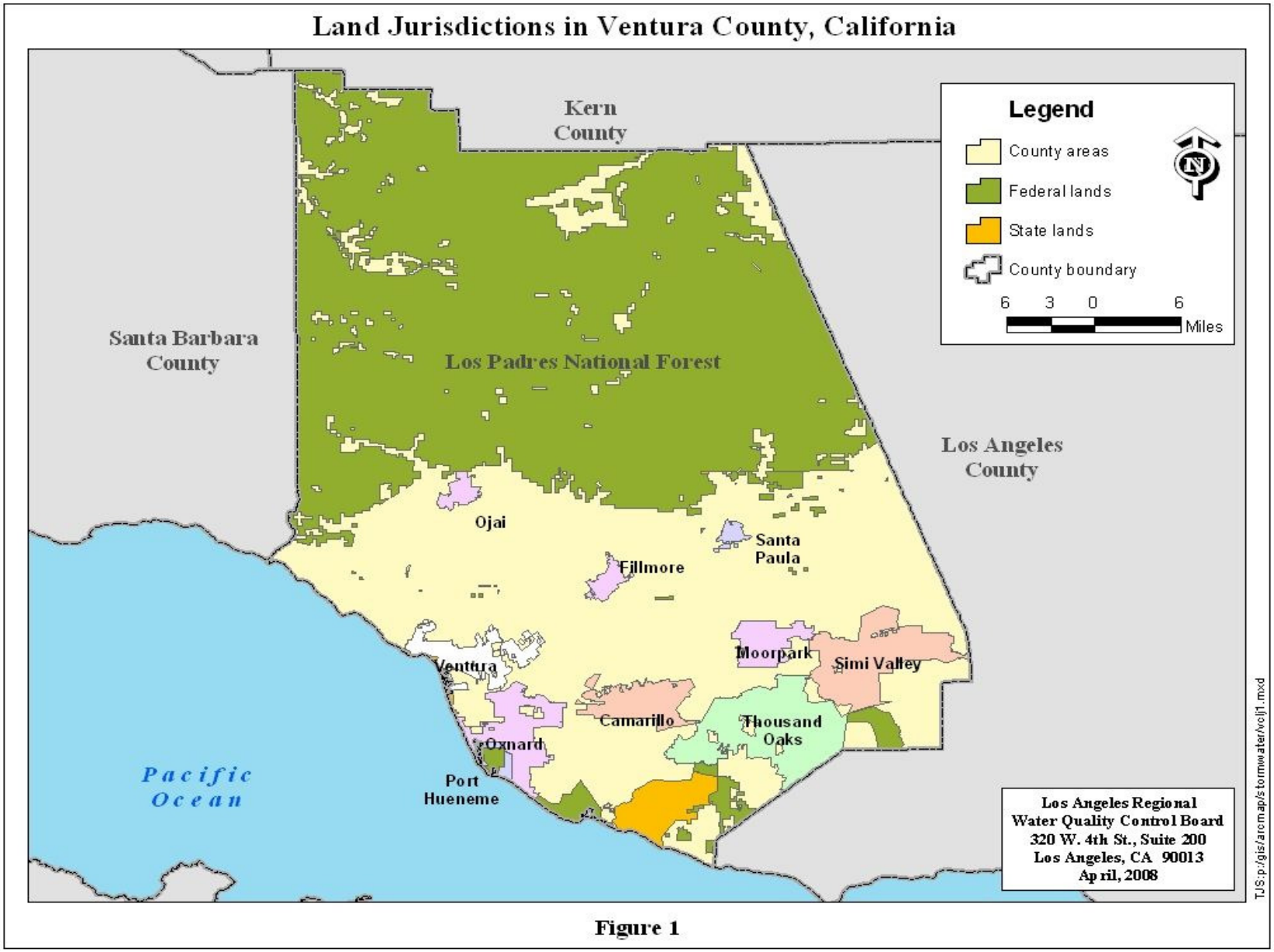
Land Jurisdictions in Ventura County, California
Kern County
Santa Barbara County
Los Padres National Forest
Los Angeles County
Legend
County areas
Federal lands
State lands
County boundary
6 3 0 6
Miles
Ojai
Santa Paula
Fillmore
Moorpark
Simi Valley
Ventura
Camarillo
Thousand Oaks
Oxnard
Port Hueneme
Pacific Ocean
Los Angeles Regional Water Quality Control Board
320 W. 4th St., Suite 200
Los Angeles, CA 90013
April, 2008
T:\S:p:/gis/arcmap/stormwater/vcjl1.mxd

