



California Regional Water Quality Control Board

Central Coast Region



Winston H. Hickox
Secretary for
Environmental
Protection

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Gray Davis
Governor

INTEROFFICE MEMORANDUM

TO: Melenee Emanuel,
Division of Water Quality
State Water Resource Control Board
1001 I Street
Sacramento, CA 95814

FROM:  Roger W. Briggs
Executive Officer

DATE: April 23, 2002

SUBJECT: ADDITIONAL 303(D) LIST INFORMATION

You asked me to provide you with additional information to support our proposed 303(d) List revisions. The following items are attached.

1. Majors Creek Listing Support Information—Letter from Citizens for Responsible Forest Management, August 31, 2001
2. Santa Maria River organochlorine pesticide listing support documents—(a) Excerpt from *Chemical and Biological Measures of Sediment Quality in the Central Coast Region, Final Report*, October 1998 and (b) 1999 Toxic Substances Monitoring Program data.

You also asked we provide you with a statement of our control mechanisms in place for San Lorenzo River Nitrate impairment. This information is contained with our Basin Plan. The Basin Plan contains the following language in the Individual, Alternative, and Community Systems Prohibitions section of Chapter Four (page IV-65):

“Discharges shall be allowed, providing the County of Santa Cruz, as lead agency, implements the “Wastewater Management Plan for the San Lorenzo River Watershed, County of Santa Cruz, Health Services Agency, Environmental Health Service”, February 1995 and “San Lorenzo Nitrate Management Plan, Phase II Final Report”, February 1995, County of Santa Cruz, Health Services Agency, Environmental Health Service (Wastewater Management Plan) and assures the Regional Board that areas of the San Lorenzo River Watershed are serviced by wastewater disposal systems to protect and enhance water quality, to protect and restore beneficial uses of water, and to abate and prevent nuisance, pollution, and contamination.

In fulfilling the responsibilities identified above, the County of Santa Cruz shall submit annual reports beginning on January 15, 1996. The report shall state the status and progress of the Wastewater Management Plan in the San Lorenzo River Watershed. The County of Santa Cruz annual report shall document the results of:

- a. Existing disposal system performance evaluations,
- b. Disposal system improvements,
- c. Inspection and maintenance of on-site systems,
- d. Community disposal system improvements,
- e. New development and expansion of existing system protocol and standards,
- f. Water quality monitoring and evaluation,
- g. Program administration management, and
- h. Program information management.

The report shall also document progress on each element of the Nitrate Management Plan, including:

- a. Parcel size limit,
- b. Wastewater Management Plan implementation,
- c. Boulder Creek Country Club Wastewater Treatment Plant Upgrade,
- d. Shallow leachfield installation,
- e. Enhanced wastewater treatment for sandy soils,
- f. Enhanced wastewater treatment for large on-site disposal systems,
- g. Inclusion of nitrogen reduction in Waste Discharge Permits,
- h. Livestock and stable management,
- i. Protection of ground water recharge areas,
- j. Protection of riparian corridors and erosion control,
- k. Nitrate control for new uses,
- l. Scotts Valley nitrate discharge reduction, and
- m. Monitoring for nitrate in surface and ground water.”

If you need further assistance, please contact Angela G. Carpenter at (805) 542-4624.

TABLE 2
Toxic Substances Monitoring Program
Preliminary Summary of 1999 Data: Organic Chemicals in Fish and Clams (ppb, wet weight)

