



**Pacific Gas and
Electric Company**

James R. Becker
Vice President - Diablo Canyon
Operations and Station Director

Diablo Canyon Power Plant
PO Box 56
Avila Beach, CA 93424

805 545 3462
Fax: 805 545 4234

Certified Mailing
Return Receipt
#7001-0360-0000-2103-3541

April 30, 2003

PG&E Letter DCL-2003-532

50-215/323

Mr. Roger Briggs, Executive Officer
Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

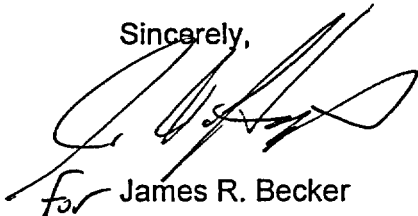
Re: PG&E Diablo Canyon Power Plant (DCPP) Submittal -
Receiving Water Monitoring Program 2002 Annual Report

Dear Mr. Briggs:

Enclosed is a copy of the Receiving Water Monitoring Program 2002 Annual Report for DCPP. This report presents the physical and biological data collected in the Receiving Water Monitoring Program during 2002. Per our agreement, no analysis or interpretation of the data were performed. Tables in the appendices provide summary statistics for each task.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,



for James R. Becker

2003532/JLK/kmo

IE25

PG&E Letter DCL-2003-532
Mr. Roger Briggs, Executive Officer
Central Coast Regional Water Quality Control Board
April 30, 2003
Page 2

cc: w/encl.: Michael Thomas, CCRWQCB
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

Debra Johnston
California Department of Fish and Game
20 Lower Ragsdale, Suite 100
Monterey, California 93490

Regional Administrator, Region 9
U. S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105
Attention: Carey Houk (W-5-3)

Resident Inspector , David Proulx
U.S. Nuclear Regulatory Commission
Diablo Canyon Power Plant 104/5

Regional Administrator
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Dr., Suite 400
Arlington, TX 76011-8064

Director, Division of Reactor Projects
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Dr., Suite 400
Arlington, TX 76011-8064

✓ U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

John Steinbeck
TENERA DCP, Avila Beach

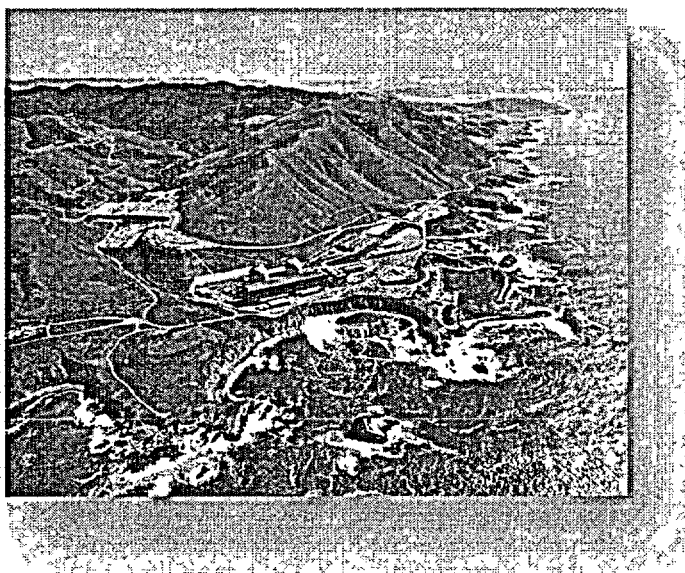
PG&E Letter DCL-2003-532
Mr. Roger Briggs, Executive Officer
Central Coast Regional Water Quality Control Board
April 30, 2003
Page 3

cc w/o encl.: Robyn Stuber
US EPA, Region 9
CWA Standards & Permits Office (Water Div.)
75 Hawthorne Street
San Francisco, CA 94105-3901

Jennifer Soloway
SWQCB
Office of the Chief Counsel
901 P Street
Sacramento, CA 95812-0100

Diablo Canyon Power Plant

Receiving Water Monitoring Program: 2002 Annual Report



April 18, 2003

Prepared for:

Pacific Gas and Electric Company
Diablo Canyon Power Plant
Avila Beach, CA 93424

Prepared by:



TENERA Environmental

225 Prado Rd., Suite D, San Luis Obispo, CA 93401
805.541.0310, FAX: 805.541.042

RWMP PROJECT ORGANIZATION

Key Project Personnel (TENERA):

Principal Investigator/
Project Manager:

Mr. John Steinbeck

Project Scientists:

Mr. Jim Blecha
Mr. Jay Carroll
Mr. Paul Dunn
Mr. David Innis
Mr. Scott Kimura
Mr. Rich Moran
Mr. Steve Pengilley
Mr. Jim Strampe

Project Staff:

Ms. Susan Helberg
Mr. John Lindsey

TABLE OF CONTENTS

1.0 INTRODUCTION	1-1
2.0 TEMPERATURE MONITORING	2-1
3.0 INTERTIDAL ALGAE AND INVERTEBRATES	3-1
4.0 INTERTIDAL FISHES	4-1
5.0 SUBTIDAL ALGAE AND INVERTEBRATES	5-1
6.0 SUBTIDAL FISHES	6-1

DATA SUMMARIES

Appendix A. Monthly Subtidal Temperatures.....	1
Appendix B. Monthly Intertidal Temperatures.....	6
Appendix C. Intertidal Horizontal Band Transects	13
Appendix D. Intertidal Vertical band Transects.....	68
Appendix E. Subtidal Arc Quadrants	72
Appendix F. Subtidal Line Contacts.....	81
Appendix G. Subtidal Fixed Quadrats.....	91
Appendix H. Subtidal Fish Transects.....	103

1.0 INTRODUCTION

Monitoring of the marine environment near the Diablo Canyon Power Plant (DCPP) is required by National Pollutant Discharge Elimination System (NPDES) Permit Order No. 90-09 as revised in a letter from the Central Coast Regional Water Quality Control Board (CCRWQCB) in December 1998. Special studies were completed in 1999, and therefore are not included in this report. Changes in the marine environment in the vicinity of DCPP (Figure 1) are monitored by the Receiving Water Monitoring Program (RWMP) in accordance with the NPDES Permit.

This report presents water temperature and biological data collected from January through December 2002 from the program's intertidal and subtidal monitoring tasks (Table 1). The report sections are divided according to the program's individual tasks. Sampling methods for the intertidal and subtidal studies are followed by the results for the surveys completed in 2002. This report does not include any analysis or discussion of results.

Table 1. Tasks, stations, and frequency of surveys for the DCPP Receiving Water Monitoring Program, 2002.

Task and Sampling Frequency		Stations
Temperature Monitoring (continuous readings every 20 min)		
Intertidal		NC-2, FC-1, FC-2, FC-3, NDC-1, NDC-2, NDC-3, SDC-1, SDC-2, SDC-3, SDP-1, SDP-2, SC-1, and SC 1-V
Subtidal		NC 1 -3m, FC 1 -3m, NDC 2 -3m, NDC 3 -3m, NDC 4 -4m, SDC 1 -3m, SDC 4 -4m, SC 1 -3m, and SC 2 -6m
Intertidal Horizontal Band Transects (algae, invertebrates, substrate)		
4 surveys per year		NC-1, NC-2, FC-1, FC-2, FC-3, NDC-1, NDC-2, NDC-3, SDC-1, SDC-2, SDC-3, SDP-1, SDP-2, and SC-1
Intertidal Vertical Band Transects (fishes)		
4 surveys per year		NC-1V, FC-1V, NDC-1V, SDC-2V, and SC-1V
Subtidal Benthic Stations (algae, invertebrates, substrate)		
4 surveys per year		FC 1 -3m, NDC 2 -3m, NDC 3 -3m, NDC 4 -4m, SDC 2 -3m, SDC 3 -4m, SC 1 -3m, and SC 2 -6m
Subtidal Fish Observations (fishes)		
4 surveys per year		FC FO-1, FC FO-2, FC FO-3, NDC FO-1, NDC FO-2, NDC FO-3, SDC FO-1, SDC FO-2, SDC FO-3; SC FO-1, SC FO-2, and SC FO-3
Habitat-Forming Kelp Survey (bull kelp, giant kelp)		
1 survey per year		Diablo Cove

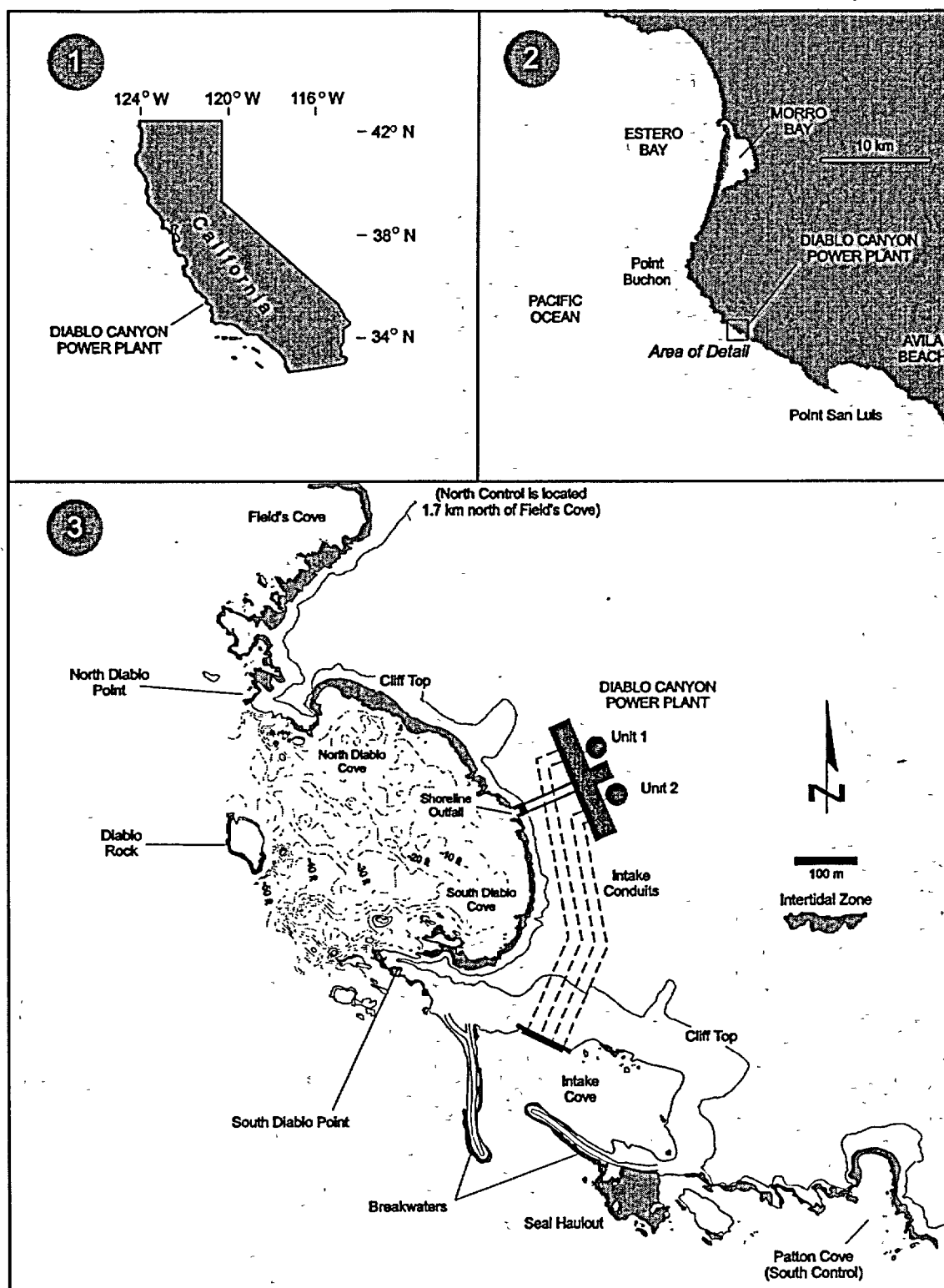


Figure 1. Location of the Diablo Canyon Power Plant.

2.0 TEMPERATURE MONITORING

Intertidal and subtidal seawater temperatures were recorded at permanent stations located along the Diablo coastline. Temperature units at intertidal stations were located along the rocky shore at the +0.6 m mean lower low water (MLLW) elevation (Figure 2). Subtidal temperature recorders were located at depths from -3 to -6 m MLLW (Figure 3). The designation of individual subtidal stations reflects the area location and number, followed by the station depth relative to MLLW (e.g., NDC 1 -3m is North Diablo Cove subtidal station 1 at a depth of -3 m MLLW).

The following 13 stations were nearest to the point of discharge in Diablo Cove, and were contacted regularly by the discharge plume:

- Intertidal (NDC-1, NDC-2, NDC-3, SDC-1, SDC-2, SDC-3, SDP-1, and SDP-2)
- Subtidal (NDC 2 -3m, NDC 3 -3m, NDC 4 -4m, SDC 1 -3m, and SDC 4 -4m)

The following four stations were located in Field's Cove, approximately one kilometer upcoast from Diablo Cove:

- Intertidal (FC-1, FC-2, and FC-3)
- Subtidal (FC 1 -3m)

The following six control stations measure ambient ocean temperatures at sites beyond the influence of the discharge:

- Intertidal (NC-2, SC-1, and SC-1V)
- Subtidal (NC 1 -3m, SC 1 -3m, and SC 2 -6m)

Each instrument synchronously logged temperatures every 20 minutes throughout its deployment period. Instrument precision was 0.01°C with an accuracy of $\pm 0.2^\circ\text{C}$. Temperature units were deployed at a station for approximately 60 days and then exchanged with a serviced, calibrated unit. Intertidal temperature units recorded air temperatures when tidal levels receded below about +0.6 m MLLW.

Results

Results for all subtidal and intertidal temperature recording stations are presented in Appendices A & B. Air temperatures recorded by the intertidal temperature units were not analyzed and were removed from the database by referencing tidal height measurements calculated as the average tidal height from local NOAA tide stations at Morro Bay to the north and Port San Luis to the south.

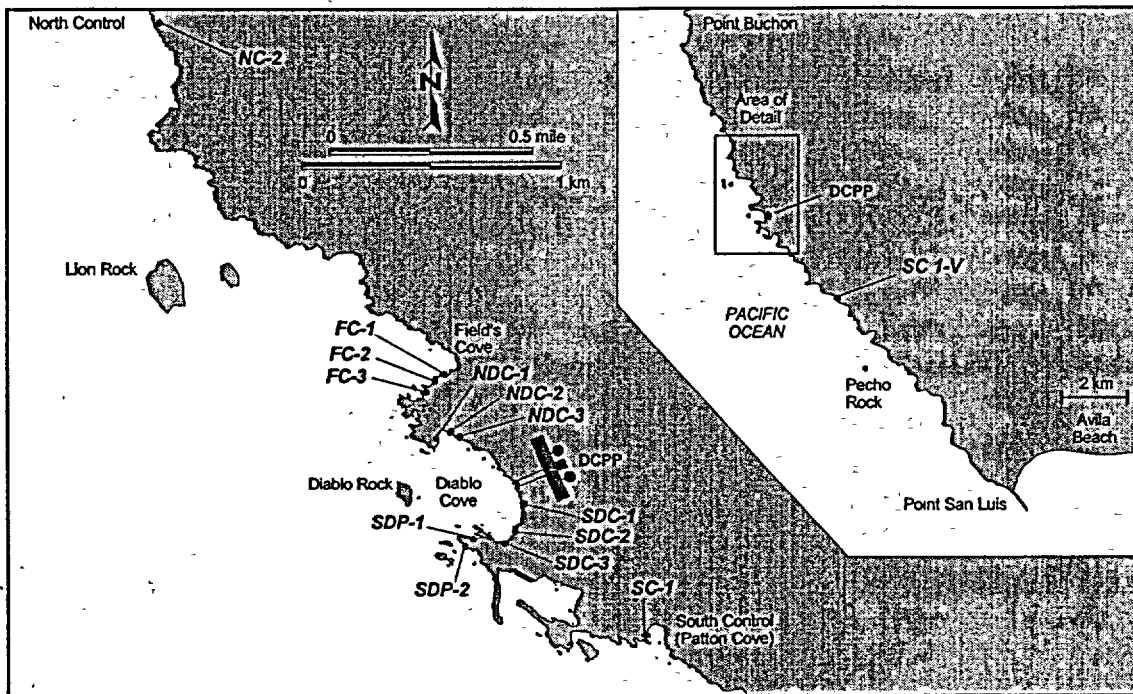


Figure 2. Locations of intertidal temperature monitoring stations.

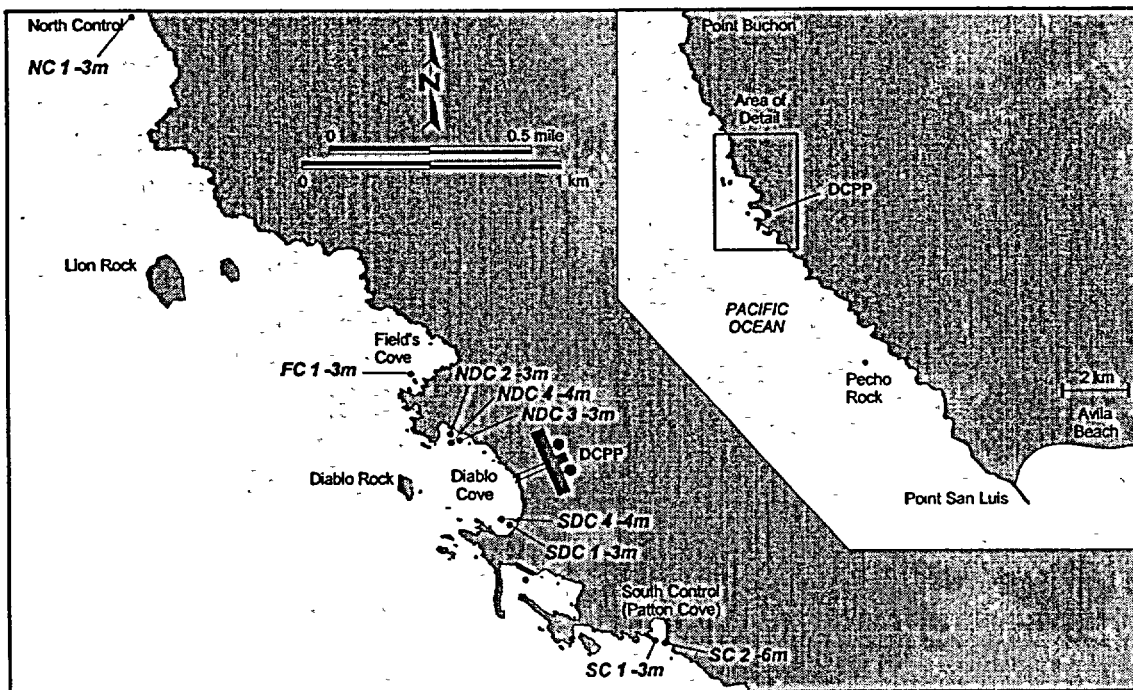


Figure 3. Locations of subtidal temperature monitoring stations.

3.0 INTERTIDAL ALGAE AND INVERTEBRATES

Intertidal algae and invertebrates were sampled using the horizontal band transect (HBT) sampling method at the locations shown in (Figure 4). Most HBT stations consisted of two 30 m long transects oriented parallel to the waterline, one at the +0.9 m (3 ft) MLLW tide level and the other at the +0.3 m (1 ft) MLLW tide level. Only one transect at the +0.9 m (3 ft) MLLW tide level was sampled at stations SDP-1 and SDP-2. The sampling area of each transect consisted of ten 1 m² fixed quadrats. Stations were mainly on bedrock and boulders, but various amounts of cobble and sand also occurred at the stations. The substrate at the +0.9 m MLLW level at Station SDC-1 near the discharge was mainly barren cobble. Therefore, the upper transect at that station was located lower at the +0.6 m MLLW tide level where the intertidal biota was more abundant.

Visual estimates of percent cover were made for all algal species and bare substrate. Overstory species were sampled first for coverage estimates, and then their branches and blades were brushed aside to allow estimates of understory and crustose species cover. Species with less than one percent cover were recorded as "present" on the data sheet. Total algal cover plus bare substrate cover often exceeded 100 percent in a quadrat due to layering of multiple algal taxa on the rocks.

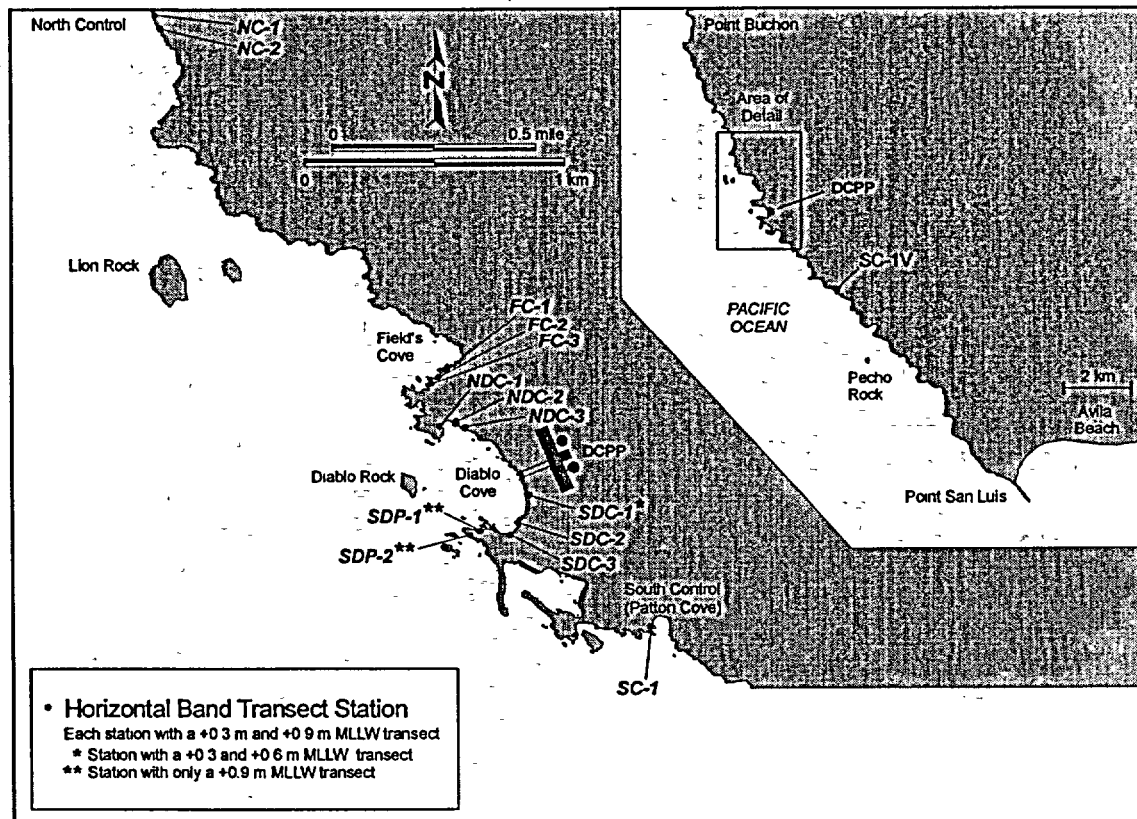


Figure 4. Horizontal band transect stations.

Intertidal invertebrates were sampled in the same quadrats as the algae. In five of the ten quadrats, all species were recorded as either present or absent, and individuals larger than 2.5 cm in greatest dimension were counted. In the remaining five quadrats (count quadrats), the same method was used except that select species of invertebrates were counted regardless of size. The percent cover of sessile invertebrates, such as sponges and tunicates, was estimated using the same methods used for the algae. All algae and invertebrates were identified to the lowest taxonomic level practical. All sizes of black abalone were counted within these ten quadrats and within an additional five quadrats.

Results

The survey mean and standard deviation for each taxon at each transect level for the four surveys completed during the year are presented in Appendix. The mean for the entire year across the four surveys was also calculated and presented. Survey statistics for algae and substrates are calculated from all ten quadrats along a transect, while statistics for the invertebrates are calculated from the data for the five 'count' quadrats. If a taxon was only recorded as present in a quadrat, its abundance was given a value of 0.000001 for calculating summary statistics.

4.0 INTERTIDAL FISHES

Intertidal fishes were sampled using the Vertical Band Transect (VBT) sampling method. At each of five stations (Figure 5), three fixed transects were positioned perpendicular to the shoreline at fixed locations. Each transect originated in the high intertidal zone (approximately +1.5 m MLLW) and terminated in the low intertidal zone (approximately -0.2 m MLLW). Transects at each station were separated by approximately 3 m. Each transect was used as a reference line to position twelve 1 m² permanent sampling quadrats, for a total of thirty-six 1 m² quadrats per station. Moveable rocks were carefully lifted and any fishes seen were captured in small hand nets. Foliose algae was also searched for cryptic fishes. Fishes were identified to the lowest practical taxonomic level, measured, and returned to the quadrat. Newly settled juvenile fishes were not identified to the species level but were grouped into composite taxa (e.g., *Anoplarchus/Cebidichthys*).

Results

The total numbers of fishes of each taxon observed throughout the surveys at each station during the four surveys completed during the year are presented in Appendix D. The tables also show the annual mean abundance and standard deviation for each taxon.

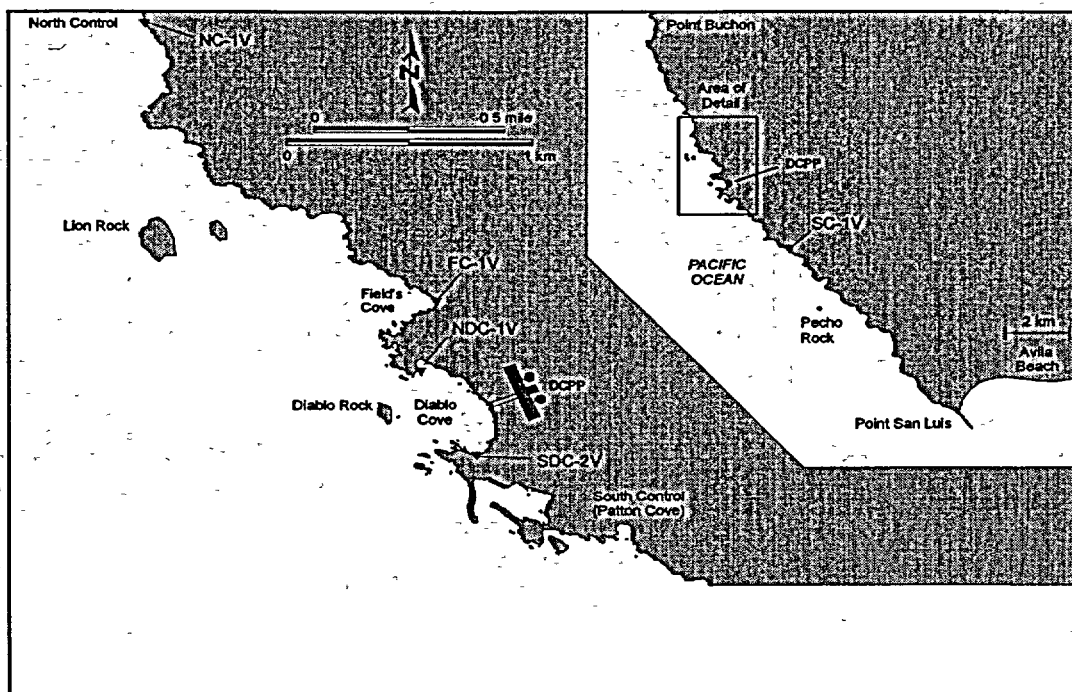


Figure 5. Vertical band transect stations

5.0 SUBTIDAL ALGAE AND INVERTEBRATES

Benthic Algae and Invertebrates

Subtidal algae and invertebrates were sampled at fixed stations (Figure 6) using three sampling methods. Each station was circular with a radius of 3.15 m and a sampling area of 28 m². The center 3.1 m² area, which contained a mooring wheel, was not sampled to avoid any unnatural algal and invertebrate growth associated with the mooring. Each station was divided into four equal sections, or "arc quadrants", 7 m² in area. All stations were established primarily on substrates of mixed bedrock and boulders with small amounts of cobble and sand. Depths ranged from -3 m to -6 m (-10 ft to -20 ft) MLLW.

Counts of individual species of kelp (brown algae of the order Laminariales and Fucales) and macroinvertebrates were estimated in each arc quadrant (SAQ sampling method). Kelp plants and individuals of select invertebrate taxa were counted regardless of their size. Individuals of other non-encrusting invertebrates were counted if they were larger than 2.5 cm (length or width). Juvenile kelp plants that could not be identified to the species level were counted and recorded as "Laminariales." A few common species that generally occurred in numbers too high to accurately count were sampled only in the first one-third (2.33 m²) of each quadrant.