Figure 1

ATTACHMENT A
Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Ventura River	402.10 402.20 402.31 402.32	Ventura River Ventura River Estuary Canada Larga Matilija Creek Matilija Creek Reservoir San Antonio Creek	Algae Coliform (fecal, total) Eutrophic Low DO Nitrogen Trash	City of Ojai City of San Buenaventura Ventura County Watershed Protection District
Santa Clara River	403.11 403.21 403.22 403.31 403.32 403.41 403.42 403.43 403.44 403.51 403.52 403.53 403.54 403.55	Santa Clara River Santa Clara River Estuary Brown Barranca/Long Canyon Elizabeth Lake Hopper Creek Lake Hughes Mint Canyon Creek Munz Lake Piru Creek Pole Creek Sespe Creek Torrey Canyon Creek Wheeler Canyon/Todd Barranca	Algae Ammonia ChemA* (tissue) Chloride Coliform Enrichment Eutrophic Fish kills Low DO/Organic Enrichment Nitrate + Nitrite Odors pH Sulfate Trash Total Dissolved Solids Toxaphene	City of Fillmore City of Oxnard City of San Buenaventura City of Santa Paula Ventura County Watershed Protection District

ATTACHMENT A
Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Calleguas Creek	403.11 403.12 403.61 403.62 403.63 403.64 403.67 403.66 403.68	Calleguas Creek Calleguas Creek Estuary Arroyo Conejo Arroyo Las Posas Arroyo Simi Beardsley Channel Conejo Creek Fox Barranca Mugu Lagoon Mugu Drain/Oxnard Drain Rio de Santa Clara/Oxnard Drain Revolon Slough Tapo Canyon	Algae Ammonia Boron ChemA* (tissue) Chlordane (tissue, sediment) Chloride Chlorpyrifos (tissue) Coliform, fecal Copper (total, dissolved) Dacthal (sediment) DDT (tissue, sediment) Dieldrin (tissue) Endosulfan (tissue, sediment) Hexachlorocyclohexane (tissue) Mercury Nickel Nitrate + Nitrite Nitrate as Nitrogen (NO3) Nitrogen Organophosphorus Pesticides PCBs (tissue) Sediment Toxicity Sedimentation/Siltation Selenium Sulfate Total Dissolved Solids Toxaphene (tissue, sediment) Toxicity Trash Zinc	City of Camarillo City of Moorpark City of Oxnard City of Simi Valley City of Thousand Oaks Ventura County Watershed Protection District

ATTACHMENT A
Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Malibu Creek	401.00 403.11 404.21 404.22 404.23 404.24 404.25 404.26 404.47 404.45	Malibu Creek Malibu Creek Lagoon Lake Lindero Lake Sherwood Las Virgenes Creek Linero Creek Malibou Lake Medea Creek Palo Comado Santa Monica Bay Westlake Lake Triunfo Creek	Algae Ammonia Coliform DDT (tissue, sediment) Enteric viruses Eutrophic Lead Low DO/Organic Enrichment Nutrients (algae) PAHs (sediment) PCBs (tissue, sediment) PH Mercury Scum/foam Sedimentation/Siltation Sediment Toxicity Selenium Specific Conductance Trash	City of Simi Valley City of Thousand Oaks Ventura County Watershed Protection District

ATTACHMENT A
Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Miscellaneous Ventura Coastal	401.00 403.11	Channel Islands Harbor Channel Islands Beach Hobie Beach Mandalay Beach McGrath Lake McGrath Beach Ormond Beach Port Hueneme Harbor Promenade Park Beach Rincon Beach San Buenaventura Beach Santa Clara River Estuary Beach/Surfers Knoll Ventura Harbor: Ventura Keys	Beach closures Coliform (fecal) Chlordane (sediment) DDT (tissue, sediment) Dieldrin (sediment) PCBs (tissue, sediment) Lead (sediment) Sediment Toxicity Zinc (sediment)	City of Oxnard City of Port Hueneme City of San Buenaventura Ventura County Watershed Protection District

ATTACHMENT B

Calleguas Creek Watershed Pollutants of Concern (2003 through 2007)[1]

Mass Emission (ME-CC), Receiving Water (W-3 & W-4), and Land Use (A-1) Sites

Wet Weather	
Bacteriological	
E. Coli	
Fecal Coliform	
Conventional	
Residual Chlorine	
TDS	
Metal	
Aluminum - Total	Chromium - Total
Barium -Total	Cooper - Dissolved
Beryllium - Total	Mercury - Total
Cadmium - Total	Nickel - Total
Nutrient	
Nitrate as Nitrogen	
Organic	
Benzo(a)anthracene	
Benzo(a)pyrene	
Benzo(b)fluoranthene	
Benzo(k)fluoranthene	
Bis(2-ethylhexyl)phthalate	
Chrysene	
Dibenz(a,h)anthracene	
Hexachlorobenzene	
Indeno(1,2,3-cd)pyrene	
Pentachlorophenol	
Pesticide	
4,4'-DDD	
4,4'-DDE	

