flooding cannot replace displaced fish spawn or other benthic larvae. Subsequent flooding may also not be sufficient to adequately flush sedimentation generated by previous flood control activities, or fully re-establish comparable physical habitat niches such as pools, riffles, and under-cut banks. Finally, subsequent floods may require additional emergency flood control work which could negate the beneficial effects of the flood flows.

Turbidity

Page 374

Paragraphs 1-4: The Techncial Paper does not adequately or accurately assess the adverse impacts of turbidity and sedementation generated by instream flood control activities. The Cordone and Kelley article cited in support of the contention that the direct impacts of turbidity on fish cannot be established actually concluded that there was considerable evidence that turbidity can directly and significantly impact salmonids. Some of the more pertinent conclusions from Cordone and Kelley article are cited below:

> We have found many statements in the literature that silt is directly harmful to fishes by interference with normal gill functions. (emphasis added) p. 194.
>
> Of course, the fish do not have to be killed to be directly influenced . . . salmon avoided the muddy water of the Yuba River, California in preference for the clear water of a rela-

> tively small tributary containing about 1/25 the flow of the Yuba. Salmon occurred in such concentrations that the previously constructed redds were torn up. (emphasis added) p. 195.
>
> The general conclusion we reach from reviewing the considerable efforts of a number of competent investigations is that the effects of sediment upon alevins and especially eggs of salmonids can be and probably is often disasterous. Even moderate deposition is detrimental. Sedimentation is probably one of the most important factors limiting the natural reproduction of salmonids in streams, and certainly every effort should be made to prevent it. (emphasis added) p. 204.
>
> In summary, we can only conclude that there is overwhelming evidence that the deposition of sediment in streams can and often has destroyed insect and mussel populations. Much of the available information has been gathered during pollution investigations and is limited because of the small number of samples taken. It would appear, however, that those who report on the problem are unanimously in agreement that it is a serious one. (emphasis added) p. 207.
>
> A brief summary of this section /Influences of Sediment upon Bottom Organisms/ can be made in three statements. First, there is abundant evidence that deposition of inorganic sediment will damage and reduce bottom fauna. Second, such reduction will in many cases deleteriously affect salmonid populations. Third, with care such reduction can be measured. (emphsis added) p. 211.

The contention that additional sedimentation stemming from human activities such as flood control maintenance has only limited, short term impacts on water quality and acquatic resources is also not supported by the findings of the Cordone and Kelley article. Some of the more relevant conclusions are cited below:

> Storms usually increase the turbidity of streams, and man's activities increase and prolong the period when light penetration is lessened. The question of the effects of relatively short periods of turbidity need much study. Short term discharges of sediment may do little visable damage to fishes, or fish eggs, but may interrupt the entire biological complex through effects on algae. (emphasis added) p. 213.
>
> There is abundant evidence that sediment is detrimental to aquatic life in salmon and trout streams. The adult fishes them-

> selves can apparently stand normal high concentrations without harm, but deposition of sediments on the bottom of the stream will reduce the survival of eggs, and alevins, reduce aquatic insect fauna, and destroy needed shelter. There can be little doubt that prolonged turbidity of any great degree is also harmful. (emphasis added) p. 222.
>
> The increasing activity of man on our mountain watersheds in California is resulting in obviously increased erosion and sediment deposition. Our failure to recognize that even small amounts of sediments may be harmful may well result in gradual destruction of the majority of our streams, while we work feverishly to solve more obvious and spectacular problems. (emphasis added) p. 223.

Paragraph 5: The distance sediments can be transported downstream varies with the competance of the stream and the nature and size of the material being transported. As Morisawa explains:

> Sediment discharge . . . or bedload or suspended load is variable from time to time and place to place in a stream. The factors which determine the debris load are stream discharge, velocity, gradient, channel morphology, bed roughness, and the physical characteristics of the fluid and of the grains in the load. In turn these variables are interrelated and affect each other.
>
> Once particles are entrained and part of the suspended load, little or no energy is required to transport them. They can be and are carried along by a current which has a velocity less than the critical erosion velocity needed for their entrainment. Moreover, the suspended load decreases the inner turbulence of the water, thus reducing frictional losses of energy and making the stream more effecient. Marie Morisawa, Streams: Their Dynamics and Morphology, McGraw-Hill Book Company, 1968, pp. 59, 64.

The conclusion that the impacts of turbidity are limited to a distance one mile downstream from its origin is apparently based upon a study reported by Cordone and Kelley. This study, which was conducted by Heg (1952) and Hertzog (1953) involved a large clay slide on the North Fork of the Stillaguamish River, Washington; the investigators reported that the slide effected the development of steelhead eggs and fry for a distance of less than one

downstream from the slide. (Robert T. Heg, "Stillaguamish Slide Study: Summary of Data Obtained by Research Division During 1952." 1952, Washington Department of Fish,11 pp; Donald E. Hertzog, "Stillaguamish Slide Study." 1953 Washington Department of Fish. 29 pp.) The Technical Paper, however, ignored other studies reported by Cordone and Kelley in which sedimentation effected water quality and aquatic resources considerably further dowstream from the point of origin. For example, Cordone and Pennyoer (1960) reported that silt from a gravel washing operation plant on Cold Creek, a tributary of the Truckee River, California reduced bottom organisms by 75 percent more than ten miles below the gravel washing outfall. (Almo J. Cordone and Steve Pennoyer, "Notes on Silt Pollution in the Truckee River Drainage." California Department of Fish and Game, Inland Fisheries Administrative Report No. 60-14, 1960, 25 pp.)

Similar investigations in Ventura County have demonstrated the long distance impacts of artificially generated turbidity. For example, instream flood control work in San Antonio Creek, a tributary of the Ventura River, following the winter rains of 1978 produced observable turbidity near the mouth of the river at the Pacific ocean, approximately nine miles from the origin of the turbidity.

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Paragraph 1: Stream systems maintain a natural equilibrium to which its associated flora and fauna are genetically adapted; flood control maintenance activities increase the sediment load normally produced by natural flooding. This increased sedimentation can have serious, long term impacts on water quality and related instream beneficial uses. A series of investigations

were conducted by Moore (1980) in the Ventura River between 1976 and 1978 to assess the factors influencing the survival of juvenile steelhead. These investigations revealed that the quality and quantity of resident rainbow tour and juvenile steelhead habitat in the study area was substantially degraded as a result of instream flood control activities. Moore concluded that the amount of salmonid habitat:

> was significantly reduced as evidenced by the relative abundance of planted juvenile steelhead occurring in artificially and naturally altered stream sections following the winter flood of 1978. Electrofishing showed more than four times as many fish in a naturally altered stream section than in a stream section which had been artificially altered by instream flood control activities. (emphasis added)
>
> It is likely that the heavy sedimentation of pool and riffle areas in the study area during the spring of 1978 significantly reduced the shelter available to wild salmonid fry that had hatched and survived to emergence, and that high post-emergence mortality occurred prior to the population sampling conducted in July, 1978. Mark R. Moore, Factors Influencing the Survival of Juvenile Steelhead Rainbow Trout (Salmo gairdneri gairdneri) in the Ventura River, California. M.A. Thesis, Humboldt State University, 1980, pp. 68-69.

Paragraph 2: A river or stream does not necessarily have to carry a perennial surface flow to provide significant habitat for fish and wildlife. Some species of fish utilize a stream as a migration corridor to reach spawning areas, or only for the spawning and initial development of their young. Similarly, wildlife may make temporary but critical use of a stream while it carries a surface flow. The generation of additional turbidity and sedimentation will reduce the productivity of the stream during periods of surface flow; additionally, disruption of the natural channel morphology will also reduce the value of the stream section for species which continue to utilize the stream corridor after surface flows have ceased. It should also be recognized that sedimentation deposited in a stream section which periodically goes

dry will eventually be transported downstream in subsequent freshets and deposited in other sections which may maintain a perennial surface flow, thus prolonging and compounding the adverse impacts of sedimentation generated by instream flood control activities.

Paragraph 3: As noted above, the effects of instream flood control activities are not cancelled by subsequent flood flows; while subsequent flooding can initate the recovery of a river or stream, this recovery will not be completed quickly; additionally, future floods may occasion additional flood control activity which can negate the restorative function of subsequent flooding.

Riparian Habitat

Paragraph 5: In addition to the direct removal of wildlife habitat, the disruption of riparian vegetation will also result in reduced thermal stability in the river or stream. Moore (1980) found that:

> Following the winter flood flows of 1978, water temperatures exhibited greater diurnal fluctuation than in the two previous years. This fluctuation was largely due to the loss of riparian cover and the contribution of surface flow originating in the upper Ventura River and San Antonio Creek.
>
> The impacts of the natural removal of riparian vegetation by flooding have been compounded by man-made alterations in the watershed. The most important of these alterations are water supply development and instream flood control activities. pp. 34, 66.

Increased water temperatures can result in algae blooms; such blooms can create a eutrophic situation with periods of high demand on dissolved oxygen, thus causing stress and possibly death to fish and other aquatic organisms which depend upon an abundant supply of dissolved oxygen. Eutrophication represents an important form of water quality degradation which is controlled through waste discharge discharge permits for point waste discharges.

Regarding the displacement of wildlife populations, it is often mistakenly assumed that wildlife will re-locate to an adjacent site if their habitat is disturbed or distroyed. Most habitat areas have a limited food supply, shelter, nesting, and roosting sites. The existing wildlife populations are generally making the maximum use of these resources. Consequently, adjacent or nearby sites cannot accept or support additional numbers of individuals without upsetting the existing equilibrium. The California Department of Fish and Game, in a letter to the County of Ventura dated August 6, 1974, noted some of the problems involved in displacing wildlife populations:

> Any sudden influx of additional wildlife leads to direct competition for food, escape cover, etc. The inevitable result is the death of one or both of the competitors. There is also a considerable danger of introduction of disease if the animals are transported into a new area for relocation. Furthermore, intermingling of wildlife populations may eliminate particular genetic characteristics of a unique species or race.

Appendix G contains the full text of the California Department of Fish and Game's letter to the County of Ventura.

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Paragraph 3: Another common mis-conception is that the disruption or removal of riparian vegetation by natural flooding is comparable to the disruption or removal of such vegetation as a result of instream flood control activities. This assumption is not supported by studies of secondary plant succession. The following comments are addressed to the specific points which are offered to support the conclusion that the impact of instream flood control activities on riparian vegetation is minor and short-term: 1) A flooding stream selectively removes vegetation, leaving both mature plants and reproductive materials such as rhizomes, seeds, and stolens on isolated sand and gravel bars, along

higher banks, and on the insides of meanders. These areas provide reproductive plant materials which will enable other areas which have been denuded by scouring to be relatively rapidly re-colonized. 2) If large stream sections containing seed or other reproductive plant materials are excavated for flood control purposes, several subsequent floods will be necessary to replace the lost propagules at a density comparable to that which was present before the stream sections were disturbed; also, as noted above, subsequent flooding may require additional instream flood control work which would further disrupt the riparian vegetation and retard its re-establishment. 3) The re-establishment of a mature, stable climax riparian plant assemblage with a large canopy will take a considerable lenght of time, possibly 15 to 25 years before it will provide adequate stream shade and support a full range of wildlife. An examination of the areas disturbed by instream flood control activities after the 1973 and 1978 floods revealed that the riparian habitat disturbed by these activities has not been significantly re-established.

Addition of Pollutants

Paragraph 4: The use of asphalt and re-cycled concrete to shore up failing banks, bridge abutments, or other structures contributes additional pollutants to the stream: concrete contains lime, and asphalt contains petroleum products. The U.S. Fish and Wildlife Service recommended in its 1978 Damage Survey Reports for Ventura County that:

> The material which is to be utilized as rip-rap or stabilization fill should be clean and contain no hydro-carbons or excessive amounts of fines.

The practice of changing oil and greasing heavy equipment utilized during major flood control maintenance operations can also contribute sigificant pollu-

tants to the stream; it is common to find discarded oil filters, cans, and other material related to the servicing of heavy equipment in work areas.

Channel Braiding

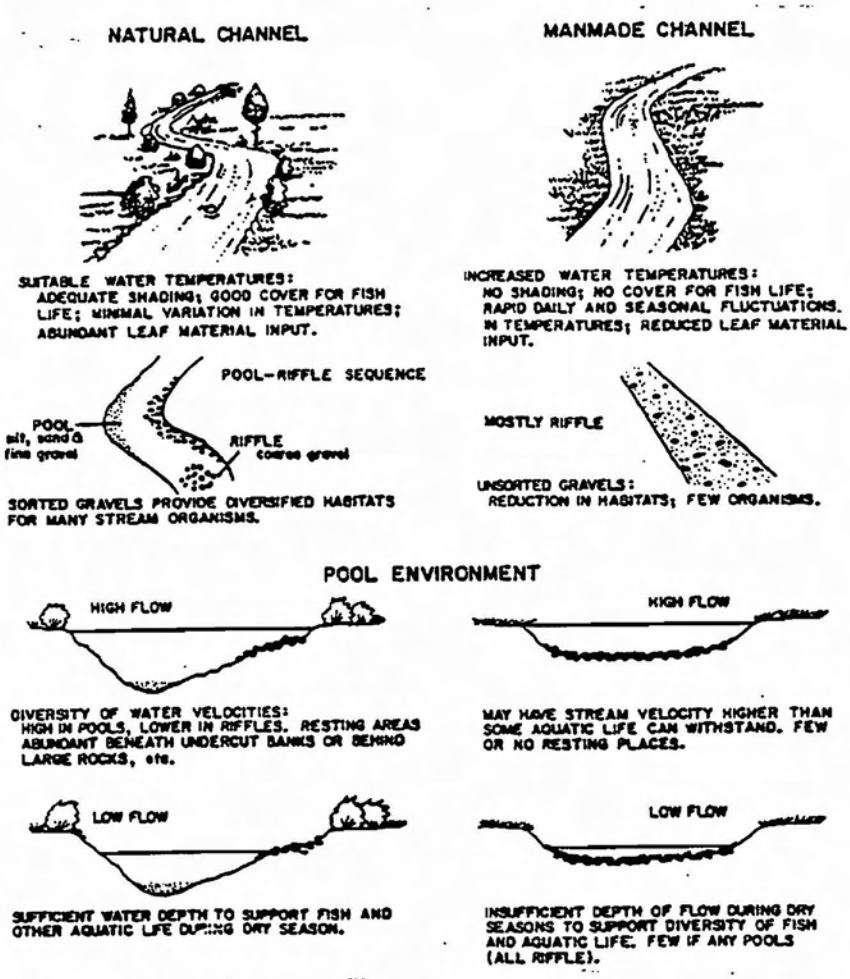
Paragraph 6: The physical configuration of a stream is complex, consisting of such features as pools, riffles, falls, flat shallow reaches, isolated boulders, under-cut banks, as well as braided channels. (Because channel braiding is only one aspect of channel morphology, it should be discussed as part of the more general section entitle "Channel Configuration".)

The natural configuration of a river or stream will determine to a large extent its biological productivity and species diversity. Physical irregularities provide specialized niches for different organisms and sites for different phases of an organisms life-cycle. A trout, for example, will feed in riffle areas, lay in deeper pools or under-cut banks during periods of high water temeperatures, retreat to boulders or under-cut banks for temporary shelter against predators, and spawn in the tails of pools. Shallow areas provide suitable substrate for certain types of algae. Boulders and cobbles provide habitat for aquatic insects. Riffles and falls provide aereation and thus sustain a level of dissolved oxygen essential to the survival of all aquatic life.

Instream flood control activities reduce this physical diversity, leaving a relatively uniform substrate which provides a suitable habitat for a limited variety of organisms. This situation is perpetuatated by the repeated disturbance of a river or stream in response to repeated floods. As Keller has noted:

> The reduced variability of the biological community in response to channel modification is directly attributed to the loss of variability in the physical environment. That it, stream channel modification tends to reduce the diversity of flow conditions, the diversity of bed-material distribution, and the diversity of bed forms. If enviornmental deterioration caused by stream channel modification is to be minimized then new design criteria must be developed such that the stream's natural tendency to converge and diverge flow and sort the bed material is maintained. E. A Keller, "The Fluvial System: Selected Observations" in Riparian Forests in California: Their Ecology and Conservation, ed. Anne Sands, 1977, p. 45.

The following illustration provides a comparison of some of these natural physical features as modified by instream flood control activities:



There is a substantial body of scientific literature on the environmental impacts

of channel modification stemming from flood control and other types of activities. (See Appendix B.)

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Paragraph 1: The configuration of a natural river or stream channel is not "haphazard"; the basic processes of erosion, transporation, and deposition which produce meanders, bars, and other morphological features represent a complex, but predictable, adjustment of the stream to changes in flow, resistance to the substrate, changes in suspended and bed-loads, and stream gradient. The natural channel configuration allows the stream to perform work in the most effecient manner. An understanding of how and why a stream or river alters landforms is essential to an understanding of flooding problems. (See "The Channel Pattern" in Streams: Their Dynamics and Morphology by Marie Morisawa, McGraw Hill and Company, 1968, pp. 135-151.)

