

7.0 APPENDICES

**A. Spring 1995 Marine Biological
Survey Station Data**

**COASTAL RESOURCES MANAGEMENT
SPRING 1995 MARINE BIOLOGICAL SURVEYS
DATA REPORT**

INTRODUCTION

Coastal Resources Management (CRM) conducted a subtidal marine biological survey of sand bottom and kelp bed habitats offshore San Simeon Creek and Pico Creek on May 17 and 18, 1995. The purpose of the survey was to document the types and abundances of marine organisms in the vicinity of the Cambria Community Services District's (CCSD) proposed desalination facility ocean intake and seawater brine discharge structures. A previous survey was conducted in October and November 1994; a late summer 1995 survey will also be conducted. The results of these surveys will precede preconstruction surveys immediately prior to the startup of construction activities of the offshore component of the desalination facilities, scheduled for late spring or early summer 1996.

In addition, aerial surveys were flown over the project site in late winter and late spring to document the extent of kelp bed canopy cover in the vicinity of the proposed intake and diffuser systems.

FIELD METHODS

Survey Sites

The project area is located in northern San Luis Obispo County, California between the communities of Cambria and San Simeon (Exhibit 1). Surveys were to be conducted at 6 sites within two general locations over two day period; a sand channel station offshore of San Simeon Creek (Station T-1), two kelp bed stations offshore of San Simeon Creek (Station K-5a and K-5b); a sand channel stations at the Pico Creek control area (T-9) and two kelp bed stations at the Pico Creek control area (K-9a and K-9b). However, extremely poor visibility in the sand channel offshore of San Simeon Creek prevented biologists from completed the survey at station T-1.

Stations 9 is located directly offshore of Pico Creek. This site was selected as an appropriate project control area because it is subjected to seasonal creek flow, the habitats include both sand bottom and hard bottom habitats similar to the San Simeon Creek area, and it is far enough upcoast (10 km) that it is considered to be out of the potential effect area of both construction and operational modes for the Cambria desalination facility. Based upon the results of oceanographic surveys conducted over a one-year period (August 1994 through July 1995), the ambient current flow was downcoast 85 percent of the time, and only 5 percent of the time did the currents flow north (Marine Resource Consultants, Inc. 1995). Therefore, this site appears to be an appropriate control area for future surveys.

Marine biologists conducted subtidal diving surveys on May 17 and May 18, 1995 (Table 1). The data collected during the survey are presented by station. Analysis and interpretation of the data will be included in an annual project report that will be finalized in October 1995.

