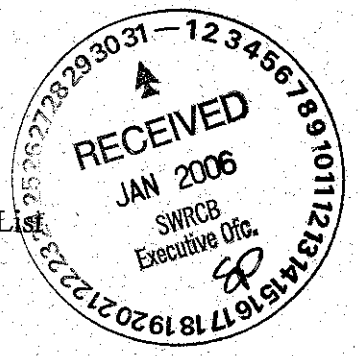
303 (d) Deadline:
1/31/06

Santa Barbara County Public Works Department
Flood Control 💧 Water Agency

January 30, 2006

Selica Potter, Acting Clerk to the Board
State Water Resources Control Board
Executive Office
1001 I Street, 24th Floor
Sacramento, CA 95814



RE: Revision of Clean Water Act 303(d) List

Dear Ms Potter;

Staff of the Santa Barbara County water agency appreciates the opportunity to comment on proposed changes to the state's list of impaired water bodies pursuant to section 303(d) of the Clean Water Act (303(d) list). The Santa Barbara County Water Agency is a dependant special district responsible for water supply planning and implementation of the County's phase II NPEDS storm-water program. We are directly involved in monitoring surface and ground water throughout the Santa Barbara County. Our comments are based on our experience and extensive research of the materials listed in the "References" list enclosed with this letter.

Our recommendations to the WRCB are summarized as:

1. Delist the following "beaches" for Bacteria since these areas are meet basin Plan Water Quality Objectives (WQOs) (Pacific Ocean at Carpinteria State Beach, Pacific Ocean at Hammonds, Pacific Ocean at Hope Ranch, Pacific Ocean at Jalama, Pacific Ocean at Ocean Beach (Surf), Pacific Ocean at Refugio
2. Deslist the segment of the Santa Ynez River between Salsipudes Creek and bradbury Dam because ongoing monitoring shows it to be below the Basin Plan WQOs
3. Defer the proposed listing for Boron in the following water bodies: Arroyo Paradon, Gaviota Creek and Rincon Creek because the Boron is from natural sources, no evidence exists that beneficial uses are affected and the Basin Plan objectives are inappropriate given the existing geologic work by the USGS.

Data in support of these recommendations is presented in detail in Attachment A. As a basis for this discussion we have used WRCB "Criteria of listing and delisting" and

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Planning for 303(d) and TMDL. While we are aware that the latter document is in "draft" form, we believe Figure 6-1 provides a particularly helpful framework to understand our recommendations in the State's listing/TMDL process (APPENDIX D).

If any of the WRCB staff have questions regarding this material, please contact me at this office.

Sincerely

Robert B Almy, Water Agency Manager

Attachment

cc: RWQCB
SBC EHS
SYRWCD
City of Carpinteria

WRCB Format for data and other information

WRCB "Listing Policy
(Source:http://www.swrcb.ca.gov/tmdl/docs/ffed_303d_listingpolicy093004.pdf)

For the purposes of this solicitation, information means any documentation describing the water quality condition of a surface water body. Data are considered a subset of information that consists of reports detailing measurements of specific environmental characteristics. The data and information may pertain to physical, chemical, and/or biological conditions of the State's waters or watersheds.

Information solicited should contain the following:
• The name of the person or organization providing the information;
• The name of the person certifying the completeness and accuracy of the data and information and a statement describing the standards exceedance;
• Mailing address, telephone numbers, and email address of a contact person for the information provided;
• A copy of all information provided. The submittal must specify the software used to format the information and provide definitions for any codes or abbreviations used;
• Bibliographic citations for all information provided; and
• If computer model outputs are included in the information, provide bibliographic citations and specify any calibration and quality assurance information available for the model(s) used.

Data solicited should contain the following:
• Data in electronic form, spreadsheet, database, or ASCII formats. The submittal should use the SWAMP data format and should define any codes or abbreviations used in the database.
• Metadata for the field data, i.e., when measurements were taken, locations, number of samples, detection limits, and other relevant factors.
• Metadata for any Geographical Information System data must be included. The metadata must detail all the parameters of the projection, including datum.
• A copy of the quality assurance procedures.
• A copy of the data.
• Data from citizen volunteer water quality monitoring efforts require the name of the group and indication of any training in water quality assessment completed by members of the group. Data submitted by citizen monitoring groups should meet the data quality assurance procedures as detailed in section 6.1.4.
• For photographic documentation, adhere to the guidelines detailed in section 6.1.4.

Data and information previously submitted to RWQCBs, such as Discharge Monitoring Reports, need not be solicited if the data and information remain available to RWQCBs.

General Information for Recommendations from Santa Barbara County

The name of the person or organization providing the information and mailing and "e-mail" address as contact information

Robert Almy, RG, Manager
Santa Barbara County Water Agency
123 E. Anapamu St.
Santa Barbara, CA 93101
ralmy@co.santa-barbara.ca.us

The name of the person certifying the completeness and accuracy of the data and information and a statement describing the standards exceedance(s)

The data are certified by Robert Almy and comprise recent information currently known to the County Water Agency. These data, as organized below, pertain to Bacteria, TDS ("salt"), nutrients and Boron.

The summary recommendations are:

Delist the following:
Pacific Ocean at Carpinteria State Beach (bacteria)
Pacific Ocean at Gaviota (bacteria)
Pacific Ocean at Hammonds (bacteria)
Pacific Ocean at Hope Ranch (bacteria)
Pacific Ocean at Jalama (bacteria)
Pacific Ocean at Ocean Beach (Surf) (bacteria)
Pacific Ocean at Refugio (bacteria)
Santa Ynez River between Salsipudes Creek and Bradbury Dam (TDS/"Salt" and Nutrients)

Defer listing (or do not list) the following:
Arroyo Paredon (Boron)
Canada de la Gaviota (Boron)
Cuyama River (Boron)
Rincon Creek (Boron)

Establish later target date for TMDL
Orcutt-Solomon creek (Fecal coliform)

Recommendations regarding "delisting"
(Source: http://www.swrcb.ca.gov/tmdl/docs/ffed_303d_listingpolicy093004.pdf)

Delisting Policy General

4 California Delisting Factors

This section provides the methodology for removing waters from the section 303(d) list (including the Water Quality Limited Segments category and Water Quality Limited Segments Being Addressed category).

All listings of water segments shall be removed from the section 303(d) list if the listing was based on faulty data, and it is demonstrated that the listing would not have occurred in the absence of such faulty data. Faulty data include, but are not limited to, typographical errors, improper quality assurance/quality control procedures, or limitations related to the analytical methods that would lead to improper conclusions regarding the water quality status of the segment.

If objectives or standards have been revised and the site or water meets water quality standards, the water segment shall be removed from the section 303(d) list. The listing of a segment shall be reevaluated if the water quality standard has been changed.

Any interested party may request an existing listing be reassessed under the delisting factors of this Policy. In requesting the reevaluation, the interested party must, using the delisting factors: state the reason(s) the listing is inappropriate and the Policy would lead to a different outcome; and provide the data and information necessary to enable the RWQCB and SWRCB to conduct the review.

Water segments or pollutants shall be removed from the section 303(d) list if any of the following conditions are met.

Bacteria in ocean water sites

4.3 Numeric Water Quality Objectives for Bacteria in Water

Numeric water quality objectives or standards for bacteria are not exceeded using the binomial distribution as described in section 4.2. If a site-specific exceedance frequency was used to place the water on the section 303(d) list, then the same exceedance frequency shall be used in the assessment to remove waters from the section 303(d) list. To the extent possible and allowed by water quality objectives, RWQCBs shall identify one or more reference beaches or water segments in a relatively unimpacted watershed to compare the measurements.

Santa Barbara County Recommendation for delisting sites for Bacteria

Delist the Following Sites

Pacific Ocean at Carpinteria State Beach (Table 1)
Pacific Ocean at Gaviota (Table 2)
Pacific Ocean at Hammonds (Table 3)
Pacific Ocean at Hope Ranch (Table 4)
Pacific Ocean at Jalama (Table 5)
Pacific Ocean at Ocean Beach (Surf) (Table 6)
Pacific Ocean at Refugio (Table 7)

Data source
Santa Barbara County Public Health Department, Environmental Health Services (attached as Tables 1 through 7)

Data type
Time series (weekly) bacteria levels pursuant to AB 411, (and including October to April weekly samples) as related to "excedances" of state guidelines which trigger beach postings.

QA/QC
Santa Barbara County Public Health Department, See Appendix A

Data summary

The following ocean monitoring sites have less than 10% exceedences year-round for the past four years (including two above average rainfall years) for all three bacterial indicators:

Location	Total Coliform	Fecal Coliform	Enterococcus
Pacific Ocean at Carpinteria State Beach	4.85%	3.68%	5.80%
Pacific Ocean at Gaviota	2.51%	2.04%	4.84%
Pacific Ocean at Hammonds	2.75%	2.24%	6.83%
Pacific Ocean at Hope Ranch	2.53%	3.18%	6.42%
Pacific Ocean at Jalama	3.15%	2.19%	7.52%
Pacific Ocean at Ocean Beach (Surf)	2.27%	1.14%	3.11%
Pacific Ocean at Refugio	3.25%	1.33%	10.08%

Comparison with "unimpacted" sites

Due to level of development, Pacific Ocean at El Capitan may be considered an "unimpacted" watershed for comparison (Table 8). Specifically, the watershed of El Capitan Creek contains no urban or "suburban" development, no commercial or industrial development and most of the watershed is in public ownership (or preserve status) with little of no grazing. See summary Tables in Appendix B for land use information

The sites proposed for delisting show numbers of exceedances of bacteria similar to or below levels of the unimpacted site.

Existing programs to control bacteria

Pursuant to community recommendations and the County's commitment to public use at its beaches, information signage and pet waste stations have been established throughout the County. Regular inspections of creeks and stormdrains have resulted in abatement of a number of illicit discharges over the last several years. In addition, increased public information and enforcement of solid waste regulations has resulted in greater recycling of green waste and proper disposal of animal waste. Finally, increased emphasis on appropriate maintenance has resulted in fewer failures and higher treatment efficiency.

Recommendation

The criterion used to list these sites was 10% exceedances of levels which require postings of public wanings. Each of the sites listed now have achieved better water quality than the listing criteria for four years (less than 10% exceedances for four years). These sites should be "delisted" pursuant to the States criteria.

Santa Barbara County Recommendation for delisting sites for TDS, "salt" and "nutrients" in one segment of the Santa Ynez River

Delist the following Stream Segment

Santa Ynez River from its confluence with Salsipudes Creek upstream to Bradbury Dam

Data sources

USGS hydrologic records for California, Santa Ynez River sites (available at http://nwis.waterdata.usgs.gov/ca/nwis/)

Balance Hydrologics (2002a) Water Quality Sampling Results- August 2002 Water-Rights Releases, Santa Ynez River, Santa Barbara County, California; Prepared for Cachuma Conservation Release Board.

Central Coast Ambient Water Quality Monitoring Program (CCRWQCB) (available at: http://www.ccamp.org/ca0/3/3.htm)

TDS/Salt data type and presentation

Time series samples taken by public agencies or contractors working for public agencies during reservoir releases, and storm-flow. Time series data.

Data is provided from the following locations:

Los Laureles gage (Santa Ynez River immediately above Cachuma Lake)
Table 9, Figure 1 (USGS)
"Unimpaired" water quality from a largely undeveloped part of the watershed

Santa Ynez River at Santa Ynez (Santa Ynez River immediately below Cachuma Lake)
Table 10, Figure 2 (USGS)
Quality of water held in Cachuma Reservoir and released for water rights/fish

Santa Ynez River at Solvang (Santa Ynez River at Alisal Bridge)
Table 11, Figure 3 (USGS)
Water quality of the reach below Bradbury dam, above City of Solvang

Santa Ynez River at Narrows (Santa Ynez River 1.5 mi upstream of Hwy 246 Bridge)
Table 12, Figure 4 (USGS recent data)
Shows effects of Salsipudes on Santa Ynez River flows

Santa Ynez River at Robinson Bridge (Santa Ynez River at Hwy 246 Bridge)
Table 13, Figure 5 (USGS older data)
Shows effects of Salsipudes on Santa Ynez River flows

Salsipudes Creek (Salsipudes Creek at Santa Rosa Road)
Table 14, Figure 6 (USGS)
Quality of water from main tributary below reach proposed for delisting

Synoptic data along the Santa Ynez River, August 2002, (Balance Hydrologics)
Table 15, Figure 7 (Combined in Figure 7)

"Nutrients" Data Type
Time series samples taken by public agencies or contractors working for public agencies during reservoir releases, and storm-flow. Time series data.

Data is provided from the following locations:
Los Laureles gage (Santa Ynez River immediately above Cachuma Lake)
Table 9
"Unimpaired" water quality from a largely undeveloped part of the watershed
Santa Ynez River at Santa Ynez (Santa Ynez River immediately below Cachuma Lake)
Table 10
Quality of water held in Cachuma Reservoir and released for water rights/fish
Santa Ynez River at Solvang (Santa Ynez River at Alisal Bridge)
Table 11
Water quality of the reach below Bradbury dam, above City of Solvang
Santa Ynez River at Narrows (Santa Ynez River 1.5 mi upstream of Hwy 246 Bridge)
Table 12
Shows effects of Salsipudes on Santa Ynez River flows
Synoptic data along the Santa Ynez River, August 2002, (Balance Hydrologics)
Table 15

QA/QC
See USGS discussion at website, CCAMP discussion at website, discussion in Balance Hydraulics (2002)

Data summary

TDS/Salt

Both USGS and CCAMP data show similar trends (Figures 8, 9, 10 with locations shown on Figure 16). Inflow to Lake Cachuma and flow in the Santa Ynez River below Bradbury Dam are similar in water quality. No systematic changes in TDS/Salt levels in the Santa Ynez River are noted except as influenced by Salsipudes Creek and areas of ground-water underflow documented by the USGS (WSP 1107). TDS/salt levels are increased substantially during low and moderate flow by Salsipudes Creek which has a higher natural TDS level due to geologic factors in tits watershed. This increased TDS is seen in samples taken at low to moderate flows at the narrows (downstream from the confluence of Salsipudes Creek and the Santa Ynez River).

Effluent from sewage treatment plants above the narrows (Cities of Buellton, Solvang and Santa Ynez Community Services District) is of lower TDS due to source water quality. Water quality throughout this "stream segment" of the Santa Ynez River meets basin plan standards. TDS levels do not preclude any listed beneficial uses.

Certain tributaries (in particular Salsipudes Creek) have naturally higher TDS and thus influence data collected below their confluence with the Santa Ynez River (USGS sampling sites and the "Narrows" and at "Robinson Bridge" (Hwy 246 bridge). Data from the RWQCB "CCAMP" program are insufficient to document the effect of flow from Salsipudes Creek. However, data from USGS and Balance Hydrologics (2002) clearly show the effect and that the Santa Ynez River upstream from the confluence with Salsipudes Creek in compliance with Basin Plan objectives.

Nutrients

Neither inflow to Lake Cachuma nor flows between Bradbury Dam and Salsipudes Creek show "nutrients" (NO3 and PO4) exceedances of Basin Plan Standards during recent wet and dry years. Exceedances do not occur during releases to satisfy down stream water rights and/or fish needs.

Comparison with "unimpacted" sites

Water quality from upstream of Cachuma reservoir is similar to down stream water quality. Water quality within the Santa Ynez watershed appears to be locally influenced by bedrock and soils. Salsipudes watershed naturally produces water of higher TDS.

The river segment proposed for delisting shows no exceedances of TDS or nutrients compared to basin plan objectives. Further, no impairments of any identified beneficial uses are documented for the Santa Ynez River between Salsipudes Creek upstream to Bradbury Dam.

Existing Programs to control Nutrients in the Santa Ynez River above the Hwy 246 bridge

- Sewage treatment WDRs issued by the RWQCB
- SWMPs for Buellton, Solvang and Santa Ynez/Los Olivos
- Cachuma Resource Conservation District Mobile Lab nutrient management program
- Farm Plans and education programs pursuant to the CCRWQCB "Agricultural Waiver Program"

Recommendation

The Santa Ynez River meets water quality objectives of the Basin Plan and should be "delisted" for TDS (salts) and nutrients in the reach between the confluence with Salsipudes Creek and Bradbury Dam pursuant to State delisting criteria.

Santa Barbara County Recommendation for "Do Not List" for Boron

Basis

The listing criteria of the WRCB policy are not met for Boron. The occurrence of Boron in several local surface water bodies is 1) natural and 2) poses no threat to beneficial uses reflected in basin plan objectives. Incorrect units for Boron data posted in CCAMP tables may have influenced recommendations to list several surface water bodies. No discussion provided as to role this may have played in listing recommendations

Current WRCB criteria for listing
(Source: http://www.swrcb.ca.gov/tmdl/docs/ffed_303d_listingpolicy093004.pdf)

> ***2.1 Water Quality Limited Segments***
> *Waters shall be placed in this category of the section 303(d) list if it is determined, in accordance with the California Listing Factors, that the water quality standard is not attained; the standards nonattainment is due to toxicity, a pollutant, or pollutants; and remediation of the standards attainment problem requires one or more TMDLs.*
>
> ***2.2 Water Quality Limited Segments Being Addressed***
> *Water segments shall be placed in this category if the conditions for placement in the water quality limited segments category (section 3) are met and either of the following conditions is met:*
> *1. A TMDL has been developed and approved by USEPA and the approved implementation plan is expected to result in full attainment of the standard within a specified time frame; or*
> *2. The RWQCB has determined in fact sheets that an existing regulatory program is reasonably expected to result in the attainment of the water quality standard within a reasonable, specified time frame.*

County Analysis of Listing Criteria

These criteria are not met in that Boron occurs naturally in the levels reported and it impairs no established beneficial uses thus cannot be considered a "pollutant." As such it is not amenable to TMDL. Specifically, it is not reasonable to expect that any regulatory program, existing or otherwise, would "result in the attainment of the water quality standard...." Therefore the listing criteria of the State are clearly not met.

Sites

Arroyo Paredon, Canada de la Gaviota, Cuyama River, and Rincon Creek
Note: The segments proposed for listing are "flashy" streams and are not reliable sources of water supply. As a result, ground-water and imported water are the sole sources of water in these areas. Thus no established surface water diversions occur in the segments proposed for listing.

Data Sources

USGS WSP # 1110-B
USGS WSP # 1108
USGS hydrologic records for California (available at http://nwis.waterdata.usgs.gov/ca/nwis/)
Dibblee Foundation geologic maps of the Capinteria and Gaviota Quadrangles
Dibblee, T. (1954) Geology and Mineral Resources of the Santa Ynez Mountains, California

Data Type

Geological mapping by Thomas Dibblee, published by the Dibblee Foundation.
Background water quality monitoring and source assessment by United States Geological Survey

QA/QC

Extensive internal review and peer review provided for all USGS publications, discussion at: http://ca.water.usgs.gov/waterdata/explaination.html

Data summary

Detailed mapping of the region was done by Dibblee and published at a scale of 1:24,000 (see references). The USGS established natural sources (the Sespe Formation) of Boron in local streams in a series of reports published as Water Supply Papers. Occurrences of the Sespe Formation are well documented in a series of detailed geologic maps by Thomas Dibblee and published by the Dibblee Foundation and Santa Barbara Natural History Museum.

Data provided for proposed listing are inadequate in that CCAMP provides no water quality sampling data for areas above human development as a basis for considering Boron levels elevated. The listing discussion does not discuss the relation between human activities and natural sources of Boron in the Santa Barbara County area.

Recommendation

Do not list for Boron. Direct RWQCB staff to provide evidence for land use activities contributing to boron levels above basin plan objectives, impairments of beneficial uses, and appropriate regulatory process before recommending listing.

Santa Barbara County recommendation for a later target date for TMDL Orcutt-Solomon creek (Fecal coliform)

This is a qualitative discussion and is therefore not structured according to the WRCB guidelines for format of data.

Site: Orcutt-Solomon creek

Pollutant: Fecal coliform

Proposed TMDL initiation: 2008

Discussion: the Orcutt-Solomon Creek watershed is 37 square miles and drains into the estuary of the Santa Maria River. Due to the occurrence of rainfall, the nature of underlying soils and style of development, flow throughout the entire stream-course is rare. As a result any water borne constituents are rarely transported from the urbanized portion of the watershed to its discharge at the Santa Maria River estuary.

Little or no recreation occurs along Orcutt-Solomon Creek for two reasons: 1) property ownership precludes public access along most of the stream course and 2) the stream flows intermittently and then only in the winter and during storms. Thus there is no practical impact of coliform exceedances upon the health of the recreational public. Furthermore, water from Orcutt-Solomon Creek is not used as a drinking water source.

Numerous exceedances of the bacteria standards occur in heavily used recreational areas within Santa Barbara County. Since addressing impairments in other areas would appear to be of greater public ebnefit, we recommend that the Orcutt-Solomon Creek be moved to a later start date than other, more heavily used public recreation areas.

List of Appendices

Appendix A *County of Santa Barbara Public Health Department QA/QC and sampling procedures for ocean water monitoring.*

Appendix B *Table of land uses, Carpinteria Creek, El Capitan Creek Watershed, Gaviota Creek, Jalama Creek, Montecito Creek, Las Palmas Creek, Refugio Creek, and Santa Ynez River Watersheds*

Appendix C *Annual Rainfall, Santa Barbara California (source: Santa Barbara County Flood Control District)*

Appendix D *Draft State of California SB 467 TMDL Guidance,* Figure 6-1 Regulatory Decision Tree

References

Balance Hydrologics (2002a) Water Quality Sampling Results- August 2002 Water-Rights Releases, Santa Ynez River, Santa Barbara County, California; Prepared for Cachuma Conservation Release Board.

Central Coast Ambient Water Quality Monitoring Program (Central Coast Regional Water Quality Control Board), water quality data (available at: http://www.ccamp.org/)

Dibblee, T. (1966) Geology of the Central Santa Ynez Mountains, California; Bulletin 166; California Division of Mines and Geology

Dibblee, T (1985) Geologic Map of the Carpinteria Quadrangle, Published by the Dibblee Foundation, Santa Barbara California

Dibblee, T (1986) Geologic Map of the Gaviota Quadrangle, Published by the Dibblee Foundation, Santa Barbara California

Ocean Monitoring Results, Percent Exceedances 1998-2004, Santa Barbara County Public Health, Environmental Health Services, posted at: http://www.sbcphd.org/ehs/PerEx1998-2004.htm

Upson, J. E. (1951) Geology and Ground-Water Resources of the South-Coast Basins of Santa Barbara County, California; United States Geological Survey Water-Supply Paper 1108

Upson, J. E. and Thomasson, H. G. (1951) Geology and Water Resources of the Santa Ynez River Basin, Santa Barbara County, California; United States Geological Survey Water-Supply Paper 1107

Upson, J. E. and Worts, G. F. (1951) Ground-Water in the Cuyama Valley California; United States Geological Survey Water-Supply Paper 1110-B

USGS hydrologic records for California (available at http://nwis.waterdata.usgs.gov/ca/nwis/)

APPENDIX A

Santa Barbara County
Environmental Health Services
Ocean Monitoring Program

Sampling Analysis Plan
QA/QC Plan

Table of Contents

1.0 PROJECT OVERVIEW/DESCRIPTION

This document describes specific procedures used by Santa Barbara County to sample ocean water quality at local beaches and report results to the public. It includes procedures to assure the integrity and reliability of the information gathered and disseminated (so called quality assurance and quality control or "QA/QC") and references to other relevant QA/QC procedures (e.g. Public Health laboratory sample handling procedures)

1.1 Overview

Scientific evidence has linked storm water runoff with high levels of bacteria in creeks and ocean water. Exposure to these bacteria can pose an increased health risk to humans. During the heavy rains of 1995, The County Public Health Department, Environmental Health Services (EHS) began testing several local beaches for bacteria. EHS suspected that the heavy rains would increase the levels of bacteria in our area beaches, but did not know to what extent this would be true. As a result of the testing several local beaches were testing very high for both fecal and total coliform; bacteria which can cause skin rashes, sinus infections, and other unhealthful affects. These high test results generated a lot of concern from PHD, as well as the public and the media. As a result the ocean water monitoring program was established and continues as described below.

As part of the current program, Environmental Health Services distributes test results in weekly press releases to several media sources and interested groups. EHS has built a computer database of these test results to help us understand trends and possible causes. Environmental Health Services recognizes the need for this important public resource in our community and is dedicated to our continued effort to protect the public's health.

