

**Identification of Sources of Fecal Pollution Impacting Pillar Point Harbor:
Literature Review**



May 31, 2008
San Mateo County Resource Conservation District

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EXECUTIVE SUMMARY

INTRODUCTION

The objective of this analysis is to provide the research team with data and information which already exists in order to develop a strategy for determining a project overview and detailed project plan. An analysis of the data revealed a number of data gaps. There are a number of studies that are pending release or were not received, which will provide further valuable information. These will be reviewed and this document amended when those studies become available. Documents that are still pending are as follows:

- Kleinfelder Report: San Mateo County Midcoast Groundwater Study, Phase II San Mateo County, California
- Fitzgerald Marine Reserve Critical Coastal Area Project:
Preliminary Watershed Assessment
Historical Ecology
- Vandenberg Pillar Point Air Force Station site specific studies

The enumeration data for fecal indicators with regard to tidal and flow conditions, temporal issues, weather, rain events, seasons, first flush events, etc. has not been addressed in this document as the data was not available in the original reports and will require the reconstruction of the conditions through the use of historical weather information, rain gauge data and tidal charts. Enumeration data is included.

LOCATION

The project study area is the Pillar Point Outer Harbor in El Granada, California. The geographical focus extends to any potential drainages and/or pollution sources which empty into or otherwise impact the harbor and its beaches, such as creeks, marshes, storm drains, sewer systems, runoff, leach fields, springs, wells, boat discharge, pet and avian fecal contamination, sediment, and wrack.

PROJECT SUMMARY

The goal of this project is to assess and identify sources of fecal pollution in Pillar Point Harbor and recommend opportunities for remediation. Water will be sampled in select locations and tested for the presence and abundance of bacteria that occur with fecal pollution. Bacteria samples will be genetically tested to determine their original host source. The primary focus is Capistrano Beach, which has well documented levels of fecal pollution. The secondary focus is the five other beaches and live-aboard boats in the harbor.

The project then develops specific objectives for implementation of water quality remediation projects based on research and analysis. It identifies constraints, impediments, opportunities, and priorities to remediate water quality on the beaches in Pillar Point Harbor and cost-effective, feasible water quality improvement projects. It develops a timeline for implementing the proposed methods to achieve water quality objectives and the parties responsible, as well as a monitoring plan and performance measures to track implementation of projects.

SITE DESCRIPTION

Pillar Point Harbor is an enclosed watershed with complex inputs and water flows. It contains an inner boat harbor, pier, and saltwater/brackish tidal marsh (Pillar Point Marsh). It receives drainage from Denniston and Deer Creeks, storm drains, outflow pipes, and large, mixed use areas including an airport, agricultural, commercial and residential sections. Pillar Point Harbor contains five beaches: Capistrano Beach, Yacht Club Beach, Marsh Beach, Mavericks Beach, Inner Harbor Beach, and Beach House Beach.

Pillar Point Harbor comprises an inner harbor and outer harbor. The inner harbor berths 180 commercial fishing vessels and approximately 200 recreational boats, and is encompassed within the much larger outer harbor area. The harbor area houses commercial ventures including several restaurants, hotels, shops, a fertilizer plant, three commercial fish buyers, sport fishing concessions, a yacht club, two kayak rental companies, a recreational vehicle park, and a Naval Station situated on the bluff overlooking the Outer Harbor. Outside of the Outer Harbor area but within the project study area are conference facilities, residential areas, and additional commercial ventures as well as a pump station for the Sewer Authority Mid-Coastside.

The project area is also within the boundaries of the James V. Fitzgerald Marine Reserve Critical Coastal Area (CCA) Pilot Project. The marine reserve is a designated Area of Special Biological Significance and the CCA pilot project, jointly administered by the State Water Resources Control Board and the California Coastal Commission, is to foster collaboration among local stakeholders and government agencies to better coordinate resources and focus efforts on coastal watersheds in critical need of protection from polluted runoff. The CCA will develop an action plan to reduce non-point source pollution by 2010 and intends to coordinate closely with this project to identify and remediate sources of fecal contamination in Pillar Point Harbor.

METHODOLOGY

Following the first Technical Advisory Committee (TAC) meeting in October 2007 a request for data sources relevant to Pillar Point Harbor was sent to all TAC members. Balance Hydrologics, Pillar Point Harbor Master's Office, Granada Sanitary District (GSD), Sewer Authority Mid-Coastside (SAM), San Mateo County Environmental Health Services (SMCEHS), and the Santa Cruz Department of Environmental Health Services (SCEHS) submitted recommendations for literature to be reviewed. San Mateo County Resource Conservation District staff conducted independent literature searches. Some information was found on the internet and in the Half Moon Bay public library.

Fourteen reports from Balance Hydrologics and eighteen reports from the Pillar Point Harbor Master's office were reviewed. Two reports and five files of correspondence and relevant information were received from the GSD. A binder of information containing correspondence and relevant information was received from SAM. SMCEHS submitted twelve files of correspondence and relevant information electronically. SCEHS submitted six reports electronically.

The literature reviewed has been divided into two categories: reports and correspondence/relevant information. Appendix 1: lists all of the reports in chronological order. The type of information found in the reports has been summarized in Table 1: Known Existing Information. Detailed summaries for each report are found in Appendix 2.

The literature identified as correspondence/relevant information has been organized into Pillar Point Project files. Correspondence refers to communication between the various agencies involved with Pillar Point Harbor. Relevant information refers to items such as newspaper articles, maps, etc. These files are identified by topic or by who the correspondents are; i.e. the file titled Granada Sanitary District/Sewer Authority Mid-Coastside contains all correspondence received by the San Mateo County Resource Conservation District between the Granada Sanitary District and the Sewer Authority Mid-Coastside. There are fifteen files of correspondence and six files of relevant information containing a total of 120 documents. Appendix 3: lists the files of correspondence and relevant information. Detailed summaries of all correspondence and relevant information are in Appendix 4.

Two indices to sort the literature have been created. The index to sort the reports is in digital format and can be obtained by contacting the SMCRCDC. The reports are listed chronologically by a document number determined by the year the report was published. All document numbers begin with the prefix: PPH.R, which stands for Pillar Point Harbor Report. This is followed by the year the report was published. If there is more than one report for a given year, they are designated by a lower case letter. For example, PPH.R.88.a, PPH.R.88.b would refer to two reports published in 1988.

The index to sort the correspondence/relevant information is in digital format and can be obtained by contacting the SMCRCDC. The information is listed chronologically within the Pillar Point file categories (refer to Appendix 3). All document numbers begin with the prefix: PPH.C, which stands for Pillar Point Harbor Correspondence. This is followed by the Pillar Point Harbor file number, the year and the month the item was written. If there is more than one document for a given month, they are designated by a lower case letter. For example, PPH.C.1.91.09.a, PPH.C.1.91.09.b refers to two items from Pillar Point Harbor file 1 that were both published in September 1991.

The SMCEHS has collected samples for fecal indicator bacteria (FIB) at various sites within Pillar Point Harbor under the auspices of AB 411. The San Mateo County Chapter of the Surfrider Foundation has collected FIB samples within Pillar Point Harbor as part of their Blue Water Task Force citizen volunteer water monitoring program. Table 2 summarizes the time periods for the collection of FIB data by this agency and organization.

All documents and electronic files have been duplicated and are housed at the SMCRCDC.

TABLES

Table 1: Known Existing Information

Table 2: Data Gaps

Table 3: Fecal Indicator Bacteria for Pillar Point Harbor

TABLE 1: KNOWN EXISTING INFORMATION FROM REPORTS

(Number of reports related to column headings are listed by location and identified in the Document Reference column.)

	WATERSHED: HYDROLOGY/ GEOLOGY INCL. SEDIMENTATI ON	LANDUSE	HABITAT	FIB	FUNCTION	NATURAL &/OR MAND- MADE CONDITIONS	SEWER/SEWERA GE INFLOW & INFILTRATION STUDIES	DOCUMENT REFERENCE (ALL WITH PREFIX PPH.R)
DENNISTON CREEK	5	5	0	0	0	0	0	74.a; 77.a; 87.a; 91.e; 02.a
DEER CREEK	1	0	0	0	0	0	0	99.a
PILLAR POINT MARSH	6	6	1	0	0	0	0	77.a; 87.a; 91.e; 92.b; 02.a; 03.a
PILLAR POINT HARBOUR	10	6	3	0	0	0	0	75.a; 76.a; 82.a; 86.a; 86.b; 89.d; 89.e; 90.a; 91.a; 91.c; 91.d; 94.a; 95.a; 95.b; 95.c; 97.a; 97.b; 07.a; 07.b
UPLAND	6	4	3	0	0	0	0	88.a; 88.b; 89.a; 89.c; 92.a; 94.b; 01.a
STORM DRAINS/SEWER	0	0	0	0	0	0	0	
OTHER	2	2	1	5	1	0	0	72.a; 89.b; 01.b; 03.b; 06.a; 06.b; 06.c; 08.a

TABLE 2: DATA GAPS

Key

x = no data
 xx = some data
 xxx = full data set

TOPIC	AVAILABLE LITERATURE	WHAT WE HAVE	DATA GAP
Storm Drain Flushing	x	Documents that allude to the need for, and commitment to do this, but no documentation of this work.	Any storm drain flushing data or report
Enumeration Data:			
i) FIB	xx	No data for some sites, minimal data for some sites and substantial data for some sites	Refer to FIB Table 3
ii) Bacteriophage	xx	Two random tests for a number of sites	Consistent sampling data to establish a conclusive source
iii) MST	x		
Storm Drain/Sewerline Maps	xx	Two line diagrams with limited legends and information. Limited to the area surrounding HMB Brewery and Barbara's Fish Trap	Maps for the entire Pillar Point Area – inclusive from the launch ramp to the Westpoint Parking lot
Sewer, other inflow and infiltration studies.	x	This has been referred to in various correspondences but there are no documented studies.	
Landuse Maps	x		
Oral History	xx	Limited to two accounts from local residents	Decisions, actions and/or communications regarding these studies
Smoke, Dye, TV and Soil Tests	xx	Data collected from 7 tests conducted 1991-2005	
Natural and/or human-made conditions	x	CCA pending document on historical ecology.	
Watershed data: Hydrology/Geology			
i) Denniston Creek	xx	Several studies incl. larger area and	

		aquifer – most recent being 1991	
ii) Pillar Point Marsh	xx	Several studies, feasibility of utilizing ground water, biological survey 1977	
iii) Deer Creek Outlet	xx	One study, feasibility of sediment basin	
iv) Harbor	xx	Numerous studies, biota, chemical & physical soil analysis, bathymetry and urban master plan	Circulation study, breakwall permeability studies. sedimentation and beach sand shifting
v) Reclaimed Marsh Area (behind HMB Brewery/Oceano Hotel)	x		

TABLE 3: FECAL INDICATOR BACTERIA FOR PILLAR POINT HARBOUR

(Fecal Indicator Bacteria Data for Pillar Point Harbor)

SITE	DATE	SOURCE
Capistrano Outfall Pipe	6/99-2/01;4/02-2/06	SMC EHS AB411
Bathhouse Outfall Pipe	6/05-4/07	Surfrider San Mateo
Capistrano Beach	6/99-2/01;4/02-2/06	SMC EHS AB411
	6/05-4/07	Surfrider San Mateo
Denniston Creek	9/05-4/07	Surfrider San Mateo
Pillar Point Marsh Beach	6/99-10/07	SMC EHS AB411
Mavericks Beach	8/04-10/07	SMC EHS AB411
Beach House Beach	No data	
Deer Creek	No data	
Inner Harbor Beach	No data	
Yacht Club Beach	No data	
Offshore	No data	

APPENDICES

Appendix 1: List of Reports in Chronological Order

Appendix 2: Report Summaries

Appendix 3: List of Pillar Point Project Files: Correspondence/Relevant Information

Appendix 4: Correspondence/Relevant Information Summaries

Appendix 1: List of Reports

Pillar Point Harbor Report List

This appendix lists the reports received from the various agencies involved with the Pillar Point Harbor project and other pertinent background information.

Document Number: PPH.R.72.a

Title: Preliminary geologic map of San Mateo County, California: USGS Miscellaneous Field Studies Map MF-328

Author: Brabb, E.E. and Pampeyan, E.H.

Date: 1972

Type: Report

Source: Balance Hydrologics

Media Type: Hard Copy, Electronic

Document Number: PPH.R.74.a

Title: Ground water investigation, Denniston Creek vicinity, San Mateo County, California: Unpublished consulting report, 12 p.

Author: Lowney-Kaldveer Associates

Date: 1974

Type: Report

Source: Balance Hydrologics

Media Type: Electronic

Document Number: PPH.R.75.a

Title: Biological Survey of Pillar Point Harbor, Progress Report

Author: Marine Ecological Institute

Date: 1975

Type: Study

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.76.a

Title: Biological Survey of Pillar Point Harbor, El Granada, CA.

Author: Marine Ecological Institute

Date: 1976

Type: Study

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.77.a

Title: Environmental study of the Pillar Pt. Marsh, San Mateo County, California: Part I. Baseline data: Consulting report prepared for the Coastside County Water District, draft, 34 p. + numerous tables and appendices.

Author: Flint, P.S.

Date: 1977

Type: Report

Source: Balance Hydrologics

Media Type: Electronic

Document Number: PPH.R.82.a

Title: Geotechnical Engineering Investigation Pillar Point Marina, El Granada, CA

Author: Woodward-Clyde Consultants

Date: 1982

Type: Report

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.86.a

Title: Princeton Study Area, Background Report

Author: Department of Environmental Management

Date: 1986

Type: Report

Source: Granada Sanitary District

Media Type: Hard Copy

Document Number: PPH.R.86.b

Title: Comprehensive Condition Survey: East and West Breakwaters, Half Moon Bay, San Mateo, CA

Author: US Army Corps of Engineers;

Date: 1986

Type: Report

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.87.a

Title: Half Moon Bay Airport/Pillar Point Marsh ground water basin, phase I study report (preliminary report): Unpublished Report

Author: Earth Science Associates and Luhdorff & Scalmanini

Date: 1987

Type: Report

Source: Balance Hydrologics

Media Type: Electronic

Document Number: PPH.R.88.a

Title: El Granada ground water investigation report: Kleinfelder & Associates consulting report prepared for the San Mateo County Planning Department.