[1] Mass Emission, Receiving Water, and Land Use wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07), data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern

ATTACHMENT B

Santa Clara River Watershed Pollutants of Concern (2003 through 2007)[1]

Mass Emission (ME-SCR) and Land Use (I-2 & R-1) Sites

Wet Weather	
Anion	
Chloride	
Bacteriological	
E. Coli	
Fecal Coliform	
Conventional	
Ph	
TDS	
Metal	
Aluminum - Total	Cooper - Dissolved
Arsenic - Total	Mercury - Total
Barium - Total	Nickel - Total
Cadmium - Total	Selenium - Total
Chromium - Total	Zinc - Dissolved
Organic	
Benzo(a)anthracene	
Benzo(a)pyrene	
Benzo(b)fluoranthene	
Benzo(k)fluoranthene	
Bis(2-ethylhexyl)phthalate	
Chrysene	
Dibenz(a,h)anthracene	
Indeno(1,2,3-cd)pyrene	
Pesticide	
4,4'-DDE	

[1] Mass Emission and Land Use wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07), data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern.

ATTACHMENT B

Ventura River Watershed Pollutants of Concern (2003 through 2007)[1]

Mass Emission (ME- VR & ME- VR2) Sites

Wet Weather
Anion
Chloride
Bacteriological
E. Coli
Fecal Coliform
Conventional
TDS
Metal
Aluminum -Total
Cadmium - Total
Chromium - Total
Mercury - Total
Nickel - Total
Zinc - Dissolved
Organic
Benzo(a)pyrene
Benzo(b)fluoranthene
Bis(2-ethylhexyl)phthalate
Chrysene
Hexachlorobenzene
Pesticide
4,4'-DDD
4,4'-DDE

[1] Mass Emission wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07). Monitoring data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern.

ATTACHMENT C
Treatment BMP Performance Standards

Effluent Concentrations as Median Values

BMP Category	Total Suspended Solids mg/L	Total Nitrate-Nitrogen mg/L	Total Copper, ug/L	Total Lead, ug/L	Total Zinc, ug/L
Detention Pond	27	0.48	15.9	14.6	58.7
Wet Pond	10	0.2	5.8	3.4	21.6
Wetland Basin	13	0.13	3.3	2.5	29.2
Biofilter	18	0.36	9.6	5.4	27.9
Media Filter	11	0.66	7.6	2.6	32.2
Hydrodynamic Device	23	0.29	11.8	5	75.1

Expected BMP pollutant removal performance for effluent quality was developed from the WERF-ASCE/ U.S. EPA International BMP Database, 2007.

See Part 3.A.3 (Storm Water Quality Management Program Implementation- General Requirements).

ATTACHMENT D
Critical Sources Categories[1]

Municipal Landfills (SIC 4953)

Hazardous Waste Treatment, Disposal and Recovery Facilities[1]

Facilities Subject to SARA Title III (also known as EPCRA)[2]

Restaurants[3]

Wholesale trade (scrap, auto dismantling) (SIC 50)

Automotive service facilities[2]

Fabricated metal products (SIC 34)

Motor freight (SIC 42)

Chemical/allied products (SIC 28)

Automotive Dealers/Gas Stations (SIC 55)

Primary Metals Products (SIC 33)

Nursery[3] ~~(NAICS 424930 and 444220)~~

Electric/Gas/Sanitary (SIC 49)

Air Transportation (SIC 45)

Water Transportation (SIC 44)

Rubbers/Miscellaneous Plastics (SIC 30)

Local/Suburban Transit (SIC 41)

Railroad Transportation (SIC 40)

Oil & Gas Extraction (SIC 13)

Lumber/Wood Products (SIC 24)

Machinery Manufacturing (SIC 35)

Transportation Equipment (SIC 37)

[1] Non-underlined categories belong to Industrial Facilities.
[2] Various categories subject to these requirements.
[3] See Definition in Part 6. of the Order.