Station Number	Station Name	Species Code	Tissue Type	Sample Date	Aldrin	alpha-Chlor-dene	cis-Chlor-dane	gamma-Chlor-dene	trans-Chlor-dane	cis-Nona-chlor	Non-chlor	Oxy-chlor-dane	Total Chlor-dane	Chlor-pyrifos	Dacthal
310.31.00	Arroyo Grande Creek Lagoon	STB	W	09/22/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	3.2	1.2	3.5	2.3	3.2
312.10.00	Santa Maria R/Mouth	STB	W	09/21/99	<1.0	<1.0	3.4	<1.0	<2.0	4.3	95.	<1.0	43.6	25.8	12.6
314.10.00	Santa Ynez River Lagoon	STF	F	09/21/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	0<1.	<1.0	ND	<2.0	<2.0
315.34.00	Carpinteria Marsh	CKF	W	09/21/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	9.1	<1.0	1.9	<2.0	<2.0
402.10.05	Ventura R/d/s OVSD Discharge	AC	W	08/13/99	<1.0	<1.0	3.8	1.1	2.5	<2.0	3.5	2.7	15.4	<2.0	<2.0
402.10.06	Ventura R/u/s OVSD Discharge	AC	W	08/13/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	9.2	1.2	4.2	<2.0	<2.0
403.11.00	Santa Clara River Estuary	AC	W	08/13/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	4.1	<1.0	1.4	<2.0	6.6
403.12.06	Calleguas Creek	BB	F	08/11/99	<1.0	<1.0	2.1	<1.0	<2.0	<2.0	4.3	<1.0	5.5	<2.0	4.7
403.64.03	Arroyo Conejo/d/s Forks	BB	F	08/11/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	1.2	<1.0	2.1	6.0	<2.0
403.67.08	Arroyo Simi/Madera Rd	AC	W	08/12/99	<1.0	<1.0	2.9	<1.0	<2.0	3.2	8.6	3.5	16.3	<2.0	16.6

Station Number	Dieldrin	o,p' DDD	p,p' DDD	o,p' DDE	p,p' DDE	o,p' DDT	p,p' DDT	p,p' DDMU	p,p' DDMS	Total DDT	Dicofol	Diazinon	Endo-sulfan I	Endo-sulfan I I	Endo-sulfan Sulfate	Total Endo-sulfan	Endrin	Ethion	
310.31.00	2.8	2.9	10.0	<2.0	120.0	<3.0	7.6	4.2	NA	144.7	NA	<20.0	<2.0	A	N	NA	ND	<2.0	<6.0
312.10.00	188.0	204.0	803.0	23.2	5116.0	236.0	971.0	170.0	NA	7523.2	NA	<20.0	<2.0	A	N	NA	ND	148.0	<6.0
314.10.00	<2.0	<2.0	<2.0	<2.0	3.9	<3.0	<5.0	<3.0	NA	3.9	NA	<20.0	<2.0	A	N	NA	ND	<2.0	<6.0
315.34.00	<2.0	<2.0	7.2	<2.0	49.1	<3.0	<5.0	3.2	NA	59.5	NA	<20.0	<2.0	A	N	NA	ND	<2.0	<6.0
402.10.05	5.7	2.9	<2.0	<2.0	10.8	<3.0	<5.0	<3.0	NA	13.7	NA	<20.0	<2.0	A	N	NA	ND	<2.0	<6.0
402.10.06	<2.0	<2.0	<2.0	<2.0	11.4	<3.0	<5.0	<3.0	NA	11.4	NA	<20.0	<2.0	A	N	NA	ND	<2.0	<6.0
403.11.00	<2.0	<2.0	5.8	<2.0	36.8	<3.0	<5.0	<3.0	NA	42.6	NA	<20.0	<2.0	A	N	NA	ND	<2.0	<6.0
403.12.06	3.5	2.6	14.4	<2.0	208.0	5.7	42.0	3.5	NA	276.2	NA	<20.0	<2.0	A	N	NA	ND	<2.0	<6.0
403.64.03	<2.0	<2.0	<2.0	<2.0	19.1	<3.0	<5.0	<3.0	NA	19.1	NA	<20.0	<2.0	A	N	NA	ND	<2.0	<6.0
403.67.08	3.7	<2.0	2.1	<2.0	67.4	<3.0	<5.0	<3.0	NA	69.5	NA	<20.0	<2.0	A	N	NA	ND	<2.0	<6.0