Paragraph 2: The discussion regarding the desirability of a braided stream channel contains a number of significant mis-conceptions. The following comments are addressed to the enumerated points: a) as noted previously, an intermittent stream may have value for fish and wildlife (including anadromous fishes) which can temporarily use the channel while it maintains a surface flow, and subsequently after flows have ceased. The presence or absence of channel braids may favor some species over others depending on the flow conditions; b) receding flood flows will in many cases drop naturally into a single channel (see the cover photograph for an example); however, it should be recognized that channel braiding is a natural phenomenon to which the native flora and fauna is genetically adapted; c) braided channels do not provide any advantages to anadromous fishes, and may in fact inhibit their migration

to and from spawning areas under low flow conditions. In general, the natural channel configuration of a river or stream (whether braided or not) should not be altered. It may be appropriate to make exceptions to offset some other artificial alteration, such as creating a single channel to by-pass andromous fishes where articificially reduced flows have made it difficult or impossible for fish to reach or escape from spawning and rearing areas.

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Paragraph 2: The Technical Paper suggests that the reduction of natural braiding (presumably through pilot channeling for flood control purposes) may not significantly adversely impact fish and wildlife because: 1) surface flows are not eliminated; 2) sedimentation may be reduced; 3) water will be concentrated in a single channel; and 4) because most streams in Ventura County do not have enough water to create a suitable aquatic habitat with a braided channel configuration. Aside from the dubious benefits of any of these claims, the argument ignores the fundamental fact that such channel modification eliminates important morphological features such as pools, riffles, under-cut banks, and meanders, as well as lotic and riparian vegetation.

Paragraph 3: Flooding is a natural process which is essential to the continued biological productivity and diversity of a river system; the Techncial Paper was not intended and should not be used to provide ways of mitigating the environmental impacts of natural flooding. Instream beneficial uses are recognized beneficial uses of the rivers and streams of Ventura County. The conduct of flood control maintenance activities has adversely impacted these beneficial uses by degrading water quality and disrupting the physical habi-

tat of fish and wildlife resources.

Increased Mineralization

Instream flood control maintenance activities increase the sediment load and therfore introduce additional minerals into the stream system which adversely impact water quality and related instream beneficial uses. (See the discussion above.)

Channel Configuration

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Paragraph 2: The removal of natural sediment deposits from a low flow channel will only temporarily increase its flood carrying capacity. Subsequent floods will re-deposit sediments, reducing the flood carrying capacity of the stream channel. Attempts to confine flood flows to naturally formed low flow channels will require a permanent maintenance program.

Paragraph 3: As pointed out previously, while essential to the recovery of an artificially disturbed stream section, subsequent flood flows will not themselves replace lost fish and wildlife resources or vegetative cover; subsequent flood flows may, however, require additional instream flood control work which negates the beneficial effects of re-occurrent flooding.

Paragraph 4: Artificial channel modifications will also effect sediment loads, water temperature, and the level of dissolved oxygen; these are important aspects of water quality which are controlled by the Regional Water Quality Control Board through the issuance of waste discharge permits for point waste discharges.

Paragraph 6: Channel morphology is a basic element in any aquatic ecological system. The recovery of an artificially disturbed stream section is a complex process which takes an extended period of time; this process may be delayed or indifinitely postponed if instream flood control activities are periodically conducted in the same stream section.. Almost all stream channels have fish and wildlife habitat value which will be adversely impacted by instream flood control activities which disturbs the natural channel morphology or removes the lotic and riparian vegetation.

LOCATION

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Paragraphs 1-2: The list of streams prepared by the California Department of Fish and Game does not reflect the extensive stream survey performed by the U.S. Fish and Wildlife Service subsequent to the compilation of the Department's list. This new survey indicates that many of the tributaries of the major river systems in Ventura County provide substantial fish and wildlife habitat. (See U.S. Fish and Wildlife Service, Stream Survey: Ojai Ranger District, Los Padres National Forest, 1979. 242 pp.)

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Paragraphs 2-3: The Technical Paper presents no assessment of specific rivers or streams; there is only a general discussion of the impacts of instream flood control activities. Consequently, there are no specific policies or best management practices which would address problems peculiar to the rivers and streams of Ventura County.

Paragraph 4: The criteria which the Technical Paper proposes to be used in determining whether flood control work could have an adverse impact on water quality and related instream beneficial uses are either vague or misconceived. The following comments are addressed to the enumerated criteria: a) what is meant by "significant" riparian vegetation? Who is to make such a determination: the Ventura County Flood Control District personnel or a qualified biologist?; b) as indicated previously, the habitat value of a river or stream section is not dependent solely on the presence of surface flows; instream flood control activities can adversely impact water quality and related in-

stream beneficial uses of intermittent as well as perennial streams; c) this criteria falsely presumes that the choice is between conducting and not conducting instream flood control maintenance activities. The first question to be asked is whether the flood control work is justified. If so, how much and where? And finally, how can the work be performed in a manner which minimized the adverse impacts on water quality and related instream beneficial uses?; e) who is to determine if the stream section is utilized by anadromous fishes or rare or endangered fish? Why is the criteria limited to fish? Both fish and terrestial wildlfe should be considered.

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Paragraphs 1-3:

There are other approaches and specific flood control practices available than those enumerated here to minimize the adverse impacts of instream flood control maintenance activies on water quality and instream beneficial uses.

This discussion reiterates a theme which underlies much of the Technical Paper: there is an inherent and irreconcilable conflict between the performance of flood control maintenance activities and the protection of water quality and instream beneficial uses. While flood control activities can and often do have significant adverse environmental impacts, not all of these impacts are inevitable; some may be avoided or mitigated with a proper understanding of geomorphological and biological principles.

Paragraph 4: The estimates of stream lengths do not include all of the tributaries of the Ventura, Santa Clara, Calleguas, or Cuyama river systems which are under the jurisdiction of the Ventura County Flood Control District and susceptible to adverse impacts from instream flood control maintenance activities. Appendix H contains a map of the river systems under the jurisdiction of the Ventura County Flood Control District.

Paragraph 4: Both the Ventura and Santa Clara River systems presently support runs of anadromous fishes; several plans to rehabilitate the fishery resources of these rivers are currently being evaluated by the County of Ventura, the California Department of Fish and Game, the California Department of Water Re-

sources, the State Water Resources Control Board, and the U.S. Water and Power Resources Service. (See Technical Appendix I to the Ventura County 208 Areawide Water Quality Management Plan.)

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Paragraph 1: Again, this discussion presumes an irreconcilable conflict between the need to perform flood control maintenance activities and the protection of water quality and instream beneficial uses. Because this presumed conflict is treated in extremely general terms, the specific ways of reconciling the potential conflicts have not been effectively dealt with in the Technical Paper.

Paragraph 2: As noted above, the legislative requirements and intent of the several statutes relied upon in the Technical Paper have not been accurately represented. The legislative intent of these statutes is to facilitate the performance of flood control activities in a bona fide emergency situation; however, neither the California legislature or the Congress of the United States contemplated, or has condoned the categorical suspension of all environmental considerations in emergency situations.

A close analysis of the relevant statutory, administrative and case law indicates that the California Legislature has not waived all environmental considerations in emergency situations. Furthermore, the definition of "emergency" which governs state provisions suspending formal environmental impact assessments or normal permit requirements is much narrower than the definition of "emergency period" proposed in the Technical Paper. Similarly, the provisions of the Federal Diaster Relief Act of 1974 do not provide as is claimed that emergency work is an activity which does not significantly effect

the human environment; it merely waives the requirements for the preparation of a formal environmental impact statement pursuant to the provisions of the National Environmental Policy Act.

Finally, the summary presented here omits mention of the environmental review and mitigation requirements of the U.S. Army Corps of Engineers and the U.S. Soil Conservation Service which were discussed earlier in the Technical Paper (at pages 367-370), as well as the permit authority over emergency flood control activities exercised by the Ventura County Flood Control District and the California Coastal Commissions.

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Paragraph 1: The list of potential solutions does not exhaust the possible constructive and practical policies, programs, procedures, and best management practices which could be used to mitigate the adverse impacts of instream flood control activities on water quality and instream beneficial uses. Nor do the discussions of individual "solutions" deal in sufficient detail to enable a reviewer to determine their merits and limitations.

Enactment of Local Ordinances

Paragraphs 3-4: The Ventura County Flood Control District presently has an ordinance (FC-18) which requires a stream encroachment permit for emergency flood control work. This ordinance could be amended to incorporate environmental considerations and mitigations into emergency flood control activities. (See the above discussion regarding the approach adopted by the California Coastal Commissions.)

The following comments are directed at the reasons given for the impracticality of a new ordinance: a) as noted above, the Ventura County Flood Control District presently has a permit process for both "emergency" and "non-emergency" flood control activities. This ordinance waives the requirement to obtain a stream encroachment permit prior to performing emergency flood control work, but requires that the work be subsequently reviewed and issued a valid stream encroachment permit; b) there is nothing in the relevent state of federal statutory, administrative, or case law which prohibits the District of any aother party from taking into account environmental considerations and

mitigations in the performance of emergency flood control activities; also, as indicated above, there is no basis for presuming an inherent and irreconcilable conflict between the timely performance of emergency flood control work and the reasonable protection of water quality and instream beneficial uses. The adminstration of emergency permits issued by the Ventura County Flood Control District and the California Coastal Commissions has not caused unacceptable delays in the performance of emergency flood control work. The incorporation of environmental considerations and appropriate mitigations into the post-emergency stream encroachment permits issued by the District would not effect the performance of necessary emergency work, but would ensure that the work was performed in a manner which was based upon sound engineering, geomorphological, and biological principles; c) a flood control ordinance which stringently regulated development in areas subject to flood damage, and which would require large expenditures of public monies to protect from flooding or restore after being damaged by flooding, would provide a more effective means of saving tax-payers' money than the suspension of environmental considerations and mitigations for flood control maintenance activities.

Strengthen Existing Fish and Game Department Laws

The purpose of the Technical Paper is to develop internal policies, programs, procedures, and best management practices which the District and other local interests may use to reduce the adverse impacts of flood control maintenance activities on water quality and instream beneficial uses. The analysis of existing state or federal legislation or the development and evaluation of new state or federal legislation is beyond the scope of the Technical Paper. (We would note, however, that the administration of stream alteration agreements by the California Department of Fish and Game is relies upon the definition

of emergency contained in the Public Resources Code 21060.5, not on the emotionally charged and amorphous concept of "disaster"; this defintion is more limited than the definition of "emergency" or "emergency period" proposed in the Technical Paper.)

Training Session

Page 385a

The suggested "adverse aspects" of the proposed training program do not appear to be substantial for the following reasons: a) the training program could be incorporated into the normal training of field personnel; b) the effect and influence of the training sessions could be easily extended by preparing a manual outlining the impacts of instream flood control activities on water quality and instream beneficial uses, and the techniques available to mitigate these impacts. This manual could be distributed to interested local public agencies and private individuals who perform instream flood control work.

Staff Review of Emergency Projects

Page 385b

Paragraph 1: The conclusions regarding the use of Ventura County staff appear to be based upon a misapprehension. The primary purpose of the staff review would be to identify methods of performing a particular flood control operation in an environmentally sensitive manner, not to approve or disapprove the project. Many mitigation techniques have wide applicability (for example, using silt curtains or catchment basins, isolating flood control work from flowing water, utilizing clean material for fill, and minimizing the re-

moval of riparian vegetation); also, many of the flood-prone areas are well known from previous experience, making it possible to develop strategies for performing flood control work in these areas in advance of a flood. Personnel from the California Department of Fish and Game and U.S. Fish and Wildlife Service are also available to assist in emergency project review. If environmental considerations are incorporated into the Ventura County Flood Control District's emergency permit review procedures, the expertise of the District's Staff Conservationist could also be used to minimize the adverse impacts of privately conducted flood control activities. Appendix I contains a letter from the U.S. Fish and Wildlife Service to the Ventura County Regional Office, U.S. Soil Conservation Service, concerning specific mitigation measures for several rivers and streams in Ventura County.

Selected Solution

Pages 385b-c

Paragraph 3: The conclusions presented in this section are not supported by the relevant scientific literature regarding the nature of fluvial processes or the biological impacts associated with instream flood control activities. Instream flood control activities can and often due have significant long term adverse impacts on water quality and related instream beneficial uses; these impacts are often repeated before the river or stream has had sufficient time to fully recover from the initial disturbance. All the studies reviewed regarding current flood control practices indicate that there is a need to strengthen regulatory control over instream flood control work to protect water quality and related instream beneficial uses.

Paragraph 4: The following comments are directed at the four points offered in support of the position taken in the Technical Paper that a) in-stream flood control activities do not have a significant adverse impact on water quality or acquatic resources; b) that such impacts as are incurred are unavoidable in view of the emergency nature of the activity and the need to perform such work expiditiously; c) and that the legislative intent and contraints imposed on emergency activities generally discourages or waives environmental considerations. First, while the California Legislature and the Congress have recognized the need to perform bona fide emergency work in an expiditious manner, they have not waived all environmental considerations as is evident by the policies of the U.S. Army Corps of Engineers, the U.S. Soil Conservation Service, and the California Coastal Commissions. Second, experience has shown that a majority of the flood control work performed in the rivers and stream of Ventura County in response to flooding is performed by or under the auspices of the Ventura County Flood Control District. The flood control projects refered to (Ventura River, Santa Paula Creek, and Calleguas Creek) were constructed the follwing summer, long after the damages stemming from the flood had abated, and therefore could not be considered "emergency" flood control work as defined by the California Public Resources Code or proposed in the Technical Paper. (A portion of the Calleguas Creek project was the subject of a regular Coastal Permit #212-26.) Third, environmental considerations are not inherently incompatible with the need to perform emergency flood control work in an expiditious manner. Emergency work can be anticipated to some degree and mitigations strategies developed before flooding occurs; additionally, the current permit requirements of the Ventura County Flood Control District could be modified to incorporate environmental considerations and mitigations without

delaying the conduct of private emergency flood control activities. Fourth, the sensitizing program proposed in the Technical Paper could be substantially expanded by publishing a manual; this manual could be distributed to other local agencies engaged in flood control work, persons performing such work pursuant to a stream encroachment permit isssued by the Ventura County Flood Control District, and other interested parties.

COORDINATION

Page 385d

Paragraph 1: The Ventura County Flood Control District did not consult or coordinate with the FRIENDS in the preparation of the Technical Paper; such contact could have increased appreciably the completeness, accuracy, and usefulness of the Technical Paper. It is relevant to cite here one of the findings of the California Department of Water Resources' Flood Management Bulletin:

> Planning, public works, and flood management agencies that have aggressively encouraged public involvement in the formulation and planning of flood programs and projects tend to experience fewer delays and less public objection and to achieve greater public acceptance and satisfaction. The public is made aware of the flood hazard, is educated about agency concerns and constraints, and can assist the agency in designing a project acceptable to those directly affected and to the general public.

The Department recommended therefore that:

> All levels of government should encourage an active and effective role by the public early in the flood management planning process. They should recognize that public involvement is required in the local approval, EIR and right-of-way acquisition processes, and can produce more acceptable projects, as well as avoid delays, litigation, and rejection by decision making bodies. Public involvement is basically a process which combines the needs and wishes of various publics with the professional expertise of an agency to produce a result that will maximize the efforts of both. p. 10.

For a fuller discussion of this topic see "Public Participation", in Proceedings of Flood Management Conference, Sacramento, California, October 24, 25, 1978.

APPENDIX A

TASK 4.5.4.

EMERGENCY FLOOD CONTROL MEASURES

Prepared by Staff of the

VENTURA COUNTY FLOOD CONTROL DISTRICT

APRIL 1980

4.5.4 EMERGENCY FLOOD CONTROL MEASURES

I. INTRODUCTION

1- The typical event leading to the need for emergency flood control measures in Ventura County may follow a pattern similar to the following:

2- Generally, sometime between November and April of any given rainfall year, rain will begin falling in Ventura County. The storm will last for several days with high intensity rainfall occurring during the last portion of the storm. During the initial portion of the storm, the ground will become saturated and runoff will begin. As the storm progresses, the watercourses in the area will begin to fill and run with greater and greater depths and velocities. If the rainfall intensities are great enough, the magnitude of flow within the channels will become destructive, removing vegetation from within the channels, causing bed and bank erosion, and in more extreme cases, the channels will overflow their banks, causing damage to adjacent lands and facilities. Examples of this latter type of damage are that which occurred in Fillmore (Sespe Creek) and Live Oak Acres (Ventura River) in 1978, the Ventura Marina (Santa Clara River) in 1969 and Point Mugu (Calleguas Creek) in 1980. Many other similar examples could be cited involving wastewater treatment facilities, water lines, utilities, and other facilities.

3- As the storm continues, flow will recede, return to the channels and ultimately only residual flow will remain in the channel.

4- The degree of damage that may result from any flood will depend upon the rate of flow, the velocity, the depth and capacity of any given channel and the erodibility of the channel bed and banks and the adjacent lands. The amount of damage that may occur will depend upon the value of uses on the adjacent lands and the environmental value of the stream itself.

5- Typically, both during and following the occurrence of a flood of any severity, personnel and equipment may be found in and adjacent to streams performing flood fight operations and repairing damage that has occurred. Such damage may include:

1. Eroded channel banks and levees;
2. Damaged public structures, such as flood control channels, roads, bridges, sewer lines, water lines, utilities, and railroads;
3. Damage to urban lands, including homes and businesses; and
4. Eroded and inundated agricultural land.

6- Generally, although not always, the nature and extent of damage repair work will relate to man's use of property. In areas such as the Los Padres National Forest, channels are generally left in their natural state and the damage experienced occurs to land in its natural state and does not warrant repair.