Other subtidal algal species are more difficult to count because they are usually small or occur as dense clumps. These species are often collectively referred to as the algal understory as they occur beneath kelp fronds. We quantified all understory species at the stations in percent cover using a random point contact (RPC) sampling method. A line with ten points positioned at

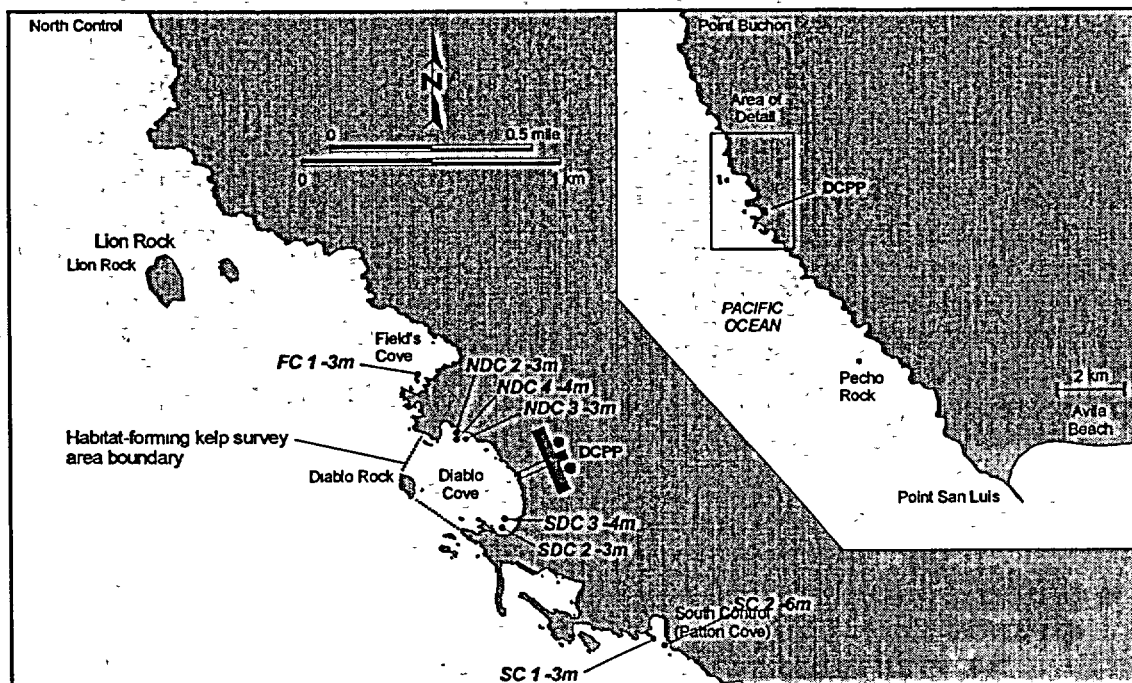


Figure 6. Subtidal benthic stations and habitat-forming kelp survey area in Diablo Cove.

increasing intervals toward the station perimeter was attached to the center of the station and used to locate sampling loci in each quadrant. Fifty points within each quadrant, or 200 points per station, were randomly selected (using a random numbers table) before sampling. For each survey we sampled a new set of randomly selected points. The presence of all algal species, sessile invertebrates, and substrates observed directly under the points was recorded. Holdfasts of kelp species were also included when contacted by the sample points. Percent cover of the understory algae was calculated by dividing the number of 'contacts' by the number of points sampled. Species were identified to the lowest taxonomic level practical. Unknown taxa were collected outside the sampling area, if possible, and returned to the laboratory for identification.

Smaller motile or attached invertebrates were sampled using the subtidal fixed quadrat (SFQ) method. This task sampled four circular quadrats with an area of 0.25 m² at fixed locations within each subtidal station to determine the species composition and abundance of the smaller, cryptic, subtidal invertebrates. A fixed quadrat was located within each of the four SAQ quadrants at a subtidal station, generally on bedrock or boulder substrate. Depending upon the degree of topographical relief, two quadrats were located on horizontal-aspect substrate and two quadrats were located on vertical-aspect substrate. Non-encrusting taxa were identified and counted regardless of size. The coverage of encrusting taxa (e.g., colonial/social tunicates) was quantified in square centimeters if the total equaled or exceeded 6.5 square centimeters, or was recorded as "present" if coverage was less.

Results

The survey mean and standard deviation for each taxon at each station from the four surveys completed during the year are presented in Appendices E, F, and G. The means are based on the data from the four quadrats or quadrants at each station. The tables also show the mean for all the surveys for the entire year by station. If an algal taxon was only recorded as present in the RPC study, its abundance was given a value of 0.000001 for calculating statistics for the station.

Surface Canopy Kelps

Maps of surface kelp canopies in Diablo Cove were used to document the distribution and abundance of surface canopy-forming kelp species outside the fixed benthic stations. Near the end of the annual growth cycle in October, nearly all bull kelp plants have reached the surface and can be counted. Two observers at the headland of north Diablo Cove and two observers at the headland of south Diablo Cove (south Diablo Point) were used to count and map the extent of bull kelp plants and giant kelp canopies. The occurrence of bull kelp plants with bare bulbs, indicating early senescence in plants, are also noted when possible.

Results

We conducted the annual habitat-forming kelp survey for *Nereocystis luetkeana* (bull kelp) and *Macrocystis pyrifera* (giant kelp) on October 22, 2002 for North and South Diablo Cove. The results from the survey showing five bull kelp plants in Diablo Cove are presented in (Figure 7). There are no appendix figures or tables for this task.

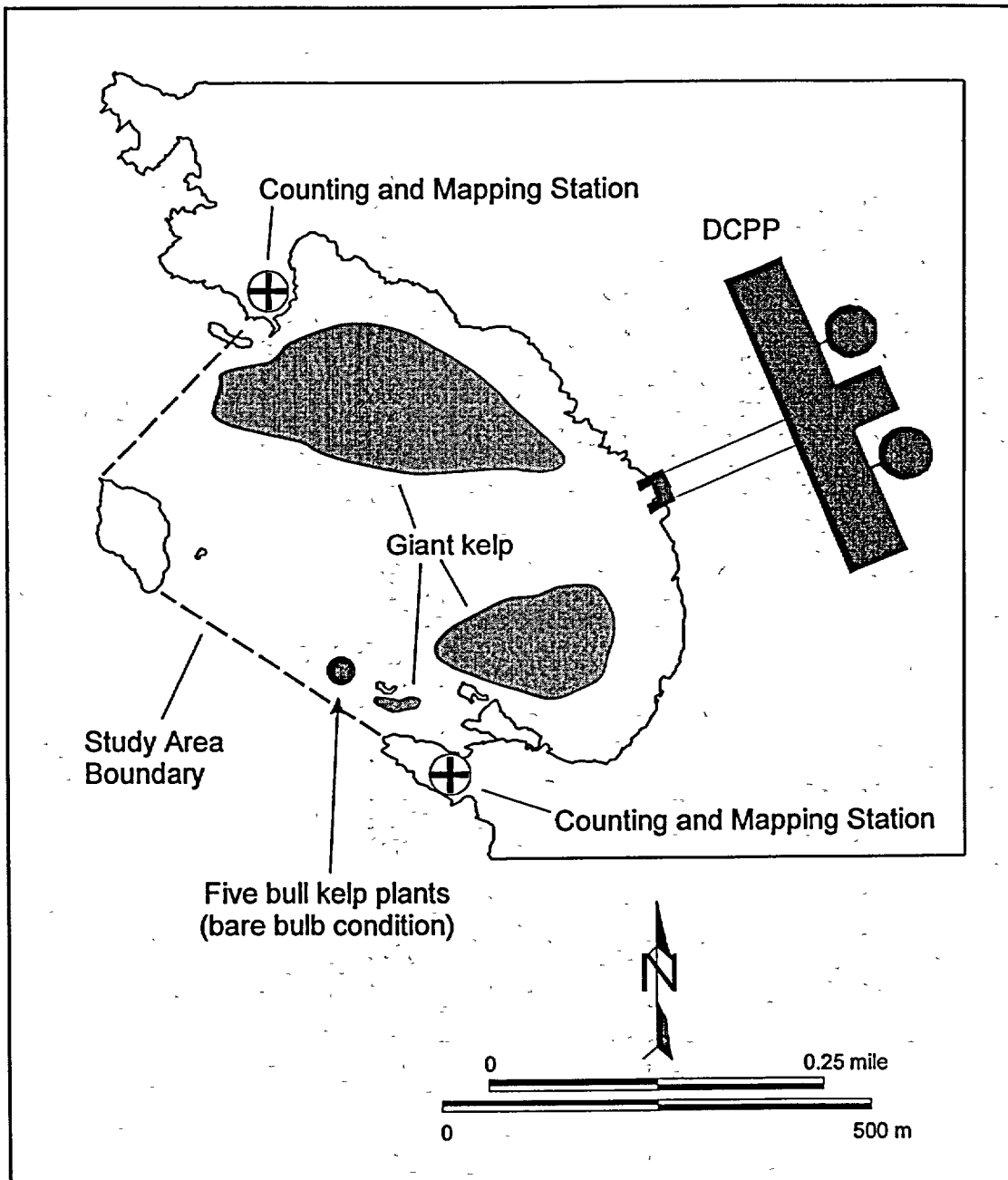


Figure 7. Map of surface bull kelp and giant kelp in Diablo Cove from the habitat-forming kelp survey completed in October 2002.

6.0 SUBTIDAL FISHES

Visual counts of fishes were conducted within fixed subtidal stations shown in (Figure 8). Each fish assessment station consisted of a permanent 50 m long transect where midwater and benthic areas of the station were sampled separately due to differences in habitat and fish assemblages. A station was sampled by deploying a weighted 50 m transect line from a boat, beginning at a permanent marker buoy and extending along a pre-determined compass course away from the buoy. The benthic sampling corridor was 2 m to either side of the line (4 m width) and 1 m above the bottom. The midwater sampling corridor was a cylinder 4 m in diameter, centered 3 m above the benthic transect. Some transects crossed each other in the same area because some were positioned parallel to depth contours, and others were positioned perpendicular to depth contours. The area common to both transects in these cases was approximately 2%. This small overlap did not affect the data summaries because the numbers of fish counted were averaged by area, and the mobility of most fish added to the independence of transects.

A survey team consisted of two divers, each counting fish along the benthic and midwater portions of a transect independently, but in opposite directions. This sampling technique allowed a more thorough inspection of potential fish habitats from all angles of view than would have been possible by a single diver progressing along a transect in only one direction. Fish were identified to species if possible, but juveniles of some species with similar appearances were combined into broader categories.

The resulting survey data were the combined species counts of both divers, divided by two. This yielded an average count for each taxon per 50 m benthic or midwater transect. During each survey, the stations were usually sampled a second time within approximately one to two weeks

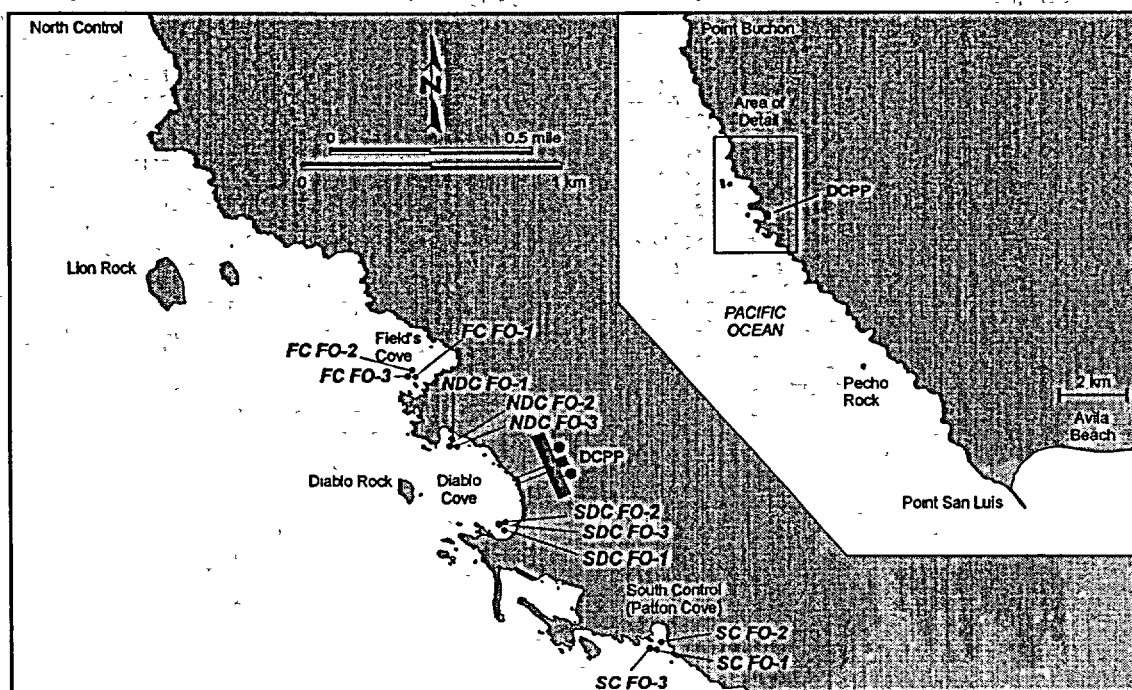


Figure 8. Subtidal fish observation transects.

of the initial sampling effort, unless adverse sea conditions precluded a second replicate. Replicate transects were pooled by survey and area. The areas were Field's Cove, north Diablo Cove, south Diablo Cove, and South Control.

Results

The survey mean and standard deviation for each taxon within each sampling area from the four surveys completed during the year are presented in Appendix H. The dates shown for the surveys represent the average date among the stations and replicates sampled in each area. The means are based on the data from the three transects within each area. The tables also show the overall mean for the entire year.

[illegible]

Appendix A

Results for

Subtidal Temperature

2001, The City of Seattle
 2001, The City of Seattle

[illegible]

Monthly Statistical Summary of Subtidal Temperature (°C) Data from January –
December 2002, North Control Station

Date	High	Low	Mean	Std. Dev	Sum	Sum SQ	N
Station: NC 1-3m							
Jan	13.30	10.23	12.07	0.76	26,948	326,647	2,232
Feb	14.07	10.48	12.04	0.69	24,276	293,286	2,016
Mar	14.20	9.57	11.80	1.11	26,338	313,544	2,232
Apr	14.00	9.85	11.66	0.85	25,186	295,251	2,160
May	13.20	9.60	11.05	0.79	24,653	273,705	2,232
Jun	14.52	10.27	11.82	0.85	25,538	303,497	2,160
Jul	15.95	11.90	13.79	0.76	30,781	425,756	2,232
Aug	16.15	11.27	13.41	0.72	29,925	402,560	2,231
Sep	14.23	11.55	13.10	0.53	28,292	371,200	2,160
Oct	15.43	12.40	13.65	0.69	30,476	417,177	2,232
Nov	15.02	12.20	13.36	0.54	28,848	385,897	2,160
Dec	15.18	13.20	14.29	0.44	30,885	441,827	2,161

Monthly Statistical Summary of Subtidal Temperature (°C) Data from January - December
2002, Field's Cove Station

Date	High	Low	Mean	Std. Dev	Sum	Sum SQ	N
Station: FC 1-3m							
Jan	14.95	10.93	13.02	0.71	29,051	379,245	2,232
Feb	15.60	11.25	13.07	0.89	26,350	346,002	2,016
Mar	16.42	9.93	12.68	1.43	28,302	363,448	2,232
Apr	14.95	10.02	12.27	1.11	26,499	327,750	2,160
May	14.27	9.52	11.16	0.86	24,909	279,629	2,232
Jun	15.68	10.52	12.48	1.08	26,960	339,014	2,160
Jul	16.85	12.27	14.93	0.86	33,320	499,055	2,232
Aug	16.67	12.27	14.60	0.71	32,580	476,913	2,231
Sep	15.95	12.00	14.54	0.68	31,402	457,520	2,160
Oct	16.98	12.90	14.80	1.08	33,027	491,549	2,231
Nov	16.10	12.07	13.92	0.61	30,077	419,611	2,160
Dec	17.35	13.43	14.81	0.60	32,014	475,037	2,161

Monthly Statistical Summary of Subtidal Temperature (°C) Data from January -
December 2002, North Diablo Cove Stations

Date	High	Low	Mean	Std. Dev.	Sum	Sum SQ	N
Station: NDC 2-3m							
Jan	20.88	11.20	15.67	1.78	34,965	554,809	2,232
Feb	20.63	11.30	16.28	1.74	32,812	540,117	2,016
Mar	19.83	13.75	17.10	1.15	11,079	190,259	648
Apr	20.85	10.30	15.33	1.91	20,480	318,808	1,336
May	21.63	10.25	14.38	2.02	32,107	471,009	2,232
Jun	21.33	11.13	15.86	2.04	34,258	552,304	2,160
Jul	23.10	14.77	18.34	1.44	40,936	755,438	2,232
Aug	21.55	13.80	17.60	1.50	39,289	696,618	2,232
Sep	21.83	13.90	18.24	1.24	39,409	722,311	2,160
Oct	23.20	12.88	17.33	2.24	38,675	681,314	2,232
Nov	22.88	12.57	17.08	2.13	36,901	640,239	2,160
Dec	23.00	13.38	16.64	1.93	35,961	606,488	2,161
Station: NDC 3-3m							
Jan	22.50	11.25	16.08	2.07	35,901	586,995	2,232
Feb	21.25	11.57	16.47	1.73	33,204	552,939	2,016
Mar	20.75	10.18	15.74	2.21	35,136	563,955	2,232
Apr	20.50	10.38	15.72	1.93	33,962	542,056	2,160
May	21.48	10.15	14.25	2.17	31,811	463,907	2,232
Jun	21.40	11.18	15.82	2.08	34,168	549,837	2,160
Jul	23.52	14.70	18.07	1.61	40,333	734,572	2,232
Aug	21.10	13.77	17.25	1.63	38,505	670,152	2,232
Sep	22.00	13.82	17.95	1.46	38,768	700,432	2,160
Oct	23.52	13.10	17.18	2.18	38,338	669,114	2,232
Nov	23.02	12.57	17.14	2.25	37,024	645,540	2,160
Dec	23.77	13.35	16.90	2.08	36,512	626,238	2,161
Station: NDC 4-4m							
Jan	20.95	11.35	15.64	1.78	34,901	552,837	2,232
Feb	20.38	11.32	16.08	1.71	32,409	526,923	2,016
Mar	20.25	10.02	15.34	2.12	34,239	535,287	2,232
Apr	25.42	10.30	15.20	2.23	33,906	526,647	2,230
May	20.55	10.07	13.23	1.69	29,524	396,917	2,232
Jun	20.42	10.95	14.95	1.86	32,285	490,052	2,160
Jul	22.45	13.30	16.97	1.65	37,881	649,002	2,232
Aug	20.33	12.50	16.26	1.65	36,302	596,525	2,232
Sep	21.30	13.45	17.00	1.57	36,716	629,394	2,160
Oct	22.00	13.05	16.48	1.93	36,788	614,683	2,232
Nov	21.73	12.13	16.32	1.94	35,249	583,395	2,160
Dec	23.40	13.40	16.46	1.80	35,578	592,725	2,161

Monthly Statistical Summary of Subtidal Temperature (°C) Data from January –
December 2002, South Diablo Cove Stations

Date	High	Low	Mean	Std. Dev	Sum	Sum SQ	N
Station: SDC 1–3m							
Jan	23.27	12.38	16.01	1.90	35,739	580,323	2,232
Feb	22.23	12.25	15.55	1.82	31,350	494,170	2,016
Mar	21.90	11.25	14.91	1.86	33,282	504,010	2,232
Apr	19.90	10.38	14.18	1.73	30,624	440,656	2,160
May	20.30	9.60	13.72	2.72	30,625	436,750	2,232
Jun	22.58	10.98	14.67	2.45	31,689	477,868	2,160
Jul	23.23	11.07	14.86	2.23	33,178	504,241	2,232
Aug	21.42	11.48	14.47	2.10	32,287	476,912	2,232
Sep	21.38	11.73	14.98	2.19	32,366	495,369	2,160
Oct	22.13	12.95	16.07	1.92	35,877	584,926	2,232
Nov	22.38	12.23	16.05	1.97	34,677	565,051	2,160
Dec	24.15	14.45	17.44	1.70	37,679	663,192	2,161
Station: SDC 4–4m							
Jan	21.70	11.25	14.76	1.95	32,954	495,072	2,232
Feb	20.65	11.38	14.27	1.70	28,764	416,221	2,016
Mar	20.52	9.90	13.44	1.83	29,994	410,670	2,231
Apr	16.98	10.05	12.06	1.33	26,051	318,020	2,160
May	18.77	9.25	11.62	1.93	25,925	309,464	2,232
Jun	19.25	10.07	12.50	2.02	27,008	346,524	2,160
Jul	20.92	10.45	13.12	1.58	29,295	390,036	2,232
Aug	19.30	10.57	12.61	1.38	28,141	359,040	2,232
Sep	21.20	10.88	13.08	1.78	28,249	376,320	2,160
Oct	20.75	12.27	14.58	1.76	32,533	481,113	2,232
Nov	18.90	12.02	14.87	1.64	32,124	483,546	2,160
Dec	22.77	13.77	16.85	1.48	36,410	618,151	2,161

Monthly Statistical Summary of Subtidal Temperature (°C) Data from January –
December 2002, South Control Cove Stations

Date	High	Low	Mean	Std. Dev	Sum	Sum SQ	N
Station: SC 1–3m							
Jan							
Feb							
Mar	12.45	10.00	11.24	0.57	8,520	96,018	758
Apr	13.30	9.77	11.29	0.81	24,395	276,919	2,160
May	12.77	9.32	10.53	0.78	23,500	248,785	2,232
Jun	14.70	10.23	11.70	0.83	25,266	297,030	2,160
Jul	15.98	11.00	13.53	0.83	30,194	409,990	2,232
Aug	14.82	11.02	12.91	0.64	28,782	372,558	2,229
Sep	14.63	11.40	12.91	0.57	27,867	360,382	2,159
Oct	15.15	12.50	13.62	0.59	30,407	415,008	2,232
Nov	14.80	12.15	13.45	0.49	29,062	391,533	2,160
Dec	15.18	13.15	14.27	0.44	30,842	440,602	2,161
Station: SC 2–6m							
Jan	13.25	10.48	12.12	0.67	27,060	329,083	2,232
Feb	13.52	11.00	11.89	0.55	23,963	285,444	2,016
Mar	13.68	9.52	11.45	1.11	25,566	295,572	2,232
Apr	13.35	9.73	10.89	0.74	23,520	257,290	2,160
May	12.52	9.20	10.09	0.71	22,518	228,304	2,232
Jun	14.02	9.90	11.11	0.81	23,995	267,974	2,160
Jul	15.48	10.32	12.80	0.84	28,573	367,356	2,232
Aug	14.05	10.57	12.19	0.65	27,217	332,816	2,232
Sep	14.27	10.90	12.40	0.62	26,793	333,167	2,160
Oct	14.70	12.38	13.31	0.45	29,703	395,734	2,232
Nov	14.98	12.15	13.33	0.48	28,789	384,207	2,160
Dec	15.05	13.25	14.29	0.43	30,871	441,417	2,161
Jan	13.25	10.48	12.12	0.67	27,060	329,083	2,232

Appendix B
 Results for
 Intertidal Temperature

DATE	TIME	TEMP	DEPTH	WIND	WAVE	WAVE	WAVE
2003-01-01	00:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	01:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	02:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	03:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	04:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	05:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	06:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	07:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	08:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	09:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	10:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	11:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	12:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	13:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	14:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	15:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	16:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	17:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	18:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	19:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	20:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	21:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	22:00	60.0	0.0	0.0	0.0	0.0	0.0
2003-01-01	23:00	60.0	0.0	0.0	0.0	0.0	0.0

Results for Intertidal Temperature

Monthly Statistical Summary of Intertidal Temperature (°C) Data from January –
December 2002, North Control Station

Date	High	Low	Mean	Std. Dev	Sum	Sum SQ	N
Station: NC 2+.6m							
Jan	13.35	9.85	11.93	0.85	14,749	176,896	1,236
Feb	13.77	10.45	11.98	0.71	12,402	149,128	1,035
Mar	14.65	9.55	11.88	1.13	13,243	158,704	1,115
Apr	14.15	8.55	11.80	0.85	12,781	151,625	1,083
May	14.93	9.02	11.44	0.95	13,332	153,626	1,165
Jun	14.63	10.55	12.45	0.91	14,674	183,604	1,179
Jul	16.55	12.00	14.41	0.90	17,686	255,898	1,227
Aug	16.35	11.02	13.84	0.89	17,788	247,264	1,285
Sep	15.32	11.68	13.39	0.68	17,060	229,054	1,274
Oct	16.80	9.65	13.75	0.76	17,932	247,341	1,304
Nov	15.02	12.20	13.28	0.51	16,486	219,329	1,241
Dec	15.13	13.10	14.20	0.48	17,651	250,936	1,243

Monthly Statistical Summary of Intertidal Temperature (°C) Data from January – December 2002, Field's Cove Stations

Date	High	Low	Mean	Std. Dev	Sum	Sum SQ	N
Station: FC 1+6m							
Jan	15.02	3.38	12.84	0.79	19,196	247,423	1,495
Feb	15.63	10.88	13.01	0.95	16,573	216,761	1,274
Mar	17.38	9.93	12.81	1.52	16,899	219,577	1,319
Apr	16.92	7.03	12.57	1.34	16,077	204,386	1,279
May	16.83	8.63	11.65	1.15	15,314	180,217	1,314
Jun	16.83	9.85	13.37	1.30	16,080	216,982	1,203
Jul	18.20	11.63	15.78	1.14	23,808	377,582	1,509
Aug	18.55	10.90	15.83	1.04	11,337	180,298	716
Sep	16.48	10.70	14.84	0.81	17,528	260,951	1,181
Oct	19.98	8.50	14.89	1.28	21,808	327,045	1,465
Nov	15.80	12.18	13.83	0.58	19,234	266,449	1,391
Dec	16.25	13.15	14.67	0.58	20,697	304,069	1,411
Station: FC 2+6m							
Jan	15.07	10.77	12.91	0.73	15,954	206,587	1,236
Feb	15.52	11.10	13.00	0.89	13,452	175,683	1,035
Mar	17.35	9.93	12.75	1.50	14,213	183,676	1,115
Apr	16.10	8.10	12.50	1.29	13,532	170,896	1,083
May	15.70	9.23	11.56	1.07	13,126	152,978	1,136
Jun	16.85	10.27	13.29	1.25	13,852	185,783	1,042
Jul	18.83	12.93	15.72	1.08	19,288	304,649	1,227
Aug	18.67	11.63	15.35	1.00	19,730	304,254	1,285
Sep	17.70	11.25	15.00	0.87	19,109	287,603	1,274
Oct	18.08	10.43	14.91	1.23	19,438	291,725	1,304
Nov	15.80	12.15	13.83	0.59	17,159	237,679	1,241
Dec	16.30	13.35	14.70	0.57	18,270	268,941	1,243
Station: FC 3+6m							
Jan	15.00	5.68	12.83	0.87	15,857	204,365	1,236
Feb	15.48	9.35	12.95	0.89	13,407	174,493	1,035
Mar	18.73	9.95	12.70	1.49	14,162	182,339	1,115
Apr	16.40	7.28	12.41	1.29	13,442	168,633	1,083
May	15.70	8.85	11.48	1.06	13,379	154,935	1,165
Jun	16.50	9.98	13.00	1.25	15,327	201,102	1,179
Jul	18.58	12.40	15.59	1.08	19,134	299,798	1,227
Aug	18.50	11.23	15.24	1.02	19,580	299,678	1,285
Sep	17.33	10.73	14.90	0.86	18,989	283,966	1,274
Oct	18.77	9.50	14.87	1.26	19,388	290,335	1,304
Nov	15.82	12.13	13.83	0.59	17,162	237,773	1,241
Dec	16.35	13.38	14.73	0.57	18,309	270,074	1,243

Monthly Statistical Summary of Intertidal Temperature (°C) Data from January –
December 2002, North Diablo Cove Stations

Date	High	Low	Mean	Std. Dev	Sum	Sum SQ	N
Station: NDC 1+.6m							
Jan	19.55	4.65	14.86	1.95	22,845	345,379	1,537
Feb	20.48	11.25	15.68	1.63	19,983	316,788	1,274
Mar	19.77	9.95	15.33	2.12	20,222	315,944	1,319
Apr	20.70	10.27	15.62	1.89	19,979	316,654	1,279
May							
Jun							
Jul	22.83	15.13	19.07	1.31	28,769	551,095	1,509
Aug	22.27	13.63	18.36	1.42	27,803	513,603	1,514
Sep	21.15	14.05	18.50	1.00	26,599	493,465	1,438
Oct	21.83	12.90	17.28	2.34	25,315	445,442	1,465
Nov	21.73	11.88	16.47	1.92	22,916	382,660	1,391
Dec	21.05	13.38	16.09	1.62	22,709	369,188	1,411
Station: NDC 2+.6m							
Jan	19.10	7.43	15.17	1.48	18,019	275,909	1,188
Feb	20.25	11.43	15.80	1.63	15,833	252,853	1,002
Mar							
Apr							
May	19.70	9.23	14.22	1.71	16,135	232,690	1,135
Jun	22.17	11.20	16.06	2.18	18,228	298,142	1,135
Jul	22.83	12.20	19.00	1.49	22,405	428,379	1,179
Aug	22.17	10.75	18.32	1.52	22,668	418,256	1,237
Sep	20.98	10.52	18.60	1.13	22,994	429,348	1,236
Oct	21.45	9.18	17.30	2.38	22,230	391,860	1,285
Nov	21.20	12.40	16.59	1.95	20,194	339,675	1,217
Dec	21.27	13.27	16.10	1.65	19,464	316,661	1,209
Station: NDC 3+.6m							
Jan	19.38	11.13	15.33	1.57	23,137	358,472	1,509
Feb	20.45	11.40	16.06	1.66	20,670	335,520	1,287
Mar	19.92	10.07	15.69	2.11	20,944	334,516	1,335
Apr	20.98	9.68	15.89	1.83	20,477	329,639	1,289
May	20.58	10.32	14.44	1.75	19,585	287,006	1,356
Jun	22.20	11.20	16.17	2.19	22,293	366,965	1,379
Jul	22.95	13.48	19.04	1.35	29,057	556,083	1,526
Aug	22.25	12.85	18.39	1.38	28,089	519,603	1,527
Sep	21.17	14.10	18.64	1.04	27,035	505,608	1,450
Oct	22.05	12.93	17.44	2.32	25,734	456,626	1,476
Nov	21.92	12.52	16.88	1.98	23,717	405,833	1,405
Dec	21.58	13.85	15.85	1.44	13,188	210,763	832

Monthly Statistical Summary of Intertidal Temperature (°C) Data from January –
December 2002, South Diablo Cove Stations