Author: Laduzinsky, D., Hecht, B., and Woyshner, M.

Date: 1988

Type: Report

Source: Balance Hydrologics

Media Type: Hard Copy, Electronic

Document Number: PPH.R.88.b

Title: Biology Montara-Moss Beach Water Wells EIR. Administrative draft for Kleinfelder

Author: Renshaw, D.L.

Date: 1988

Type: Report

Source: Balance Hydrologics

Media Type: Hard Copy, Electronic

Document Number: PPH.R.89.a

Title: Appendix: Plants & Animals Identified in the Montara-Moss Beach Study Area

Author: Renshaw, D.L.

Date: 1989

Type: Report

Source: Balance Hydrologics

Media Type: Electronic

Document Number: PPH.R.89.b

Title: An Evaluation of Waste Water Disposal and Water Quality in the San Lorenzo River Watershed: Preliminary Report

Author: County of Santa Cruz Health Services Agency

Date: 1989

Type: Report

Source: Santa Cruz Department of Environmental Health

Media Type: Electronic

Document Number: PPH.R.89.c

Title: Groundwater Extraction in the Urban Mid-Coastside Communities of San Mateo County

Author: California Coastal Commission

Date: 1989

Type: Report

Source: Balance Hydrologics

Media Type: Hard Copy

Document Number: PPH.R.89.d

Title: Soil and Foundation Study for Proposed Boardwalk-pathway, Pillar Point, Half Moon Bay, San Mateo Co, CA

Author: JCP Geologist/Engineers, Cupertino, CA

Date: 1989

Type: Report

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.89.e

Title: Final Environmental Impact Report as an Addendum to the Draft Environmental Impact Report for the Pillar Point East Harbor Master Plan

Author: Earth Metrics Incorporated;

Date: 1989

Type: Report

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.90.a

Title: Geotechnical Engineering Study West Shoreline Access Project, Pillar Point Marina, El Granada, CA

Author: Levine-Fricke Consulting Engineers and Hydrogeologists.

Date: 1990

Type: Study

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.91.a

Title: Pillar Point Harbor Master Plan and Urban Waterfront Restoration Plan

Author: Callander Associates

Date: 1991

Type: Study

Source: Half Moon Bay Library

Media Type: Hard Copy

Document Number: PPH.R.91.b

Title: Denniston Creek Investigations Pictures

Date: 1991

Type: Internal document

Source: Granada Sanitary District

Media Type: Hard Copy

Document Number: PPH.R.91.c

Title: Results of Geotechnical Field Testing West Shoreline
Access Project, Pillar Point Marina, El Granada, CA

Author: Levine-Fricke Consulting Engineers and Hydrogeologists

Date: 1991

Type: Report

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.91.d

Title: Pillar Point Boat Ramp Facility Mitigation Site Monitoring Program Baseline Data Report

Author: Entrix, Inc.

Date: 1991

Type: Report

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.91.e

Title: Half Moon Bay Airport/Pillar Point Marsh ground-water basin report Phase II

Author: Luhdorff and Scalmanini Consulting Engineers and Earth Sciences Associates

Date: 1991

Type: Study

Source: Balance Hydrologics

Media Type: Electronic

Document Number: PPH.R.92.a

Title: Initial identification of hydrogeologic and water-quality opportunities and constraints: proposed county golf course at the Cowell-Torello Property, Moss Beach, California: Consulting report submitted to Cowell-Torello Properties

Author: Hecht, B., White, C., and Knudsen, K.

Date: 1992

Type: Study

Source: Balance Hydrologics

Media Type: Electronic

Document Number: PPH.R.92.b

Title: Half Moon Bay Airport/Pillar Point Marsh ground-water basin report, Phase II: Supplemental Data.

Author: Luhdorff and Scalmanini Consulting Engineers and Earth Sciences Associates

Date: 1992

Type: Report

Source: Balance Hydrologics

Media Type: Electronic

Document Number: PPH.R.94.a

Title: Results of Chemical and Physical Testing of Sediments from the Pillar Point Marina

Author: Advanced Biological Testing, Inc.

Date: 1994

Type: Report

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.94b

Title: Rescission of a Portion of Categorical Exclusion E-81-1, Approved for San Mateo County in 1981

Author: California Coastal Commission

Date: 1994

Type: Report

Source: Balance Hydrologics

Media Type: Electronic

Document Number: PPH.R.95.a

Title: Results of Chemical and Physical Testing of Sediments from the Pillar Point Marina Surfer Beach

Author: Advanced Biological Testing, Inc.

Date: 1995

Type: Report

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.95.b

Title: Results of Pillar Point Harbor Intertidal Mitigation Site Investigations A: Benthic Invertebrates, B: Shorebirds

Author: Entrix, Inc.

Date: 1995

Type: Study

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.95.c

Title: Administrative Draft Supplemental Environmental Impact Report for the Pillar Point Harbor 71-Berth Addition and Harbor Maintenance Dredging Project

Author: Huffman and Associates, Inc.

Date: 1995

Type: Study

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.97.a

Title: Results of Chemical and Physical Testing of Sediments for New Construction Dredging at Pillar Point Harbor

Author: Advanced Biological Testing, Inc.

Date: 1997

Type: Report

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.97.b

Title: Addendum to Results of Chemical and Physical Testing of Sediments for New Construction Dredging at Pillar Point Harbor

Author: Advanced Biological Testing, Inc.

Date: 1997

Type: Report

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.99.a

Title: A Feasibility Study of Sediment Retention Basins for Deer Creek, El Granada, CA

Author: DeTemple, B.; Battalio, R.; Ruttenberg, D.

Date: 1999

Type: Study

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.01.a

Title: Water Supply Evaluation: Calendar Year 2000 Report

Author: Coastside County Water District

Date: 2001

Type: Report

Source: Balance Hydrologics

Media Type: Hard Copy, Electronic

Document Number: PPH.R.01.b

Title: Evaluation of Urban Water Quality, Task 4 Report, San Lorenzo River Watershed Management Plan Update

Author: Ricker, J.; Peters, S.; Golling, R.

Date: 2001

Type: Report

Source: Santa Cruz Department of Environmental Health

Media Type: Electronic

Document Number: PPH.R.02.a

Title: Fitzgerald Marine Reserve Master Plan

Author: Kittleson, G.; Hecht, B. consulting contribution excerpts found as pp. 129-140 in Brady/LSA, 2002, Fitzgerald Marine Reserve Master Plan Part Two: Environmental Setting

Date: 2002

Type: Report

Source: Balance Hydrologics

Media Type: Electronic

Document Number: PPH.R.03.a

Title: Fitzgerald Marine Reserve Draft Environmental Impact Report

Author: Thomas Reid Associates

Date: 2003

Type: Report

Source: Half Moon Bay Library

Media Type: Hard copy

Document Number: PPH.R.03.b

Title: San Lorenzo Urban River Plan

Author: City of Santa Cruz

Date: 2003

Type: Report

Source: Santa Cruz Department of Environmental Health

Media Type: Electronic

Document Number: PPH.R.06.a

Title: Assessment of Sources of Bacterial Contamination at Santa Cruz County Beaches

Author: Ricker, J.; Peters, S.

Date: 2006

Type: Study

Source: Santa Cruz Department of Environmental Health

Media Type: Electronic

Document Number: PPH.R.06.b

Title: The Amplification of Indicator Bacteria resulting as a Result of kelp Mound Incubation along a Protected Beach in Southern California

Author: McCoy, D.; Aumand, L.

Date: 2006

Type: Study

Source: Santa Cruz Department of Environmental Health

Media Type: Electronic

Document Number: PPH.R.06.c

Title: Observations in Macro and Micro Algae Contributions to Bacteria Populations and Implications for Beach Advisories

Author: Peters, S.

Date: 2006

Type: Study

Source: Santa Cruz Department of Environmental Health

Media Type: Electronic

Document Number: PPH.R.07.a

Title: Summary Report Pillar Point Harbor Bathymetry Study & Outer Harbor Channel Design

Author: Gahagan & Bryant Associates, Inc.

Date: 2007

Type: Report

Source: Pillar Point Harbor Master's Office

Media Type: Hard Copy

Document Number: PPH.R.07.b

Title: Jurisdictional Waters of the US and Wetland Determination Report: United States Air Force Pillar Point Storm Water Outfall Project

Author: Bayer, K.; Evans, Y.; Varney, R.; Zoidis, A.

Date: 2007

Source: Pillar Point Harbor Master's Office

Type: Study

Media Type: Hard Copy

Document Number: PPH.R.08.a

Title: Clean Marina Program Annual Review

Author: Kronman, M., City of Santa Barbara Waterfront Department

Date: 2008

Type: Memo

Source: Santa Barbara Harbor Master's Office

Media Type: Hard Copy, Electronic

Appendix 2: Report Summaries

Pillar Point Harbor Literature Review

This document summarizes the reports received from the various agencies involved with the Pillar Point Harbor project and other pertinent background information.

Document Number: PPH.R.72.a

Title: Preliminary geologic map of San Mateo County, California: USGS Miscellaneous Field Studies Map MF-328

Author: Brabb, E.E. and Pampeyan, E.H.

Date: 1972

Type: Report

Source: Balance Hydrologics

Summary: Open-File report, digital geologic map database compiled from previously published & unpublished data, represents general distribution of bedrock and surficial deposits in San Mateo Co., provides information of geologic structure and stratigraphy.

Document Number: PPH.R.74.a

Title: Ground water investigation, Denniston Creek vicinity, San Mateo County, California: Unpublished consulting report, 12 p.

Author: Lowney-Kaldveer Associates

Date: 1974

Type: Report

Source: Balance Hydrologics

Summary: Purpose of study was to evaluate potential for future subsurface water development within the area under jurisdiction of the Coastside County Water District as a basis for management of the basin.

Document Number: PPH.R.75.a

Title: Biological Survey of Pillar Point Harbor, Progress Report

Author: Marine Ecological Institute

Date: 1975

Type: Study

Source: Pillar Point Harbor Master's Office

Summary: This report presents initial findings of the Biological Survey of Pillar Point Harbor conducted by the Marine Ecological Institute.

Document Number: PPH.R.76.a

Title: Biological Survey of Pillar Point Harbor, El Granada, CA.

Author: Marine Ecological Institute

Date: 1976

Type: Study

Source: Pillar Point Harbor Master's Office

Summary: The purpose of this study was to describe the biotic resources of Pillar Point Harbor and to develop the data necessary for an Environmental Impact Statement. The entire area within the breakwater was studied for one year. Detailed observations were made with regards to water quality (temperature, salinity, transparency, and dissolved oxygen), avian and mammalian surveys, fish and macroinvertebrate surveys, benthic surveys, and diver transects.

Document Number: PPH.R.77.a

Title: Environmental study of the Pillar Pt. Marsh, San Mateo County, California: Part I. Baseline data: Consulting report prepared for the Coastside County Water District, draft, 34 p. + numerous tables and appendices.

Author: Flint, P.S.

Date: 1977

Type: Report

Source: Balance Hydrologics

Summary: Coastside County Water District (CCWD) undertaking the development of Denniston Creek watershed as a local water supply in two phase project. This report conducted as part of Phase II, the proposal to drill 8 wells in the Denniston Creek/airport area. A condition of the permit from the Central Coast Regional Commission for this project states that “prior to production of any proposed wells, applicant shall adopt a monitoring program for groundwater levels and quality & the biological effects in the Princeton area.” This document reports on the biota as a baseline study before the onset of the rainy season. Groundwater monitoring was performed by the District engineer. This document includes detailed descriptions of the Pillar Point Marsh: physiographic setting, brief history of land use, physical environment, geology, hydrology, soils, vegetation, and animals.

Document Number: PPH.R.82.a

Title: Geotechnical Engineering Investigation Pillar Point Marina, El Granada, CA

Author: Woodward-Clyde Consultants

Date: 1982

Type: Report

Source: Pillar Point Harbor Master’s Office

Summary: Provides geotechnical information and recommendations to aid in developing design criteria for proposed marina improvements.

Document Number: PPH.R.86.a

Title: Princeton Study Area, Background Report

Author: Department of Environmental Management

Date: 1986

Type: Report

Source: Granada Sanitary District

Summary: Provides background information about the Princeton area. Identifies potential issues for future development of this area. Pertinent information for the PPH project is found in Section 3, Public Services and Facilities. On page 3.4 it’s stated that “some of the sewer pipelines...are in need of repair or replacement.”

Document Number: PPH.R.86.b

Title: Comprehensive Condition Survey: East and West Breakwaters, Half Moon Bay, San Mateo, CA

Author: US Army Corps of Engineers;

Date: 1986

Type: Report

Source: Pillar Point Harbor Master's Office

Summary: This condition survey was designed to identify problems which require immediate rehabilitation and to evaluate the overall condition of the east and west breakwaters at Half Moon Bay. While many minor problems were identified, the structures were found to be in good condition. The key problems found included: possible loss of armor stone at various locations, an overlay of smaller rock over the crest of most of the west breakwater, this is not of a design size and is not keyed well to the section below. These problems could be addressed as part of a routine maintenance contract, although no immediate work is required on either breakwater. The evaluation of the overall condition of the breakwaters indicates that there is no serious design or material deficiencies.