1- The repair work accomplished may be either temporary or permanent in nature. The work may occur during the flood, following the flood but still during the wet season, or months later, during the dry season.

2- This discussion will not deal with all actions that occur throughout the flood period, but will deal only with that portion of the flood period that can be defined as the "emergency" period. Further, since the issue in question deals with the subject of adverse impacts on water quality and, therefore, impacts on flora and fauna, the emergency period will further be narrowed to that portion of the emergency period during which such effects may occur.

3- The assumption made for the purposes of this paper is that a flood has occurred or flood hazard has presented itself and that emergency activity is necessary to mitigate the effects of the flood or to prevent the hazard from becoming an occurrence. It is not the purpose of this paper to delve into the broader issue of flood control and the activities that may occur before a flood that could result in reduction of the need for such activities. Nevertheless, it is noted that continuous actions by the Ventura County Flood Control District and many other agencies and cities result in placement of facilities that lead to the reduction in need for emergency activities. It is also true that no matter how many actions are taken from a preventative standpoint, emergency activities will still be required.

4- This task was originally included in the 208 Work Program as a direct request by the Friends of the Ventura River who had expressed concern over the effects of flood control activities in the Ventura River. As a consequence of that request, State and Federal administrators of the 208 Work Program included this task in the local program and included necessary funding. This is a task which was originally rejected at the local level as a very low priority item in terms of water quality.

II. CONCLUSIONS AND RECOMMENDATIONS

1- 1. No substantial or conclusive evidence has been found that indicates emergency flood damage repair work has significant detrimental effects upon the quality of water flowing in the various streams either from the standpoint of increased mineral content or from added pollution and human health hazards.

2- 2. Emergency flood damage repair work may result in incremental added turbidity in streams which already contain high levels of naturally occurring turbidity from the point of activity for a distance of approximately one mile downstream. No evidence was found that indicates that this added turbidity creates any worse impacts than the flood which caused the damage. However, when the work is being accomplished in stream flow which is clear, it is probable that impacts on downstream fish and plant life may occur. Such impacts will occur in a limited number of streams in Ventura County due to a lack of occurrence of flow.

3- 3. Major changes in channel configuration and removal of riparian habitat caused by emergency flood damage repair work may result in detrimental effects upon the ecology of a stream on a short term basis dependent upon the biological sensitivity of the stream, the stream's location, and the time of year the work occurs.

4- 4. Legislative intent at both the federal and state level appears to place, during any emergency, man's existing use of streams and adjacent lands at a higher priority than the preservation and protection of the natural environment. Accordingly, restoration projects are allowed to proceed without environmental considerations normally applied to non-disaster related projects. Even so, coordination with responsible environmentally oriented agencies is encouraged.

5- 5. The only mechanism available to reduce the impacts of emergency flood control work that is not contrary to legislative intent relating to the urgency and necessity to expedite the completion of restoration work is the sensitizing of personnel performing work in channels to the impacts that may result from the work. The sensitization process would be of limited effectiveness because of the lack of ability to reach all segments of the public agencies and private contractors and individuals performing the work.

6- 6. Present legislation, including CEQA, is adequate and no change is recommended in any presently existing law or guidelines dealing with environmental impacts.

7- 7. In many instances, if emergency flood control work is not performed in a timely fashion, damage to water quality,

private and public property, and health may be far more detrimental than any impacts associated with the flood control repair and protective measures themselves.

1- In view of the lack of significant adverse effect of emergency flood control activities on water quality, no new regulations are recommended for controlling emergency flood control measures. However, in recognition of the desirability of preserving riparian resources where possible and educating maintenance and construction workers, it is recommended that the District staff (1) develop guidelines for performing emergency work in natural streams which reflect environmental considerations and (2) request that the Department of Fish and Game provide an educational program to promote awareness of environmental concerns related to emergency work in flood control channels.

III. THE EMERGENCY ACTIVITY

1- Although many considerations may enter into the decision to place personnel and equipment in a channel for the purpose of performing emergency restoration and protection work, the basic decision as to whether such work should be done relates to existing or potential damage to man's facilities, whether in the stream or adjacent thereto. Damage to utilities, pipe lines, bridges, and other facilities located within a stream demands immediate attention. Inundation of urban and agricultural lands as a result of flood flows escaping channels also demands immediate response. Sedimentation or erosion within a channel may demand immediate response to prevent damage from subsequent events.

2- The damage resulting from flood flows may be immediate, such as that which occurs when a street, home, or wastewater treatment facility is inundated, or it may be more subtle, such as the damage that may result from a broken sewer line which contaminates waters receiving the untreated effluent or the ruptured oil lines which may result in oil slicks, or the contamination of streams, crops, or beaches that may result from either.

3- The usual response to such potential damage and obstruction is to move personnel, equipment, and materials to the location of the problem and proceeding with necessary repairs, either of a temporary or permanent nature.

4- Emergency activity also includes actions taken during a flood to prevent damage; such as placing of large rock to halt bank erosion which threatens a water or sewer line, although significant damage to the line itself may not yet have occurred.

5- Emergency activity can generally be divided into two types of response:

1. Work performed from outside the channel; and
2. Work performed from within the channel.

Work performed from outside the channel may consist of replacing, repairing or "armoring" the banks and generally involves use of cranes, draglines, or backhoe type equipment to perform the necessary tasks. It may also involve draglines engaged in removal of material from the channel bed. Work within the channel generally involves bulldozers and similar pusher type equipment which moves material from one spot to another. In either case, large capacity trucks may be used for hauling material away from or to the site.

6- Utilization of equipment within a channel can only occur when flows are of a non-hazardous magnitude.

7- When equipment is placed in a channel for the purpose of bank repair or channel cleanout (removal of deposited sediment and debris), generally, the first work completed is the diversion of

1- flowing water away from the site of the work, if possible. This may be done through pilot channeling of the stream or by closing various "braids". Pilot channeling may be defined as creating a low flow channel through use of heavy equipment, such as using a bulldozer to push material out of the bottom of a channel and creating banks in the area where the flow is desired.

2- A "braided" channel consists of a series of low flow channels that are interlaced. By using equipment certain of the "braids" may be closed off, thereby removing flow from the desired area.

3- These actions can occur only in streams where sufficient channel width exists for them to occur. In channels of insufficient width, the work must be accomplished either in flowing water or when there is no stream flow.

4- In cases where heavy deposition has occurred and channel capacity is reduced, it is necessary to enter the channel and remove material to prevent overbank flow and damage to adjacent lands. Instances of this type of work have occurred on Santa Paula Creek, where deposition within the channel nearly obliterated it in January and February 1969; in the East Ojai Valley, where deposition in the channels caused realignment in some areas; in the Sespe Creek in 1978, where severe damage occurred adjacent to the City of Fillmore; and in the lower reaches of Calleguas Creek in 1980, where severe flooding of Point Mugu occurred. In cases such as these, extended operations may be necessary in order to clear the channel and prepare it for the next flood. Such work is generally accomplished by bulldozers and loaders in conjunction with trucks, where necessary, to haul deposited material away.

IV. WHO PERFORMS THE ACTIVITY

1- Damage resulting from a major flood may be experienced by homeowners, agricultural interests, utilities, railroads, commercial enterprise, pipe line owners, and various governmental agencies ranging from local through federal levels. Repair of damage may be completed by any or all of these parties.

2- Private interests and governmental entities may immediately repair that damage which is within their capability. The homeowner may begin cleaning his house, utilities, may repair damaged lines, and government may repair roads, sewer lines, and other facilities. In a normal flood event, little or no control is exercised over the repair work that is performed by private interests in recognition of the emergency aspects of the work and the need to prevent delays.

3- In the case of more severe events, the ability of private interests and local government to deal with the problems is severely limited by insufficient financial resources. Under these circumstances, the normal course of action is the declaration of a disaster by the local governing bodies. This declaration is submitted to the Governor who, after necessary investigation, may also declare a disaster and request the President to follow the same course. In the event of a federally declared disaster, funds and manpower are made available for performance of emergency work through the appropriate federal agencies. In 1969, much work was completed in Ventura County through the Corps of Engineers and their contractors. Similarly, in 1978, the U. S. Department of Agriculture, Soil Conservation Service, through their contractors (which included Flood Control District staff), provided much of the funding and manpower necessary to correct the major problems.

4- It should be noted that Federal and State disaster programs allow extensive work to be completed, but that such work by no means repairs all damages. Federal funds may generally only be used to restore what the flood damaged (betterments are not usually allowed) and are sometimes limited to repair of governmentally owned or controlled facilities. Low cost loans may be made available to private enterprise through the Small Business Administration. Funds are also available for certain types of damage to those holding flood insurance policies.

5- In any event, many varied interests will be performing activities within the watercourses of Ventura County in an attempt to mitigate the effects of the flood. Agencies under the control of the Board of Supervisors represent only a part of the total group which may be involved. Private enterprise may, depending upon the severity of the situation, be called upon to complete a significant portion of the work.

V. THE EMERGENCY PERIOD

1- Scenarios which may describe the emergency period include consideration of the characteristics of the flood; the laws and administrative requirements of governing and permitting agencies; the environmental process under the California Environmental Quality Act (CEQA); and the type of contracting methods employed.

Characteristics

2- Based upon the characteristics of a flood, the time sequence of a flood and following periods may be distributed as follows:

1. The Initial Period - The time period from the commencement of a storm to the beginning of damage within a channel.

2. The Initial Emergency Period - The time during a flood during which flows are causing damage or are receding after having caused damage.

3. The Post Emergency Period - The time following a flood when there is no flow or only residual flow in a channel, but still during the flood season. During this time, additional flood flows may occur, and the adjacent lands and facilities remain exposed to potential flood damage. The flood season in Ventura County is considered to be between November 15 and April 15.

4. The Post Disaster Period - The time following the Post Emergency Period during which major repair work will be completed. This time period will generally extend from April 15 of the flood year until repairs are completed and may extend into the following flood season.

3- Utilizing this time sequence, an "emergency period" would include the Initial Emergency Period and the Post Emergency Period.

Legal Aspects

4- Based upon law and administrative guidelines, a second approach may be taken in defining the "emergency period". Conceptually, the approach is when the State or Federal environmental impact laws or guidelines are applicable, then adequate consideration of all impacts of proposed work resulting from an emergency or disaster is assumed. This concept may be expanded beyond the environmental laws to state that when agencies or bodies with authority over the work proposed impose environmental considerations, then the proposed work is also assumed to have been given adequate environmental consideration prior to receiving approval to go forward with the work.

1- Given the above concept, it follows that the work performed exterior of the above limitations falls within the "emergency period", while that work which has been given prior environmental consideration falls outside of the scope of this paper.

2- In order to determine the laws and guidelines that affect this aspect of the work, several agencies were contacted and EIR Guidelines, adopted pursuant to CEQA, consulted.

3- Section 15071 of the Guidelines provides:

> 15071. Emergency Projects. The following emergency projects are exempt from the requirements of CEQA, and no EIR is required. (a) Projects undertaken, carried out, or approved by a public agency to maintain, repair, restore, demolish or replace property or facilities damaged or destroyed as a result of a disaster in a disaster striken area in which a state of emergency has been proclaimed by the Governor pursuant to chapter 7 (commencing with Section 8550) of Division 1, Title 2 of the Government Code; (b) Emergency repairs to public service facilities necessary to maintain service; and (c) Specific actions necessary to prevent or mitigate an emergency.

4- Based upon this section, it can be stated that work necessary to maintain the service of flood control channels or specific actions taken to either prevent or mitigate damage resulting from flooding is exempt from CEQA.

5- When a disaster occurs, help may be sought from the Federal Government through two avenues. First, when it becomes apparent that a disaster has occurred, the District offices of the Corps of Engineers, under the authority of the District Engineer, may implement flood fight procedures. This effort normally will occur only during the immediate flood period with restriction of activity when the immediate danger is past. This activity occurs under PL 84-99.

6- Second, upon Presidential Declaration of a disaster, the Federal Emergency Management Administration (FEMA) is given overall authority to govern the acts of the many other federal agencies which may become involved. FEMA may then direct the Corps of Engineers and/or the Soil Conservation Service to implement

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[1] State EIR Guidelines, California Administrative Code, Title 14,

further flood fight activities or restoration work pursuant to the appropriate federal law.

1- Review of applicable federal laws reveals the following:

PL 93-288, The Disaster Relief Act of 1974, provides:

> "Section 405. No action taken or assistance provided . . . that has the effect of restoring facilities substantially as they existed prior to the disaster, shall be deemed a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act of 1969 (83 Stat. 852). . ."

2- In other words, actions taken within flood control channels to restore facilities to a semblance of a prior existing condition shall be deemed to not have environmental significance. When "betterments" are installed, then this section does not apply since the project can no longer be considered a "restoration" project and the impact of the National Environmental Policy Act (NEPA) comes into play.

3- Federal legislation under which the Soil Conservation Service operates is known as PL 81-516, the Flood Control Act of May 17, 1950. PL 81-516 makes no reference to environmental policy as it exists today. Accordingly, the Soil Conservation Service has proposed rules to bring present practice of the Soil Conservation Service into conformance with NEPA. According to these rules as set forth in the Federal Register[2], emergency work shall be done in a manner allowing retention of as much of the existing characteristics of the channel and riparian habitat as is possible. Any request for funds pursuant to these rules should include an environmental assessment of the impaired watershed. In order to prepare this assessment, the U. S. Fish and Wildlife Service, the Environmental Protection Agency, the appropriate State Fish and Game authority, and other local agencies are to be notified of the proposed work and their assistance invited. Environmental and other considerations are to be integrated into the emergency work using an interdisciplinary planning approach.

4- The Federal legislation under which the Corps of Engineers operates is known as PL 84-99. Based upon conversations with staff of the Corps, PL 84-99 provides the Corps with necessary authority to perform mitigating acts under disaster circumstances. It is understood that administrative regulations established by the Corps divide the disaster into three segments. These are actions taken prior to the actual occurrence of a disaster, such as building levees during the winter to prevent damage from

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2 Federal Register, Vol. 44, No. 182, Tuesday, September 18, 1979. Proposed Rules, pages 54074 and 54075.

1- runoff from snow melt in the spring or taking action following a fire to prevent damage from subsequent floods; activities performed during the actual flood occurrence; and actions taken to restore facilities following a flood.

2- It is also understood that the use of PL 84-99 is now considered as complimentary to PL 93-288, and is generally used only during the immediate emergency, while restoration work following a flood will generally occur using PL 93-288 as the mechanism to trigger it.

3- Although no reference is made to environmental considerations in PL 84-99, it is the policy of the Chief of Engineers that the provisions of the Fish and Wildlife Coordination Act (PL 85-624) and the terms of other agency agreements shall apply to emergency work. When time is a limiting factor, informal coordination may occur[3].

4- Where there is federal involvement in disaster recovery operations, there is generally a time lapse before federally funded restoration work occurs. This is due to the need for the local, state and federal disaster declarations and because the time it takes for the federal agencies to move personnel, equipment and materials to the site. This time lapse can cover periods from as short as two weeks (1969) to several months (1978) and is, in part, dependent upon the type of work to be performed. Under flood fight situations, as distinct from recovery operations, the time period can be measured in hours.

5- The Fish and Game Code of the State of California, Sections 1601 through 1606, requires that an agreement be acquired for any activity occurring within a stream identified as a "blue line" on a United States Geological Survey Quadrangle Sheet of the 7.5 minute series. This Code exempts public agencies from the need for notifying the Fish and Game Department prior to beginning emergency repairs; however, notification is required within 14 days following commencement of the activity. Although notification is a requirement under disaster circumstances, there is no requirement for agreements with State Fish and Game so long as the disaster persists.

6- The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) require a Corps of Engineers' permit under Section 404 of the Act for the discharge of fill or dredged material into all waters of the United States. Within Ventura County, ten streams fall under the requirements of this Act. Review of

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3 Letter from Department of the Army, Los Angeles District, Corps of Engineers, to W. G. Haydon, Ventura County Public Works Agency, dated January 18, 1980.

this Act with respect to emergency operations indicates that there is no relief from the requirement to obtain "404" permits and the only concession granted to emergency situations is a shortening of the normal time required to process applications[4]. This Act does require consideration of the impacts of the action proposed. Administrative requirements indicate that where an unacceptable hazard to life or a severe loss of property exists emergency procedures are appropriate[5].

Summary of Legal Aspects

1- Review of the various laws and administrative requirements lead to no well defined definition of an emergency period. Depending upon the level of government involved and the law in question, definitions vary.

2- Under CEQA, State and local authorities are not bound to consider the environmental consequences of their acts when performing restoration projects, although notification of State Fish and Game is required within two weeks following commencement of emergency work.

3- Pursuant to federal administrative requirements and law, it appears that environmental coordination is required prior to performing work. Such coordination can be quite informal during the occurrence of the actual flood or it may require more detailed and formal effort beyond the immediate emergency period. Except for the Corps of Engineers' "404" permits, Federal criteria may be imposed only in the event the disaster is of sufficient significance to warrant requests to the federal agency for help. Under more normal circumstances emergency effort occurs pursuant to state law and local ordinances.

4- Based on the discussion in this section (Legal Aspects), the only definition of an emergency period that appears logical is that the "disaster period" should extend from the commencement of damage until restoration work is complete. The application of the time period would relate to work completed under local ordinances or state law.