Date	High	Low	Mean	Std. Dev	Sum	Sum SQ	N
Station: SDC 1+-6m							
Jan	23.67	13.07	17.30	2.56	27,035	477,834	1,563
Feb	23.05	12.15	16.51	2.24	21,557	362,367	1,306
Mar	22.27	12.50	16.02	1.98	21,679	352,675	1,353
Apr	21.48	12.18	15.59	1.86	20,272	320,618	1,300
May	22.40	12.30	16.28	2.25	22,359	371,030	1,373
Jun	23.60	13.93	17.15	2.01	23,887	415,227	1,393
Jul	23.20	15.02	18.75	1.35	28,830	543,236	1,538
Aug	21.85	14.95	18.17	1.15	28,163	513,782	1,550
Sep	21.40	15.57	17.99	1.03	26,321	475,084	1,463
Oct	23.25	15.30	17.94	1.38	26,623	480,467	1,484
Nov	22.77	13.50	17.35	2.00	24,656	433,471	1,421
Dec	25.40	15.95	19.10	2.36	27,545	534,197	1,442
Station: SDC 2+-6m							
Jan	21.02	13.02	15.89	1.38	20,231	323,943	1,273
Feb	21.55	12.02	15.58	1.50	16,129	253,677	1,035
Mar	21.55	12.00	15.54	1.80	17,332	272,989	1,115
Apr	21.25	9.32	15.50	1.85	16,786	263,879	1,083
May	21.58	10.55	16.22	2.21	18,897	312,206	1,165
Jun	23.50	12.55	17.11	2.05	20,168	349,927	1,179
Jul	23.10	13.98	18.83	1.46	23,107	437,756	1,227
Aug	21.73	12.70	18.26	1.30	23,458	430,384	1,285
Sep	21.15	13.90	17.90	1.08	22,802	409,599	1,274
Oct	21.85	13.20	17.52	1.27	22,848	402,445	1,304
Nov	22.75	13.43	16.90	1.86	20,979	358,938	1,241
Dec	22.30	14.73	17.18	1.16	21,354	368,538	1,243
Station: SDC 3+-6m							
Jan	18.65	10.77	15.34	1.21	22,283	343,884	1,453
Feb	18.15	12.00	14.92	0.99	17,551	263,082	1,176
Mar	18.67	11.02	14.69	1.38	18,127	268,635	1,234
Apr	19.05	8.85	14.62	1.22	17,422	256,391	1,192
May	18.70	11.35	14.89	1.50	18,929	284,768	1,271
Jun	20.27	12.80	15.83	1.43	20,423	325,959	1,290
Jul	20.92	14.60	18.01	1.17	25,513	461,297	1,417
Aug	21.10	13.80	17.48	1.08	24,793	435,150	1,418
Sep	19.73	14.25	17.17	0.97	23,317	401,637	1,358
Oct	20.65	14.48	16.98	1.15	23,551	401,716	1,387
Nov	20.60	13.27	16.43	1.47	21,852	361,881	1,330
Dec	19.98	14.05	16.70	1.03	22,194	372,026	1,329

Monthly Statistical Summary of Intertidal Temperature (°C) Data from January –
December 2002, South Diablo Point Stations

Date	High	Low	Mean	Std. Dev	Sum	Sum SQ	N
Station: SDP 1+.6m							
Jan	18.25	12.20	15.26	1.16	23,801	365,202	1,560
Feb	18.00	12.18	14.94	1.00	19,954	299,363	1,336
Mar	18.55	11.20	14.71	1.36	20,440	303,135	1,390
Apr	18.60	12.38	14.61	1.06	19,528	286,716	1,337
May	18.23	11.68	14.88	1.40	20,844	312,841	1,401
Jun	19.92	13.25	15.66	1.35	22,342	352,377	1,427
Jul	20.77	14.68	17.80	1.14	27,923	498,963	1,569
Aug	20.52	12.48	17.23	1.02	27,499	475,486	1,596
Sep	19.88	14.02	17.02	0.95	25,342	432,627	1,489
Oct	20.52	14.48	16.94	1.10	25,636	436,201	1,513
Nov	19.77	13.13	16.44	1.47	23,808	394,551	1,448
Dec	20.13	14.13	16.70	1.04	24,293	407,187	1,455
Station: SDP 2+.6m							
Jan	16.73	11.68	14.24	0.81	21,295	304,308	1,495
Feb	16.77	11.73	14.10	0.95	17,964	254,450	1,274
Mar	17.13	10.63	14.01	1.28	18,478	261,010	1,319
Apr	16.38	10.90	13.53	0.92	17,301	235,115	1,279
May	16.20	9.60	12.52	1.07	16,837	212,298	1,345
Jun	17.58	11.18	14.19	1.02	19,401	276,763	1,367
Jul	18.70	11.85	15.97	1.31	24,098	387,424	1,509
Aug	18.17	10.95	14.91	1.45	22,570	339,633	1,514
Sep	17.75	11.35	14.86	1.33	21,376	320,282	1,438
Oct	18.75	13.05	15.63	1.00	22,892	359,163	1,465
Nov	17.08	12.38	14.75	0.76	20,517	303,421	1,391
Dec	18.02	13.70	15.80	0.69	22,006	348,280	1,393

Monthly Statistical Summary of Intertidal Temperature (°C) Data from January –
December 2002, South Control Stations

Date	High	Low	Mean	Std. Dev	Sum	Sum SQ	N
Station: SC 1+6m							
Jan	13.20	10.25	12.06	0.73	16,828	203,751	1,395
Feb	13.77	10.80	11.90	0.63	13,748	164,112	1,155
Mar	13.95	9.63	11.60	1.09	14,139	165,446	1,219
Apr	13.30	9.80	11.31	0.80	13,291	151,093	1,175
May	13.02	9.32	10.63	0.84	13,386	143,197	1,259
Jun	14.68	10.23	12.02	0.88	15,350	185,485	1,277
Jul	16.00	11.32	13.96	0.89	19,431	272,331	1,392
Aug	14.95	11.15	13.23	0.72	18,563	246,323	1,403
Sep	14.60	11.43	13.07	0.58	17,608	230,611	1,347
Oct	15.48	12.48	13.61	0.62	18,692	254,988	1,373
Nov	14.77	12.10	13.37	0.47	17,624	235,953	1,318
Dec	15.13	13.27	14.27	0.44	18,967	270,939	1,329
Station: SC 1-V							
Jan	19.25	4.97	11.80	1.54	26,331	315,923	2,232
Feb	24.58	7.60	12.57	1.77	25,340	324,854	2,016
Mar	20.58	4.50	12.26	1.83	27,370	343,094	2,232
Apr	24.45	6.03	12.77	2.06	27,585	361,406	2,160
May	25.00	6.55	12.70	2.16	28,347	370,377	2,232
Jun	22.30	8.38	13.92	1.78	30,065	425,311	2,160
Jul	19.95	11.07	15.47	1.37	34,523	538,193	2,232
Aug	18.02	10.73	14.73	1.24	32,877	487,717	2,232
Sep	17.35	10.35	14.18	1.07	30,619	436,509	2,160
Oct	19.23	8.35	14.07	1.31	31,409	445,842	2,232
Nov	17.48	8.77	13.58	0.89	29,334	400,077	2,160
Dec	17.23	7.03	13.90	1.12	30,049	420,546	2,161

Table C-1: Intertidal Horizontal Band Transect Data (continued)

Station		171		071		111		211		311		411		511		611		711		811		911		1011		1111		1211		1311		1411		1511		1611		1711		1811		1911		2011		2111		2211		2311		2411		2511		2611		2711		2811		2911		3011		3111		3211		3311		3411		3511		3611		3711		3811		3911		4011		4111		4211		4311		4411		4511		4611		4711		4811		4911		5011		5111		5211		5311		5411		5511		5611		5711		5811		5911		6011		6111		6211		6311		6411		6511		6611		6711		6811		6911		7011		7111		7211		7311		7411		7511		7611		7711		7811		7911		8011		8111		8211		8311		8411		8511		8611		8711		8811		8911		9011		9111		9211		9311		9411		9511		9611		9711		9811		9911		10011		10111		10211		10311		10411		10511		10611		10711		10811		10911		11011		11111		11211		11311		11411		11511		11611		11711		11811		11911		12011		12111		12211		12311		12411		12511		12611		12711		12811		12911		13011		13111		13211		13311		13411		13511		13611		13711		13811		13911		14011		14111		14211		14311		14411		14511		14611		14711		14811		14911		15011		15111		15211		15311		15411		15511		15611		15711		15811		15911		16011		16111		16211		16311		16411		16511		16611		16711		16811		16911		17011		17111		17211		17311		17411		17511		17611		17711		17811		17911		18011		18111		18211		18311		18411		18511		18611		18711		18811		18911		19011		19111		19211		19311		19411		19511		19611		19711		19811		19911		20011		20111		20211		20311		20411		20511		20611		20711		20811		20911		21011		21111		21211		21311		21411		21511		21611		21711		21811		21911		22011		22111		22211		22311		22411		22511		22611		22711		22811		22911		23011		23111		23211		23311		23411		23511		23611		23711		23811		23911		24011		24111		24211		24311		24411		24511		24611		24711		24811		24911		25011		25111		25211		25311		25411		25511		25611		25711		25811		25911		26011		26111		26211		26311		26411		26511		26611		26711		26811		26911		27011		27111		27211		27311		27411		27511		27611		27711		27811		27911		28011		28111		28211		28311		28411		28511		28611		28711		28811		28911		29011		29111		29211		29311		29411		29511		29611		29711		29811		29911		30011		30111		30211		30311		30411		30511		30611		30711		30811		30911		31011		31111		31211		31311		31411		31511		31611		31711		31811		31911		32011		32111		32211		32311		32411		32511		32611		32711		32811		32911		33011		33111		33211		33311		33411		33511		33611		33711		33811		33911		34011		34111		34211		34311		34411		34511		34611		34711		34811		34911		35011		35111		35211		35311		35411		35511		35611		35711		35811		35911		36011		36111		36211		36311		36411		36511		36611		36711		36811		36911		37011		37111		37211		37311		37411		37511		37611		37711		37811		37911		38011		38111		38211		38311		38411		38511		38611		38711		38811		38911		39011		39111		39211		39311		39411		39511		39611		39711		39811		39911		40011		40111		40211		40311		40411		40511		40611		40711		40811		40911		41011		41111		41211		41311		41411		41511		41611		41711		41811		41911		42011		42111		42211		42311		42411		42511		42611		42711		42811		42911		43011		43111		43211		43311		43411		43511		43611		43711		43811		43911		44011		44111		44211		44311		44411		44511		44611		44711		44811		44911		45011		45111		45211		45311		45411		45511		45611		45711		45811		45911		46011		46111		46211		46311		46411		46511		46611		46711		46811		46911		47011		47111		47211		47311		47411		47511		47611		47711		47811		47911		48011		48111		48211		48311		48411		48511		48611		48711		48811		48911		49011		49111		49211		49311		49411		49511		49611		49711		49811		49911		50011		50111		50211		50311		50411		50511		50611		50711		50811		50911		51011		51111		51211		51311		51411		51511		51611		51711		51811		51911		52011		52111		52211		52311		52411		52511		52611		52711		52811		52911		53011		53111		53211		53311		53411		53511		53611		53711		53811		53911		54011		54111		54211		54311		54411		54511		54611		54711		54811		54911		55011		55111		55211		55311		55411		55511		55611		55711		55811		55911		56011		56111		56211		56311		56411		56511		56611		56711		56811		56911		57011		57111		57211		57311		57411		57511		57611		57711		57811		57911		58011		58111		58211		58311		58411		58511		58611		58711		58811		58911		59011		59111		59211		59311		59411		59511		59611		59711		59811		59911		60011		60111		60211		60311		60411		60511		60611		60711		60811		60911		61011		61111		61211		61311		61411		61511		61611		61711		61811		61911		62011		62111		62211		62311		62411		62511		62611		62711		62811		62911		63011		63111		63211		63311		63411		63511		63611		63711		63811		63911		64011		64111		64211		64311		64411		64511		64611		64711		64811		64911		65011		65111		65211		65311		65411		65511		65611		65711		65811		65911		66011		66111		66211		66311		66411		66511		66611		66711		66811		66911		67011		67111		67211		67311		67411		67511		67611		67711		67811		67911		68011		68111		68211		68311		68411		68511		68611		68711		68811		68911		69011		69111		69211		69311		69411		69511		69611		69711		69811		69911		70011		70111		70211		70311		70411		70511		70611		70711		70811		70911		71011		71111		71211		71311		71411		71511		71611		71711		71811		71911		72011		72111		72211		72311		72411		72511		72611		72711		72811		72911		73011		73111		73211		73311		73411		73511		73611		73711		73811		73911		74011		74111		74211		74311		74411		74511		74611		74711		74811		74911		75011		75111		75211		75311		75411		75511		75611		75711		75811		75911		76011		76111		76211		76311		76411		76511		76611		76711		76811		76911		77011		77111		77211		77311		77411		77511		77611		77711		77811		77911		78011		78111		78211		78311		78411		78511		78611		78711		78811		78911		79011		79111		79211		79311		79411		79511		79611		79711		79811		79911		80011		80111		80211		80311		80411		80511		80611		80711		80811		80911		81011		81111		81211		81311		81411		81511		81611		81711		81811		81911		82011		82111		82211		82311		82411		82511		82611		82711		82811		82911		83011		83111		83211		83311		83411		83511		83611		83711		83811		83911		84011		84111		84211		84311		84411		84511		84611		84711		84811		84911		85011		85111		85211		85311		85411		85511		85611		85711		85811		85911		86011		86111		86211		86311		86411		86511		86611		86711		86811		86911		87011		87111		87211		87311		87411		87511		87611		87711		87811		87911		88011		88111		88211		88311		88411		88511		88611		88711		88811		88911		89011		89111		89211		89311		89411		89511		89611		89711		89811		89911		90011		90111		90211		90311		90411		90511		90611		90711		90811		90911		91011		91111		91211		91311		91411		91511		91611		91711		91811		91911		92011		92111		92211		92311		92411		92511		92611		92711		92811		92911		93011		93111		93211		93311		93411		93511		93611		93711		93811		93911		94011		94111		94211		94311		94411		94511		94611		94711		94811		94911		95011		95111		95211		95311		95411		95511		95611		95711		95811	
---------	--	-----	--	-----	--	-----	--	-----	--	-----	--	-----	--	-----	--	-----	--	-----	--	-----	--	-----	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--	-------	--

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, North Control
Station NC 1 +.3m

Survey Survey Date	128 8-Feb-02		129 1-May-02		130 12-Jul-02		131 2-Nov-02		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae									
<i>Mazzaella flaccida</i>	18.1	8.5	46.7	16.8	53.8	16.4	10.8	5.1	32.3
<i>Phyllospadix</i> spp.	19.2	22.1	19.4	25.2	13.4	19.0	22.5	25.9	18.6
<i>Mazzaella affinis</i>	11.6	11.3	21.0	15.3	16.3	12.8	11.0	9.0	15.0
Non-coralline crust	16.7	12.7	5.6	4.8	6.2	4.5	16.0	10.2	11.1
<i>Gastroclonium subarticulatum</i>	10.9	10.9	5.9	5.4	5.9	5.2	7.6	6.5	7.6
<i>Chondracanthus canaliculatus</i>	6.9	6.0	5.9	2.5	8.8	4.5	3.7	3.2	6.3
<i>Gelidium coulteri</i>	6.3	5.2	6.0	3.7	5.9	8.1	6.1	5.4	6.1
<i>Mastocarpus papillatus</i>	2.2	2.6	3.8	2.7	9.2	7.5	4.5	4.3	4.9
coralline crust	3.1	2.2	4.2	2.9	2.8	3.8	4.4	3.0	3.6
<i>Cryptopleura violacea</i>	3.2	2.4	4.2	3.1	3.0	2.2	1.0	2.0	2.8
<i>Endocladia muricata</i>	2.4	4.8	2.4	7.0	2.7	6.5	1.2	3.1	2.2
<i>Mastocarpus jardinii</i>	1.8	1.6	2.6	1.6	2.4	3.2	1.5	1.8	2.1
<i>Codium setchellii</i> (prostrate)	1.7	3.9	1.7	3.2	1.4	3.5	3.3	7.1	2.0
filamentous red algae-complex	0.8	1.8	0.0	0.0	4.1	5.5	0.4	1.1	1.3
<i>Mazzaella leptorhynchus</i>	0.7	0.6	1.9	1.6	1.2	1.7	0.7	1.1	1.1
<i>Calliarth./Bossie.</i> spp.-complex	0.6	1.3	0.8	1.7	1.7	1.9	1.0	1.5	1.0
<i>Corallina vancouveriensis</i>	0.8	1.5	1.3	1.4	0.5	1.5	1.0	1.9	0.9
<i>Gelidium pusillum</i>	0.8	1.3	0.1	0.4	0.3	0.4	1.5	1.9	0.7
<i>Mazzaella heterocarpa</i>	0.4	0.9	0.9	0.8	0.9	0.8	<.1	0.2	0.6
<i>Smithora naiadum</i>	0.0	0.0	<.1	<.01	0.2	0.5	1.6	5.1	0.5
<i>Pterosiphonia dendroidea</i>	<.1	<.01	<.1	<.01	0.1	0.3	1.7	3.1	0.5
juv. articulated coralline algae	0.8	2.0	0.3	0.5	<.1	<.01	0.5	0.9	0.4
<i>Prionitis</i> spp.	0.4	0.6	<.1	0.2	0.3	0.6	0.4	0.8	0.3
<i>Ulva/Enteromorpha</i> spp.	0.2	0.7	<.1	0.2	0.6	1.2	<.1	0.2	0.2
<i>Osmundea</i> spp.	<.1	0.2	0.6	1.1	<.1	0.2	<.1	<.01	0.2
<i>Callithamnion pikeanum</i>	0.0	0.0	0.2	0.7	<.1	<.01	0.0	0.0	<.1
<i>Porphyra</i> spp.	0.0	0.0	0.0	0.0	<.1	0.2	0.0	0.0	<.1
<i>Corallina officinalis</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	0.2	<.1
<i>Sarcoditheca gaudichaudii</i>	0.0	0.0	<.1	0.2	0.0	0.0	<.1	<.01	<.1
<i>Cladophora</i> spp.	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Melobesia mediocris</i>	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Microcladia coulteri</i>	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Cryptopleura ruprechtiana</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Halymen./Schizy.</i> spp.-complex	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Invertebrates									
<i>Tegula funebris</i>	66.2	33.4	48.0	17.5	38.4	40.7	41.0	10.1	48.4
<i>Pagurus</i> spp.	22.6	14.7	14.4	6.8	42.0	38.3	27.6	11.8	26.7
<i>Pista</i> spp.	4.1	4.8	1.3	2.6	4.5	4.5	6.7	5.4	4.1
<i>Anthopleura elegantissima</i>	1.2	1.3	1.4	1.1	1.6	2.1	2.0	1.9	1.6
<i>Leptasterias</i> spp.	0.2	0.5	0.2	0.5	0.4	0.6	1.4	1.5	0.6
Nemertea unid.	0.2	0.5	0.4	0.6	0.8	1.8	0.6	1.3	0.5
<i>Pugettia</i> spp.	0.4	0.6	0.4	0.6	0.8	1.3	0.2	0.5	0.5
tunicates, colonial/social unid.	<.1	<.01	<.1	<.01	0.9	1.9	0.2	0.7	0.3
<i>Lottia pelta</i>	0.0	0.0	0.0	0.0	0.2	0.5	0.4	0.9	0.2
<i>Strongylocentrotus purpuratus</i>	0.4	0.6	0.0	0.0	0.0	0.0	0.2	0.5	0.2

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, North Control
Station NC 1 +.3m (continued)

Survey	128	129	130	131	
Survey Date	8-Feb-02	1-May-02	12-Jul-02	2-Nov-02	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean
					Mean
					Std. Dev.
					Annual Mean
Invertebrates (continued)					
<i>Epiactis prolifera</i>	0.0	0.0	0.2	0.5	0.0
<i>Tectura scutum</i>	0.0	0.0	0.0	0.0	0.4
<i>Tegula brunnea</i>	0.0	0.0	0.0	0.0	0.0
<i>Pseudomelatoma torosa</i>	0.0	0.0	0.4	0.9	0.0
<i>Lottia limatula</i>	0.0	0.0	0.0	0.0	0.0
<i>Macclintockia scabra</i>	0.0	0.0	0.0	0.0	0.2
<i>Fissurella volcano</i>	0.0	0.0	0.0	0.0	0.0
<i>Tonicella lineata</i>	0.0	0.0	0.0	0.0	0.0
<i>Littorina</i> spp.	0.2	0.5	0.0	0.0	0.0
<i>Nuttallina californica</i>	0.0	0.0	0.0	0.0	0.2
<i>Pachygrapsus crassipes</i>	0.0	0.0	0.0	0.0	0.0
<i>Cancer</i> spp.	0.0	0.0	0.0	0.0	0.2
<i>Lacuna</i> spp.	<.1	<.1	<.1	<.1	0.0
<i>Crepidula</i> spp.	<.1	<.1	0.0	0.0	<.1
<i>Lottia asmi</i>	<.1	<.1	0.0	0.0	<.1
Spirorbidae	<.1	<.1	0.0	0.0	<.1
Porifera unid. (encrusting)	<.1	<.1	0.0	0.0	<.1
<i>Phragmatopoma californica</i>	0.0	0.0	0.0	0.0	<.1
Acmaeidae unid.	0.0	0.0	<.1	<.1	<.1
Ischnochitonidae	0.0	0.0	<.1	<.1	<.1
<i>Pisaster/Henricia</i> (juv.)	0.0	0.0	0.0	0.0	0.0
<i>Heptacarpus</i> spp.	<.1	<.1	0.0	0.0	0.0
<i>Alia</i> spp.	0.0	0.0	0.0	0.0	<.1
<i>Chthamalus fissus</i>	0.0	0.0	<.1	<.1	<.1
Serpulidae unid.	<.1	<.1	0.0	0.0	0.0
Sipuncula unid.	0.0	0.0	<.1	<.1	0.0
<i>Tricolia</i> spp.	<.1	<.1	0.0	0.0	<.1
Pycnogonida unid.	0.0	0.0	0.0	0.0	0.0
<i>Lissothuria nutrens</i>	0.0	0.0	0.0	0.0	0.0
Bryozoa, unid. (encrusting)	0.0	0.0	0.0	0.0	0.0
Substrate					
sand (shell gravel)	14.0	10.5	4.1	4.0	10.1
rock	1.8	1.8	1.4	1.1	1.7
cobble	1.5	2.1	1.4	3.1	1.5

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, North Control
Station NC 1 +.9m

Survey	128		129		130		131		Annual Mean
Survey Date	8-Feb-02		1-May-02		12-Jul-02		20-Nov-02		
	Mean	Std. Dev	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae									
<i>Endocladia muricata</i>	34.6	21.7	38.1	27.5	35.8	25.8	32.4	25.4	35.2
Non-coralline crust	19.7	8.5	15.6	9.8	14.2	7.1	22.2	13.9	17.9
<i>Mazzaella flaccida</i>	12.5	9.7	18.1	18.0	24.0	21.8	11.5	8.8	16.5
<i>Mastocarpus papillatus</i>	11.9	6.0	8.3	5.9	27.1	17.8	17.7	6.2	16.3
coralline crust	10.0	5.2	5.4	3.3	3.3	2.9	8.8	5.7	6.9
<i>Pelvetia compressa</i>	5.3	8.8	2.7	4.3	6.2	12.6	5.1	12.0	4.8
<i>Codium setchellii</i> (prostrate)	3.5	7.4	4.1	10.0	2.4	6.0	3.3	8.1	3.3
<i>Mastocarpus jardinii</i>	4.2	6.5	2.3	2.4	1.3	1.4	1.6	1.7	2.4
<i>Corallina vancouveriensis</i>	3.3	3.9	1.9	2.3	1.7	1.9	1.5	1.9	2.1
<i>Mazzaella affinis</i>	2.2	4.9	2.8	3.4	0.8	1.2	2.1	5.6	2.0
<i>Gelidium coulteri</i>	2.2	2.0	1.4	1.1	0.7	1.5	1.6	2.6	1.5
<i>Gelidium pusillum</i>	0.6	1.1	<.1	<.01	0.4	0.8	1.7	2.6	0.7
<i>Prionitis</i> spp.	0.6	1.1	0.6	1.0	0.2	0.5	0.6	1.1	0.5
<i>Mazzaella heterocarpa</i>	0.9	0.7	0.3	0.7	0.3	0.5	<.1	0.2	0.4
<i>Anelopus japonicus</i>	0.2	0.7	0.2	0.7	0.3	1.1	0.8	2.6	0.4
<i>Cryptopleura violacea</i>	0.6	2.0	0.2	0.7	<.1	0.2	0.3	0.9	0.3
<i>Chondracanthus canaliculatus</i>	0.5	0.6	0.3	0.6	0.1	0.4	0.2	0.3	0.3
<i>Mazzaella leptorhynchus</i>	0.7	2.0	0.3	0.7	<.1	0.2	<.1	<.01	0.3
<i>Phyllospadix</i> spp.	0.1	0.4	0.3	1.1	0.2	0.5	0.3	1.1	0.3
juv. articulated coralline algae	0.1	0.4	0.3	0.7	0.1	0.3	0.1	0.3	0.2
<i>Porphyra</i> spp.	0.0	0.0	0.0	0.0	0.5	1.1	<.1	0.2	0.1
<i>Cladophora</i> spp.	<.1	<.01	<.1	0.0	0.5	1.3	<.1	<.01	0.1
<i>Fucus gardneri</i>	0.0	0.0	0.0	0.0	<.1	0.2	0.0	0.0	<.1
<i>Callithamnion pikeanum</i>	<.1	<.01	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Ulva/Enteromorpha</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Gastroclonium subarticulatum</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Melobesia mediocris</i>	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
Invertebrates									
<i>Tegula funebris</i>	89.8	93.5	113.0	43.6	58.8	55.1	68.2	52.4	82.5
<i>Pagurus</i> spp.	9.6	13.5	15.8	12.9	33.2	33.8	28.2	48.8	21.7
<i>Anthopleura elegantissima</i>	9.0	13.8	5.6	9.0	6.8	8.9	16.4	28.0	9.5
<i>Pollicipes polymerus</i>	9.4	21.0	5.0	11.2	8.2	18.3	5.0	11.2	6.9
<i>Macclintockia scabra</i>	0.2	0.5	4.8	3.7	3.2	4.1	0.0	0.0	2.1
<i>Lottia limatula</i>	0.2	0.5	2.0	2.1	3.6	6.1	1.4	1.3	1.8
<i>Nuttallina californica</i>	3.0	4.2	1.8	3.5	1.8	3.5	0.2	0.5	1.7
<i>Pachygrapsus crassipes</i>	1.0	1.0	1.2	1.3	1.0	0.7	0.4	0.9	0.9
<i>Tectura scutum</i>	0.0	0.0	0.2	0.5	2.8	4.2	0.2	0.5	0.8
<i>Strongylocentrotus purpuratus</i>	1.2	1.1	0.2	0.5	0.8	1.3	0.2	0.5	0.6
<i>Mytilus</i> spp.	2.2	4.9	<.1	<.01	0.0	0.0	0.0	0.0	0.6
<i>Lottia pelta</i>	0.2	0.5	0.6	0.9	0.8	1.8	0.2	0.5	0.5
<i>Leptasterias</i> spp.	0.4	0.6	0.2	0.5	0.8	1.3	0.0	0.0	0.4
<i>Mytilus californianus</i>	0.0	0.0	0.0	0.0	0.8	1.8	0.6	1.3	0.4
<i>Ocenebra</i> spp.	0.4	0.6	0.6	0.6	0.0	0.0	0.4	0.6	0.4
<i>Mopalia</i> spp.	0.0	0.0	0.4	0.9	0.6	0.6	0.0	0.0	0.3
<i>Cyanoplax</i> spp.	0.0	0.0	0.2	0.5	0.4	0.6	0.0	0.0	0.2

(continued)

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, North Control
Station NC 1 +.9m (continued)

	Survey Date	128 8-Feb-02	129 1-May-02	130 12-Jul-02	131 20-Nov-02	Annual Mean
		Std. Mean Dev.	Std. Mean Dev.	Std. Mean Dev.	Std. Mean Dev.	
Invertebrates (continued)						
<i>Tetractia rubescens</i>		0.0 0.0	0.0 0.0	0.6 1.3	0.0 0.0	0.2
<i>Lacuna</i> spp.		0.0 0.0	0.0 0.0	0.4 0.6	<0.1 <0.1	0.1
<i>Haliotis</i> spp.		0.0 0.0	0.2 0.6	<0.1 <0.1	0.0 0.0	<0.1
<i>Epiactis prolifera</i>		0.0 0.0	0.0 0.0	0.2 0.5	0.0 0.0	<0.1
Nemertea unid.		0.0 0.0	0.0 0.0	0.0 0.0	0.2 0.5	<0.1
<i>Acanthina</i> spp.		0.2 0.5	0.0 0.0	0.0 0.0	0.0 0.0	<0.1
<i>Nucella emarginata</i>		0.2 0.5	0.0 0.0	0.0 0.0	0.0 0.0	<0.1
<i>Henricia leviuscula</i>		0.0 0.0	0.0 0.0	0.2 0.5	0.0 0.0	<0.1
<i>Pugettia</i> spp.		0.2 0.5	0.0 0.0	0.0 0.0	0.0 0.0	<0.1
<i>Haliclona</i> spp.		<0.1 <0.1	<0.1 <0.1	<0.1 <0.1	0.2 0.2	<0.1
<i>Crepidula</i> spp.		<0.1 <0.1	<0.1 <0.1	<0.1 <0.1	<0.1 <0.1	<0.1
<i>Lottia asmi</i>		<0.1 <0.1	<0.1 <0.1	<0.1 <0.1	<0.1 <0.1	<0.1
<i>Phragmatopoma californica</i>		<0.1 <0.1	<0.1 <0.1	<0.1 <0.1	<0.1 <0.1	<0.1
Acmaeidae unid.		0.0 0.0	<0.1 <0.1	<0.1 <0.1	0.0 0.0	<0.1
Spirorbidae		<0.1 <0.1	<0.1 <0.1	<0.1 <0.1	0.0 0.0	<0.1
<i>Chthamalus fissus</i>		<0.1 <0.1	<0.1 <0.1	<0.1 <0.1	<0.1 <0.1	<0.1
<i>Alia</i> spp.		<0.1 <0.1	0.0 0.0	0.0 0.0	0.0 0.0	<0.1
<i>Nitidiscala/Opalia</i> spp.		0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	<0.1
Serpulidae unid.		<0.1 <0.1	0.0 0.0	0.0 0.0	0.0 0.0	<0.1
Sipuncula unid.		0.0 0.0	0.0 0.0	0.1 <0.1	<0.1 0.0	<0.1
<i>Pista</i> spp.		0.0 0.0	0.0 0.0	<0.1 <0.1	0.0 0.0	<0.1
Substrate						
rock		9.4 9.5	6.7 5.6	7.2 3.2	3.6 2.5	6.7
cobble		2.2 5.5	2.6 6.1	3.7 8.4	1.5 4.0	2.5
sand (shell gravel)		1.0 2.3	0.3 1.1	2.2 4.4	0.3 0.7	1.0