Document Number: PPH.R.87.a

Title: Half Moon Bay Airport/Pillar Point Marsh ground water basin, phase I study report (preliminary report): Unpublished Report

Author: Earth Science Associates and Luhdorff & Scalmanini

Date: 1987

Type: Report

Source: Balance Hydrologics

Summary: Purpose of study was to determine safe yield of Half Moon Bay Airport/Pillar Point Marsh Ground Water Basin (the Denniston Creek sub-basin of the Half Moon Bay Aquifer.)

Document Number: PPH.R.88.a

Title: El Granada ground water investigation report: Kleinfelder & Associates consulting report prepared for the San Mateo County Planning Department.

Author: Laduzinsky, D., Hecht, B., and Woyshner, M.

Date: 1988

Type: Report

Source: Balance Hydrologics

Summary: This report presents a reconnaissance description of the local ground-water resources in the El Granada area and discusses factors affecting their recharge, discharge, annual and seasonal fluctuations, and water quality. Detailed information is included regarding aquifer analysis (geometry, boundaries, and properties), ground water occurrence and storage, water level fluctuations, water balance inflows (percolation, inflow from valley alluvium, reservoir recharge) and water balance outflows (infiltration to sewer pipe, ground water pumpage), water quality. Conclusions address the assessment of risks and suggested directions for management.

Document Number: PPH.R.88.b

Title: Biology Montara-Moss Beach Water Wells EIR. Administrative draft for Kleinfelder

Author: Renshaw, D.L.

Date: 1988

Type: Report

Source: Balance Hydrologics

Summary: This report discusses the biological impacts (direct and indirect) associated with residential development on the habitat types (riparian, coastal grasslands, wetlands, aquatic, ruderal, eucalyptus and conifer stands, residential, and developed) in the Moss Beach-Montara area. Unique features such as plant and animal species of special concern, sensitive habitats, CA wild strawberries, and weedy, undesirable plants are discussed. Various mitigations and alternatives are presented.

Document Number: PPH.R.89.a

Title: Appendix: Plants & Animals Identified in the Montara-Moss Beach Study Area

Author: Renshaw, D.L.

Date: 1989

Type: Report

Source: Balance Hydrologics

Summary: List of plants and animals identified during the surveys presented in the previous document as well as species identified during unpublished field research conducted from 1975-1988.

Document Number: PPH.R.89.b

Title: An Evaluation of Waste Water Disposal and Water Quality in the San Lorenzo River Watershed: Preliminary Report

Author: County of Santa Cruz Health Services Agency

Date: 1989

Type: Report

Source: Santa Cruz Department of Environmental Health;
(http://sccounty01.co.santa-cruz.ca.us/eh/environmental_water_quality_home.htm)

Summary: This report evaluates the conclusions of past studies in relation to the findings of the San Lorenzo Wastewater Management Program which has been conducted by the Santa Cruz County Health Services Agency since 1985. This program has included water quality monitoring, sanitary surveys, lot-by-lot investigations of septic system performance, and required upgrade of inadequate wastewater disposal systems. This report provides an analysis of water quality of surface water and ground water in the San Lorenzo watershed, with specific emphasis on water quality conditions which are affected by wastewater disposal in the watershed. It also presents an analysis of the effectiveness of current methods of wastewater disposal, evaluates the potential for improvements, and makes recommendations for future wastewater management in the Watershed. 335pp

Document Number: PPH.R.89.c

Title: Groundwater Extraction in the Urban Mid-Coastside Communities of San Mateo County

Author: California Coastal Commission

Date: 1989

Type: Report

Source: Balance Hydrologics

Summary: An update to the 1989 report presented on the issue of ground water extraction in the Mid-Coastside communities of Half Moon Bay, Princeton, El Granada, Moss Beach, and Montara. In response to the inability of water providers to service new projects, landowners have drilled individual wells to serve their projects. Commission concerns regarding the proliferation of private wells include potential impacts on environmentally sensitive habitats, particularly the Pillar Point Marsh and the adequacy of public services for new projects.

Document Number: PPH.R.89.d

Title: Soil and Foundation Study for Proposed Boardwalk-pathway, Pillar Point, Half Moon Bay, San Mateo Co, CA

Author: JCP Geologist/Engineers, Cupertino, CA

Date: 1989

Type: Report

Source: Pillar Point Harbor Master's Office

Summary: Presents the results of studies performed for the boardwalk-pathway located adjacent to the Marchant property and Pillar Point Harbor. This report includes a site description (surface and subsurface conditions), geology of the area, secondary seismic events (liquefaction potential, slope stability, tsunami, and coastal erosion), conclusions and recommendations.

Document Number: PPH.R.89.e

Title: Final Environmental Impact Report as an Addendum to the Draft Environmental Impact Report for the Pillar Point East Harbor Master Plan

Author: Earth Metrics Incorporated

Date: 1989

Type: Report

Source: Pillar Point Harbor Master's Office

Summary: The East Harbor Master Plan for Pillar Point harbor consists of numerous improvements which cover the majority of the East Harbor area. The plan is broken down into four major improvement areas: the boat launch ramp and associated parking area, the commercial dock areas (or bulkhead expansion), the Johnson Pier expansion and construction of additional berths, the R.V. park and public access ways path to the launch ramp and beach areas. This document responds to all written comments received by the San Mateo Co. harbor District. Together with the Draft EIR, dated February 1989, this document constitutes the full final EIR subject to review and certification by the SMC Harbor Commission.

Document Number: PPH.R.90.a

Title: Geotechnical Engineering Study West Shoreline

Access Project, Pillar Point Marina, El Granada, CA

Author: Levine-Fricke Consulting Engineers and Hydrogeologists.

Date: 1990

Type: Study

Source: Pillar Point Harbor Master's Office

Summary: This report presents the results of a geotechnical engineering study on the west shoreline of Pillar Point Harbor for the proposed project consisting of the construction of a 12-car parking lot, approximately 2400 feet of 10-foot wide graveled pedestrian pathway, and the construction of approximately 1 acre of new intertidal habitat created by soil and bedrock excavation. The existing non-functional storm drain will be replaced with a new drain outfall. The purpose of the study was to evaluate the subsurface conditions in specific areas of the access road alignment and the mitigation site and to develop recommendations for site excavation and placement of fill and shoreline protection.

Document Number: PPH.R.91.a

Title: Pillar Point Harbor Master Plan and Urban Waterfront Restoration Plan

Author: Callander Associates

Date: 1991

Type: Study

Source: Half Moon Bay Library

Summary: Study recommends that the West Shoreline be maintained as a natural area and Pillar Point Marsh be preserved and included in the West Shoreline Management area.

Document Number: PPH.R.91.b

Title: Denniston Creek Investigations Pictures

Date: 1991

Type: Internal document

Source: Granada Sanitary District

Summary: A binder containing photographs of:

Denniston Creek, 8/9/91

Outlet of Denniston Creek, 8/23/91

Sand on beach at the end of Columbia Ave. storm drain outlet, 8/23/91

Storm drain near Shorebird after county flushed storm drain, 8/26/91

Document Number: PPH.R.91.c

Title: Results of Geotechnical Field Testing West Shoreline Access Project, Pillar Point Marina, El Granada, CA

Author: Levine-Fricke Consulting Engineers and Hydrogeologists

Date: 1991

Type: Report

Source: Pillar Point Harbor Master's Office

Summary: This document concludes the geotechnical field services for the project described in the 1990 report. Based on the observations, monitoring, and field density testing conducted by Levine-Fricke personnel, they give their professional opinion that the grading activities have been conducted in substantial conformance with the project plans and specifications and meet or exceed their recommendations.

Document Number: PPH.R.91.d

Title: Pillar Point Boat Ramp Facility Mitigation Site Monitoring Program Baseline Data Report

Author: Entrix, Inc.

Date: 1991

Type: Report

Source: Pillar Point Harbor Master's Office

Summary: Contractor retained by San Mateo Harbor District to conduct a baseline survey and a three year monitoring program of the intertidal marine benthic invertebrate community and birds using the nearshore area at the mitigation site near the western edge of the outer breakwater. Results are presented for epibenthic surveys, infaunal samples, bird censuses, species abundance and number of species, water bird use by segment and habitat, and sensitive species. Since this is a baseline survey no effort was made to draw conclusions from the data.

Document Number: PPH.R.91.e

Title: Half Moon Bay Airport/Pillar Point Marsh ground-water basin report Phase II

Author: Luhdorff and Scalmanini Consulting Engineers and Earth Sciences Associates

Date: 1991

Type: Study

Source: Balance Hydrologics

Summary: Purpose of this study was to determine the safe yield of HMB Airport/Pillar Point Marsh ground-water Basin (Denniston Creek sub-basin of the HMB Aquifer). Safe yield defined as "the amount of water that can be removed without adverse impacts on marsh health." The amount of water pumped from new wells is to "be limited to a safe yield factor which will not impact water dependent sensitive habitats, riparian habitats, or marshes." This study was conducted in two parts: a review and evaluation of available data to determine appropriate methodology for determining basin yield and the collection of additional data necessary for estimation of yield and development of management practices required to use and protect ground-water resources. This report includes the following information: description of the study area; information from previous studies; available data for surface water, wells, ground water quality; geologic conditions, regional and local; hydrologic conditions, surface water hydrology, stream gauging, infiltration potential, ground-water conditions, aquifer characteristics, ground water budget; biological assessment; ground-water basin yield and management.

Document Number: PPH.R.92.a

Title: Initial identification of hydrogeologic and water-quality opportunities and constraints: proposed county golf course at the Cowell-Torello Property, Moss Beach, California: Consulting report submitted to Cowell-Torello Properties

Author: Hecht, B., White, C., and Knudsen, K.

Date: 1992

Type: Study

Source: Balance Hydrologics

Summary: Portions of the Cowell-Torello property at the eastern edge of unincorporated Moss Beach were evaluated for the feasibility of the development of a golf course. This report addresses the impacts of water use, particularly the draw-down from wells (if used) and the impacts of runoff containing applied chemicals on the important natural areas of Pillar Point Marsh and the Fitzgerald Marine Reserve. This document provides information on the hydrologic setting, a description of the proposed development, projected water demands, previously conducted studies of the area, known beneficial uses, environmental issues and resource vulnerability, constituents of concern and pathways of dispersion, chemical applications management plans, ground-water occurrence, current use, yields, and likely effects, and potential mitigative approaches. The summary and conclusions describes additional water demands, potential water quality effects, anticipated effects on San Vicente Creek and Pillar Point Marsh, and pertinent information still needed.

Document Number: PPH.R.92.b

Title: Half Moon Bay Airport/Pillar Point Marsh ground-water basin report, Phase II: Supplemental Data.

Author: Luhdorff and Scalmanini Consulting Engineers and Earth Sciences Associates

Date: 1992

Type: Report

Source: Balance Hydrologics

Summary: This report provides additional data and an update of the Phase II report through April 1992. Recent water levels measured in piezometers show that an upward vertical ground-water gradient still exists indicating that ground water continues to recharge the marsh.

Document Number: PPH.R.94.a

Title: Results of Chemical and Physical Testing of Sediments from the Pillar Point Marina

Author: Advanced Biological Testing, Inc.

Date: 1994

Type: Report

Source: Pillar Point Harbor Master's Office

Summary: This report evaluates the potential use of sediments from the Marina for disposal at a site offshore of Surfers Beach to aid in beach replenishment or onsite at the marina for use as fill material.

Document Number: PPH.R.94b

Title: Rescission of a Portion of Categorical Exclusion E-81-1, Approved for San Mateo County in 1981

Author: California Coastal Commission

Date: 1994

Type: Report

Source: Balance Hydrologics

Summary: Recommends partial rescission of the portion of San Mateo County Categorical Exclusion E-81-1 that excludes agricultural wells from the requirement for obtaining a coastal development permit from the County. Partial rescission applies only to new agricultural wells in the Pillar Point Marsh watershed. New agricultural wells in this watershed would be required to be issued coastal development permits by San Mateo County before construction.

Document Number: PPH.R.95.a

Title: Results of Chemical and Physical Testing of Sediments from the Pillar Point Marina Surfer Beach

Author: Advanced Biological Testing, Inc.

Date: 1995

Type: Report

Source: Pillar Point Harbor Master's Office

Summary: Reports on the sediment chemical and physical analysis carried out on two samples taken from Surfers Beach adjacent to the Marina near Half Moon Bay. Dredging is being proposed to a maintained depth of -7 feet MLLW. Samples were taken to assess the compatibility of sediment taken from the Marina and proposed for disposal at this beach site.

Document Number: PPH.R.95.b

Title: Results of Pillar Point Harbor Intertidal Mitigation Site Investigations A: Benthic Invertebrates, B: Shorebirds

Author: Entrix, Inc.

Date: 1995

Type: Study

Source: Pillar Point Harbor Master's Office

Summary: Two reports that describe how the marine invertebrate and shorebird communities at the west end of Pillar Point Harbor may have changed over time following mitigation conducted in conjunction with the completion of the new boat ramp at the Harbor. For the invertebrate study, transects were set up in the mitigation area and a nearby reference area to assess the success of the mitigation effort in supporting a marine benthos community similar to those occurring naturally within the boundaries of the harbor. To evaluate shorebird communities, shorebird utilization of the mitigation area was compared to several nearby reference areas. Shorebird habitat appeared to be somewhat improved over nearby reference areas, while invertebrate communities were generally similar to that of the reference area. It appears the mitigation effort was successful in enhancing the habitat for these two communities.

Document Number: PPH.R.95.c

Title: Administrative Draft Supplemental Environmental Impact Report for the Pillar Point Harbor 71-Berth Addition and Harbor Maintenance Dredging Project

Author: Huffman and Associates, Inc.