Beginning July 1999, Assembly Bill 411 (AB411) amended the California Health and Safety Code Sections 115880, 115885 and 115915. These amendments include requirements for the California Department of Health Services (DHS) to develop regulations that establish minimum standards for the sanitation of public beaches (Section 115580). Specific provisions apply to the testing of waters adjacent to public beaches for microbiological contaminants. In addition, there are new requirements for local health officers to ensure compliance with these microbiological standards and for taking corrective action when standards are exceeded.

Under the provisions of AB 411, public beaches are required to be monitored weekly between April 1 to October 31. Public beaches are defined as those that are visited by more than 50,000 people annually and located adjacent to a storm drain, creek or stream that flows in the summer. Additionally, other beaches within the County that are of public health concern have been identified and are monitored on a variable schedule. These beaches were selected for monitoring because they meet one or more of the following criteria: a nearby source of contamination, poor water circulation, seasonal problems, or are heavily used by the public. The three indicator bacteria tested are total coliform, fecal coliform, and enterococcus.

1.2 Personnel

The Santa Barbara County Ocean Monitoring Program is conducted by Environmental Health Services. Currently, David Brummond (Phone 805.681.4900) is the supervisor

for the program. One Environmental Health Specialist performs the field sampling. On Mondays (barring a holiday), sampling is done from Refugio State Beach south-east ward to Rincon Beach. Tuesdays the North County is sampled from Guadalupe Dunes Beach southward to Gaviota State Beach.

1.3 General Scope of Monitoring Activities

Monitoring activities include initial weekly sampling on Mondays and Tuesdays, with re-sampling on Wednesdays for South County beaches only, if exceedances are found. Consistent with sampling results, beaches are posted and public notification is completed on Wednesdays and Fridays.

1.4 Project Organization and Responsibilities

The Ocean Water Program is part of the Technical Services Section of Environmental Health Services. Environmental Health Services is a division of the Santa Barbara County Public Health Department. The program is staffed by one full-time Environmental Health Specialist who works under the direction of the program supervisor and the Environmental Health Services Director.

The primary responsibility of the program and staff is to assure that Santa Barbara County is in compliance with the Health and Safety Code regulations pertaining to water quality monitoring at public beaches. This includes the collection and transportation of samples according to established protocol, completing required public notification and completing and submitting reports to state and federal agencies.

2.0 OCEAN MONITORING SITES

Currently 19 sites are sampled by EHS along the County's coastline.

2.1 Site Locations

The following table lists the beaches currently sampled as part of this program.

- Arroyo Burro Beach
- Butterfly Beach
- Carpinteria City Beach
- Carpinteria State Beach
- East Beach @ Mission Creek
- East Beach @ Sycamore Creek
- El Capitan State Beach
- Gaviota State Beach
- Goleta Beach
- Guadalupe Dunes
- Hammonds
- Haskell's Beach
- Hope Ranch Beach
- Jalama Beach
- Leadbetter Beach
- Ocean/Surf Beach
- Refugio Beach
- Rincon @ Bates Beach
- Sands Beach @ Coal Oil Point

2.2 Notification procedures

When data results are obtained from the laboratory, EHS contacts the responsible agencies for posting or un-posting of the yellow warning signs within 12 hours.

2.3 Project Clean Water Permanent Sign Locations

The County's Project Clean Water installed permanent information signs in conspicuous locations at the beaches listed below. In addition to the general information bout creek and

ocean pollution contained, each permanent sign contains three interchangeable panels for OPEN, WARNING and CLOSED status of the beach. The entities notified pursuant to Section 2.3 (above) are responsible for posing the correct status panel. To the extent that incorrect posting are found, EHS staff should post the correct panel.

- Guadalupe Dunes Beach (1) – North side of parking lot
- Ocean Beach (1) – North side of parking lot
- Jalama Beach (2) – Near the path leading to the lagoon
- Goleta Beach (3) – One located west of Beachside Café; one located at the east end of the parking lot; one located at pier entrance
- Arroyo Burro (1) – Located next to the stairs leading to the beach
- Ledbetter Beach (1) – Located west of Shoreline Restaurant
- East Beach at Mission Creek (2) – One located next to the bike path and restroom by Stearns Wharf; one located next to the entrance to the beach in the city parking lot.
- East Beach at Sycamore Creek (3) – One located west of the bath house; one located east of the bath house; one located at the east end of the parking lot by Corona del Mar
- Rincon Beach (2) – Located at the top of the stairs and ramp leading down to Bates Beach
- Carpinteria City Beach (1) – Located at entrance to parking lot at the end of Linden

3.0 ANALYTICAL CONSTITUENTS

Grab samples are collected with 100 ml plastic sterile bottles containing sodium thiosulfate. The samples are analyzed at Santa Barbara County Public Health Laboratory. The ocean water samples are analyzed for total coliform, E. coli, and enterococcus. Reagents manufactured by IDEXX, corp., are currently used for the analysis. Colilert 18 is used to analyze for total coliform and E. coli. Enterolert 24 is used to analyze for enterococcus.

4.0 DATA QUALITY OBJECTIVES (DQO)

Because of the nature of sample handling and testing procedures for live organisms, limitations exist in the accuracy and precision of the sample results. Careful preparations and handling are essential to minimize potential errors introduced by these limitations

4.1 Analytical Reporting Limits

The upper and lower reporting limits using the IDEXX methods are 24,192 MPN (Most Probable Number) and 10 MPN, respectively, in a 1:10 dilution.

The indicator bacteria exceed the standards if the counts are as follows:

- Total Coliform greater than 10,000 MPN
- Fecal Coliform greater than 400 MPN
- Enteroccus greater than 104 MPN
- The ratio of fecal to total coliform greater than 0.1 when total coliform concentration is greater than 1,000 MPN

4.2 Analytical Precision, Accuracy, and Completeness

The Colilert method yields E. coli counts in MPN, while the legislature calls for the analysis of fecal coliform. Currently, Mike Hartley is gathering data for a study to estimate fecal

coliform from E.coli. With the help of County Biostatistician Natlee Hapeman, an equation has been derived to convert E. coli results to fecal coliform levels.

$$\text{Fecal Coliform} = (1.16162)(\text{E.coli}) - 24.3348$$

However, the equation does not work well if the E.coli count is below 50 MPN. The Reasons may be that the sample size is too small, thus, the margin of error is large. Also, bacterial count fluctuations, due to varying environmental factors such as temperature, pH, and salinity, are not accounted for in the samples. Environmental factors need to be incorporated into the correlation analysis in order for precision of the equation to improve.

5.0 MONITORING PREPARATION AND LOGISTICS

5.1 Weather Tracking

Prior to beginning travel to sampling locations, the technician should check web sites for swell directions, tides, storms, etc. The following "real time" data should be recorded: water temperature, wind speed, wind direction, wave height and wave period. This data should be recorded on the sample forms.

Real time conditions (Southern beaches)

- http://www.ndbc.noaa.gov/station_page.phtml?$station=46053
- http://seaboard.ndbc.noaa.gov/station_page.php?station=46054

Real time conditions (Northern beaches)

- http://seaboard.ndbc.noaa.gov/station_page.php?station=46063
- http://seaboard.ndbc.noaa.gov/station_page.php?station=46023

When on each sampling site the following information will be recorded: wind direction and strength, direction of long-shore drift, estimated flow in creek or storm drain, cloud cover and/or rain.

5.2 Sample Bottles

Sample bottles are obtained from Santa Barbara County Public Health Laboratory. Before use sample bottles must be found in good condition and the seal should not be broken until the sample is to be collected. Extra sample bottles should be available during the sampling process.

5.3 Field Equipment Preparation

Before going out to the field, gather the following field equipment:

- Sample bottles (at least 20)
- Sample bottle labels
- Field sampling lab slip
- Sunscreen
- Hat
- Blue ice (freshly frozen)_ and 10 to 20 qt. ice chest
- Latex gloves
- Antibacterial sanitizer
- Boots
- Cell phone

Print sampling bottle labels and field lab slip from Envision ahead of time. Labels should be filled out completely with soft pencil of waterproof marker. Care should be taken to ensure all information is complete and legible.

At least two freshly frozen "blue ice" packs should be placed in a 10 to 20 quart cooler prior to collection of the first sample.

6.0 SAMPLE COLLECTION, PRESERVATION AND DELIVERY

This section provides procedures for sample collection, handling, storage during transportation and delivery to the laboratory.

6.1 Sample Collection Methods

Samples are collected at ankle to knee-deep surf zone water, as the wave is about to retreat, at 25 yards down current of storm drain or creek mouth. Latex gloves must be worn during sampling.

6.2 Sample Containers, Preservation and Handling

Samples are to be places in the ice chest as soon after collection as practicable. Samples are to be kept as cold as feasible (but not frozen) until delivery to the lab. Exposure to light should be minimized.

6.3 QA/QC sample collection methods

The Ocean Monitoring Program currently samples 19 sites from Guadalupe Dunes Beach to Rincon Beach. Ocean water samples are taken in ankle to knee high surfzone water at 25 yards down current of creek or storm drain. Samples are collected in sterile 100-ml plastic sample bottles containing the sodium thiosulfate. The sampler collects the water as the wave is about to retreat. The sample bottles are labeled with the location, the site number, and the date.

Environmental conditions such as time, wave height, weather conditions and number of birds, is recorded in the sample log/chain-of-custody sheet. After the ocean water samples are collected, they are immediately placed in an ice box with blue ice and kept away from light. The samples are taken to Santa Barbara County Public Health Laboratory. To ensure optimal and consistent results, samples are refrigerated at the lab and analyzed within 6-8 hours of collection.

6.4 Sample Labeling (site names/ codes, etc)

The sample bottle labels can be printed from Envision report #6413. Enter the WP number to obtain the label for the specific site. Write the date of the sampling on the label before delivery to the laboratory.
The following is the list of facility and WP numbers for all of the sampling sites:

Site	Facility Number	WP Number
Rincon Beach at Bates Beach	FA0012522	WP0000123
Carpinteria State Beach	FA0012523	WP0000180
Carpinteria City Beach	FA0013544	WP0000134

Hammond's Beach	FA0012524	WP0000004
Butterfly Beach	FA0012545	WP0000023
East Beach at Sycamore Creek	FA0012525	WP0000083
East Beach at Mission Creek	FA0012526	WP0000085
Leadbetter Beach	FA0012527	WP0000007
Arroyo Burro Beach	FA0012528	WP0000147
Hope Ranch Beach	FA0012533	WP0000072
Goleta Beach	FA0012534	WP0000037
Sands Beach	FA0012535	WP0000012
Haskell's Beach	FA0014943	WP0000186
El Capitan State Beach	FA0012536	WP0000013
Refugio State Beach	FA0012537	WP0000183
Gaviota State Beach	FA0012538	WP0000079
Jalama Beach	FA0012539	WP0000080
Ocean/Surf Beach	FA0012540	WP0000081
Guadalupe Dunes Beach	FA0012541	WP0000018

6.5 Forms and Procedures For Documenting Sample Collection and Field Measurements

The field collection report/chain-of-custody form is in Envision report #6415. Enter the date of the sampling and print the report. At each site, enter all data required on the form (such as the time, weather conditions, surf conditions, number of birds, number of people, number of dogs, and any unusual field conditions).

6.6 Laboratory Communication Procedures

When re-sampling failed sites call to let the lab know how many samples will be brought in. The laboratory fax number is 681-4753, and the phone number is 681-5259.

6.7 Sample Shipping/Delivery, and Chain-of-Custody

When delivering samples to the lab, enter the date and time on the lab slip. Place the samples in the refrigerator.

7.0 DATA MANAGEMENT AND REPORTING PROCEDURES

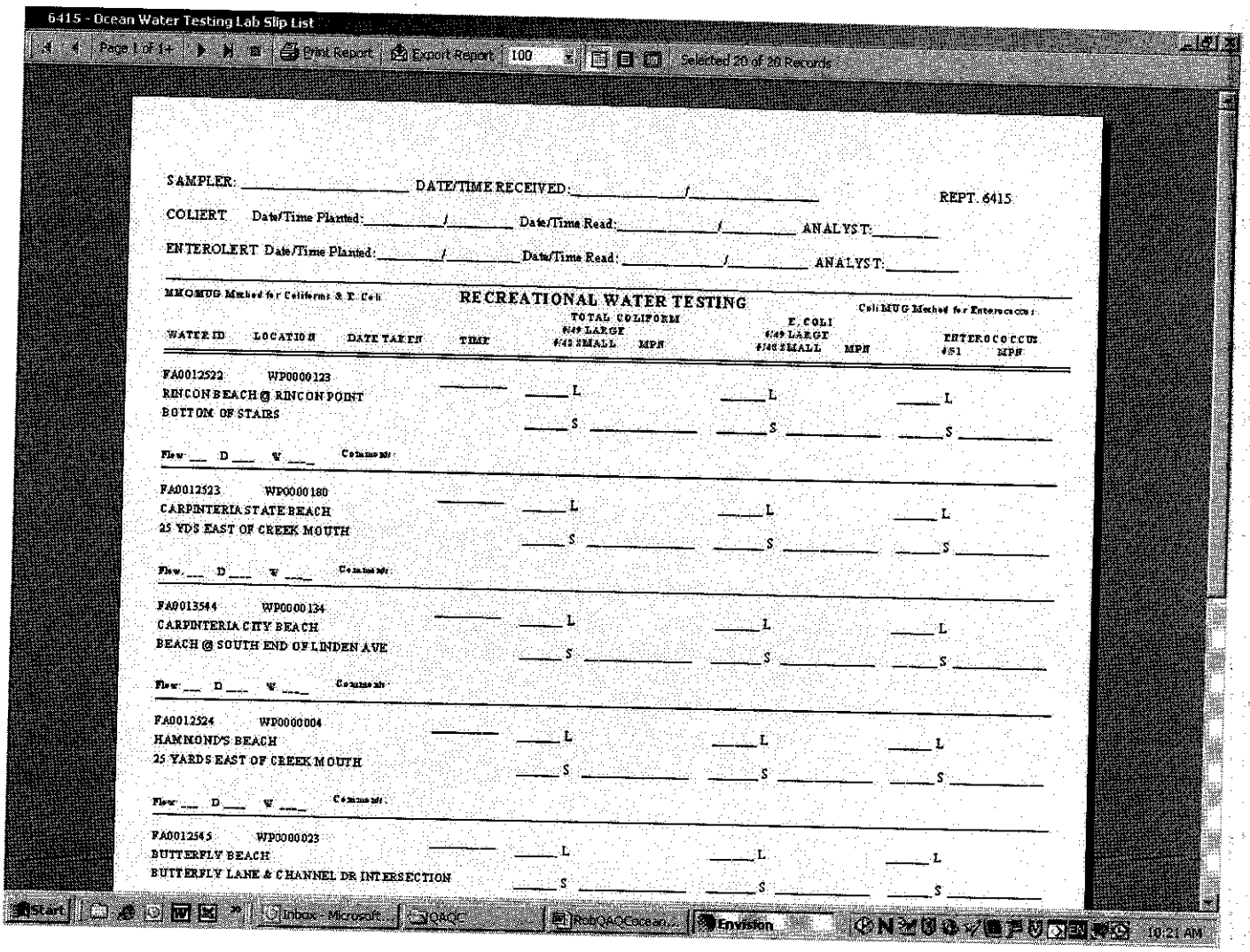
Since public information and establishment of a long term record of ocean water quality are core objectives of the ocean monitoring program, preservation and dissemination of data collected must be timely and accurate. The procedures below provide for rapid and widespread dissemination of ocean water quality information while preserving the data in a permanent and publicly accessible data base.

Data must be entered in an accurate and timely manner. All data entered must be crosschecked with original data sheets.

Appendix A. Driving Directions

Beaches	Driving Directions
Guadalupe Dunes Beach	From Santa Maria: Take West Main St. west for 9 miles.
Ocean/Surf Beach	From Guadalupe Dunes Beach: Take W. Main St east; turn right on to Hwy 1; past VAFB; right on Central Ave; left on Union Sugar Ave; right onto Ocean Ave; right to Ocean Beach Park or left to Surf Beach
Jalama Beach	From Ocean/Surf Beach: Take Ocean Ave. towards Lompoc; past the City of Lompoc; take Hwy 1 towards Santa Barbara; right on Jalama Beach Rd.
Gaviota State Beach	From Jalama Beach: Go back to Hwy 1 and head south; right into Gaviota State Beach
Refugio State Beach	From Gaviota: Take Hwy 101 South; follow sign on Hwy 101
El Capitan State Beach	From Refugio: Take Hwy 101 South; follow sign on Hwy 101
Haskell's Beach	From El Capitan: Take Hwy 101 South; exit on Winchester Canyon Rd; right at the Bacara Resort sign; left onto a road (no left turn sign) to dirt lot in front of the Resort
Sands Beach at Coal Oil Point	From Haskells : Take Hollister Ave east; right on Storke Rd.; at the end of Storke Rd/El Colegio. go straight towards Coal Oil Point
Goleta Beach	From Sands: Go back to El Colegio and drive through UCSB campus; get on the 217; right into Goleta Beach Park
Hope Ranch Beach	From Goleta: Take 217 to Hwy 101 South; exit on La Cumbre and turn right; La Cumbre will turn into Las Palmas; turn right onto Las Olas Dr (after curves sign and left turn ahead sign); key required for entry into the beach parking lot
Arroyo Burro Beach	From Hope Ranch: Take Las Palmas east; Las Palmas turns into Marina Dr, and Cliff Dr.; right into Arroyo Burro Beach Park
Leadbetter Beach	From Arroyo Burro: Take Cliff Dr and head east; right onto Loma Alta straight into Leadbetter Beach parking lot
East Beach at Mission Creek	From Leadbetter: Take Shoreline Dr and head east; Shoreline Dr. becomes Cabrillo Blvd; past State St and turn right into City parking lot at Garden St.
East Beach at Sycamore Creek	From Mission Creek: Take Cabrillo and head east; right into City parking lot at intersection with Los Ninos Drive
Butterfly Beach	From Sycamore Creek: Take Cabrillo and head east; take Hwy 101 South; exit right Olive Mill Rd; right onto Channel Dr.; take sample at the intersection of Butterfly Ln and Channel Dr.
Hammond's Beach	From Butterfly: Take Hwy 101S; exit right on Eucalyptus Ln; right into the gated community at roundabout; park car near the bridge
Carpinteria City Beach	From Hammonds: Take 101S: exit at Linden Ave. Turn right on Linden and follow all the way to its terminus at the ocean.
Carpinteria State Beach	From Carpinteria City: Take Linden back up to Sixth and turn right. Right Palm Ave; the State Beach is at the end
Rincon Beach	From Carp State Beach: Take Hwy 101S; exit right on Bates Rd; turn right into the County Park and park by the stairs.

Appendix B. Sampling Lab Slip



6415 - Ocean Water Testing Lab Slip List

Page 1 of 1+ | Print Report | Export Report | 100 | Selected 20 of 20 Records

SAMPLER: _____ DATE/TIME RECEIVED: _____/_____ REPT. 6415

COLIERT Date/Time Planted: _____/_____ Date/Time Read: _____/_____ ANALYST: _____

ENTEROLERT Date/Time Planted: _____/_____ Date/Time Read: _____/_____ ANALYST: _____

MMOMUG Method for Coliforms & E. Coli — RECREATIONAL WATER TESTING — ColiMUG Method for Enterococci

WATER ID	LOCATION	DATE TAKEN	TIME	TOTAL COLIFORM #49 LARGE #48 SMALL	MPN	E. COLI #49 LARGE #48 SMALL	MPN	ENTEROCOCCUS #51	MPN
FA0012522	WP0000123			L / S		L / S		L / S	
RINCON BEACH @ RINCON POINT BOTTOM OF STAIRS									
Flow: __ D: __ W: __ Comments:									
FA0012523	WP0000180			L / S		L / S		L / S	
CARPINTERIA STATE BEACH 25 YDS EAST OF CREEK MOUTH									
Flow: __ D: __ W: __ Comments:									
FA0013544	WP0000134			L / S		L / S		L / S	
CARPINTERIA CITY BEACH BEACH @ SOUTH END OF LINDEN AVE									
Flow: __ D: __ W: __ Comments:									
FA0012524	WP0000004			L / S		L / S		L / S	
HAMMOND'S BEACH 25 YARDS EAST OF CREEK MOUTH									
Flow: __ D: __ W: __ Comments:									
FA0012545	WP0000023			L / S		L / S		L / S	
BUTTERFLY BEACH BUTTERFLY LANE & CHANNEL DR INTERSECTION									

Start | Inbox - Microsoft | QAQC | RobQAQCocean... | Envision | 10:21 AM

APPENDIX B
Summary of data in support of "Delisting"

Summary of watershed information, Ocean sites proposed for delisting

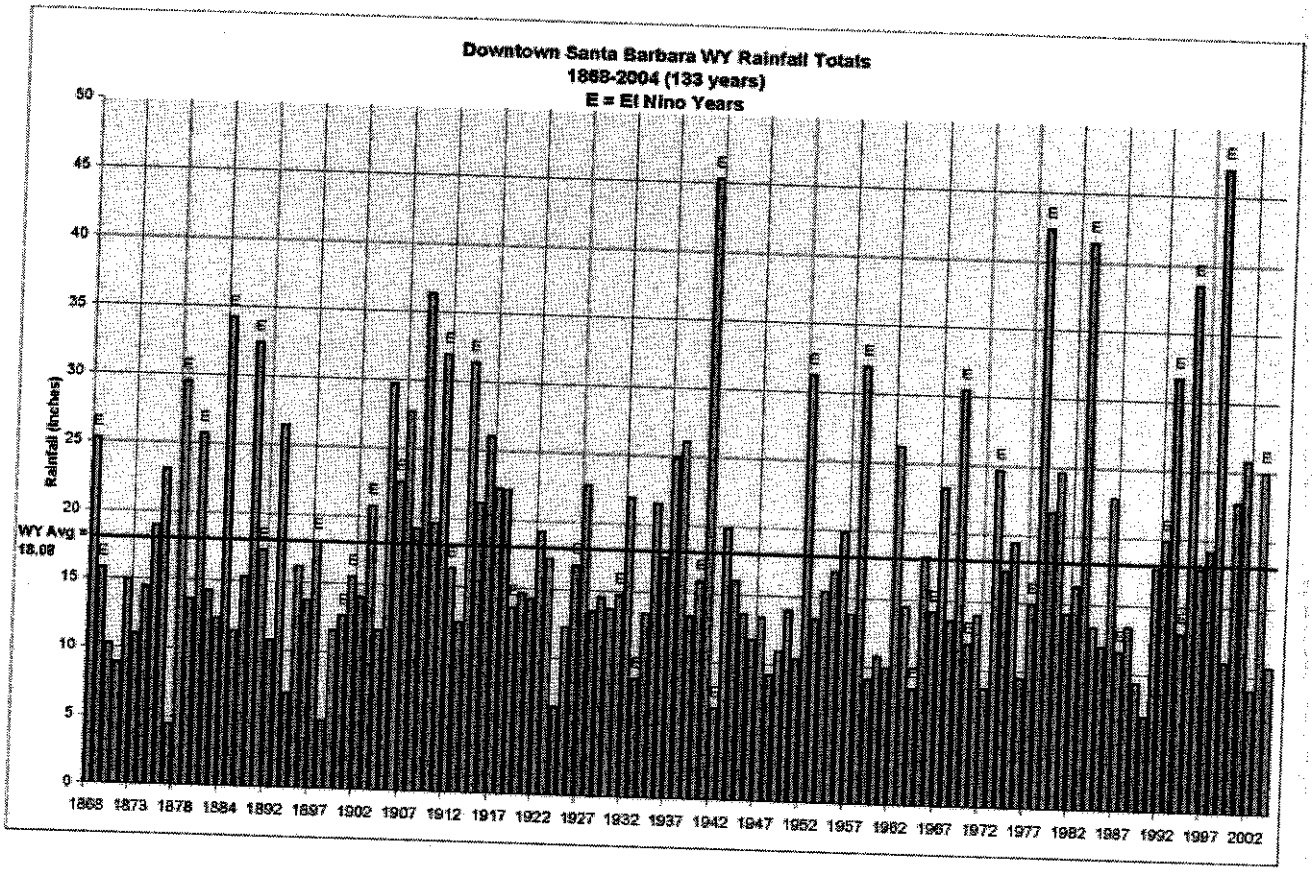
Name of Water Body	Impairment Pollutant(s) of concern/cause	Year of listing	Geographic Setting	Supporting Data	Rational	Recent developments/change in circumstance	Summary of land use in watershed
Pacific Ocean at Carpinteria State Beach	(bacteria)	2002	Ocean water at beach near mouth of Carpinteria Creek	County Health Department ocean monitoring data, Table	Postings (exceedances of standards) are less than 10%	Water quality programs initiated since 1999, including animal waste control	Open space 60% Agriculture 15% Suburban 5% Urban 10%
Pacific Ocean at Hammonds	(bacteria)	2002	Ocean water at beach near mouth of Montecito Creek	County Health Department ocean monitoring data, Table	Postings (exceedances of standards) are less than 10%	Water quality programs initiated since 1999, including animal waste control	Open space 60% Agriculture 2% Suburban 25% Urban 3%
Pacific Ocean at Hope Ranch	(bacteria)	2002	Ocean water at beach near mouth of Las Palmas Creek	County Health Department ocean monitoring data, Table	Postings (exceedances of standards) are less than 10%	Water quality programs initiated since 1999, including animal waste control	Open space 50% Agriculture 5% Suburban 45% Urban 0%
Pacific Ocean at Jalama,	(bacteria)	2002	Ocean water at beach near mouth of Jalama Creek	County Health Department ocean monitoring data, Table	Postings (exceedances of standards) are less than 10%	Water quality programs initiated since 1999, including animal waste control	Open space 60% Agriculture 40% Suburban 0% Urban 0%
Pacific Ocean at Ocean Beach (Surf)	(bacteria)	2002	Ocean water at beach near mouth of Santa Ynez River	County Health Department ocean monitoring data, Table	Postings (exceedances of standards) are less than 10%	Water quality programs initiated since 1999, including animal waste control	Open space 60% Agriculture 25% Suburban 10% Urban 05%
Pacific Ocean at Refugio	(bacteria)	2002	Ocean water at beach near mouth of Refugio Creek	County Health Department ocean monitoring data, Table	Postings (exceedances of standards) are less than 10%	Water quality programs initiated since 1999, including animal waste control	Open space 60% Agriculture 40% Suburban 0% Urban 0%