Station Number	alpha-HCH	beta-HCH	delta-HCH	gamma-HCH (Lindane)	Total HCH	Hepta-chlor	Hepta-chlor-epoxide	Hexa-chloro-benzene	Methoxy-chlor	Oxa-diazon	Ethyl Para-thion	Methyl Para-thion	PCB 1248	PCB 1254	CB P 2601	Total PCB	Toxaphene	Chemical Group A
310.31.00	<1.0	<2.0	<2.0	<1.0	ND	<2.0	2.4	0.5	<5.0	<3.0	<2.0	<4.0	<25.0	11.0	0.<1	11.0	83.1	91.9
312.10.00	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	1.4	9.3	<3.0	<2.0	<4.0	<25.0	248.0	0.<1	248.0	7593.0	7972.6
314.10.00	<1.0	<2.0	<2.0	1.0	1.0	<2.0	<1.0	<0.3	<5.0	<3.0	<2.0	<4.0	<25.0	<10.0	0.<1	ND	<20.0	1.0
315.34.00	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	<0.3	<5.0	148.0	<2.0	<4.0	<25.0	<10.0	0.<1	ND	<20.0	1.9
402.10.05	<1.0	<2.0	<2.0	47.4	47.4	<2.0	<1.0	1.0	<5.0	<3.0	2.0	<4.0	<25.0	17.0	0.<1	17.0	<20.0	68.5
402.10.06	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	0.6	<5.0	<3.0	<2.0	<4.0	<25.0	11.0	0.<1	11.0	<20.0	4.2
403.11.00	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	<0.3	<5.0	<3.0	3.3	<4.0	<25.0	<10.0	0.<1	ND	77.7	79.1
403.12.06	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	0.8	<5.0	<3.0	<2.0	<4.0	<25.0	30.0	0.<1	30.0	424.0	433.0
403.64.03	<1.0	<2.0	<2.0	1.3	1.3	<2.0	<1.0	0.6	<5.0	<3.0	<2.0	<4.0	<25.0	<10.0	0.<1	ND	<20.0	3.4
403.67.08	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	1.4	<5.0	53.0	<2.0	<4.0	<25.0	40.0	0.<1	40.0	32.9	53.0

NA Means that the sample was not analyzed for the chemical.

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310.31.00	Arroyo Grande Creek Lagoon	STB	W	09/22/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	3.2	1.2	3.5	2.3	3.2
312.10.00	Santa Maria R/Mouth	STB	W	09/21/99	<1.0	<1.0	3.4	<1.0	<2.0	4.3	95.	<1.0	43.6	25.8	12.6
314.10.00	Santa Ynez River Lagoon	STF	F	09/21/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	0.1	<1.0	ND	<2.0	<2.0
315.34.00	Carpinteria Marsh	CKF	W	09/21/99	<1.0	<1.0	<2.0	<1.0	<2.0	<2.0	9.1	<1.0	1.9	<2.0	<2.0
402.10.05	Ventura R/d/s OVSD Discharge	AC	W	08/13/99	<1.0	<1.0	3.8	1.1	2.5	<2.0	3.5	2.7	15.4	<2.0	<2.0
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314.10.00	<1.0	<2.0	<2.0	1.0	1.0	<2.0	<1.0	<0.3	<5.0	<3.0	<2.0	<4.0	<25.0	<10.0	0.01	ND	<20.0	1.0
315.34.00	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	<0.3	<5.0	148.0	<2.0	<4.0	<25.0	<10.0	0.01	ND	<20.0	1.9
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402.10.06	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	0.6	<5.0	<3.0	<2.0	<4.0	<25.0	11.0	0.01	11.0	<20.0	4.2
403.11.00	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	<0.3	<5.0	<3.0	3.3	<4.0	<25.0	<10.0	0.01	ND	77.7	79.1
403.12.06	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	0.8	<5.0	<3.0	<2.0	<4.0	<25.0	30.0	0.01	30.0	424.0	433.0
403.64.03	<1.0	<2.0	<2.0	1.3	1.3	<2.0	<1.0	0.6	<5.0	<3.0	<2.0	<4.0	<25.0	<10.0	0.01	ND	<20.0	3.4
403.67.08	<1.0	<2.0	<2.0	<1.0	ND	<2.0	<1.0	1.4	<5.0	53.0	<2.0	<4.0	<25.0	40.0	0.01	40.0	32.9	53.0