**TABLE 1. SITE SURVEY INFORMATION
CAMBRIA MARINE BIOLOGICAL INVENTORY, MAY 1995**

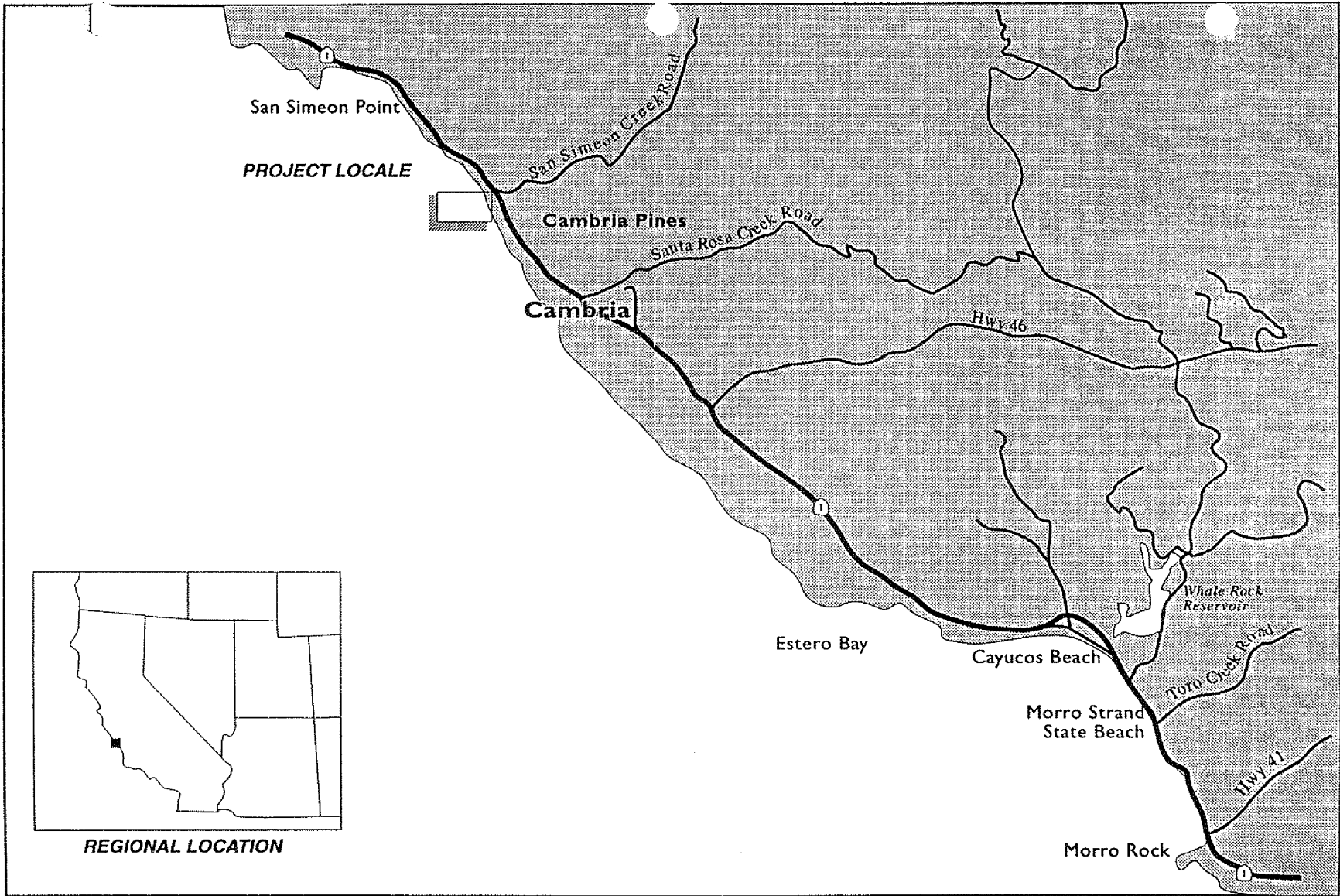
Site	Date of Survey
San Simeon T-1 Sand Bottom Epifauna (28 ft depth) K-5a Kelp Bed Macrofauna (27.5 ft depth) K-5a Kelp Bed Recruitment/Density (29-31 ft depth) K-5b Kelp Bed Macrofauna (34-37 ft depth) K-5b Kelp Bed Recruitment/Density (35-38 ft depth)	May 17 cancelled completed completed May 18 completed completed
Pico Creek T-9a/b Sand Bottom Epifauna Control (29 ft depth) T-9a Kelp Bed Macrofauna (29 ft depth) T-9a Kelp Bed Recruitment/Density (29-34 ft depth) T-9b Kelp Bed Macrofauna (34-39 ft depth) T-9b Kelp Bed Recruitment/Density (35-38 ft depth)	May 18 completed completed completed completed completed
Kelp Bed Aerial Surveys San Simeon Creek Region-Late Winter Survey San Simeon Creek Region-Late Spring Survey	March 15 June 8; rough seas and winds; reshot on June 21

Field Operations

Diving surveys were conducted between 0800 and 1300 hours. Operations were conducted from the 38 foot (ft) vessel *Bonnie Marietta*, owned and operated by Mr. Mark Tognazzini. Underwater studies were conducted by marine biologists Rick Ware (Coastal Resources Management), Noel Davis (Chambers Group, Inc.), and Leray A. de Wit (Independent Consultant). The biologists were assisted by Ms. Amanda Harrison and Mr. Doug Ravenzahn. SCUBA techniques were employed for the surveys which were conducted at depths between 27 and 38 ft (MLLW).

Biological Community Inventory

Epibiota were quantified using a 50 meter long by 1 meter wide band transect in both sand channel and reef habitat. Data were collected in 10 meter replicate increments along the transect