APPENDIX B
Summary of data in support of "Delisting"

Summary of watershed information, Santa Ynez River segments proposed for delisting

Name of Water Body	Impairment Pollutant(s) of concern/cause	Year of listing	Geographic Setting	Supporting Data Sources	Rational	Recent developments/change in circumstance	Land Use In drainage of segment
Santa Ynez River between the confluence with Salsipudes Creek and Bradbury Dam	Nutrients	2002	Santa Ynez Valley and Santa Rosa areas below Bradbury Dam and above the Lompoc Plain	CCAMP, USGS, Local Agency monitoring	Recent monitoring shown no exceedance of Basin Plan standards in this segment Tables 9 through 14	Nutrient management programs through Mobil Lab Closure of dairy and feedlot operations Expansion of organic farming operations	Open Space 50% Ag 35% Suburban 15% Urban 5 %
Santa Ynez River between the confluence with Salsipudes Creek and Bradbury Dam	TDS/"salt"	2002	Santa Ynez Valley and Santa Rosa areas below Bradbury Dam and above the Lompoc Plain	CCAMP, USGS, Local Agency monitoring	Recent monitoring shown no exceedance of Basin Plan standards in this segment Tables 9-14 Naturally high TDS flow for Salsipudes Creek contributed to exceedances below confluence Figure 7, Table 15	Modification of downstream releases from Cachuma Reservoir Importation of lower TDS water from State Water Project	Open Space 50% Ag 35% Suburban 15% Urban 5 %

APPENDIX C


Downtown Santa Barbara WY Rainfall Totals
1868-2004 (133 years)
E = El Nino Years
Rainfall (inches)
WY Avg = 18.08
0
5
10
15
20
25
30
35
40
45
50
1868 1873 1878 1884 1892 1897 1902 1907 1912 1917 1922 1927 1932 1937 1942 1947 1952 1957 1962 1967 1972 1977 1982 1987 1992 1997 2002

APPENDIX D

From: DRAFT STATE OF CALIFORNIA, S.B. 469 TMDL GUIDANCE, A PROCESS FOR ADDRESSING IMPAIRED WATERS IN CALIFORNIA

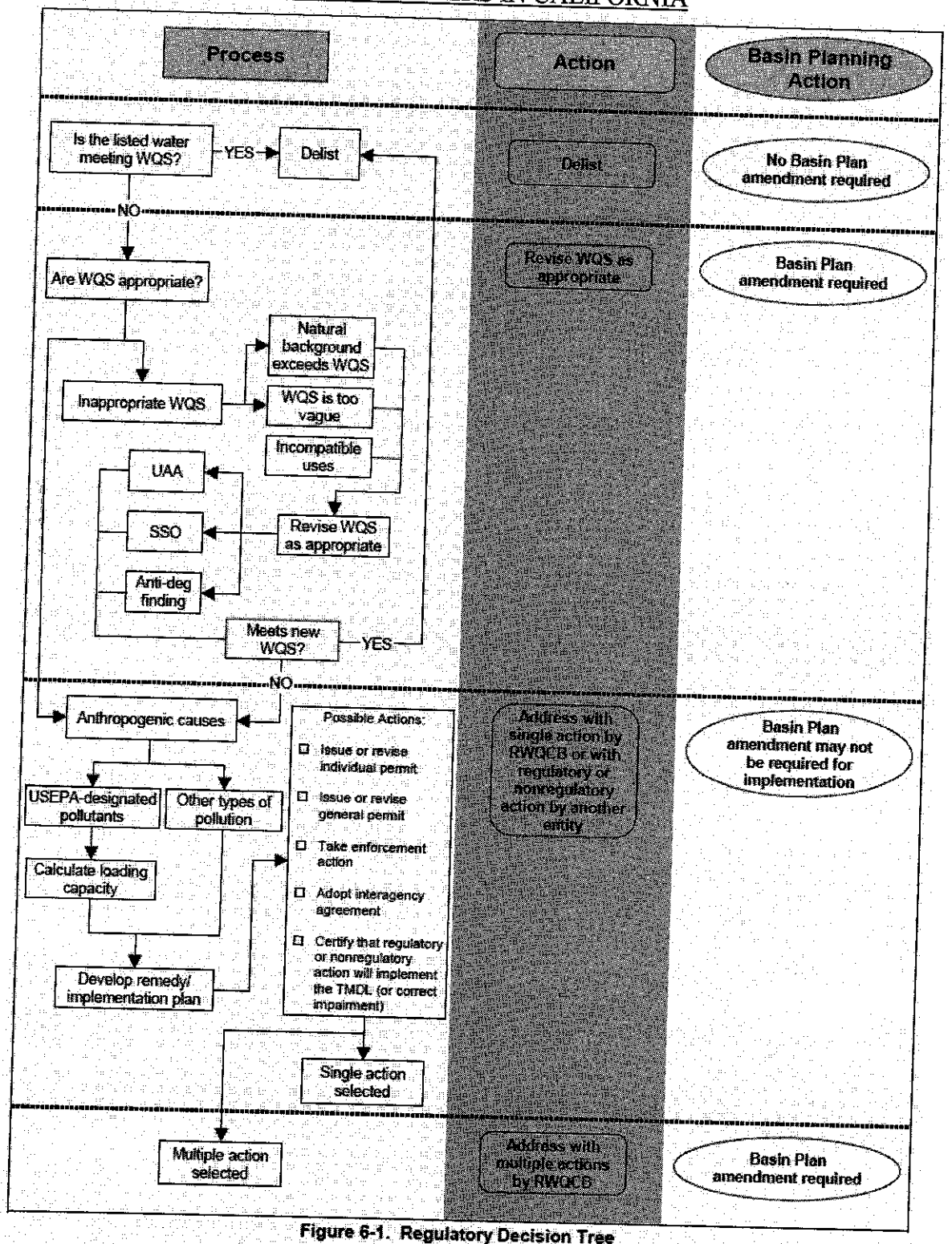


Figure 6-1. Regulatory Decision Tree

CARPINTERIA STATE- Mouth

Fac: ID# 012523

Date	Total Coliform	exceeds	Fecal Coliform	exceeds	Enterococcus	exceeds
1/2/2002	327	No	63	No	20	No
1/7/2002	3,441	No	52	No	197	Yes
1/9/02re	2,909	No	2,014	Yes	216	Yes
1/14/2002	109	No	3	No	20	No
1/22/2002	1,211	No	987	Yes	934	Yes
1/28/2002	1,119	No	122	No	62	No
2/4/2002	256	No	74	No	10	No
2/11/2002	213	No	10	No	3	No
2/19/2002	30,000	Yes	1,012	Yes	464	Yes
2/26/2002	98	No	31	No	31	No
3/4/2002	74	No	52	No	41	No
3/11/2002	84	No	10	No	3	No
3/18/2002	85	No	20	No	3	No
3/25/2002	20	No	3	No	3	No
4/1/2002	10	No	10	No	3	No
4/8/2002	52	No	10	No	20	No
4/15/2002	20	No	10	No	3	No
4/22/2002	3	No	3	No	3	No
4/28/2002	3	No	3	No	3	No
5/7/2002	3	No	3	No	3	No
5/13/2002	10	No	3	No	3	No
5/20/2002	63	No	10	No	3	No
5/28/2002	10	No	10	No	3	No
6/3/2002	148	No	63	No	122	Yes
6/3/2002	30	No	3	No	3	No
6/10/2002	20	No	3	No	10	No
6/17/2002	146	No	41	No	30	No
6/24/2002	20	No	3	No	3	No
7/1/2002	52	No	10	No	20	No
7/8/2002	3	No	3	No	10	No
7/15/2002	31	No	3	No	3	No
7/22/2002	20	No	3	No	3	No
7/29/2002	52	No	3	No	3	No
8/5/2002	30	No	10	No	3	No
8/12/2002	20	No	3	No	3	No
8/19/2002	40	No	10	No	3	No
8/26/2002	3	No	3	No	3	No
9/3/2002	84	No	30	No	3	No
9/9/2002	20	No	3	No	3	No
9/16/2002	52	No	3	No	10	No
9/23/2002	20	No	20	No	3	No
9/30/2002	3	No	3	No	3	No
10/7/2002	31	No	20	No	3	No
10/14/2002	228	No	199	No	3	No
10/21/2002	110	No	31	No	41	No
10/28/2002	52	No	3	No	63	No
11/4/2002	379	No	86	No	62	No
11/12/2002	3,873	No	109	No	10	No
11/18/2002	9,208	No	97	No	20	No
11/25/2002	10	No	3	No	3	No
12/2/2002	488	No	84	No	52	No
12/9/2002	10	No	3	No	10	No

12/16/2002	309	No	20	No	52	No
12/23/2002	384	No	98	No	10	No
Min	3		3		3	
Max	30,000		2,014		934	
Mean	1,037		102		49	
Standard Dev	4268.73		325.71		143.15	
1/6/2003	10	No	3	No	3	No
1/13/2003	20	No	10	No	3	No
1/21/2003	52	No	10	No	3	No
1/27/2003	1,250	No	657	Yes	31	No
1/29/2003	213	No	52	No	3	No
2/3/2003	10	No	3	No	10	No
2/10/2003	10	No	3	No	3	No
2/18/2003	31	No	3	No	3	No
2/24/2003	41	No	3	No	3	No
3/3/2003	20	No	3	No	3	No
3/10/2003	160	No	3	No	3	No
3/17/2003	839	No	30	No	41	No
3/24/2003	63	No	3	No	10	No
3/31/2003	20	No	3	No	3	No
4/7/2003	41	No	3	No	3	No
4/14/2003	933	No	31	No	110	Yes
4/16/2003	63	No	3	No	3	No
4/21/2003	146	No	121	No	20	No
4/28/2003	52	No	10	No	3	No
5/5/2003	627	No	30	No	41	No
5/12/2003	3	No	3	No	3	No
5/19/2003	84	No	3	No	3	No
5/27/2003	20	No	3	No	3	No
6/2/2003	41	No	3	No	3	No
6/9/2003	52	No	31	No	3	No
6/16/2003	62	No	3	No	30	No
6/23/2003	3	No	3	No	3	No
6/30/2003	74	No	20	No	3	No
7/7/2003	10	No	10	No	10	No
7/14/2003	171	No	31	No	10	No
7/21/2003	63	No	3	No	3	No
7/28/2003	63	No	3	No	3	No
8/4/2003	52	No	20	No	10	No
8/11/2003	20	No	10	No	10	No
8/18/2003	31	No	10	No	52	No
8/25/2003	10	No	10	No	10	No
9/2/2003	10	No	10	No	10	No
9/8/2003	171	No	10	No	10	No
9/15/2003	960	No	20	No	10	No
9/29/2003	74	No	41	No	10	No
10/6/2003	358	No	20	No	10	No
10/13/2003	74	No	10	No	20	No
10/20/2003	41	No	10	No	10	No
10/27/2003	30	No	30	No	41	No
11/3/2003	30	No	10	No	10	No
11/12/2003	84	No	20	No	10	No
11/17/2003	41	No	10	No	10	No
11/24/2003	41	No	20	No	63	No
12/1/2003	41	No	10	No	10	No
12/8/2003	52	No	10	No	10	No
12/15/2003	20	No	10	No	10	No

12/22/2003	7270	No	651	Yes	717	Yes
12/29/2003	259	No	10	No	10	No
Min	3		3		3	
Max	7,270		657		717	
Mean	281		39		27	
Standard Dev	1014.65		124.41		98.46	
1/5/2004	85	No	74	No	10	No
1/12/2004	10	No	10	No	10	No
1/20/2004	581	No	63	No	86	No
1/26/2004	20	No	10	No	10	No
2/2/2004	98	No	31	No	10	No
2/9/2004	10	No	10	No	10	No
2/17/2004	1529	No	20	No	10	No
2/23/2004	74	No	10	No	10	No
3/1/2004	24192	Yes	74	No	30	No
3/8/2004	305	No	10	No	10	No
3/15/2004	52	No	10	No	10	No
3/22/2004	63	No	10	No	20	No
3/29/2004	31	No	10	No	10	No
4/5/2004	63	No	10	No	10	No
4/12/2004	223	No	10	No	10	No
4/19/2004	41	No	10	No	10	No
4/26/2004	31	No	10	No	10	No
5/3/2004	521	No	122	No	10	No
5/10/2004	132	No	20	No	10	No
5/17/2004	52	No	31	No	20	No
5/24/2004	41	No	10	No	10	No
6/1/2004	20	No	10	No	10	No
6/7/2004	97	No	41	No	84	No
6/14/2004	10	No	10	No	10	No
6/21/2004	31	No	10	No	10	No
6/28/2004	20	No	10	No	10	No
7/6/2004	30	No	10	No	10	No
7/12/2004	31	No	10	No	41	No
7/19/2004	20	No	10	No	10	No
7/26/2004	20	No	10	No	10	No
8/2/2004	20	No	10	No	10	No
8/9/2004	31	No	20	No	10	No
8/16/2004	20	No	10	No	10	No
8/23/2004	30	No	20	No	10	No
8/30/2004	10	No	10	No	10	No
9/7/2004	20	No	20	No	10	No
9/13/2004	20	No	10	No	10	No
9/21/2004	10	No	10	No	10	No
9/27/2004	20	No	10	No	10	No
10/4/2004	52	No	20	No	10	No
10/11/2004	10	No	10	No	10	No
10/18/2004	185	No	41	No	10	No
10/25/2004	14136	Yes	428	Yes	41	No
10/27/2004	4884	No	350	No	63	No
11/1/2004	146	No	10	No	10	No
12/1/2004	10	No	10	No	10	No
12/6/2004	216	No	10	No	10	No
12/13/2004	74	No	10	No	10	No
12/21/2004	52	No	10	No	10	No
12/27/2004	10	No	10	No	20	No

Min	10		10		10	
Max	24,192		428		86	
Mean	968		34		16	
Standard Dev	3952.22		76.63		17.32	
1/3/2005	24192	Yes	323	No	663	Yes
1/5/2005	19863	Yes	135	No	354	Yes
1/10/2005	24192	Yes	135	No	377	Yes
1/12/2005	24192	Yes	41	No	52	No
1/18/2005	24192	Yes	10	No	20	No
1/24/2005	24192	Yes	20	No	20	No
1/26/2005	9208	No	20	No	20	No
1/31/2005	1607	No	63	No	31	No
2/7/2005	4352	No	295	No	31	No
2/14/2005	991	No	41	No	1450	Yes
2/16/2005	3654	No	85	No	97	No
2/22/2005	24192	Yes	504	Yes	292	Yes
2/24/2005	3076	No	20	No	62	No
2/28/2005	1500	No	135	No	41	No
3/7/2005	738	No	20	No	10	No
3/14/2005	455	No	31	No	10	No
3/21/2005	158	No	30	No	10	No
3/28/2005	2014	No	20	No	63	No
4/4/2005	633	No	209	No	20	No
4/11/2005	364	No	31	No	10	No
4/18/2005	733	No	31	No	10	No
4/27/2005	10	No	10	No	10	No
4/28/2005	2359	No	512	Yes	199	Yes
5/2/2005	183	No	10	No	10	No
5/10/2005	554	No	115	No	74	No
5/16/2005	20	No	10	No	10	No
5/23/2005	40	No	10	No	10	No
5/30/2005	4106	No	231	No	30	No
6/6/2005	563	No	41	No	10	No
6/13/2005	546	No	86	No	10	No
6/20/2005	355	No	10	No	31	No
6/27/2005	12033	Yes	109	No	10	No
6/29/2005	2909	No	74	No	10	No
7/5/2005	10	No	10	No	10	No
7/11/2005	663	No	10	No	10	No
7/19/2005	84	No	10	No	10	No
7/25/2005	63	No	10	No	10	No
8/1/2005	97	No	41	No	10	No
8/8/2005	63	No	52	No	10	No
8/15/2005	10	No	10	No	10	No
8/22/2005	52	No	20	No	10	No
8/29/2005	10	No	10	No	31	No
9/6/2005	10	No	10	No	10	No
9/12/2005	10	No	10	No	10	No
9/19/2005	20	No	10	No	10	No
9/26/2005	10	No	10	No	10	No
10/4/2005	20	No	20	No	20	No
10/11/2005	10	No	10	No	10	No
10/17/2005	1071	No	41	No	10	No
10/24/2005	31	No	10	No	10	No
10/31/2005	10	No	10	No	10	No
11/7/2005	31	No	10	No	10	No
11/14/2005	1106	No	122	No	20	No
11/16/2005	31	No	10	No	10	No

11/21/2005	10	No	10	No	10	No
11/29/2005	74	No	41	No	10	No
12/5/2005	31	No	10	No	10	No
12/12/2005	213	No	10	No	20	No
12/19/2005	10	No	10	No	10	No
Min	10		10		10	
Max	24,192		512		1,450	
Mean	3,761		67		74	
Standard Dev	7644.25		108.40		213.72	
4yr % Exc	4.85%		3.68%		5.80%	

GAVIOTA BEACH-Mouth

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Date	Total Coliform	exceeds	Fecal Coliform	exceeds	Enterococcus	exceeds
1/2/2002	74	No	10	No	95	No
1/7/2002	279	No	10	No	10	No
1/14/2002	408	No	93	No	3	No
1/22/2002	10	No	10	No	3	No
1/28/2002	10	No	3	No	84	No
2/4/2002	3	No	3	No	3	No
2/11/2002	495	No	3	No	3	No
2/19/2002	52	No	3	No	10	No
2/26/2002	74	No	3	No	3	No
3/4/2002	146	No	3	No	3	No
3/11/2002	3	No	3	No	3	No
3/18/2002	10	No	3	No	3	No
3/25/2002	3	No	3	No	3	No
4/1/2002	156	No	3	No	3	No
4/8/2002	3	No	3	No	3	No
4/15/2002	10	No	3	No	3	No
4/22/2002	3	No	3	No	3	No
4/28/2002	10	No	3	No	3	No
5/7/2002	3	No	3	No	3	No
5/13/2002	3	No	3	No	3	No
5/20/2002	216	No	20	No	31	No
5/28/2002	74	No	3	No	3	No
6/3/2002	3	No	3	No	3	No
6/10/2002	3	No	3	No	3	No
6/17/2002	41	No	3	No	85	No
6/24/2002	31	No	31	No	31	No
7/1/2002	31	No	20	No	3	No
7/8/2002	3	No	3	No	3	No
7/15/2002	41	No	3	No	3	No
7/22/2002	10	No	3	No	20	No
7/29/2002	41	No	10	No	3	No
8/5/2002	10	No	3	No	3	No
8/26/2002	3	No	3	No	10	No
9/3/2002	3	No	3	No	3	No
9/9/2002	63	No	31	No	41	No
9/16/2002	3	No	3	No	10	No
9/23/2002	41	No	3	No	3	No
9/30/2002	10	No	10	No	3	No
10/7/2002	3	No	3	No	74	No
10/14/2002	122	No	122	No	3	No
10/21/2002	31	No	10	No	97	No
10/28/2002	52	No	31	No	97	No
11/4/2002	10	No	3	No	3	No
11/12/2002	11,199	Yes	10	No	20	No
11/18/2002	41	No	3	No	3	No
11/25/2002	41	No	10	No	31	No
12/2/2002	1,246	No	211	No	52	No
12/4/2002	20	No	3	No	3	No
12/9/2002	63	No	41	No	3	No
12/16/2002	1,169	No	145	No	120	Yes
12/18/2002re	7,701	No	63	No	30	No
12/23/2002	1,597	No	10	No	3	No
12/30/2002	697	No	10	No	20	No
Min	3		3		3	
Max	11,199		211		120	

Mean	498		19		20	
Standard Dev	1851.17		39.39		31.19	
1/6/2003	3	No	3	No	3	No
1/13/2003	10	No	3	No	3	No
1/21/2003	74	No	10	No	31	No
1/27/2003	30	No	20	No	3	No
2/3/2003	109	No	3	No	3	No
2/10/2003	134	No	10	No	41	No
2/18/2003	959	No	20	No	3	No
2/24/2003	331	No	63	No	31	No
3/3/2003	20	No	3	No	3	No
3/10/2003	3	No	3	No	10	No
3/17/2003	1,162	No	85	No	31	No
3/24/2003	10	No	3	No	3	No
3/31/2003	31	No	3	No	3	No
4/7/2003	3	No	3	No	3	No
4/14/2003	3,654	No	336	No	156	Yes
4/16/2003re	31	No	20	No	3	No
4/21/2003	3	No	3	No	3	No
4/28/2003	31	No	20	No	3	No
5/5/2003	20	No	3	No	3	No
5/12/2003	121	No	86	No	3	No
5/27/2003	41	No	10	No	3	No
6/2/2003	19,863	Yes	455	Yes	10	No
6/4/2003re	1,850	No	199	No	10	No
6/9/2003	1,187	No	148	No	3	No
6/11/03re	905	No	135	No	10	No
6/16/2003	20	No	3	No	10	No
6/23/2003	41	No	31	No	3	No
6/30/2003	10	No	3	No	3	No
7/7/2003	3	No	3	No	3	No
7/14/2003	160	No	74	No	63	No
7/21/2003	85	No	20	No	52	No
7/28/2003	41	No	3	No	3	No
8/4/2003	41	No	10	No	20	No
8/11/2003	10	No	3	No	3	No
8/18/2003	73	No	10	No	20	No
8/25/2003	20	No	3	No	3	No
9/2/2003	63	No	63	No	10	No
9/8/2003					10	No
9/15/2003					41	No
9/22/2003					573	Yes
9/24/2003					10	No
9/29/2003					10	No
10/6/2003					10	No
10/13/2003					10	No
10/20/2003					10	No
10/27/2003					10	No
11/3/2003					10	No
11/12/2003					142	Yes
11/17/2003					10	No
11/24/2003					10	No
12/1/2003					10	No
12/8/2003					10	No
12/15/2003					10	No
12/22/2003					341	Yes
12/29/2003					10	No
Min	3		3		3	
Max	19,863		455		573	
Mean	842		51		33	
Standard Dev	3290.55		96.68		90.84	