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Species codes are listed in Table

Woods

Chemical And Biological Measures of Sediment Quality In The Central Coast Region

Final Report

**California State Water Resources Control Board
Division of Water Quality
Bay Protection and Toxic Cleanup Program**

**California Regional Water Quality Control Board
Central Coast Region**

**California Department of Fish and Game
Marine Pollution Studies Laboratory**

**University of California, Santa Cruz
Institute of Marine Sciences**

**San Jose State University
Moss Landing Marine Laboratories**

**October 1998
New Series No. 5**

Worcester

Chemical And Biological Measures of Sediment Quality In The Central Coast Region

Final Report

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**October 1998
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Santa Cruz Yacht Harbor (30001)

Although toxicity in Santa Cruz Yacht Harbor was only demonstrated on one occasion, the presence of copper, mercury and PCBs is of concern. Nearby stations in the harbor have shown chemical pollution with chlordane and PAHs. Toxicity was not tested at these nearby stations (35001 and 35002), however. The relative magnitude of overall pollution is also of concern. Santa Cruz Yacht Harbor (30001) had the highest ERM and PEL quotient values measured in the region (0.447 and 0.735 respectively).

AVS/SEM results (Appendix C section III) showed that metals may be available to organisms in the sediments in Santa Cruz Yacht Harbor, but at comparatively low levels. Copper and zinc were found in relatively high concentrations at other stations in Santa Cruz Harbor, but AVS/SEM analysis was not done at these stations.

Of the 34 stations in the Central Coast Region for which PCB analysis was done, only Santa Cruz Yacht Basin exceeded the ERM and PEL

Santa Maria River Estuary (30020)

The Santa Maria River Estuary is of considerable interest because it drains a large agricultural watershed and is adjacent to the Guadalupe Oil Field, the site of large-scale cleanup efforts to remove compounds related to petroleum production from the soils. The region's highest DDT value and the only one in the region exceeding the OC normalized threshold was measured at this station. Nickel and dieldrin were also in exceedance of guideline values at this station. Pollutant concentrations were sufficiently high to produce the third highest ERMQ and PELQ in the region. Toxic response by *Eohaustorius* was strong, with a mean percent survival of only two percent. This station was only visited once, however, and no comparative data from sources such as the California Mussel watch are available.

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Bennet Slough Estuary (30023)

This station demonstrated significant toxicity to amphipods on two visits, one of which tested three field replicates. Chemical exceedances at this station included nickel (ERM and PEL), Chromium (PEL) and dieldrin (PEL). This station does not exhibit overall high chemistry (ERMQ 0.209), although, but has been toxic to amphipods on repeat visits. Careful application of TIE may be useful at stations such as this to pinpoint classes of toxic agents responsible for the observed toxic effects.

Additional Stations of Interest

Stations showing a significant toxic response but missing concurrent chemistry data include Santa Barbara Harbor (30003), Goleta Slough (30009), Morro Bay Fuel Dock (30033), Morro Bay South Bay (30025), and Salinas River Lagoon (30011). Further toxicity and concurrent chemical information from these stations would be meaningful. Some of these stations may use the watershed approaches similar to that used in the Tembladero study to fully characterize pollutant sources and extents, especially those stations located at river mouths or near stream

Note: Asterisks reflects the number of toxic results obtained from three replicates.
Station numbers with "X" in the decimal place (i.e. 30036.X) denote stations with three field replicates.
Entries separated by commas are from separate sampling events.