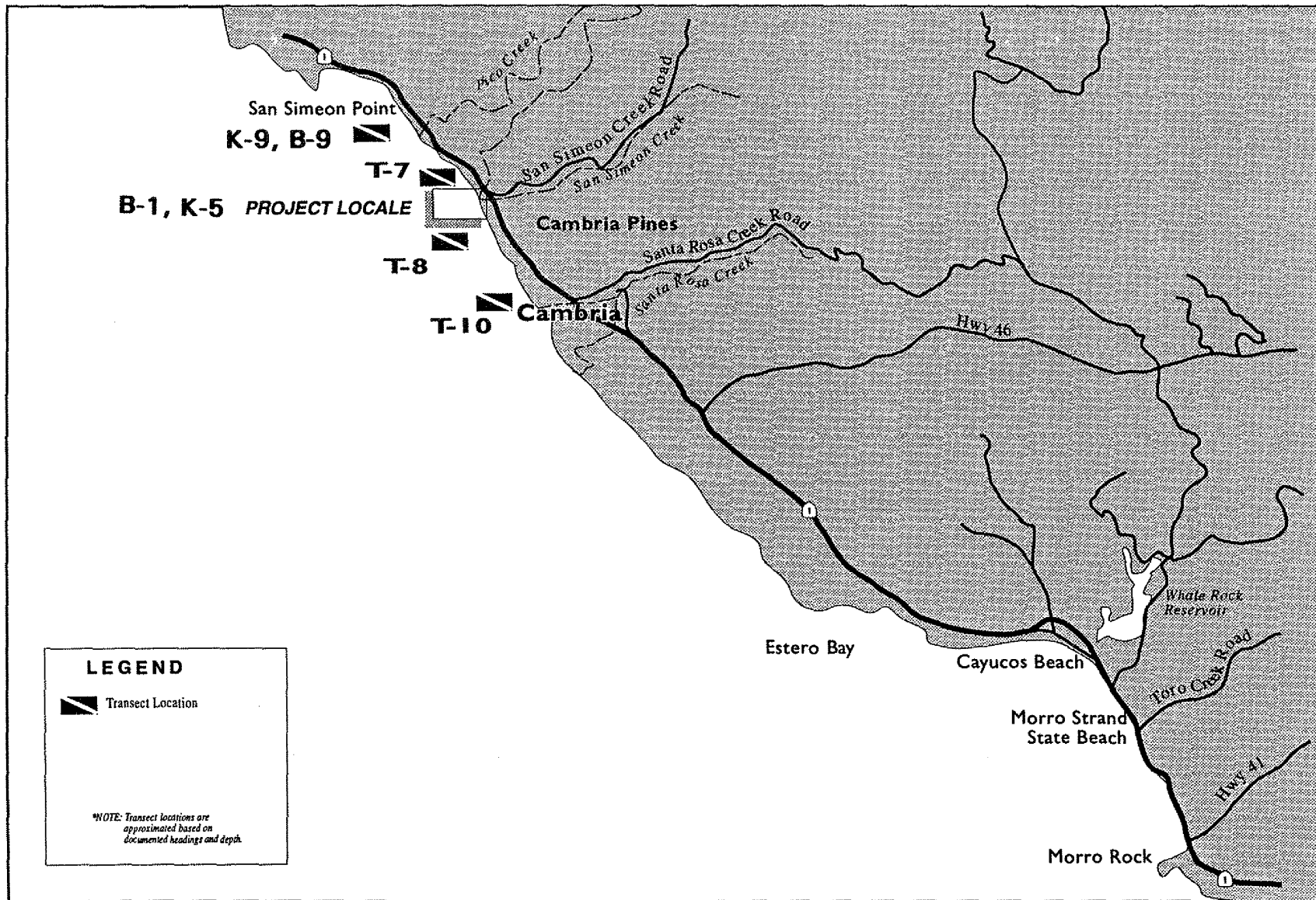
1 mile 0 1 mile 3 miles




October/November, 1994

EXHIBIT ONE
REGIONAL AND PROJECT LOCALE
 Cambria Community Services District Proposed Desalination Facility

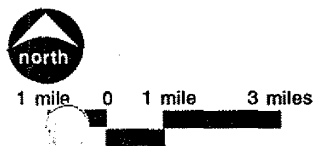
Source: Coastal Resources Management



LEGEND

 Transect Location

**NOTE: Transect locations are approximated based on documented headings and depth.*



October/November, 1994

**EXHIBIT 2. LOCATION OF DIVER TRANSECT SITES
San Simeon Sand Channel Project Locale (Stations B-1 and K-5)
Pico Creek (Station B-9 and K-9)**

line. For sand bottom habitat surveys, two biologists noted the types and abundances of all epibiota within a 1 meter wide band on opposite sides of the 50 meter transect.

For reef habitat, one biologist concentrated on the identification and enumeration of the smaller, cryptic invertebrates (less than 5 cm in diameter) and smaller red and brown algal taxa. Organisms were enumerated by directly counting distinct individuals or estimating the percent cover of algae or encrusting invertebrates within a one-quarter meter square quadrat randomly positioned within each 10 meter section of the transect line. The second biologist collected information on larger macroinvertebrates and the larger algal taxa (i.e, kelps), the percent cover of rock, algae, and invertebrates within each 10 meter segment, and noted the presence of all dominant macroinvertebrate and algal taxa.

A second team quantified kelp recruitment, kelp density, and fish along a 50 meter transect within a 3 meter wide band (150 meters total area). Kelp plants were classified into four categories: new recruits (up to 2 cm in length), juveniles (2 to 40 cm in length), subadults (40 cm to 2 meters in length), and adults (greater than 2 meters in length). In addition, the team photographed representative rock and sand bottom habitat and representative community members. Voucher specimens of organisms that were not readily identified in the field were collected, returned to the laboratory, and identified to the lowest possible taxa.

Ancillary data that were collected during the surveys included sediment types, water depth, water temperature, underwater visibility, and general features of each sampling area.

Data Analysis

Field data were checked by the field biologists following the completion of each day's survey. Samples of unknown species were subsequently identified in the laboratory.

Field data were entered into Lotus 1-2-3 spreadsheets from which the station data were generated. Percent cover of algae and colonial invertebrates were converted directly into a numerical value to standardize the database. Additionally, the data collected within one-quarter meter square quadrats were standardized for a 10 meter square area.

From these data, statistical means, standard deviations, and percent occurrences were calculated within each station. Water depths were adjusted relative to Mean Lower Low Water (MLLW) tidal datum based on tidal height predictions for San Simeon.