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, North Control
Station NC 2 +.3m

Survey Survey Date	128 8-Feb-02		129 1-May-02		130 11-Jul-02		131 20-Nov-02		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae									
<i>Mazzaella flaccida</i>	23.3	14.1	37.1	11.9	40.6	12.6	6.0	3.0	26.8
Non-coralline crust	22.0	10.6	12.4	9.4	9.0	5.7	29.0	10.9	18.1
<i>Phyllospadix</i> spp.	21.0	19.3	14.7	14.8	13.5	14.2	16.5	17.4	16.4
<i>Chondracanthus canaliculatus</i>	9.6	7.4	11.7	11.1	11.7	8.8	3.8	2.7	9.2
<i>Mazzaella affinis</i>	7.0	8.0	11.8	8.2	7.9	6.0	4.0	4.1	7.7
<i>Gastroclonium subarticulatum</i>	10.8	12.2	5.9	5.9	8.7	8.4	4.4	5.2	7.4
<i>Mastocarpus papillatus</i>	5.3	6.3	9.8	4.3	6.3	4.8	2.8	2.8	6.1
<i>Codium setchellii</i> (prostrate)	3.1	6.0	5.0	10.8	2.6	4.9	3.6	7.8	3.6
coralline crust	3.0	3.4	1.5	1.2	2.1	1.7	4.9	3.2	2.9
<i>Gelidium coulteri</i>	1.4	1.2	3.3	1.7	2.6	2.5	3.6	4.2	2.7
<i>Egregia menziesii</i>	0.6	1.6	1.3	4.0	7.6	12.9	1.3	4.0	2.7
<i>Neorhodomela larix</i>	2.5	4.5	2.4	4.1	1.9	5.0	1.0	1.4	1.9
<i>Mastocarpus jordinii</i>	1.3	2.0	2.8	2.7	2.4	3.4	0.6	1.0	1.8
<i>Mazzaella leptorhynchus</i>	0.7	1.0	2.6	2.8	2.9	4.8	0.4	0.4	1.7
filamentous red algae-complex	1.4	2.4	1.0	1.9	3.7	3.3	0.2	0.3	1.6
<i>Mazzaella heterocarpa</i>	0.9	0.9	3.3	2.3	1.9	1.5	0.0	0.0	1.5
<i>Ulva/Enteromorpha</i> spp.	0.4	1.1	0.3	0.9	4.2	2.4	0.6	0.6	1.4
<i>Corallina vancouveriensis</i>	0.9	2.2	1.0	1.1	0.7	0.9	1.2	1.4	0.9
<i>Cryptopleura violacea</i>	0.4	0.9	1.0	1.4	1.7	1.5	0.3	0.7	0.9
<i>Calliarth./Bossie. spp.-complex</i>	1.1	1.4	0.3	0.6	0.5	0.7	1.0	1.2	0.7
<i>Porphyra</i> spp.	<.1	<.01	0.0	0.0	2.3	4.3	0.3	1.1	0.7
<i>Prionitis</i> spp.	0.5	0.7	0.8	0.8	0.3	0.5	0.9	1.4	0.6
juv. articulated coralline algae	0.4	0.6	0.6	0.7	0.1	0.4	1.0	0.8	0.5
<i>Pterosiphonia dendroidea</i>	0.0	0.0	<.1	0.2	0.0	0.0	1.6	2.3	0.4
<i>Endocladia muricata</i>	0.2	0.5	0.6	1.1	0.4	1.1	0.1	0.3	0.3
<i>Gelidium pusillum</i>	0.2	0.5	0.3	0.4	<.1	<.01	0.6	1.1	0.3
<i>Smuthora naiadum</i>	<.1	<.01	0.0	0.0	0.6	0.9	0.4	0.8	0.3
<i>Sarcoditheca gaudichaudii</i>	<.1	<.01	0.2	0.5	0.6	1.8	0.0	0.0	0.2
<i>Osmundea</i> spp.	<.1	0.2	0.0	0.0	<.1	<.01	0.5	0.7	0.1
<i>Halymen./Schizy. spp.-complex</i>	0.3	0.6	0.0	0.0	<.1	0.2	0.0	0.0	0.1
<i>Cladophora</i> spp.	0.1	0.4	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Melobesia mediocris</i>	<.1	<.01	<.1	<.01	<.1	<.01	<.1	0.2	<.1
<i>Microcladia coulteri</i>	0.0	0.0	0.0	0.0	<.1	0.2	<.1	<.01	<.1
<i>Corallina officinalis</i>	<.1	<.01	0.0	0.0	0.0	0.0	<.1	0.2	<.1
<i>Callithamnion pikeanum</i>	0.0	0.0	0.0	0.0	<.1	0.2	0.0	0.0	<.1
<i>Halosaccion americanum</i>	0.0	0.0	0.0	0.0	<.1	0.2	0.0	0.0	<.1
<i>Gelidium robustum</i>	<.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Spongo./Acrosiphon.-complex</i>	<.1	<.01	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Chrysophyta unid.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Colpomenia</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Callitham. spp./Pleonos. spp.</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Invertebrates									
<i>Tegula funebris</i>	42.6	37.7	14.4	9.7	15.6	9.0	9.0	1.2	20.4
<i>Pagurus</i> spp.	17.6	24.7	16.0	16.9	21.0	11.3	7.2	5.4	15.5
<i>Anthopleura elegantissima</i>	9.0	17.9	5.4	11.5	14.0	30.2	8.2	15.6	9.2

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, North Control
Station NC 2 +.3m (continued)

Survey	128	129	130	131	Annual
Survey Date	8-Feb-02	1-May-02	11-Jul-02	20-Nov-02	Mean
	Mean	Mean	Mean	Mean	
	Std. Dev.	Std. Dev.	Std. Dev.	Std. Dev.	
Invertebrates (continued)					
<i>Tegula brunnea</i>	0.6	4.8	9.8	3.2	4.6
<i>Macclintockia scabra</i>	7.6	0.6	7.6	2.4	4.6
<i>Pista</i> spp.	5.6	5.1	4.0	3.2	4.5
<i>Tectura scutum</i>	6.0	6.0	2.6	2.8	4.4
<i>Lottia limatula</i>	4.2	1.0	3.2	0.0	2.1
<i>Tetracita rubescens</i>	3.2	0.0	0.0	0.4	0.9
Nemertea unid.	0.4	0.4	1.8	0.6	0.8
<i>Leptasterias</i> spp.	0.4	0.6	1.8	0.4	0.8
<i>Lottia pelta</i>	0.4	0.6	1.8	0.2	0.8
<i>Pugettia</i> spp.	<.1	0.2	1.6	0.4	0.6
<i>Epiactis prolifera</i>	0.0	0.0	2.0	0.0	0.5
<i>Fissurella volcano</i>	1.2	0.2	0.2	0.4	0.5
<i>Nucella emarginata</i>	0.0	0.0	1.0	0.0	0.3
<i>Ocenebra</i> spp.	0.6	0.0	0.0	0.2	0.2
<i>Chthamalus fissus</i>	0.5	<.1	<.1	<.1	0.1
<i>Mopalia</i> spp.	0.2	0.2	0.0	0.0	<.1
<i>Tonicella lineata</i>	0.0	0.2	0.0	0.2	<.1
Ischnochitonidae	0.0	0.2	<.1	0.0	<.1
Serpulidae unid.	<.1	0.2	0.0	0.0	<.1
<i>Serpulorbis squamigerus</i>	0.0	0.0	0.0	0.2	<.1
<i>Nuttallina californica</i>	0.0	0.0	0.0	0.2	<.1
<i>Strongylocentrotus purpuratus</i>	0.0	0.0	0.2	0.0	<.1
<i>Cancer</i> spp.	0.0	0.0	0.2	0.0	<.1
<i>Sipuncula</i> unid.	0.0	0.2	0.0	0.0	<.1
<i>Lepidozonia</i> spp.	0.0	0.2	0.0	0.0	<.1
tunicates, colonial/social unid.	<.1	<.1	<.1	<.1	<.1
Bryozoa, unid. (encrusting)	<.1	0.0	<.1	0.2	<.1
<i>Lacuna</i> spp.	<.1	<.1	<.1	0.0	<.1
Porifera unid. (encrusting)	<.1	<.1	<.1	<.1	<.1
<i>Crepidula</i> spp.	<.1	0.0	0.0	<.1	<.1
Spirorbidae	<.1	<.1	<.1	<.1	<.1
Acmaeidae unid.	<.1	0.0	<.1	0.0	<.1
<i>Phragmatopoma californica</i>	0.0	0.0	<.1	<.1	<.1
<i>Lottia asmi</i>	0.0	<.1	0.0	<.1	<.1
<i>Lissothuria nutriens</i>	0.0	0.0	<.1	<.1	<.1
<i>Acmaea mitra</i>	0.0	0.0	0.0	<.1	<.1
<i>Cyanoplax</i> spp.	0.0	0.0	<.1	0.0	<.1
<i>Discurria insessa</i>	0.0	0.0	0.0	<.1	<.1
<i>Lottia ochracea</i>	0.0	0.0	0.0	<.1	<.1
Pycnogonida unid.	0.0	0.0	<.1	0.0	<.1
<i>Bittium</i> spp.	0.0	0.0	0.0	<.1	<.1
<i>Eudistylia polymorpha</i>	0.0	0.0	<.1	0.0	<.1
<i>Amphissa</i> spp.	0.0	0.0	0.0	<.1	<.1
<i>Heptacarpus</i> spp.	<.1	0.0	0.0	0.0	<.1
<i>Barleeia</i> spp.	<.1	0.0	0.0	0.0	<.1

(continued)

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, North Control
Station NC 2 +.3m (continued)

	Survey	128		129		130		131		Annual
	Survey Date	8-Feb-02		1-May-02		11-Jul-02		20-Nov-02		
	Mean	Std.		Std.		Std.		Std.		
		Mean	Dev.	Mean	Dev.	Mean	Dev.	Mean	Dev.	Mean
Invertebrates (continued)										
<i>Homo. luridum/Lirular. succin.</i>		0.0	0.0	< .1	< .01	0.0	0.0	0.0	0.0	< .1
<i>Haliclona</i> spp.		0.0	0.0	0.0	0.0	0.0	0.0	< .1	< .01	< .1
<i>Salmacina tribranchiata</i>		0.0	0.0	0.0	0.0	< .1	< .01	0.0	0.0	< .1
Substrate										
sand (shell gravel)		5.6	4.1	4.8	2.9	11.5	8.6	7.0	7.2	7.2
rock		6.0	7.3	4.4	3.6	4.0	6.6	10.9	7.0	6.3
cobble		2.8	2.7	2.4	4.1	1.0	2.0	3.3	5.1	2.4

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, North Control
Station NC 2 +.9m

Survey	Survey Date	128		129		130		131		Annual Mean
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae										
<i>Endocladia muricata</i>		43.9	27.6	48.5	23.4	77.7	128.7	31.0	31.0	50.3
Non-coralline crust		19.5	10.0	15.6	11.3	7.8	3.7	23.6	14.1	16.6
<i>Mastocarpus papillatus</i>		14.4	8.6	14.4	6.9	28.2	17.4	8.9	13.5	16.5
<i>Mazzaella flaccida</i>		4.7	5.4	7.4	8.7	16.5	15.0	2.2	2.1	7.7
coralline crust		6.7	6.9	2.6	2.5	2.4	2.1	6.3	2.7	4.5
<i>Mazzaella affinis</i>		4.6	5.7	4.0	4.3	4.4	5.0	5.0	6.7	4.5
<i>Mastocarpus jadinii</i>		1.0	1.9	0.9	1.9	1.3	1.9	1.3	1.2	1.1
<i>Corallina vancouveriensis</i>		0.6	1.1	0.6	1.2	0.1	0.4	1.0	2.6	0.6
<i>Gelidium coulteri</i>		0.5	1.1	0.5	1.1	0.5	1.1	0.6	1.0	0.5
<i>Mazzaella heterocarpa</i>		<1	0.2	0.7	0.6	1.0	1.2	0.1	0.3	0.5
<i>Gastroclonium subarticulatum</i>		0.5	1.5	0.0	0.0	<1	0.2	0.3	1.1	0.2
<i>Chondracanthus canaliculatus</i>		0.3	1.1	<1	0.2	0.1	0.4	0.2	0.7	0.2
<i>Gelidium pusillum</i>		0.3	0.5	0.1	0.3	<1	<0.1	0.2	0.3	0.2
<i>Mazzaella lilacina</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.5	0.1
<i>Porphyra</i> spp.		<1	<0.1	0.0	0.0	0.3	0.5	0.1	0.4	0.1
juv. articulated coralline algae		0.1	0.4	0.1	0.3	<1	0.2	<1	<0.1	<1
<i>Mazzaella leptorhynchus</i>		<1	<0.1	0.1	0.3	<1	0.2	<1	<0.1	<1
<i>Calliarth./Bossie. spp.-complex</i>		0.1	0.3	<1	<0.1	<1	<0.1	<1	<0.1	<1
<i>Pelvetia compressa</i>		0.0	0.0	<1	0.2	<1	<0.1	<1	0.2	<1
<i>Prionitis</i> spp.		<1	<0.1	0.0	0.0	<1	<0.1	<1	0.2	<1
<i>Halosaccion americanum</i>		0.0	0.0	0.0	0.0	<1	0.2	0.0	0.0	<1
<i>Cryptopleura violacea</i>		0.0	0.0	0.0	0.0	<1	0.2	0.0	0.0	<1
<i>Cladophora</i> spp.		<1	<0.1	<1	0.0	<1	<0.1	<1	<0.1	<1
<i>Callithamnion pikeanum</i>		<1	<0.1	0.0	0.0	0.0	0.0	0.0	0.0	<1
<i>Microcladia coulteri</i>		0.0	0.0	0.0	0.0	<1	<0.1	0.0	0.0	<1
<i>Ulva/Enteromorpha</i> spp.		0.0	0.0	0.0	0.0	<1	<0.1	0.0	0.0	<1
Invertebrates										
<i>Tegula funebris</i>		89.6	38.3	90.4	51.9	103.2	35.3	97.0	42.2	95.1
<i>Pagurus</i> spp.		27.8	26.0	25.4	31.6	46.0	62.8	10.6	10.2	27.5
<i>Anthopleura elegantissima</i>		16.8	11.7	17.0	10.2	25.4	23.8	12.4	13.4	17.9
<i>Macclintockia scabra</i>		5.6	6.5	5.4	2.5	8.4	5.2	14.4	11.1	8.5
<i>Tectura scutum</i>		2.0	1.4	6.0	5.1	10.8	8.7	4.8	2.6	5.9
<i>Lottia limatula</i>		0.6	0.6	2.4	2.7	5.4	2.3	1.6	2.1	2.5
<i>Lottia pelta</i>		0.2	0.5	0.8	1.3	4.4	7.7	1.0	1.7	1.6
<i>Ocenebra</i> spp.		0.6	0.6	2.0	1.6	2.2	2.2	0.8	0.8	1.4
<i>Pollicipes polymerus</i>		1.4	3.1	3.4	7.6	0.6	1.3	0.0	0.0	1.4
<i>Pachygrapsus crassipes</i>		0.4	0.6	0.8	1.3	3.0	2.6	1.0	1.0	1.3
<i>Chthamalus fissus</i>		1.5	3.9	0.4	1.3	0.8	1.8	0.7	1.5	0.9
<i>Mopalia</i> spp.		0.4	0.6	0.8	0.8	0.2	0.5	0.4	0.6	0.5
<i>Lottia digitalis</i>		0.8	1.8	0.4	0.9	0.0	0.0	0.0	0.0	0.3
<i>Nuttallina californica</i>		0.2	0.5	0.4	0.6	0.0	0.0	0.6	0.9	0.3
<i>Hemigrapsus nudus</i>		0.0	0.0	1.0	0.7	0.0	0.0	0.0	0.0	0.3
<i>Nucella emarginata</i>		0.4	0.9	0.0	0.0	0.2	0.5	0.0	0.0	0.2
<i>Tegula brunnea</i>		0.0	0.0	0.0	0.0	0.6	1.3	0.0	0.0	0.2
<i>Tetraclita rubescens</i>		0.0	0.0	0.4	0.9	0.0	0.0	0.0	0.0	<1

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, North Control
Station NC 2 +.9m (continued)

Survey Survey Date	128		129		130		131		Annual Mean
	8-Feb-02		1-May-02		11-Jul-02		20-Nov-02		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
<i>Leptasterias</i> spp.	0.0	0.0	0.0	0.0	0.4	0.6	0.0	0.0	<.1
<i>Pachycheles</i> spp.	0.0	0.0	0.4	0.9	0.0	0.0	0.0	0.0	<.1
<i>Acanthina</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Calliostoma ligatum</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
Porifera unid. (encrusting)	<.1	<.01	<.1	<.01	0.0	0.0	0.1	0.3	<.1
<i>Haliotis</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	<.1	0.3	<.1
Acmaeidae unid.	<.1	<.01	<.1	<.01	<.1	0.0	<.1	<.01	<.1
<i>Lottia asmi</i>	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Crepidula</i> spp.	0.0	0.0	<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Phragmatopoma californica</i>	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Littorina</i> spp.	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
Spirorbidae	0.0	0.0	<.1	<.01	<.1	<.01	<.1	<.01	<.1
tunicates, colonial/social unid.	0.0	0.0	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Haliclona</i> spp.	0.0	0.0	<.1	<.01	0.0	0.0	<.1	<.01	<.1
Bryozoa, unid. (encrusting)	0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
Grapsidae (juv.)	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Pista</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Substrate									
cobble	12.2	10.1	13.8	13.2	10.2	12.7	10.6	7.8	11.7
rock	9.3	5.6	5.4	5.1	9.9	11.9	13.4	10.8	9.5
sand (shell gravel)	0.5	1.1	0.3	0.6	0.3	0.5	1.1	1.7	0.5

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, Field's Cove Station FC 1 +.3m

Survey	Survey Date	128		129		130		131		Annual Mean
		9-Jan-02	Std. Dev.	13-May-02	Std. Dev.	9-Jul-02	Std. Dev.	21-Nov-02	Std. Dev.	
		Mean	Dev.	Mean	Dev.	Mean	Dev.	Mean	Dev.	
Algae										
<i>Mazzaella flaccida</i>		13.5	6.6	39.6	19.8	54.3	22.8	8.5	4.7	29.0
Non-coralline crust		24.7	11.6	15.6	6.5	12.4	5.3	17.4	7.6	17.5
<i>Gastroclonium subarticulatum</i>		14.3	10.6	6.5	5.4	11.1	7.9	11.1	10.1	10.7
<i>Chondracanthus canaliculatus</i>		5.7	6.8	13.2	9.5	11.6	9.8	6.8	5.7	9.3
<i>Corallina vancouveriensis</i>		8.3	5.9	5.6	4.0	6.0	4.9	13.1	9.4	8.2
<i>Cryptopleura violacea</i>		16.4	12.6	1.4	2.4	7.4	5.7	7.8	9.5	8.2
coralline crust		4.9	2.9	4.1	3.0	5.0	3.7	8.2	7.8	5.5
<i>Endocladia muricata</i>		5.0	9.2	6.2	9.0	4.7	7.8	4.4	8.4	5.1
<i>Phyllospadix</i> spp.		4.5	5.6	2.2	3.2	4.5	5.6	5.6	7.5	4.2
<i>Gelidium coulteri</i>		0.7	0.9	5.3	2.9	4.2	3.4	4.4	4.4	3.7
<i>Mastocarpus papillatus</i>		2.3	2.6	5.5	5.6	4.0	4.2	1.2	3.5	3.2
<i>Mazzaella affinis</i>		0.7	1.1	2.8	4.3	6.2	9.0	1.9	3.8	2.9
<i>Mastocarpus jordinii</i>		1.3	1.8	2.0	1.9	3.7	2.7	2.5	4.8	2.4
<i>Calliarth./Bossie</i> spp.-complex		1.5	1.8	1.4	1.6	2.2	2.7	2.2	3.4	1.8
juv. articulated coralline algae		0.4	0.6	1.3	1.4	2.5	2.4	2.6	2.7	1.7
<i>Ulva/Enteromorpha</i> spp.		0.6	1.5	<1	0.2	2.9	4.9	1.4	3.2	1.2
<i>Egria menziesii</i>		1.7	2.3	0.0	0.0	2.0	3.2	0.9	2.1	1.1
<i>Prionitis</i> spp.		0.6	1.1	0.3	0.5	1.9	5.0	1.4	2.2	1.1
<i>Mazzaella heterocarpa</i>		0.4	0.8	1.3	1.2	1.1	1.5	0.1	0.3	0.7
<i>Spongo./Acrosiph.</i> -complex		0.0	0.0	<1	<1	2.3	4.8	0.0	0.0	0.6
<i>Porphyra</i> spp.		0.0	0.0	0.3	1.1	0.8	1.4	<1	0.1	0.3
filamentous red algae-complex		<1	<1	0.0	0.0	0.9	2.4	0.0	0.0	0.2
<i>Mazzaella leptorhynchus</i>		<1	0.2	<1	0.2	<1	<1	0.7	1.4	0.2
Chrysophyta unid.		0.0	0.0	0.6	2.0	<1	<1	0.0	0.0	0.2
<i>Smithora naiadum</i>		<1	<1	0.0	0.0	<1	<1	0.4	1.3	0.1
<i>Osmundea</i> spp.		0.1	0.3	<1	0.2	0.1	0.3	<1	<1	<1
<i>Cryptosiphonia woodii</i>		<1	<1	0.2	0.5	<1	0.2	0.0	0.0	<1
<i>Chondracanthus corymbiferus</i>		0.1	0.4	0.0	0.0	0.0	0.0	0.1	0.4	<1
<i>Gelidium pusillum</i>		<1	<1	<1	0.2	0.1	0.3	0.0	0.0	<1
<i>Melobesia mediocris</i>		<1	<1	0.0	0.0	<1	<1	0.2	0.7	<1
<i>Microcladia coulteri</i>		0.0	0.0	0.0	0.0	0.1	0.3	<1	<1	<1
<i>Mazzaella lilacina</i>		0.0	0.0	0.0	0.0	0.1	0.4	0.0	0.0	<1
<i>Callithamnion pikeanum</i>		0.0	0.0	<1	<1	<1	0.2	0.0	0.0	<1
<i>Corallina officinalis</i>		<1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	<1
<i>Sarcoditheca gaudichaudii</i>		<1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	<1
<i>Halymen./Schizy.</i> spp.-complex		0.0	0.0	0.0	0.0	<1	0.2	0.0	0.0	<1
<i>Cladophora</i> spp.		<1	<1	<1	<1	<1	<1	<1	<1	<1
<i>Callitham. spp./Pleonospor. spp.</i>		<1	<1	0.0	0.0	0.0	0.0	0.0	0.0	<1
Invertebrates										
<i>Strongylocentrotus purpuratus</i>		17.6	13.1	5.4	4.7	15.2	10.5	15.0	16.0	13.3
<i>Pagurus</i> spp.		5.8	3.7	9.2	10.6	10.4	4.8	27.0	23.6	13.1
<i>Tegula brunnea</i>		32.2	18.2	2.6	3.7	6.0	3.5	9.8	15.5	12.7
<i>Tegula funebris</i>		3.8	3.0	21.2	14.3	13.0	16.5	10.6	9.1	12.2
<i>Anthopleura elegantissima</i>		6.4	4.7	7.6	5.7	8.6	9.6	13.8	15.8	9.1
<i>Macclintockia scabra</i>		2.4	4.3	10.6	20.4	3.4	5.5	5.0	10.1	5.4

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, Field's Cove
Station FC 1 +.3m (continued)

Survey Date	128 9-Jan-02		129 13-May-02		130 9-Jul-02		131 21-Nov-02		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
<i>Nuttallina californica</i>	0.8	1.8	4.4	5.9	4.6	7.2	6.6	9.6	4.1
<i>Tectura scutum</i>	2.0	3.9	3.0	3.2	7.6	6.1	2.6	4.2	3.8
<i>Lottia limatula</i>	1.2	0.8	1.8	1.5	8.8	9.3	1.8	2.1	3.4
<i>Fissurella volcano</i>	0.2	0.5	0.2	0.5	5.6	4.2	3.2	2.3	2.3
<i>Pachygrapsus crassipes</i>	0.0	0.0	1.2	1.6	3.8	3.4	1.4	2.2	1.6
<i>Leptasterias</i> spp.	0.4	0.6	1.6	1.3	2.2	1.1	0.4	0.9	1.2
<i>Pista</i> spp.	0.3	0.5	0.5	1.3	0.2	0.7	3.6	6.6	1.1
Serpulidae unid.	0.4	0.6	1.0	1.7	1.6	2.6	1.4	2.2	1.1
<i>Lottia pelta</i>	0.4	0.6	0.4	0.6	2.8	1.9	0.8	1.3	1.1
<i>Ocenebra</i> spp.	0.8	0.8	1.0	1.0	1.8	2.5	0.4	0.6	1.0
Nemertea unid.	0.0	0.0	0.8	0.8	0.6	0.9	2.0	1.9	0.9
<i>Serpulorbis squamigerus</i>	0.2	0.5	0.6	0.6	1.4	1.7	0.2	0.5	0.6
<i>Tetraclita rubescens</i>	0.0	0.0	0.8	1.8	1.6	2.5	0.0	0.0	0.6
<i>Epiactis prolifera</i>	0.2	0.5	0.4	0.6	0.6	0.9	0.2	0.5	0.4
<i>Acmaea mitra</i>	0.4	0.6	0.0	0.0	0.6	1.3	0.2	0.5	0.3
<i>Pugettia</i> spp.	0.0	0.0	0.0	0.0	0.2	0.5	0.4	0.9	0.2
tunicates, colonial/social unid.	<.1	<.01	<.1	<.01	<.1	0.2	0.4	1.3	0.1
Sipuncula unid.	0.0	0.0	<.1	<.01	<.1	<.01	0.4	0.9	0.1
<i>Lottia gigantea</i>	0.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Pisaster ochraceus</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.2	0.5	<.1
<i>Pseudomelatoma torosa</i>	0.2	0.5	0.0	0.0	0.2	0.5	0.0	0.0	<.1
<i>Phragmatopoma californica</i>	0.3	0.9	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Lacuna</i> spp.	<.1	<.01	<.1	<.01	<.1	<.01	0.2	0.5	<.1
<i>Tonicella lineata</i>	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Octopus</i> spp.	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1
<i>Fusinus luteopictus</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Haliotis</i> spp.	0.0	0.0	<.1	0.3	0.0	0.0	<.1	0.3	<.1
Acmaeidae unid.	<.1	<.01	<.1	<.01	<.1	0.0	<.1	<.01	<.1
Spirorbidae	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Chthamalus fissus</i>	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
Porifera unid. (encrusting)	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Heptacarpus</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Lissothuria nutriens</i>	0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Lottia asmi</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Grapsidae (juv.)	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Homo. luridum/Lirular. succin.</i>	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Alia</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Lottia ochracea</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Hermisenda crassicornis</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Pycnogonida unid.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Bryozoa, unid. (encrusting)	0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Lepidozона</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Substrate									
rock	9.0	5.4	12.4	8.1	8.0	6.3	7.1	3.5	9.1
sand (shell gravel)	3.2	6.8	1.2	2.3	0.7	1.5	4.0	6.4	2.3
cobble	0.5	0.7	0.7	0.9	2.4	3.8	0.7	1.5	1.1

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, Field's Cove Station FC 1 +.9m