1/5/2004	538	No	109	No	20	No
1/12/2004	10	No	10	No	10	No
1/20/2004	20	No	10	No	10	No
1/26/2004	10	No	10	No	10	No
2/2/2004	10	No	10	No	10	No
2/9/2004	10	No	10	No	10	No
2/17/2004	10	No	10	No	10	No
2/23/2004	3076	No	563	Yes	413	Yes
2/25/2004	479	No	74	No	10	No
3/1/2004	145	No	10	No	10	No
3/8/2004	10	No	10	No	10	No
3/15/2004	1236	No	86	No	30	No
3/22/2004	10	No	10	No	10	No
3/29/2004	262	No	63	No	10	No
4/5/2004	10	No	10	No	10	No
4/12/2004	72	No	10	No	10	No
4/19/2004	10	No	10	No	10	No
4/26/2004	10	No	10	No	10	No
5/3/2004	52	No	10	No	10	No
5/10/2004	10	No	10	No	10	No
5/17/2004	10	No	10	No	20	No
5/19/2004	10	No	10	No	265	Yes
5/24/2004	10	No	10	No	10	No
6/1/2004	20	No	10	No	20	No
6/7/2004	10	No	10	No	20	No
6/14/2004	10	No	10	No	10	No
6/21/2004	10	No	10	No	10	No
6/28/2004	10	No	10	No	10	No
7/6/2004	10	No	10	No	10	No
7/12/2004	10	No	10	No	10	No
7/20/2004	20	No	10	No	10	No
7/26/2004	10	No	20	No	10	No
8/3/2004	10	No	10	No	10	No
8/10/2004	10	No	10	No	10	No
8/17/2004	10	No	10	No	10	No
8/24/2004	145	No	10	No	10	No
8/31/2004	10	No	20	No	20	No
9/7/2004	20	No	10	No	20	No
9/22/2004	110	No	10	No	10	No
9/28/2004	10	No	110	No	10	No
10/5/2004	10	No	10	No	10	No
10/12/2004	249	No	10	No	10	No
10/19/2004	24192	Yes	10	No	10	No
10/26/2004	24192	Yes	65	No	251	Yes
11/2/2004	2851	No	24192	Yes	24192	Yes
12/1/2004	1723	No	10	No	41	No
12/6/2004	272	No	10	No	108	Yes
12/14/2004	1145	No	10	No	63	No
12/22/2004	41	No	20	No	10	No
			10	No		
Min	10		10		10	
Max	24,192		24,192		24,192	
Mean	1,248		525		538	
Standard Dev	4827.08		3452.47		3487.63	
1/5/2005	4884	No	10	No	10	No
1/11/2005	-99	No	-99	No	-99	No
1/19/2005	-99	No	-99	No	-99	No
5/24/2005	1483	No	30	No	74	No
5/30/2005	960	No	62	No	31	No
5/3/2005	399	No	52	No	10	No
5/10/2005	20	No	10	No	10	No

5/17/2005	10	No	10	No	10	No
6/7/2005	1119	No	41	No	10	No
6/14/2005	586	No	10	No	10	No
6/21/2005	1162	No	41	No	20	No
1/25/2005	2247	No	30	No	41	No
2/1/2005	689	No	10	No	10	No
2/15/2005	404	No	10	No	10	No
2/8/2005	462	No	20	No	63	No
4/5/2005	1172	No	63	No	10	No
4/19/2005	393	No	108	No	10	No
4/28/2005	377	No	62	No	20	No
7/12/2005	2282	No	31	No	10	No
7/20/2005	798	No	74	No	10	No
7/26/2005	317	No	10	No	10	No
6/28/2005	243	No	20	No	10	No
7/6/2005	2987	No	20	No	10	No
8/2/2005	15531	Yes	1246	Yes	10	No
8/9/2005	122	No	10	No	10	No
8/15/2005	331	No	31	No	10	No
8/23/2005	10	No	10	No	10	No
9/7/2005	10	No	10	No	10	No
9/13/2005	10	No	10	No	10	No
9/20/2005	20	No	10	No	10	No
8/30/2005	10	No	10	No	10	No
9/27/2005	10	No	10	No	10	No
10/5/2005	10	No	10	No	10	No
10/12/2005	10	No	10	No	10	No
10/18/2005	422	No	10	No	10	No
11/7/2005	10	No	10	No	10	No
11/15/2005	52	No	10	No	10	No
11/22/2005	10	No	10	No	10	No
12/13/2005	10	No	10	No	10	No
10/25/2005	161	No	10	No	10	No
11/1/2005	10	No	10	No	10	No
11/30/2005	197	No	74	No	20	No
12/6/2005	10	No	10	No	10	No
12/28/2005	10	No	10	No	10	No
Min	(99)		(99)		(99)	
Max	15,531		1,246		74	
Mean	904		47		10	
Standard Dev	2450.66		188.24		27.43	
4yr % Exc	2.51%		2.04%		4.84%	

HAMMONDS BEACH
Fac: ID# 012524

Date	Total Coliform	exceeds	Fecal Coliform	exceeds	Enterococcus	exceeds
1/2/2002	85	No	10	No	10	No
1/7/2002	512	No	63	No	10	No
1/14/2002	3	No	3	No	3	No
1/22/2002	10	No	10	No	3	No
1/28/2002	563	No	73	No	41	No
2/4/2002	3	No	3	No	3	No
2/11/2002	30	No	30	No	3	No
2/19/2002	10	No	10	No	1100	Yes
2/26/2002	259	No	275	No	20	No
3/4/2002	10	No	10	No	3	No
3/11/2002	31	No	20	No	3	No
3/18/2002	309	No	20	No	20	No
3/25/2002	285	No	3	No	3	No
4/1/2002	10	No	3	No	3	No
4/8/2002	86	No	3	No	3	No
4/15/2002	1,968	No	73	No	41	No
4/22/2002	169	No	41	No	3	No
4/28/2002	10	No	10	No	10	No
5/7/2002	41	No	3	No	3	No
5/13/2002	10	No	3	No	3	No
5/20/2002	20	No	3	No	3	No
5/28/2002	31	No	31	No	3	No
6/3/2002	10	No	10	No	3	No
6/10/2002	41	No	31	No	31	No
6/17/2002	20	No	3	No	3	No
6/24/2002	20	No	3	No	10	No
7/1/2002	20	No	3	No	3	No
7/8/2002	31	No	10	No	3	No
7/15/2002	10	No	3	No	3	No
7/22/2002	63	No	41	No	3	No
7/29/2002	161	No	161	No	31	No
8/5/2002	10	No	3	No	20	No
8/12/2002	20	No	20	No	3	No
8/19/2002	10	No	10	No	20	No
8/26/2002	3	No	3	No	3	No
9/3/2002	10	No	3	No	10	No
9/9/2002	86	No	63	No	30	No
9/16/2002	3	No	3	No	3	No
9/23/2002	20	No	10	No	3	No
9/30/2002	20	No	3	No	3	No
10/7/2002	63	No	20	No	72	No
10/14/2002	10	No	3	No	379	Yes
10/16/2002re	20	No	10	No	3	No
10/21/2002	833	No	583	Yes	706	Yes
10/23/2002re	74	No	52	No	52	No
10/28/2002	298	No	250	No	132	Yes
10/30/2002re	63	No	3	No	3	No
11/4/2002	31	No	10	No	20	No
11/18/2002	354	No	72	No	10	No
11/25/2002	74	No	3	No	3	No
12/2/2002	465	No	98	No	122	Yes
12/04/2002re	84	No	62	No	109	Yes
12/9/2002	51	No	3	No	10	No
12/16/2002	24,192	Yes	4,352	Yes	12,997	Yes
12/18/2002re	1,396	No	52	No	63	No
12/23/2002	148	No	3	No	20	No
12/30/2002	285	No	41	No	10	No
Min	3		3		3	
Max	24,192		4,352		12,997	
Mean	587		118		284	
Standard Dev	3200.48		578.02		1722.96	

1/6/2003	63	No	3	No	30	No
1/13/2003	63	No	31	No	3	No
1/21/2003	20	No	10	No	20	No
1/27/2003	20	No	3	No	10	No
2/3/2003	108	No	63	No	3	No
2/10/2003	20	No	3	No	3	No
2/18/2003	173	No	3	No	10	No
2/24/2003	41	No	20	No	10	No
3/3/2003	52	No	20	No	3	No
3/10/2003	3	No	3	No	10	No
3/17/2003	12,997	Yes	228	No	318	Yes
03/18/2003re	1,956	No	86	No	98	No
3/24/2003	644	No	31	No	10	No
3/31/2003	295	No	10	No	3	No
4/7/2003	74	No	10	No	3	No
4/14/2003	465	No	41	No	41	No
4/21/2003	97	No	3	No	20	No
4/28/2003	51	No	3	No	10	No
5/5/2003	19,863	Yes	670	Yes	216	Yes
5/7/2003re	1,162	No	85	No	41	No
5/12/2003	246	No	10	No	20	No
5/19/2003	85	No	10	No	3	No
5/27/2003	10	No	3	No	3	No
6/2/2003	31	No	3	No	3	No
6/9/2003	86	No	3	No	10	No
6/16/2003	30	No	10	No	10	No
6/23/2003	3	No	3	No	20	No
6/30/2003	3	No	3	No	3	No
7/7/2003	20	No	3	No	663	Yes
7/9/2003re	3	No	3	No	3	No
7/14/2003	31	No	10	No	10	No
7/21/2003	10	No	3	No	10	No
7/28/2003	10	No	3	No	3	No
8/4/2003	10	No	10	No	10	No
8/11/2003	20	No	10	No	30	No
8/18/2003	52	No	10	No	10	No
8/25/2003	31	No	10	No	10	No
9/2/2003	31	No	10	No	10	No
9/8/2003	10	No	10	No	20	No
9/15/2003	98	No	31	No	10	No
9/22/2003	10	No	10	No	10	No
9/29/2003	74	No	10	No	31	No
10/6/2003	10	No	10	No	10	No
10/13/2003	3448	No	3448	Yes	402	Yes
10/15/2003	10	No	10	No	10	No
10/20/2003	41	No	10	No	20	No
10/27/2003	175	No	63	No	85	No
11/3/2003	295	No	10	No	10	No
11/12/2003	10	No	10	No	10	No
11/17/2003	41	No	10	No	20	No
11/24/2003	20	No	10	No	20	No
12/1/2003	10	No	10	No	10	No
12/8/2003	41	No	10	No	10	No
12/15/2003	52	No	10	No	10	No
12/22/2003	243	No	74	No	645	Yes
12/29/2003	122	No	10	No	10	No
Min	3		3		3	
Max	19,863		3,448		663	
Mean	778		93		54	
Standard Dev	3155.62		465.99		136.78	
1/5/2004	10	No	10	No	10	No
1/12/2004	109	No	52	No	41	No
1/20/2004	213	No	41	No	52	No
1/26/2004	10	No	10	No	10	No
2/2/2004	10	No	10	No	10	No
2/9/2004	10	No	10	No	10	No
2/23/2004	86	No	10	No	10	No

3/1/2004	465	No	10	No	10	No
3/8/2004	31	No	10	No	20	No
3/15/2004	134	No	10	No	10	No
3/22/2004	1354	No	41	No	10	No
3/24/2004	41	No	10	No	1565	Yes
3/29/2004	10	No	20	No	10	No
4/5/2004	20	No	10	No	10	No
4/12/2004	31	No	10	No	10	No
4/19/2004	20	No	10	No	10	No
4/26/2004	10	No	10	No	10	No
5/3/2004	31	No	10	No	10	No
5/10/2004	72	No	20	No	10	No
5/17/2004	20	No	10	No	10	No
5/24/2004	10	No	10	No	10	No
6/1/2004	20	No	10	No	10	No
6/7/2004	41	No	10	No	10	No
6/14/2004	109	No	41	No	20	No
6/21/2004	20	No	20	No	10	No
6/28/2004	52	No	10	No	10	No
7/6/2004	10	No	52	No	10	No
7/12/2004	10	No	10	No	10	No
7/19/2004	148	No	10	No	10	No
7/21/2004	31	No	74	No	109	Yes
7/26/2004	146	No	10	No	10	No
8/2/2004	10	No	10	No	10	No
8/9/2004	10	No	10	No	10	No
8/16/2004	20	No	10	No	10	No
8/23/2004	10	No	20	No	10	No
8/30/2004	10	No	10	No	10	No
9/7/2004	20	No	10	No	10	No
9/13/2004	10	No	10	No	10	No
9/21/2004	10	No	10	No	10	No
9/27/2004	10	No	10	No	10	No
10/4/2004	10	No	10	No	10	No
10/11/2004	10	No	10	No	10	No
10/18/2004	9804	No	10	No	10	No
10/25/2004	5475	No	171	No	41	No
11/1/2004	52	No	73	No	10	No
12/1/2004	31	No	10	No	31	No
12/6/2004	10	No	10	No	10	No
12/13/2004	20	No	10	No	10	No
12/21/2004	31	No	10	No	10	No
12/27/2004	399	No	20	No	10	No
Min	10		10		10	
Max	9,804		171		1,565	
Mean	385		20		46	
Standard Dev	1571.85		26.95		219.81	

1/18/2005	24192	Yes	41	No	31	No
1/24/2005	350	No	20	No	52	No
1/26/2005	379	No	31	No	10	No
1/31/2005	1842	No	41	No	10	No
2/7/2005	238	No	10	No	41	No
2/14/2005	275	No	10	No	20	No
2/22/2005	10	No	10	No	728	Yes
2/24/2005	193	No	10	No	10	No
2/28/2005	373	No	10	No	10	No
3/7/2005	882	No	20	No	10	No
3/14/2005	24192	Yes	10	No	20	No
3/21/2005	934	No	10	No	10	No
3/28/2005	435	No	20	No	52	No
4/4/2005	1281	No	10	No	31	No
4/6/2005	670	No	10	No	10	No
4/11/2005	24192	Yes	588	Yes	31	No
4/18/2005	1789	No	10	No	31	No
4/28/2005	148	No	10	No	10	No
5/2/2005	226	No	10	No	31	No
5/10/2005	1664	No	10	No	10	No
5/16/2005	63	No	10	No	20	No
5/23/2005	2282	No	20	No	41	No
5/30/2005	1281	No	185	No	10	No
6/6/2005	703	No	95	No	10	No
6/13/2005	504	No	31	No	30	No
6/20/2005	776	No	96	No	30	No
6/27/2005	379	No	20	No	10	No
7/5/2005	109	No	10	No	10	No
7/11/2005	10	No	10	No	10	No
7/19/2005	41	No	288	No	10	No
7/25/2005	1259	No	10	No	72	No
7/27/2005	10	No	10	No	10	No
8/1/2005	201	No	10	No	10	No
8/8/2005	63	No	10	No	10	No
8/15/2005	20	No	10	No	10	No
8/22/2005	86	No	10	No	10	No
8/29/2005	20	No	10	No	10	No
9/6/2005	41	No	10	No	10	No
9/12/2005	10	No	10	No	10	No
9/19/2005	10	No	10	No	10	No
9/26/2005	52	No	10	No	10	No
10/4/2005	298	No	160	No	85	No
10/11/2005	10	No	10	No	10	No
10/17/2005	250	No	84	No	10	No
10/24/2005	41	No	30	No	10	No
10/31/2005	20	No	10	No	10	No
11/7/2005	20	No	10	No	10	No
11/14/2005	63	No	31	No	10	No
11/21/2005	74	No	20	No	10	No
11/29/2005	10	No	20	No	10	No
12/5/2005	52	No	10	No	10	No
12/12/2005	20	No	20	No	52	No
12/19/2005	41	No	10	No	10	No
Min	10		10		10	
Max	24,192		588		728	
Mean	1,756		41		33	
Standard Dev	5575.33		91.74		98.79	
4yr % Exc	2.75%		2.24%		6.83%	

HOPE RANCH BEACH
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Date	Total Coliform	exceeds	Fecal Coliform	exceeds	Enterococcus	exceeds
1/2/2002	295	No	20	No	31	No
1/7/2002	288	No	20	No	52	No
1/14/2002	20	No	3	No	10	No
1/22/2002	20	No	3	No	3	No
1/28/2002	1,259	No	41	No	52	No
2/4/2002	20	No	3	No	3	No
2/11/2002	20	No	3	No	10	No
2/19/2002	120	No	63	No	3	No
2/26/2002	109	No	52	No	62	No
3/4/2002	31	No	10	No	3	No
3/11/2002	86	No	20	No	20	No
3/18/2002	243	No	63	No	41	No
3/25/2002	31	No	10	No	41	No
4/1/2002	155	No	30	No	20	No
4/8/2002	146	No	63	No	10	No
4/15/2002	122	No	10	No	30	No
4/22/2002	31	No	10	No	20	No
4/28/2002	10	No	3	No	10	No
5/7/2002	31	No	10	No	3	No
5/13/2002	10	No	3	No	3	No
5/20/2002	52	No	10	No	10	No
5/28/2002	20	No	10	No	10	No
6/3/2002	52	No	31	No	3	No
6/10/2002	10	No	3	No	10	No
6/17/2002	265	No	3	No	10	No
6/24/2002	41	No	3	No	10	No
7/1/2002	52	No	3	No	20	No
7/8/2002	74	No	30	No	31	No
7/15/2002	97	No	10	No	20	No
7/22/2002	602	No	75	No	63	No
7/29/2002	10	No	10	No	3	No
8/5/2002	20	No	10	No	10	No
8/12/2002	20	No	3	No	31	No
8/19/2002	41	No	20	No	3	No
8/26/2002	51	No	3	No	31	No
9/3/2002	41	No	3	No	3	No
9/9/2002	10	No	3	No	10	No
9/16/2002	185	No	31	No	41	No
9/23/2002	41	No	20	No	3	No
9/30/2002	3	No	3	No	3	No
10/7/2002	369	No	265	No	41	No
10/14/2002	52	No	20	No	10	No
10/21/2002	41	No	20	No	10	No
10/28/2002	74	No	41	No	52	No
11/4/2002	364	No	243	No	74	No
11/12/2002	24,192	Yes	41	No	41	No
11/18/2002	862	No	31	No	41	No
11/25/2002	3	No	3	No	3	No
12/2/2002	158	No	10	No	3	No
12/9/2002	110	No	3	No	20	No
12/16/2002	24,192	Yes	24,192	Yes	24192	Yes
12/18/2002re	4,352	No	110	No	223	Yes
12/23/2002	2,613	No	3	No	393	Yes
12/30/2002	528	No	20	No	3	No
Min	3		3		3	
Max	24,192		24,192		24,192	
Mean	1,160		476		479	
Standard Dev	4612.03		3288.55		3288.39	
1/6/2003	85	No	3	No	20	No
1/13/2003	31	No	20	No	3	No
1/21/2003	292	No	98	No	41	No
1/27/2003	10	No	3	No	3	No
2/3/2003	20	No	3	No	3	No
2/10/2003	3	No	3	No	3	No
2/18/2003	146	No	10	No	10	No
2/24/2003	185	No	10	No	3	No
3/3/2003	10	No	10	No	3	No

3/10/2003	20	No	3	No	3	No
3/17/2003	1,483	No	20	No	62	No
3/24/2003	495	No	3	No	70	No
3/31/2003	121	No	10	No	20	No
4/7/2003	41	No	10	No	20	No
4/14/2003	8,664	No	52	No	246	Yes
4/16/2003re	145	No	30	No	3	No
4/21/2003	109	No	3	No	52	No
4/28/2003	259	No	41	No	41	No
5/5/2003			No sample taken - Road closed.			
5/7/2003	10	No	3	No	3	No
5/12/2003	41	No	3	No	10	No
5/19/2003	63	No	3	No	10	No
5/27/2003	185	No	86	No	20	No
6/2/2003	107	No	10	No	3	No
6/9/2003	146	No	10	No	74	No
6/16/2003	63	No	52	No	10	No
6/23/2003	10	No	3	No	3	No
7/2/03re	63	No	31	No	20	No
7/7/2003	3	No	3	No	3	No
7/14/2003	41	No	10	No	3	No
7/21/2003	41	No	3	No	3	No
7/28/2003	189	No	10	No	41	No
8/4/2003	86	No	31	No	10	No
8/11/2003	109	No	10	No	3	No
8/18/2003	121	No	10	No	3	No
8/25/2003	41	No	3	No	20	No
9/2/2003	85	No	10	No	10	No
9/8/2003					119	Yes
9/10/2003					10	No
9/15/2003					10	No
9/22/2003					20	No
9/29/2003					10	No
10/6/2003					31	No
10/13/2003					10	No
10/20/2003					10	No
10/27/2003					41	No
11/3/2003					41	No
11/12/2003					121	Yes
11/17/2003					10	No
11/24/2003					20	No
12/1/2003					20	No
12/8/2003					20	No
12/15/2003					10	No
12/22/2003					934	Yes
12/29/2003					10	No
Min	3		3		3	
Max	8,664		98		934	
Mean	376		17		43	
Standard Dev	1442.80		22.84		129.98	

2/17/2004	189	No	41	No	10	No
2/23/2004	135	No	10	No	10	No
3/1/2004	134	No	10	No	20	No
3/8/2004	327	No	10	No	10	No
3/15/2004	52	No	10	No	10	No
3/22/2004	187	No	31	No	10	No
3/29/2004	84	No	10	No	10	No
4/5/2004	31	No	10	No	10	No
4/12/2004	41	No	10	No	10	No
4/19/2004	10	No	10	No	10	No
4/26/2004	52	No	10	No	10	No
5/3/2004	20	No	10	No	10	No
5/10/2004	145	No	10	No	10	No
5/17/2004	134	No	20	No	63	No
5/24/2004	10	No	10	No	10	No
6/1/2004	20	No	10	No	10	No
6/7/2004	10	No	10	No	30	No
6/14/2004	160	No	41	No	20	No
6/21/2004	10	No	10	No	10	No
6/28/2004	10	No	10	No	10	No
7/6/2004	41	No	10	No	10	No
7/12/2004	20	No	10	No	10	No
7/19/2004	20	No	10	No	10	No
7/26/2004	10	No	10	No	10	No
8/2/2004	62	No	41	No	20	No
8/9/2004	97	No	41	No	10	No
8/16/2004	31	No	10	No	31	No
8/23/2004	594	No	496	Yes	10	No
8/25/2004	98	No	31	No	10	No
8/30/2004	121	No	74	No	31	No
9/7/2004	52	No	10	No	10	No
9/13/2004	41	No	20	No	10	No
9/21/2004	10	No	10	No	10	No
9/27/2004	63	No	42	No	10	No
10/4/2004	52	No	31	No	10	No
10/11/2004	31	No	10	No	10	No
10/18/2004	24192	Yes	5172	Yes	15531	Yes
10/20/2004	19863	Yes	1860	Yes	2723	Yes
10/25/2004	8164	No	437	Yes	148	Yes
10/27/2004	5172	No	905	Yes	379	Yes
11/1/2004	74	No	31	No	10	No
12/1/2004	41	No	10	No	10	No
12/6/2004	350	No	52	No	41	No
12/13/2004	262	No	41	No	10	No
12/21/2004	52	No	10	No	10	No
12/27/2004	631	No	31	No	63	No
Min	10		10		10	
Max	24,192		5,172		15,531	
Mean	1,346		211		422	
Standard Dev	4693.22		808.94		2312.30	

2/7/2005	278	No	10	No	20	No
2/14/2005	307	No	20	No	20	No
2/22/2005	199	No	226	No	52	No
2/24/2005	231	No	41	No	41	No
2/28/2005	209	No	10	No	20	No
3/7/2005	173	No	10	No	20	No
3/14/2005	2723	No	10	No	20	No
3/21/2005	1112	No	52	No	20	No
3/28/2005	1345	No	20	No	10	No
4/4/2005	933	No	10	No	10	No
4/11/2005	24192	Yes	10	No	487	Yes
4/18/2005	557	No	10	No	10	No
4/28/2005	1850	No	10	No	74	No
5/2/2005	246	No	20	No	10	No
5/10/2005	9208	No	31	No	63	No
5/16/2005	2359	No	74	No	63	No
5/23/2005	839	No	73	No	52	No
5/30/2005	195	No	41	No	10	No
6/6/2005	97	No	31	No	20	No
6/13/2005	63	No	41	No	20	No
6/20/2005	108	No	31	No	31	No
6/27/2005	84	No	10	No	20	No
7/5/2005	148	No	10	No	73	No
7/11/2005	155	No	10	No	20	No
7/19/2005	397	No	72	No	20	No
7/25/2005	250	No	63	No	10	No
8/1/2005	201	No	86	No	41	No
8/8/2005	168	No	20	No	31	No
8/15/2005	958	No	30	No	10	No
8/22/2005	110	No	31	No	73	No
8/29/2005	20	No	10	No	10	No
9/6/2005	52	No	10	No	10	No
9/12/2005	160	No	10	No	10	No
9/19/2005	131	No	10	No	119	Yes
9/26/2005	31	No	20	No	30	No
9/28/2005	41	No	10	No	31	No
10/4/2005	41	No	30	No	10	No
10/11/2005	52	No	41	No	20	No
10/17/2005	20	No	10	No	10	No
10/24/2005	199	No	31	No	10	No
10/31/2005	41	No	10	No	10	No
11/7/2005	10	No	20	No	10	No
11/14/2005	135	No	20	No	10	No
11/21/2005	110	No	10	No	10	No
11/29/2005	20	No	10	No	10	No
12/5/2005	63	No	10	No	31	No
12/12/2005	41	No	10	No	10	No
12/19/2005	74	No	10	No	52	No
Min	10		10		10	
Max	24,192		226		487	
Mean	1,061		29		37	
Standard Dev	3687.79		35.44		70.37	
4yr % Exc	2.53%		3.18%		6.42%	