Date: 1995

Type: Study

Source: Pillar Point Harbor Master's Office

Summary: This EIR evaluates the environmental impacts of the Pillar Point Harbor 71-berth addition, harbor maintenance dredging, and the construction of a guest dock at the HMB Yacht Club. The project includes 71 berths for recreational boats, a public access dock, an interim parking area, and a 6000 sq.ft. restaurant. The project also includes associated dredging required to achieve navigable depths in the berth and dock areas and maintenance dredging inside the eastern outer breakwater. In addition the HMB Yacht Club is proposing construction of a guest dock adjacent to their facility on Princeton Avenue. The report provides analysis of significant and unavoidable impacts, significant impacts, mitigation measures to avoid or reduce identified significant impacts, and less-than-significant impacts.

Document Number: PPH.R.97.a

Title: Results of Chemical and Physical Testing of Sediments for New Construction Dredging at Pillar Point Harbor

Author: Advanced Biological Testing, Inc.

Date: 1997

Type: Report

Source: Pillar Point Harbor Master's Office

Summary: This document was prepared to support applications for permits by Pillar Point Harbor to conduct new construction dredging. Its specific purpose is to present the results of chemical and physical analyses of the sediments.

Document Number: PPH.R.97.b

Title: Addendum to Results of Chemical and Physical Testing of Sediments for New Construction Dredging at Pillar Point Harbor

Author: Advanced Biological Testing, Inc.

Date: 1997

Type: Report

Source: Pillar Point Harbor Master's Office

Summary: Two additional stations were sampled after the completion of the previous document. The results of the chemical and physical analyses of these sites are reported here.

Document Number: PPH.R.99.a

Title: A Feasibility Study of Sediment Retention Basins for Deer Creek, El Granada, CA

Author: DeTemple, B.; Battalio, R.; Ruttenberg, D.

Date: 1999

Type: Study

Source: Pillar Point Harbor Master's Office

Summary: Reports on the feasibility of using a sediment retention basin to manage and reduce inflow of sediment into Pillar Point Harbor from Deer Creek.

Document Number: PPH.R.01.a

Title: Water Supply Evaluation: Calendar Year 2000 Report

Author: Coastside County Water District

Date: 2001

Type: Report

Source: Balance Hydrologics

Summary: Annual report prepared by CCWD staff following compilation of water production and sales data for the prior year. This report covers water production data for the period 1972-2000 and water sales data for 1975-2000. This report also presents an updated analysis of the capability of the water supply and transmission system to meet current and projected demands. There is no substantial change from last year's report.

Document Number: PPH.R.01.b

Title: Evaluation of Urban Water Quality, Task 4 Report, San Lorenzo River Watershed Management Plan Update

Author: Ricker, J.; Peters, S.; Golling, R.

Date: 2001

Type: Report

Source: Santa Cruz Department of Environmental Health

Summary: The County of Santa Cruz prepared and adopted a Watershed Management Plan for the San Lorenzo River in 1979. This report is an update of the Plan with particular emphasis on investigation and control of contamination from urban run-off. Results from investigations of microbiological contamination, toxic contaminants, lagoon water quality, and urban run-off management are presented. The section addressing Microbiological Contamination includes detailed information about the potential for disease and the use of indicator organisms, testing methodologies, historical trends of bacteria in the San Lorenzo River, focused monitoring (river, ocean, storm drains, sediments, and bacterial die-off), sources of bacteriologic contamination (birds, sewage spills/leaks, storm drain systems, and upstream flood plain areas). A Health Risk study was conducted with the following information reported: background on health risks, prior incidence of water-borne disease in Santa Cruz, survey methods and results, and the relationship to indicator levels. The section on General lagoon Water Quality and Chemical Constituents in Urban Run-off includes information about past findings in the San Lorenzo River, heavy metals, pesticides /PCBs, oil and grease, and products of combustion. Conclusions and Recommendations report observed levels of impairment, sources of microbiologic contamination, management measures for reduction of sewer spills/leaks and other sources of reduction.

Document Number: PPH.R.02.a

Title: Fitzgerald Marine Reserve Master Plan

Author: Kittleson, G.; Hecht, B. consulting contribution excerpts found as pp. 129-140 in Brady/LSA, 2002, Fitzgerald Marine Reserve Master Plan Part Two: Environmental Setting

Date: 2002

Type: Report

Source: Balance Hydrologics

Summary: This section, pertinent to the Pillar Point Harbor project, describes the primary hydrologic features found within FMR: San Vicente Creek, Pillar Point Marsh, and Denniston Creek. The ground water and surface water hydrology, land use history and changes and water quality of Pillar Point Marsh are described.

Document Number: PPH.R.03.a

Title: Fitzgerald Marine Reserve Draft Environmental Impact Report

Author: Thomas Reid Associates

Date: 2003

Type: Report

Source: Half Moon Bay Library

Summary: Describes recommended implementation actions designed to avoid impacts and make improvements to water quality in San Vicente Creek and Pillar Point Marsh.

Document Number: PPH.R.03.b

Title: San Lorenzo Urban River Plan

Author: City of Santa Cruz

Date: 2003

Type: Report

Source: Santa Cruz Department of Environmental Health

Summary: This report articulates a community vision for the corridor encompassing the lower San Lorenzo River, Branciforte Creek, and Jessie Street Marsh as a wildlife area as well as a community recreation and public open space amenity. It contains recommendations for habitat enhancement, public access and trail improvements, public art, and community programs. It seeks to guide the city of Santa Cruz in reestablishing and improving its management of and relationship to this major and recently expanded landscape feature over the next 20 years. The report describes in detail the planning area and river reach descriptions, the physical and social settings, history of flooding, current planning, system-wide recommendations, reach-specific recommendations, design improvements, project planning and projected costs.

Document Number: PPH.R.06.a

Title: Assessment of Sources of Bacterial Contamination at Santa Cruz County Beaches

Author: Ricker, J.; Peters, S.

Date: 2006

Type: Study

Source: Santa Cruz Department of Environmental Health

Summary: Santa Cruz County Environmental Health Services conducted this study to determine the source and health threat of elevated bacteria levels at Santa Cruz County beaches. This document presents background information and the results from the current study. Data were generated from the analysis of over 2000 collected water samples, 1200 bacteria isolates were tested to identify their source, 2100 swimmers were interviewed for the occurrence of illness, and 4700 feet of sewer main and associated laterals were evaluated. The primary source of contamination for the beaches is coastal lagoons that discharge to the ocean with additional contributions from birds, marine mammals, kelp, and possibly boats. Microbial Source Tracking (MST) using ribotyping provided an indication of the relative magnitude of the fecal coliform contribution from various types of animals with an estimated accuracy of at least 75-90%. Results indicate that birds were the major source of contamination at all locations, averaging 60%, human contribution to the bacteria loading averaged 5%. There were higher amounts of human loading in the lagoons during summer. Most of the human loading came from urban areas, with the proportion of human loading more than four times higher in winter than summer. Other significant sources of bacteria that on average each contributed 7% of the load were dogs, rodents, and wildlife; 15% of the bacteria assessed could not be attributed to specific sources.

Document Number: PPH.R.06.b

Title: The Amplification of Indicator Bacteria as a Result of Kelp Mound Incubation along a Protected Beach in Southern California

Author: McCoy, D.; Aumand, L.

Date: 2006

Type: Study

Source: Santa Cruz Department of Environmental Health

Summary: Pacific Beach Point in La Jolla, CA frequently exceeds state water quality standards for indicator bacteria. Studies were designed to investigate bacterial transport mechanisms and possible bacteria amplification occurring within the extensive kelp mounds found along the beach wrack line. Initial data indicate that bacteria reaching kelp mounds via storm drains, birds, flies, and scour pond run-off undergo incubation and subsequent multiplication within the kelp debris located along the high tide wrack line. Related and on-going laboratory and on-site studies have been designed to confirm that fecal coliform and Enterococci bacteria reproduce rapidly under conditions typical of coastal beaches with large amounts of kelp present. Another potential contributor to the spread of bacterial contamination considered was brineflies. Brine flies, which congregate in large numbers on and near beached kelp, may account to spread bacteria from point sources onto freshly beached kelp where the bacteria can then incubate.

Document Number: PPH.R.06.c

Title: Observations in Macro and Micro Algae Contributions to Bacteria Populations and Implications for Beach Advisories

Author: Peters, S.

Date: 2006

Type: Study

Source: Santa Cruz Department of Environmental Health

Summary: Santa Cruz County Environmental Health Services conducted tests on kelp found in the tidal area of several Santa Cruz County beaches to determine if decaying kelp could be one of the sources of elevated fecal indicator bacteria that has caused two beaches to be posted with swimming advisories. Both macro and micro algae results indicate that there is an increase in bacteria overtime and can be influenced by both increased temperature and lack of circulation at public beaches.

Document Number: PPH.R.07.a

Title: Summary Report Pillar Point Harbor Bathymetry Study & Outer Harbor Channel Design

Author: Gahagan & Bryant Associates, Inc.

Date: 2007

Type: Report

Source: Pillar Point Harbor Master's Office

Summary: This report compares the differences between the hydrographic surveys GBA did of Pillar Point Harbor in 1994 & 2006 for the addition of 71 berths inside the inner breakwater and for maintenance dredging.

Document Number: PPH.R.07.b

Title: Jurisdictional Waters of the US and Wetland Determination Report: United States Air Force Pillar Point Storm Water Outfall Project

Author: Bayer, K.; Evans, Y.; Varney, R.; Zoidis, A.

Date: 2007

Source: Pillar Point Harbor Master's Office

Type: Study

Summary: Describes proposed modifications to the storm water outfall system at the Pillar Point Airforce Station in order to comply with the requirements of a violation notification issued by the State Water Resources Control Board. The violation cited the discharge of storm water, defined as a waste, into the James V. Fitzgerald Marine Reserve Area of Special Biological Significance. The proposed action is to divert the storm water into Pillar Point Harbor. Water samples from the storm water discharge showed levels of zinc, copper, nitrogen, total coliform, fecal coliform, and Enterococci in excess of water quality standards.

Document Number: PPH.R.08.a

Title: Clean Marina Program Annual Review

Author: Kronman, M., City of Santa Barbara Waterfront Department

Date: 2008

Type: Memo

Source: Santa Barbara Harbor Master's Office

Summary: Describes outcomes of actions taken to maintain Clean Marina Program adopted in 2002. Regarding water quality, monthly sampling conducted during dry season only. Inspection & dye-tabling of Marine Sanitation Devices (MSDs/holding tanks/porta-potties) is required for all vessels visiting SB Marina & for new live-aboards & new vessels assigned to slips. Increased signage on wharf and with "table tent" signs at restaurants to reduce number of human/sea bird interactions. Worked with fishermen to reduce feeding of birds.

Appendix 3: Pillar Point Harbor Project Files: Correspondence and Relevant Information

These files were created from:

- 1) Five files obtained from the Granada Sanitary District (GSD):
 - Denniston Creek/Capistrano Rd. Storm Drain Files 1,2,3 (Referred to as GSD Files 1, 2, 3) and
 - Capistrano Rd. Beach/Storm Drain Problem (Referred to as GSD File “Cap. Rd.”)
 - Bacteriological Examination of Water Test Results: Capistrano Rd. SMC Env. Health; 5/31/85 – 2/24/86.
- 2) pdf files from San Mateo County Environmental Health Services (SMCEHS)
- 3) “Capistrano Storm Drain Binder” obtained from Sewer Authority MidCoast (SAM Binder)

Pillar Point Harbor Project File Number, Correspondents/Contents:

1. Granada Sanitary District (GSD) Memos and Staff Reports
2. Granada Sanitary District /Sewer Authority Mid-Coastside (SAM)
3. Granada Sanitary District/San Mateo County Environmental Health Services (SMCEHS) and San Mateo Department of Public Works
4. Granada Sanitary District /Pillar Point Harbor District
5. Sewer Authority Mid-Coastside / San Mateo County Environmental Health Services
6. Sewer Authority Mid-Coastside / Pillar Point Harbor District
7. Sewer Authority Mid-Coastside /State Regional Water Quality Control Board (SRWQCB)
8. San Mateo County Environmental Health Services Memos/Staff Reports
9. San Mateo County Environmental Health Services / Pillar Point Harbor District
10. San Mateo County Environmental Health Services / State Regional Water Quality Control Board
11. Pillar Point Harbor District/State Regional Water Quality Control Board
12. Smoke, Dye, TV, Soil Test Results
13. Newspaper Articles/Press Releases
14. Public Questions/Comments
15. Bacterial Test Results
16. Miscellaneous Correspondence
17. Maps
18. Sewer Authority Mid-Coastside Memos/Reports
19. Bacteria Regulations
20. Verbal Correspondence
21. Harbor Regulations

Appendix 4: Summaries of the documents listed as Correspondence/Relevant Information

A. Pillar Point Harbor File #1: Granada Sanitary District Memos and Staff Reports

Document Number: PPH.C.1.90.12.a.

Date: 9/26/90 – 12/18/90

Type: Field Notes: Chronology of Spill Survey

To: No author

From: No recipient

Source: GSD File “Cap. Rd.”

Summary: Pillar Point Chronology of Spill Survey with SMCEHS Field Data Sheets for bacteriological examination of water.

Document Number: PPH.C.1.91.08.a.

Date: 8/1/91

Type: Letter

To: Granada Sanitary District Board

From: Kamil Azoury, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District

Source: GSD File 3

Summary: Notified on 7/26/91 of potential contamination in Denniston Creek and storm drain outlet next to Barbara’s Fish Trap by Ann Jensen of SMCEHS, advised her to discuss matter with her dept. since it was perhaps more under their jurisdiction. On 8/1/91 requested SAM to clean contamination at Denniston and on sand next to storm drain, GSD requesting SMCEHS to initiate investigation of contamination since it has been reported sporadically for last several months, GSD will initiate its own investigation; he is not aware of any mass spill occurring from GSD sewers; SAM had reported there had been some stoppages in main sewer fronting Shorebird but were removed, they suspect here may be a new break in main line; he did not get impression that these stoppages were cause of reported spill by SMCEHS.

Document Number: PPH.C.1.91.08.b.