Survey	128		129		130		131		Annual Mean
	Survey Date	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	
Algae									
<i>Endocladia muricata</i>		30.4	19.7	47.8	26.5	41.3	22.6	31.7	37.8
Non-coralline crust		18.3	10.8	13.5	8.4	12.4	8.0	17.7	15.5
<i>Mastocarpus papillatus</i>		6.2	6.2	5.8	1.6	9.3	5.9	11.7	8.2
<i>Pelvetia compressa</i>		1.3	4.0	0.8	2.0	2.1	3.9	1.5	1.4
coralline crust		1.2	2.1	1.6	2.0	1.1	2.1	1.0	1.2
<i>Mazzaella flaccida</i>		1.3	2.0	0.8	1.8	1.9	4.0	0.9	1.2
<i>Gelidium coulteri</i>		0.3	0.9	0.6	0.9	0.7	1.6	1.9	0.9
<i>Phyllospadix</i> spp.		0.5	1.1	0.7	1.2	1.3	2.6	1.0	0.9
<i>Calliarth./Bossie.</i> spp.-complex		0.6	1.3	0.8	2.4	0.4	1.3	0.7	0.6
<i>Corallina vancouveriensis</i>		0.3	0.7	0.4	0.9	0.3	0.8	0.3	0.3
juv. articulated coralline algae		<.1	<.01	0.3	0.5	<.1	<.01	0.2	0.1
<i>Gelidium pusillum</i>		<.1	<.01	<.1	0.0	0.4	0.5	<.1	0.1
<i>Mazzaella leptorhynchus</i>		<.1	<.01	<.1	<.01	0.3	0.5	<.1	<.1
<i>Prionitis</i> spp.		0.2	0.7	0.0	0.0	0.1	0.3	0.0	<.1
<i>Mazzaella heterocarpa</i>		<.1	<.01	<.1	0.2	0.2	0.5	<.1	<.1
<i>Porphyra</i> spp.		0.0	0.0	<.1	<.01	0.1	0.3	<.1	<.1
<i>Gastroclonium subarticulatum</i>		0.0	0.0	0.1	0.4	<.1	<.01	<.1	<.1
<i>Cladophora</i> spp.		<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.1
<i>Mazzaella affinis</i>		<.1	<.01	0.0	0.0	<.1	0.2	<.1	<.1
<i>Chondracanthus canaliculatus</i>		<.1	<.01	0.0	0.0	<.1	<.01	<.1	<.1
<i>Callithamnion pikeanum</i>		<.1	<.01	<.1	0.2	0.0	0.0	0.0	<.1
<i>Mastocarpus jordanii</i>		0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.1
<i>Ulva/Enteromorpha</i> spp.		0.0	0.0	0.0	0.0	<.1	0.2	0.0	<.1
<i>Fucus gardneri</i>		0.0	0.0	0.0	0.0	<.1	<.01	0.0	<.1
<i>Hesperophycus californicus</i>		0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.1
<i>Smithora naiadum</i>		0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.1
<i>Cryptopleura violacea</i>		0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.1
<i>Melobesia mediocris</i>		0.0	0.0	0.0	0.0	<.1	<.01	0.0	<.1
filamentous red algae-complex		0.0	0.0	0.0	0.0	<.1	<.01	0.0	<.1
Invertebrates									
<i>Tegula funebris</i>		225.2	125.8	174.0	44.0	289.8	214.9	141.2	207.6
<i>Anthopleura elegantissima</i>		186.2	134.7	104.8	91.9	210.0	119.9	325.6	206.7
<i>Pagurus</i> spp.		10.6	7.5	20.2	17.9	25.6	14.7	71.4	32.0
<i>Macclintockia scabra</i>		21.8	33.2	25.8	33.3	27.0	26.1	37.6	28.1
<i>Lottia limatula</i>		2.8	1.8	3.6	3.3	5.4	2.9	5.0	4.2
<i>Tectura scutum</i>		1.6	1.8	1.6	1.5	3.0	2.0	4.2	2.6
<i>Cyanoplax</i> spp.		0.2	0.5	2.8	1.5	3.4	2.1	1.0	1.9
<i>Ocenebra</i> spp.		1.4	0.9	1.4	2.1	1.8	1.8	2.2	1.7
<i>Acanthina</i> spp.		1.6	1.1	1.6	0.9	0.8	0.8	2.4	1.6
<i>Lottia pelta</i>		0.2	0.5	1.0	1.0	2.2	2.3	0.8	1.1
<i>Pachygrapsus crassipes</i>		0.0	0.0	0.2	0.5	1.0	1.7	2.2	0.9
<i>Phragmatopoma californica</i>		0.7	1.1	1.2	1.5	0.5	0.7	0.3	0.7
<i>Chthamalus fissus</i>		0.3	0.9	0.6	1.2	1.0	1.9	0.5	0.6
<i>Haliotis</i> spp.		0.3	1.0	0.4	1.3	0.3	1.0	0.3	0.3

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, Field's Cove
Station FC 1 +.9m (continued)

Survey Date	128		129		130		131		Annual Mean
	8-Jan-02		13-May-02		9-Jul-02		21-Nov-02		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
<i>Strongylocentrotus purpuratus</i>	0.0	0.0	0.0	0.0	0.8	1.8	0.0	0.0	0.2
Serpulidae unid.	0.0	0.0	0.4	0.6	0.0	0.0	<.1	<.01	0.1
Nemertea unid.	0.2	0.5	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Fissurella volcano</i>	0.0	0.0	0.2	0.5	0.2	0.5	0.0	0.0	<.1
<i>Hemigrapsus nudus</i>	0.0	0.0	0.2	0.5	0.2	0.5	0.0	0.0	<.1
<i>Acmaea mitra</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Lottia digitalis</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Nuttallina californica</i>	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Leptasterias</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Pisaster ochraceus</i>	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Acmaeidae unid.	<.1	<.01	<.1	0.0	<.1	<.01	<.1	0.0	<.1
<i>Littorina</i> spp.	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Lottia asmi</i>	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
Spirorbidae	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Crepidula</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Amphissa</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Heptacarpus</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Sipuncula unid.	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Haliclona</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Substrate									
rock	35.4	13.9	28.3	18.4	27.5	16.3	21.6	9.6	28.2
sand (shell gravel)	8.3	7.6	1.5	2.9	1.0	2.1	7.4	11.0	4.6
cobble	3.3	6.2	1.9	2.5	4.5	7.7	4.4	6.9	3.5

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, Field's Cove Station FC 2 +3m

Survey	128	129	130	131	
Survey Date	9-Jan-02	14-May-02	22-Jul-02	19-Nov-02	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean
Algae					
Non-coraline crust	29.0	16.2	13.8	8.4	9.7
<i>Mazzaella flaccida</i>	5.1	5.2	18.1	9.6	29.7
<i>Corallina vancouveriensis</i>	14.2	13.2	10.6	8.5	4.5
coralline crust	6.4	4.4	6.3	3.4	5.6
<i>Endocladia muricata</i>	5.4	12.7	6.3	11.5	8.8
<i>Gelidium coulteri</i>	1.7	1.1	6.4	4.5	9.2
<i>Cryptopleura violacea</i>	9.0	11.2	0.5	0.7	2.4
<i>Phyllospadix</i> spp.	4.9	12.8	3.7	9.8	5.1
<i>Egredia menziesii</i>	3.0	6.4	2.0	5.4	8.3
<i>Mastocarpus papillatus</i>	1.3	1.1	5.9	5.4	8.1
<i>Calliarth./Bossie. spp.-complex</i>	4.4	5.4	3.6	3.1	4.0
<i>Chondracanthus canaliculatus</i>	2.2	3.7	3.6	6.1	5.6
<i>Gastroclonium subarticulatum</i>	3.8	4.6	1.3	1.9	2.6
juv. articulated coralline algae	0.3	0.7	2.6	2.4	1.9
<i>Prionitis</i> spp.	1.9	2.9	1.4	2.2	1.6
<i>Mazzaella affinis</i>	0.8	2.0	1.3	2.7	2.6
<i>Mastocarpus jordanii</i>	0.8	0.9	2.5	3.1	0.8
<i>Spongo./Acrosiphonia-complex</i>	0.0	0.0	0.3	1.1	2.2
<i>Ulva/Enteromorpha</i> spp.	<1	0.2	0.6	1.2	0.8
<i>Mazzaella heterocarpa</i>	0.1	0.3	0.6	0.6	0.6
<i>Porphyr</i> spp.	<1	0.3	0.3	0.5	1.0
<i>Osmundea</i> spp.	<1	<1	0.2	0.2	0.1
<i>Chrysophyta</i> unid.	0.0	0.0	0.6	1.4	<1
<i>Corallina officinalis</i>	0.0	0.0	0.0	0.0	0.0
<i>Cryptosiphonia woodii</i>	<1	0.2	<1	0.2	0.2
<i>Cladophora</i> spp.	<1	<1	<1	0.2	0.1
<i>Mazzaella leptorhynchus</i>	0.0	0.0	<1	<1	<1
<i>Microcladia coulteri</i>	0.0	0.0	0.0	0.0	0.2
<i>Cryptopleura ruprechtiana</i>	0.0	0.0	0.1	0.4	0.0
<i>Mazzaella lilacina</i>	0.0	0.0	0.1	0.4	0.0
<i>Gelidium pusillum</i>	<1	<1	<1	0.2	<1
<i>Smithora naiadum</i>	0.0	0.0	0.0	0.0	<1
<i>Mazzaella linearis</i>	0.0	0.0	<1	0.2	0.0
<i>Callitham. spp./Pleonospor. spp.</i>	<1	<1	0.0	0.0	<1
<i>Halymen./Schizy. spp.-complex</i>	0.0	0.0	0.0	0.0	<1
<i>Melobesia mediocris</i>	<1	<1	0.0	0.0	0.0
<i>Microcladia borealis</i>	0.0	0.0	0.0	0.0	<1
<i>Callophyllis</i> spp.	<1	<1	0.0	0.0	0.0
<i>Chondracanthus corymbiferus</i>	0.0	0.0	<1	<1	0.0
Laminariales	0.0	0.0	0.0	0.0	<1
filamentous red algae-complex	0.0	0.0	<1	<1	0.0
<i>Farlowia/Pikea</i> spp.-complex	<1	<1	0.0	0.0	0.0
Invertebrates					
<i>Tegula funebris</i>	133.6	79.0	58.4	68.7	12.2

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, Field's Cove
Station FC 2 +.3m (continued)

Survey Survey Date	128 9-Jan-02		129 14-May-02		130 22-Jul-02		131 19-Nov-02		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
<i>Strongylocentrotus purpuratus</i>	37.6	16.4	43.4	22.3	45.6	24.2	41.6	29.0	42.1
<i>Macclintockia scabra</i>	42.2	89.9	14.2	30.7	58.8	89.1	26.8	42.5	35.5
<i>Anthopleura elegantissima</i>	36.6	31.3	13.8	8.6	22.2	24.3	19.2	15.4	23.0
<i>Nuttallina californica</i>	7.4	8.4	7.8	9.2	26.2	35.7	36.8	51.9	19.6
<i>Pagurus</i> spp.	14.4	5.8	9.4	9.6	32.2	41.2	15.8	7.3	18.0
<i>Tetraclita rubescens</i>	2.2	3.0	2.6	3.3	10.6	23.7	0.8	1.8	4.1
<i>Lottia limatula</i>	0.2	0.5	3.0	1.6	1.8	0.8	6.8	7.8	3.0
<i>Fissurella volcano</i>	1.2	1.8	2.2	1.9	1.6	1.1	5.0	3.4	2.5
<i>Tectura scutum</i>	1.8	4.0	1.8	3.5	4.6	2.1	0.6	0.9	2.2
<i>Lottia pelta</i>	0.6	0.9	1.6	1.7	1.0	1.4	2.6	2.1	1.5
<i>Ocenebra</i> spp.	0.6	0.9	2.6	3.0	0.0	0.0	2.2	3.4	1.4
<i>Tegula brunnea</i>	3.0	2.4	0.0	0.0	1.4	2.0	0.8	0.8	1.3
<i>Chthamalus fissus</i>	1.6	4.8	1.0	3.1	1.3	4.0	0.1	0.4	1.0
Grapsidae (juv.)	0.0	0.0	<.1	<.01	0.0	0.0	3.8	2.4	1.0
<i>Leptasterias</i> spp.	1.2	1.3	0.6	0.9	0.8	1.3	0.8	0.8	0.9
<i>Pachygrapsus crassipes</i>	0.0	0.0	0.4	0.6	1.4	0.9	1.4	2.2	0.8
Nemertea unid	0.4	0.9	0.2	0.5	1.2	1.3	0.8	0.8	0.7
<i>Serpulorbis squamigerus</i>	1.4	3.1	0.8	1.8	0.0	0.0	0.2	0.5	0.6
<i>Epiactis prolifera</i>	0.0	0.0	0.4	0.6	0.4	0.9	0.2	0.5	0.3
Serpulidae unid.	0.2	0.5	0.4	0.6	0.2	0.5	<.1	<.01	0.2
<i>Pugettia</i> spp.	0.0	0.0	0.0	0.0	0.6	0.9	0.2	0.5	0.2
<i>Tonicella lineata</i>	0.0	0.0	0.0	0.0	0.4	0.6	0.2	0.5	0.2
<i>Acanthina</i> spp	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9	<.1
<i>Cyanoplax</i> spp.	0.0	0.0	0.0	0.0	0.4	0.9	0.0	0.0	<.1
<i>Acmaea mitra</i>	0.0	0.0	0.2	0.5	<.1	<.01	<.1	<.01	<.1
<i>Lepidozonia</i> spp	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1
<i>Diodora</i> spp.	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
<i>Mopalia</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Nucella emarginata</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Lottia ochracea</i>	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Nereididae unid.	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1
<i>Henricia leviuscula</i>	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1
<i>Pisaster ochraceus</i>	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Pycnopodia helianthoides</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Mitra idae</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
<i>Pisaster giganteus</i>	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1
tunicates, colonial/social unid.	<.1	<.01	<.1	<.01	<.1	0.2	<.1	<.01	<.1
<i>Phragmatopoma californica</i>	<.1	<.01	<.1	<.01	<.1	0.0	<.1	<.01	<.1
Acmaeidae unid.	<.1	<.01	<.1	<.01	<.1	0.0	0.0	0.0	<.1
<i>Lottia asmi</i>	<.1	<.01	<.1	<.01	0.0	0.0	<.1	<.01	<.1
<i>Pista</i> spp.	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
Sipuncula unid.	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Lacuna</i> spp.	<.1	<.01	0.0	0.0	<.1	<.01	<.1	<.01	<.1
Spirorbidae	<.1	<.01	<.1	<.01	0.0	0.0	<.1	<.01	<.1
Porifera unid. (encrusting)	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, Field's Cove Station FC 2 +3m (continued)

Survey Date	128	129	130	131	Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean
Invertebrates (continued)					
Cirratulidae/Terebellidae unid.	0.0	0.0	0.0	0.0	0.0
Discuria inessa	0.0	0.0	0.0	0.0	0.0
Dodecaceria fewkesi	0.0	0.0	0.0	0.0	0.0
Crepidula spp.	0.0	0.0	0.0	0.0	0.0
Littorina spp.	0.0	0.0	0.0	0.0	0.0
Bryozoa, unid. (encrusting)	0.0	0.0	0.0	0.0	0.0
Ischnochitonidae	0.0	0.0	0.0	0.0	0.0
Pelecypoda unid. boring	0.0	0.0	0.0	0.0	0.0
Halielona spp.	0.0	0.0	0.0	0.0	0.0
Substrate					
rock	11.9	13.7	21.1	17.8	12.6
sand (shell gravel)	2.0	2.1	1.3	3.2	0.8
cobble	0.2	0.5	0.9	1.8	0.9

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, Field's Cove Station FC 2 +.9m

Survey Date	128		129		130		131		Annual Mean
	8-Jan-02		14-May-02		22-Jul-02		19-Nov-02		
	Mean	Std. Dev	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae									
<i>Endocladia muricata</i>	40.6	11.9	37.8	16.7	38.9	10.4	35.8	9.6	38.3
Non-coralline crust	16.0	12.6	9.8	7.8	11.7	11.4	16.5	12.9	13.5
<i>Mastocarpus papillatus</i>	7.4	4.4	4.9	1.7	19.5	5.7	9.7	3.9	10.3
<i>Pelvetia compressa</i>	3.1	5.1	2.8	5.1	3.5	7.0	4.9	8.0	3.6
coralline crust	1.0	1.0	0.2	0.7	0.1	0.4	1.0	0.9	0.6
<i>Mazzaella flaccida</i>	0.6	1.1	0.2	0.5	0.7	1.5	0.2	0.5	0.4
<i>Fucus gardneri</i>	0.4	1.3	0.5	1.3	0.3	1.1	0.0	0.0	0.3
<i>Gelidium coulteri</i>	<.1	0.2	0.4	0.8	0.3	1.1	0.1	0.3	0.2
<i>Hesperophycus californicus</i>	0.1	0.4	0.0	0.0	0.2	0.7	0.4	0.9	0.2
<i>Cladophora</i> spp.	0.1	0.3	<.1	0.0	0.3	0.5	0.3	0.7	0.2
<i>Calliarth./Bossie.</i> spp.-complex	<.1	0.2	0.3	0.6	0.0	0.0	<.1	0.2	0.1
<i>Corallina vancouveriensis</i>	<.1	0.2	<.1	<.01	0.1	0.4	0.1	0.4	<.1
<i>Mastocarpus jardinii</i>	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Mazzaella affinis</i>	<.1	0.2	0.0	0.0	<.1	<.01	0.2	0.5	<.1
<i>Prionitis</i> spp.	<.1	0.2	<.1	<.01	<.1	0.2	0.1	0.4	<.1
juv. articulated coralline algae	0.1	0.4	<.1	<.01	<.1	<.01	<.1	0.2	<.1
<i>Porphyra</i> spp.	<.1	<.01	<.1	<.01	<.1	0.2	0.1	0.4	<.1
<i>Mazzaella heterocarpa</i>	<.1	0.2	<.1	<.01	<.1	0.2	0.0	0.0	<.1
<i>Cryptosiphonia woodii</i>	<.1	<.01	<.1	0.2	<.1	0.2	0.0	0.0	<.1
<i>Corallina officinalis</i>	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.0	<.1
<i>Mazzaella leptorhynchus</i>	<.1	<.01	<.1	<.01	<.1	<.01	<.1	0.2	<.1
<i>Gastroclonium subarticulatum</i>	<.1	0.2	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Cryptopleura violacea</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	0.2	<.1
<i>Gelidium pusillum</i>	<.1	<.01	<.1	0.0	<.1	0.0	<.1	<.01	<.1
<i>Ulva/Enteromorpha</i> spp.	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
Invertebrates									
<i>Tegula funebris</i>	93.4	35.2	79.6	48.3	261.8	95.9	120.6	103.8	138.9
<i>Anthopleura elegantissima</i>	66.2	42.3	60.6	41.4	109.6	79.8	65.6	35.5	75.5
<i>Macclintockia scabra</i>	30.4	15.9	9.6	9.3	19.4	9.0	21.0	8.1	20.1
<i>Pagurus</i> spp.	10.2	8.2	10.4	12.6	39.2	38.3	9.6	8.1	17.4
<i>Lottia limatula</i>	1.4	2.2	2.0	4.5	4.4	3.4	3.6	4.4	2.9
<i>Lottia pelta</i>	2.4	1.5	2.6	2.6	1.6	1.1	4.4	3.7	2.8
<i>Tectura scutum</i>	1.0	1.0	2.2	2.3	0.8	1.1	7.0	9.8	2.8
<i>Cyanoplax</i> spp.	1.0	1.4	1.8	1.6	2.0	2.6	2.8	1.6	1.9
<i>Pachygrapsus crassipes</i>	0.6	0.9	1.4	1.1	2.0	0.0	0.8	1.3	1.2
<i>Acanthina</i> spp.	1.6	1.5	0.6	0.9	0.4	0.6	1.2	0.5	1.0
<i>Ocenebra</i> spp.	1.0	1.0	0.2	0.5	0.4	0.9	1.8	1.6	0.9
<i>Pollicipes polymerus</i>	0.0	0.0	1.4	3.1	0.6	1.3	1.0	2.2	0.8
<i>Strongylocentrotus purpuratus</i>	0.0	0.0	0.2	0.5	0.4	0.9	0.8	1.3	0.4
<i>Nuttallina californica</i>	0.4	0.9	0.0	0.0	0.4	0.9	0.2	0.5	0.3
<i>Phragmatopoma californica</i>	<.1	<.01	0.3	0.7	<.1	<.01	0.6	1.2	0.2
<i>Lottia gigantea</i>	0.0	0.0	0.0	0.0	0.2	0.5	0.4	0.9	0.2
<i>Mopalia</i> spp.	0.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Nemertea unid.	0.0	0.0	0.2	0.5	0.2	0.5	0.0	0.0	<.1

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, Field's Cove Station FC 2 +.9m (continued)

		Survey Date	128 Jan-02		129 May-02		130 Jul-02		131 Nov-02		
		Survey Date	8-Jan-02		14-May-02		22-Jul-02		19-Nov-02		Annual
			Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean
Invertebrates (continued)											
Mytilus spp.	0.2	0.2	0.0	0.0	0.4	0.9	0.0	0.0	0.0	0.0	<.1
Chthamalus fissus	0.2	0.2	0.1	0.4	<.1	0.2	<.1	0.0	<.1	<.1	<.1
Lottia digitalis	2.4	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
Hemigrapsus nudus	2.2	2.2	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
Pisaster ochraceus	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1
Pelecypoda unid. boring	0.2	0.2	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
Halotis spp.	0.2	0.2	0.0	0.0	<.1	0.3	<.1	0.3	0.0	0.0	<.1
Grapsidae (juv.)	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
Acmaeidae unid.	0.2	0.2	<.1	0.0	0.0	0.0	<.1	0.0	<.1	0.0	<.1
Lottia asmi	0.2	0.2	<.1	<.1	<.1	<.1	<.1	0.0	<.1	<.1	<.1
Littorina spp.	0.2	0.2	<.1	<.1	<.1	<.1	<.1	<.1	<.1	0.0	<.1
Serpulidae unid.	0.2	0.2	<.1	<.1	0.0	0.0	0.0	0.0	0.0	<.1	<.1
Crepidula spp.	0.2	0.2	<.1	<.1	0.0	0.0	0.0	<.1	<.1	0.0	<.1
Ischnochitonidae	0.2	0.2	<.1	<.1	0.0	0.0	0.0	0.0	0.0	<.1	<.1
Lacuna spp.	0.2	0.2	<.1	<.1	0.0	0.0	0.0	<.1	<.1	0.0	<.1
Sipuncula unid.	0.2	0.2	0.0	0.0	0.0	0.0	0.0	<.1	<.1	<.1	<.1
Cirratulidae/Terebellidae unid.	0.2	0.2	0.0	0.0	0.0	0.0	0.0	<.1	<.1	<.1	<.1
Nitidiscala/Opalia spp.	0.2	0.2	<.1	<.1	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Balanus spp.	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.1
Spirorbidae	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.1
Substrate	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
rock	0.2	0.2	34.2	12.4	38.1	12.8	33.4	13.9	28.7	14.0	33.6
sand (shell gravel)	0.2	0.2	3.5	5.9	7.5	14.7	0.7	1.1	5.3	9.7	4.2
cobble	0.2	0.2	0.3	0.7	0.1	0.4	1.3	3.9	0.8	2.0	0.6

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, Field's Cove Station FC 3 +.3m

Survey Date	128		129		130		131		Annual Mean
	11-Jan-02		29-May-02		23-Jul-02		19-Nov-02		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae									
<i>Mazzaella flaccida</i>	16.7	12.9	42.3	20.7	48.4	18.1	14.9	15.3	30.6
Non-coralline crust	21.1	9.5	19.3	7.8	10.2	3.9	35.4	10.0	21.5
<i>Gastroclonium subarticulatum</i>	9.1	6.1	7.2	9.8	7.1	8.7	9.5	7.5	8.2
<i>Phyllospadix</i> spp.	9.9	18.4	6.0	11.3	7.0	14.5	8.5	13.7	7.8
coralline crust	7.3	5.2	5.6	3.5	3.8	2.5	6.3	6.9	5.7
<i>Chondracanthus canaliculatus</i>	5.1	4.6	7.1	2.9	5.8	4.7	4.5	4.3	5.6
<i>Calliarth./Bossie.</i> spp.-complex	5.8	8.8	5.1	6.8	4.3	6.7	5.8	8.8	5.3
<i>Mastocarpus papillatus</i>	2.6	1.7	6.0	3.5	5.9	3.7	2.5	2.3	4.3
<i>Mastocarpus jardinii</i>	5.1	5.9	5.1	6.2	5.1	5.5	1.7	2.5	4.2
<i>Cryptopleura violacea</i>	8.1	5.4	1.8	2.2	3.1	1.9	3.1	2.7	4.0
<i>Corallina vancouveriensis</i>	5.2	5.0	3.1	2.7	1.4	1.4	4.7	2.5	3.6
<i>Gelidium coulteri</i>	1.7	1.3	5.4	2.2	3.7	2.1	3.0	2.1	3.5
<i>Mazzaella affinis</i>	1.1	1.4	3.3	3.2	2.1	1.8	1.3	1.8	1.9
<i>Spongo./Acrosiphon.</i> -complex	0.0	0.0	1.7	3.4	5.4	7.0	0.0	0.0	1.8
<i>Ulva/Enteromorpha</i> spp.	1.2	1.7	1.0	2.0	1.6	2.0	3.2	2.5	1.8
<i>Porphyra</i> spp.	0.0	0.0	0.6	0.8	5.4	8.9	0.2	0.7	1.5
<i>Egregia menziesii</i>	1.9	4.2	0.0	0.0	2.1	5.9	1.9	3.3	1.5
<i>Mazzaella heterocarpa</i>	1.2	1.4	2.4	1.9	1.4	0.9	0.6	0.7	1.4
<i>Endocladia muricata</i>	1.0	1.1	2.4	3.7	1.0	1.4	0.9	1.9	1.3
juv. articulated coralline algae	0.9	1.2	1.0	1.9	0.6	1.1	2.4	1.8	1.2
<i>Prionitis</i> spp.	1.0	1.5	0.6	1.1	0.4	0.8	1.5	1.4	0.9
<i>Callithamnion pikeanum</i>	<.1	0.2	0.9	2.0	0.5	1.1	0.0	0.0	0.4
<i>Mazzaella leptorhynchus</i>	0.2	0.5	0.7	1.8	<.1	0.2	0.4	0.5	0.3
Chrysophyta unid.	0.0	0.0	1.4	2.4	<.1	<.01	0.0	0.0	0.3
filamentous red algae-complex	0.6	1.0	0.2	0.7	0.3	0.7	<.1	0.2	0.3
<i>Osmundea</i> spp.	0.7	1.0	<.1	0.2	<.1	<.01	0.0	0.0	0.2
<i>Cryptosiphonia woodii</i>	0.3	0.9	0.3	0.9	<.1	0.2	0.0	0.0	0.2
<i>Smithora naiadum</i>	<.1	<.01	<.1	<.01	0.3	1.1	0.2	0.5	0.1
<i>Gelidium pusillum</i>	<.1	<.01	0.1	0.4	<.1	<.01	0.3	0.4	0.1
<i>Halymen./Schizy.</i> spp.-complex	0.2	0.7	0.0	0.0	<.1	0.2	0.0	0.0	<.1
<i>Microcladia coulteri</i>	<.1	<.01	<.1	0.2	0.1	0.4	0.0	0.0	<.1
<i>Corallina officinalis</i>	0.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Chondracanthus corymbiferus</i>	<.1	<.01	<.1	<.01	<.1	<.01	<.1	0.2	<.1
<i>Microcladia borealis</i>	<.1	0.2	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Cladophora</i> spp.	0.0	0.0	<.1	<.01	<.1	<.01	<.1	0.0	<.1
<i>Melobesia mediocris</i>	<.1	<.01	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Colpomenia</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Cystoseira osmundacea</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Sarcodiotheca gaudichaudii</i>	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Callitham.</i> spp./ <i>Pleonospor.</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Pterosiphonia dendroidea</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Laminariales	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Farlowia/Pikea</i> spp.-complex	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Invertebrates									
<i>Strongylocentrotus purpuratus</i>	62.8	106.3	33.2	55.5	55.2	85.6	46.8	81.9	49.5

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, Field's Cove
Station FC 3 +.3m (continued)

	Survey 1	128	129	130	131	
Survey Date	11-Jan-02	29-May-02	23-Jul-02	19-Nov-02		
	Mean	Std.	Mean	Std.	Mean	Std.
Annual Mean						
Invertebrates (continued)						
<i>Pagurus</i> spp.	24.0	11.8	10.0	4.4	28.4	15.5
<i>Tegula funebris</i>	63.0	73.4	3.4	5.3	0.6	1.3
<i>Anthopleura elegantissima</i>	7.6	1.1	9.4	5.4	10.8	5.4
<i>Tegula brunnea</i>	3.4	2.7	3.0	4.6	8.4	4.6
<i>Tetraclita rubescens</i>	6.0	13.4	3.0	6.7	3.6	8.1
<i>Tectura scutum</i>	2.2	1.9	5.2	3.6	4.2	2.5
<i>Pista</i> spp.	5.1	8.7	1.6	2.3	1.4	3.0
<i>Serpulorbis squamigerus</i>	7.6	12.8	1.0	2.2	0.4	0.9
<i>Fissurella volcano</i>	2.6	3.2	1.4	1.7	2.8	2.2
<i>Macclintockia scabra</i>	3.8	6.9	1.0	2.2	1.6	3.1
<i>Nemertea</i> unid.	1.8	1.8	1.2	0.8	4.4	6.1
<i>Leptasterias</i> spp.	3.0	2.4	2.0	1.7	1.4	1.1
<i>Nuttallina californica</i>	2.6	3.7	0.8	1.8	0.6	0.9
<i>Lottia limatula</i>	2.4	2.1	0.0	0.0	0.2	0.5
<i>Serpulidae</i> unid.	1.8	2.5	1.6	1.7	0.6	0.9
<i>Ocenebra</i> spp.	1.0	1.0	1.6	1.5	0.4	0.6
<i>Phragmatopoma californica</i>	0.5	1.5	1.9	4.0	0.5	1.1
<i>Pachygrapsus crassipes</i>	0.2	0.5	1.0	1.4	1.4	1.7
<i>Tonicella lineata</i>	0.4	0.9	0.0	0.0	0.8	0.8
<i>Lottia pelta</i>	0.6	1.3	0.0	0.0	0.8	1.3
<i>Acmaea mitra</i>	0.6	0.9	0.0	0.0	<.1	<.01
<i>Pugettia</i> spp.	0.0	0.0	0.2	0.5	0.4	0.6
<i>Sipuncula</i> unid.	<.1	<.01	0.2	0.5	<.1	<.01
<i>Cyanoplax</i> spp.	0.4	0.6	0.0	0.0	0.0	0.0
<i>Nereididae</i> unid.	0.0	0.0	0.0	0.0	0.4	0.6
<i>Pisaster ochraceus</i>	0.4	0.9	0.0	0.0	0.0	0.0
<i>Cancer</i> spp.	0.0	0.0	0.0	0.0	0.4	0.6
<i>Ischnochitonidae</i>	0.0	0.0	<.1	<.01	<.1	<.01
tunicates, colonial/social unid.	<.1	<.01	<.1	<.01	0.1	0.4
<i>Acmaeidae</i> unid.	<.1	<.01	<.1	0.0	<.1	<.01
<i>Lacuna</i> spp.	<.1	<.01	<.1	<.01	<.1	<.01
<i>Chthamalus fissus</i>	<.1	<.01	<.1	<.01	<.1	<.01
<i>Lottia asmi</i>	<.1	<.01	0.0	0.0	0.0	0.0
<i>Spirorbidae</i>	<.1	<.01	<.1	<.01	<.1	<.01
<i>Littorina</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0
Bryozoa, unid. (encrusting)	<.1	<.01	0.0	0.0	<.1	<.01
<i>Alia</i> spp.	0.0	0.0	<.1	<.01	0.0	0.0
<i>Calliostoma ligatum</i>	0.0	0.0	0.0	0.0	<.1	<.01
<i>Crepidula</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0
Porifera unid. (encrusting)	0.0	0.0	0.0	0.0	0.0	<.1
<i>Phidiana hiltoni</i>	<.1	<.01	0.0	0.0	0.0	0.0
<i>Bittium</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0
<i>Amphissa</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0
<i>Cirratulidae/Terebellidae</i> unid.	0.0	0.0	0.0	0.0	<.1	<.01
<i>Homo. luridum/Lirular. succin.</i>	0.0	0.0	<.1	<.01	0.0	0.0