Kelp Bed Aerial Photography

Aerial surveys were conducted by Golden State Aerial Surveys of San Luis Obispo, California on March 15, June 8, and June 21 1995 using infrared aerial photographic techniques. Conditions were good on March 15, but the seas were extremely rough on June 8 which limited the usefulness of the infrared film. The survey was reflown on midday on June 21, with somewhat better results despite a problem with glare.

SPECIES	0 M	10 M	20 M	TOTAL	MEAN	STD	N	%OCC
<i>Dendraster excentricus</i>	7	0	0	7	2.3	3.3	1	33
<i>Orthastarias koehleri</i>	0	1	0	1	0.3	0.5	1	33
<i>Balanophyllia elegans</i>	0	13333	6667	20000	6666.7	5443.3	2	67
<i>Balanus nubilis</i>	0	0	4	4	1.3	1.9	1	33
<i>Arteidius corallinus</i>	0	0	1	1	0.3	0.5	1	33
<i>Corynactis californica</i>	1000	0	0	1000	333.3	471.4	1	33
<i>Acanus erithacus</i>	10	0	0	10	3.3	4.7	1	33
<i>Serpulorbis squamigerus</i>	5	0	0	5	1.7	2.4	1	33
Total Abundance	211	5345.33	2695.66	8252	2750.7	2096.4	3	100
Mean	30.1	763.6	385.1	1178.857	393.0	299.5	3	100
Std Dev	69.4	1865.6	931.5	2866.463	955.5	733.5	3	100
Number of species	9	9	12	20	10.0	1.4	3	100

**incomplete survey; 30m transect only

**CAMBRIA DESALINATION FACILITY
MARINE BIOLOGICAL SURVEYS
DIVER SURVEY DATA**

STATION: 5b (Edge of San Simeon Sand Channel Boulder/Reef, 50m Into Kelp)
 DATE: 18 May 95
 TIME: 1200
 DEPTH RANGE: 34-37 ft (MLLW)
 VISIBILITY: 5 ft
 WATER TEMP: 50 deg F

DENSITY PER 10 METER SQ METERS

SPECIES	0 M	10 M	20 M	30 M	40 M	TOTAL	MEAN	STD	N	%OCC
<i>Diopatra ornata</i>	320	0	40	480	1440	2280	456.0	523.1	4	80
<i>Lithothamnion/Lithophyllum</i>	10	10	80	0	0	100	20.0	30.3	3	60
<i>Pterygophora californica</i>	8	22	22	37	2	91	18.2	12.2	5	100
<i>Polyneura latissima</i>										
<i>Patiria miniata</i>	12	7	10	7	1	37	7.4	3.7	5	100
<i>Microcladia coulteri</i>										
<i>Cystodytes lobata</i>										
<i>Cnemidocarpa finmarkiensis</i>										
<i>Pisaster brevispinus</i>	10	18	30	8	2	68	13.6	9.7	5	100
Maldanidae, unid.										
<i>Calliostoma ligatum</i>	40	80	40	80	40	280	56.0	19.6	5	100
Porifera, unid sp A										
<i>Bossiella sp.</i>										
Pholodidae, unid.										
<i>Balanus pacificus</i>	5	0	0	0	0	5	1.0	2.0	1	20
<i>Aglaophenia sp.</i>										
Urochordata sp. A										
<i>Styela montereyensis</i>	3	1	1	1	3	9	1.8	1.0	5	100
<i>Pugettia producta</i>										
<i>Cancer sp. (juv)</i>										
<i>Ceratostoma foliatum</i>	1	0	0	0	0	1	0.2	0.4	1	20
<i>Citharichthys sordidus</i>										
<i>Macrocystis pyrifera</i>	1	0	0	0	0	1	0.2	0.4	1	20
<i>Pisaster ochraceus</i>										
<i>Calliostoma annulatum</i>										
<i>Strongylocentrotus purpuratus</i>	6	0	0	0	0	6	1.2	2.4	1	20
<i>Anthopleura elegantissima</i>	21	0	0	0	0	21	4.2	8.4	1	20
<i>Pisaster giganteus</i>	1	0	0	0	0	1	0.2	0.4	1	20
<i>Scorpaena guttata</i>	1	0	0	0	0	1	0.2	0.4	1	20
<i>Iridaea sp.</i>	0	5	0	5	0	10	2.0	2.4	2	40

SPECIES	0 M	10 M	20 M	30 M	40 M	TOTAL	MEAN	STD	N	%OCC
<i>Botryoglossum farlowianum</i>	0	0	0	0	10	10	2.0	4.0	1	20
Paguridae, unid.	40	0	80	0	360	480	96.0	135.3	3	60
wide leaf red algae	0	0	0	0	10	10	2.0	4.0	1	20
<i>Pista pacifica</i>	40	0	0	0	0	40	8.0	16.0	1	20
Rhodophyta, unid.	20	0	0	0	0	20	4.0	8.0	1	20
<i>Tealia piscivora</i>	1	0	0	0	0	1	0.2	0.4	1	20
Tunicate, unid.	1	0	0	0	0	1	0.2	0.4	1	20
<i>Spiochaetopterus costarum</i>	0	0	120	0	0	120	24.0	48.0	1	20
Total Abundance	416	138	223	613	1488	2878	575.6	484.8	5	100
Mean	37.8	12.5	20.3	55.7	135.3	261.6	52.3	44.1	5	100
Std Dev	89.8	22.6	24.4	136.2	412.7	685.8	137.2	144.2	5	100
Number of species	19	7	9	7	9	23	10.2	4.5	5	100