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4 Federal Register, Vol. 42, Tuesday, July 19, 1977, Part II, page 37151.

5 Letter from Department of the Army, Los Angeles District, Corps of Engineers, to W. G. Haydon, Ventura County Public Works Agency, dated January 18, 1980.

Contracting Methods

1- Emergency correction of damage resulting from floods generally occurs in one of two ways. Where damage is sufficient and need exists, normal contracting procedures are set aside and operation and maintenance personnel of an affected agency move into an area and take corrective action. Where the agency's manpower is insufficient, force account procedures may be used in order to hire contractors or owner-operated equipment to extend the agency's efforts. Such activity occurs where specific and definite need exists to clear or repair channels, open traveled ways, repair utilities, or to perform other varied functions.?

2- Force account work is essentially the hiring of equipment and personnel on the basis of an agreed upon price per hour or day to perform work under the specific direction of the hiring agency's personnel. An example of this type of work would be the hiring of an owner-operated bulldozer to operate in a manner and at a location specified by Flood Control District staff. Work of this nature is not conducted on a competitive bid basis.

3- When a project becomes quite complex or where the immediate need to repair damage is not as great, plans and specifications may be developed and normal contracting procedures utilized which involve obtaining bids on a competitive basis from contractors interested in completing the work. Advertising for and award of these contracts, because of their magnitude, generally require actions of the governing bodies thereby offering opportunity for public input into the process. This process may take from one to several months before work in the field is implemented.

4- Given consideration of the method utilized to hire contractors to perform flood restoration work, it is desirable when defining an emergency period to separate the two methods of contracting for work. When time exists for the normal competitive bid process to be used, work resulting therefrom should not be considered as "emergency" work although the need for such work may be as great.

5- The usual reason for utilizing "force account" is to acquire the personnel and equipment necessary to immediately perform work. Although all force account work may not be "emergency" work, this contracting method may be indicative of emergency work.

Selected Emergency Period

6- The above sections have attempted to develop a potential definition of an emergency period based on physical characteristics, legal aspects, and contracting methods. Each section provides a potential definition exclusive of other considerations. In order to provide a working definition of an emergency period, all sections must be considered together.

7- For the purposes of this paper, the "Emergency Period" will be defined as the period extending from the time damage requiring

repair occurred to the end of the rain season (approximately April 15). This definition stems primarily from the discussion of characteristics and involves a longer time period than when other considerations are utilized. The fact that other legal requirements may come into play during this selected time period only reinforces the need for environmental considerations and is not damaging to the purposes of this paper.

VI. THE IMPACTS

1- The aim of the following discussion is to determine the potential effect of emergency flood control measures on water quality and to consider riparian habitat protection. The obvious objective is to attempt to reduce any impacts which may result from engaging in emergency flood control measures.

2- The water in a stream may consist of:

1. Naturally occurring water;
2. Irrigation return water;
3. Effluent from wastewater treatment plants; and
4. Water releases from reservoirs, such as Lake Piru.

3- With the exception of the flows which naturally occur in a stream, the sources may be classified as "man-made" since they would not otherwise occur. In some instances, such as the flow originating at the Thousand Oaks and Simi Valley Treatment Plants, the flows result from waters imported into the watershed. Irrespective of the origin of the water, if flow occurs in a stream, it is considered as flow that may be affected by the impacts discussed in this section.

4- Recognizable impacts which may occur as a result of taking emergency flood control measures include:

1. Turbidity or cloudiness of the water flowing in the stream;
2. Disturbance or removal of riparian and aquatic habitat and the associated effects on fish and wildlife;
3. Addition of pollutants washed from the equipment or material utilized in correcting the flood problem;
4. Elimination or reduction of "braiding" of a stream and reduced regrowth of riparian habitat.
5. Changes in the channel configuration.
6. Increased mineralization of water.

5- Generally, only removal of riparian habitat and reduction of "braiding" in a stream would be placed in an "adverse" impact category when flow ceases to occur in the stream.

6- It should be noted that the effect of the impacts is variable, depending on the time of the year during which the emergency work is pursued. Emergency work undertaken while flood damage is occurring or during the period following the initial flood damage but prior to exposure to subsequent flood flows is

less disruptive and would generally not affect growth and reproduction which will take place during the following spring. Nevertheless, such work can affect streamside habitat[6].

Turbidity

1- Use of heavy equipment or the dumping of material, such as large rock, in a channel may have impacts upon fish, bottom organisms, and plant life, due to the effects of silts and sediments introduced into the flowing water by these activities.

2- Based on Cordone and Kelley[7], and the many studies reviewed by the authors, the question, "Is sediment directly harmful to fish?" cannot really be answered. It can, however, be documented that sediments can cause indirect damage to the fish through destruction or reduction of the food supply, eggs, or alevins. Essentially, the eggs and alevins are reduced in numbers as a result of sediments coating eggs or covering the gravel beds in which eggs are laid, thereby reducing the supply of fresh water that supplies food and removes waste from the eggs and alevins. The effect may be a drastic reduction in fish population. It has also been noted that fish will not lay eggs in gravel beds which contain too many sediments.

3- Algae are considered to be the basis of the food chain and are believed to support large populations of lower animals. Since algae are plants which need light for photosynthesis, sediments in the water limit algae growth through the smothering action of sediments and through reduction in the penetration of sunlight into the water.

4- Related comments may be made with respect to the effect of sediment on other organisms and plant life.

5- According to Cordone and Kelley, turbidity can be expected to affect a stream environment for a distance approximately one mile downstream from the source.

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6 Letter from State of California, Resources Agency, Department of Fish and Game, to the Ventura County Flood Control District, dated December 17, 1979.

7 "The Influence of Inorganic Sediment on the Aquatic Life of Streams", Almo J. Cordone, Don W. Kelley, California Fish and Game, Volume 47, Number 2, April 1961, pages 189 through 228.

1- Unfortunately, the studies do not differentiate between the sediments which may be transported by the natural flooding process and those which may be introduced as a result of emergency work during and immediately following a flood. It appears that emergency work may prolong the period during which turbidity may affect life in streams. Insufficient data is available to indicate that the turbidity from the emergency work does, in and of itself, cause destruction beyond that created by the flood.

2- The significance of this issue, as it relates to Ventura County, is unclear. In those streams where there is no perennial flow and fish cannot survive, the issue of turbidity resulting from emergency actions is of no concern. In those streams which do support a population of fish, it probably can be documented that turbidity in water can have drastic effects upon the population. No data exists, however, to indicate that the additional turbidity resulting from emergency work does, in fact, create impacts beyond those created by the flood itself. It can only be assumed that prolonged periods of turbidity resulting from emergency work will have detrimental effects.

3- This statement should be qualified by the understanding that emergency work during a flood or in a period between two floods during the same rainfall year will produce negligible results. A work period which extends into the following spring could probably result in potentially significant problems[8].

Riparian Habitat

4- During the course of a flood, disruption of the stream environment occurs. When the flood recedes and emergency activities commence, additional disruption may occur. Bulldozers, draglines, trucks and other equipment may cause disruption of vegetation when gaining access to the site of work, while preparing the site for work (such as through relocation of the primary flow line) or while performing the work itself.

5- Removal of riparian habitat reduces protective cover available to fish and game. It may also result in warming the water and increased algae population. If destruction of the riparian vegetation occurs over a significant reach of river course, it can lead to reduction in the populations of wildlife and fish by causing migration to other locations and elimination of the area as a reproductive growth area.

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8 Letter from State of California, Resources Agency, Department of Fish and Game, from Fred A. Wortherly, Jr., to W. G. Haydon, Ventura County Flood Control District, dated December 17, 1979.

1- Such work may also result in disruption of future habitat by removal of the nutrient-rich silts and clays which will deposit along stream banks as flood waters recede. Such deposits are considered important for rapid riparian growth.

2- Generally, emergency work occurs where severe disruption of the riparian environment has already occurred as a result of the flood. Nevertheless, man's intrusion may add to that disruption.

3- Due to the lack of available data, the significance of the impact resulting from emergency work has not been fully determined. However, it appears that the impact is minor for the following reasons:

1. Where emergency work is performed in a streambed, the riparian habitat has generally already been destroyed or severely disrupted by flood flow which necessitated the emergency action.

2. When there are consecutive flood flows, the subsequent floods tend to overcome detrimental aspects of the emergency work, such as by replacement of the nutrient rich materials.

3. The impact is "short-term" in that riparian habitat is a renewable resource capable of being restored naturally during the ensuing seasons. In most cases, significant regrowth of habitat will occur within one to three years.

Addition of Pollutants

4- When equipment is used in a stream, the potential exists for introduction of various pollutants into the stream. These will generally be grease, oils, and fuels used in maintenance and operations of the equipment and which wash off or are worn off the equipment during its operation. Also included in this category are chemicals utilized in restoring service to damaged pipelines and other facilities.

5- Absent substantial evidence to the contrary, introduction of pollutants from this source is not considered significantly adverse and will not be pursued further herein.

Channel Braiding

6- During a flood, reconfiguration of the existing channel bed can occur as a result of erosion and sedimentation. High velocity flows erode the bed of a channel, and as flows recede, erosion slows and sedimentation begins. These activities result in shifting of the low flow channel and the build up of gravel, sand and silt

deposits in a haphazard configuration. In channels of sufficient width, these deposits may result in a series of low flow channels that interlace with each other. The end result is called a "braided" channel.

1- A braided channel creates a potential habitat over a much larger area than a single low flow channel. Additionally, a braided channel reduces the magnitude of flow in any particular braid below that which would occur if a single channel existed within the same reach.

2- Depending upon the value attached to the habitat, the volume of flow occuring in the various channels in an area, and on whether the flow occurs on a year-round basis, braided streams may be viewed in several ways.

a. Where flow does not occur on a year-round basis, the habitat will have little value for anadromous fish. Accordingly, whether or not braids exist will not be of significant concern.

Where no flow exists remnant pools of water may remain, depending upon the configuration of the channel bottom. These remnant pools, when in contact with moving ground water which prevents stagnation, can be important for rearing of fish. In cases where the water stagnates, the ability to maintain fish populations is severely restricted; however, the pond remains important as a watering hole as long as it contains water.

b. Where flow occurs on a year-round basis, but where such flow has little volume, it is important that a single channel be created in order to insure suitable stream width, depth, velocity, and temperatures for juvenile fish rearing during summer and fall[9].

c. Where low flow in the summer and fall is of sufficient magnitude to provide proper environmental conditions, it is desirable to maintain the braided channel configuration for the benefit of the anadromous fish.

3- Within Ventura County, no channels are believed to have sufficient flow on a year-round basis to make braided channels desirable. This statement is based on the fact that Fish and Wildlife Service considers the Ventura River to have sufficient flow for only a

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9 Letter from United States Department of the Interior, Fish and Wildlife Service, to the Ventura County Flood Control District, April 24, 1978; subject: "Low Flow Channel Configuration, Ventura River."

single channel[10] and no other stream in Ventura County appears
1- more appropriate for braided channel flow than it does.

2- The significance of reduced braiding appears to be minor, and there is some question as to whether it is adverse for the following reasons:

1. Work which eliminates channel braiding never eliminates the stream flow in the channel.

2. Elimination of braids in order to divert flow from a work site prevents turbidity downstream which might result from such work.

3. It is sometimes desirable for single channels to exist to insure sufficient water in a stream during the dry months to preserve fish populations.

4. Only a small number of streams within Ventura County have perennial flow, and only in these could braiding have any importance.

3- It should be noted that no agency performing emergency work in streams is there to eliminate the flood's impact upon the stream, but rather for the purpose of restoring or protecting man's existing uses. Accordingly, emergency work completed may only partially mitigate effects upon the stream.

Increased Mineralization

4- Increased mineralization of water is an increase of total dissolved solids (TDS) contained in the water, resulting from the activity in question. No data was found which directly relates to emergency work in streams. However, a relationship can be inferred between such work and the discharges of wash water from gravel processing plants as far as TDS is concerned. Studies of wash water effluent from the S. P. Milling operations in the Santa Clara River indicate that the washing of gravel does not increase TDS. Accordingly, it may be concluded that no impact results from stream sediments entering into flowing streams during emergency operations.

Channel Configuration

5- Natural streams follow a cycle that involves periods of flooding and low flow. During flood periods, the natural channel experiences high velocity flow, erosion, deposition, removal of riparian growth, possible channel relocations, and other changes relating

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10 Ibid.

1- to the high volumes of flow. During low flows, the channel will be irregularly shaped with pools, riffles, and quiet water areas.

2- At times, bank erosion and sedimentation resulting from flood flows or man's uses require that equipment be used within the channel to restore the stream to its previously existing configuration (East Ojai Valley - 1969 and 1978, and Calleguas Creek - 1980), to repair the channel banks (Ventura River - 1969 and 1978), and to remove deposited sediments to restore flood carrying capacity (Santa Paula Creek - 1969 and 1978). Where the work performed is over a sufficient reach, the resulting channel may be of a fairly regular cross-section with a uniform bottom slope and any remnant flows following a single channel. The naturally occurring pools and riffles will be destroyed and the flow itself may take a fairly straight course. From a flood control viewpoint, a channel will have been created that may be capable of carrying larger peak flows than would have existed naturally.

3- The resulting channel may be relatively sterile from the viewpoint of those interested in fish and wildlife because riparian habitat may have been removed and the riffles and pools and other factors important to fish and wildlife may no longer exist. The channel may remain in this condition until additional flood flows occur which will "season" the new channel configuration and until sufficient time passes to allow regrowth of riparian habitat.

4- The change in the channel configuration does not eliminate the flow of water, but may reduce the population of fish and wildlife in the affected area due to reduction in cover (see Riparian Habitat above) and the lack of riffles and pools.

5- The creation of such a channel configuration has no effect on water quality, although short term effects may be as discussed in other sections.

6- The importance of channel configuration varies. In areas where no perennial stream flow occurs and where adjacent lands are not conducive to wildlife, this type of work will have little impact. In other areas where population of fish and wildlife occur, such work may reduce their populations in the short term.

VII. LOCATION

1- In examining the effect upon water quality and riparian habitat, it has become obvious that the location of the work may be the major factor in determining whether such effects should be considered prior to performing work. For example, performance of work within the Ventura River may result in any or all of the potential effects described previously. Similarly, the same work could be performed in channels in the Oxnard or Camarillo urban areas with no concern for the potential effects because there is no beneficial use of the remnant flood flows, little value as habitat, and lack of fauna.

2- Based on comment received from the State Department of Fish and Game[11], the below listed channels or portions thereof listed below are believed to be biologically significant. The term biologically significant indicates that the area is considered valuable as a reproductive or spawning area and that the area is considered to provide important forms of habitat.

1. Ventura River from its mouth to the Santa Ana Boulevard bridge (Oak View) and from Robles Diversion Dam to Matilija Reservoir.
2. San Antonio Creek from its mouth to its headwaters.
3. Lion Canyon Creek from its mouth to its headwaters.*
4. Rincon Creek from its mouth to its headwaters.*
5. Santa Clara River from its mouth to the Victoria Avenue bridge and from Sespe Creek to the Los Angeles County Line.
6. Todd Barranca from its mouth to its headwaters.*
7. Santa Paula Creek from its mouth to its headwaters.
8. Sisar Creek from its headwaters to its mouth.
9. Bear Creek from its headwaters to its mouth.*
10. Sespe Creek from its mouth to its headwaters.
11. Piru Creek from its mouth to Lake Piru.*
12. Lower Lockwood Creek within the County jurisdiction.*

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[11] Letter from State of California, Resources Agency, Department of Fish and Game, dated December 17, 1979, signed Fred A. Worthley, Jr.

1- 13. Calleguas Creek from its mouth to its confluence with Sycamore Canyon.

14. Arroyo Conejo from its confluence with Conejo Creek to its confluence with the South Branch Arroyo Conejo.*

2- These amount to approximately 95 channel miles or 19% of the channels considered to be within the jurisdiction of the Ventura County Flood Control District, and those marked with an asterisk have had little or no work performed within them by the District.

3- It should be noted that the inquiry submitted to the Department of Fish and Game included a map indicating those channels which are under the Flood Control District's jurisdiction, which is limited on the response received, since all channels within Ventura County do not fall under the jurisdiction of the District.

4- In the remaining areas of Ventura County, each work location should be reviewed to determine if emergency work could have adverse impact on riparian habitat or water quality. To arrive at proper conclusions, it appears necessary to respond to several questions such as:

a. Is significant riparian habitat involved within the work area?

b. Is stream flow presently occurring?

c. In the event stream flow is occurring, what downstream adverse impacts may occur if the work is to be performed?

d. Will the impacts resulting from the proposed work be worse than that resulting from the damage which has already occurred? For example, immediate repair of a broken sewer line may result in turbidity of the water and loss of riparian habitat, but these impacts may be considered less onerous than continued discharge of untreated sewage into the stream.

e. Is the work site in an area utilized by anadromous or rare and endangered fish?

5- Proper response to these or similar questions will lead to decisions as to whether adverse impacts on water quality or riparian habitat may result.

6- In general, if responses to the above questions are negative, then work should proceed with no further concern over the issues raised in this paper. In the event one or more responses are positive, then further consideration should be given to the problems of the area to determine if mitigating measures are necessary if the work is to be undertaken.