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, Field's Cove
Station FC 3 +.3m (continued)

Survey Survey Date	128		129		130		131		Annual Mean
	11-Jan-02		29-May-02		23-Jul-02		19-Nov-02		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
<i>Haliclona</i> spp.	< .1	< .01	0.0	0.0	0.0	0.0	0.0	0.0	< .1
Bryozoa, unid. (foliose)	< .1	< .01	0.0	0.0	0.0	0.0	0.0	0.0	< .1
Substrate									
rock	3.5	2.7	9.0	10.4	6.7	6.3	4.4	3.0	5.9
sand (shell gravel)	6.5	7.5	1.8	2.1	1.0	1.1	2.8	2.0	3.0
cobble	1.5	2.4	1.2	1.5	1.9	2.2	1.3	2.2	1.5

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, Field's Cove Station FC 3 +.9m

Survey	128	129	130	131	
Survey Date	9-Jan-02	29-May-02	23-Jul-02	19-Nov-02	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean
Algae					
<i>Endocladia muricata</i>	34.2	12.2	46.7	22.2	34.7
<i>Mastocarpus papillatus</i>	21.7	11.7	25.4	22.4	42.7
Non-coralline crust	18.1	9.9	12.8	4.9	12.2
<i>Mazzaella flaccida</i>	3.7	2.7	2.9	2.9	4.4
<i>Mazzaella affinis</i>	3.8	6.4	0.6	1.1	<.1
<i>Gelidium coulteri</i>	0.8	1.2	<.1	0.2	1.3
coralline crust	1.0	1.4	0.9	0.9	0.4
<i>Cladophora</i> spp.	<.1	0.2	0.4	0.9	1.1
<i>Pelvetia compressa</i>	0.8	1.7	0.1	0.3	1.0
<i>Corallina vancouveriensis</i>	0.7	2.0	<.1	<.01	0.9
<i>Gelidium pusillum</i>	0.3	0.4	0.9	0.9	0.1
<i>Mazzaella heterocarpa</i>	1.1	1.2	0.2	0.3	<.1
<i>Calliarth./Bossie. spp.-complex</i>	0.0	0.0	1.4	2.0	<.1
<i>Mastocarpus jordinii</i>	<.1	0.2	0.1	0.4	0.1
<i>Fucus gardneri</i>	0.2	0.7	0.1	0.4	0.2
<i>Porphyra</i> spp.	0.0	0.0	0.1	0.3	0.5
<i>Prionitis</i> spp.	0.0	0.0	0.3	1.1	<.1
<i>Chondracanthus canaliculatus</i>	0.2	0.3	<.1	0.2	0.0
juv. articulated coralline algae	<.1	0.2	0.2	0.3	<.1
<i>Mazzaella leptorhynchus</i>	0.1	0.4	0.0	0.0	<.1
<i>Cryptosiphonia woodii</i>	<.1	<.01	0.1	0.3	<.1
<i>Ulva/Enteromorpha</i> spp.	<.1	<.01	0.0	0.0	0.0
<i>Phyllospadix</i> spp.	0.0	0.0	<.1	<.01	0.0
<i>Callithamnion pikeanum</i>	0.0	0.0	<.1	<.01	0.0
<i>Gastroclonium subarticulatum</i>	0.0	0.0	0.0	0.0	<.1
Invertebrates					
<i>Tegula funebris</i>	144.6	102.1	258.0	73.1	280.8
<i>Pagurus</i> spp.	12.0	8.0	4.4	2.7	25.8
<i>Anthopleura elegantissima</i>	10.4	9.9	11.0	16.5	12.4
<i>Macclintockia scabra</i>	0.6	0.9	6.8	5.5	9.8
<i>Cyanoplax</i> spp.	0.2	0.5	1.6	1.8	1.8
<i>Tectura scutum</i>	0.4	0.6	0.4	0.9	0.4
<i>Pachygrapsus crassipes</i>	0.2	0.5	0.8	0.8	1.6
<i>Acanthina</i> spp.	0.0	0.0	0.4	0.6	0.6
<i>Lottia limatula</i>	0.4	0.6	0.2	0.5	0.4
<i>Ocenebra</i> spp.	0.8	1.3	0.4	0.6	0.4
<i>Lottia pelta</i>	0.4	0.9	0.0	0.0	0.4
<i>Phragmatopoma californica</i>	<.1	0.2	0.5	0.9	<.1
<i>Strongylocentrotus purpuratus</i>	0.2	0.5	0.0	0.0	0.4
Ischnochitonidae	0.0	0.0	0.4	0.9	<.1
Nemertea unid.	0.0	0.0	0.0	0.0	0.4
<i>Tegula montereyi</i>	0.0	0.0	0.4	0.9	0.0
<i>Lottia asmi</i>	<.1	<.01	<.1	<.01	<.1
<i>Tegula brunnea</i>	0.0	0.0	0.2	0.5	0.0
<i>Nuttallina californica</i>	0.0	0.0	0.2	0.5	0.0

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, Field's Cove
Station FC 3 +.9m (continued)

Survey Survey Date	128		129		130		131		Annual Mean
	9-Jan-02	Std. Dev.	29-May-02	Std. Dev.	23-Jul-02	Std. Dev.	19-Nov-02	Std. Dev.	
Invertebrates (continued)									
<i>Leptasterias</i> spp.	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Pisaster ochraceus</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
<i>Chthamalus fissus</i>	<.1	<.01	0.1	0.3	<.1	<.01	<.1	<.01	<.1
Acmaeidae unid.	<.1	<.01	<.1	<.01	<.1	0.0	<.1	<.01	<.1
<i>Littorina</i> spp.	<.1	<.01	<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Nitidiscala/Opalia</i> spp.	<.1	<.01	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Lacuna</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Pista</i> spp.	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Haliclona</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Spirorbidae	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
Substrate									
rock	12.5	7.7	13.1	13.3	16.5	8.5	13.9	12.9	14.0
sand (shell gravel)	10.9	13.3	1.0	1.9	1.4	1.5	1.1	1.4	3.6
cobble	0.3	0.6	0.4	0.9	0.8	1.2	0.3	0.9	0.5

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, North Diablo Cove
Station NDC 1 +3m

	Survey Date	128	129	130	131					
		14-Jan-02	17-May-02	25-Jul-02	21-Nov-02					
		Mean	Std. Dev.	Mean	Std. Dev.	Mean				
						Std. Dev.				
						Annual Mean				
Algae										
Non-coralline crust		26.0	11.5	23.3	15.2	29.0	18.8	25.6	14.3	26.0
coralline crust		4.4	3.3	2.0	1.8	0.8	0.9	3.2	2.7	2.6
<i>Mastocarpus papillatus</i>		3.5	2.3	0.0	0.0	0.3	0.4	1.5	1.0	1.3
juv. articulated coralline algae		2.0	1.9	0.4	0.7	0.1	0.3	0.4	0.7	0.7
<i>Corallina vancouveriensis</i>		0.5	0.9	0.1	0.4	<.1	<.01	0.9	1.4	0.4
<i>Gelidium coulteri</i>		0.2	0.3	0.0	0.0	0.3	1.1	0.2	0.3	0.2
filamentous red algae-complex		0.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
<i>Chondracanthus canaliculatus</i>		0.4	0.9	0.0	0.0	<.1	<.01	<.1	<.01	0.1
<i>Mazzaella affinis</i>		0.3	0.7	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Calliarth./Bossie. spp.-complex</i>		0.1	0.3	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Gastroclonium subarticulatum</i>		0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Prionitis</i> spp.		0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Mazzaella leptorhynchus</i>		<.1	<.01	0.0	0.0	<.1	<.01	<.1	0.2	<.1
<i>Mazzaella flaccida</i>		0.0	0.0	0.0	0.0	<.1	<.01	<.1	0.2	<.1
<i>Cladophora</i> spp.		<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Gelidium pusillum</i>		<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Ulva/Enteromorpha</i> spp.		0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Invertebrates										
<i>Macclintockia scabra</i>		195.0	87.0	410.2	84.9	725.0	271.4	824.0	108.5	538.6
<i>Tegula funebris</i>		74.2	54.5	158.4	78.4	21.8	23.0	40.6	36.7	73.8
<i>Pagurus</i> spp.		18.4	7.4	17.6	21.4	51.0	25.7	65.2	41.8	38.1
<i>Tetracitta rubescens</i>		16.8	15.5	33.2	29.5	11.8	12.0	16.6	9.3	19.6
<i>Tectura scutum</i>		2.2	1.8	26.2	10.3	28.0	11.4	17.0	6.0	18.4
<i>Lottia pelta</i>		11.8	8.8	14.6	8.1	7.6	5.2	37.0	31.6	17.8
<i>Lottia limatula</i>		14.8	10.2	12.8	6.5	19.2	11.7	13.2	5.5	15.0
<i>Chthamalus fissus</i>		14.3	7.4	15.6	8.2	13.1	10.2	9.5	5.7	13.1
<i>Lottia digitalis</i>		3.2	4.4	0.6	1.3	21.4	25.2	14.6	14.4	10.0
<i>Strongylocentrotus purpuratus</i>		3.6	2.0	9.6	15.4	13.4	12.1	4.6	2.4	7.8
<i>Anthopleura elegantissima</i>		3.6	1.8	5.4	5.2	3.4	2.3	2.6	1.1	3.8
<i>Fissurella volcano</i>		5.0	2.4	3.6	1.7	2.6	2.0	3.0	2.8	3.6
<i>Tegula brunnea</i>		9.6	9.4	0.2	0.5	1.6	1.8	0.0	0.0	2.9
<i>Phragmatopoma californica</i>		3.4	3.4	2.9	2.1	1.0	1.4	2.6	3.9	2.5
<i>Serpulidae</i> unid.		1.4	0.6	3.8	3.1	1.4	1.1	1.8	1.1	2.1
<i>Pachygrapsus crassipes</i>		0.8	0.8	2.8	0.8	3.6	2.1	0.6	0.6	2.0
<i>Anthopleura xanthogrammica</i>		1.2	0.8	1.0	0.7	1.2	0.8	0.8	0.8	1.1
<i>Ocenebra</i> spp.		0.6	0.6	2.2	1.8	0.2	0.5	1.0	1.0	1.0
<i>Mytilus californianus</i>		0.4	0.9	0.2	0.5	0.6	0.9	1.6	1.1	0.7
<i>Lottia gigantea</i>		0.2	0.5	0.2	0.5	0.0	0.0	1.8	2.1	0.6
<i>Nuttallina californica</i>		0.6	0.9	1.0	2.2	0.6	1.3	0.0	0.0	0.6
<i>Acanthina</i> spp.		0.4	0.6	1.0	1.2	0.0	0.0	0.2	0.5	0.4
<i>Cyanoplax</i> spp.		0.0	0.0	0.8	0.8	0.2	0.5	0.2	0.5	0.3
<i>Mopalia</i> spp.		0.0	0.0	0.2	0.5	0.2	0.5	0.0	0.0	<.1
<i>Balanus</i> spp.		0.0	0.0	0.0	0.0	0.4	0.6	0.0	0.0	<.1
<i>Heptacarpus</i> spp.		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9	<.1
<i>Mytilus galloprovincialis</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9	<.1

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, North Diablo Cove
Station NDC 1 +.3m (continued)

Survey Survey Date	128		129		130		131		Annual Mean
	14-Jan-02		17-May-02		25-Jul-02		21-Nov-02		
	Mean	Std Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
<i>Acmaea mitra</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
Acmaeidae unid.	<.1	0.0	<.1	<.01	<.1	0.0	<.1	<.01	<.1
<i>Littorina</i> spp.	0.0	0.0	<.1	0.0	<.1	<.01	0.0	0.0	<.1
<i>Lottia asmi</i>	0.0	0.0	<.1	0.0	0.0	0.0	<.1	<.01	<.1
Spirorbidae	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Pollicipes polymerus</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Ischnochitonidae	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Lepidozona</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Mytilus</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Pista</i> spp.	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
Substrate									
rock	28.1	9.9	32.0	15.4	36.3	18.0	37.1	15.5	33.4
cobble	15.4	7.6	21.8	10.2	16.9	9.4	15.5	13.7	17.4
sand (shell gravel)	3.1	2.4	4.2	2.7	3.9	4.0	6.5	3.3	4.4

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, North Diablo Cove
Station NDC 1 +.9m

	Survey Date	128 29-Jan-02	129 17-May-02	130 25-Jul-02	131 21-Nov-02	Annual Mean
		Mean Std. Dev.	Mean Std. Dev.	Mean Std. Dev.	Mean Std. Dev.	Mean Std. Dev.
Algae						
Non-coralline crust		48.7 20.7	41.3 21.5	48.3 22.7	35.0 17.6	43.3
<i>Endocladia muricata</i>		4.2 5.7	6.7 10.1	6.9 9.6	6.0 9.2	6.0
<i>Mastocarpus papillatus</i>		0.8 1.4	1.2 1.8	1.5 1.7	2.3 2.5	1.5
coralline crust		0.7 2.0	0.9 2.2	0.2 0.7	0.9 1.3	0.7
<i>Mazzaella affinis</i>		0.0 0.0	<.1 <.01	<.1 <.01	0.2 0.1	<.1
<i>Mazzaella leptorhynchus</i>		<.1 0.2	<.1 <.01	<.1 <.01	<.1 0.2	<.1
juv. articulated coralline algae		0.1 0.4	<.1 <.01	<.1 <.01	<.1 <.01	<.1
<i>Gelidium coulteri</i>		0.0 0.0	0.0 0.0	<.1 0.2	<.1 0.2	<.1
<i>Cladophora</i> spp.		<.1 <.01	<.1 0.0	<.1 0.0	<.1 <.01	<.1
<i>Gelidium pusillum</i>		<.1 <.01	<.1 <.01	<.1 0.0	<.1 <.01	<.1
<i>Gastroclonium subarticulatum</i>		0.0 0.0	0.0 0.0	0.0 0.0	<.1 <.01	<.1
<i>Mastocarpus jardinii</i>		0.0 0.0	0.0 0.0	0.0 0.0	<.1 <.01	<.1
<i>Chondracanthus canaliculatus</i>		0.0 0.0	0.0 0.0	0.0 0.0	<.1 <.01	<.1
<i>Pterosiphonia dendroidea</i>		0.0 0.0	0.0 0.0	0.0 0.0	<.1 <.01	<.1
Invertebrates						
<i>Macclintockia scabra</i>		85.2 49.0	136.8 43.5	312.2 159.7	203.2 105.6	184.4
<i>Tegula funebris</i>		190.2 82.4	112.4 33.7	181.8 87.0	199.4 105.3	171.0
<i>Anthopleura elegantissima</i>		27.6 28.7	41.8 47.4	43.0 56.8	58.2 70.1	42.7
<i>Pagurus</i> spp.		18.2 15.8	3.8 5.2	1.4 1.1	23.4 18.6	11.7
<i>Tectura scutum</i>		2.0 1.6	5.2 4.0	6.4 4.2	4.0 4.2	4.4
<i>Lottia limatula</i>		1.0 1.2	3.2 3.1	9.0 5.0	2.0 2.6	3.8
<i>Chthamalus fissus</i>		4.0 6.5	4.3 5.5	3.8 5.7	1.8 2.5	3.5
<i>Lottia pelta</i>		1.0 1.0	1.6 2.1	2.8 1.3	1.4 1.3	1.7
<i>Lottia digitalis</i>		0.0 0.0	0.0 0.0	0.8 1.8	5.6 9.3	1.6
<i>Ocenebra</i> spp.		2.4 4.3	0.6 0.6	0.4 0.6	1.2 1.1	1.2
<i>Acanthina</i> spp.		1.0 1.4	0.8 0.8	0.4 0.6	0.4 0.6	0.7
<i>Fissurella volcano</i>		0.0 0.0	0.0 0.0	0.4 0.9	1.2 2.2	0.4
<i>Pachygrapsus crassipes</i>		0.2 0.5	0.6 0.9	0.4 0.9	0.0 0.0	0.3
<i>Cyanoplax</i> spp.		0.0 0.0	0.2 0.5	<.1 <.01	0.6 0.9	0.2
<i>Mopalia</i> spp.		0.0 0.0	0.0 0.0	0.6 0.6	0.2 0.5	0.2
<i>Mytilus californianus</i>		0.0 0.0	0.0 0.0	0.0 0.0	0.8 1.1	0.2
Serpulidae unid.		0.0 0.0	0.2 0.5	0.0 0.0	0.4 0.6	0.2
<i>Asterina miniata</i>		0.6 1.3	0.0 0.0	0.0 0.0	0.0 0.0	0.2
<i>Anthopleura xanthogrammica</i>		0.0 0.0	0.2 0.5	0.2 0.5	0.0 0.0	<.1
<i>Strongylocentrotus purpuratus</i>		0.0 0.0	0.0 0.0	0.0 0.0	0.4 0.9	<.1
<i>Phragmatopoma californica</i>		<.1 <.01	<.1 0.0	<.1 <.01	0.3 1.1	<.1
<i>Acmaea mitra</i>		0.0 0.0	0.0 0.0	0.0 0.0	0.2 0.5	<.1
<i>Mytilus galloprovincialis</i>		0.0 0.0	0.0 0.0	0.0 0.0	0.2 0.5	<.1
Acmaeidae unid.		<.1 0.0	<.1 0.0	<.1 <.01	<.1 <.01	<.1
<i>Littorina</i> spp.		<.1 <.01	<.1 <.01	<.1 <.01	<.1 <.01	<.1
<i>Lottia asmi</i>		<.1 <.01	<.1 <.01	<.1 <.01	<.1 <.01	<.1
<i>Nitidiscala/Opalia</i> spp.		<.1 <.01	<.1 <.01	0.0 0.0	<.1 <.01	<.1
Spirorbidae		<.1 <.01	0.0 0.0	0.0 0.0	<.1 <.01	<.1
<i>Crepidula</i> spp.		0.0 0.0	<.1 <.01	0.0 0.0	0.0 0.0	<.1
Ischnochitonidae		0.0 0.0	0.0 0.0	0.0 0.0	<.1 <.01	<.1

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, North Diablo Cove
 Station NDC 1 +.9m (continued)

	Survey	128		129		130		131		Annual Mean
	Survey Date	29-Jan-02		17-May-02		25-Jul-02		21-Nov-02		
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Substrate										
rock		22.2	15.7	35.0	24.4	31.2	22.9	39.2	23.4	31.9
cobble		11.5	6.7	8.8	8.8	8.3	7.4	10.4	8.4	9.8
sand (shell gravel)		8.1	5.2	5.9	5.8	4.5	4.5	6.7	4.4	6.3

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, North Diablo Cove
Station NDC 2 +3m

Survey	Survey Date	128		129		130		131		Annual Mean
		14-Jan-02	Std.	29-Apr-02	Std.	24-Jun-02	Std.	4-Nov-02	Std.	
		Mean	Dev.	Mean	Dev.	Mean	Dev.	Mean	Dev.	
Algae										
<i>Phyllospadix</i> spp.		20.0	27.0	15.1	19.8	17.8	27.5	23.3	31.0	19.0
Non-coralline crust		24.9	14.9	19.8	18.7	13.3	11.8	18.1	26.4	19.0
filamentous red algae-complex		7.1	9.7	25.6	27.2	21.0	22.7	9.0	13.1	15.6
<i>Gastroleclonum subarticulatum</i>		6.6	6.4	2.9	2.9	5.1	4.4	4.2	2.8	4.7
coralline crust		5.1	5.6	3.3	2.9	1.5	1.5	3.2	2.6	3.2
<i>Pterosiphonia dendroidea</i>		10.6	10.2	1.1	3.0	0.0	0.0	0.6	0.6	3.1
<i>Chondracanthus canaliculatus</i>		2.4	3.0	2.1	2.0	2.2	1.8	1.3	1.8	2.0
<i>Mastocarpus papillatus</i>		0.2	0.5	2.2	2.1	3.9	5.8	1.3	2.0	1.9
<i>Mazzaella affinis</i>		1.0	1.3	2.2	1.8	2.5	2.6	0.8	1.3	1.6
juv. articulated coralline algae		0.5	0.8	0.3	0.7	<1	<.01	2.0	2.5	0.7
<i>Smithora naiadum</i>		<1	<.01	0.0	0.0	<1	<.01	2.8	4.0	0.7
<i>Prionitis</i> spp.		1.3	1.5	0.1	0.3	0.3	1.1	0.8	1.1	0.6
<i>Gelidium coulteri</i>		0.1	0.3	0.5	0.9	0.5	0.9	0.8	1.6	0.5
<i>Phycodrys</i> spp.		0.0	0.0	0.0	0.0	1.3	1.5	0.0	0.0	0.3
<i>Ulva/Enteromorpha</i> spp.		<1	0.2	0.3	0.7	0.0	0.0	0.8	0.6	0.3
<i>Calliarth/Bossie</i> spp.-complex		0.9	2.9	<1	<.01	<1	<.01	<1	0.2	0.2
<i>Mazzaella leptorhynchus</i>		0.1	0.3	0.3	0.7	0.3	0.6	0.1	0.3	0.2
<i>Endocladia muricata</i>		<1	<.01	0.3	0.9	0.2	0.7	0.3	1.1	0.2
<i>Cryptopleura violacea</i>		<1	0.2	0.8	2.4	0.0	0.0	0.0	0.0	0.2
Chrysophyta unid.		0.0	0.0	0.1	0.4	0.0	0.0	0.6	1.3	0.2
<i>Gelidium pusillum</i>		0.0	0.0	0.1	0.3	0.0	0.0	0.2	0.3	<1
<i>Mastocarpus jardinii</i>		0.0	0.0	0.0	0.0	0.1	0.4	0.1	0.3	<1
<i>Cladophora</i> spp.		<1	<.01	<1	<.01	0.1	0.3	<1	<.01	<1
<i>Porphyra</i> spp.		0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	<1
<i>Osmundea</i> spp.		0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	<1
<i>Corallina vancouveriensis</i>		<1	0.2	<1	<.01	<1	<.01	<1	<.01	<1
<i>Mazzaella heterocarpa</i>		<1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	<1
<i>Halymen/Schizy</i> spp.-complex		0.0	0.0	0.0	0.0	0.0	0.0	<1	0.2	<1
<i>Colpomenia</i> spp.		0.0	0.0	0.0	0.0	<1	<.01	0.0	0.0	<1
<i>Bryopsis</i> spp.		<1	<.01	0.0	0.0	<1	<.01	0.0	0.0	<1
<i>Melobesia mediocris</i>		<1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<1
Invertebrates										
<i>Macclintockia scabra</i>		164.4	203.3	214.6	151.5	308.0	360.2	380.2	401.4	266.8
<i>Tetraclita rubescens</i>		72.2	91.1	66.2	99.6	72.6	126.4	36.0	49.6	61.8
<i>Strongylocentrotus purpuratus</i>		23.4	44.2	76.2	101.6	72.6	93.0	24.2	28.2	49.1
<i>Lottia pelta</i>		10.8	14.9	11.0	14.0	37.6	33.7	26.4	22.2	21.5
<i>Lottia limatula</i>		3.2	1.3	14.0	5.5	16.6	5.7	2.2	1.9	9.0
<i>Tegula funebris</i>		26.6	43.8	8.4	18.8	0.2	0.5	0.0	0.0	8.8
<i>Pagurus</i> spp.		13.4	18.1	8.4	12.6	7.2	8.8	2.4	4.3	7.9
<i>Anthopleura elegantissima</i>		10.4	11.2	5.6	10.0	5.2	6.1	6.6	11.5	7.0
<i>Lottia digitalis</i>		1.0	2.2	13.4	28.9	8.0	12.3	4.6	10.3	6.8
<i>Fissurella volcano</i>		7.2	10.6	2.4	1.8	5.4	3.8	6.0	7.0	5.3
<i>Tectura scutum</i>		0.8	1.8	4.8	5.1	12.0	10.3	3.4	5.0	5.3
<i>Mytilus californianus</i>		7.0	15.7	0.0	0.0	5.6	10.0	7.8	13.4	5.1
<i>Chthamalus fissus</i>		3.5	9.8	2.8	7.8	5.6	14.8	2.5	7.9	3.6

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, North Diablo Cove
Station NDC 2 +.3m (continued)

Survey Survey Date	128 14-Jan-02		129 29-Apr-02		130 24-Jun-02		131 4-Nov-02		Annual Mean
	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
<i>Lottia gigantea</i>	1.4	3.1	0.2	0.5	2.2	4.9	1.2	2.7	1.3
<i>Balanus</i> spp.	0.0	0.0	0.0	0.0	5.0	11.2	0.0	0.0	1.3
<i>Cyanoplax</i> spp.	0.6	0.6	1.6	2.5	1.4	2.1	0.6	0.9	1.1
<i>Pachygrapsus crassipes</i>	0.2	0.5	1.0	1.2	2.2	2.9	0.4	0.9	1.0
<i>Mytilus</i> spp.	0.0	0.0	3.2	4.6	0.0	0.0	0.0	0.0	0.8
<i>Nuttallina californica</i>	0.2	0.5	0.8	1.3	0.8	1.8	1.0	1.4	0.7
Serpulidae unid.	1.4	3.1	0.0	0.0	0.2	0.5	0.4	0.9	0.5
<i>Pista</i> spp.	1.0	2.2	<.1	<.01	0.4	1.1	0.6	1.0	0.5
<i>Phragmatopoma californica</i>	<.1	<.01	<.1	0.2	0.8	2.6	<.1	<.01	0.2
<i>Mopalia</i> spp.	0.4	0.6	0.0	0.0	0.4	0.9	0.0	0.0	0.2
<i>Tegula brunnea</i>	0.0	0.0	0.0	0.0	0.2	0.5	0.6	1.3	0.2
<i>Pugettia</i> spp.	0.2	0.5	0.2	0.5	0.0	0.0	0.2	0.5	0.2
<i>Epiactis prolifera</i>	0.0	0.0	0.0	0.0	0.4	0.9	0.0	0.0	<.1
<i>Acmaea mitra</i>	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1
<i>Anthopleura xanthogrammica</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
Nemertea unid.	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
<i>Acanthina</i> spp.	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Alia</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Serpulorbis squamigerus</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
Pelecypoda unid	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Ocenebra</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Ophiothrix</i> spp.	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
<i>Tectura paleacea</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Mytilus galloprovincialis</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
Acmaeidae unid.	<.1	<.01	<.1	0.0	<.1	0.0	<.1	0.0	<.1
Spirorbidae	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Lacuna</i> spp.	<.1	<.01	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Cirratulidae/Terebellidae unid.	0.0	0.0	<.1	<.01	0.0	0.0	<.1	<.01	<.1
<i>Littorina</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Lottia asmi</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Pelecypoda unid. boring	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Heptacarpus</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Porifera unid. (encrusting)	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Substrate									
rock	18.5	9.7	23.3	18.1	21.8	16.1	27.7	25.1	22.8
sand (shell gravel)	6.0	6.4	4.9	4.4	9.2	8.4	11.9	8.2	8.0
cobble	3.3	4.5	10.1	9.6	6.9	6.6	6.5	6.2	6.7

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, North Diablo Cove
Station NDC 2 +.9m