**CAMBRIA DESALINATION FACILITY
MARINE BIOLOGICAL SURVEYS
DIVER SURVEY DATA**

STATION: 9a (Edge of Pico Creek Boulder/Reef, 50m into Kelp)
DATE: 18 May 1995
TIME: 0800
DEPTH RANGE: 29 ft (MLLW)
WATER TEMP: 51 deg F
WATER VISIBILITY: 5 ft

DENSITY PER 10 SQ METERS

SPECIES	0 M	10 M	20 M	30 M	40 M	TOTAL	MEAN	STD	N	OCC
<i>Diopatra ornata</i>	0	0	3333	0	11667	15000	3000.0	4521.6	2	40
<i>Isocheles pilosus</i>										
<i>Balanophyllia elegans</i>	0	1000	0	440	0	1440	288.0	394.7	2	40
<i>Patiria miniata</i>	41	34	35	15	9	134	26.8	12.5	5	100
<i>Pisaster brevispinus</i>	7	1	2	4	0	14	2.8	2.5	4	80
<i>Lithothamnion/Lithophyllum</i>	0	0	100	0	0	100	20.0	40.0	1	20
<i>Rhodoglossum affinae</i>										
<i>Polynura latissima</i>	0	10	0	10	10	30	6.0	4.9	3	60
<i>Ceratostoma foliatum</i>	2	4	2	3	7	18	3.6	1.9	5	100
Porifera, unid.										
<i>Gigartina corymbifera</i>	0	20	0	0	0	20	4.0	8.0	1	20
<i>Iridaea sp.</i>	5	5	5	5	5	25	5.0	0.0	5	100
<i>Balanus pacificus</i>	0	0	5	20	0	25	5.0	7.7	2	40
<i>Arteidius corallinus</i>										
<i>Urticina crassicornis</i>										
<i>Boltenia villosa</i>			1			1	1.0	0.0	1	20
<i>Calliostoma ligatum</i>	0	0	280	40	320	640	128.0	141.8	3	60
<i>Citharichthys sordidus</i>										
<i>Styela montereynsis</i>	1	2	1	0	0	4	0.8	0.7	3	60
<i>Desmarestia ligulata</i>										
<i>Lepasterias hexactis</i>	0	1	0	0	0	1	0.2	0.4	1	20
<i>Collisella pelta</i>										
<i>Anthopleura elegantissima</i>										
<i>Pisaster ochraceus</i>										
<i>Crangon nigromaculata</i>										
<i>Olivella baetica</i>										
<i>Calliostoma annulatum</i>	0	40	40	0	0	80	16.0	19.6	2	40
<i>Cryptochiton stelleri</i>					1	1	1.0	0.0	1	20
<i>Pugettia producta</i>										
<i>Polyclinum planum</i>	0	1	0	0	0	1	0.2	0.4	1	20
<i>Tonicella lineata</i>	0	0	10	0	0	10	2.0	4.0	1	20
<i>Macrocystis pyrifera</i>	2	4	1	0	0	7	1.4	1.5	3	60
<i>Pista pacifica</i>										
<i>Tealia piscivora</i>	3	2	1	1	1	8	1.6	0.8	5	100
<i>Pisaster giganteus</i>	5	4	2	3	0	14	2.8	1.7	4	80

SPECIES	0 M	10 M	20 M	30 M	40 M	TOTAL	MEAN	STD	N	OCC
<i>Pterygophora californica</i>	0	9	4	3	5	21	4.2	2.9	4	80
<i>Henricia laeviuscula</i>	0	1	0	0	0	1	0.2	0.4	1	20
Rhodophyta, unid.	0	5	5	0	0	10	2.0	2.4	2	40
<i>Spiochaetopterus costarum</i>	0	0	0	3	0	3	0.6	1.2	1	20
Tunicate, unid.	0	5	0	0	0	5	1.0	2.0	1	20
<i>Mitra idae</i>	0	40	40	0	0	80	16.0	19.6	2	40
<i>Cytodytes lobata</i>	0	0	15	0	0	15	3.0	6.0	1	20
<i>Alia carinata</i>	320	0	0	40	0	360	72.0	125.0	2	40
Pholadidae, unid.	0	0	400	0	0	400	80.0	160.0	1	20
<i>Loxorhynchus crispatus</i>	0	0	2	0	0	2	0.4	0.8	1	20
<i>Orthopagurus minimus</i>	0	0	160	0	0	160	32.0	64.0	1	20
<i>Corynactis californica</i>	0	0	600	0	0	600	120.0	240.0	1	20
<i>Cryolithoides sitchensis</i>	0	1	0	0	0	1	0.2	0.4	1	
Total Abundance	58	1189	5044.33	587	12024.6	18903	3781	4479.6	5	100
Mean	11.7	36.0	148.4	17.8	353.7	568	114	129.9	5	100
Std Dev	55.0	170.8	568.8	75.3	1970.1	2840	568	725.2	5	100
Number of Species	9	20	23	13	9	35	15	5.7	5	100