ATTACHMENT D
Critical Sources Categories[1]

Stone, Clay, Glass, Concrete (SIC 32)

Leather/Leather Products (SIC 31)

Miscellaneous Manufacturing (SIC 39)

Food and kindred Products (SIC 20)

Mining of Nonmetallic Minerals (SIC 14)

Printing and Publishing (SIC 27)

Electric/Electronic (SIC 36)

Paper and Allied Products (SIC 26)

Furniture and Fixtures (SIC 25)

Laundries *(SIC 72)*

Instruments (SIC 38)

Textile Mills Products (SIC 22)

Apparel (SIC 23)

[1] Non-underlined categories belong to Industrial Facilities.

ATTACHMENT E
Determination of Erosion Potential

E_p is determined as follows- The *total effective work* done on the channel boundary is derived and used as a metric to predict the likelihood of channel adjustment given watershed and stream hydrologic and geomorphic variables. The index under urbanized conditions is compared to the index under pre-urban conditions expressed as a ratio (E_p). The effective work index (W) is computed as the excess shear stress that exceeds a critical value for streambed mobility or bank material erosion integrated over time and represents the total work done on the channel boundary:

$$W = \sum_{i=1}^{n} (\tau_i - \tau_c)^{1.5} \cdot V \cdot \Delta t_i \qquad (1)$$

Where τ_c = critical shear stress that initiates bed mobility or erodes the weakest bank layer, τ_i = applied hydraulic shear stress, Δt = duration of flows (in hours), and n = length of flow record. The effective work index for presumed stable stream channels under pre-urban conditions is compared to stable and unstable channels under current urbanized conditions. The comparison, expressed as a ratio, is defined as the Erosion Potential (Ep)[1] (McRae (1992, 1996).

$$Ep = \frac{W_{post}}{W_{pre}} \qquad (2)$$

where:

W_{post} = work index estimated for the post-urban condition
W_{pre} = work index estimated for the pre-urban condition

[1] MacRae, C.R. 1992. The Role of Moderate Flow Events and Bank Structure in the Determination of Channel Response to Urbanization. Resolving conflicts and uncertainty in water management: Proceedings of the 45th Annual Conference of the Canadian Water Resources Association. Shrubsole, D, ed. 1992, pg. 12.1-12.21; MacRae, C.R. 1996. Experience from Morphological Research on Canadian Streams: Is Control of the Two-Year Frequency Runoff Event the Best Basis for Stream Channel Protection. Effects of Watershed Development and Management on Aquatic Ecosystems, ASCE Engineering Foundation Conference, Snowbird, Utah, pg. 144-162

ATTACHMENT G

Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)[1]

CONSTITUENTS	MLs
CONVENTIONAL POLLUTANTS	**mg/L**
Oil and Grease	5
Total Phenols	0.1
Cyanide	0.005
pH	0 - 14
Temperature	N/A
Dissolved Oxygen	Sensitivity to 5 mg/L
BACTERIA (single sample limits)	**MPN/100ml**
Total coliform (marine waters)	10,000
Enterococcus (marine waters)	104
Fecal coliform (marine & fresh waters)	400
E. coli (fresh waters)	235
GENERAL	**mg/L**
Dissolved Phosphorus	0.05
Total Phosphorus	0.05
Turbidity	0.1 NTU
Total Suspended Solids	2
Total Dissolved Solids	2
Volatile Suspended Solids	2
Total Organic Carbon	1
Total Petroleum Hydrocarbon	5
Biochemical Oxygen Demand	2
Chemical Oxygen Demand	20-900
Total Ammonia-Nitrogen	0.1
Total Kjeldahl Nitrogen	0.1
Nitrate-Nitrite	0.1
Alkalinity	2
Specific Conductance	1umho/cm
Total Hardness	2
MBAS	0.5
Chloride	2
Fluoride	0.1
Methyl tertiary butyl ether (MTBE)	1
Perchlorate	4 µg/L

[1] For priority pollutants, MLs published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (SIP) shall be used for all analyses, unless otherwise specified. Method Detection Levels (MDLs) must be lower than or equal to the ML value, unless otherwise approved by the Regional Board.