Survey	Survey Date	128		129		130		131		Annual Mean
		14-Jan-02	Std.	29-Apr-02	Std.	23-Jul-02	Std.	4-Nov-02	Std.	
		Mean	Dev.	Mean	Dev.	Mean	Dev.	Mean	Dev.	
Algae										
<i>Endocladia muricata</i>	0.0	16.6	14.6	17.9	15.5	16.0	13.6	14.1	16.7	16.1
Non-coralline crust	0.0	5.9	6.3	3.7	2.6	4.3	2.6	4.9	2.5	4.7
<i>Mastocarpus papillatus</i>	0.0	1.7	3.5	1.9	2.1	1.9	2.8	2.6	2.9	2.0
coralline crust	0.0	1.9	2.2	2.4	3.0	1.3	2.1	2.0	0.7	1.9
<i>Gelidium coulteri</i>	0.0	0.2	0.5	<.1	<.01	0.5	1.1	1.4	1.6	0.5
juv. articulated coralline algae	0.0	0.3	0.8	0.8	2.0	<.1	<.01	0.8	0.5	0.5
<i>Mazzaella affinis</i>	0.0	0.1	0.3	<.1	<.01	<.1	<.01	0.6	1.0	0.2
<i>Corallina vancouveriensis</i>	0.0	0.2	0.5	0.5	1.1	<.1	<.01	0.0	0.0	0.2
<i>Prionitis</i> spp.	0.0	0.0	0.0	<.1	<.01	<.1	0.2	0.3	0.9	0.1
<i>Gelidium pusillum</i>	0.0	<.1	<.01	<.1	<.01	<.1	0.0	0.3	0.4	<.1
filamentous red algae-complex	0.0	<.1	<.01	0.0	0.0	0.0	0.0	0.3	1.1	<.1
<i>Mastocarpus jardinii</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Gastroclonium subarticulatum</i>	0.0	<.1	<.01	0.0	0.0	<.1	<.01	0.1	0.4	<.1
<i>Calliarth./Bossie.</i> spp.-complex	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1	0.2	<.1
<i>Cladophora</i> spp.	0.0	<.1	<.01	<.1	<.01	<.1	0.0	<.1	<.01	<.1
<i>Ulva/Enteromorpha</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Chondracanthus canaliculatus</i>	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Mazzaella leptorhynchus</i>	0.0	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Invertebrates										
<i>Macclintockia scabra</i>	145.0	90.9	143.0	54.7	481.0	245.6	283.0	92.9	263.0	
<i>Tegula funebris</i>	155.2	21.1	163.0	128.5	77.2	76.2	60.2	69.0	113.9	
<i>Anthopleura elegantissima</i>	76.2	70.0	57.0	59.7	64.2	62.3	47.0	47.2	61.1	
<i>Chthamalus fissus</i>	11.4	8.4	13.3	10.9	12.2	9.2	9.7	5.7	11.6	
<i>Lottia limatula</i>	10.0	8.0	8.4	5.6	15.4	8.0	12.4	19.4	11.6	
<i>Lottia digitalis</i>	2.8	6.3	1.0	2.2	3.8	2.3	35.0	45.2	10.7	
<i>Pagurus</i> spp.	3.4	5.3	17.4	12.6	4.8	6.2	6.8	6.9	8.1	
<i>Cyanoplax</i> spp.	3.6	2.4	10.4	4.2	7.2	3.8	9.2	5.5	7.6	
<i>Lottia pelta</i>	1.4	0.9	3.0	3.7	3.4	3.8	5.4	4.8	3.3	
<i>Tectura scutum</i>	1.6	1.7	3.4	2.4	2.2	4.4	2.6	1.7	2.5	
<i>Acanthina</i> spp.	0.4	0.6	2.8	2.4	1.6	0.6	0.8	0.8	1.4	
<i>Lottia gigantea</i>	1.2	1.8	2.4	3.9	1.2	1.8	0.6	1.3	1.4	
<i>Pachygrapsus crassipes</i>	0.0	0.0	1.4	1.1	1.4	1.1	1.2	1.3	1.0	
<i>Mytilus californianus</i>	0.6	0.9	0.8	1.3	1.4	2.2	1.0	1.4	1.0	
<i>Fissurella volcano</i>	0.2	0.5	0.4	0.6	1.8	1.8	0.8	0.8	0.8	
<i>Mopalia</i> spp.	1.0	1.0	0.0	0.0	0.8	1.1	0.4	0.6	0.6	
<i>Nuttallina californica</i>	0.8	1.1	0.4	0.9	0.0	0.0	0.0	0.0	0.3	
<i>Strongylocentrotus purpuratus</i>	0.0	0.0	0.2	0.5	0.6	0.6	0.4	0.9	0.3	
<i>Tetraclita rubescens</i>	0.0	0.0	1.2	1.8	0.0	0.0	0.0	0.0	0.3	
<i>Phragmatopoma californica</i>	<.1	<.01	0.8	1.4	<.1	0.2	0.1	0.4	0.2	
<i>Ocenebra</i> spp.	0.0	0.0	0.0	0.0	0.2	0.5	0.2	0.5	<.1	
<i>Mytilus galloprovincialis</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9	<.1	
Serpulidae unid.	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1	
Acmaeidae unid.	<.1	0.0	<.1	0.0	<.1	0.0	<.1	0.0	<.1	
<i>Littorina</i> spp.	<.1	0.0	<.1	0.0	<.1	<.01	<.1	0.0	<.1	
<i>Lottia asmi</i>	0.0	0.0	<.1	<.01	<.1	<.01	<.1	<.01	<.1	

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, North Diablo Cove
Station NDC 2 +.9m (continued)

Survey Survey Date	128		129		130		131		Annual Mean
	14-Jan-02		29-Apr-02		23-Jul-02		4-Nov-02		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
Spirorbidae	< .1	< .01	0.0	0.0	0.0	0.0	< .1	< .01	< .1
Nemertea unid.	0.0	0.0	0.0	0.0	0.0	0.0	< .1	< .01	< .1
Cirratulidae/Terebellidae unid.	0.0	0.0	0.0	0.0	0.0	0.0	< .1	< .01	< .1
<i>Haliclona</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	< .1	< .01	< .1
Substrate									
rock	58.1	17.1	54.7	8.3	63.9	11.7	60.5	14.0	59.3
cobble	3.5	4.6	4.8	5.6	2.3	4.1	4.0	4.4	3.6
sand (shell gravel)	0.6	2.0	0.2	0.7	0.2	0.7	< .1	0.2	0.3

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, North Diablo Cove
Station NDC 3 +3m

	Survey Date	128		129		130		131		Annual Mean
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae										
Non-coralline crust		12.8	8.9	12.5	17.4	5.7	8.2	10.3	14.6	10.3
coralline crust		6.5	4.6	2.6	2.2	2.7	0.8	1.5	0.9	3.3
<i>Calliarth./Bossie. spp.-complex</i>		5.1	8.9	<.1	0.2	<.1	<.01	1.1	3.0	1.6
juv. articulated coralline algae		2.0	2.9	2.2	5.8	0.2	0.7	0.5	0.7	1.2
<i>Corallina vancouveriensis</i>		1.2	2.3	1.9	5.9	0.7	1.0	0.2	0.7	1.0
filamentous red algae-complex		0.0	0.0	0.6	2.0	0.0	0.0	0.1	0.4	0.2
<i>Gelidium coulteri</i>		0.3	0.8	0.1	0.3	<.1	0.2	0.1	0.3	0.2
<i>Gastroidium subarticulatum</i>		0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Gelidium pusillum</i>		0.0	0.0	<.1	<.01	<.1	<.01	<.1	0.2	<.1
<i>Chondracanthus canaliculatus</i>		<.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Cladophora spp.</i>		0.0	0.0	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Mazzaella affinis</i>		<.1	<.01	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Bryopsis spp.</i>		0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Ulva/Enteromorpha spp.</i>		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
Invertebrates										
<i>Macclintockia scabra</i>		198.4	60.2	341.0	72.3	264.8	140.7	412.0	340.5	304.1
<i>Tetractula rubescens</i>		55.6	26.0	79.0	79.0	61.4	64.8	104.2	99.2	75.1
<i>Strongylocentrotus purpuratus</i>		50.2	34.8	31.4	20.1	82.4	69.9	51.2	40.6	53.8
<i>Tectura scutum</i>		2.4	1.5	15.8	13.2	43.6	25.6	48.0	23.9	27.5
<i>Mytilus californianus</i>		0.0	0.0	64.6	144.5	21.0	28.4	1.6	1.5	21.8
<i>Lottia limatula</i>		3.4	3.4	29.2	26.8	27.2	18.4	18.6	14.0	19.6
<i>Lottia pelta</i>		20.6	22.5	12.6	13.6	39.8	33.7	4.0	3.5	19.3
<i>Mytilus spp.</i>		33.0	21.9	18.4	27.6	0.0	0.0	0.0	0.0	12.9
<i>Fissurella volcano</i>		15.6	12.5	7.6	8.2	5.4	4.3	7.8	8.0	9.1
<i>Nuttallina californica</i>		6.4	6.4	6.2	5.1	3.0	5.1	5.6	10.9	5.3
<i>Lottia gigantea</i>		3.4	6.0	0.8	0.8	1.4	3.1	6.4	6.2	3.0
<i>Pachygrapsus crassipes</i>		0.0	0.0	0.4	0.6	3.0	1.0	2.8	1.3	1.6
<i>Lottia digitalis</i>		3.4	6.5	0.0	0.0	2.6	5.8	0.0	0.0	1.5
<i>Chthamalus fissus</i>		1.9	5.0	2.5	3.2	<.1	0.0	1.5	3.1	1.5
<i>Pagurus spp.</i>		0.0	0.0	0.0	0.0	0.2	0.5	5.6	5.8	1.5
Serpulidae unid.		0.2	0.5	1.6	3.6	0.6	0.6	1.2	1.8	0.9
<i>Anthopleura elegantissima</i>		0.6	1.3	0.6	0.9	1.4	0.9	0.4	0.9	0.8
<i>Phragmatopoma californica</i>		0.3	1.1	0.5	0.7	0.8	2.0	0.4	0.8	0.5
<i>Cyanoplax spp.</i>		0.8	1.1	0.4	0.9	0.2	0.5	0.2	0.5	0.4
<i>Ocenebra spp.</i>		0.2	0.5	0.2	0.5	0.8	1.8	0.2	0.5	0.4
<i>Tegula funebris</i>		1.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.3
<i>Tegula brunnea</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.8	0.2
<i>Diadema sandiegensis</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9	<.1
<i>Acanthina spp.</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Cancer antennarius</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Pisaster ochraceus</i>		0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
Acmaeidae unid.		<.1	0.0	<.1	<.01	<.1	<.01	<.1	<.01	<.1
Pelecypoda unid. boring		0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
Sipuncula unid.		0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Spirorbidae		0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, North Diablo Cove
Station NDC 3 +.3m (continued)

Survey Survey Date	128		129		130		131		Annual Mean
	29-Jan-02		29-Apr-02		24-Jun-02		24-Nov-02		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
<i>Acmaea mitra</i>	< .1	< .01	0.0	0.0	0.0	0.0	0.0	0.0	< .1
<i>Lottia ochracea</i>	0.0	0.0	0.0	0.0	0.0	0.0	< .1	< .01	< .1
Porifera unid. (encrusting)	0.0	0.0	0.0	0.0	< .1	< .01	< .1	< .01	< .1
Ischnochitonidae	0.0	0.0	0.0	0.0	< .1	< .01	0.0	0.0	< .1
<i>Lissothuria nutriens</i>	0.0	0.0	0.0	0.0	0.0	0.0	< .1	< .01	< .1
Grapsidae (juv.)	0.0	0.0	0.0	0.0	< .1	< .01	0.0	0.0	< .1
<i>Ophiactis simplex</i>	0.0	0.0	0.0	0.0	0.0	0.0	< .1	< .01	< .1
<i>Salmacina tribranchiata</i>	0.0	0.0	0.0	0.0	< .1	< .01	0.0	0.0	< .1
Substrate									
rock	64.8	20.6	66.9	25.0	75.2	17.4	77.2	19.0	71.0
cobble	6.7	6.9	9.9	14.9	10.6	14.5	8.0	13.7	8.8
sand (shell gravel)	0.2	0.7	0.0	0.0	< .1	0.2	0.0	0.0	< .1

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, North Diablo Cove
Station NDC 3 +9m

Survey Date	128		129		130		131		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae									
Non-coralline crust	11.5	7.8	3.4	1.8	4.4	2.4	8.5	4.9	6.9
<i>Endocladia muricata</i>	3.7	6.0	1.0	2.3	4.5	8.7	1.7	2.7	2.7
<i>Cryptosiphonia woodii</i>	0.0	0.0	3.6	10.3	0.0	0.0	0.0	0.0	0.9
coralline crust	1.6	1.6	0.6	0.7	0.3	0.7	0.7	0.7	0.8
juv. articulated coralline algae	0.2	0.5	0.1	0.4	0.1	0.4	<.1	0.2	0.1
<i>Gelidium coulteri</i>	0.4	0.8	0.0	0.0	0.0	0.0	0.1	0.3	0.1
<i>Mastocarpus papillatus</i>	0.1	0.4	<.1	0.2	0.1	0.3	<.1	<.01	<.1
<i>Calliarth./Bossie. spp.-complex</i>	0.1	0.3	<.1	<.01	0.0	0.0	<.1	0.2	<.1
<i>Prionitis</i> spp.	<.1	0.2	<.1	<.01	<.1	<.01	<.1	0.2	<.1
<i>Corallina vancouveriensis</i>	0.1	0.3	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Cladophora</i> spp.	<.1	<.01	<.1	0.2	<.1	<.01	<.1	0.0	<.1
<i>Gastroclonium subarticulatum</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	0.2	<.1
<i>Gelidium pusillum</i>	<.1	<.01	<.1	<.01	<.1	<.01	<.1	0.0	<.1
<i>Mazzaella affinis</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Ulva/Enteromorpha</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
filamentous red algae-complex	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Invertebrates									
<i>Macclintockia scabra</i>	213.2	95.5	257.6	51.1	473.0	330.0	563.0	119.4	376.7
<i>Tegula funebris</i>	54.8	46.0	108.2	133.0	65.4	87.6	37.2	49.6	66.4
<i>Chthamalus fissus</i>	33.9	21.2	29.7	22.3	31.6	19.6	30.5	22.5	31.4
<i>Strongylocentrotus purpuratus</i>	11.8	12.5	26.0	21.5	33.4	21.0	26.6	19.9	24.5
<i>Lottia digitalis</i>	20.6	29.3	13.0	18.7	17.4	12.4	23.8	19.4	18.7
<i>Tectura scutum</i>	2.0	1.2	1.8	2.7	42.4	47.4	25.6	38.0	18.0
<i>Tetraclita rubescens</i>	23.0	26.9	15.8	18.3	11.0	14.6	7.8	11.5	14.4
<i>Lottia limatula</i>	9.0	5.8	16.0	15.4	11.2	8.5	12.0	14.9	12.1
<i>Lottia gigantea</i>	8.6	9.3	6.6	9.4	6.0	7.1	11.0	11.8	8.1
<i>Lottia pelta</i>	8.8	10.7	6.6	3.3	8.2	5.7	1.2	2.2	6.2
<i>Pagurus</i> spp.	3.8	4.4	0.0	0.0	7.0	8.3	13.0	13.2	6.0
<i>Mytilus californianus</i>	3.6	3.9	4.8	5.3	3.4	7.6	4.6	7.4	4.1
<i>Fissurella volcano</i>	3.0	4.6	1.4	1.7	1.8	3.0	3.2	4.6	2.4
<i>Pachygrapsus crassipes</i>	1.8	0.8	1.0	1.2	1.2	0.8	4.6	3.4	2.2
<i>Cyanoplax</i> spp.	3.8	1.9	2.2	0.8	1.0	2.2	1.2	1.3	2.1
<i>Pollicipes polymerus</i>	0.4	0.9	2.2	3.5	0.0	0.0	1.0	2.2	0.9
<i>Serpulidae</i> unid.	0.8	0.8	0.6	0.9	0.4	0.6	1.0	1.0	0.7
<i>Mopalia</i> spp.	1.2	1.6	0.4	0.9	0.4	0.9	0.4	0.9	0.6
<i>Ocenebra</i> spp.	0.4	0.6	0.4	0.6	<.1	<.01	1.0	1.7	0.5
<i>Anthopleura elegantissima</i>	0.2	0.5	0.2	0.5	0.4	0.6	0.8	0.8	0.4
<i>Phragmatopoma californica</i>	0.7	2.0	0.7	1.6	0.1	0.4	<.1	0.0	0.4
<i>Nuttallina californica</i>	0.2	0.5	0.4	0.9	0.6	1.3	0.0	0.0	0.3
<i>Acanthina</i> spp.	0.0	0.0	0.4	0.9	0.0	0.0	0.0	0.0	<.1
<i>Diodora</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Haliotis</i> spp.	0.0	0.0	0.0	0.0	<.1	0.3	0.0	0.0	<.1
<i>Acmaeidae</i> unid.	<.1	0.0	<.1	0.0	<.1	0.0	<.1	0.0	<.1
<i>Littorina</i> spp.	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Spirorbidae</i>	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, North Diablo Cove Station
NDC 3 +.9m (continued)

Survey Survey Date	128		129		130		131		Annual Mean
	14-Jan-02		29-Apr-02		24-Jun-02		4-Nov-02		
	Mean	Std. Dev.	Mean	Std Dev	Mean	Std. Dev.	Mean	Std Dev.	
Invertebrates (continued)									
<i>Lottia asmi</i>	0.0	0.0	<.1	< .01	<.1	<.01	0.0	0.0	<.1
Pelecypoda unid. boring	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Lissothuria nutriens</i>	<.1	< .01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Mytilus</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Haliotona</i> spp	0.0	0.0	0.0	0.0	0.0	0.0	<.1	< .01	<.1
Substrate									
rock	39.1	13.5	53.1	24.0	55.4	17.6	55.1	18.9	50.7
cobble	9.8	11.7	10.1	13.5	6.1	10.8	5.1	10.2	7.8
sand (shell gravel)	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, South Diablo Cove
Station SDC 1 +3m

	Survey Date	128 28-Jan-02	129 30-Apr-02	130 26-Jun-02	131 6-Nov-02	Annual Mean
		Mean	Mean	Mean	Mean	Mean
		Std. Dev.	Std. Dev.	Std. Dev.	Std. Dev.	Std. Dev.
Algae						
Non-coralline crust		31.5	8.4	16.2	37.6	23.4
coralline crust		12.6	5.8	6.4	8.4	8.3
filamentous red algae-complex		<1	0.3	1.8	16.1	4.6
juv. articulated coralline algae		1.7	1.9	5.4	4.0	3.3
<i>Calliarth./Bossie. spp.-complex</i>		0.3	2.8	0.4	0.7	1.1
<i>Sargassum muticum</i>		1.9	<1	0.0	1.7	0.9
<i>Cryptopleura violacea</i>		0.0	0.0	0.5	12.6	0.8
<i>Gelidium coulteri</i>		<1	<1	0.1	2.0	0.6
<i>Corallina vancouveriensis</i>		0.1	0.0	1.5	0.6	0.6
<i>Ulva/Enteromorpha spp.</i>		0.0	<1	0.9	0.8	0.4
<i>Pterosiphonia dendroidea</i>		0.0	0.0	<1	1.6	0.4
<i>Colpomenia spp.</i>		0.0	0.0	1.0	0.0	0.2
<i>Prionitis spp.</i>		0.0	0.0	0.0	0.9	0.2
<i>Gelidium pusillum</i>		<1	<1	<1	0.3	<1
<i>Mastocarpus papillatus</i>		0.0	0.0	0.3	0.0	<1
<i>Farlowia/Pikea spp.-complex</i>		0.0	0.0	0.0	<1	<1
<i>Cladophora spp.</i>		0.0	<1	<1	<1	<1
Chrysophyta unid.		0.0	0.0	<1	0.0	<1
<i>Gastroclonium subarticulatum</i>		0.0	0.0	<1	0.0	<1
<i>Chondracanthus canaliculatus</i>		0.0	0.0	<1	0.0	<1
Invertebrates						
<i>Tetractita rubescens</i>		131.2	130.2	146.2	149.0	139.2
<i>Macclintockia scabra</i>		29.0	117.0	103.8	117.6	91.9
<i>Mytilus californianus</i>		0.0	172.6	33.0	142.6	87.1
<i>Mytilus spp.</i>		200.6	24.8	0.0	0.0	56.4
<i>Strongylocentrotus purpuratus</i>		17.8	63.8	13.2	6.8	31.9
<i>Lottia pelta</i>		5.8	12.8	59.6	14.9	22.1
<i>Lottia limatula</i>		8.2	28.0	12.6	6.5	16.0
<i>Fissurella volcano</i>		27.6	13.2	13.4	13.0	15.4
<i>Anthopleura elegantissima</i>		19.8	17.2	7.4	3.2	14.5
<i>Pagurus spp.</i>		13.8	7.0	32.0	44.6	14.5
<i>Tegula funebris</i>		11.2	22.4	1.2	2.7	9.2
<i>Mytilus galloprovincialis</i>		0.0	2.6	2.6	2.6	4.4
<i>Phragmatopoma californica</i>		3.6	4.9	3.9	5.5	4.0
<i>Tectura scutum</i>		0.0	4.6	3.0	4.6	3.0
<i>Cyanoplax spp.</i>		1.0	0.2	1.6	2.3	1.1
<i>Mopalia spp.</i>		2.4	1.6	0.2	0.5	1.1
<i>Pista spp.</i>		0.3	2.2	0.7	1.5	0.9
<i>Chthamalus fissus</i>		0.1	1.2	1.0	1.3	0.6
<i>Lottia gigantea</i>		0.6	0.6	0.6	1.3	0.6
<i>Ophiothrix spp.</i>		0.0	0.6	0.2	0.5	0.4
Nemertea unid.		0.0	0.0	0.0	0.0	0.3
<i>Pachygrapsus crassipes</i>		0.4	0.6	0.9	0.0	0.3
<i>Serpulorbis squamigerus</i>		0.8	0.0	0.0	0.0	0.2
<i>Diopatra ornata</i>		0.0	0.0	0.0	0.0	0.2

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, South Diablo Cove
Station SDC 1 +.3m (continued)

Survey Survey Date	128 28-Jan-02		129 30-Apr-02		130 26-Jun-02		131 6-Nov-02		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
<i>Ocenebra</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.3	0.2
Serpulidae unid.	0.0	0.0	0.2	0.5	0.4	0.6	0.0	0.0	0.2
<i>Anthopleura artemisia</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Hermisenda crassicornis</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Nuttallina californica</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
Sabellidae	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1
<i>Diaulula sandiegensis</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
Acmaeidae unid.	<.1	0.0	<.1	0.0	<.1	0.0	<.1	0.0	<.1
Spirorbidae	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Heptacarpus</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
Sipuncula unid.	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Nitidiscala/Opalia</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Cirratulidae/Terebellidae unid.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Ophiactis simplex</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Littorina</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Ischnochitonidae	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Pisaster/Henricia</i> (juv.)	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Aeolidia papillosa</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Modiolus</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Dodecacera fewkesi</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Substrate									
rock	34.6	10.0	53.3	21.9	34.4	18.6	19.8	11.0	35.5
cobble	6.9	8.1	24.0	43.6	8.1	7.8	5.0	9.1	11.0
sand (shell gravel)	1.0	1.1	0.7	0.9	10.3	12.2	6.3	8.1	4.6

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, South Diablo Cove
Station SDC 1 +.6m

	Survey	128	129	130	131	
	Survey Date	28-Jan-02	30-Apr-02	26-Jun-02	6-Nov-02	
		Mean	Mean	Mean	Mean	Annual
		Std. Dev.	Std. Dev.	Std. Dev.	Std. Dev.	Mean
Algae						
Non-coralline crust		43.2	45.3	36.7	45.3	42.6
coralline crust		7.4	6.5	6.2	5.8	6.5
<i>Gelidium coulteri</i>		0.0	<.1	1.3	7.7	2.2
<i>Sargassum muticum</i>		2.0	1.9	1.3	1.9	1.8
filamentous red algae-complex		<.1	<.1	0.3	5.3	1.4
juv. articulated coralline algae		2.4	0.6	0.9	0.8	1.2
<i>Ulva/Enteromorpha</i> spp.		<.1	<.1	1.5	0.2	0.4
<i>Corallina vancouveriensis</i>		0.6	0.0	0.9	0.1	0.4
<i>Calliarth./Bossie.</i> spp.-complex		0.2	0.7	0.1	0.6	0.4
<i>Prionitis</i> spp.		<.1	0.8	0.1	0.4	0.3
<i>Cryptopleura violacea</i>		<.1	0.0	0.1	1.0	0.3
Chrysophyta unid.		0.0	<.1	0.6	0.0	0.1
<i>Chondracanthus canaliculatus</i>		0.0	<.1	0.3	<.1	0.1
<i>Gelidium pusillum</i>		<.1	<.1	<.1	0.3	<.1
<i>Mastocarpus papillatus</i>		0.0	0.0	0.1	0.1	<.1
<i>Gastroclonium subarticulatum</i>		0.0	0.0	<.1	<.1	<.1
<i>Endocladia muricata</i>		<.1	0.0	0.0	0.0	<.1
<i>Sarcodiotheca gaudichaudii</i>		0.0	0.0	0.0	<.1	<.1
<i>Cladophora</i> spp.		0.0	<.1	<.1	<.1	<.1
<i>Mazzaella affinis</i>		0.0	0.0	<.1	<.1	<.1
<i>Colpomenia</i> spp.		0.0	0.0	<.1	0.0	<.1
<i>Halymen./Schizy.</i> spp.-complex		0.0	0.0	<.1	0.0	<.1
<i>Pterosiphonia dendroidea</i>		0.0	0.0	<.1	0.0	<.1
<i>Farlowia/Pikea</i> spp.-complex		0.0	0.0	0.0	<.1	<.1
Invertebrates						
<i>Macclintockia scabra</i>		91.2	71.4	167.8	279.0	152.4
<i>Tetracilita rubescens</i>		100.4	173.8	146.2	147.6	142.0
<i>Mytilus californianus</i>		0.0	154.4	67.4	228.2	112.5
<i>Anthopleura elegantissima</i>		54.0	44.6	32.6	57.4	47.2
<i>Mytilus</i> spp.		175.8	0.0	0.0	0.0	44.0
<i>Tegula funebris</i>		33.2	27.4	19.4	24.8	26.2
<i>Lottia pelta</i>		5.2	7.8	9.8	13.0	17.0
<i>Lottia limatula</i>		3.6	21.6	30.2	6.4	15.5
<i>Strongylocentrotus purpuratus</i>		10.8	8.2	4.8	13.0	9.2
<i>Fissurella volcano</i>		18.2	3.4	3.6	7.2	8.1
<i>Pagurus</i> spp.		3.2	4.4	13.8	6.6	7.0
<i>Mytilus galloprovincialis</i>		0.0	12.4	3.0	8.4	6.0
<i>Chthamalus fissus</i>		3.3	4.6	8.1	1.4	4.4
<i>Tectura scutum</i>		0.0	3.0	5.2	4.4	4.1
<i>Serpulorbis squamigerus</i>		2.8	1.4	1.3	1.6	2.0
<i>Balanus</i> spp.		0.0	0.2	0.5	0.0	1.5
<i>Mopalia</i> spp.		3.0	0.6	1.2	1.0	1.5
<i>Lottia gigantea</i>		1.4	1.4	0.8	0.6	1.1
<i>Lottia digitalis</i>		1.6	0.0	0.8	0.0	0.6
<i>Cyanoplax</i> spp.		0.4	0.6	0.9	0.8	0.6

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, South Diablo Cove
Station SDC 1 +.6m (continued)

Survey Survey Date	128 28-Jan-02		129 30-Apr-02		130 26-Jun-02		131 6-Nov-02		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
<i>Pachygrapsus crassipes</i>	0.4	0.6	0.2	0.5	0.0	0.0	0.6	0.9	0.3
Serpulidae unid.	0.0	0.0	0.2	0.5	0.0	0.0	1.0	2.2	0.3
<i>Nuttallina californica</i>	0.8	0.8	0.0	0.0	0.2	0.5	0.0	0.0	0.3
<i>Phragmatopoma californica</i>	<.1	<.01	0.8	1.4	0.1	0.4	<.1	<.01	0.2
<i>Diopatra ornata</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.8	0.2
<i>Pista</i> spp.	0.3	0.9	0.2	0.5	<.1	<.01	<.1	<.01	0.1
<i>Anthopleura artemisia</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.2	0.5	<.1
<i>Acanthina</i> spp.	0.0	0.0	0.4	0.6	0.0	0.0	0.0	0.0	<.1
<i>Chama</i> spp.	0.2	0.5	0.0	0.0	0.2	0.5	0.0	0.0	<.1
Nemertea unid.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Pisaster ochraceus</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
Acmaeidae unid.	<.1	<.01	<.1	0.0	<.1	0.0	<.1	0.0	<.1
<i>Heptacarpus</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
Spirorbidae	<.1	<.01	<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Littorina</i> spp.	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Lottia asmi</i>	0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Septifer bifurcatus</i>	0.0	0.0	<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Lottia ochracea</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Nutidiscala/Opalia</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Sipuncula unid.	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Ophiactis simplex</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Substrate									
rock	22.4	10.0	21.7	12.2	21.6	9.7	17.8	9.1	20.9
cobble	6.0	8.0	10.3	11.6	9.4	9.4	6.7	8.3	8.1
sand (shell gravel)	4.1	5.4	1.9	3.5	4.9	6.8	5.2	5.3	4.0

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, South Diablo Cove
Station SDC 2 +.3m