**CAMBRIA DESALINATION FACILITY
MARINE BIOLOGICAL SURVEYS
DIVER SURVEY DATA**

STATION: 9b (Edge of Pico Creek Boulder/Reef, 50m into Kelp)

DATE: 18 May 1995

TIME: 1038

DEPTH RANGE: 34-39ft (MLLW)

WATER TEMP: 53 deg F

WATER VISIBILITY: 5 ft

DENSITY PER 10 SQ METERS

SPECIES	0 M	10 M	20 M	30 M	40 M	TOTAL	MEAN	STD	N	OCC
<i>Diopatra ornata</i>	1000	0	1200	800	1520	4520	904.0	510.7	4	80
<i>Isocheles pilosus</i>	40	0	0	0	0	40	8.0	16.0	1	20
<i>Balanophyllia elegans</i>	5	5	5	0	0	15	3.0	2.4	3	60
<i>Patiria miniata</i>	31	35	54	38	18	176	35.2	11.6	5	100
<i>Pisaster brevispinus</i>	2	6	1	2	3	14	2.8	1.7	5	100
<i>Lithothamnion/Lithophyllum</i>	100	60	0	60	10	230	46.0	36.7	4	80
<i>Rhodoglossum affinae</i>										
<i>Polyneura latissima</i>	5	10	5	20	20	60	12.0	6.8	5	100
<i>Ceratostoma foliatum</i>	40	0	0	0	80	120	24.0	32.0	2	40
Porifera, unid.										
<i>Gigartina corymbifera</i>										
<i>Iridaea cordata</i>	0	0	5	5	0	10	2.0	2.4	2	40
<i>Balanus pacificus</i>										
<i>Artedius corallinus</i>										
<i>Urticina crassicornis</i>										
<i>Boltenia villosa</i>	1	0	2	0	0	3	0.6	0.8	2	40
<i>Calliostoma ligatum</i>	40	280	80	80	40	520	104.0	89.8	5	100
<i>Citharichthys sordidus</i>										
<i>Styela montereynsis</i>	0	9	4	0	0	13	2.6	3.6	2	40
<i>Desmarestia ligulata</i>										
<i>Lepasterias hexactis</i>										
<i>Collisella pelta</i>										
<i>Anthopleura elegantissima</i>										
<i>Pisaster ochraceus</i>	0	0	1	0	0	1	0.2	0.4	1	20
<i>Crangon nigromaculata</i>										
<i>Olivella baetica</i>	0	0	0	0	40	40	8.0	16.0	1	20
<i>Calliostoma annulatum</i>										
<i>Cryptochiton stelleri</i>	0	2	1	0	0	3	0.6	0.8	2	40
<i>Pugettia producta</i>										
<i>Polyclinum planum</i>										
<i>Tonicella lineata</i>										
<i>Macrocystis pyrifera</i>	5	3	1	0	0	9	1.8	1.9	3	60
<i>Pista pacifica</i>										
<i>Tealia piscivora</i>	1	1	2	1	0	5	1.0	0.6	4	80
<i>Pisaster giganteus</i>	4	5	5	2	1	17	3.4	1.6	5	100
<i>Pterygophora californica</i>	4	5	0	0	5	14	2.8	2.3	3	60