JALAMA BEACH- Mouth

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Date	Total Coliform	exceeds	Fecal Coliform	exceeds	Enterococcus	exceeds
1/7/2002	20	No	10	No	3	No
1/14/2002	108	No	30	No	3	No
1/22/2002	63	No	3	No	3	No
1/28/2002	183	No	10	No	3	No
2/4/2002	41	No	10	No	10	No
2/11/2002	52	No	20	No	3	No
2/19/2002	135	No	31	No	41	No
2/26/2002	63	No	20	No	20	No
3/4/2002	41	No	10	No	3	No
3/11/2002	98	No	41	No	3	No
3/18/2002	132	No	41	No	3	No
3/25/2002	10	No	3	No	20	No
4/1/2002	10	No	3	No	3	No
4/8/2002	41	No	20	No	10	No
4/15/2002	122	No	10	No	10	No
4/22/2002	697	No	309	No	187	Yes
4/28/2002	98	No	31	No	63	No
5/7/2002	86	No	3	No	3	No
5/13/2002	3	No	3	No	3	No
5/20/2002	520	No	52	No	161	Yes
5/28/2002	73	No	3	No	3	No
6/3/2002	135	No	20	No	3	No
6/10/2002	185	No	31	No	30	No
6/17/2002	309	No	20	No	20	No
6/24/2002	No sample taken					
7/1/2002	231	No	41	No	63	No
7/8/2002	73	No	3	No	3	No
7/15/2002	233	No	3	No	30	No
7/22/2002	243	No	10	No	31	No
7/29/2002	10	No	10	No	3	No
8/5/2002	97	No	52	No	31	No
8/12/2002	20	No	20	No	10	No
8/19/2002	3	No	3	No	3	No
8/26/2002	41	No	3	No	3	No
9/3/2002	10	No	10	No	3	No
9/9/2002	10	No	10	No	3	No
9/16/2002	52	No	10	No	10	No
9/23/2002	63	No	10	No	20	No
9/30/2002	10	No	10	No	10	No
10/7/2002	228	No	31	No	74	No
10/14/2002	97	No	41	No	63	No
10/21/2002	10	No	3	No	3	No
10/28/2002	63	No	41	No	3	No
11/4/2002	41	No	20	No	3	No
11/12/2002	3,873	No	85	No	10	No

11/18/2002	1,223	No	74	No	20	No
11/25/2002	327	No	41	No	3	No
12/2/2002	233	No	20	No	52	No
12/9/2002	354	No	3	No	3	No
12/16/2002	11,199	Yes	98	No	240	Yes
12/23/2002	1,989	No	52	No	10	No
12/30/2002	1,313	No	3	No	20	No
Min	3		3		3	
Max	11,199		309		240	
Mean	496		28		26	
Standard Dev	1653.26		45.72		47.39	
1/6/2003	31	No	3	No	3	No
1/13/2003	31	No	3	No	10	No
1/21/2003	41	No	10	No	3	No
1/27/2003	63	No	10	No	3	No
2/3/2003	108	No	41	No	30	No
2/10/2003	354	No	231	No	20	No
2/18/2003	98	No	3	No	3	No
2/24/2003	3	No	3	No	3	No
3/3/2003	63	No	10	No	3	No
3/10/2003	5,475	No	439	Yes	74	No
3/17/2003	598	No	86	No	41	No
3/24/2003	52	No	10	No	3	No
3/31/2003	3	No	3	No	3	No
4/7/2003	171	No	74	No	10	No
4/14/2003	292	No	110	No	63	No
4/21/2003	161	No	20	No	30	No
4/28/2003	738	No	31	No	52	No
5/5/2003	420	No	63	No	10	No
5/12/2003	41	No	31	No	10	No
5/19/2003	350	No	72	No	83	No
5/27/2003	122	No	3	No	10	No
6/2/2003	10,462	Yes	41	No	10	No
6/9/2003	259	No	20	No	10	No
6/16/2003	528	No	20	No	3	No
6/23/2003	1,354	No	134	No	3	No
6/30/2003	281	No	10	No	3	No
7/7/2003	959	No	86	No	10	No
7/14/2003	12,033	Yes	74	No	10	No
7/21/2003	4,352	No	121	No	20	No
7/28/2003	135	No	10	No	10	No
8/4/2003	3	No	3	No	3	No
8/11/2003	1,014	No	20	No	10	No
8/18/2003	158	No	30	No	3	No
8/25/2003	1,119	No	63	No	10	No
9/2/2003	122	No	3	No	3	No
9/8/2003					10	No
9/15/2003					10	No
9/22/2003					10	No
9/29/2003					31	No
10/6/2003					10	No
10/13/2003					132	Yes
10/20/2003					10	No

10/27/2003					10	No
11/3/2003					41	No
11/12/2003					10	No
11/17/2003					10	No
11/24/2003					10	No
12/1/2003					31	No
12/8/2003					10	No
12/15/2003					10	No
12/22/2003					118	Yes
12/29/2003					52	No
Min	3		3		3	
Max	12,033		439		132	
Mean	1,200		54		21	
Standard Dev	2764.33		83.30		28.20	
2/9/2004	295	No	41	No	20	No
2/17/2004	10	No	10	No	10	No
2/23/2004	243	No	52	No	20	No
3/1/2004	74	No	10	No	10	No
3/8/2004	109	No	30	No	63	No
3/15/2004	657	No	20	No	10	No
3/22/2004	448	No	86	No	74	No
3/29/2004	10	No	10	No	10	No
4/5/2004	1354	No	31	No	41	No
4/12/2004	203	No	10	No	10	No
4/19/2004	520	No	20	No	31	No
4/26/2004	816	No	135	No	20	No
5/3/2004	6015	No	158	No	63	No
5/10/2004	1483	No	10	No	10	No
5/17/2004	62	No	10	No	10	No
5/24/2004	10	No	10	No	10	No
6/1/2004	228	No	41	No	31	No
6/7/2004	24192	Yes	213	No	384	Yes
6/14/2004	20	No	10	No	10	No
6/21/2004	1455	No	97	No	132	Yes
6/28/2004	20	No	10	No	10	No
7/6/2004	794	No	63	No	63	No
7/12/2004	171	No	20	No	20	No
7/20/2004	169	No	10	No	10	No
7/27/2004	435	No	185	No	31	No
8/3/2004	148	No	10	No	10	No
8/10/2004	10	No	10	No	10	No
8/17/2004	10	No	10	No	10	No
8/24/2004	10	No	10	No	10	No
8/31/2004	10	No	10	No	10	No
9/7/2004	471	No	10	No	10	No
9/14/2004	1467	No	10	No	41	No
9/22/2004	10	No	10	No	10	No
9/28/2004	110	No	10	No	10	No
10/5/2004	31	No	10	No	10	No
10/12/2004	31	No	10	No	10	No
10/19/2004	41	No	10	No	10	No
10/26/2004	10	No	10	No	10	No
11/2/2004	146	No	41	No	10	No

12/1/2004	132	No	10	No	10	No
12/7/2004	10	No	10	No	10	No
12/14/2004	74	No	10	No	10	No
12/22/2004	1553	No	226	No	n/s	Yes
12/28/2004	160	No	20	No	10	No
Min	10		10		10	
Max	24,192		226		384	
Mean	1,005		40		31	
Standard Dev	3706.47		57.00		60.31	
2/15/2005	20	No	10	No	122	Yes
2/23/2005	5475	No	148	No	31	No
3/1/2005	2603	No	120	No	10	No
3/8/2005	2187	No	134	No	31	No
3/15/2005	10	No	10	No	10	No
3/22/2005	24192	Yes	4106	Yes	544	Yes
3/29/2005	576	No	10	No	10	No
4/5/2005	1050	No	41	No	10	No
4/12/2005	3255	No	2282	Yes	504	Yes
4/19/2005	723	No	82	No	41	No
4/28/2005	332	No	10	No	10	No
5/3/2005	2481	No	583	Yes	108	Yes
5/10/2005	1616	No	185	No	73	No
5/17/2005	31	No	10	No	10	No
5/24/2005	17329	Yes	31	No	10	No
5/30/2005	487	No	10	No	10	No
6/7/2005	63	No	10	No	10	No
6/14/2005	10	No	10	No	10	No
6/21/2005	830	No	31	No	103	No
6/28/2005	6867	No	10	No	52	No
7/6/2005	3448	No	31	No	10	No
7/12/2005	3076	No	134	No	63	No
7/20/2005	41	No	10	No	10	No
7/26/2005	1789	No	20	No	63	No
8/2/2005	233	No	20	No	10	No
8/9/2005	465	No	10	No	10	No
8/15/2005	41	No	10	No	10	No
8/23/2005	771	No	131	No	85	No
8/30/2005	744	No	41	No	10	No
9/7/2005	689	No	20	No	20	No
9/13/2005	1296	No	63	No	10	No
9/20/2005	20	No	10	No	10	No
9/27/2005	98	No	10	No	41	No
10/5/2005	98	No	10	No	10	No
10/12/2005	243	No	63	No	10	No
10/18/2005	10	No	10	No	41	No
10/25/2005	2046	No	20	No	51	No
11/1/2005	10	No	10	No	10	No
11/7/2005	41	No	10	No	10	No
11/15/2005	63	No	10	No	10	No
11/22/2005	53	No	41	No	10	No
11/30/2005	364	No	197	No	134	Yes
12/6/2005	109	No	20	No	10	No
12/13/2005	1616	No	171	No	369	Yes

Min	10		10		10	
Max	24,192		4,106		544	
Mean	1,989		202		62	
Standard Dev	4466.27		695.88		118.91	
4yr % Exc	3.15%		2.19%		7.52%	

OCEAN/SURF BEACH

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Date	Total Coliform	exceeds	Fecal Coliform	exceeds	Enterococcus	exceeds
1/2/2002	3	No	3	No	3	No
1/7/2002	3	No	3	No	3	No
1/14/2002	10	No	3	No	3	No
1/22/2002	122	No	3	No	10	No
1/28/2002	41	No	3	No	3	No
2/4/2002	52	No	3	No	3	No
2/11/2002	10	No	3	No	3	No
2/19/2002	1,076	No	20	No	3	No
2/26/2002	41	No	10	No	3	No
2/26/2002	41	No	10	No	3	No
3/4/2002	No sample collected- Closed due to Snowy Plover					
3/11/2002	No sample collected- Closed due to Snowy Plover					
3/18/2002	No sample collected- Closed due to Snowy Plover					
3/25/2002	No sample collected- Closed due to Snowy Plover					
4/1/2002	No sample collected- Closed due to Snowy Plover					
4/8/2002	3	No	3	No	3	No
4/15/2002	98	No	3	No	3	No
4/22/2002	3	No	3	No	30	No
4/28/2002	3	No	3	No	3	No
5/7/2002	No sample collected- Beach closed (due to Snowy Plover?)					
5/13/2002	20	No	3	No	3	No
5/20/2002	624	No	30	No	31	No
5/22/2002	No sample collected- Beach closed due to Snowy Plover					
5/28/2002	No sample collected- Beach closed due to Snowy Plover					
6/3/2002	3	No	3	No	3	No
6/10/2002	3	No	3	No	3	No
6/17/2002	10	No	3	No	3	No
6/24/2002	No sample					
7/1/2002	3	No	3	No	3	No
7/8/2002	3	No	3	No	20	No
7/15/2002	3	No	3	No	3	No
7/22/2002	3	No	3	No	3	No
7/29/2002	10	No	10	No	3	No
8/5/2002	3	No	3	No	3	No
8/12/2002	20	No	3	No	41	No
8/19/2002	20	No	10	No	3	No
8/26/2002	20	No	10	No	3	No
9/3/2002	No sample collected - Beach closed due to Snowy Plover?					
9/9/2002	10	No	10	No	10	No
9/16/2002	3	No	3	No	350	Yes
9/23/2002	3	No	3	No	3	No
9/30/2002	3	No	3	No	520	Yes
10/7/2002	3	No	3	No	3	No
10/14/2002	3	No	3	No	3	No
10/21/2002	20	No	10	No	10	No

10/28/2002	10	No	3	No	3	No
11/4/2002	20	No	3	No	3	No
11/12/2002	31	No	3	No	3	No
11/18/2002	10	No	10	No	3	No
11/25/2002	10	No	3	No	3	No
12/2/2002	3	No	3	No	3	No
12/9/2002	3	No	3	No	3	No
12/16/2002	10	No	3	No	10	No
12/23/2002	85	No	3	No	20	No
12/30/2002	121	No	3	No	3	No
Min	3		3		3	
Max	1,076		30		520	
Mean	58		5		26	
Standard Dev	181.88		5.20		91.50	
1/6/2003	97	No	3	No	20	No
1/13/2003	3	No	3	No	3	No
1/21/2003	41	No	10	No	3	No
1/27/2003	10	No	10	No	3	No
2/3/2003	3	No	3	No	3	No
2/10/2003	74	No	10	No	3	No
2/18/2003	41	No	10	No	3	No
2/24/2003	10	No	10	No	3	No
3/3/2003	3	No	3	No	3	No
3/10/2003	3	No	3	No	3	No
3/17/2003	74	No	3	No	3	No
3/24/2003	3	No	3	No	3	No
3/31/2003	3	No	3	No	3	No
4/7/2003	3	No	3	No	3	No
4/14/2003	3	No	3	No	3	No
4/21/2003	3	No	3	No	3	No
4/28/2003	3	No	3	No	3	No
5/5/2003	30	No	3	No	3	No
5/12/2003	3	No	3	No	3	No
5/19/2003	3	No	3	No	3	No
5/27/2003	No Sample taken					
6/2/2003	10	No	3	No	3	No
6/9/2003	3	No	3	No	20	No
6/16/2003	3	No	3	No	3	No
6/23/2003	3	No	3	No	3	No
6/30/2003	3	No	3	No	3	No
7/7/2003	3	No	3	No	3	No
7/14/2003	3	No	3	No	3	No
7/21/2003	3	No	3	No	3	No
7/28/2003	3	No	3	No	10	No
8/4/2003	3	No	3	No	3	No
8/11/2003	3	No	3	No	3	No
8/18/2003	3	No	3	No	3	No
8/25/2003	3	No	3	No	3	No
9/2/2003	No Sample taken					
9/8/2003					10	No

9/15/2003					10	No
9/22/2003					10	No
9/29/2003					10	No
10/6/2003					10	No
10/13/2003					108	Yes
10/20/2003					10	No
10/27/2003					10	No
11/3/2003					10	No
11/12/2003					10	No
11/17/2003					10	No
11/24/2003					10	No
12/1/2003					10	No
12/8/2003					10	No
12/15/2003					10	No
12/22/2003					10	No
12/29/2003					10	No
Min	3		3		3	
Max	97		10		108	
Mean	14		4		8	
Standard Dev	24.21		2.55		15.05	
2/9/2004	10	No	10	No	10	No
2/17/2004	14136	Yes	41	No	10	No
2/23/2004	512	No	10	No	10	No
3/1/2004	10	No	10	No	10	No
3/8/2004	10	No	10	No	10	No
3/15/2004	10	No	10	No	10	No
3/22/2004	121	No	10	No	10	No
3/29/2004	10	No	10	No	10	No
4/5/2004	10	No	10	No	10	No
4/12/2004	10	No	10	No	10	No
4/19/2004	10	No	10	No	52	No
4/26/2004	10	No	10	No	10	No
5/3/2004	10	No	10	No	31	No
5/10/2004	10	No	10	No	10	No
5/17/2004	10	No	10	No	10	No
5/24/2004	10	No	10	No	10	No
6/7/2004	10	No	10	No	10	No
6/14/2004	10	No	10	No	488	Yes
6/21/2004	86	No	10	No	10	No
6/28/2004	10	No	10	No	10	No
7/6/2004	10	No	10	No	10	No
7/12/2004	10	No	10	No	10	No
7/20/2004	10	No	10	No	10	No
7/27/2004	10	No	10	No	10	No
8/3/2004	31	No	31	No	10	No
8/10/2004	10	No	10	No	10	No
8/17/2004	10	No	10	No	10	No
8/24/2004	10	No	10	No	10	No
8/31/2004	10	No	10	No	10	No
9/7/2004	10	No	10	No	10	No

9/14/2004	10	No	10	No	20	No
9/22/2004	10	No	10	No	10	No
9/28/2004	10	No	10	No	10	No
10/5/2004	10	No	10	No	10	No
10/12/2004	10	No	10	No	10	No
10/19/2004	10	No	10	No	10	No
10/26/2004	10	No	10	No	10	No
11/2/2004	482	No	10	No	10	No
12/1/2004	30	No	10	No	10	No
12/7/2004	31	No	10	No	10	No
12/14/2004	10	No	10	No	10	No
12/22/2004	31	No	10	No		No
12/28/2004	24192	Yes	880	Yes	3076	Yes
Min	10		10		10	
Max	24,192		880		3,076	
Mean	930		31		96	
Standard Dev	4221.34		132.61		476.77	
2/8/2005	404	No	20	No	10	No
2/15/2005	504	No	31	No	62	No
2/23/2005	19863	Yes	1789	Yes	823	Yes
3/1/2005	243	No	20	No	10	No
3/8/2005	1012	No	20	No	20	No
3/15/2005	10	No	10	No	10	No
3/22/2005	20	No	10	No	10	No
3/29/2005	74	No	10	No	10	No
4/5/2005	231	No	10	No	10	No
4/12/2005	97	No	10	No	10	No
4/19/2005	249	No	20	No	10	No
4/28/2005	10	No	10	No	10	No
5/3/2005	52	No	10	No	10	No
5/10/2005	161	No	10	No	10	No
5/17/2005	336	No	20	No	10	No
5/24/2005	14136	Yes	100	No	20	No
5/30/2005	5172	No	10	No	10	No
6/7/2005	1539	No	10	No	10	No
6/14/2005	3448	No	10	No	10	No
6/21/2005	20	No	10	No	10	No
6/28/2005	462	No	10	No	10	No
7/6/2005	703	No	10	No	10	No
7/12/2005	933	No	10	No	10	No
7/20/2005	195	No	10	No	10	No
7/26/2005	771	No	10	No	10	No
8/2/2005	244	No	10	No	10	No
8/9/2005	504	No	10	No	10	No
8/15/2005	30	No	10	No	10	No
8/23/2005	31	No	10	No	10	No
8/30/2005	10	No	10	No	10	No
9/7/2005	31	No	10	No	10	No
9/13/2005	10	No	10	No	10	No
9/20/2005	10	No	10	No	10	No

9/27/2005	10	No	10	No	10	No
10/5/2005	10	No	10	No	10	No
10/12/2005	10	No	10	No	10	No
10/18/2005	4996	No	246	No	10	No
10/25/2005	10	No	10	No	10	No
11/1/2005	10	No	10	No	10	No
11/7/2005	10	No	10	No	10	No
11/15/2005	52	No	10	No	10	No
11/22/2005	10	No	10	No	10	No
11/30/2005	10	No	10	No	10	No
12/6/2005	10	No	10	No	10	No
12/13/2005	10	No	10	No	10	No
Min	10		10		10	
Max	19,863		1,789		823	
Mean	1,259		58		30	
Standard Dev	3672.03		266.47		121.21	
4yr % Exc	2.27%		1.14%		3.11%	

REFUGIO BEACH

Fac ID# 012537

Date	Total Coliform	exceeds	Fecal Coliform	exceeds	Enterococcus	exceeds
1/2/2002	85	No	20	No	31	No
1/7/2002	63	No	3	No	3	No
1/14/2002	52	No	31	No	3	No
1/22/2002	471	No	483	Yes	156	Yes
1/28/2002	743	No	41	No	309	Yes
1/30/02re	97	No	32	No	50	No
2/4/2002	122	No	52	No	199	Yes
2/6/02re	364	No	292	No	122	Yes
2/11/2002	31	No	3	No	10	No
2/19/2002	131	No	20	No	30	No
2/26/2002	309	No	109	No	109	Yes
2/28/02re	74	No	20	No	10	No
3/4/2002	288	No	10	No	10	No
3/11/2002	833	No	98	No	265	Yes
3/13/02re	130	No	72	No	63	No
3/18/2002	131	No	10	No	20	No
3/25/2002	63	No	10	No	3	No
4/1/2002	226	No	3	No	20	No
4/8/2002	109	No	10	No	41	No
4/15/2002	712	No	63	No	3	No
4/22/2002	246	No	31	No	121	Yes
4/24/02re	3	No	3	No	3	No
4/28/2002	20	No	10	No	10	No
5/7/2002	185	No	3	No	10	No
5/13/2002	3	No	3	No	3	No
5/20/2002	265	No	63	No	52	No
5/28/2002	135	No	31	No	10	No
6/3/2002	41	No	3	No	10	No
6/10/2002	31	No	10	No	3	No
6/17/2002	3	No	3	No	3	No
6/24/2002	10	No	3	No	31	No
7/1/2002	41	No	20	No	3	No
7/8/2002	3	No	3	No	30	No
7/15/2002	171	No	10	No	20	No
7/22/2002	131	No	31	No	3	No
7/29/2002	20	No	3	No	10	No
8/5/2002	134	No	31	No	3	No
8/12/2002	199	No	10	No	10	No
8/19/2002	278	No	31	No	41	No
8/26/2002	98	No	20	No	52	No
9/3/2002	3	No	3	No	3	No
9/9/2002	20	No	10	No	20	No
9/16/2002	10	No	3	No	3	No
9/23/2002	121	No	121	No	31	No
9/30/2002	3	No	3	No	3	No
10/7/2002	85	No	20	No	3	No
10/14/2002	41	No	10	No	52	No
10/21/2002	332	No	235	No	410	Yes
10/23/2002re	132	No	84	No	134	Yes
10/28/2002	10	No	3	No	3	No
11/4/2002	98	No	86	No	63	No
11/12/2002	19,863	Yes	41	No	31	No
11/18/2002	676	No	354	No	169	Yes
11/25/2002	565	No	63	No	98	No
12/2/2002	1,616	No	97	No	63	No

12/9/2002	249	No	20	No	3	No
12/16/2002	763	No	10	No	96	No
12/23/2002	19,863	Yes	74	No	107	Yes
12/30/2002	24,192	Yes	605	Yes	576	Yes
Min	3		3		3	
Max	24,192		605		576	
Mean	1,283		60		64	
Standard Dev	4705.54		113.82		105.30	
1/6/2003	98	No	3	No	10	No
1/13/2003	52	No	3	No	3	No
1/21/2003	86	No	3	No	10	No
1/27/2003	10	No	3	No	3	No
2/3/2003	3	No	3	No	3	No
2/10/2003	3	No	3	No	3	No
2/18/2003	31	No	3	No	3	No
2/24/2003	98	No	20	No	20	No
3/3/2003	488	No	30	No	20	No
3/10/2003	189	No	74	No	173	Yes
03/12/2003re	31	No	20	No	3	No
3/17/2003	30,000	Yes	259	No	473	Yes
3/19/2003re	1,956	No	20	No	73	No
3/24/2003	374	No	10	No	20	No
3/31/2003	41	No	3	No	3	No
4/7/2003	86	No	3	No	3	No
4/14/2003	20	No	3	No	3	No
4/21/2003	85	No	3	No	10	No
4/28/2003	265	No	10	No	41	No
5/5/2003	408	No	10	No	3	No
5/12/2003	109	No	3	No	3	No
5/19/2003	74	No	3	No	10	No
5/27/2003	323	No	63	No	30	No
6/2/2003	305	No	10	No	52	No
6/9/2003	256	No	20	No	10	No
6/16/2003	829	No	142	No	31	No
6/23/2003	727	No	20	No	31	No
6/30/2003	295	No	10	No	3	No
7/7/2003	31	No	10	No	10	No
7/14/2003	73	No	41	No	10	No
7/21/2003	520	No	41	No	3	No
7/28/2003	110	No	10	No	3	No
8/4/2003	85	No	30	No	10	No
8/11/2003	563	No	156	No	52	No
8/18/2003	20	No	3	No	3	No
8/25/2003	63	No	20	No	30	No
9/2/2003	31	No	10	No	3	No
9/8/2003					10	
9/15/2003					41	
9/22/2003					10	
9/29/2003					10	
10/6/2003					10	
10/13/2003					20	
10/20/2003					10	
10/27/2003					10	
11/3/2003					52	
11/12/2003					86	
11/17/2003					10	
11/24/2003					52	
12/1/2003					10	
12/8/2003					10	
12/15/2003					74	
12/22/2003					169	
12/29/2003					10	