VIII. PRIORITIES

1- The foregoing analysis is an attempt to determine the adverse impacts of emergency flood control work on water quality and riparian habitat, with the goal of minimizing such impacts. Methods available for reduction of impacts range from passing laws or ordinances to govern activities in and adjacent to streams to the more simple techniques of making equipment operators and field superintendents more sensitive to the potential problems created by their activities and to create a work environment which is more conducive to protection of the stream and its environs.

2- To place this in proper perspective, it must be recognized that emergency activities are generally directed toward restoring man's existing uses of the flood plains and streams or to protect existing facilities. Protection of homes, businesses, and existing facilities, restoration of utilities and traveled ways, and many similar activities demand prompt and immediate response in order to reduce the potential for damages from an ongoing flood, or to prevent damages from later flood events.

3- These activities and their necessity must be balanced against adverse water quality impacts and the damage to riparian habitat that may result from them.

4- As has been noted earlier, four potential impacts may affect water quality and riparian habitat. The impacts were turbidity, removal of riparian growth, addition of pollutants to the water, and elimination of channel braiding. Of these impacts only turbidity was considered to be potentially adverse and then only in those streams where the work would be performed within the flowing stream.

5- It is noted that only 14 streams or reaches thereof are considered to have biological significance. Of these 14 streams, 8 have perennial flow during most years originating from either natural or man-made sources, while the remaining 6 are dry during significant portions of each year. These 8 channels comprise about 66.5 miles or 13.5% of the total 492 miles of channels under the District jurisdiction.

6- Relative to these perennial streams, the Three-spine unarmored stickleback, a rare and endangered specie, is found in the upper Santa Clara River and is believed to exist in Santa Paula Creek and also, attempts are being made to reestablish a steelhead fishery in the Ventura River. Within other perennial streams, native populations of fish and other aquatic species may be affected.

IX. POTENTIAL SOLUTIONS

1- As identified previously, emergency work performed within flood control channels in Ventura County may impact upon the ecology of some streams. Mitigation of impacts created by such work can range from enactment of stringent ordinances controlling such work to ignoring the problem altogether. Solutions which suggest themselves and which may be considered include:

1. Enactment of local ordinances to control emergency work at the local level;

2. Utilization of the present Fish and Game laws (Sections 1601 through 1606), coupled with strengthening the law by requiring agreements;

3. Training sessions for those in a position to govern work in channels;

4. Publications of a brochure indicating the problems created by work in streams and potential solutions to these problems; and

2- Each of the listed potential solutions are attractive to someone, depending on perspective. Discussion of these various solutions will provide further information in this regard.

Enactment of Local Ordinances

3- Ordinances could be developed at the local level which would make emergency activities in a stream a misdemeanor if such activities were performed in a manner which was detrimental to the existence of riparian habitat or the quality of water. Misdemeanors would be punishable by fines or jail terms to the extent provided by law.

4- Enactment of such ordinance does not appear to be feasible for the following reasons:

a. Enactment of an ordinance would most likely require a permit process in order to provide a control mechanism. The work required to implement such a process would require funds and personnel of the local agencies having authority over the County's streams which, by the very nature of a disaster, simply are not available.

Although it may be argued that such a program could be self-supporting through imposed fees, it must be noted that such an ordinance would not be applied in every year, only in years of severe runoff and, therefore, personnel administration of it would have to draw from existing staff. Under disaster circumstances, this is not a desirable situation.

1- b. In all laws reviewed, it appears that legislative intent is to speed work under disaster circumstances, not delay the activity. Any such ordinance would result in delays.

c. The apparent intent of Proposition 13 was to reduce the size and involvement, not increase it. Passage of such an ordinance at the local level would appear to be contrary to this intent.

Strengthen Existing Fish and Game Department Laws

2- The California Department of Fish and Game presently has authority over all streams indicated as blue lines on the 7.5 minute series of United States Geological Survey Maps. Under disaster circumstances, the authority of this agency is reduced in that it is only necessary to notify it within two weeks after commencement of work in the channel. No regulatory authority exists under which environment-related requirements could be imposed upon those working in the channels. It is also noted that in many cases emergency work can be completed within the two week period.

3- In order to strengthen this law, it would be necessary to require that agreements be entered into between Fish and Game and the party performing the work following disasters in similar fashion to non-disaster circumstances.

4- This does not appear to be a viable solution to the problem at hand for the following reasons:

a. Discussion with members of the Fish and Game Department's staff indicates personnel sufficient to manage such a program is not presently available and there is little likelihood that the situation will change in the future.

b. Legislative intent appears to be that work be completed in an expeditious fashion following an emergency, not delayed. Any proposal requiring agreements between Fish and Game and the party performing the work will result in delays.

Training Sessions

5- The operator of a piece of equipment may look upon vegetation in a channel as an obstacle to his being able to complete his work. Similarly, water flowing in a stream may be considered as a nuisance that has to be contended with. It is possible that the value of the water for beneficial uses or the vegetation as riparian habitat is not recognized. In order to sensitize personnel to the value of the water and habitat, training sessions for both equipment operators, their supervisory personnel, and others involved in disaster operations which affect channels could be established. It would be desirable for the content of such sessions to include information relating to the various uses of water and the value of riparian habitat to the ecology of a stream. Training courses of this nature could be held once a year before the beginning of the rainy season.

1- Development of such a course and teaching staff for it could be attained through use of the County's Staff Conservationist and staff of the State Department of Fish and Game.

2- Benefits of such a training session would include:

a. Sensitization of those attending the classes to the problems created by their activities and, therefore, a potential reduction in damage.

b. Reduction in potential delays in implementation of emergency services as compared to other alternatives.

c. Making personnel aware of other agencies involved in the process, such as the Fish and Game Department and the Regional Water Quality Control Board.

3- Adverse aspects of training sessions would include:

a. The need to fund the program at a time when the public is demanding less government;

b. The training sessions would most likely be attended only by those employed by local public agencies and, therefore, would only reach a portion of those actually involved in performing work during emergency circumstances. This would result in questionable effectiveness on a County-wide basis due to the limited spectrum of those "sensitized".

Publication of a Brochure

4- There is no doubt that a brochure could be developed which would spell out concerns relating to water and riparian habitat and, in general terms, sets forth methods of reducing or eliminating the impact upon water quality and riparian habitat where such is capable of being done. Development of a brochure is not the question, the use of such a document is.

5- If such a document is developed and then allowed to "sit on a shelf", the expenditure relating to its development is wasted. On the other hand, if the document is given wide distribution and is read, it could be an effective tool in reducing impacts from emergency activities. This type of document could be utilized in conjunction with the training sessions referenced to above.

Staff Review of Emergency Projects

5- The Flood Control District staff includes a Staff Conservationist whose duties relate to flora and fauna and impacts thereon from development. Potential exists for use of this staff member during emergency situations to review field activities and develop recommendations for use by staff to minimize, where possible, impacts upon stream flow and riparian habitat.

1- In attempting to arrive at a balance between the need for emergency activity and the necessity for protection of water quality and riparian habitat, the legislative intent of political bodies must also be reviewed.

2- Legislative bodies of the United States and the State of California have provided recognition of the potential conflicts between man and his environment under disaster circumstances. The California Environmental Quality Act exempts restoration work accomplished to prevent or mitigate an emergency. The California Fish and Game Code permits deletion of notification requirements for a period of two weeks after commencement of the work and eliminates the need for agreements. At the Federal level, PL 93-288 specifically finds that emergency restoration work is not an activity that significantly affects the environment.

3- Under declared disaster circumstances, many laws dealing with expenditure of funds, trespass on private land, performance of work, and acquisition of personnel are reduced in scope, or other laws are called into play which allow more expeditious completion of work in order to mitigate the effects of the disaster.

4- The foregoing appears to indicate that existing legislative intent is to reduce consideration of the environment and speed emergency repair work.

1- Utilization of this staff member for this duty would entail little additional cost to the District. Nevertheless, if all emergency work required review and approval by him, it is likely that certain effects would be felt.
These include:

1. Delays in implementation of the emergency work, since only one position exists to review all activities in the County; and

2. Lack of availability of the Staff Conservationist, since he is not available on a 24-hour-a-day basis.

2- It should be noted that use of this staff member for this purpose will only affect activities undertaken by County staff and would not extend to other agencies or private enterprise involved in similar work under emergency circumstances due to lack of authority on the part of the District.

Selected Solution

3- No body of evidence has been found that indicates emergency restoration work in flood control channels has long lasting and significantly adverse affects upon either water quality or riparian habitat. It is acknowledged that this type of activity may have short term impacts upon turbidity of the water, flora and fauna, and upon the channel configuration. These impacts are mitigated by natural processes either through the actions of flowing flood flows or the passage of a reasonably short period of time. Accordingly, it must be stated that although limited short term impacts may result from emergency flood control measures instituted in channels, that they are not significant enough to warrant the institution of a new regulatory program to cause mitigation.

4- The following comments are provided as support for this in addition to those cited above.

1. Legislative intent under the type of condition that warrants emergency work appears to be a softening or modification of existing laws to allow immediate activity to occur in recognition of the agency of the situation.

2. Most, although not all, emergency restoration work that represents significant expenditure of funds and personnel occurs under the auspices of the Federal Government and is considered exterior of the scope of this paper for reasons cited. Examples of such work include levee construction in the Ventura River following the 1978 flood, channel clearance on Santa Paula Creek in 1969, and the restoration work completed, to date, on Calleguas Creek in 1980.

1- 3. Any program instituted which provides full control of activity through changing of state law or passage of local ordinances will result in delays in implementing work due to the need for a regulatory permit process. Considering the life threatening urgency of restoration work under emergency circumstances such delays usually cannot be tolerated.

2- 4. Program for sensitization of personnel involved in emergency work will provide an awareness of environmental concerns for only a limited number of those actually involved in performance of such work. Although the limited scope of such a program would basically apply to governmental personnel, it could be an important first step in developing an awareness of environmental concerns among the field forces. The Department of Fish and Game could be requested to provide an educational program.

X. COORDINATION

1- As part of the preparation of this paper, requests for information were submitted to State and Federal agencies relating to the subject at hand. Also, a preliminary and incomplete draft was submitted to the same agencies in an effort to encourage comment. The following tabulation indicates the agencies contacted and whether response was received.

Agency Contacted	Initial Data Request Response Received		Draft Response Received	
	YES	NO	YES	NO
FEDERAL				
a. Corps of Engineers	X			X
b. Fish and Wildlife Service		X		X
c. Federal Emergency Management Admin.		X		X
d. Soil Conservation Service	X			X
STATE				
a. Water Quality Control Board	X		X	
b. Fish and Game Department	X		X	
c. Dept. of Water Resources	X			X

2- In general, the responses received were helpful with respect to legal and administrative requirements. With respect to data, little or no helpful information was received from these sources with the exception of the California Department of Fish and Game.

APPENDIX B

STREAM CHANNEL MODIFICATION: A SELECTED BIBLIOGRAPHY

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APPENDIX C

BENEFICIAL WATER USE DEFINITIONS

Beneficial Use	Abbreviation	Definition
Municipal and Domestic Supply	MUN	Usual uses in community or military water systems and domestic uses from individual water supply systems
Agricultural Supply	AGR	Crop, orchard, and pasture irrigation; stock watering; support of vegetation for range grazing and all uses in support of farming and ranching operations
Industrial Service Supply	IND	Uses which do not depend primarily on water quality such as mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil well repressurization
Industrial Process Supply	PROC	Process water supply and all uses related to the manufacturing of products
Groundwater Recharge	GWR	Natural or artificial recharge for future extraction for beneficial uses and to maintain salt balance or halt saltwater intrusion into freshwater aquifers
Freshwater Replenishment	FRSH	Provides a source of freshwater for replenishment of inland lakes and streams of varying salinities
Navigation	NAV	Commercial and naval shipping uses
Hydropower Generation	POW	Used for hydropower generation
Water Contact Recreation	REC-1	All recreational uses involving actual body contact with water, such as swimming, wading, waterskiing, skin diving, surfing, sport fishing, uses in therapeutic spas, and other uses where ingestion of water is reasonably possible

BENEFICIAL WATER USE DEFINITIONS

Beneficial Use	Abbreviation	Definition
Non-contact Water Recreation	REC-2	Recreational uses which involve the presence of water but do not require contact with water, such as picnicking, sunbathing, hiking, beachcombing, camping, pleasure boating, tidepool and marine life study, hunting and esthetic enjoyment in conjunction with the above activities, as well as sightseeing
Ocean Commercial and Sport Fishing	COMM	Commercial collection of various types of fish and shellfish, including those taken for bait purposes, and sport fishing in ocean, bays, estuaries, and similar nonfreshwater areas
Warm Freshwater Habitat	WARM	Provides a warm-water habitat to sustain aquatic resources associated with a warm-water environment
Cold Freshwater Habitat	COLD	Provides a cold-water habitat to sustain aquatic resources associated with a cold-water environment
Preservation of Areas of Special Biological Significance	BIOL	Preservation of Areas of Special Biological Significance (ASBS)--Areas of Special Biological Significance are those areas designated by the State Water Resources Control Board as requiring protection of species or biological communities to the extent that alteration of natural water quality by even the slightest degree is undesirable.
Saline Water Habitat	SAL	Provides an inland saline water habitat for aquatic and wildlife resources
Wildlife Habitat	WILD	Provides a water supply and vegetative habitat for the maintenance of wildlife
Preservation of Rare and Endangered Species	RARE	Provides an aquatic habitat necessary, at least in part, for the survival of certain species established as being rare and endangered species

BENEFICIAL WATER USE DEFINITIONS

Beneficial Use	Abbreviation	Definition
Marine Habitat	MAR	Provides for the preservation of the marine ecosystem including the propagation and sustenance of fish, shellfish, marine mammals, waterfowl, and vegetation such as kelp
Fish Migration	MIGR	Provides a migration route and temporary aquatic environment for anadromous or other fish species
Fish Spawning	SPWN	Provides a high quality aquatic habitat especially suitable for fish spawning
Shellfish Harvesting	SHELL*	The collection of shellfish such as clams, oysters, abalone, shrimp, crab, and lobster for either commercial or sport purposes.

* The definition of "SHELL" is different from that adopted by the State Health Department in that it does not include mussels but does include shrimp, crabs and lobsters.

Key to Beneficial Use Table Changes:

Ⓧ = new beneficial use designation X added

X Ⓨ = beneficial use designation Y replaces old designation X

X ◯ = old designation X deleted

PRESENT AND POTENTIAL BENEFICIAL WATER USES IN THE SANTA CLARA RIVER BASIN

Unit No.	Hydrographic Unit, Subunit, or Subarea	Beneficial Uses: MUN	IND	PROC	AGR	GWR	POW	FRSH	NAV	RPRM	MARH	COLD	WILD	RARE	REC 1	REC 2	WSOL	BAL	NAV	MAR	COMM	SHELL
U-01.00	Rincon Creek Unit																					
	Various Surface Streams		I	I	I	I			I	I	E	I	I		I	I						
	Groundwater a/	E	E	P	E																	
	Nearshore Zone a/														E	E			E	E	E	E
U-02.00	Ventura River Unit																					
U-02.A0	Lower Ventura River Subunit																					
	Ventura River & Tributaries		E		E	E		E		E b/	E E b/	P E	E		E	E						
	Canada Larga Creek			I	I	I		I			E	I	I		I	I						
	Groundwater		E	P	E																	
	Ventura River Tidal Prism									E			E		E	E		E		E	E	E
	Nearshore Zone										E			E	E	E			E	E	E	E
U-02.B0	Upper Ventura River Subunit																					
	Ventura River & Tributaries	E	E	E	E	E		E b/		E E b/	E E b/	E	E		E	E						
	Lake Casitas	E	E	E	E	P		P			E	E	E		c/	E						
	Matilija Reservoir	E			E	E		p b/		E p b/	E p b/	E	E		E	E						
	Groundwater	E	E	E	E																	
U-03.C0	Ojai Subunit																					
	San Antonio Creek & Trib.	E	E	E	E	E		p b/		E	E	E	E		E	E						
	Groundwater	E	E	E	E																	
U-03.00	Santa Clara-Calleguas Unit																					
U-03.A0	Oxnard Plain Subunit																					
U-03.A1	Oxnard Subarea																					
	Santa Clara River		E	E	E	E		E			E	E	E		E	E						
	Calleguas Creek				E	E		E			E	E	E		E	E						
	Revelon Slough		P		E	E					E	E	E		I	E						
	Groundwater: Semiperched Zone		E		P						E											
	Ventura Aquifer		E	P	E																	
	Oxnard Aquifer	E	E	E	E																	
	Hugu Aquifer	E	E	E	E																	
	Hueneme Aquifer	E	E	E	E																	
	Fox Canyon Aquifer	E	E	E	E																	
	Grimes Canyon Aquifer	E	E	E	E																	
	Harbors: Port Hueneme			E											E	E			E	E	E	
	Channel Islands Marina		E												d/	E			E	E	E	
	Ventura Marina		E												E	E			E	E	E	E
	Ventura Keys														E	E			E	E	E	
	Tidal Prisms: Calleguas Creek												E	E e/	IV	E		E				
	Edison Canal		E												E	E		E		E		
	McGrath Lake												E		E	E		E				
	Hugu Lagoon												E	E e/	IV	E		E		E	P	P
	Santa Clara River														E	E		E				
	Nearshore Zone													E	E	E			E	E	E	E
U-03.A2	Pleasant Valley Subarea																					
	Calleguas Creek		E	E	E	E					E	E	E		I	E						
	Conejo Creek		E	E	E	E					E	E	E		I	E						
	Groundwater: Semiperched Zone		E		P																	
	Fox Canyon Aquifer	E	E	E	E																	
	Grimes Canyon Aquifer	E	E	E	E																	
U-03.B0	Santa Paula Subunit																					
U-03.B1	Santa Paula Subarea																					
	Santa Clara River		E	E	E	E		E			E	E	E		E	E						
	Santa Paula Creek	P	E	E	E	E		E			E	E	E		E	E						
	Groundwater	E	E	E	E																	
	Mandalay Bay		E												E	E			E	E		

See footnotes at end of table.