SPECIES	0 M	10 M	20 M	30 M	40 M	TOTAL	MEAN	STD	N	OCC
<i>Henricia laeviuscula</i>	0	1	0	0	0	1	0.2	0.4	1	20
Rhodophyta, unid.	0	0	0	5	0	5	1.0	2.0	1	20
<i>Spiochaetopterus costarum</i>	0	0	40	0	0	40	8.0	16.0	1	20
Tunicate, unid.	1	30	0	0	0	31	6.2	11.9	2	40
<i>Mitra idae</i>	1	0	0	0	0	1	0.2	0.4	1	
<i>Cystodytes lobata</i>	0	5	0	0	0	5	1.0	2.0	1	20
<i>Alia carinata</i>										
Pholadidae, unid.										
<i>Loxorhynchus crispatus</i>	1	0	0	1	0	2	0.4	0.5	2	40
<i>Orthopagurus minimus</i>										
<i>Corynactis californica</i>										
<i>Pycnopodia helianthoides</i>	1	1	1	1	1	5	1.0	0.0	5	100
<i>Orthasteria koehleri</i>										0
<i>Evasterias troschellii</i>										
<i>Botryoglossum farlowii</i>	0	0	0	15	0	15	3.0	6.0	1	20
<i>Eudistylia polymorpha</i>	0	0	0	40	0	40	8.0	16.0	1	20
<i>Chaetopterus variopedatus</i>	0	0	0	40	0	40	8.0	16.0	1	20
<i>Serpulorbis squamigerus</i>	0	0	0	5	0	5	1.0	2.0	1	20
Paguridae, unid. (juv)	0	0	0	120	0	120	24.0	48.0	1	20
<i>Ophioplocus esmarkii</i>	1	0	0	0	0	1	0.2	0.4	1	20
<i>Phragmatopoma californica</i>	0	0	0	50	0	50	10.0	20.0	1	20
<i>Cactosoma sp.</i>	0	0	0	1	0	1	0.2	0.4	1	20
leafy, wide red	30	50	50	0	0	130	26.0	22.4	3	60
chiton, unid. (juv)	0	40	0	0	0	40	8.0	16.0	1	20
<i>Diodora aspera</i>	0	0	0	1	1	2	0.4	0.5	2	40
Total Abundance	1269	410	1359	1005	1731	5774	1155	439.1	5	100
Mean	79.3	25.6	84.9	62.8	108.2	361	72	27.4	5	100
Std Dev	239.2	67.5	288.7	191.8	365.2	1152	230	99.7	5	100
Number of Species	20	18	17	20	12	38	17	2.9	5	100

**CAMBRIA DESALINATION FACILITY
MARINE BIOLOGICAL SURVEYS
DIVER SURVEY DATA
SAND BOTTOM EPIFAUNA**

STATION: 9 Rep 1 (Pico Creek)
DATE: 18 May 1995
TIME: 0800
DEPTH RANGE: 29 ft (MLLW)
WATER TEMP: 50 deg F
WATER VISIBILITY: 8 ft

DENSITY PER 10 SQ METERS

SPECIES	0 M	10 M	20 M	30 M	40 M	TOTAL	MEAN	STD	N	OCC
<i>Diopatra ornata</i>	6	5	3	5	4	23	4.6	1.0	5	100
<i>Isocheles pilosus*</i>	4429	3857	4143	714	714	13857	2771.4	1689.3	5	100
<i>Pisaster brevispinus</i>	0	0	2	1	0	3	0.6	0.8	2	40
<i>Spiochaetopterus costarum</i>	2	0	0	1	2	5	1.0	0.9	3	60
<i>Nassarius fossatus</i>	1	1	0	0	0	2	0.4	0.5	2	40
<i>Olivella baetica</i>	0	0	0	1	0	1	0.2	0.4	1	20
<i>Pista pacifica</i>	1	1	0	1	1	4	0.8	0.4	4	80
Total Abundance	4439	3864	4148	723	721	13895	2779.0	1689.1	5	100
Mean	634.1	552.0	592.6	103.3	103.0	1985	397.0	241.3	5	100
Std Dev	1549.1	1349.3	1449.4	249.4	249.5	4847	969.4	591.2	5	100
Number of Species	5	4	3	6	4	7	4.4	1.0	5	100

* Counts per 0.07 sq meter subsample area standardized to 10 m

STATION: 9 Rep 2 (Pico Creek)
DATE: 18 May 1995
TIME: 0800
DEPTH RANGE: 29 ft (MLLW)
WATER TEMP: 50 deg F
WATER VISIBILITY: 8 ft

DENSITY PER 10 SQ METERS

SPECIES	0 M	10 M	20 M	30 M	40 M	TOTAL	MEAN	STD	N	OCC
<i>Diopatra ornata</i>	0	4	11	14	13	42	8.4	5.5	4	80
<i>Isocheles pilosus**</i>	10333	4000	2667	1667	3333	22000	4400.0	3065.2	4	80
<i>Patiria miniata</i>	1	0	0	0	0	1	0.2	0.4	1	20
<i>Citharichthys sordidus</i>	0	1	0	0	0	1	0.2	0.4	1	20
Total Abundance	10334	4005	2678	1681	3346	22044	4408.8	3060.8	5	100
Mean	2583.6	1001.3	669.4	420.2	836.6	5511	1102.2	765.2	5	100
Std Dev	4474.3	1731.3	1153.1	719.7	1441.5	9519.970	1904.0	1327.9	5	100
Number of Species	2	3	2	2	2	4	2.2	0.4	5	100

** Counts per 0.03 sq meter subsample area standardized to 10 m

KELP DENSITY IN THE PROJECT AREA
May 17-18, 1995

	Depth	Recruits	Juveniles	Subadults	Adults	Total	Total Area	Kelp Density/ 10m sq
San Simeon Creek								
K5a-1	29-31 ft	0	0	1	2	3	150	0.20
K5a-2	29-31 ft	0	0	2	1	3	150	0.20
Total K5a		0	0	3	3	6	300	0.20
San Simeon Creek								
K5b-1	35-38 ft	0	0	1	2	3	150	0.20
K5b-2	35-38 ft	0	0	0	1	1	150	0.07
Total K5b		0	0	1	3	4	300	0.13
San Simeon Creek		0	0	4	6	10	600	0.17