Min	0		0		0	
Max	30,000		605		576	
Mean	1,432		54		53	
Standard Dev	5186.57		108.96		102.01	
2/17/2004	20	No	10	No	10	No
2/23/2004	3448	No	278	No	269	Yes
2/25/2004	331	No	218	No	30	No
3/1/2004	5172	No	10	No	63	No
3/8/2004	546	No	31	No	10	No
3/15/2004	189	No	41	No	20	No
3/22/2004	933	No	63	No	85	No
3/29/2004	31	No	10	No	10	No
4/5/2004	216	No	85	No	31	No
4/12/2004	512	No	52	No	10	No
4/19/2004	109	No	10	No	10	No
4/26/2004	52	No	52	No	10	No
5/3/2004	20	No	10	No	10	No
5/10/2004	20	No	10	No	10	No
5/17/2004	10	No	10	No	10	No
5/24/2004	41	No	10	No	10	No
6/1/2004	10	No	10	No	10	No
6/7/2004	10	No	10	No	10	No
6/14/2004	10	No	10	No	10	No
6/21/2004	10	No	10	No	10	No
6/28/2004	52	No	41	No	10	No
7/6/2004	203	No	10	No	10	No
7/12/2004	10	No	10	No	10	No
7/19/2004	20	No	20	No	10	No
7/26/2004	20	No	10	No	10	No
8/2/2004	41	No	31	No	10	No
8/9/2004	10	No	10	No	30	No
8/16/2004	63	No	20	No	10	No
8/23/2004	20	No	20	No	10	No
8/30/2004	41	No	10	No	10	No
9/7/2004	181	No	168	No	10	No
9/13/2004	52	No	10	No	10	No
9/21/2004	10	No	10	No	10	No
9/27/2004	10	No	10	No	10	No
10/4/2004	203	No	203	No	10	No
10/11/2004	30	No	20	No	10	No
10/18/2004	132	No	85	No	10	No
10/25/2004	2014	No	63	No	109	Yes
10/27/2004	11199	Yes	373	No	377	Yes
11/1/2004	1515	No	135	No	20	No
12/1/2004	121	No	41	No	10	No
12/6/2004	97	No	10	No	10	No
12/13/2004	31	No	10	No	10	No
12/21/2004	10	No	10	No	10	No
12/27/2004	197	No	20	No	20	No
Min	10		10		10	
Max	11,199		373		377	
Mean	622		51		31	
Standard Dev	1876.13		78.93		67.71	
1/31/2005	860	No	70	No	318	Yes
2/7/2005	1408	No	10	No	10	No
2/9/2005	495	No	213	No	97	No
2/14/2005	305	No	10	No	10	No
2/22/2005	24192	Yes	41	No	74	No
2/24/2005	767	No	10	No	10	No
2/28/2005	4106	No	10	No	41	No

3/2/2005	816	No	10	No	10	No
3/7/2005	8664	No	97	No	30	No
3/14/2005	238	No	10	No	41	No
3/21/2005	624	No	74	No	109	Yes
3/28/2005	2755	No	10	No	10	No
3/30/2005	262	No	10	No	10	No
4/4/2005	529	No	20	No	20	No
4/11/2005	576	No	63	No	10	No
4/18/2005	86	No	74	No	10	No
4/28/2005	435	No	52	No	1722	Yes
5/2/2005	24192	Yes	909	Yes	10	No
5/4/2005	3255	No	171	No	120	Yes
5/10/2005	285	No	31	No	41	No
5/16/2005	10	No	146	No	1459	Yes
5/23/2005	2224	No	10	No	10	No
5/30/2005	20	No	63	No	10	No
6/6/2005	63	No	20	No	10	No
6/13/2005	10	No	31	No	10	No
6/20/2005	20	No	10	No	20	No
6/27/2005	1785	No	10	No	10	No
7/5/2005	108	No	10	No	10	No
7/11/2005	41	No	10	No	10	No
7/19/2005	20	No	10	No	20	No
7/25/2005	1515	No	74	No	10	No
8/1/2005	2142	No	72	No	10	No
8/8/2005	471	No	20	No	10	No
8/15/2005	20	No	20	No	10	No
8/22/2005	148	No	20	No	10	No
8/29/2005	98	No	10	No	10	No
9/6/2005	41	No	10	No	10	No
9/12/2005	10	No	31	No	10	No
9/19/2005	1246	No	160	No	20	No
9/26/2005	1782	No	10	No	10	No
10/4/2005	31	No	10	No	10	No
10/11/2005	1783	No	63	No	20	No
10/17/2005	20	No	10	No	20	No
10/24/2005	10	No	10	No	10	No
10/31/2005	41	No	10	No	10	No
11/7/2005	135	No	10	No	30	No
11/14/2005	108	No	10	No	10	No
11/21/2005	10	No	10	No	10	No
11/29/2005	10	No	10	No	10	No
12/5/2005	52	No	10	No	10	No
12/12/2005	305	No	10	No	10	No
12/19/2005	10	No	41	No	10	No
Min	10		10		10	
Max	24,192		909		1,722	
Mean	1,714		55		87	
Standard Dev	4762.72		129.37		308.45	
4yr % Exc	3.25%		1.33%		10.08%	

EL CAPITAN BEACH

Fac ID# 012536

Date	Total Coliform	exceeds	Fecal Coliform	exceeds	Enterococcus	exceeds
1/2/2002	52	No	10	No	30	No
1/7/2002	52	No	3	No	3	No
1/14/2002	10	No	3	No	3	No
1/22/2002	41	No	3	No	10	No
1/28/2002	41	No	3	No	3	No
2/4/2002	3	No	3	No	3	No
2/11/2002	3	No	3	No	108	Yes
2/13/02re	3	No	3	No	74	No
2/19/2002	109	No	3	No	3	No
2/26/2002	31	No	3	No	20	No
3/4/2002	51	No	51	No	3	No
3/11/2002	10	No	3	No	10	No
3/18/2002	31	No	31	No	3	No
3/25/2002	10	No	10	No	3	No
4/1/2002	155	No	3	No	3	No
4/8/2002	20	No	20	No	10	No
4/15/2002	41	No	10	No	3	No
4/22/2002	10	No	3	No	206	Yes
4/24/02re	148	No	20	No	3	No
4/28/2002	3	No	3	No	3	No
5/7/2002	20	No	3	No	3	No
5/13/2002	31	No	3	No	3	No
5/20/2002	3	No	3	No	3	No
5/28/2002	10	No	10	No	3	No
6/3/2002	31	No	10	No	20	No
6/10/2002	10	No	3	No	3	No
6/17/2002	3	No	3	No	3	No
6/24/2002	86	No	86	No	3	No
7/1/2002	3	No	3	No	3	No
7/8/2002	3	No	3	No	3	No
7/15/2002	10	No	3	No	41	No
7/22/2002	41	No	10	No	3	No
7/29/2002	3	No	3	No	3	No
8/5/2002	10	No	3	No	3	No
8/12/2002	20	No	10	No	30	No
8/19/2002	20	No	3	No	20	No
8/26/2002	31	No	10	No	3	No
9/3/2002	10	No	3	No	52	No
9/9/2002	41	No	10	No	10	No
9/16/2002	10	No	3	No	50	No
9/23/2003	10	No	3	No	41	No
9/30/2002	10	No	10	No	10	No
10/7/2002	41	No	10	No	3	No

10/14/2002	10	No	10	No	3	No
10/21/2002	41	No	10	No	62	No
10/28/2002	41	No	10	No	3	No
11/4/2002	246	No	10	No	345	Yes
11/6/2002	3	No	161	No	10	No
11/12/2002	98	No	3	No	3	No
11/18/2002	41	No	10	No	109	Yes
11/20/2002re	96	No	10	No	3	No
11/25/2002	63	No	3	No	10	No
12/2/2002	41	No	3	No	10	No
12/9/2002	63	No	3	No	3	No
12/16/2002	156	No	3	No	10	No
12/23/2002	813	No	73	No	31	No
12/30/2002	410	No	3	No	20	No
1/6/2003	85	No	10	No	10	No
1/13/2003	31	No	20	No	10	No
1/21/2003	20	No	3	No	10	No
1/27/2003	97	No	10	No	3	No
2/3/2003	93	No	3	No	3	No
2/10/2003	3	No	3	No	10	No
2/18/2003	10	No	3	No	3	No
2/24/2003	573	No	3	No	3	No
3/3/2003	31	No	3	No	3	No
3/10/2003	20	No	3	No	3	No
3/17/2003	97	No	3	No	10	No
3/24/2003	20	No	3	No	3	No
3/31/2003	41	No	3	No	3	No
4/7/2003	3	No	3	No	20	No
4/14/2003	52	No	3	No	3	No
4/23/2003	63	No	20	No	41	No
4/28/2003	3	No	3	No	3	No
5/5/2003	10	No	3	No	3	No
5/12/2003	3	No	3	No	3	No
5/19/2003	20	No	3	No	3	No
5/27/2003	10	No	3	No	3	No
6/2/2003	31	No	3	No	3	No
6/9/2003	41	No	3	No	3	No
6/16/2003	3	No	3	No	3	No
6/23/2003	10	No	3	No	3	No
6/30/2003	31	No	3	No	3	No
7/7/2003	3	No	3	No	121	Yes
7/9/2003re	3	No	3	No	3	No
7/14/2003	181	No	10	No	20	No
7/21/2003	243	No	31	No	10	No
7/28/2003	627	No	85	No	3	No
8/4/2003	30	No	3	No	3	No
8/11/2003	97	No	41	No	41	No
8/18/2003	52	No	10	No	41	No
8/25/2003	98	No	31	No	20	No
9/2/2003	20	No	3	No	10	No
9/8/2003		No		No	256	Yes
9/10/2003		No		No	10	No

9/15/2003		No		No	10	No
9/22/2003		No		No	20	No
9/23/2003		No		No	41	No
9/29/2003		No		No	10	No
10/6/2003		No		No	10	No
10/13/2003		No		No	73	No
10/20/2003		No		No	10	No
10/27/2003		No		No	30	No
11/3/2003		No		No	20	No
11/12/2003		No		No	10	No
11/17/2003		No		No	10	No
11/24/2003		No		No	10	No
12/1/2003		No		No	10	No
12/8/2003		No		No	10	No
12/15/2003		No		No	10	No
12/22/2003		No		No	168	Yes
12/29/2003		No		No	10	No
1/5/2004	10	No	10	No	10	No
1/12/2004	20	No	10	No	10	No
1/20/2004	95	No	20	No	10	No
1/26/2004	31	No	10	No	10	No
2/2/2004	61	No	41	No	10	No
2/9/2004	31	No	10	No	10	No
2/17/2004	171	No	41	No	10	No
2/23/2004	379	No	31	No	20	No
3/1/2004	512	No	20	No	10	No
3/8/2004	74	No	10	No	10	No
3/15/2004	238	No	181	No	30	No
3/22/2004	52	No	10	No	10	No
3/29/2004	20	No	10	No	10	No
4/5/2004	10	No	10	No	20	No
4/12/2004	31	No	20	No	10	No
4/19/2004	10	No	10	No	10	No
4/26/2004	10	No	10	No	10	No
5/3/2004	30	No	10	No	10	No
5/10/2004	20	No	10	No	20	No
5/17/2004	62	No	10	No	30	No
5/24/2004	20	No	10	No	10	No
6/1/2004	10	No	10	No	10	No
6/7/2004	31	No	10	No	10	No
6/14/2004	20	No	10	No	10	No
6/21/2004	20	No	10	No	10	No
6/28/2004	20	No	10	No	10	No
7/6/2004	110	No	10	No	10	No
7/12/2004	85	No	10	No	10	No
7/19/2004	41	No	10	No	10	No
7/26/2004	41	No	10	No	10	No
8/2/2004	135	No	10	No	10	No
8/9/2004	74	No	10	No	10	No
8/16/2004	145	No	10	No	10	No
8/23/2004	193	No	10	No	10	No
8/30/2004	120	No	20	No	10	No

9/7/2004	108	No	10	No	10	No
9/13/2004	52	No	10	No	10	No
9/21/2004	10	No	10	No	10	No
9/27/2004	42	No	10	No	10	No
10/4/2004	10	No	10	No	10	No
10/11/2004	31	No	10	No	10	No
10/18/2004	109	No	10	No	10	No
10/25/2004	4352	No	41	No	187	Yes
10/27/2004	1935	No	187	No	201	Yes
11/1/2004	780	No	10	No	20	No
12/1/2004	41	No	10	No	10	No
12/6/2004	121	No	10	No	10	No
12/13/2004	292	No	10	No	20	No
12/21/2004	262	No	10	No	31	No
12/27/2004	226	No	20	No	63	No
1/3/2005	4106	No	95	No	62	No
1/10/2005	24192	Yes	20	No	197	Yes
1/12/2005	24192	Yes	30	No	85	No
1/18/2005	3609	No	10	No	31	No
5/2/2005	557	No	20	No	85	No
5/10/2005	1565	No	161	No	63	No
5/16/2005	148	No	10	No	121	Yes
5/23/2005	145	No	10	No	31	No
5/30/2005	772	No	10	No	10	No
5/18/2005	97	No	10	No	10	No
6/6/2005	327	No	10	No	10	No
6/13/2005	187	No	41	No	20	No
6/20/2005	31	No	10	No	10	No
1/24/2005	8164	No	10	No	20	No
1/31/2005	959	No	10	No	10	No
2/7/2005	1054	No	10	No	10	No
2/14/2005	373	No	51	No	10	No
3/7/2005	1658	No	10	No	10	No
3/14/2005	41	No	20	No	31	No
2/22/2005	6488	No	146	No	63	No
2/28/2005	3255	No	31	No	31	No
3/21/2005	776	No	10	No	10	No
3/28/2005	1467	No	41	No	10	No
4/4/2005	865	No	30	No	10	No
4/11/2005	554	No	84	No	10	No
4/18/2005	109	No	52	No	30	No
4/28/2005	435	No	63	No	52	No
6/27/2005	110	No	10	No	10	No
7/5/2005	336	No	10	No	41	No
7/11/2005	109	No	20	No	41	No
7/19/2005	86	No	41	No	20	No
7/25/2005	1541	No	10	No	20	No
8/1/2005	20	No	10	No	10	No
8/8/2005	345	No	10	No	134	Yes
8/10/2005	419	No	20	No	63	No
8/15/2005	145	No	10	No	30	No
8/22/2005	243	No	20	No	41	No

9/6/2005	98	No	41	No	10	No
9/12/2005	121	No	10	No	31	No
9/19/2005	134	No	31	No	20	No
9/26/2005	96	No	10	No	20	No
8/29/2005	197	No	10	No	10	No
10/4/2005	41	No	10	No	20	No
10/11/2005	10	No	10	No	10	No
10/17/2005	20	No	10	No	10	No
11/14/2005	74	No	10	No	10	No
11/29/2005	63	No	10	No	10	No
12/5/2005	41	No	10	No	10	No
12/19/2005	10	No	10	No	10	No
10/24/2005	10	No	10	No	10	No
10/31/2005	41	No	10	No	10	No
11/7/2005	10	No	10	No	10	No
11/21/2005	10	No	10	No	10	No
12/12/2005	20	No	10	No	20	No
12/27/2005	52	No	10	No	20	No
Min	3		3		3	
Max	24,192		187		345	
Mean	545		18		25	
Standard Dev	2571.25		28.94		43.69	
4yr % Excd	0.92%		0.00%		5.53%	

USGS 11123500 SANTA YNEZ R BL LOS LAURLS CYN NR SNTA YNEZ CA

SAMPLE DATETIME	Instan-taneous dis-charge, cfs -61	Nitrite water, fltrd, mg/L as N -613	Nitrite + nitrate water fltrd, mg/L as N -631	Ortho-phos-phate, water, fltrd, mg/L as P -671	Residue on evap. at 180degC wat flt mg/L -70300
3/2/1989	0.74		< .100	< .01	924
4/6/1989	0.4				1020
5/3/1989	0.6				1060
3/4/1991	0.12	0.04	0.86	0.02	954
4/16/1991	68				763
5/24/1991	11				852
6/20/1991	0.18				916
7/17/1991	0.6				1020
8/15/1991	1.5				1000
1/17/1992	4.6	< .010	0.16	< .01	921
4/16/1992	145				860
5/13/1992	48				874
6/17/1992	4.2				948
7/7/1992	1.2				908
8/12/1992	10				976
9/9/1992	0.5				974
2/17/1993	489				682
3/11/1993	598				832
4/6/1993	582				778
5/13/1993		< .010	< .050	< .01	904
6/10/1993	53				940
7/9/1993	< 12				952
8/19/1993	1.4				906
9/10/1993	3.3				918
10/12/1993	1				896
11/1/1993	0.77				908
1/4/1994	3				912
2/1/1994	4.5				968
3/9/1994	33				874
4/21/1994	7	0.01	< .050	< .01	930
5/11/1994	3.2				886
6/7/1994	8.4				974
7/12/1994	1.3				976
8/9/1994	0.81				996
1/12/1995	2130				316
2/14/1995	2450				626
3/7/1995	1070				584
4/25/1995	282	0.02	0.07	< .01	912
5/25/1995	114				926
7/21/1995	6.3				866
8/17/1995	11				936
10/12/1995	1.5				868
11/30/1995	1.5				836
1/4/1996	0.4				820
2/15/1996	6.6				958
4/11/1996	24	< .010	< .05	< .01	878
5/8/1996	3.7				884
6/6/1996	1.7				858
7/18/1996	0.59				866
8/14/1996	1				964

11/21/1996	0.87				964
2/10/1997	5.3	0.01	< .05	< .01	708
5/13/1997	1.7				828
1/14/1998	133				673
4/20/1998	442	< .010	0.12	0.05	888
6/10/1998	215				908
7/22/1998	47				918
8/10/1998	21				931
10/6/1998	8.6				924
11/5/1998	3.7				884
1/6/1999	6.5				940
3/1/1999	12	< .010	0.06	0.01	970
4/2/1999	30				926
5/12/1999	7.5				928
6/2/1999	4.6				858
7/13/1999	16				1010
8/12/1999	4.7				1020
9/14/1999	0.71				992
10/7/1999	0.06				952
12/7/1999	0.08				1000
1/11/2000	0.13				1000
2/7/2000	0.82				994
3/8/2000	675				679
4/18/2000	906				726
4/27/2000	103	< .010	< .05	< .01	730
5/31/2000	13				818
7/3/2000	1.8				792
9/16/2000	0.69				936
10/3/2000	0				888
11/6/2000	0.82				922
12/14/2000	0.88				892
1/4/2001	0.74				862
2/5/2001	8.6				852
3/21/2001	321				696
4/3/2001	142	< .006	< .05	< .02	750
5/17/2001	34				790
6/13/2001	7.6				786
7/11/2001	2.7				802
8/23/2001	7.1				872
9/20/2001	1.3				860
10/2/2001	0.59				832
11/6/2001	2.4				884
12/19/2001	3.8				840
1/15/2002	4.7				860
2/14/2002	4				869
4/5/2002	2.3	< .008	< .05	< .02	836
1/22/2003	1.8				902
2/4/2003	1.2				940
3/7/2003	5.4				956
4/12/2003	4.2	< .008	< .06	< .02	883
5/1/2003	18				846
6/3/2003	3.9				815
7/1/2003	0.83				799
8/6/2003	4.9				927
1/7/2004	0.48				922
2/3/2004	0.63				898
3/2/2004	12				847
4/6/2004	1.6	< .008	< .06	E .01	878

USGS 11126000 SANTA YNEZ R NR SANTA YNEZ CA

SAMPLE DATETIME	Instan-taneous dis-charge, cfs -61	Nitrite water, fltrd, mg/L as N -613	Nitrite + nitrate water fltrd, mg/L as N -631	Ortho-phos-phate, water, fltrd, mg/L as P -671	Residue on evap. at 180degC wat flt mg/L -70300
10/23/1991	150	< .010	0.22	0.02	620
7/7/1992					556
10/15/1992	41				568
1/16/1993	620				547
2/18/1993	625				473
3/11/1993	680				478
4/8/1993	600				556
5/12/1993	100	< .010	0.22	0.02	572
6/10/1993	15				572
7/6/1993	10				586
8/5/1993	8.9				596
9/3/1993	9				588
7/27/1994	E 135	< .010	0.23	0.06	658
8/8/1994	70				630
9/13/1994	48				644
10/13/1994	50				646
3/6/1995	2320				514
4/7/1995	640	< .010	0.1	< .01	536
5/23/1995	100				586
6/21/1995	60				600
8/3/1995	8				612
10/18/1995					604
12/7/1995					620
2/15/1996	E 5.6				662
4/5/1996	2.4	< .010	< .05	0.01	634
7/18/1996					626
8/14/1996	70				644
10/3/1996	31				630
11/21/1996	3.3				648
2/11/1997	3	0.02	0.29	< .01	655
5/13/1997	3.9				659
6/11/1997	1.3				619
8/12/1997	63				663
9/5/1997	40				656
10/6/1997	34	0.016	0.197	0.08	660
11/4/1997	1.7				671
12/4/1997	1.5				674
4/21/1998	725	< .010	0.1	0.02	551
6/11/1998	147				599
8/10/1998	6.4				615
10/6/1998	8.2				615
11/13/1998	3.1				638
1/13/1999	6.3				675
3/8/1999	3.6	< .010	< .05	0.04	682
4/27/1999	4.1				675
6/3/1999	3.6				684
7/14/1999	1				695
9/15/1999	0.45				692

10/13/1999	0.33				695

SAMPLE DATETIME	Instan-taneous dis-charge, cfs -61	Nitrite water, fltrd, mg/L as N -613	Nitrite + nitrate water fltrd, mg/L as N -631	Ortho-phos-phate, water, fltrd, mg/L as P -671	Residue on evap. at 180degC wat flt mg/L -70300
11/8/1999	1.1				680
12/15/1999	2.3				699
1/10/2000	1.6				697
2/8/2000	1.7				691
3/14/2000	2.8				627
4/19/2000					667
4/27/2000	46	< .010	0.07	0.01	653
5/31/2000	2.7				668
7/7/2000	1.5				658
8/1/2000	2.3				671
9/15/2000	84				657
10/4/2000	22				653
11/8/2000	0.56				688
12/11/2000	72				665
1/10/2001	1.4				671
2/16/2001	5				524
4/3/2001		E .004	E .04	0.02	583
5/30/2001	3.3				576
6/12/2001	4.3				570
7/10/2001	2.8				570
8/29/2001	6.4				559
9/17/2001	6				570
10/1/2001	5.3				564
12/20/2001	3.1				580
1/17/2002	2				584
2/13/2002	1.7				587
4/4/2002	1.3	< .008	< .05	0.02	596
5/6/2002	1.9				589
7/12/2002	11				580
8/1/2002	139				564
9/6/2002	38				488
10/2/2002	59				503
11/8/2002	3.6				568
12/12/2002	2.2				550
1/14/2003	E 30				553
2/27/2003	1.9				568
3/11/2003	0.83				606
4/11/2003	2.5	< .008	0.06	< .02	511
5/7/2003	1.5				498
6/12/2003	1				507
7/18/2003	0.76				592
8/6/2003	3.3				571
9/5/2003	1.2				592
10/2/2003	3.5				601
11/4/2003	2.7				607
12/4/2003	2.2				586
1/9/2004	2				612