ATTACHMENT G

Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)[1]

METALS (Dissolved & Total)	**µg/L**
Aluminum	100
Antimony	0.5
Arsenic	1
Beryllium	0.5
Cadmium	0.25
Chromium (total)	0.5
Copper	0.5
Hex. Chromium	5
Iron	100
Lead	0.5
Mercury	0.5
Nickel	1
Selenium	1
Silver	0.25
Thallium	1
Zinc	1
SEMIVOLATILE ORGANIC COMPOUNDS	**µg/L**
ACIDS	**µg/L**
2-Chlorophenol	2
4-Chloro-3-methylphenol	1
2,4-Dichlorophenol	1
2,4-Dimethylphenol	2
2,4-Dinitrophenol	5
2-Nitrophenol	10
4-Nitrophenol	5
Pentachlorophenol	2
Phenol	1
2,4,6-Trichlorophenol	10
BASE/NEUTRAL	**µg/L**
Acenaphthene	1
Acenaphthylene	2
Anthracene	2
Benzidine	5
1,2 Benzanthracene	5
Benzo(a)pyrene	2
Benzo(g,h,i)perylene	5
3,4 Benzoflouranthene	10

ATTACHMENT G

Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)[1]

BASE/NEUTRAL	µg/L
Benzo(k)flouranthene	2
Bis(2-Chloroethoxy) methane	5
Bis(2-Chloroisopropyl) ether	2
Bis(2-Chloroethyl) ether	1
Bis(2-Ethylhexl) phthalate	5
4-Bromophenyl phenyl ether	5
Butyl benzyl phthalate	10
2-Chloroethyl vinyl ether	1
2-Chloronaphthalene	10
4-Chlorophenyl phenyl ether	5
Chrysene	5
Dibenzo(a,h)anthracene	0.1
1,3-Dichlorobenzene	1
1,4-Dichlorobenzene	1
1,2-Dichlorobenzene	1
3,3-Dichlorobenzidine	5
Diethyl phthalate	2
Dimethyl phthalate	2
di-n-Butyl phthalate	10
2,4-Dinitrotoluene	5
2,6-Dinitrotoluene	5
4,6 Dinitro-2-methylphenol	5
1,2-Diphenylhydrazine	1
di-n-Octyl phthalate	10
Fluoranthene	0.05
Fluorene	0.1
Hexachlorobenzene	1
Hexachlorobutadiene	1
Hexachloro-cyclopentadiene	5
Hexachloroethane	1
Indeno(1,2,3-cd)pyrene	0.05
Isophorone	1
Naphthalene	0.2
Nitrobenzene	1
N-Nitroso-dimethyl amine	5
N-Nitroso-diphenyl amine	1
N-Nitroso-di-n-propyl amine	5
Phenanthrene	0.05
Pyrene	0.05
1,2,4-Trichlorobenzene	1

ATTACHMENT G

Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)[1]

CHLORINATED PESTICIDES	**µg/L**
Aldrin	0.005
alpha-BHC	0.01
beta-BHC	0.005
delta-BHC	0.005
gamma-BHC (lindane)	0.02
alpha-chlordane	0.1
gamma-chlordane	0.1
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
Dieldrin	0.01
alpha-Endosulfan	0.02
beta-Endosulfan	0.01
Endosulfan sulfate	0.05
Endrin	0.01
Endrin aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Toxaphene	0.5
POLYCHLORINATED BIPHENYLS	**µg/L**
Aroclor-1016	0.5
Aroclor-1221	0.5
Aroclor-1232	0.5
Aroclor-1242	0.5
Aroclor-1248	0.5
Aroclor-1254	0.5
Aroclor-1260	0.5
ORGANOPHOSPHATE PESTICIDES	**µg/L**
Atrazine	2
Chlorpyrifos	0.05
Cyanazine	2
Diazinon	0.01
Malathion	1
Prometryn	2
Simazine	2
HERBICIDES	**µg/L**
2,4-D	10
Glyphosate	5
2,4,5-TP-SILVEX	0.5

ATTACHMENT ~~I~~H
Storm Water Monitoring Program's Major Outfall Stations

PERMITTEE	STATION ID	LATITUDE	LONGITUDE
City of Camarillo	MO-CAM	34°13'10.00"N	119° 3'58.06"W
City of Fillmore	MO-FIL	34°24'16.51"N	118°55'50.47"W
Unincorporated Ventura County	MO- MEI (Meiners Oaks)	34°26'43.98"N	119°17'25.18"W
City of Moorpark	MO-MPK	34°16'44.29"N	118°54'19.40"W
City of Ojai	MO-OJA	34°26'41.25"N	119°14'28.43"W
City of Oxnard	MO-OXN	34°14'17.38"N	119°11'23.08"W
City of Port Hueneme	MO-HUE	34° 8'29.30"N	119°11'21.09"W
City of Santa Paula	MO-SPA	34°20'54.99"N	119° 3'19.82"W
City of Simi Valley	MO-SIM	34°16'18.59"N	118°47'1.51"W
City of Thousand Oaks	MO-THO	34°12'49.16"N	118°55'16.24"W
City of Ventura	MO-VEN	34°14'35.86"N	119°11'40.86"W