Date: 8/8/91

Type: Memo

To: Kamil Azoury, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District

From: Bill Kitajima, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District

Source: GSD File 3

Report of investigation around creek and storm drain as a result of public complaint regarding septic material. Storm drain appeared to be plugged with sand bags, became unplugged with high tides allowing septic material onto beach.

Document Number: PPH.C.1.91.08.c.

Date: 8/14/91

Type: Memo

To: Kamil Azoury, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District
From: Bill Kitajima, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District
Source: GSD File 3

Meeting set-up with SAM, SMCEHS, RWQCB, & GSD to discuss Denniston Creek. RWQCB suggested soil testing and water samples from restaurants, Harbor District pump station to establish a “fingerprint”, will contact Fish & Game to see what is necessary for creek clean-up.

Document Number: PPH.C.1.91.08.d.

Date: 8/29/91

Type: Memo

To: Kamil Azoury, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District
From: Bill Kitajima, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District
Source: GSD File 3

Summary: Meeting set-up with SAM, SMC Public Works, & GSD to discuss Denniston Creek. Describes dye testing that shows flow from various points out of storm drain (map included).

Document Number: PPH.C.1.91.09.a.

Date: 9/4/91

Type: Memo

To: Kamil Azoury, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District
From: Bill Kitajima, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District
Source: GSD File 1

Summary: Soil results in, no need to remove soil from creek. Meeting to be set up with GSD, SMCEHS & Public Works, SAM, Fish & Game, RWQCB. SMCEHS investigating high coliform counts. RWQCB will ask Fish & Game if they will allow modification of creek mouth so water does not sit there.

Document Number: PPH.C.1.91.09.b.

Date: 9/4/91

Type: Letter

To: Kamil Azoury, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District
From: Gary Vallado, General Manager, Sewer Authority Mid-Coastside
Source: GSD File 3

Summary: Collection Problem report chronologically summarizes SAM involvement with Denniston Creek.

Document Number: PPH.C.1.96.07.a.

Date: 7/2/96

Type: Letter

To: Granada Sanitary District Board
From: Carl Schrader, Kennedy/Jenks Consultants
Source: GSD File “Cap. Rd.”

Summary: Report on water usage and waste water discharges from Pillar Point Harbor.

Document Number: PPH.C.1.97.10.a.

Date: 10/10/97

Type: Memo

To: Bonnie Okonek

From: Julie Phelps

Source: GSD File 1

Summary: Bacterial test results after “bubble box” had been cleaned, recommendations from Public Works, Shorebird wash down connected to sewer as final alternative.

Document Number: PPH.C.1.97.11.a.

Date: 11/14/97

Type: Memo

To: Granada Sanitary District Board

From: Julie Phelps

Source: GSD File 1

Summary: Summarizes meeting between agencies regarding bacterial contamination; identification of next steps and responsible agencies: dye testing, BOD testing, connect Shorebird wash down to sewer, leak-proof dumpsters for Shorebird and Fish Trap, flushing of drain and bubble box quarterly, installation of back flow flap to be determined.

Document Number: PPH.C.1.98.02.a

Date: 2/5/98

Type: Meeting summary

To/From: Participants not identified

Source: GSD File 1

Summary: Wash down at Shorebird considered to be source, SMCEHS will take enforcement action and conduct water testing; debris boxes at both restaurants are watertight.

Document Number: PPH.C.1.00.12.a

Date: 12/5/00

Type: Memo

To: Granada Sanitary District Board

From: Gina Holmes, Granada Sanitary District Administrator

Source: GSD File 2

Summary: Dye test between manholes 64 & 65 revealed a leak from mainline out onto the beach & into harbor.

Document Number: PPH.C.1.00.12.b

Date: 12/13/00

Type: Memo

To: Granada Sanitary District Board

From: Gina Holmes, Granada Sanitary District Administrator

Source: GSD File 2

Summary: Summarizes conversation between Gina Holmes, Granada Sanitary District Administrator, and Steve Hartsell, San Mateo County Environmental Health Services,: dye test of 12/5/00 did not show heavy amount of dye, SMCEHS has been taking water samples at this location but had not reached a final conclusion; Holmes arranging for GSD engineer Robert Item & SAM field manager Pat McGowen to meet with Hartsell at Capistrano for additional tests.

Document Number: PPH.C.1.01.03.a

Date: 3/29/01

Type: Staff Report

To: Granada Sanitary District Board

From: Gina Holmes, Granada Sanitary District Administrator

Source: GSD File 2

Summary: Summarizes investigation of drainage source; 4 dye tests conducted between manholes 64 & 65; original assumption that main above leaking into storm drain below; results not consistent or conclusive so no report written at this time; no septic systems in this area. Next step to take samples directly from storm drain.

Document Number: PPH.C.1.01.10.a

Date: 10/15/01

Type: Staff Report

To: Granada Sanitary District Board

From: Gina Holmes, Granada Sanitary District Administrator

Source: GSD File 2

Summary: Summary of on-going contamination at Capistrano, two Granada Sanitary District Board members representing GSD on SAM board requesting board authorization to bring beach closure before SAM board to request SAM pursue the cause of permanent beach closure to RWQCB.

Document Number: PPH.C.1.01.10.b

Date: 10/26/01

Type: Memo

To: Granada Sanitary District Board

From: Howard Hoffman, Granada Sanitary District Engineer, Kennedy/Jenks Consultants

Source: GSD File "Cap. Rd."

Summary: Report of investigation of storm drain; built and maintained by San Mateo County; even though no significant rain appears to flow all the time, appears to consist mostly of groundwater, tests indicate high levels of coliform, many possible sources of bacteria including GSD wastewater.

Document Number: PPH.C.1.01.11.a

Date: 11/7/01

Type: E-Mail

To: Granada Sanitary District Board

From: Gina Holmes, Granada Sanitary District Administrator

Source: GSD File 2

Summary: Anticipated letter from County arrived regarding Capistrano storm drain, Howard Hoffman, Granada Sanitary District Engineer, Kennedy/Jenks Consultants contacting Steve Hartsell, San Mateo County Environmental Health Services.

Document Number: PPH.C.1.01.12.a

Date: 12/28/01

Type: Memo

To: Granada Sanitary District Board

From: Howard Hoffman, Granada Sanitary District Engineer, Kennedy/Jenks Consultants

Source: GSD File 2

Summary: Continued testing fails to determine how presumed wastewater leakage is occurring from sewer into storm drain; recommends digging up and changing backfill around District sewer where it crosses over County owned storm drain; estimates cost as part of capital improvement project (CIP) is \$22,000 or as a separate project at \$31,000; work could begin in March; contingency to have contractor make additional repairs, if needed, while pipe is exposed; no guarantee this will cure long-standing leakage.

Document Number: PPH.C.1.02.04.a

Date: 4/26/02

Type: Status Report, CIP Capistrano Ave.

To: Granada Sanitary District Board

From: Leo Karner, Resident Engineer, Granada Sanitary District

Source: GSD File 2

Summary: Two locations excavated ; South: 30 LF upstream, 15 LF downstream of the point where 12” ductile iron pipe crosses over 36” reinforced concrete storm drain; North: 15 LF upstream, 5 LF downstream of point where 12” vitrified clay pipe crosses under 12” reinforced concrete storm drain.

Groundwater entered excavation, SMCEHS sampled groundwater, no contamination found, will continue to test storm drain weekly.

Document Number: PPH.C.1.02.05.a

Date: 5/10/02

Type: Memo

To: Granada Sanitary District Board

From: Howard Hoffman, Granada Sanitary District Engineer, Kennedy/Jenks Consultants

Source: GSD File 2

Summary: SMCEHS reports that preliminary test results of water from storm drain look hopeful; beach still posted but posting could be removed if results remain favorable; still too soon for press release.

Document Number: PPH.C.1.02.08.a

Date: 8/8/02

Type: Memo

To: Granada Sanitary District Board

From: Howard Hoffman, Granada Sanitary District Engineer, Kennedy/Jenks Consultants

Source: GSD File "Cap. Rd."

Summary: Have 7 weeks of good results (bacteriological results included) on water discharging from storm drain (E. coli below 200 MPN/100 ml); recent dye studies show no leakages from sewers or building laterals to storm drains; suggested to San Mateo County that they consider installing filters on storm drain inlets to trap contaminants, have received no reply to this suggestion.

Document Number: PPH.C.1.02.09.a

Date: 9/5/02

Type: Memo

To: Granada Sanitary District Board

From: Nathan Nutter, Granada Sanitary District Engineer

Source: GSD File 2

Summary: Dye test conducted 8/29/02 was negative; update 9/9/02 from SMCEHS "test results from last week showed both pipe & surf meeting all EPA standards, signs will be removed this week if numbers continue to be good".

B. Pillar Point Harbor File #2: Correspondence between Granada Sanitary District and Sewer Authority Mid-Coastside

Document Number: PPH.C.2.90.07.a

Date: 7/26/90

Type: Letter

To: Kamil Azoury, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District

From: Gary Vallado, General Manager, Sewer Authority Mid-Coastside

Source: GSD File 1

Summary: Reporting and advising of possible offset or broken mainline in front of Shorebird Restaurant, between manhole 64 & manhole 63, location of possible break is 40 feet north of manhole 64; report & map from Collection Supervisor included.

Document Number: PPH.C.2.90.11.a

Date: 11/16/90

Type: Letter

To: Mark Center, Sewer Authority Mid-Coastside

From: Bill Kitajima, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District

Source: GSD File 1

Summary: Per FAXed report of 11/8/90, offset is to be repaired ASAP before any more overflows occur.

Document Number: PPH.C.2.01.10.a.

Date: 10/26/01

Type: Memo

To: Gina Holmes, Granada Sanitary District Administrator

From: David Dickson, Manager, Sewer Authority Mid-Coastside

Source: GSD File 2

Summary: Storm drain under San Mateo Co. jurisdiction; SAM & GSD would like to help in finding a solution; putting storm drain flows into GSD/SAM system a last resort only if San Mateo Co. fails to eliminate problem; if GSD decides to accept this flow Board should consider: 1) diversion is temporary pending more suitable, permanent solution, 2) SAM plant has capacity to treat diverted flow during dry weather only, 3) diverted flow included in GSD's flow for cost & capacity allocation, 4) if GSD decides to provide this solution, may want to request SAM board consider allowing temporary use of plant to treat dry weather runoff without counting this against allocated capacities.

Document Number: PPH.C.2.02.07.a

Date: 7/5/02

Type: E-Mail

To: Brenda Donald, Sewer Authority Mid-Coastside

From: Gina Holmes, Granada Sanitary District Administrator

Source: SAM Binder

Summary: Will make sure results are available and will pass them on to Engineers, legal, & Board. Please explain "normal" range for tests. Brenda responded and attached test results through 6/19/02, storm sewer cleaned 6/27/02, will continue sampling for several weeks & will check with Regional Board.

Document Number: PPH.C.2.02.07.b

Date: 7/5/02

Type: E-Mail

To: Gina Holmes, Granada Sanitary District Administrator

From: Brenda Donald, Sewer Authority Mid-Coastside

Source: GSD File 2

Summary: Explains detection limits and standards for recreational waters; KN properties has tapped into Capistrano storm sewer system, half dozen new catch basins at south end of Capistrano, asked Keet Nerhan to have soil cleaned out & make sure they don't get clogged with dirt, he was very cooperative, perhaps good idea for engineers to GIS system & require County Building Dept. to coordinate any new extensions on system until bacterial problem solved; found an old tie in, at bottom of manhole in front of restaurant, clay pipe discharging from some mystery point, SMC Public Works didn't know where it originated; catch basin at 440 Capistrano completely buried in oil with shrub growing in it.

C. Pillar Point Harbor File #3: Correspondence between Granada Sanitary District and San Mateo County Environmental Health Services

Document Number: PPH.C.3.01.02.a

Date: 2/21/01

Type: FAX

To: Steve Hartsell, San Mateo County Environmental Health Services

From: Gina Holmes, Granada Sanitary District Administrator

Source: GSD File 2

Summary: Regarding other possible sources of contamination, all businesses from Pillar Point Inn/Fish Trap north to Mezza Luna are “connected” according to GSD data base.

Document Number: PPH.C.3.01.10.a

Date: 10/2/01

Type: FAX

To: Steve Hartsell, San Mateo County Environmental Health Services

From: Gina Holmes, Granada Sanitary District Administrator

Source: GSD File 2

Summary: Robert Item, (GSD Engineer) recommends TVing full line from dry to culvert, map attached.

Document Number: PPH.C.3.01.11.a

Date: 11/1/01

Type: Letter

To: Joseph Carlevaris, President Granada Sanitary District Board

From: Steve Hartsell, San Mateo County Environmental Health Services,

Source: GSD File 1

Summary: July 1, 2000 water samples from storm drain sent to BioVir Labs, Inc for presence of Male Specific Bacteriophage (a virus almost exclusively from human waste), both samples positive; sewer dye testing found dye in storm drain outflow; presumptive evidence of link between fecal contamination in storm drain and District sewer main; have concluded that source of contamination is public sewer; notifying that GSD must find and eliminate source of release or divert storm water to public sewer for treatment & disposal; plans and permits must be approved within 30 days, work to correct problem must be completed in 60 days of receipt of notice, includes results of bacterial test.

Document Number: PPH.C.3.01.11.b

Date: 11/8/01

Type: Letter

To: Steve Hartsell, San Mateo County Environmental Health Services

From: Howard Hoffman, Granada Sanitary District Engineer, Kennedy/Jenks Consultants

Source: GSD File 1

Summary: Response to letter of 11/1/01. Refers to 1997 Intra-Dept. memo on PPH Storm Drain Investigation from Lorraine Lew-White, Environmental Health Program Supervisor, SMCEHS, which recommended in part that: San Mateo Public Works install a backflow prevention flap & perform quarterly cleaning of drainage system, GSD to allow Shorebird connection of wash down area to sewer. Backflow flap has not been installed; GSD believes it would be beneficial. GSD would like to know when system last cleaned. GSD has connected Shorebird to sewer. GSD may need as much as 12 months to assess situation. Until tidegate installed will be difficult for GSD to test system to develop action plan. Would be difficult to connect storm drain to sewer since sewer passes above storm drain.