2/3/2004	1.1				612

SAMPLE DATETIME	Instantaneous discharge, cfs -61	Nitrite water, fltrd, mg/L as N -613	Nitrite + nitrate water fltrd, mg/L as N -631	Ortho-phosphate, water, fltrd, mg/L as P -671	Residue on evap. at 180degC wat flt mg/L -70300
3/5/2004	1.2				619
4/5/2004	0.82	< .008	< .06	0.03	615
5/21/2004	0.43				624
6/11/2004	0.95				625
7/8/2004	0.91				633
8/4/2004	84				539
9/9/2004	48				493

USGS 11128500 SANTA YNEZ R A SOLVANG CA

SAMPLE DATETIME	Instan-taneous dis-charge, cfs -61	Nitrite water, fltrd, mg/L as N -613	Nitrite + nitrate water fltrd, mg/L as N -631	Ortho-phos-phate, water, fltrd, mg/L as P -671	Potas-sium, water, fltrd, mg/L -935	Residue on evap. at 180degC wat flt mg/L -70300
10/2/1996	23					680
11/20/1996	2.9					722
2/11/1997	25	< .010	0.37	< .01	2.1	696
5/12/1997	2					756
8/6/1997	82					678
9/9/1997	45					659
10/7/1997	25	< .010	< .05	0.02	2.42	698
11/5/1997	3					726
12/3/1997	6.5					576
1/13/1998	50					641
4/22/1998	640	< .010	0.31	0.02	2.12	567
6/4/1998	272					608
7/14/1998	25					606
8/6/1998	19					651
10/7/1998	17					663
1/12/1999	17					671
3/9/1999	13	< .010	0.57	0.03	1.87	707
4/28/1999	20					683
7/15/1999	3.9					742
8/21/1999	0.85					736
9/15/1999	0.98					750
10/7/1999	1.5					786
11/9/1999	2.8					812
12/7/1999	3.2					836
1/12/2000	3.2					840
2/10/2000	8.1					772
3/13/2000	23					655
4/19/2000	1050					482
5/11/2000	17	< .010	0.12	0.02	2.11	696
6/1/2000	4.2					714
7/6/2000	1.1					750
8/2/2000	3.4					774
9/16/2000	54					703
10/4/2000	18					695
11/14/2000	7.1					748
12/12/2000	5.8					772
1/11/2001	60					642
2/12/2001	140					527
3/21/2001	446					504
4/4/2001	196	< .006	0.08	< .02	2.14	591
5/22/2001	8.1					664
6/14/2001	7.2					720
7/12/2001	2.3					756
8/27/2001	0.56					678
11/19/2001	6.5					762
12/21/2001	15					748
1/22/2002	10					748
2/1/2002	12					734

4/2/2002	2.4	E .004	0.43	E .02	2.46	765
8/5/2002	111					646
9/6/2002	24					632
11/8/2002	19					646
12/10/2002	6.1					690
1/16/2003	10					682
2/21/2003	10					704
3/7/2003	11					700
4/2/2003	11	< .008	0.07	0.03	2.32	709
5/13/2003	7.9					708
6/6/2003	2.4					725
1/8/2004	1.4					774
2/1/2004	3.1					836
3/11/2004	3.6					733
8/3/2004	73	< .008	< .06	E .01	2.55	587
9/10/2004	30					632

USGS 11133000 SANTA YNEZ R A NARROWS NR LOMPOC CA

SAMPLE DATETIME	Instan-taneous dis-charge, cfs	Nitrite water, fltrd, mg/L as N	Nitrite + nitrate water fltrd, mg/L as N	Ortho-phos-phate, water, fltrd, mg/L as P	Potas-sium, water, fltrd, mg/L	Residue on evap. at 180degC wat flt mg/L
1/14/2000	4.2					1230
2/11/2000	21					1120
3/10/2000	103					738
4/14/2000	31					1000
4/26/2000	216	< .010	0.31	0.07	3.32	806
6/2/2000	19					1030
7/7/2000	4.4					972
8/4/2000	2					1090
9/8/2000	0.88					1150
10/6/2000	19					1040
11/9/2000	15					1090
12/15/2000	15					1120
1/5/2001	16					1140
2/16/2001	199					698
3/23/2001	545					656
4/4/2001		E .004	0.23	0.03	2.56	760
6/15/2001	11					1070
7/13/2001	4.7					1020
8/17/2001	2.7					984
9/21/2001	2.2					1040
10/5/2001	1.7					1060
11/16/2001	9.1					1220
12/21/2001	31					1060
1/22/2002	23					1110
2/1/2002	25					1080
4/3/2002	7.1	< .008	< .05	0.05	3.33	1200
5/7/2002	3.2					1140
8/16/2002	4.1					1340
9/6/2002	27					950
10/8/2002	14					1020
11/15/2002	18					1050
12/13/2002	9.7					1170
1/22/2003	24					1080
2/20/2003	26					1030
3/11/2003	20					1050
4/4/2003	19	< .008	< .06	0.06	3.42	1050
5/13/2003	18					1020
6/14/2003	3.9					1170
7/18/2003	0.49					1180
1/8/2004	1.3					1240
2/7/2004	3.4					1240
3/11/2004	14					1160
4/8/2004	1.6	< .008	< .06	0.06	3.7	1270
5/21/2004	0.71					969
6/10/2004	0.46					1130
8/4/2004	33					892
9/9/2004	18					940

USGS 11133500 SANTA YNEZ R NR LOMPOC CA

SAMPLE DATETIME	Instan-taneous dis-charge, cfs -61	Nitrite + nitrate water fltrd, mg/L as N -631	Ortho-phos-phate, water, fltrd, mg/L -660	Ortho-phos-phate, water, fltrd, mg/L as P -671	Potas-sium, water, fltrd, mg/L (00935)	Residue on evap. at 180degC wat flt mg/L (70300)
1/18/1973		0.46			3.5	
1/19/1973		1			3.3	
4/12/1973		<.100			3.2	
10/2/1978	0.75					1150
10/20/1978	2.6					1160
11/21/1978	9.4					1210
1/2/1979	17					1250
2/1/1979	352					442
3/1/1979	434					791
4/2/1979	836					642
5/2/1979	76					906
6/4/1979	13					1070
7/2/1979	3.6					1050
8/1/1979	0.52					1110
1/3/1980	1.7	0.04	0.21	0.07	4.6	
2/1/1980	17					1170
3/4/1980	1450					495
4/2/1980	254					715
5/1/1980	138					791
6/2/1980	14					1010
7/8/1980	5					1090

USGS 11132500 SALSIPUEDES C NR LOMPOC CA

Table 14

SAMPLE DATETIME	Residue on evap. mg/L
3/9/2000	726
4/6/2000	910
4/26/2000	926
6/5/2000	838
6/28/2000	848
8/4/2000	840
9/7/2000	884
9/29/2000	856
11/7/2000	888
12/4/2000	900
1/5/2001	892
2/5/2001	928
3/20/2001	920
4/6/2001	906
5/7/2001	838
6/6/2001	796
7/5/2001	750
8/2/2001	824
9/10/2001	824
10/1/2001	852
11/8/2001	860
12/10/2001	828
1/8/2002	896
2/12/2002	868
3/6/2002	872
4/3/2002	845
5/6/2002	853
6/10/2002	899
7/9/2002	951
8/9/2002	1020
8/30/2002	997
10/8/2002	1040
11/10/2002	926
12/10/2002	986
1/14/2003	970
2/12/2003	863
3/10/2003	946
4/7/2003	966
5/5/2003	822
6/2/2003	939
7/2/2003	1000
8/5/2003	1050
9/3/2003	1040
10/3/2003	1020
11/12/2003	979
1/2/2004	900
2/3/2004	801
3/10/2004	952
4/8/2004	954
5/4/2004	1000
5/28/2004	1020
7/1/2004	1110
8/2/2004	1170
9/7/2004	1180

Figure 1

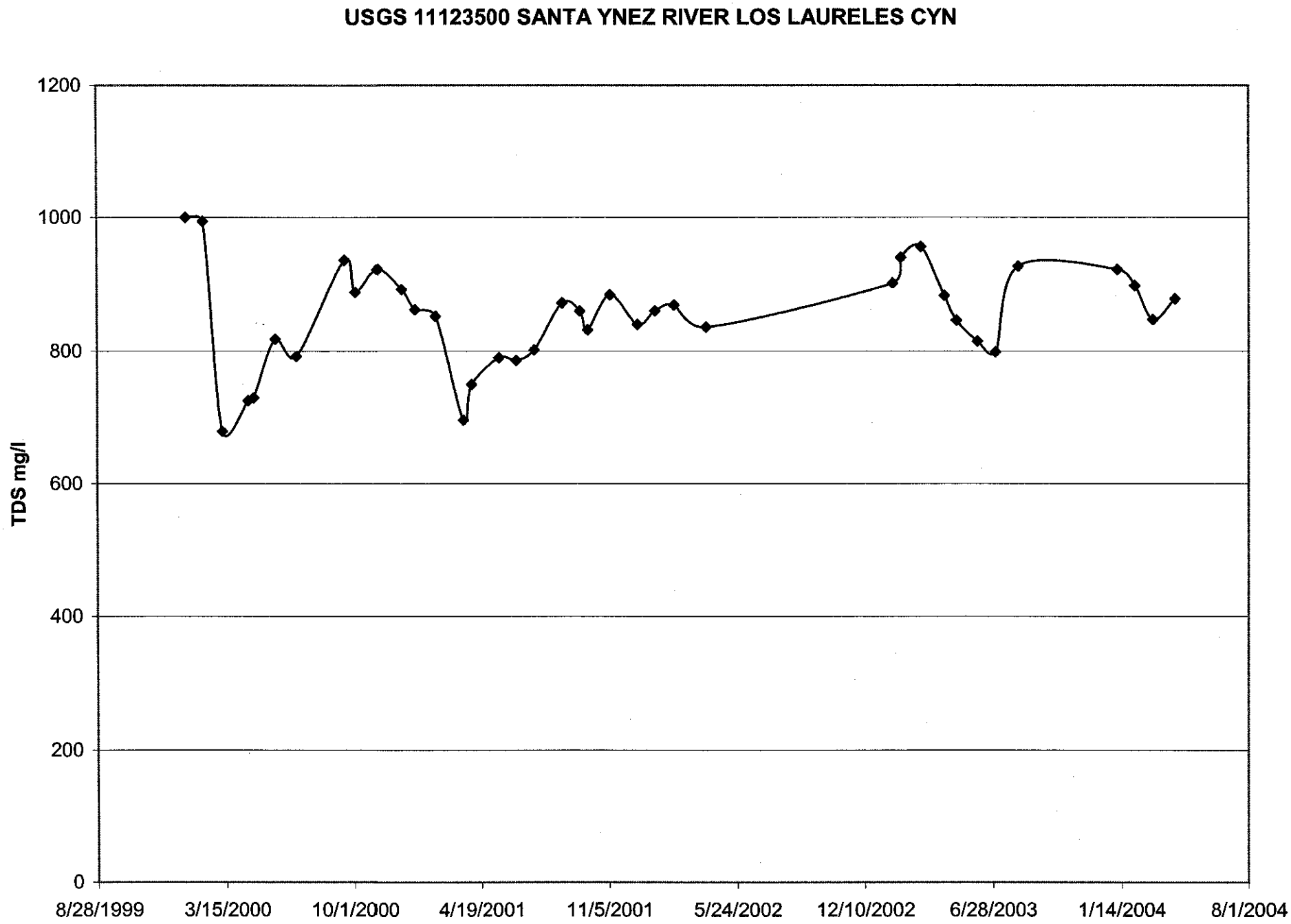
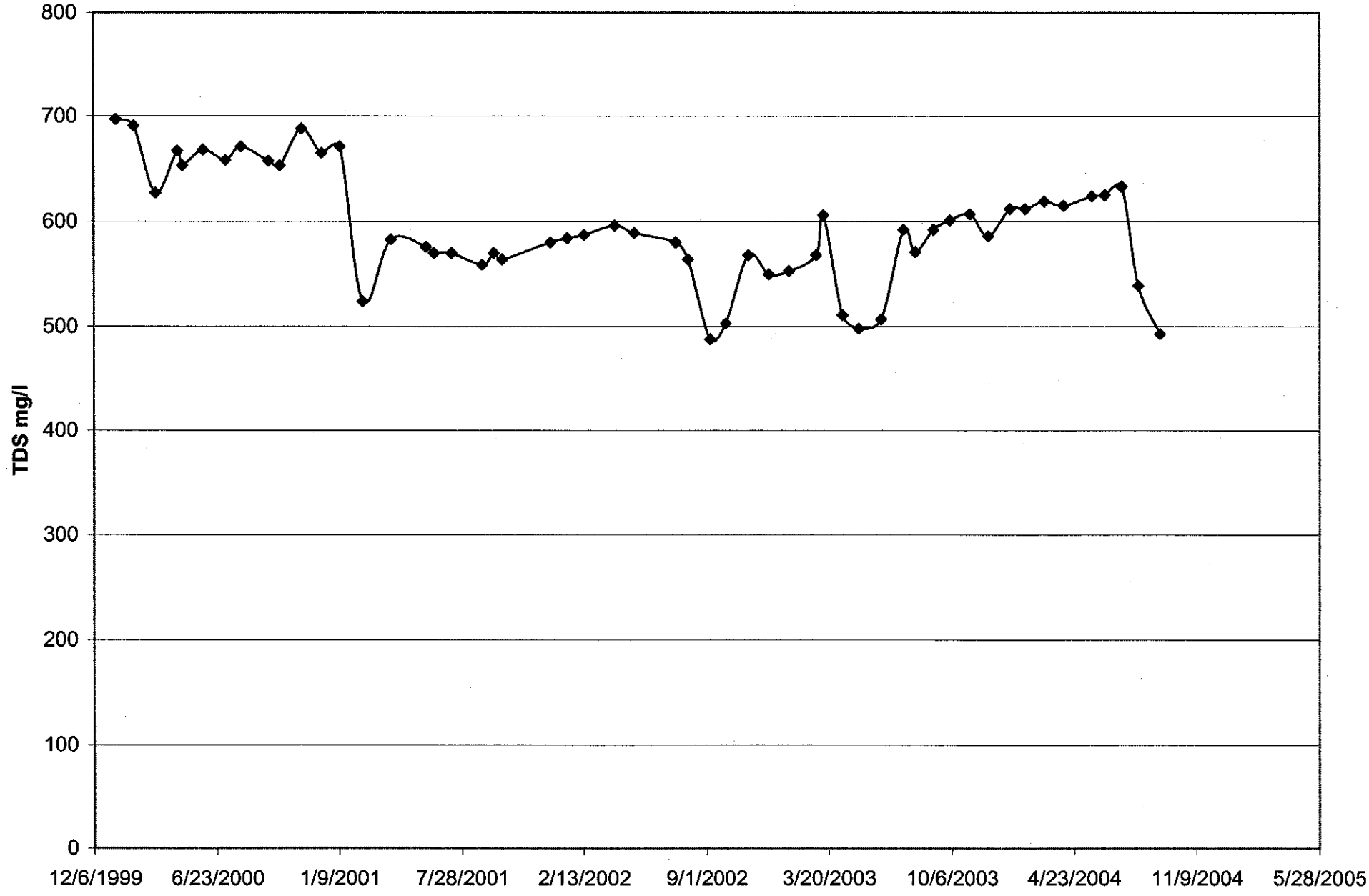
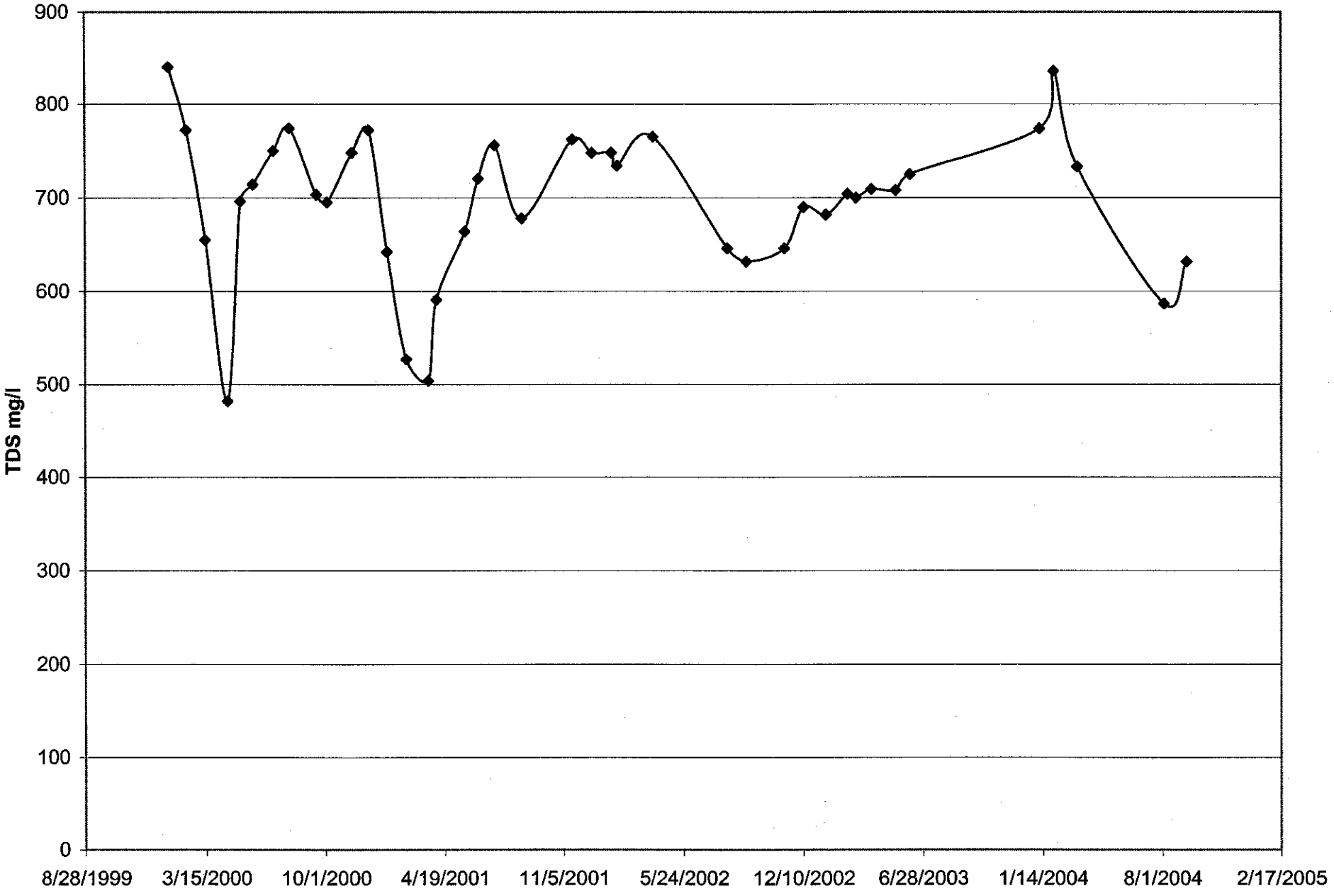

USGS 11123500 SANTA YNEZ RIVER LOS LAURELES CYN
TDS mg/l
1200
1000
800
600
400
200
0
8/28/1999
3/15/2000
10/1/2000
4/19/2001
11/5/2001
5/24/2002
12/10/2002
6/28/2003
1/14/2004
8/1/2004