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PRESENT AND POTENTIAL BENEFICIAL WATER USES IN THE SANTA CLARA RIVER BASIN

Unit No.	Hydrographic Unit, Subunit, or Subarea	Beneficial Uses																			
		MUN	IND	PROC	AGR	GWR	POW	FRSH	MGR	SPWN	WARM	COLD	WILD	RARE	REC 1	REC 2	BIOL.	SAL.	NAV	MAR	COMM	SHELL
U-03. B2	Sisar Subarea																					
	Santa Paula Creek	P	E	P	E	E		E			E	E	E		E	E						
	Groundwater	E	E	P	E																	
U-03. C0	Sespe Creek Subunit																					
U-03. C1	Fillmore Subarea																					
	Santa Clara River		E	E	E	E		E			E	E	E		E	E						
	Sespe Creek	P	E	E	E	E		E			E	E	E		E	E						
	Groundwater	E	E	E	E																	
U-03. C2	Sespe Subarea																					
	Sespe Creek & Tributaries	P	E	P	E	E		E			E	E	E	E 1/	E	E						
	Groundwater	P	E	P	E																	
	Topatopa Dam (Potential)	P		P	P	P		P			P		P		P	P						
	Cold Spring Dam (Potential)	P		P	P	P		P			P		P		P	P						
U-03. D0	Piru Subunit																					
U-03. D1	Piru Subarea																					
	Santa Clara River		E	E	E	E		E			E	E	E		E	E						
	Hopper Creek		E		E	E		E			E	E	E		E	E						
	Piru Creek & Tributaries	P	E	E	E	E		E			E	E	E		E	E						
	Groundwater	P	E	E	E																	
	Lake Piru	P	E	E	E	E		P			E	E	E		E	E						
U-03. D2	Upper Piru Subarea																					
	Piru Creek & Tributaries	P	E	E	E	E		E			E	E	E		E	E						
	Groundwater	P	E	E	E																	
	Lake Piru	P	E	E	E	E	E	P			E	E	E		E	E						
	Pyramid Reservoir (U.C.)	E	E	E	E	P	E	P			E	E	E		E	E						
	Hard Luck Reservoir (Prop.)	P	P	P	P	P	P	P			P		P		P	P						
U-03. D3	Hungry Valley Subarea																					
	Canada de los Alamos & Trib.				I	I		I			I	I	I		I	I						
	Groundwater	E		E	E																	
U-03. D4	Stauffer Subarea																					
	Lockwood Creek & Trib.				I	I		I			I	I	I		I	I						
	Groundwater	E			E																	
U-03. E0	Upper Santa Clara River Subunit																					
U-03. E1	Eastern Subarea																					
	Santa Clara River & Trib.		E	E	E	E		E			E	E	E		E	E						
	Castaic Creek & Trib.	I	I	I	I	I		I			I	I	I		I	I						
	Elizabeth Lake Canyon & Tributaries	I	I	I	I	I		I			I	I	I		I	I						
	Dry Canyon	I	I	I	I	I		I			I	I	I		I	I						
	San Francisquito Canyon & Tributaries	I	I	I	I	I		I			I	I	I		I	I						
	Bouquet Canyon & Trib.	I	I	I	I	I		I			I	I	I		I	I						
	Mint Canyon & Tributaries	I	I	I	I	I		I			I	I	I		I	I						
	Castaic Lake & Forebay	E	E	E	E	P		P			E		E		E	E						
	Lake Hughes	P	P	P	P	P		P			E		E		E	E						
	Lake Elizabeth	P	P	P	P	P		P			E		E		E	E						
	Dry Canyon Reservoir	E	E	E	E	P	P	P			E	E	E		E b/	E						
	Groundwater	E	E	E	E																	
U-03. E2	Bouquet Subarea																					
	Bouquet Canyon & Trib.	P	P	P	E	E		P			E	E	E		E	E						
	Bouquet Reservoir	E	E	E	E	E	P	E			E		E		E b/	E						
	Groundwater	E	P	P	E																	
U-03. E3	Mint Canyon Subarea																					

PRESENT AND POTENTIAL BENEFICIAL WATER USES IN THE SANTA CLARA RIVER BASIN

Unit No.	Hydrographic Unit, Subunit, or Subarea	Beneficial Uses																			
		MUN	IND	PROC	AGR	GWR	POW	FRSH	MGR	SPWN	WARM	COLD	WILD	RARE	REC 1	REC 2	BIOL	SAL	NAV	MAR	COMM	SHELL
U-03.E4	Sierra Pelona Subarea																					
	Aqua Hausor Canyon & Trib.				I	I		I			(I)	I◯	I		I	I						
	Groundwater	E	E		E																	
U-03.E5	Acton Subarea																					
	Santa Clara River & Trib.		E	E	E	E		E			(E)	E◯	E	E1/	E	E						
	Groundwater	E	E	E	E																	
U-03.F0	Calleguas-Conejo Subunit																					
U-03.F1	West Las Posas Subarea																					
	Revolon Slough							I			(I)	I◯	I		I	I						
	Groundwater	E	E	E	E																	
U-03.F2	East Las Posas Subarea																					
	Calleguas Creek & Trib.					I		I			(I)	I◯	I		I	I						
	Groundwater	E	E	E	E																	
U-03.F3	Arroyo Santa Rosa Subarea																					
	Conejo Creek & Arroyo Santa Rosa					I		I			(I)	I◯	I		I	I						
	Groundwater	E	E	E	E																	
U-03.F4	Conejo Valley Subarea																					
	Conejo Creek & Tributaries					I		I			(I)	I◯	I		I	I						
	Groundwater	E	E	E	E																	
U-03.F5	Tierra Rejada Subarea																					
	Arroyo Santa Rosa					I		I			(I)	I◯	I		I	I						
	Groundwater	E	P	P	E																	
U-03.F6	Gillibrand Subarea																					
	Gillibrand Canyon & Trib.					I		I			(I)	I◯	I		I	I						
	Groundwater	E	E	P	E																	
U-03.F7	Simi Valley Subarea																					
	Arroyo Simi & Tributaries		E	(I)		I		I			(I)	I◯	I		I	I						
	Groundwater	E	E	E	E																	
	Lake Bard	E	E	E	E	P					(E)		E		1/	E						
U-03.F8	Thousand Oaks Subarea																					
	Conejo Creek & Tributaries					I		I			(I)	I◯	I		I	I						
	Groundwater	E	E	E	E																	
U-06.A0	Anacapa Island(s) Subunit																					
	Islands										E◯	I◯	E	E	E◯	E◯			E◯	E	E	E
	Nearshore Zone														E	E	E2/					
U-06.B0	San Nicolas Island Subunit																					
	Surface Watercourses					E◯					I◯		I(E)	I(E)	I◯	I◯						
	Groundwater	E																				
	Nearshore Zone													E	E	E	E2/		E◯	E	E	E
	Begg Rock-Nearshore Zone													E	E	E	E2/		E◯	E	E	E
	Pacific Ocean																					
	Offshore Zone														E	E			E	E	E	E
	Nearshore Zone		(E)												E	E	E2/		E	E	E	E

See footnotes on the following page.

PRESENT AND POTENTIAL BENEFICIAL WATER USES IN THE SANTA CLARA RIVER BASIN

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a/ The nearshore zone is bounded by the shoreline and a line 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline.

b/ ~~Special interest groups in Ventura County propose the reestablishment of fish spawning and migration beneficial uses in the Ventura River.~~ (This footnote deleted)

c/ Water-contact recreation activities are prohibited by the Casitas MWD.

d/ ~~Water-contact recreation activities are prohibited by the Marina Authorities.~~ Water-Contact recreation activities are limited to the beach area at the harbor by Marina Authorities.

e/ Habitat of the clapper rail, an endangered bird species.

f/ Water-contact recreation activities are prohibited by the Southern California Edison Company.

g/ Condor Refuge.

h/ Water-contact recreation activities are prohibited by the L.A. Department of Water & Power.

i/ Soledad Canyon habitat of the Unarmored Three-Spine Stickleback fish.

j/ Water-contact recreation activities are prohibited by the Calleguas MWD.

k/ The nearshore zones surrounding Anacapa Island, San Nicolas Island, and Begg Rock, and the nearshore zone from Latigo Point to Laguna Point were designated as ASBS in March 1974 by the SWRCB, (see Chapter 5 for a detailed description of these areas).

l/ Habitat of the Channel Island Fox.

m/ Aquifers contain water of very poor quality, and it is not extracted and used for domestic, industrial, or agricultural water supply in any significant quantity.

NOTES: E = Existing beneficial water use.
P = Potential Beneficial water use.
I = Beneficial water use in a watercourse with intermittent flow characteristics.
E, P And I Shall be Protected as required.

n/ Limited public access May preclude full utilization.

o/ Whenever flow conditions are Suitable.

r/ Area is Currently under control of the U.S. Navy; Swimming is prohibited.

s/ Water-Contact recreation activities are limited by the City of Oxnard to within the easement area of each home.

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APPENDIX D

DAMAGE SURVEY REPORT

REVIEWER'S COMMENTS

Disaster No. 547-DR, P/A No. _____

Category B, L. I. No. _____

DSR Inspection Date 2/27/78

Applicant Ventura County Flood Control District

County Ventura

TO: FDAA, 2580 E. Main St., Ventura, Calif.

U.S. Fish and & Wildlife Habitat Damage Survey Report

Area of Concern:* Ventura River/Matilija Creek from Foster Park Bridge to Highway 150 Bridge

Damages to Fish and Wildlife Habitat: Destruction of probable spawning beds in the vicinity of the Casitas Springs Municipal Water District Headquarters in Casitas Springs. This was caused as a result of bulldozer work in the middle of the main channel, and the creation of seemingly unnecessary pilot channels.

Adherence to or Violation of FDAA Criteria: Since the work performed was done largely when no immediate threat to public health or safety existed we do not believe that it can be considered emergency work. Nor does there seem to be any justification for the construction of pilot channels. However, the restoration of eroded banks should be eligible work under "permanent" work for dikes and levees.

Avoiding Future Potential Problems: Every effort should be made to minimize the oc-

* The area between Foster Park and Santa Ana Avenue has been considered in a prior U.S. Fish and Wildlife Damage Survey Report.

DAMAGE SURVEY REPORT

REVIEWER'S COMMENTS

Disaster No. _____, P/A No._____

Category_____, L. I. No. _____

DSR Inspection Date_____

Applicant_____

County_____

currance of bulldozers in areas where spawning beds exists. Pilot channels are often located in spawning areas and are, therefore, exceedingly damaging to spawning beds.

Mitigations Required: All future emergency or permanent work will restrict its activities to river bank protection as much as possible. No work shall be performed in areas where spawning gravel exists unless necessary to protect the public's health and safety.

Authority Under Which Recommendations for Fish and Wildlife Preservation and Mitigation Must be Carried Out: 1) U.S. F. & W. Coordination Act 48 Stat. 401; 2) Federal Water Pollution Control Act; 3) California Department of Fish and Game.

Ken Holland USFWS 4/3/78

Reviewer Agency Date

DAMAGE SURVEY REPORT

REVIEWER'S COMMENTS

Disaster No. 547-DR, P/A No. _____

Category D, L. I. No. _____

DSR Inspection Date 3/14/78

Applicant Ventura County Flood Control District

County Ventura

TO: FDAA, 2580 E. Main St. Ventura, California.

U.S. Fish and Wildlife Habitat Damage Survey Report

Area of Concern: Rincon Creek

Damages to Fish and Wildlife Habitat: None at this time; however, the work proposed could cause some serious damage to the existing riparian habitat along the creek.

Adherence to or Violation of DDFDAA Criteria: The work which is proposed is eligible work according to the FDAA Criteria.

Avoiding Future Potential Problems: A great amount of care must be exercised to prevent excessive or unnecessary removal or destruction to the relatively extensive riparian growth along most of Rincon Creek.

Mitigation Required: We recommend that areas which suffers losses of such riparian vegetation be re-vegetated and paid for either through the County or FDAA.

DAMAGE SURVEY REPORT

REVIEWER'S COMMENTS

Disaster No. _____, P/A No._____

Category_____, L. I. No. _____

DSR Inspection Date_____

Applicant_____

County_____

Authority Under Which Recommendations for Fish and Wildlife Preservation and Mitigation be Carried Out: 1) U.S. Fish and Wildlife Service Coordination Act; 2) Federal Water Pollution Control Act; 3) California Department of Fish and Game Codes 1603.

Ken Holland USFWS 4/4/78

Reviewer Agency Date

DAMAGE SURVEY REPORT

REVIEWER'S COMMENTS

Disaster No. 547-DR, P/A No. _____

Category B, L. I. No. _____

DSR Inspection Date 3/7/78

Applicant Ventura County Flood Control District

County Ventura

TO: FDAA, 2580 E. Main St., Ventura, Calif.

U.S. Fish and Wildlife Habitat Damage Survey Report

Area of Concern: Santa Paula Creek

Damages to Fish and Wildlife Habitat: Although most of the proposed work is completed, much is still on going. Damages to fish and wildlife habitat have been relatively minor in the vicinity of the town as most of this is simply a rip-rapped flood control channel. More significant damages have occurred upstream of the town. These damages were the result of channelization which did alter the river's natural course and thereby disrupted the original ecology to a certain extent.

Adherence to or Violation of FDAA Criteria: Most of the work which has been performed was work which was not emergency work. That is, it was not performed during any emergency. It was work which was performed in case an emergency were to occur. Therefore, we don not believe it should be funded by FDAA as emergency work. However, most if not all of the work would seem eligible under permanent work for dikes and levees.

DAMAGE SURVEY REPORT

REVIEWER'S COMMENTS

Disaster No. _____, P/A No._____

Category_____, L. I. No. _____

DSR Inspection Date_____

Applicant_____

County_____

Mitigations Required: In areas where riparian vegetation has been destroyed every attempt should be made to restore it. Such restoration should be made eligible for FDAA funding since the work that destroyed it was also paid for by the FDAA.

Authority Under Which Recommendations for Fish and Wildlife Preservation and Mitigation must be carried out: 1) U.S. F. & W. Service Coordination Act 48 Stat. 401; 2) Federal Water Pollution Control Act 1972; 3) California Department of Fish and Game.

Ken Holland USFWS 4/4/78

Reviewer Agency Date

DAMAGE SURVEY REPORT

REVIEWER'S COMMENTS

Disaster No. 547-DR, P/A No. _____

Category D, L. I. No. _____

DSR Inspection Date 3/24/78

Applicant Ventura County Flood Control District

County Ventura

TO: FDAA, 2580 E. Main St. Ventura, California

U.S. Fish and Wildlife Habitat Damage Survey Report

Area of Concern: Calleguas Creek

Damages to Fish and Wildlife Habitat: Relatively minor damages have occurred and are expected as a result of creek bank restoration work. The material which is to be utilized as rip-rap or stabilization fill should be clean and contain no hydrocarbons or excessive amounts of fines.

Adherence to or Violation of FDAA Criteria: Since the work is largely incomplete at this time, we believe that its classification as permanent work is a valid one and should be funded as such.

Avoiding Future Potential Problems: Great care should be exercised to prevent the unnecessary removal of riparian vegetation along the entire stretch of the creek and most certainly above (upstream) of the Camarillo State Hospital.

DAMAGE SURVEY REPORT

REVIEWER'S COMMENTS

Disaster No. _____, P/A No._____

Category_____, L. I. No. _____

DSR Inspection Date_____

Applicant_____

County_____

Mitigation Required: FDAA funds should be made available to properly mitigate (by re-vegetation) any such vegetation which is removed with FDAA funds.

Authority Under Which Recommendations for Fish and Wildlife Preservation and Mitigation Must be Carried Out: 1) U.S. Fish and Wildlife Service Coordination Act 48 Stat. 401; 2) Federal Water Pollution Control Act; 3) California Department of Fish and Game.

Ken Holland USFWS 4/3/78

Reviewer Agency Date

DAMAGE SURVEY REPORT

REVIEWER'S COMMENTS

Disaster No. 547-DR, P/A No. _____

Category D, L. I. No. _____

DSR Inspection Date 3/2/78

Applicant Ventura County Flood Control District

County Ventura

TO: FDAA, 2580 E. Main St., Ventura, California

U.S. Fish and Wildlife Habitat Damage Survey Report

Area of Concern: Revlon Slough downstream of Highway 101 and Woods Road

Damages to Fish and Wildlife Habitat: Very limited damages to fish a wildlife habitat are expected as a result of the proposed work to be completed on Revlon Slough. However, any type of rip-rap or fill material used should be clean, and free of hydrocarbon compounds or other pollutants.

Adherences to or Violation of FDAA Criteria: The work proposed is eligible work under permanent work D dikes and levees.