Document Number: PPH.C.3.01.11.c

Date: 11/21/01

Type: Letter

To: Dean Peterson, Director San Mateo County Environmental Health Services

From: Gina Holmes, Granada Sanitary District Administrator

Source: SMCEHS capfile-005.pdf

Summary: Enclosed is response from Howard Hoffman, Granada Sanitary District Engineer, Kennedy/Jenks Consultants, GSD Engineer, to letter of 11/1/01 from SMCEHS.

Document Number: PPH.C.3.01.11.d

Date: 11/29/01

Type: Letter

To: Howard Hoffman, Granada Sanitary District Engineer, Kennedy/Jenks Consultants

From: Steve Hartsell, San Mateo County Environmental Health Services

Source: GSD File "Cap. Rd."

Summary: Installation of backflow prevention device based on hypothesis of harbor water contaminating storm drain; testing has shown that drain is always more contaminated than harbor & source is human sewage. Without better reasons cannot support request for more time. GSD has 30 days from receipt of this letter to present action plan, at which time timeline can be reviewed.

Document Number: PPH.C.3.02.02.a

Date: 2/4/02

Type: Letter

To: Howard Hoffman, Granada Sanitary District Engineer, Kennedy/Jenks Consultants

From: Steve Hartsell, San Mateo County Environmental Health Services

Source: SMCEHS capfile-003.pdf

Summary: Thanks for draft plan of action & timeline (dated 1/8/02), disappointed that such a long period of time is needed to get started (6 months from notification date) am pleased plan is in place; SMCEHS views this issue as a continuing threat to public health and a violation of CA health & Safety Code Section 5411; make appropriate changes & submit final draft immediately so we can officially extend time line to repair sewer line.

Document Number: PPH.C.3.02.06.a

Date: 6/18/02

Type: Letter

To: Steve Hartsell, San Mateo County Environmental Health Services

From: Howard Hoffman, Granada Sanitary District Engineer, Kennedy/Jenks Consultants

Source: SMCEHS capfile-003.pdf

Summary: Thank you for reports on bacterial levels, still not possible to say GSD action of encasing sewer crossing over County storm drain has solved problem of contamination from “storm drain”, storm drain in quotes because speaking of dry weather flows caused by groundwater flowing into County’s pipes. GSD has done TV inspection of County storm drain, in process of preparing map of system to better understand where continuing contamination may be originating. Review of video indicates storm drain needs to be cleaned, recommends the following: storm drain system cleaned at least annually, catch basins pumped out more than once a year, perhaps 6 times/year, catch basins be labeled “Do not dump, flows to ocean”, sample at catch basins as well as discharge onto beach. If SMC provides assistance GSD prepared to undertake further investigations & corrective action; if GSD cannot determine any other source but contamination remains prepared to construct pump station to pump nuisance storm drainage flow into sewer, this would require SMC to install backflow prevention device on end of drain, may result in additional maintenance & expense to SMC, before this step taken important to get system as clean as possible.

Document Number: PPH.C.3.02.08.a

Date: 8/20/02

Type: Letter

To: Nathan Nutter, Granada Sanitary District Engineer

From: Neil Cullen, San Mateo County Director of Public Works

Source: GSD File 2

Summary: Thanks for info on the use of debris & hydrocarbon filters for drainage outlets, understands GSD continuing to dye test since dye from sewer is still evident in storm drain, EHS recommending that Capistrano not be resurfaced pending resolution of problem, GSD may want to consider slip lining sewer line, attached a list of slip lining manufactures.

Document Number: PPH.C.3.02.08.b

Date: 8/21/02

Type: Letter

To: Neil Cullen, San Mateo County Director of Public Works

From: Nathan Nutter, Granada Sanitary District Engineer

Source: SMCEHS capfile-002.pdf

Summary: Appreciate County looking into use of debris & hydrocarbon filters for drain, believe this is cost effective & maintenance efficient means of reducing contamination; partially correct about dye testing: first test before encasing sewer revealed slight dye infiltration into system, second test after encasement revealed absence of dye indicative of successful encasement. Believe GSD has fixed their portion of the problem, recent test results from SAM revealed area of storm drain under GSD sewer line is relatively clean compared to other areas of the storm drain.

D. Pillar Point Harbor File #4: Correspondence between Granada Sanitary District and San Mateo County Harbor District

Document Number: PPH.C.4.90.04.a

Date: 4/25/90

Type: Letter

To: Donald Guluzzy, General Manager, San Mateo County Harbor District,

From: Kamil Azoury, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District

Source: GSD File 3

Summary: At last SAM meeting discussion of fecal contamination in harbor, please advise how houseboats discharge waste & if there have been any overflows.

Document Number: PPH.C.4.90.04.b

Date: 4/30/90

Type: Letter

To: Kamil Azoury, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District

From: Donald Guluzzy, General Manager, San Mateo County Harbor District

Source: GSD File "Cap. Rd."

Summary: Harbor District has no knowledge of overflows at harbor from any source; live-aboards follow strict ordinance code requirements; enclosed is Ch. 3: Disposal of Refuse from Harbor Districts Ordinance Code; sewer pump out facilities available at fuel dock for any & all boats at harbor, Harbor District believes Montara sewage problem that occurred due to construction project in El Granada may have been blown into harbor by high winds, Harbor District periodically sees various types of debris blown in when high winds exist but investigations show these elements have come from outside of harbor.

Document Number: PPH.C.4.91.06.a

Date: 6/14/91

Type: Letter

To: Kamil Azoury, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District

From: Donald Guluzzy, General Manager, San Mateo County Harbor District

Source: GSD File 3

Summary: SMC Harbor District has reviewed records, no sewage overflows in recent past, everything fine regarding sanitation.

Document Number: PPH.C.4.01.11.a

Date: 11/16/01

Type: Letter

To: Joseph Carlevaris, President Granada Sanitary District Board

From: Peter Grenell, General Manager, San Mateo County Harbor District

Source: GSD File 2

Summary: Refers to 11/1/01 letter from Hartsell (SMCEHS) directing GSD to eliminate source bacterial contamination within 60 days; possible source of contamination has been identified & looking forward to prompt remedial action.

Document Number: PPH.C.4.05.09.a

Date: 9/29/05

Type: Letter

To: Chuck Duffy, General Manager, Granada Sanitary District

From: Peter Grenell, General Manager, San Mateo County Harbor District

Source: GSD File "Cap. Rd."

Summary: PPH staff has done video inspection of sewer lines in harbor; harbor patrol took EHS staff out in patrol boat to take water samples offshore of Capistrano beach; recommending that GSD do video inspection of Capistrano line from Highway 1 to Prospect St. and inspection of the trench to see if any effluent may be contributing to the problem.

Document Number: PPH.C.4.05.10.a

Date: 10/18/05

Type: Letter

To: Peter Grenell, General Manager, San Mateo County Harbor District

From: Delia Comito, Granada Sanitary District Administrator

Source: GSD File "Cap. Rd."

Summary: In 2002 GSD encased approximately 50 feet of sewer main in concrete where it crosses storm drain, follow up dye tests showed no leakage from sewer, GSD televised Capistrano mainline from Highway 1 to prospect in June 2005, found no leaks, cracks, or offsets. Storm drain is owned & maintained by San Mateo County, past tests have shown that cleaning storm drain greatly reduces levels of bacteria, GSD believes it is essential for SMC to clean rain regularly; GSD has suggested SMC install inlet filters to capture garbage & debris.

E. Pillar Point Harbor File #5: Correspondence between Sewer Authority Mid-Coastside and San Mateo County Environmental Health Services

Document Number: PPH.C.5.93.08.a

Date: 8/2/93

Type: Letter

To: Lorraine Lew-White, Environmental Health Program Supervisor

From: Gary Vallado, General Manager, Sewer Authority Mid-Coastside

Source: SAM Binder

Summary: SAM has inspected Shorebird Restaurant, made the following findings: only one of four outdoor drains in washdown area is hooked up to sanitary sewer, outdoor cleanup may result in restaurant related material entering storm sewer (SMC may want to further investigate this), if SMC wishes to have restaurant modify outdoor cleanup area to allow an expanded area to drain into sanitary sewer both SAM & GSD would need to review the proposal for how this would be done, please note discharge of storm water into sanitary sewer is prohibited according GSD ordinance.

Document Number: PPH.C.5.97.04.a

Date: 4/7/97

Type: Letter

To: David Dickson, Sewer Authority Mid-Coastside

From: Lorraine Lew-White, Environmental Health Program Supervisor

Source: SAM Binder

Summary: Thank-you to you & staff for work and involvement with Stanford students designated to investigate storm drain at Capistrano beach

Document Number: PPH.C.5.99.06.a

Date: 6/10/99

Type: FAX

To: Dean Peterson, Director San Mateo County Environmental Health Services

From: Brenda Donald, Sewer Authority Mid-Coastside

Source: GSD File 1

Summary: Understand line to be flushed & resampled soon, last flushed 5/12/97, recalls flushing had little impact on bacterial counts; outfall of pipe is half submerged into beach, difficult to keep sand, seaweed and marine debris out of line (dead gull at mouth of pipe yesterday); including pages from Stanford class study done in 1997, storm sewer sampled at several locations; coliform & fecal test results from mouth of storm sewer similar to counts found upstream at ground water intrusion site; condition of pipes has deteriorated so that water is seeping in from all 3 incoming pipes, north, east, & west, last year water seemed to only be coming from eastern pipe.

Document Number: PPH.C.5.99.07.a

Date: 7/7/99

Type: FAX

To: Brenda Donald, Sewer Authority Mid-Coastside

From: Brian Martinez

Source: SAM Binder

Summary: After years of investigating many potential sources of contamination of storm drain at Pillar Point, believe they have found the source of bacterial contamination. As of 7/2/99 beach is open to public and safe for water contact. Area will continue to be sampled weekly to ensure levels do not increase, staff will continue to work with businesses in the area to implement BMPs to keep beach open & safe.

F. Pillar Point Harbor File #6: Correspondence between Sewer Authority Mid-Coastside and San Mateo County Harbor District

Document Number: PPH.C.6.90.04.a

Date: 4/24/90

Type: Letter

To: Donald Guluzzy, General Manager, San Mateo County Harbor District

From: W.S Heaslet, Sewer Authority Mid-Coastside, General Manager

Source: GSD File 3

Summary: April 6, 1990 contractor broke inter-tie pressure main next to intersection of Highway 1 & Capistrano, two pumping stations shut down resulting in sewage overflows; Princeton Pumping station overflow did not reach harbor; background sample near Johnson Pier on 4/9/90 showed very high total coliform, SAM Board asked Harbor District be advised of these findings, requesting Harbor District to advise SAM Board what measures are being taken to control harbor pollution.

G. Pillar Point Harbor File #7: Correspondence between Sewer Authority Mid-Coastside and State Regional Water Quality Control Board

Document Number: PPH.C.7.02.06.a

Date: 6/22/02

Type: E-mail

To: Ray Balcom, State Regional Water Quality Control Board

From: Brenda Donald, Sewer Authority Mid-Coastside

Source: GSD File 2

Summary: SMC Public Works cleaned portion of storm drain but segment with most septic sludge not cleaned yet; Monday's samples will not give clear representation of changes in pollutant levels due to sewer encasement; to get useful data remaining sludge needs to be removed as well as black sludge on beach; not sure if County is planning to finish this or not, please contact them.

Document Number: PPH.C.7. 02.08.a

Date: 8/20/02

Type: Letter

To: Ray Balcom, State Regional Water Quality Control Board

From: Brenda Donald, Sewer Authority Mid-Coastside

Source: GSD File 2

Summary: Summarizes activities and observations of Capistrano Storm Drain from April – July 2002 including spreadsheet of results.

Document Number: PPH.C.7. 02.09.a

Date: 9/5/02

Type: Letter

To: Ray Balcom, State Regional Water Quality Control Board

From: Brenda Donald, Sewer Authority Mid-Coastside

Source: GSD File 2

Summary: Addendum to report of 8/20/02; even though contamination from sewer leaks have been eliminated identifies remaining potential sources of contamination: ground water enters from breaks in storm drain system; litter, vegetation, soil enter catch basins, could be reduced by screening or filtering; bottom outfall pipe located below level of the beach, especially at high tides debris enters storm drain outlet; clay pipe outlet of unknown origin discovered buried in sediment in last catch basin before outfall, should be sealed or eliminated.

H. Pillar Point Harbor File #8: San Mateo County Environmental Health Services Memos and Staff Reports

Document Number: PPH.C.8. 94.01.a

Date: 1/25/94

Type: Memo

To: All Consumer Staff

From: Lorraine Lew-White, Environmental Health Program Supervisor

Source: SAM Binder

Summary: Current policy on sewage spills and their effects on beach closure.

Document Number: PPH.C.8. 97.04.a

Date: 4/14/97

Type: Intra-Dept. Memo

To: Brian Zamora, Director

From: Lorraine Lew-White, Environmental Health Program Supervisor

Source: GSD File 1

Summary: Description and results of Stanford University's Alternative Spring Break Investigation of Capistrano Storm Drain.

Document Number: PPH.C.8. 99.05.a

Date: 5/27/99

Type: Letter

To: Dean Peterson, Director San Mateo County Environmental Health Services

From: Duane O'Donnell, Storm Water Pollution prevention Program, (STOPP)

Source: GSD File "Cap. Rd."

Summary: Results of survey and sampling at Capistrano Beach from 5/25/99.