Figure 2

USGS 11126000 SANTA YNEZ RIVER AT SANTA YNEZ



USGS 11128500 SANTA YNEZ RIVER AT SOLVANG



USGS 11133000 SANTA YNEZ RIVER NARROWS NR LOMPOC

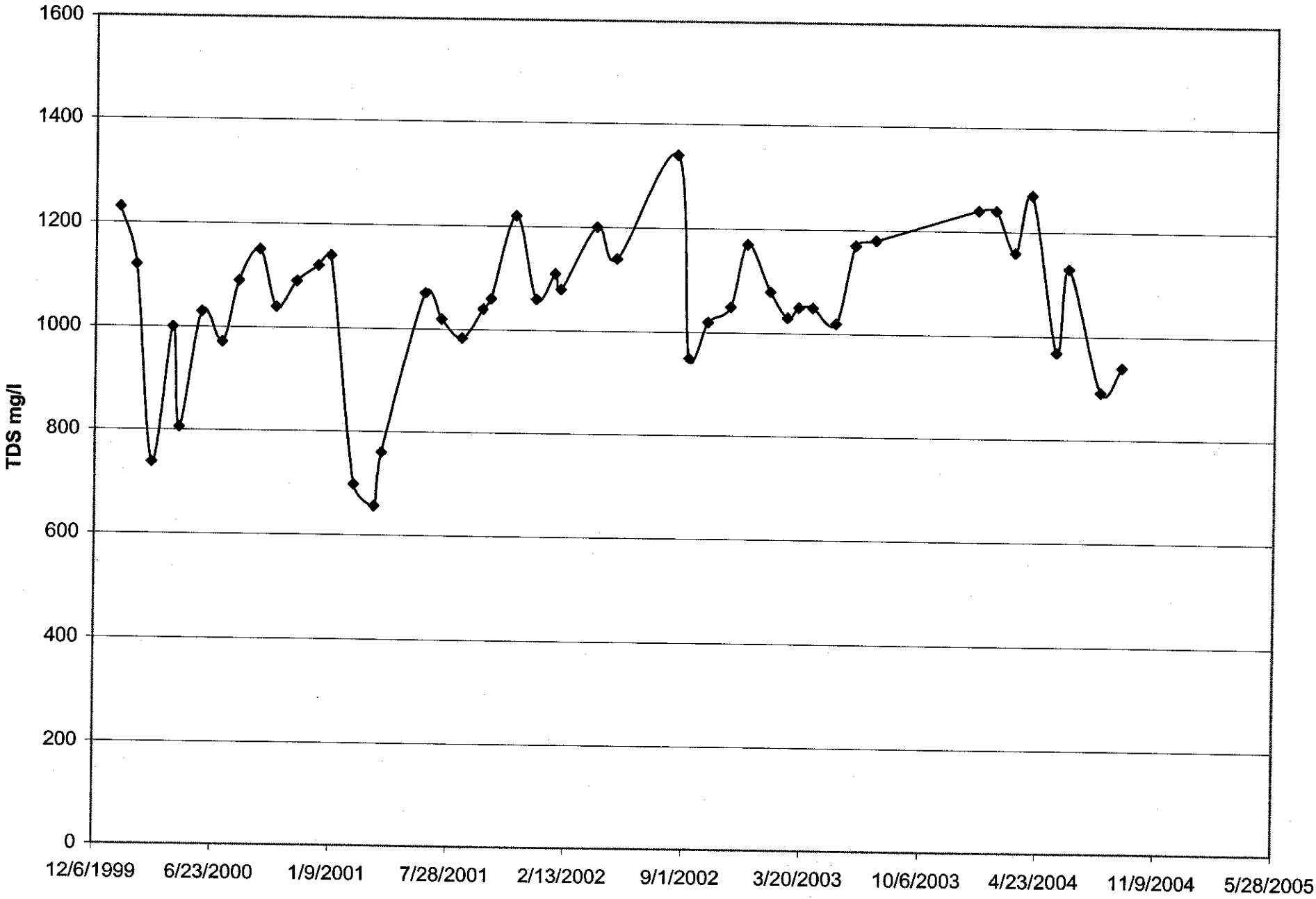


Figure 5

USGS 11133500 TDS Santa Ynez River @ Hwy 246

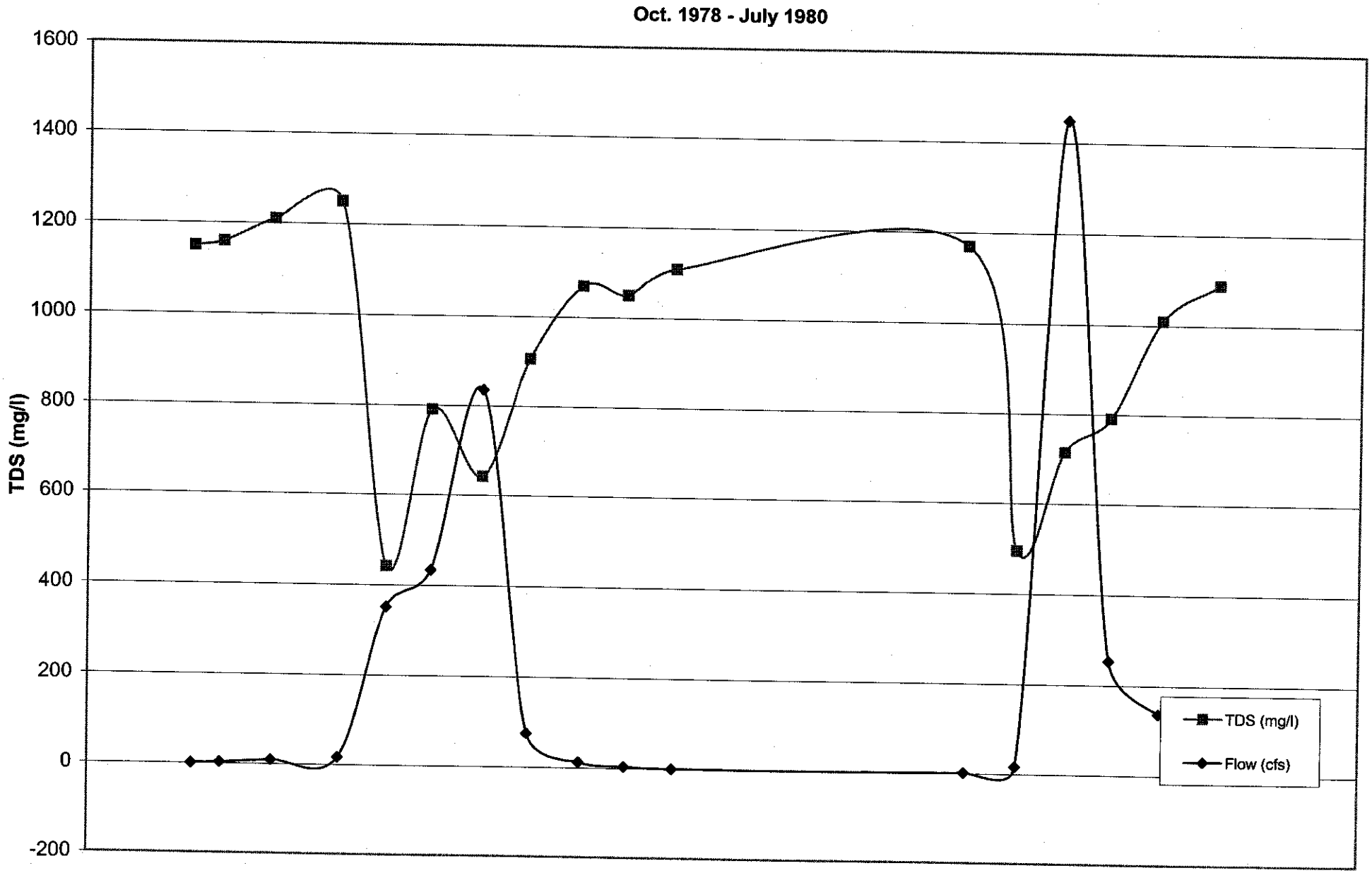


Figure 6

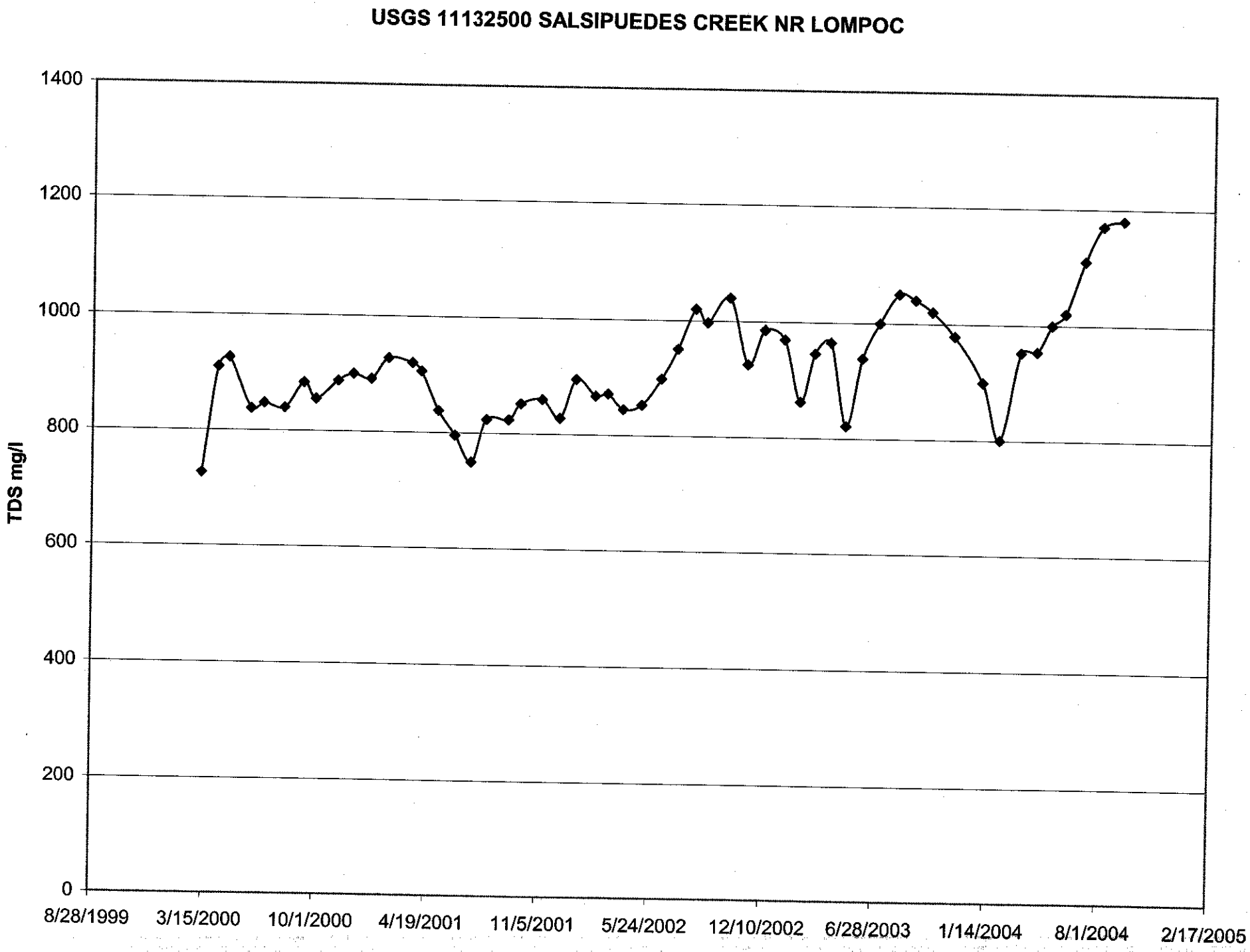
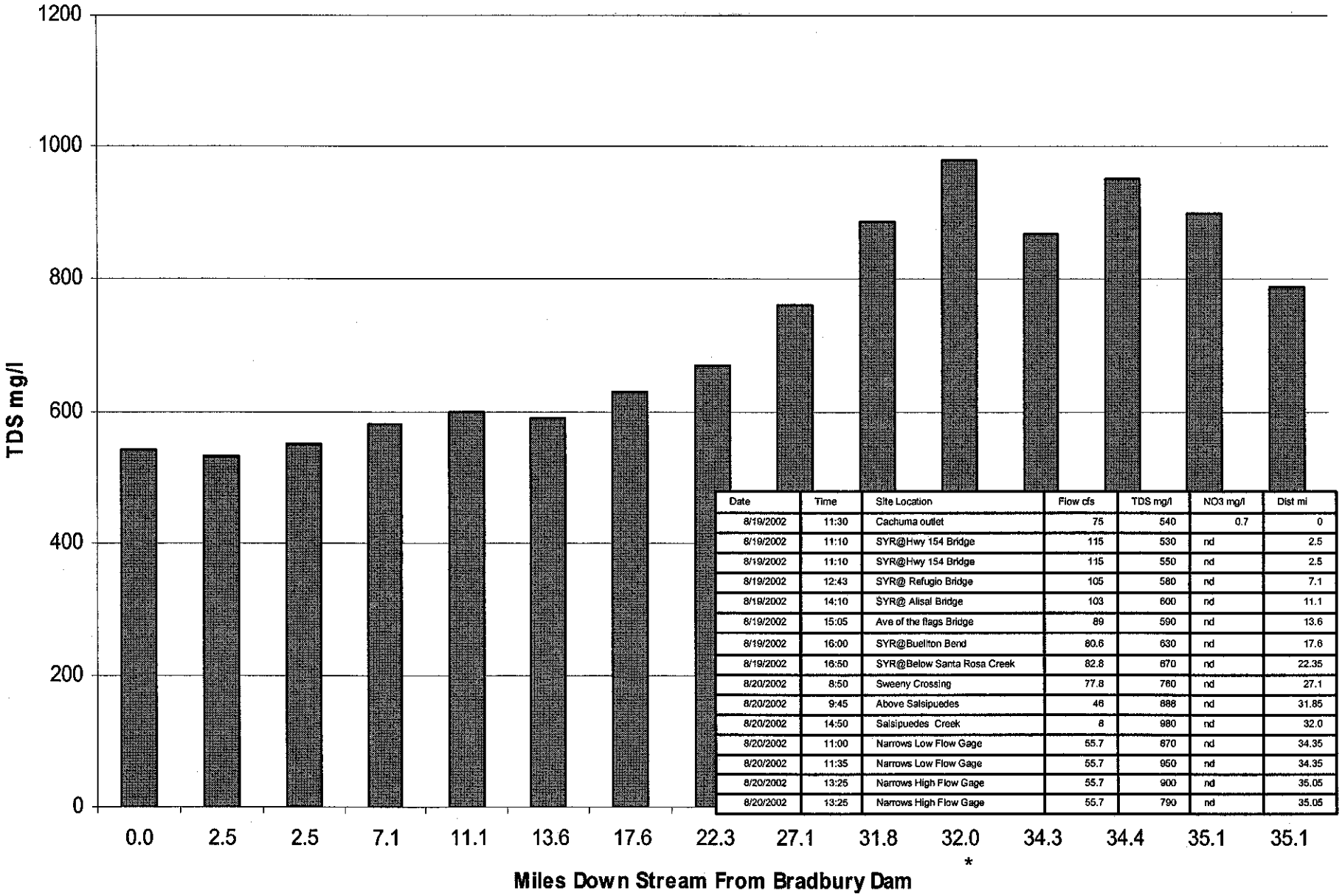

USGS 11132500 SALSIPUEDES CREEK NR LOMPOC
TDS mg/l
1400
1200
1000
800
600
400
200
0
8/28/1999
3/15/2000
10/1/2000
4/19/2001
11/5/2001
5/24/2002
12/10/2002
6/28/2003
1/14/2004
8/1/2004
2/17/2005

Table 15
Figure 7

Santa Ynez River August 2002 TDS



Date	Time	Site Location	Flow cfs	TDS mg/l	NO3 mg/l	Dist mi
8/19/2002	11:30	Cachuma outlet	75	540	0.7	0
8/19/2002	11:10	SYR@Hwy 154 Bridge	115	530	nd	2.5
8/19/2002	11:10	SYR@Hwy 154 Bridge	115	550	nd	2.5
8/19/2002	12:43	SYR@ Refugio Bridge	105	580	nd	7.1
8/19/2002	14:10	SYR@ Alisal Bridge	103	600	nd	11.1
8/19/2002	15:05	Ave of the flags Bridge	89	590	nd	13.6
8/19/2002	16:00	SYR@Buellton Bend	80.6	630	nd	17.6
8/19/2002	16:50	SYR@Below Santa Rosa Creek	82.8	670	nd	22.35
8/20/2002	8:50	Sweeny Crossing	77.8	760	nd	27.1
8/20/2002	9:45	Above Salsipuedes	46	888	nd	31.85
8/20/2002	14:50	Salsipuedes Creek	8	980	nd	32.0
8/20/2002	11:00	Narrows Low Flow Gage	55.7	870	nd	34.35
8/20/2002	11:35	Narrows Low Flow Gage	55.7	950	nd	34.35
8/20/2002	13:25	Narrows High Flow Gage	55.7	900	nd	35.05
8/20/2002	13:25	Narrows High Flow Gage	55.7	790	nd	35.05

*Salsipuedes Creek

Balance Hydrolics(2002a) Water Quality Sampling and Results – August 2002 Water-Rights Releases, Santa Ynez River, Santa Barbara County

Santa Ynez River Levels of TDS Down Stream

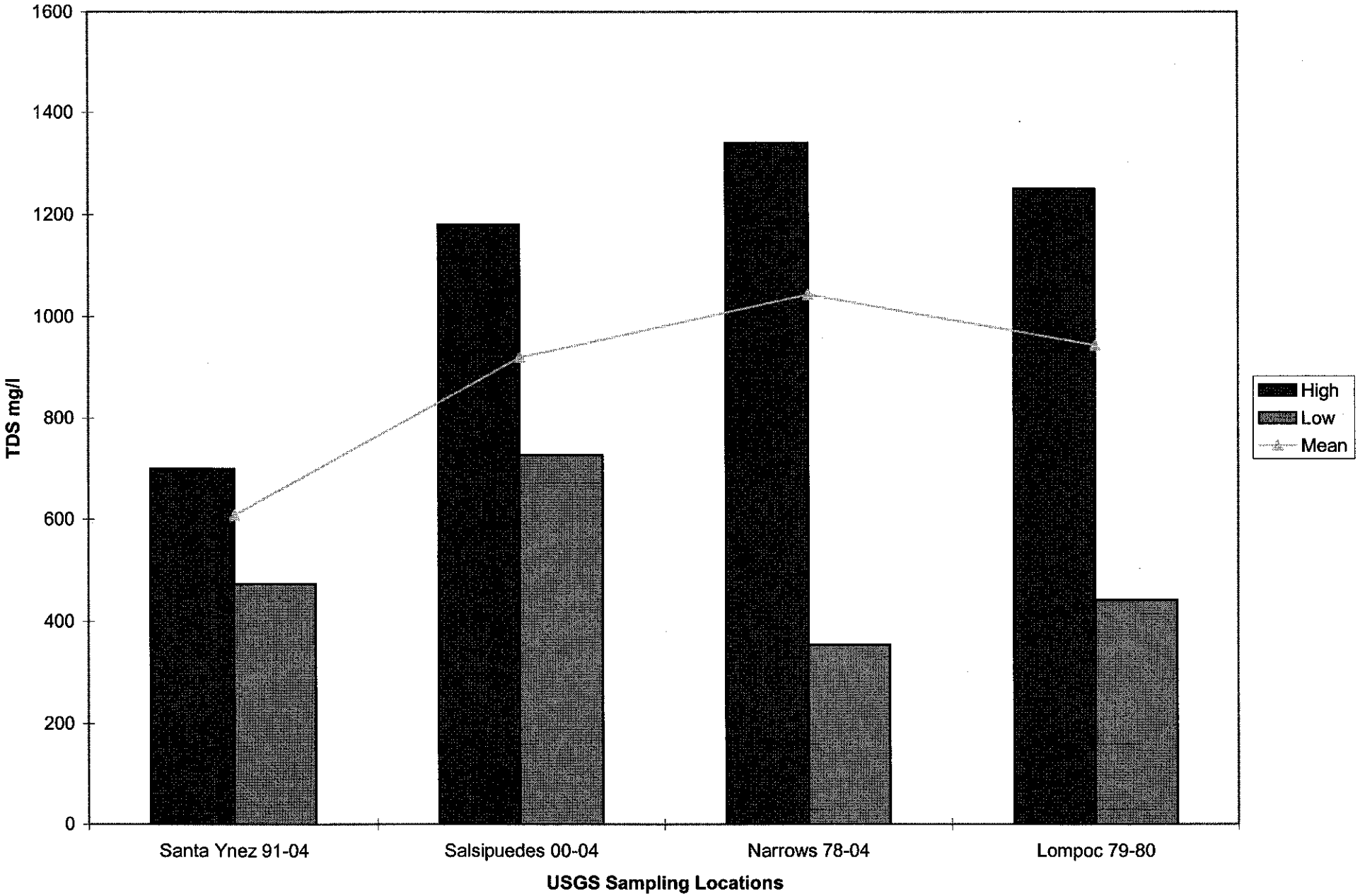
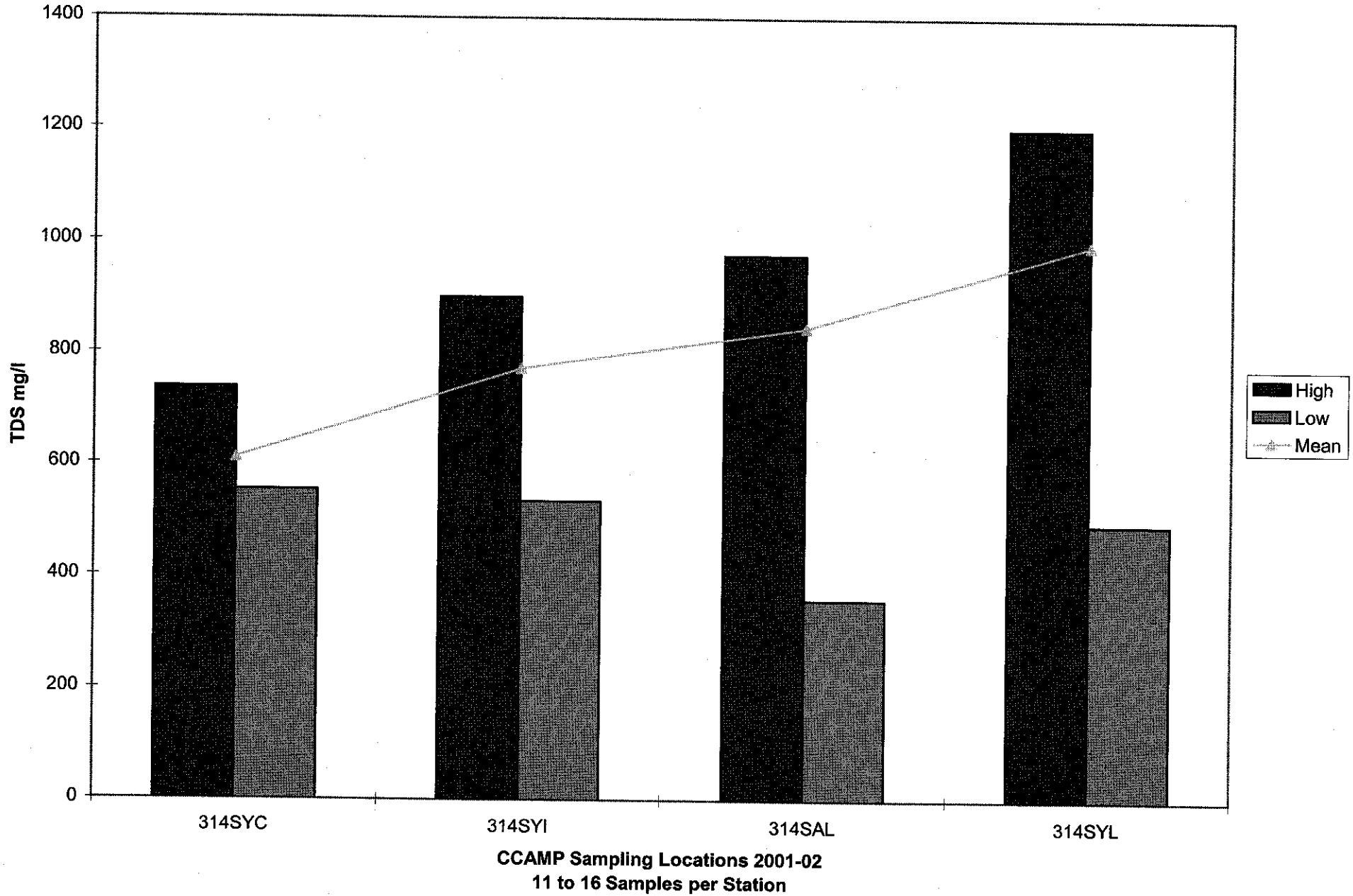
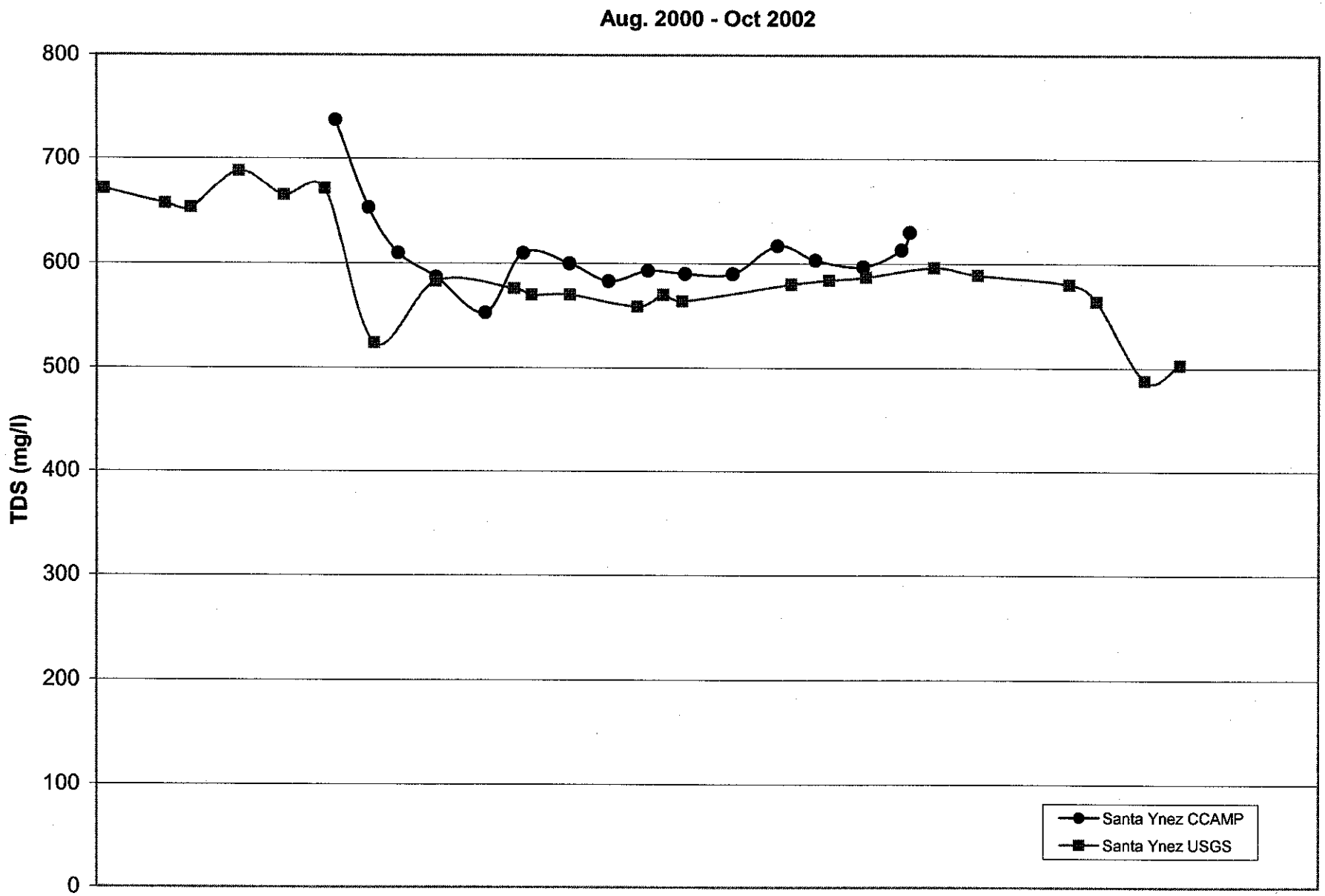


Figure 9

Santa Ynez River Levels of TDS Down Stream



CCAMP 314SYC vs. USGS 11126000 TDS Santa Ynez River @ Hwy 154



USGS Source:http://nwis.waterdata.usgs.gov/ca/nwis/qwdata/?site_no=11126000
CCAMP Source:http://www.ccamp.org/ca0/3/Sites/314syc/314SYC.htm

Figure 16

USGS MONITORING LOCATIONS