Migigation Required; None

Authority Under Which Recommendations for Fish and Wildlife Preservation Must be Carried Out; 1) U.S. Fish and Wildlife Service Coordination Act 48 Stat. 401; Federal Water Pollution Control Act; 3) California Department of Fish and Game.

Ken Holland USFWS 4/4/78

Reviewer Agency Date

APPENDIX E

STATE OF CALIFORNIA — EDMUND G. BROWN JR., *Governor*

California Coastal Commission
SOUTH CENTRAL COAST REGIONAL COMMISSION
735 STATE STREET
BALBOA BUILDING, SUITE 612
SANTA BARBARA, CA 93101

COASTAL DEVELOPMENT PERMIT

On June 27, 1980, by a vote of 10 to 0 (2 absent), the California Coastal Commission granted to VENTURA COUNTY FLOOD CONTROL DISTRICT Permit # 212-26, subject to the conditions set forth below, for development consisting of Widening and construction of levees on Revolon Channel. A new levee will be constructed on the westside of the channel. The east levee will be widened and raised to the same height as the west. Construction will be diked at upstream and downstream ends to eliminate effects of tide and local water. Upsteam flow will be pumped into Calleguas Creek. Rip-Rap will be placed on channel face of new levees.
more specifically described in the application file in the Commission offices.

The development is within the coastal zone in Ventura County at Revolon Channel, from just north of State Highway 1 to just south of Las Posas Rd., near Oxnard, California (APN 234-11, VCFCD Easements)

After public hearing held on June 27, 1980, the Commission found that, as conditioned, the proposed development is in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976; will not prejudice the ability of the local government having jurisdiction over the area to prepare a local coastal program that is in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976; if between the sea and the public road nearest the sea, is in conformity with the public access and public recreation policies of Chapter 3 of the California Coastal Act of 1976; and either (1) will not have any significant adverse impact on the environment, or (2) there are no feasible alternatives or feasible mitigation measures available that would substantially lessen any significant adverse impact that the development as approved may have on the environment.

Issued on behalf of the South Central Coast Regional Coastal Commission on June 27, 1980.

Carl C. Hetrick
Executive Director

The undersigned permittee acknowledges receipt of the California Coastal Commission Permit # 212-26, and fully understands its contents, including all conditions imposed. (Please return one signed copy to the South Central Coastal Commission as soon as possible; upon receipt of same, the permit card will be mailed to you to post on project property.

DATE PERMITTEE

Permit # 212-26, is subject to the following conditions:

I. STANDARD CONDITIONS

1. Assignment of Permit This permit may not be assigned to another person except as provided in Cal. Admin. Code, Title 14, Section 13170.

2. Notice of Receipt and Acknowledgement Construction authorized by this permit shall not commence until a copy of this permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of its contents, is returned to the Commission.

3. Expiration If construction has not commenced, this permit will expire two (2) years from the date on which the Commission voted on the application. Application for extension of this permit must be made prior to the expiration date.

4. Construction All construction must occur in accord with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviations from the approved plans must be reviewed by the Commission pursuant to Cal. Admin. Code, Title 14, Sections 13164 - 13168.

II. SPECIAL CONDITIONS

See the attached.

The complete Permit Fee of $ _____ must be submitted to the Commission. You have previously submitted $ _____. PLEASE ENCLOSE THE REMAINDER ($_____) WITH YOUR SIGNED COPY OF THE PERMIT FORM.

Carl Hetrick

CARL. C. HETRICK
Executive Director

REVISED CONDITIONS

Application No. 212-26

Applicant: Ventura County Flood Control District
800 South Victoria Avenue
Ventura, California 93009

Location: Revolon Channel, from just north of State Highway 1 to just south of Las Posas Rd., near Oxnard, California.

Project: Widening and construction of levees on Revolon Channel. A new levee will be constructed on the westside of the channel. The east levee will be widened and raised to the same height as the west. Construction area will be diked at upstream and downstream ends to eliminate effects of tide and local water. Upstream flow will be pumped into Calleguas Creek. Rip-rap will be placed on channel face of new levees.

STAFF RECOMMENDATION:

I. APPROVAL WITH CONDITIONS:

A. Construction Phase

1) No construction shall take place in the lower 1,000 feet of the Revolon Unit 0 Channel, near the Highway 1 Bridge, between July 15 and September 15, in order to avoid disrupting the feeding habitat of the endangered Least Tern.

2) During construction, a ponded area, the width of the channel (175 feet) shall be maintained at a depth of at least one foot at the upper end of the project outside the temporary construction dike, to further maintain habitat and feeding area for wildlife in the area.

3) When construction is completed in the lower 1,000 feet of the channel, the lower coffer dam, designed to restrict tidal influence in the channel during construction, shall be moved out of the lower 1,000 foot area to allow tidal influx back into the lower 1,000 feet of the channel, while construction is taking place in the upper reaches of the Revolon Unit 0 Channel.

4) No construction equipment of any type shall be allowed to operate east of the central levee dividing the Revolon and Calleguas Channels, nor east of the Calleguas Creek Channel. No cutting nor earth removal shall be done east of the top of the central levee, in order to protect from disruption the registered archeological site, VEN-110, unless the Executive Director grants specific relief from this condition based upon a new archeological report submitted by the applicant.

5) If during construction archeological resources are discovered, all activity which could damage or destroy these resources shall be temporarily suspended until the site has been examined by a qualified archeologist, approved by the Executive Director. The archeologist shall propose mitigation measures to protect the archeological resources. Said mitigation measures shall be subject to the review and approval of the Executive Director. Construction shall not begin again until said mitigation plan has been approved.

6) Approval of Revolon Flood Control Channel Unit O shall in no way commit the South Central Regional Coastal Commission nor its successor in interest, to approve any subsequent flood control projects in the area that may impact Mugu Lagbon.

7) Prior to the issuance of the permit, the applicant shall submit to the Executive Director for his review and approval, a signed acknowledgement from a qualified flood control engineer stating that the completion of the Revolon Unit O Flood Control Channel will not require the completion of a subsequent Flood Control Project involving the Highway 1 Bridge or Mugu Lagoon.

8) Atriplex lentiformis shall be planted on the the outside of the western levee to mitigate adverse impacts of the construction period on the Slough's wildlife habitat.

MAINTENANCE OPERATIONS

9) Maintenance of the Revolon Unit O Flood Control Channel shall not be undertaken until the volume of sediment within the channel is within 13 feet of the top of the channel's 16 foot levees. (The sediment would be at least 3 feet deep.)

10) No maintenance activities shall be undertaken between July 15 and September 15 in the lower 1000 feet of the slough channel in order to protect the Least Tern's habitat.

11) Cofferdams, similar to those proposed for installation during construction, shall be built at the upper and lower ends of the project site during all maintenance operations to limit the amount of silt that may be carried into Mugu Lagoon.

12) The Ventura County Flood Control District shall maintain records pertaining to sediment build-up in Revolon Unit O, with surveys taken after major storms and before and after maintenance operations. The Ventura County Flood Control District shall also annually monitor and record the flow of sediment through the channel to generate data for use in possible future studies on the sedimentation hazard in Mugu Lagoon. These data shall be compiled and made available for use by the public.

13) The Ventura County Flood Control District shall insure the continued regular gauging of Revolon Slough discharge at Laguna Road.

14) Deposition of spoils on any location besides agricultural land within the Coastal Zone shall be subject to a separate Commission approval. Spoils may be placed on agricultural land without a Coastal Permit.

15) No vegetation shall be removed from the channel nor from the inside of the channel levees except as required during the initial construction period and during maintenance operations to remove the silt as conditioned in #8. No herbicides shall be used to control vegetation growth in the channel, nor on the inside or outside of the channel levees.

ND/ms

APPENDIX F

EMERGENCY PERMIT

APPLICATION NO. #168-22

APPLICANT: Southern Pacific Transportation Company
610 South Main, Room 788
Los Angeles, California 90014
Attn: John F. Mc Allister

PROJECT APPROVED:
Breaching temporary gravel dike to redivert Ventura River flow back to original (pre-project) channel on west bank of river.

LOCATION:

Ventura River between Main Street bridge and U.S. 101 freeway bridge, Ventura County.

The following findings are recommended in accordance with Government Code Section 131-42 as the "Criteria for Granting (Emergency) Permit:"

1. Emergency Situation: A temporary gravel dike constructed to allow emergency repairs to a Southern Pacific railroad bridge has created a fanned out, shallow channel which is impeding the migration of anadromous fishes in the Ventura River.
2. Cause of Emergency: Placement of temporary gravel dike between the Main Street bridge and the U.S. 101 freeway bridge to allow repain of railroad bridge damaged during 1978 March storms.
3. Consistency with Coastal Act: The project as conditioned will protect coastal and marine resources, including but not limited to, anadromous fishes pursuant to Public Resources Code Sections 30230, 30231, 30236, and 30240.
4. Conditions:

   a) All work performed pursuant to this permit shall be limited to breaching the temporary gravel dike to the degree necessary to redivert entire current flow of the Ventura River back to its original (pre-project) channel on the west river bank.
   b) All work performed pursuant to this permit shall be done consistent with the recommendations and under the supervision of the California Department of Fish and Game.
   c) No provision of these conditions shall be construed to hold the applicant responsible for the continued maintenance of the original (pre-project) channel after the initial restoration work is completed, providing that the original gravel dike construction does not result in the recurrent displacement of the low flow from the original (pre-project) channel on the river's west bank.
   d) All work performed pursuant to this permit shall be completed no later than April 30, 1978

The Executive Director has determined that the project described above and as further described in the application numbered above as subject to the terms and conditions of Paragraph 4 conforms to the criteria for an emergency permit set forth in Pulbic Resources Code Section 30624 and rules and regulations enacted pursuant thereto; that the said project will not have any substantial adverse environmental or ecological effect and is consistent with the findings set forth in Government Code Section 13142. For specific findings see attached.

The determinations set forth in Paragraph 3 are based upon information contained in the application and any other facts relating to this project obtained by the Executive Director and set forward in the Regional Commission files. Such facts are incorporated herein by reference.

Date of issurance of permit. April 17, 1978 .

CALIFORNIA COASTAL COMMISSIONS
SOUTH CENTRAL COAST REGION
1224 Coast Village Circle, 36
Santa Barbara, CA 93108
(805) 969-5828

EMERGENCY PERMIT 168-22

Pursuant to Public Resources Code Section 30624 and following, and provisions of the California Administrative Code enacted pursuant thereto, a permit is hereby issued to perform the development described in the Permit Application.

This permit is subject to the terms and conditions of the Commission resolution or Executive Director determination approving this project and any other requirements which are set forth on the reverse of this Permit and incorporated herein by reference.

The Project shall be commenced within 2 years of the issuance date of this permit.

Failure of Permittee to conform to the provisions of this Permit shall subject him to the penalties provided by Public Resources Code Section 30820, 30821 and 30822.

This permit is not intended to, nor shall it be interpreted to have any effects on rights and obligations under private contracts or agreements, nor is it intended to take the place of any permit to be issued by any other public body.

This permit is assignable upon assumption of the Permittee's obligations by the Assignee.

Permittee shall file a notice of completion of the activities authorized hereby with the Executive Director of the Regional Commission.

Carl C. Hetrick

CARL C. HETRICK
EXECUTIVE DIRECTOR

I/We acknowledge that I/We have received a copy of this Permit, have read it, and understand its contents.

_____

_____

APPENDIX G

STATE OF CALIFORNIA—RESOURCES AGENCY RONALD REAGAN, Governor

DEPARTMENT OF FISH AND GAME
Region 5
350 Golden Shore
Long Beach, California 90802

August 6, 1974

County of Ventura
Environmental Review Board
52 North California Street
Ventura, California

Dear Sirs:

Our Department has been working on protection of the environment and conservation and enhancement of our fish and wildlife resources for many years. In recent years, the National Environmental Policy Act and the California Environmental Quality Act have provided us with ways to provide even more effective protection to these resources.

To facilitate our review of projects on which it would be of value to you to receive input from the Department of Fish and Game we are designating our local Unit Wildlife Manager to work with you on them. His name and address are listed below. Please add his name to your mailing list for contact and for receiving any printed agendas of meetings where projects may be considered. We feel a better overall, more coordinated review of projects will be the result of this new procedure.

Another item of concern to our Department is the frequency with which one particular statement keeps occurring in many of the Environmental Impact Reports we are receiving. The statement asserts that wildlife will be temporarily displaced by a project but is expected to relocate in adjacent habitats. Our Department cannot accept this as a valid statement, and we ask that County reviewers join with us and reject this philosophy. In actuality the adjacent habitats are already supporting the full quota of those particular wildlife species which are able to find their needs satisfied there. Any sudden influx of additional wildlife leads to direct competition for food, escape cover, etc. The inevitable result is the death of one or both of the competitors. There is also considerable danger of introduction of disease if the animals are transported into a new area for relocation. Furthermore, intermingling of wildlife populations may eliminate particular genetic characteristics of a unique subspecies or race.

Since human desires at times conflict with the needs of wildlife the above situation will occur more and more as urbanization encroaches into areas inhabited by wildlife. The decision to allow this encroachment is made when the County authorizes a project or passes a zoning. Then is the correct time to consider how best to minimize that predictable wildlife people conflict.

On-site mitigation is the most preferred method of handling direct adverse imports of any particular project; however, there may be other alternatives to consider. One alternative which may prove interesting to consider is that of designating an area within the county as a mitigation area. Sponsors who propose projects which contain low or no opportunity for mitigation on the site could then relieve the mitigation obligation by direct purchase and dedication into public ownership of a portion of the designated area. The counties and our Department could work together in designating particularly critical areas for wildlife as these mitigation areas.

If your County is interested in discussing further the application of such a concept, a meeting can be arranged by contacting Mr. Robert D. Montgomery, Regional Manager, Region 5, 350 Golden Shore, Long Beach, California 90802.

Sincerely,

Robert D. Montgomery
Regional Manager
Region 5

Robert Fordice
440 Clark Street
Orcutt, California 93455

APPENDIX H

APPENDIX I

Ecological Services
24000 Avila Road
Laguna Niguel, CA 92677

June 22, 1978

Mr. Willis Thompson
District Conservationist
USDA Soil Conservation Service
P.O. Box D
Somis, CA 93066

Dear Mr. Thompson:

The U.S. Fish and Wildlife Service has reviewed the proposed 216 projects on the following waterways in Ventura County:

1. Sespe Creek near Filmore
2. Calleguas Creek (various locations)
3. Santa Clara River (lower reaches)
4. Santa Clara River at Filmore
5. Thatcher Creek (upper reaches)
6. Reeves Creek (upper reaches)
7. Ventura River (near Casitas Springs)
8. San Antonio Creek Sites.

The following comments and recommendations concern only those waterways which we believe might be subject to significant impacts to fish and wildlife resources as a result of the proposed 216 work.

Calleguas Creek

The Service recommends that no activity (e.g. channelization, dike construction, vegetation removal) be performed at the mouth of Calleguas Creek in Mugu Lagoon until both of the following are determined and implemented.

1. The proposed activity will result ultimately in beneficial impacts to the endemic natural ecology. This is to be determined by both SCS and USFWS biologists.

2. Upstream sediment basins will be constructed to prevent sediment (caused to some extent by upstream conservation and agricultural practices) from entering Mugu Lagoon at the present accelerated rate.

Regarding the proposed work for the Ventura River and San Antonio Creek, the Service recommends the following be made policy.

1. Channelization of any kind will not be permitted which will significantly impact fishery resources (to be determined by SCS and USFWS biologists).

2. Spawning beds and streamside riparion habitat will be left intact.

Regarding the proposed work for Reeves Creek, we recommend that all riparian vegetation (particularly trees) be left intact. Further, that upstream settling basins be utilized rather than downstream channelization. These settling basins could be located upstream from the proposed work in the canyon, or an area of relatively low ecological productivity.

Regarding SCS 216 projects in general and from the Soil Conservation Service Guidelines, we wish to emphasize that: 1) equipment be kept out of the flowing stream; 2) spoil not be placed on top of stream vegetation; 3) broader and deeper holes (about 2 times the width and at least 2 feet deeper than the low-flow channel) be constructed in the stream channel at about 1/8 mile intervals to create ponds; 4) revegetation of the low-flow channel banks be attempted using Bermuda grass or suitable soil binding plants; 5) where possible, excavated sediment should be removed entirely from the floodway.

From the Memorandum of Understanding, we wish to emphasize that: 1) vegetation be removed only from one side of the flow channel or just from the center leaving vegetation along both sides.

If we can be of further assistance or can answer questions regarding possible Service posture towards specific proposals, please contact us at (714) 831-4270.

Sincerely yours,

James J. McKevitt
Field Supervisor

KGH:rm

cc: CDFG, Reg. 5, Long Beach, CA
Glenn Wilcox, USDA Soil Conservation Serv., Salinas, CA

bcc: AM, Sacramento

Friends of the Ventura River

A NON-PROFIT ORGANIZATION

Ed - Your may find this helpful in your work. Regards, Mark Capelli

December 1, 1980

Carla Bard
Chairperson, State Water Resources Control Board
P.O. Box 100
Sacramento, California 95801

Dear Ms Bard:

RE: VENTURA COUNTY 208 AREAWIDE WATER QUALITY MANAGEMENT PLAN, 1979-1980: EMERGENCY FLOOD CONTROL MEASURES (TASK 4.5.4)

The FRIENDS OF THE VENTURA RIVER have reviewed the Emergency Flood Control Element (Task 4.5.4) of the Ventura County 208 Plan for 1979-1980 and have found that it does not adequately address the issues or accomplish the tasks set forth in the Final Work Program (revised November 12, 1979, pages 81-82). We are therefore requesting that the State Water Resources Control Board not certify the Emergency Flood Control Element of the Ventura County 208 Plan.