Station	Depth	Recruits	Juveniles	Subadults	Adults	Total	Total Area	Kelp Density/ 10m sq
Pico Creek								
K9a-1	29-34 ft	0	0	2	7	9	150	0.60
K9a-2	29-34 ft	0	0	0	4	4	150	0.27
Total K9a		0	0	2	11	13	300	0.43
Pico Creek								
K9b-1	35-38 ft	0	0	2	11	13	150	0.87
K9b-2	35-38 ft	0	0	2	13	15	150	1.00
Total K9b		0	0	4	24	28	300	0.93
Pico Creek		0	0	6	35	41	600	0.68

Total Area	Depth	Recruits	Juveniles	Subadults	Adults	Total	Total Area	Kelp Density/ 10m sq
	29-38 ft	0	0	10	41	51	1200	0.43

Key: recruits-less than 2 cm; juveniles-2 to 40 cm; subadults-40 cm to 2 m; adults-over 2 m



WILD 15/4 UAG
No: 12018 193,84

GS 2587-1

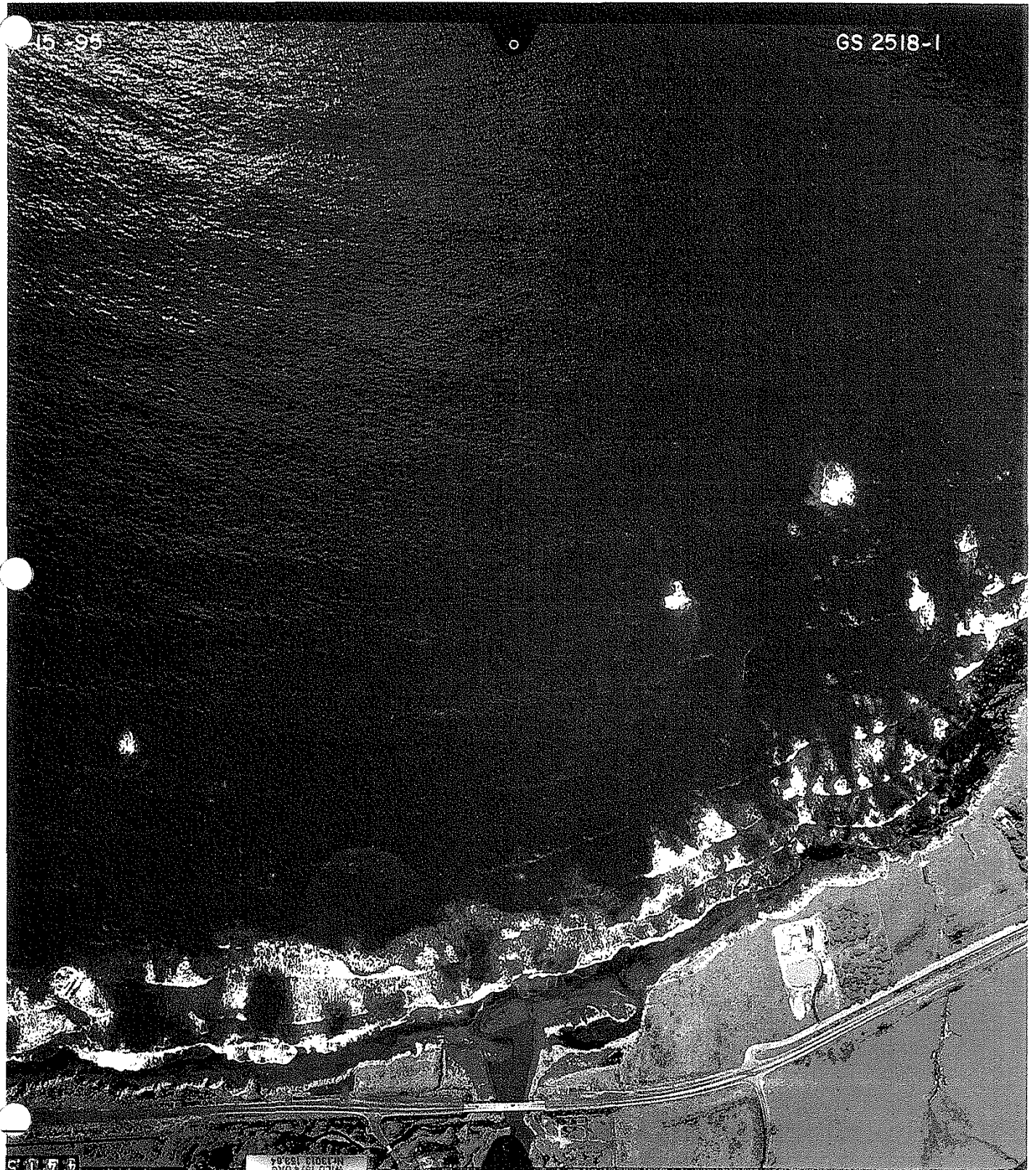
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