Document Number: PPH.C.8. 99.06.a

Date: 6/2/99

Type: Inter-Departmental Correspondence

To: Dean Peterson, Director San Mateo County Environmental Health Services

From: Neil Cullen, San Mateo County Director of Public Works

Source: SMCEHS capfile-010.pdf

Summary: Refers to attached map (but no map attached) indicating drainage system on Capistrano Rd., EHS has determined that grease trap at Barbara's Fish Trap was tied to storm drain and that trap has been source of high coliform counts, EHS reporting to Board & will determine if drain needs to be flushed once grease trap has been disconnected.

Document Number: PPH.C.8.05.09.a

Date: 9/12/05

Type: Inter-Departmental Correspondence

To: San Mateo County Board of Supervisors

From: Charlene Silva, Director Health Dept.

Source: SMCEHS capfile-001.pdf

Summary: In 1999 State of CA passed AB 411 requiring counties to sample selected beaches, SMC exceeds frequency & number of sample locations required by State; number of beach/creek closures has declined as sewer agencies have upgraded systems. Capistrano beach has been added to the Chronicle Watch due to persistent levels of bacteria, when SAM sealed sewer line in 2002 presence of human pathogens was eliminated, on-going source of bacteria appears to be from bird & wildlife and lack of circulation in harbor; until Harbor District pursues increasing circulation likely that ambient levels of bacteria above CA standards will remain.

Document Number: PPH.C.8. 05.12.a

Date: 12/05

Type: Memo

To: Various Recipients

From: San Mateo County Environmental Health Services

Source: SMCEHS capfile.pdf

Summary: Time line for Capistrano Beach.

I. Pillar Point Harbor File #9: Correspondence between San Mateo County Environmental Health Services/Department of Public Works and San Mateo County Harbor District

Document Number: PPH.C.9. 91.02.a

Date: 2/13/91

Type: Letter

To: Donald Guluzzy, General Manager, San Mateo County Harbor District

From: Jeff Edwards, Cross-Connection Control

Source: GSD File 3

Summary: Description and results of sampling at Capistrano from May 1990 – February 4, 1991; water samples from storm drain show fecal coliform to fecal strep ratios of 0.3 (1/22/91) and 0.1 (2/4/91) indicate origin of coliform probably bird feces.

Document Number: PPH.C.9.05.09.a

Date: 9/29/05

Type: Letter

To: Neil Cullen, San Mateo County Director of Public Works

From: Peter Grenell, General Manager, San Mateo County Harbor District

Source: SMCEHS capfile-001.pdf

Summary: PPH staff has done video inspection of sewer lines in harbor; harbor patrol took EHS staff out in patrol boat to take water samples offshore of Capistrano beach; recommending that GSD do video inspection of Capistrano line from Highway 1 to Prospect St. and inspection of the trench to see if any effluent may be contributing to the problem.

Document Number: PPH.C.9.05.10.a.

Date: 10/7/05

Type: Letter

To: Peter Grenell, General Manager, San Mateo County Harbor District

From: Neil Cullen, San Mateo County Director of Public Works

Source: SMCEHS capfile-001.pdf

Summary: Thank-you for letter advising steps taken by SMC Harbor District, have done tests which led to GSD rehabilitating sewer line above storm drain, when requested by EHS flush drain system to clear of debris, not planning to video line at this time, EHS has concluded that water from storm drain is no longer source of contamination.

Document Number: PPH.C.9.06.02.a

Date: 2/1/06

Type: Memo

To: San Mateo County Harbor District Board

From: Dean Peterson, Director San Mateo County Environmental Health Services

Source: SMCEHS capfile.pdf

Summary: EHS has been sampling Capistrano since 1990, contributing sources of bacterial contamination have been eliminated; since GSD sealed portion of sewer main human waste has not been detected, however bacterial levels have remained elevated; birds at mouth of Denniston Creek and lack of circulation near Capistrano Beach do not allow for sufficient breakdown of coliforms, even though counts exceed State levels do not necessarily pose a threat to public health. Effective March 1, 2006 SMC will no longer perform weekly sampling at Capistrano, encourages the Harbor District to post permanent signs. Other harbors have installed devices to increase circulation, grant money available from State Regional Water Quality Control Board.

J. Pillar Point Harbor File #10: Correspondence between San Mateo County Environmental Health Services and State Regional Water Quality Control Board (SRWQCB)

Document Number: PPH.C.10. 91.11.a

Date: 11/18/91

Type: Letter

To: Johnson Lam, Engineer State Regional Water Quality Control Board

From: Brian Zamora, Director San Mateo County Environmental Health Services

Source: GSD File 1

Summary: Description and update of work being done at Denniston Creek/ Capistrano Storm Drain; July 2, 1991 – November 6, 1991.

K. Pillar Point Harbor File #11: Correspondence between State Regional Water Quality Control Board and San Mateo County Harbor District

Document Number: PPH.C.11. 84.10.a.

Date: 10/5/84

Type: Letter

To: Ronald McClellan, San Mateo County Harbor District General Manager

From: Teng-chung Wu Chief, Municipal Division

Source: GSD File 3

Summary: SAM reported on 9/4/84 that raw sewage was overflowing into storm drain & into harbor over prior weekend, lift station was down; 9/12 informed by SAM staff that lift station was not repaired; please respond in writing by 10/30/84 indicating when overflow incident began, estimate of amount discharged daily, location of discharge, interim steps taken to eliminate overflow, schedule for improving reliability of lift station, proposed procedures for identifying, reporting and correcting such outages in the future.

Document Number: PPH.C.11. 05.04.a.

Date: 4/15/05

Type: Letter

To: Bruce Wolfe, Executive Officer, State Regional Water Quality Control Board

From: Peter Grenell, General Manager, San Mateo County Harbor District

Source: SAM Binder

Summary: Requesting assistance for two matters: storm drain outfall in Princeton that has registered high Enterococci and E. coli counts for over a decade, storm drain continues to trickle even during dry weather indicating that storm drain system has been compromised & is being infiltrated by an unknown source; outfall on public beach, Heal the Bay now lists it as the fifth most polluted beach in CA; urgently requesting State Regional Water Quality Control Board to investigate and require appropriate agency to make necessary repairs or upgrade system. Other matter is occasional high bacterial counts in Harbor, primarily in northwest sector of outer harbor; would appreciate any technical assistance or advice to help determine source

L. Pillar Point Harbor File #12: Smoke, Dye, TV, and Soil Test Results

Document Number: PPH.C.12.91.08.a

Date: 8/21/91

Type: Letter of Transmittal

To: Judy McKenzie, Granada Sanitary District

From: Bill Kitajima, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District

Source: GSD File 3

Summary: Copy of smoke test notice and list of property owners.

Document Number: PPH.C.12.91.08.b

Date: 8/28/91

Type: Data Sheet

To: Granada Sanitary District

From: Collection Systems Maintenance Systems (CSMS)

Source: GSD File 3

Summary: Smoke test data sheet and maps.

Document Number: PPH.C.12.91.08.c

Date: 8/29/91

Type: Data Sheet

To: Granada Sanitary District

From: Collection Systems Maintenance Systems

Source: GSD File 3

Summary: Closed circuit television inspection data sheets.

Document Number: PPH.C.12.91.09.a

Date: 9/3/91

Type: FAX

To: Kamil Azoury, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District

From: Wilma Frank, Chemist

Source: GSD File 3

Summary: Soil samples from Denniston Creek.

Document Number: PPH.C.12.91.10.a

Date: 10/24/91

Type: Meeting Notes

To: Various Recipients

From: Granada Sanitary District

Source: GSD File 2

Summary: Notes about where dye was placed; old abandoned main, lateral still connected?

Document Number: PPH.C.12.91.12.a

Date: 12/5/91

Type: Letter of Transmittal

To: State Regional Water Quality Control Board

From: Bill Kitajima, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District

Source: GSD File 1

Summary: Smoke test log, TV inspection log, field report on dye testing, SAM report. Only cover page, no data included

Document Number: PPH.C.12.98.04.a

Date: 4/15/98

Type: Letter

To: Darlene Reuss, San Mateo County Environmental Health Services

From: Wilma Frank, Chemist

Source: GSD File 1

Summary: Summarizes tests performed at Capistrano Beach: BOD, total and fecal coliform, dye tests.

Document Number: PPH.C.12.99.10.a

Date: 10/19/99

Type: Test Log

To: Granada Sanitary District

From: Pacific Pipeline Survey

Source: GSD File 1

Summary: Smoke test log, GSD manhole report.

Document Number: PPH.C.12.02.01.a

Date: 1/10/02

Type: Test Results

To: Granada Sanitary District

From: CSMS

Source: GSD File 2

Summary: Findings from closed circuit television inspection.

Document Number: PPH.C.12.05.06.a

Date: 6/13/05

Type: Invoice

To: Granada Sanitary District

From: CSMS

Source: GSD File 1

Summary: Video inspection, Capistrano Rd.

M. Pillar Point Harbor File #13: Newspaper Articles and Press Releases

Document Number: PPH.C.13.01.11.a

Date: 11/30/01

Type: Article, San Mateo County Times

Source: GSD File 2

Summary: “Agencies bicker over blame for sewage leak on coast, County blames GSD, District pleads innocent”.

Document Number: PPH.C.13.01.12.a.

Date: 12/17/01

Type: Press Release from Granada Sanitary District

Source: GSD File “Cap. Rd.”

Summary: “GSD to undertake program to eliminate Pillar Point Harbor pollution”.

Document Number: PPH.C.13.01.12.b

Date: 12/26/01

Type: Article, Half Moon Bay Review

Source: SMCEHS capfile-003.pdf

Summary: “Plans under way to clean harbor beach”.

Document Number: PPH.C.13.02.09.a.

Date: 9/20/02

Type: Press Release from Granada Sanitary District

Source: GSD File “Cap. Rd.”

Summary: “Dye tests negative: GSD’s program to reduce PPH pollution is successful”.

Document Number: PPH.C.13.05.06.a

Date: 6/1/05

Type: Article, Half Moon Bay Review

Source: SAM Binder

Summary: “Pillar Point area beach fails water quality test”.

Document Number: PPH.C.13.05.06.b

Date: 6/22/05

Type: Matter of Opinion, Half Moon Bay Review

From: Sally Campbell & Peter Grenell, San Mateo County Harbor District

Source: GSD File “Cap. Rd.”

Summary: “Time for agencies to solve effluent problem.”

Document Number: PPH.C.13.05.07.a

Date: 7/6/05

Type: Letter to the Editor, Half Moon Bay Review

From: Chuck Duffy, Granada Sanitary District, General Manager

Source: GSD File “Cap. Rd.”

Summary: “GSD is doing its best to prevent pollution”.

Document Number: PPH.C.13.05.09.a

Date: 9/12/05

Type: San Francisco Chronicle Watch

Source: SMCEHS capfile-001.pdf

Summary: “Contamination at Half Moon Bay beach”.

Document Number: PPH.C.13.05.09.b.

Date: No Date

Type: San Francisco Chronicle Watch

Source: SMCEHS capfile.pdf

Summary: “Results Day 207: Permanent warning signs up in HMB”.

Document Number: PPH.C.13.06.06.a

Date: 6/28/06

Type: Matter of Opinion, HMB Review

From: Sally Campbell, San Mateo County Harbor District

Source: GSD File “Cap. Rd.”

Summary: “Pillar Point beaches don’t need any healing”.

Document Number: PPH.C.13.06.07.a

Date: 7/06

Type: Letter to the Editor, Moon Bay Review

To: HMB Review

From: James Alamillo, Heal the Bay

Source: SMCEHS capfile.pdf

Summary: Refers to Letter to the Editor by Sally Campbell. No data or studies to substantiate theory that cause of contamination is birds; EHS and SMC HD should conduct source investigation as required by Assembly Bill 538 & CA Ocean Plan (6/29/06).

N. Pillar Point Harbor File #14: Public Questions and Comments

Document Number: PPH.C.14.97.10.a

Date: 10/24/97

Type: Letter

To: Brian Zamora, San Mateo County Environmental Health Services

From: John Plock, Save Our Bay (SOB)

Source: GSD File 1

Summary: SOB is going to post on its website the activities & correspondences of different organizations as they impact the MBNMS.

Document Number: PPH.C.14.01.10.a

Date: 10/30/01

Type: E-Mails

To: D. Dickson

From: Howard Hoffman, Granada Sanitary District Engineer, Kennedy/Jenks Consultants

Source: GSD File 2

Summary: Suggestion to treat dry weather flow, installation of tide gate.

Document Number: PPH.C.14.01.11.a

Date: 11/16/01

Type: Letter

To: Howard Hoffman, Granada Sanitary District Engineer, Kennedy/Jenks Consultants

From: John Plock, Save Our Bay (SOB)

Source: GSD File 2

Summary: Regarding SMCEHS letter of 11/1/01, requesting State Regional Water Quality Control Board issue notice of violation &, if necessary, enforcement order to GSD.

Document Number: PPH.C.14.01.11.b

Date: 11/21/01

Type: E-Mails

To/From: Larry Kay, Dean Peterson, Director San Mateo County Environmental Health Services, Kathryn Slater-Carter, Leonard Woren

Source: SMCEHS capfile-005.pdf

Summary: Discusses 11/1/01 letter from SMCEHS to GSD regarding contamination.

Document Number: PPH.C.14.01.12.a

Date: 12/4/01

Type: E-Mails

To: Leonard Woren

From: Howard Hoffman, Granada Sanitary District Engineer, Kennedy/Jenks Consultants

Source: GSD File 2

Summary: Answers questions regarding installation of tide gate.

Document Number: PPH.C.14.02.08.a

Date: 8/6/02

Type: E-Mails

To: Granada Sanitary District

From: John Meador

Source: GSD File 2

Summary: What is status of project to stop gross pollution of Barbara's Beach?

O. Pillar Point Harbor File #15: Bacterial Test Results

Document Number: PPH.C.15.85.05.a

Date: 5/21/85, 7/22/85, 1/13/86

Type: Data Sheets, SMC Dept of Public Health

Source: GSD File "Cap. Rd.