As you may be aware, this Work Element was included in the Ventura County 208 Plan based upon the recommendation of the FRIENDS. The Work Element was endorsed in concept by local state and federal representatives, including Senator Omer L. Rains, Assemblyman Charles R. Imbrecht, and Congressman Robert J. Lagomarsino, who recognized the need to better control the adverse impacts of flood control activities on water quality and related instream beneficial uses while at the same time providing adequate protection for lives and property. (See the attached correspondence.)

The recommendations prepared by the Ventura County Flood Control District as part of the Work Element do not provide an effective means of achieving the basic objective of the Work Element: "To minimize the impacts of emergency flood control maintenance activities." In addressing this objective, the Ventura County Flood Control District did not adequately describe the flood event or the District's flood control methodology (Task A-1); misinterpreted several important statutes and regulations governing emergency flood control activities and completely omitted any discussion of relevant regulatory programs such as the California Coastal Act of 1976 (Task A-3); and provided an over-simplified, misleading, and erroneous analysis of the impacts of flood control activities on water quality and related instream beneficial uses (Task A-4). Additionally, the Technical Paper prepared by the Ventura County Flood Control District failed to identify and analyze in a meaningful way "alternative policy senarios" (Tasks B and C) which would significantly reduce the impacts of flood control activities on water quality and instream beneficial uses.

OFFICE: 63 SOUTH OLIVE STREET, SAN BUENAVENTURA, CALIFORNIA 93001 (805) 643-6074

We have detailed these deficiencies in the accompanying report entitled: COMMENTS ON EMERGENCY FLOOD CONTROL MEASURES TASK 4.5.4 VENTURA COUNTY 208 AREAWIDE WATER MANAGEMENT PLAN, 1979-1980.

Rather than addressing the central objective of the Work Element and performing the specified tasks, the Ventura County Flood Control District apparently devoted a majority of its efforts towards de-emphasizing the impacts of flood control activities on water quality and instream beneficial uses and identifying impediments (most of them exaggerated or wholly imaginary) to reforming anachronistic flood control maintenance practices.

We are therefore requesting that the State Board not certify the Emergency Flood Control Element of the Ventura County 208 Plan, and furthermore, that the State Board not reimburse the County for the $11,250 expended on the Work Element until the document is sufficiently modified to accomplish its intended objective.

Approval and reimbursement of the Emergency Flood Control Element in its present form would constitute an unwarranted dispersement of public funds with no corresponding public benefits.

Sincerely,

Charles D. Price
President

CDP/mc
attachments

cc: Chairman, Ventura County Board of Supervisors
Program Manager, Environmental Protection Agency
Director, California Department of Fish and Game
Regional Manager, U.S. Fish and Wildlife Service
Congressman Robert J. Lagomarsino
State Senator Omer L. Rains
Assemblyman Charles R. Imbrecht

CITY OF SAN BUENAVENTURA

May 14, 1987

Friends of the Ventura River
Charles D. Price, President
63 S. Olive St.
Ventura, CA 93001

Re: HUBBARD R.V. PARK PLANNED DEVELOPMENT PERMIT NO. 406

A condition included in Planning Commission Resolution No. 6109 states as follows:

> "That the 100 foot sensitive area setback as shown on the site plan, Exhibits "H" and "I", shall have signs installed at 20-foot intervals on its east boundary adjacent to the developed area of the site warning that access into the river channel is discouraged. In addition, the developer shall implement a signage and/or notice system to advise users of the facility that the river is not suitable for human contact and is a sensitive habitat area that should not be disturbed. A notice that access to the river is discouraged, then an explanation of the sensitive nature of the area, shall be included in the packet of registration materials distributed to all users of the site. Placement, wording and specifics of the signs and programs shall be reviewed and approved by the City Planner with consultation with interested groups prior to the issuance of building permits."

As a person who commented on the draft EIR for the subject project, this letter is being sent to you for consultation. The applicant has submitted the following wording for the signs along the river and notices to be included with registration materials:

> "Notice - the Ventura River bounding this R.V. park on the east is a sensitive habitat area and should not be disturbed. The river is not suitable for human contact. Therefore, it is a rule of the Park that you do not trespass on the Ventura River Channel."

If you care to comment on the above, please contact me prior to May 29, 1987 at the address below or by calling 654-7891. Thank you for your consideration.

Dave Tabor
Associate Planner

DT/nlg/519

Friends of the Ventura River

May 26, 1987

Dave Tabor
Associate Planner
City of San Buenaventura
P.O. Box 99
Ventura, California 93002-0099

Dear Mr. Tabor:

RE: HUBBARD RV PARK PLANNED DEVELOPMENT PERMIT No. 406

Thank you for providing us with a copy of the proposed Notice to be placed along the portion of the lower Ventura River passing through the Hubbard property.

The FRIENDS have commented previously on the Planning Commission's condition which would require the applicant to post signs on his property restricting access to the Ventura River. The FRIENDS strongly objected to this condition, and therefore cannot support the wording proposed by the applicant in response to the Planning Commission's condition.

Our objection to the Planning Commission's condition and the language of the proposed public Notice is outlined below:

1. The proposed restriction conflicts with the policies of two State agencies regarding the public use of the waters of the Ventura River.

(a) The proposed restriction indicates that the "river is not suitable for human contact." The beneficial uses of the Ventura River are established by the Los Angeles Regional Water Quality Control Board (RWCQB) and the State Water Resources Control Board (SWRCB), not the City. These recognized beneficial uses are contained in the adopted Santa Clara River Basin 4(A) Plan. The current beneficial uses in the lower Ventura River adjacent to the project site (V-02AG) include REC I (Contact Water Recreation), and REC II (Non-Contact Water Recreation). Other beneficial uses included AG (Agricultural Water Supply), WARM (Warm-Freshwater Habitat), and WILD (Wildlife Habitat). See enclosed excerpts from the Santa Clara River Basin Plan 4(A).

All point discharges to the lower Ventura River must meet NPDES discharge requirements which are designed to protect these recognized beneficial uses. The RWQCB has over the past ten years required improvements to all waste discharges into the lower Ventura River, including the Oak View Sanitary District which has recently undergone a major upgrading. The restriction on access to the lower Ventura River which is contained in the language of the proposed Notice conflicts with the existing beneficial uses of the lower Ventura River.

63 SOUTH OLIVE STREET SAN BUENAVENTURA, CALIFORNIA 93001 (805) 643-6074

Significantly, no similar restrictions have been issued by the State Department of Parks and Recreation for the adjacent Emma Wood State Beach, or by the City for the nearby Seaside Wilderness Park, both of which adjoin the lower river channel. Users of both parks regularly come into contact with the waters of the lower river while crossing the river as it passes through the sand bar forming the lagoon at the mouth. We are not aware of any health problems which have resulted from this practice; nor are we aware of any proposal by either the City or the State Department of Parks and Recreation to impose such a restriction on contact within their respective park units. Even assuming a legitimate need for such a restriction, in the absence of a consistent policy regarding contact, placing a ban on the Hubbard property alone would not effectively achieve its purported purpose.

(b) The California Department of Fish and Game has adopted special trout and steelhead fishing regulations for the Ventura River which essentially limit winter steelhead fishing (November 15 through March 1) to the lower Ventura River, from the Foster Park Bridge downstream to the mouth. These restrictions are intended to protect upstream spawning and rearing areas while allowing angling access for a limited period in the lower river. See enclosed copy of the California Department of Fish and Game's 1987 Sportfishing Regulations, p. 6.

The City's requirement to bar access to a portion of the river which has been explicitly left legally open to fishing, would significantly restrict access to legally fishable water, and therefore, conflict with the intent and purpose of the Department of Fish and Game's regulations.

2. The restriction of entry (particularly pedestrian entry) into the Ventura River channel is not necessary to protect environmentally sensitive habitats or wildlife.

The FRIENDS believe that controlled public pedestrian entry into this area is consistent with the protection of the environmentally sensitive resources of the river. A signing program with a positive message about the nature of the resources in the river channel and suggestions for the proper use of the area would be sufficient to protect the river's resources. Further, controlled access for legitimate recreational, educational, and research purposes, we believe, would discourage the illegal or unauthorized use of the area by vagrants. Finally, we would note that no similar protective measures have been required for other recreational facilities adjacent to any County river or stream. No such measures, for example have been taken in Foster Park on the Ventura River, Camp Comfort on San Antonia Creek, Stickle Park on Santa Paula Creek, or in the City's Seaside Wilderness Park. We fail to see the need for such drastic measures here.

3. The Hubbard property was specifically rezoned from agricultural to recreational use in the City's Local Coastal Program for the express purpose of providing access to the coastal resources of the site, including the Ventura River. The Planning Commission's condition and the proposed Notice of

the applicant undermines the basic purpose of the land use and zoning designation on this property, as well as unnecessarily limits the special recreational opportunities afforded by its location adjacent to the Ventura River.

In summary, the FRIENDS, have objected to the Planning Commission's condition, and cannot support the language of the proposed Notice. While we would not recommend ingestion of the water from the lower Ventura River because of potential contamination from agricultural runoff containing pesticides, and from unauthorized discharges from upstream oil related activities, we believe that the complete ban on access recommended in the Notice is an unnecessary and misguided attempt to protect the Ventura River from park users, and park users from the Ventura River.

We strongly recommend that the applicant request the Planning Commission to reconsider its condition regarding signing, and specifically request that it modify the present requirement to eliminate the complete ban on river access, and provide a more positive direction for protecting the river's resources through public information and education.

Again, we appreciate the opportunity to comment on this aspect of the Hubbard RV Park. We hope that these comments will be useful in your review of this matter.

Sincerely,

CHARLES D. PRICE
President

cc: Regional Water Quality Control Board, Los Angeles Region
California Department of Fish and Game, Region 5

TABLE 4

PRESENT AND POTENTIAL BENEFICIAL WATER USES IN THE SANTA CLARA RIVER BASIN

Unit No.	Hydrographic Unit, Subunit, or Subarea	Beneficial Uses: MUN	IND	PROC	AGR	GWR	FRSH	SPWN	WARM	COLD	WILD	RARE	REC 1	REC 2	BIOL	SAL	NAV	WAR	COMM	SHELL
U-01.00	Rincon Creek Unit		I	I	I				I	I	I	I-	I							
	Various Surface Streams	E	E	P	E															
	Groundwater m/												E	E			E	E	E	E
	Nearshore Zone a/																			
U-02.00	Ventura River Unit																			
U-02.A0	Lower Ventura River Subunit																			
	Ventura River & Tributaries		E		E	E		E	E	P	E	E	E		E	E				
	Canada Larga Creek			I	I	I		I			X	I	I		I	I				
	Groundwater		(E)	P	(E)															
	Ventura River Tidal Prism								E		E		E		E	E	E	E	E	E
	Nearshore Zone											E	E				E	E	E	
U-02.B0	Upper Ventura River Subunit																			
	Ventura River & Tributaries	E	E	E	E	E		E	E	E	E	E	E	E	E					
	Lake Casitas	E	E	E	E	P		P			E	E	E	E	g/					
	Matilija Reservoir	E			E	E		B	B	B	E		E							
	Groundwater	E	E	E	E															
U-03.C0	Ojai Subunit																			
	San Antonio Creek & Trib.	E	E	E	E	E		E	E	E	E	E	E	E	E					
	Groundwater	E	E	E	E															
U-03.00	Santa Clara-Calleguas Unit																			
U-03.A0	Oxnard Plain Subunit																			
U-03.A1	Oxnard Subarea																			
	Santa Clara River		E	E	E	E		E			E		E		E	E				
	Calleguas Creek				E	E		E			E		E		E	E				
	Revelon Slough		P		E	E					E		E		E g/	E				
	Groundwater: Semiperched Zone	E	P		G															
	Oxnard Aquifer	E	E	E	E															
	Hugu Aquifer	E	E	E	E															
	Mugu Aquifer	E	E	E	E															
	Fox Canyon Aquifer	E	E	E	E															
	Grimes Canyon Aquifer	E	E	E	E															
	Harbors: Port Hueneme			E									E	E			E	E	E	
	Channel Islands Marina		E										d/	E			E	E	E	
	Ventura Marina		E										E	E			E	E	E	E
	Ventura Keys												E	E			E	E	E	
	Tidal Prisms: Calleguas Creek										E	E g/	f/	E		E				
	Edison Canal		E										f/	E		E		E		
	McGrath Lake										E		E h/	E g/		E				
	Mugu Lagoon										E	E g/	h/	E		E		E	P	P
	Santa Clara River										E	E	E	E		E				
	Nearshore Zone											E	E	E			E	E	E	E
U-03.A2	Pleasant Valley Subarea																			
	Calleguas Creek		E	E	E	E			E		E		E g/	E						
	Conejo Creek		E	E	E	E			E		E		E g/	E						
	Groundwater: Semiperched Zone		E		G															
	Fox Canyon Aquifer	E	E	E	E															
	Grimes Canyon Aquifer	E	E	E	E															
U-03.B0	Santa Paula Subunit																			
U-03.B1	Santa Paula Subarea																			
	Santa Clara River		E	E	E	E		E			E		E i/	E						
	Santa Paula Creek	P	E	E	E	E		E			E		E	E						
	Groundwater	E	E	E	E															
	Mandalay Bay		E										E j/	E			E	E		

See footnotes at end of table.

TABLE 3

BENEFICIAL WATER USE DEFINITIONS

Beneficial Use*	Abbreviation	Definition
Municipal and Domestic Supply	MUN	Usual uses in community or military water systems and domestic uses from individual water supply systems
Agricultural Supply	AGR	Crop, orchard, and pasture irrigation; stock watering; support of vegetation for range grazing and all uses in support of farming and ranching operations
Industrial Service Supply	IND	Uses which do not depend primarily on water quality such as mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil well repressurization
Industrial Process Supply	PROC	Process water supply and all uses related to the manufacturing of products
Groundwater Recharge	GWR	Natural or artificial recharge for future extraction for beneficial uses and to maintain salt balance or halt saltwater intrusion into freshwater aquifers
Freshwater Replenishment	FRSH	Provides a source of freshwater for replenishment of inland lakes and streams of varying salinities
Navigation	NAV	Commercial and naval shipping uses
Hydropower Generation	POW	Used for hydropower generation
Water Contact Recreation	REC-1	All recreational uses involving actual body contact with water, such as swimming, wading, water-skiing, skin diving, surfing, sport fishing, uses in therapeutic spas, and other uses where ingestion of water is reasonably possible

TABLE 3 (Continued)

BENEFICIAL WATER USE DEFINITIONS

Beneficial Use*	Abbreviation	Definition
Non-contact Water Recreation	REC-2	Recreational uses which involve the presence of water but do not require contact with water, such as picnicking, sunbathing, hiking, beachcombing, camping, pleasure boating, tidepool and marine life study, hunting and esthetic enjoyment in conjunction with the above activities, as well as sightseeing
Ocean Commercial and Sport Fishing	COMM	Commercial collection of various types of fish and shellfish, including those taken for bait purposes, and sport fishing in ocean, bays, estuaries, and similar nonfreshwater areas
Warm Freshwater Habitat	WARM	Provides a warm-water habitat to sustain aquatic resources associated with a warm-water environment
Cold Freshwater Habitat	COLD	Provides a cold-water habitat to sustain aquatic resources associated with a cold-water environment
Preservation of Areas of Special Biological Significance	BIOL	Preservation of Areas of Special Biological Significance (ASBS)— Areas of Special Biological Significance are those areas designated by the State Water Resources Control Board as requiring protection of species or biological communities to the extent that alteration of natural water quality by even the slightest degree is undesirable.
Saline Water Habitat	SAL	Provides an inland saline water habitat for aquatic and wildlife resources
Wildlife Habitat	WILD	Provides a water supply and vegetative habitat for the maintenance of wildlife
Preservation of Rare and Endangered Species	RARE	Provides an aquatic habitat necessary, at least in part, for the survival of certain species established as being rare and endangered species

TABLE 3 (Continued)

BENEFICIAL WATER USE DEFINITIONS

Beneficial Use*	Abbreviation	Definition
Marine Habitat	MAR	Provides for the preservation of the marine ecosystem including the propagation and sustenance of fish, shellfish, marine mammals, waterfowl, and vegetation such as kelp
Fish Migration	MIGR	Provides a migration route and temporary aquatic environment for anadromous or other fish species
Fish Spawning	SPWN	Provides a high quality aquatic habitat especially suitable for fish spawning
Shellfish Harvesting	SHELL**	The collection of shellfish such as clams, oysters, abalone, shrimp, crab, and lobster for either commercial or sport purposes.

* The beneficial uses designated in Table 2 apply to the main watercourse named and to all tributaries thereto, unless specific tributaries are identified which may have different beneficial uses, in each hydrographic unit, subunit or subarea. These waters are to be protected to insure that the designated beneficial uses are preserved.

** The definition of "SHELL" is different from that adopted by the State Health Department in that it does not include mussels but does include shrimp, crabs and lobsters.