Summary: Data sheets for bacteriological field testing.

Document Number: PPH.C.15.86.02.a

Date: 2/24/86, 3/31/86

Type: Data Sheets, SMC Dept of Public Health

Source: GSD File "Cap. Rd."

Summary: Data sheets for bacteriological field testing.

Document Number: PPH.C.15.91.07.a

Date: 7/2/91, 7/8/91, 7/16/91, 7/24/91, 7/30/91, 8/1/91, 8/7/91, 8/15/91

Type: Data Sheets, SMC Dept of Public Health

Source: GSD File 3

Summary: Data sheets for bacteriological field testing. .

Document Number: PPH.C.15.92.07.a

Date: 7/1/92, 9/22/92, 6/24/94, 8/9/94, 8/2/95, several without complete date (no year)

Type: Data Sheets, SMC Dept of Public Health

Source: GSD File "Cap. Rd."

Summary: Data sheets for bacteriological field testing.

Document Number: PPH.C.15.99.06.a

Date: 6/8/99, 5/3/89, with pictures

Type: Field Data Sheets, SMC Dept of Public Health

Source: GSD File "Cap. Rd."

Summary: Data sheets for bacteriological field testing. .

Document Number: PPH.C.15.99.07.a

Date: 7/7/99

Type: FAX

To: Various Recipients

From: SMC Dept. of Environmental Health

Source: SMCEHS capfile-001.pdf

Summary: Summary of test results: 5/11/99 – 6/29/99.

Document Number: PPH.C.15.00.08.a

Date: 8/2/00

Type: Test Results

To: SMCEHS

From: BioVir Laboratories, Inc

Source: GSD File 1

Summary: Results of Male Specific Bacteriophage Assay

Document Number: PPH.C.15.02.07.a

Date: 7/02
Type: Summary
To/From: Not identified
From: SAM
Source: GSD File 2
Summary: Summary of test results: 5/6/02 – 7/17/02.

Document Number: PPH.C.15.02.07.b

Date: 7/4/02
Type: E-Mail
To: Gina Holmes, Granada Sanitary District Administrator
From: Brenda Donald, Sewer Authority Mid-Coastside
Source: GSD File 2
Summary: SBSA test results: 6/24/02 – 7/3/02, summary of results conducted by SAM /8/02 – 7/10/02.

Document Number: PPH.C.15.02.07.c.

Date: 7/02
Type: Summary
To/From: Not identified
From: Steve Hartsell, San Mateo County Environmental Health Services
Source: GSD File 2
Summary: Summary of test results: 6/12/02 – 7/24/02.

Document Number: PPH.C.15.02.11.a

Date: 11/5/02
Type: E-Mail
To: Brenda Donald, Sewer Authority Mid-Coastside
From: Kathy Suter, SBSA
Source: SAM Binder
Summary: Coliform for samples locations 4 (Capistrano outfall) & 5 (Capistrano beach?): 9/19, 10/2, 10/10, 10/15/02

Document Number: PPH.C.15.06.02.a

Date: 2/3/06
Type: Test Results
To: San Mateo County Environmental Health Services
From: BioVir Laboratories, Inc.
Source: SMCEHS
Summary: Results of Male Specific Bacteriophage Assay

Document Number: PPH.C.15.07.10.a

Date: 10/07
Type: Digital File
Source: Carol Ann Towe, San Mateo County Resource Conservation District
Summary: Fecal Indicator Bacteria test results from San Mateo Surfrider Lab (SR) and SMCEHS Lab (AB 411) for several of the PPH sites:

1. Capistrano Outfall Pipe: AB411 6/99-2/01, 4/02-2/06
2. Bathhouse Outfall Pipe:
3. Capistrano Beach: AB411 6/99-2/01, 4/02-2/06; SR 6/05-4/07

4. Denniston Creek: SR 9/05-4/07

5. PP Marsh: AB 411 6/00-10/07

6. Mavericks Beach: 8/04-10-07

AB 411 missing data from 2/01-4/02; Capistrano Outfall and Beach sampling discontinued by SMCEHS 2/06

P. Pillar Point Harbor File #16: Miscellaneous

Document Number: PPH.C.16.93.08.a

Date: 8/17/93

Type: Letter

To: Nick Dunn, Shorebird Restaurant

From: Ann Jensen, San Mateo County Environmental Health Services

Source: GSD File 3

Summary: SMCEHS conducting investigation into high bacterial counts in storm drain system along Capistrano Rd., still uncertainty regarding initial cause of human-originated bacteria, have discovered excessive amount of grease & organic matter accumulated in storm drain system adjacent to Shorebird, believe this along with introduction of animal fecal matter has contributed to excessive counts of non-human bacteria; fenced wash down area has one drain connected to sewer; rear fenced area has 3 basins connected to storm drain system, discharge into storm drain is unacceptable and must cease immediately; please submit plans for correcting this situation within 30 day of receipt of letter, will also need to contact GSD & SAM regarding connecting drains to sewer system.

Document Number: PPH.C.16.93.09.a

Date: 9/28/93

Type: Letter

To: Nick Dunn, Shorebird Restaurant

From: Kamil Azoury, Carroll Resources Engineering and Management (C-REM) for Granada Sanitary District

Source: SAM Binder

Summary: Regarding letter from SMCEHS of 8/17/93 that suggests connecting wash down drain at restaurant to GSD collection system. This letter is to inform him of GSD regulations prohibiting connection of outside drains into GSD system since this results in rainwater intrusion into system. Rainwater entry into system is prohibited by law & will be subject to enforcement actions by GSD. Contact GSD regarding any wastes that are currently permitted for the restaurant, correction of current situation will not be through means unacceptable to GSD.

Document Number: PPH.C.16.98.08.a

Date: 8/22/98

Type: Letter

To: Brenda Donald, Sewer Authority Mid-Coastside

From: John Barbour, The Distillery Restaurant

Source: SAM Binder

Summary: Regarding recent conversation, proceeding with the following: refuse containers checked so they are not leaking, containers cleaned periodically at cleanout station, installation of cut-off device for storm drain nearest wash rack so no water gets into storm drain system, eliminating current sanitary sewer grease trap and replacing with new system, janitorial service will use sanitary service for any washing. Other items discussed: will contact SMC regarding outfall of current drainage into Princeton Harbor as it is too low and floods during high tides, will ask SMC to locate spring that appears to be leaching water into system, will SMC Public Works to remove all debris from storm sewer system. Because so many people involved and public health issue going to contact Supervisor Gordon to set up a meeting with EHS, Public Works, Board of Directors, himself, and Brenda (SAM).

Document Number: PPH.C.16.99.03.a

Date: 3/23/99

Type: FAX

To: Charles Van Linge

From: Brenda Donald, Sewer Authority Mid-Coastside

Source: SAM Binder

Summary: Capistrano Road Association has been sold, trying to track down new owners, she called Supervisor Gordon to follow-up on storm sewer repair status, will mail him background data & documents, she thinks that it's been established that source of pollution is from groundwater under the street, not adjacent businesses.

Document Number: PPH.C.16.99.04.a .

Date: 4/7/99

Type: FAX

To: Keet Nerhan

From: Brenda Donald, Sewer Authority Mid-Coastside

Source: GSD File 1

Summary: Ground water leaking from storm sewer under Capistrano Rd. in front of Shorebird polluting beach it discharges onto, break in storm sewer in front of northern Shorebird parking lot that has water flowing even in dry summer months, pollution has persisted even after Shorebird was closed; please see what you can do to get broken drain repaired.

Document Number: PPH.C.16.00.08.a

Date: 8/7/00

Type: E-Mail

To: Rich Gordon, SMC Supervisor

From: Brenda Donald, Sewer Authority Mid-Coastside

Source: GSD File 2

Summary: Total coliform & E.C. bacteria levels for Pillar Point Site #4 through the roof during month of July, heard he was considering filed trip to location, she would like to be there; suggests that there should be no dry weather flow from drain, once repaired/relocated above water table & high tide level situation should improve, clearly a Public Works project.

Document Number: PPH.C.16.01.10.a.

Date: 10/16/01

Type: Letter (draft)

To: No Recipient

From: Brenda Donald, Sewer Authority Mid-Coastside

Source: GSD File 2

Summary: Main source of bacteria/vector for bacteria is water that runs through storm sewer rain or shine, summer or winter; believes storm sewer needs to be re-engineered and possible rebuilt in such a way that roads & businesses along Capistrano have adequate drainage without invading dry weather water table or mean high tide level.

Document Number: PPH.C.16.01.11.a

Date: 11/2/01

Type: FAX

To: Nichole Freeling, Half Moon Bay Review

From: Gina Holmes, Granada Sanitary District Administrator

Source: GSD File 2

Summary: Sending SMC memo summarizing 1997 Stanford Study, under recommendations will see actions to which each Government agency entity agreed; GSD connected Shorebird (now HMB Brewery) drain to sewer in 1988.

Document Number: PPH.C.16.02.07.a

Date: 7/19/02

Type: E-Mails

To: Bernie Halloran

From: Brenda Donald, Sewer Authority Mid-Coastside

Source: SAM Binder

Summary: Brenda asking about Optical Brighteners as a good indication of domestic sewage since she had heard he was doing work on San Pedro Creek. He replies with a reference to a website. He is finishing a yearlong study of optical brighteners in SP Creek, results are mixed.

Q. Pillar Point Harbor File #17: Maps

Document Number: PPH.C.17.99.06.a

Date: 6/3/99

Type: Map

Source: SMCEHS capfile-002.pdf

Summary: Capistrano Rd.

Document Number: PPH.C.17.

Date: No date

Type: Map

Source: GSD File 2

Summary: Storm drain system, Capistrano Rd.

R. Pillar Point Harbor File #18: Sewer Authority Mid-Coastside Memos/Staff Reports

Document Number: PPH.C.18.88.09.a

Date: 9/22/88

Type: Redi-Letter

To: Gary or Bill

From: Collection

Source: SAM Binder

Summary: Called out for bad odor, noticed there was grease and water in storm drain that had turned septic, traced condition from storm drain to north parking lot of Shorebird, out to beach in front of Shorebird. Appears that clean-up of mats taking place outside and water is running in storm drain and stagnating, thinks probable solution would be to hook up wash down drain into grease trap, storm drain needs to be cleaned.

Document Number: PPH.C.18.93.07.a

Date: 7/26/93

Type: Redi-Letter

To: Tony Pullin, Operations Supervisor; Brenda Donald, Sewer Authority Mid-Coastside

From: Gary Vallado, General Manager, Sewer Authority Mid-Coastside

Source: SAM Binder

Summary: SMCEHS has requested the following: determine if Shorebird wash down drain is connected to sanitary sewer, determine if any restaurant cleaning is done outside the cleanup area and if so where does flow go, determine if possible for restaurant to expand its cleanup area and discharge to sanitary sewer.

Document Number: PPH.C.18.93.07.b

Date: 7/28/93

Type: Redi-Letter

To: Gary Vallado, General Manager, Sewer Authority Mid-Coastside, Tony Pullin, Operations Supervisor

From: Brenda Donald, Sewer Authority Mid-Coastside

Source: SAM Binder

Summary: Response to questions of 7/26/93:

Only one of four outdoor drains is hooked up to sanitary sewer, cleaning is done in the entire courtyard, waste oil container is stored there, entire area is greasy, if storm drain #3 (see map) is connected to grease trap then restaurant should have no greasy or high BOD storm water runoff.

Document Number: PPH.C.18.98.08.a

Date: 8/11/98

Type: Report

Source: SAM Binder

Summary: Non-domestic Wastewater Source Control Program Inspection Report for Shorebird Restaurant. Recommendations for mitigating pollution problem at Capistrano Beach: clean storm sewer grease trap every Monday morning, consider additional pretreatment, keep courtyard fastidiously clean, hook storm drain to sanitary sewer grease trap, insist janitorial service use sanitary sewer for wash water.

S. Pillar Point Harbor File #19: Bacteria Regulations

Document Number: PPH.C.19

Type: Bill Analysis: AB 411

Source: Internet

T. Pillar Point Harbor File #20: Verbal Communications

Document Number: PPH.C.20.07.12.a

Date: December 2007

Type: Personal Communication

To: Ellen Gartside, San Mateo County Resource Conservation District

From: Mike Mead, Princeton resident

Summary: Described renovation of HMB Brewery. When trench was dug to install structural support broken pipe was covered in concrete because workers were getting sick. Suggested contacting contractors involved: Ed Kern, Oceanside Sheet Metal; George Woodstock, Tiler; Ingraham Electronics; Kelly Bretz 892 5801

Document Number: PPH.C.20.08.02.a

Date: February 2008

Type: Personal Communication

To: Ellen Gartside, San Mateo County Resource Conservation District

From: Brenda Donald, Sewer Authority Mid-Coastside, former SAM employee

Summary: Brenda made the following suggestions:

1. Harbor Village pretreatment drainage system?
2. Seabirds: monitor landfill
3. GSD should still be in full compliance, document history of infrastructure upgrades
4. Talk to San Mateo Stormwater Pollution & Prevention (STOPP) about infrastructure repair
5. Talk to SAM regarding restaurant and businesses non-domestic waste source control program

U. Pillar Point Harbor File #21: Harbor Regulations

Document Number: PPH.C. 21.08.02.a

Date: February 2008

Type: Program Description

Source: Website

Summary: Clean Marinas California Program Guideline for: Marina Debris, Boat Sewage Discharge, Solid Waste, Liquid Waste

Document Number: PPH.C. 21.08.02.b

Date: February 2008

Type: Harbor Regulations

Source: Website

Summary: Rules and regulations of the San Francisco Marina Small Craft Harbor

Document Number: PPH.C. 21.08.02.c

Date: February 2008

Type: Form

To: San Mateo County Resource Conservation District

From: Marian Olin

Source: Santa Cruz Harbormaster

Summary: Liveaboard Permit