	Survey Date	128 28-Jan-02	129 16-May-02	130 24-Jul-02	131 5-Nov-02	Annual Mean
		Mean Std. Dev.	Mean Std. Dev.	Mean Std. Dev.	Mean Std. Dev.	Mean Std. Dev.
Algae						
Non-coralline crust		56.0 18.6	38.8 23.0	27.5 15.5	64.9 15.3	46.8
<i>Ulva/Enteromorpha</i> spp.		<.1 <.01	3.5 7.1	18.9 17.2	0.5 0.6	5.7
coralline crust		6.0 5.0	6.2 4.7	3.8 7.0	5.1 4.1	5.3
<i>Prionitis</i> spp.		4.9 5.6	2.3 2.2	6.9 8.7	3.6 3.2	4.4
filamentous red algae-complex		1.0 2.2	6.2 13.1	6.7 17.5	3.3 6.4	4.3
<i>Mastocarpus papillatus</i>		<.1 0.2	4.1 3.4	8.5 5.8	4.0 4.0	4.1
<i>Gelidium coulteri</i>		0.2 0.3	4.5 3.2	7.6 8.7	2.8 1.9	3.8
<i>Cryptopleura violacea</i>		1.8 3.1	0.7 1.6	4.9 3.3	1.5 2.1	2.2
<i>Corallina vancouveriensis</i>		1.1 1.1	2.7 4.0	<.1 0.2	1.3 2.2	1.3
<i>Gastroclonium subarticulatum</i>		<.1 0.2	1.6 3.1	2.6 4.8	0.8 1.5	1.3
juv. articulated coralline algae		1.6 1.9	1.3 1.4	<.1 <.01	0.6 1.1	0.9
<i>Mazzaella affinis</i>		<.1 0.2	1.3 1.5	1.8 1.4	<.1 0.2	0.8
<i>Chondracanthus canaliculatus</i>		0.9 1.6	1.4 2.3	<.1 <.01	0.1 0.4	0.6
<i>Pterosiphonia dendroidea</i>		1.7 4.0	0.3 0.4	<.1 0.2	0.0 0.0	0.5
Chrysophyta unid.		0.0 0.0	1.3 3.3	0.7 1.5	0.0 0.0	0.5
<i>Mazzaella leptorhynchus</i>		0.0 0.0	1.2 1.5	0.0 0.0	0.3 0.9	0.4
<i>Cryptosiphonia woodii</i>		0.0 0.0	0.6 1.6	0.0 0.0	0.5 0.9	0.3
<i>Mastocarpus jardinii</i>		<.1 <.01	<.1 0.2	0.3 1.1	0.6 1.2	0.3
<i>Calliarth./Bossie.</i> spp.-complex		<.1 0.2	0.6 1.1	<.1 0.2	<.1 0.2	0.2
<i>Chondria decipiens</i>		0.1 0.3	0.0 0.0	0.7 1.1	0.0 0.0	0.2
<i>Halymen./Schizy.</i> spp.-complex		0.0 0.0	0.3 1.1	0.2 0.3	0.0 0.0	0.1
<i>Mazzaella heterocarpa</i>		<.1 <.01	0.2 0.5	0.0 0.0	0.0 0.0	<.1
<i>Porphyra</i> spp.		0.0 0.0	0.0 0.0	0.2 0.5	0.0 0.0	<.1
<i>Bryopsis</i> spp.		0.1 0.3	0.0 0.0	0.0 0.0	0.0 0.0	<.1
<i>Gelidium pusillum</i>		<.1 <.01	<.1 <.01	<.1 <.01	<.1 0.0	<.1
<i>Cladophora</i> spp.		<.1 <.01	<.1 <.01	<.1 <.01	<.1 <.01	<.1
<i>Endocladia muricata</i>		0.0 0.0	<.1 <.01	0.0 0.0	0.0 0.0	<.1
<i>Rhodomenia</i> spp.		<.1 <.01	0.0 0.0	0.0 0.0	0.0 0.0	<.1
<i>Osmundea</i> spp.		0.0 0.0	0.0 0.0	<.1 <.01	0.0 0.0	<.1
Invertebrates						
<i>Tegula funebris</i>		203.4 82.9	209.2 102.1	73.8 54.9	170.8 96.1	164.3
<i>Anthopleura elegantissima</i>		91.8 68.5	89.6 78.8	98.4 45.9	55.2 27.1	83.8
<i>Macclintockia scabra</i>		15.6 12.6	13.2 10.1	45.4 25.8	21.2 16.3	23.9
<i>Tetraclita rubescens</i>		28.0 41.5	43.4 41.3	9.2 7.2	5.4 6.1	21.5
<i>Pagurus</i> spp.		9.6 7.4	17.4 5.6	31.8 16.0	5.0 5.6	16.0
<i>Lottia limatula</i>		1.2 0.8	5.0 2.2	18.8 5.0	7.0 4.2	8.0
<i>Tectura scutum</i>		0.8 0.8	14.2 10.0	5.6 3.5	4.0 3.4	6.2
<i>Lottia pelta</i>		3.0 3.5	2.2 0.8	2.4 1.5	3.8 1.8	2.9
<i>Chthamalus fissus</i>		2.6 1.9	2.4 2.6	2.6 2.1	0.7 1.8	2.1
<i>Fissurella volcano</i>		1.0 1.4	0.8 0.8	1.2 0.8	4.4 2.3	1.9
<i>Strongylocentrotus purpuratus</i>		1.6 1.5	0.0 0.0	3.2 6.1	2.2 1.3	1.8
<i>Cyanoplax</i> spp.		0.2 0.5	1.6 1.5	1.4 1.7	1.0 1.7	1.1
<i>Pachygrapsus crassipes</i>		0.0 0.0	0.6 0.9	2.8 1.3	0.8 1.1	1.1
<i>Serpulorbis squamigerus</i>		1.8 1.8	0.2 0.5	0.8 1.8	0.4 0.9	0.8
<i>Acanthina</i> spp.		0.4 0.6	0.6 0.6	0.2 0.5	0.4 0.9	0.4

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, South Diablo Cove
Station SDC 2 +.3m (continued)

Survey Survey Date	128 28-Jan-02		129 16-May-02		130 24-Jul-02		131 5-Nov-02		Annual Mean
	Mean	Std. Dev	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
<i>Mopalia</i> spp.	0.8	1.3	0.2	0.5	0.0	0.0	0.0	0.0	0.3
<i>Mytilus californianus</i>	0.0	0.0	0.4	0.9	<.1	<.01	0.2	0.5	0.2
<i>Pisaster ochraceus</i>	0.0	0.0	0.0	0.0	0.2	0.5	0.2	0.5	<.1
<i>Lottia ochracea</i>	0.0	0.0	0.2	0.5	0.0	0.0	<.1	<.01	<.1
Nemertea unid.	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1
<i>Tegula brunnea</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Nuttallina californica</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
Nereididae unid	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1
Serpulidae unid.	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
<i>Septifer bifurcatus</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
<i>Halotis</i> spp.	<.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Acmaeidae unid.	<.1	<.01	<.1	<.01	<.1	0.0	<.1	0.0	<.1
<i>Phragmatopoma californica</i>	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Lottia asmi</i>	<.1	<.01	<.1	<.01	<.1	0.0	<.1	<.01	<.1
<i>Littorina</i> spp.	<.1	<.01	<.1	<.01	0.0	0.0	<.1	<.01	<.1
Cirratulidae/Terebellidae unid.	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Pista</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Crepidula</i> spp.	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Hermisenda crassicornis</i>	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Nitidiscala/Opalia</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Ischnochitonidae	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Pelecypoda unid boring	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Lacuna</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Spirorbidae	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Kellia laperousii</i>	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
Substrate									
rock	18.2	19.7	21.9	19.1	12.5	8.5	13.1	10.7	16.4
sand (shell gravel)	3.6	4.5	0.9	2.1	8.1	8.7	3.3	4.0	4.0
cobble	0.8	2.0	1.8	4.0	0.3	0.6	0.8	2.0	0.9

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, South Diablo Cove
Station SDC 2 +.9m

	Survey Date	128		129		130		131		
		28-Jan-02		30-Apr-02		24-Jul-02		5-Nov-02		
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae										
Non-coraline crust		12.8	20.2	14.5	23.5	13.6	19.2	19.0	25.2	15.0
<i>Mastocarpus papillatus</i>		0.1	0.4	<.1	<.01	0.6	0.6	2.7	2.0	0.9
<i>Prionitis</i> spp.		0.2	0.5	0.2	0.5	1.0	1.8	1.3	1.6	0.7
<i>Endocladia muricata</i>		0.4	1.3	0.5	1.5	<.1	0.2	0.2	0.5	0.3
<i>Mazzaella leptorhynchus</i>		<.1	0.2	<.1	<.01	0.4	0.5	<.1	0.2	0.1
coralline crust		<.1	<.01	0.3	0.7	<.1	<.01	<.1	0.2	<.1
<i>Corallina vancouveriensis</i>		<.1	0.2	0.0	0.0	<.1	0.2	0.2	0.5	<.1
juv. articulated coralline algae		0.1	0.4	0.0	0.0	0.0	<.01	<.1	0.2	<.1
<i>Gelidium coulteri</i>		<.1	<.01	0.0	0.0	0.0	<.01	0.1	0.3	<.1
<i>Gelidium pusillum</i>		<.1	<.01	<.1	<.01	<.1	<.01	<.1	0.0	<.1
<i>Cladophora</i> spp.		<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Ulva/Enteromorpha</i> spp.		0.0	0.0	0.0	0.0	0.0	<.01	0.0	0.0	<.1
<i>Mazzaella affinis</i>		<.1	<.01	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Calliarth./Bossie.</i> spp.-complex		<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Mastocarpus jordanii</i>		0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Chondracanthus canaliculatus</i>		<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Microcladia coulteri</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.1
Invertebrates										
<i>Anthopleura elegantissima</i>		149.4	94.1	160.4	64.5	288.2	232.1	268.2	139.0	216.6
<i>Tegula funebris</i>		113.4	99.1	123.6	37.9	184.8	96.3	87.8	58.6	127.4
<i>Macclintockia scabra</i>		20.8	17.5	20.8	18.4	63.8	35.3	77.8	73.5	45.8
<i>Mytilus californianus</i>		1.4	1.3	1.6	3.6	0.4	0.6	23.2	49.1	6.7
<i>Pagurus</i> spp.		5.4	3.1	3.0	3.1	8.2	9.2	7.0	22.2	5.9
<i>Lottia limatula</i>		2.6	4.3	5.8	8.0	6.8	3.0	4.6	33.9	5.0
<i>Tectura scutum</i>		2.0	2.1	0.6	0.9	10.8	17.5	5.2	3.4	4.7
<i>Lottia pelta</i>		2.4	1.8	4.4	7.2	2.8	0.8	2.6	2.7	3.1
<i>Chthamalus fissus</i>		1.7	2.1	3.1	4.0	1.6	2.1	1.6	1.6	2.0
<i>Lottia digitalis</i>		0.2	0.5	0.0	0.0	4.0	6.3	1.6	3.6	1.5
<i>Pachygrapsus crassipes</i>		0.0	0.0	0.0	0.0	1.0	0.7	1.0	1.0	0.5
<i>Acanthina</i> spp.		0.0	0.0	0.0	0.0	1.0	1.4	0.8	0.8	0.5
<i>Cyanoplax</i> spp.		0.2	0.5	0.0	0.0	0.4	0.9	0.0	0.0	0.2
<i>Anthopleura artemisia</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Mopalia</i> spp.		0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Littorina</i> spp.		<.1	0.0	<.1	<.1	<.1	0.0	<.1	<.01	<.1
Acmaeidae unid.		<.1	0.0	<.1	<.01	<.1	0.0	<.1	0.0	<.1
<i>Lottia asmi</i>		<.1	<.01	<.1	<.01	<.1	0.0	<.1	<.01	<.1
<i>Nutidiscala/Opalia</i> spp.		0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Aeolidia papillosa</i>		0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Cirratulidae/Terebellidae unid.		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Mytilus</i> spp.		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
Substrate										
rock		65.2	20.5	53.8	26.6	49.8	17.3	52.4	20.2	55.3
sand (shell gravel)		9.3	10.9	10.2	7.0	14.2	10.7	11.3	11.4	11.3
cobble		4.5	5.6	12.7	25.3	7.6	11.1	4.2	10.9	7.3

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, South Diablo Cove
Station SDC 3 +.3m

Survey Survey Date	128 6-Feb-02		129 30-May-02		130 24-Jul-02		131 5-Nov-02		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae									
Non-coralline crust	37.4	17.3	40.9	19.3	42.7	20.2	38.6	13.5	39.9
<i>Mastocarpus papillatus</i>	11.6	9.2	2.2	2.3	12.4	5.7	26.3	9.0	13.1
<i>Gelidium coulteri</i>	<.1	0.2	<.1	0.2	1.4	1.9	2.4	3.7	1.0
coralline crust	1.3	1.6	0.8	0.8	<.1	0.2	0.1	0.3	0.6
Chrysophyta unid.	0.0	0.0	2.2	4.7	0.0	0.0	0.0	0.0	0.6
<i>Endocladia muricata</i>	0.8	1.0	0.8	1.0	0.3	0.7	0.2	0.5	0.5
<i>Mazzaella affinis</i>	0.0	0.0	<.1	<.01	1.4	2.0	0.6	0.8	0.5
<i>Ulva/Enteromorpha</i> spp.	0.0	0.0	0.0	0.0	1.7	5.5	<.1	<.01	0.4
<i>Prionitis</i> spp.	0.1	0.4	<.1	0.2	<.1	0.2	<.1	0.2	<.1
<i>Mazzaella leptorhynchus</i>	<.1	0.2	<.1	<.01	0.2	0.3	<.1	<.01	<.1
<i>Gastroclonium subarticulatum</i>	0.2	0.7	0.0	0.0	0.0	0.0	<.1	<.01	<.1
juv. articulated coralline algae	0.1	0.4	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Gelidium pusillum</i>	<.1	<.01	<.1	0.0	<.1	0.0	<.1	0.2	<.1
<i>Chondracanthus canaliculatus</i>	<.1	0.2	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Corallina vancouveriensis</i>	<.1	0.2	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Porphyra</i> spp.	0.0	0.0	0.0	0.0	<.1	0.2	0.0	0.0	<.1
filamentous red algae-complex	0.0	0.0	0.0	0.0	0.0	0.0	<.1	0.2	<.1
<i>Cladophora</i> spp.	0.0	0.0	<.1	0.0	<.1	0.0	0.0	0.0	<.1
<i>Mastocarpus jordinii</i>	<.1	<.01	<.1	<.01	0.0	0.0	<.1	<.01	<.1
<i>Calliarth./Bossie.</i> spp.-complex	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Chondria decipiens</i>	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Mazzaella flaccida</i>	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Invertebrates									
<i>Macclintockia scabra</i>	86.2	80.2	94.4	167.7	230.2	431.3	211.0	440.2	155.5
<i>Tegula funebris</i>	149.2	117.5	151.0	124.0	89.6	91.9	122.2	52.4	128.0
<i>Pagurus</i> spp.	37.4	28.1	7.4	4.5	65.0	66.4	34.0	21.8	36.0
<i>Anthopleura elegantissima</i>	29.4	54.4	37.6	72.2	18.0	26.6	18.8	38.7	26.0
<i>Lottia digitalis</i>	2.2	4.9	2.4	5.4	5.0	11.2	55.0	123.0	16.2
<i>Tectura scutum</i>	2.6	1.8	3.2	2.7	15.2	8.4	3.8	2.3	6.2
<i>Tetraclita rubescens</i>	5.8	5.9	4.6	3.7	4.6	3.7	6.4	5.0	5.4
<i>Lottia limatula</i>	2.0	2.1	9.2	3.9	5.2	3.5	2.6	2.7	4.8
<i>Chthamalus fissus</i>	7.2	8.2	6.3	6.6	3.1	5.2	1.2	1.4	4.4
<i>Lottia pelta</i>	2.0	1.9	1.8	1.9	2.4	3.3	0.6	0.9	1.7
<i>Strongylocentrotus purpuratus</i>	0.8	1.3	0.0	0.0	2.4	3.1	0.2	0.5	0.9
<i>Pachygrapsus crassipes</i>	0.2	0.5	1.0	1.0	1.2	1.3	0.4	0.9	0.7
<i>Ocenebra</i> spp.	1.0	1.7	0.4	0.9	0.2	0.5	0.0	0.0	0.4
<i>Cyanoplax</i> spp.	0.6	1.3	0.0	0.0	0.4	0.6	0.0	0.0	0.3
<i>Pisaster ochraceus</i>	0.4	0.6	0.0	0.0	0.2	0.5	0.0	0.0	0.2
<i>Diopatra ornata</i>	0.6	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Serpulidae unid.	<.1	<.01	0.4	0.6	<.1	<.01	0.0	0.0	0.1
<i>Fissurella volcano</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.2	0.5	<.1
<i>Balanus</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9	<.1
<i>Anthopleura xanthogrammica</i>	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1
<i>Serpulorbis squamigerus</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
<i>Tegula brunnea</i>	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, South Diablo Cove
Station SDC 3 +3m (continued)

		Survey Date: 6-Feb-02		128 30-May-02		129 30-May-02		130 24-Jul-02		131 5-Nov-02		Annual	
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Invertebrates (continued)													
1	<i>Lottia ochracea</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	<i>Phragmatopoma californica</i>	<.1	0.2	<.1	0.2	<.1	0.2	<.1	0.2	<.1	0.2	<.1	0.2
1	<i>Haliotis</i> spp.	1.0	0.3	1.0	0.3	1.0	0.3	1.0	0.3	1.0	0.3	1.0	0.3
1	Acmaeidae unid.	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0
1	Spirorbidae	1.0	<.01	1.0	<.01	1.0	<.01	1.0	<.01	1.0	<.01	1.0	<.01
1	<i>Lottia asmi</i>	0.0	<.01	0.0	<.01	0.0	<.01	0.0	<.01	0.0	<.01	0.0	<.01
1	<i>Littorina</i> spp.	1.0	<.01	1.0	<.01	1.0	<.01	1.0	<.01	1.0	<.01	1.0	<.01
1	Ischnochitonidae	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0
1	Sipuncula unid.	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0
1	<i>Tricolia</i> spp.	1.0	<.01	1.0	<.01	1.0	<.01	1.0	<.01	1.0	<.01	1.0	<.01
1	Substrate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	rock	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0
1	cobble	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	sand (shell gravel)	4.0	1.1	3.6	1.9	2.2	1.2	2.2	1.2	2.2	1.2	2.2	1.2

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, South Diablo Cove
Station SDC 3 +.9m

Survey Survey Date	128		129		130		131		Annual Mean
	6-Feb-02		30-May-02		24-Jul-02		5-Nov-02		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae									
Non-coralline crust	27.4	13.6	25.1	17.4	24.2	17.2	35.9	18.4	28.1
<i>Mastocarpus papillatus</i>	2.0	2.1	0.3	0.9	0.5	0.7	9.6	5.4	3.1
coralline crust	0.1	0.4	2.0	5.9	<.1	<.01	<.1	<.01	0.5
<i>Gelidium pusillum</i>	<.1	<.01	<.1	<.01	<.1	<.01	<.1	0.2	<.1
<i>Gelidium coulteri</i>	0.0	0.0	<.1	<.01	<.1	<.01	<.1	0.2	<.1
<i>Calliarth./Bossie. spp.-complex</i>	0.0	0.0	<.1	0.2	0.0	0.0	0.0	0.0	<.1
<i>Cladophora</i> spp.	0.0	0.0	<.1	0.0	<.1	<.01	<.1	<.01	<.1
<i>Mazzaella leptorhynchus</i>	0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Mazzaella affinis</i>	0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Endocladia muricata</i>	<.1	<.01	0.0	0.0	0.0	0.0	<.1	<.01	<.1
juv. articulated coralline algae	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Corallina vancouveriensis</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Prionitis</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Chrysophyta unid.	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
Invertebrates									
<i>Tegula funebralis</i>	90.2	124.2	116.6	103.3	349.0	121.0	132.6	46.9	172.1
<i>Anthopleura elegantissima</i>	96.8	95.7	104.8	149.9	115.4	156.5	114.0	145.5	107.8
<i>Macclintockia scabra</i>	42.0	40.2	37.0	28.7	82.0	81.5	73.0	35.6	58.5
<i>Pagurus</i> spp.	17.0	20.4	20.6	19.2	14.6	5.7	30.2	10.8	20.6
<i>Lottia limatula</i>	2.8	2.5	8.2	5.7	6.8	5.5	1.8	0.8	4.9
<i>Tectura scutum</i>	0.4	0.9	1.2	2.2	10.8	8.9	4.8	3.3	4.3
<i>Chthamalus fissus</i>	2.6	3.9	2.8	2.6	4.1	5.0	4.0	4.1	3.4
<i>Pollicipes polymerus</i>	5.2	11.6	1.4	3.1	2.2	4.9	2.0	4.5	2.7
<i>Mytilus californianus</i>	2.8	4.1	1.8	4.0	<.1	<.01	1.2	2.7	1.5
<i>Lottia digitalis</i>	0.0	0.0	0.2	0.5	3.6	8.1	1.8	2.5	1.4
<i>Lottia pelta</i>	0.6	1.3	3.2	1.8	0.6	0.9	0.6	1.3	1.3
<i>Pachygrapsus crassipes</i>	0.4	0.9	2.2	2.2	0.6	0.6	0.6	0.9	1.0
<i>Acanthina</i> spp.	1.0	1.7	0.2	0.5	1.2	1.6	0.8	1.8	0.8
<i>Ocenebra</i> spp.	0.6	0.6	0.8	1.3	1.0	0.7	0.4	0.9	0.7
<i>Sipuncula</i> unid.	0.0	0.0	1.8	4.0	0.0	0.0	0.0	0.0	0.5
<i>Cyanoplax</i> spp.	0.0	0.0	0.4	0.6	0.6	0.9	0.0	0.0	0.3
Cirratulidae/Terebellidae unid.	0.0	0.0	<.1	<.01	0.6	1.3	<.1	<.01	0.2
<i>Pisaster ochraceus</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
<i>Strongylocentrotus purpuratus</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
Acmaeidae unid.	<.1	<.01	<.1	0.0	<.1	0.0	<.1	0.0	<.1
<i>Littorina</i> spp.	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Phragmatopoma californica</i>	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Lottia asmi</i>	<.1	<.01	<.1	<.01	<.1	0.0	<.1	<.01	<.1
<i>Nitidiscala/Opalia</i> spp.	0.0	0.0	<.1	<.01	<.1	<.01	0.0	0.0	<.1
Spirorbidae	<.1	<.01	<.1	<.01	0.0	0.0	<.1	<.01	<.1
Substrate									
rock	28.6	16.4	30.6	27.9	39.6	23.4	32.4	23.1	32.8
cobble	32.6	16.3	32.0	14.2	26.3	13.8	14.9	8.5	26.4
sand (shell gravel)	4.9	2.8	5.1	2.5	4.0	3.6	2.6	2.0	4.1

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, South Diablo Point
Station SDP 1 +.9m

Survey	128	129	130	131	
Survey Date	30-Jan-02	28-May-02	25-Jun-02	3-Dec-02	
	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae					
Non-coralline crust	36.5	25.2	21.0	12.2	28.5
coralline crust	9.7	4.7	8.0	4.3	8.8
juv. articulated coralline algae	4.0	5.7	4.2	4.7	1.4
<i>Calliarth./Bossie. spp.-complex</i>	1.0	2.6	0.6	0.7	0.6
<i>Gelidium coulteri</i>	0.1	0.3	0.9	1.2	0.7
<i>Corallina vancouveriensis</i>	0.4	0.9	0.6	1.2	0.0
<i>Mastocarpus jardinii</i>	0.2	0.5	0.2	0.5	0.3
<i>Endocladia muricata</i>	0.1	0.4	0.2	0.7	0.0
Chrysophyta unid.	0.0	0.0	0.2	0.7	0.0
<i>Gelidium pusillum</i>	0.0	0.0	<.1	0.2	<.1
<i>Mazzaella affinis</i>	0.0	0.0	0.0	0.0	<.1
<i>Ahnfeltiopsis linearis</i>	0.0	0.0	0.0	0.0	<.1
<i>Cladophora</i> spp.	0.0	0.0	<.1	<.1	<.1
<i>Mazzaella heterocarpa</i>	<.1	<.1	0.0	0.0	0.0
<i>Prionitis</i> spp.	0.0	0.0	0.0	0.0	<.1
<i>Cryptopleura violacea</i>	<.1	<.1	0.0	0.0	0.0
<i>Ulva/Enteromorpha</i> spp.	0.0	0.0	0.0	<.1	<.1
Invertebrates					
<i>Mytilus californianus</i>	587.6	377.0	507.2	391.0	547.8
<i>Anthopleura elegantissima</i>	135.4	95.1	82.0	66.8	111.4
<i>Macclintockia scabra</i>	103.4	94.8	96.6	50.2	73.0
<i>Tetrachia rubescens</i>	79.6	85.4	110.2	85.6	68.8
<i>Strongylocentrotus purpuratus</i>	30.2	17.9	23.8	10.2	24.6
<i>Lottia pelta</i>	6.4	3.7	32.2	22.3	39.4
<i>Nuttallina californica</i>	15.0	9.9	17.4	20.7	9.8
<i>Pollicipes polymerus</i>	13.0	13.0	7.0	6.7	20.8
<i>Balanus</i> spp.	0.6	1.3	0.0	0.0	42.8
<i>Lottia gigantea</i>	15.0	10.6	10.2	6.8	11.8
<i>Lottia limatula</i>	1.8	1.8	7.2	7.0	9.0
<i>Tectura scutum</i>	0.0	0.0	8.0	4.5	2.4
<i>Pachygrapsus crassipes</i>	0.2	0.5	2.8	1.8	2.6
<i>Tegula funebris</i>	0.2	0.5	2.0	2.1	2.0
<i>Phragmatopoma californica</i>	0.3	0.9	2.6	2.6	1.7
<i>Pagurus</i> spp.	0.8	0.8	0.4	0.6	0.0
<i>Pisaster ochraceus</i>	0.0	0.0	0.4	0.6	1.0
<i>Anthopleura xanthogrammica</i>	0.8	1.3	0.8	1.3	1.8
<i>Lottia digitalis</i>	0.0	0.0	0.4	0.9	0.0
<i>Fissurella volcano</i>	1.0	1.0	1.8	1.6	0.6
<i>Ocenebra</i> spp.	0.2	0.5	0.6	0.9	0.4
<i>Cyanoplax</i> spp.	0.6	0.6	0.2	0.5	1.2
<i>Chthamalus fissus</i>	0.8	2.0	0.5	1.5	1.0
<i>Nucella emarginata</i>	0.4	0.6	0.0	0.0	1.6
Serpulidae unid.	0.2	0.5	0.8	1.8	<.1
<i>Tegula brunnea</i>	0.6	0.9	0.2	0.5	0.2
Nemertea unid.	0.2	0.5	0.0	0.0	0.2

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, South Diablo Point
Station SDP 1 +.9m (continued)

Survey Survey Date	128		129		130		131		Annual Mean
	30-Jan-02		28-May-02		25-Jun-02		3-Dec-02		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
<i>Dodecaceria fewkesi</i>	<.1	<.01	0.1	0.4	<.1	<.01	<.1	<.01	<.1
Acmaeidae unid.	<.1	<.01	<.1	0.0	<.1	0.0	<.1	0.0	<.1
Sipuncula unid.	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
Spirorbidae	<.1	<.01	<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Lottia ochracea</i>	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Acmaea mitra</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Littorina</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Pisaster giganteus</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Amphissa</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Tricolia</i> spp.	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Cirratulidae/Terebellidae unid.	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Ophiactis simplex</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Bryozoa, unid. (encrusting)	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Substrate									
rock	6.0	6.2	25.1	13.5	19.3	11.5	15.2	7.6	16.4

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, South Diablo Point
Station SDP 2 +.9m

	Survey	128	129	130	131					
	Survey Date	30-Jan-02	28-May-02	25-Jun-02	4-Dec-02					
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean		
Algae										
<i>Gelidium coulteri</i>		7.7	6.7	23.8	20.5	28.7	23.7	11.9	7.7	18.0
<i>Corallina vancouveriensis</i>		14.8	8.9	11.7	8.9	16.4	9.3	18.1	8.4	15.2
coralline crust		20.6	8.1	12.6	8.4	10.9	7.7	12.7	10.8	14.2
<i>Mazzaella flaccida</i>		2.5	3.7	13.8	15.8	15.0	15.5	5.6	6.8	9.2
<i>Cryptopleura violacea</i>		10.9	5.9	3.2	3.2	3.1	2.3	16.9	7.2	8.5
Non-coralline crust		9.4	7.3	5.1	6.4	7.5	5.1	9.0	7.4	7.8
<i>Egria menziesii</i>		6.6	9.6	7.8	9.5	9.9	12.4	4.1	6.4	7.1
<i>Prionitis</i> spp.		4.0	5.8	2.6	3.5	3.9	6.1	6.3	7.5	4.2
<i>Calliarth./Bossie.</i> spp.-complex		4.5	3.4	1.7	1.9	4.2	4.3	4.8	4.3	3.8
<i>Gastroclonium subarticulatum</i>		3.7	3.6	4.0	5.9	4.0	5.1	2.6	2.8	3.6
juv. articulated coralline algae		3.2	3.5	3.8	5.0	2.9	2.6	2.5	1.6	3.1
<i>Callitham. spp./Pleonospor. spp.</i>		<.1	<.01	4.4	4.4	6.2	5.4	<.1	0.2	2.7
<i>Chondracanthus canaliculatus</i>		0.7	1.3	2.4	3.0	3.5	5.6	2.4	2.9	2.2
Chrysophyta unid.		<.1	<.01	3.7	3.6	3.5	4.1	0.0	0.0	1.8
filamentous red algae-complex		<.1	<.01	4.4	3.7	0.1	0.4	0.0	0.0	1.1
<i>Mastocarpus jordinii</i>		0.2	0.7	1.2	3.0	1.4	2.7	0.5	1.1	0.8
<i>Osmundea</i> spp.		0.3	0.5	0.9	1.6	<.1	<.01	0.3	0.6	0.4
<i>Mastocarpus papillatus</i>		<.1	<.01	0.6	1.1	0.5	0.6	0.2	0.3	0.3
<i>Mazzaella affinis</i>		0.4	0.9	<.1	0.2	0.3	0.9	0.0	0.0	0.2
<i>Mazzaella heterocarpa</i>		0.4	0.8	<.1	0.2	<.1	0.2	0.0	0.0	0.1
<i>Ulva/Enteromorpha</i> spp.		<.1	<.01	0.3	0.5	0.1	0.3	<.1	<.01	0.1
<i>Bryopsis</i> spp.		<.1	<.01	<.1	<.01	0.3	0.5	<.1	<.01	<.1
<i>Codium fragile</i>		0.0	0.0	0.0	0.0	<.1	<.01	0.3	0.7	<.1
<i>Chondracanthus corymbiferus</i>		<.1	0.2	<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Halymen./Schizy.</i> spp.-complex		0.0	0.0	<.1	<.01	<.1	0.2	0.0	0.0	<.1
<i>Laminaria setchellii</i>		0.0	0.0	0.0	0.0	<.1	0.2	0.0	0.0	<.1
<i>Callithamnion pikeanum</i>		<.1	<.01	<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Porphyra</i> spp.		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Sarcodiotheca gaudichaudii</i>		0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Mazzaella lilacina</i>		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Gelidium</i> spp.		<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Laminariales		0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Invertebrates										
<i>Strongylocentrotus purpuratus</i>		159.8	61.0	162.4	73.2	146.2	110.1	126.6	70.4	148.8
<i>Anthopleura elegantissima</i>		101.2	73.0	156.4	182.6	169.8	185.5	106.0	104.8	133.4
<i>Tetractula rubescens</i>		8.6	12.6	30.4	46.1	43.6	85.3	58.0	116.4	35.2
<i>Tegula brunnea</i>		47.8	104.7	0.6	1.3	1.4	2.2	0.4	0.9	12.6
<i>Lottia pelta</i>		4.8	3.6	3.8	6.4	10.2	12.0	0.6	0.9	4.9
<i>Serpulorbis squamigerus</i>		4.6	3.2	4.6	3.9	6.4	7.0	2.4	1.5	4.5
Serpulidae unid.		4.0	7.4	5.6	6.3	2.2	1.5	3.2	4.3	3.8
<i>Pisaster ochraceus</i>		3.6	1.8	4.6	0.6	3.4	2.3	3.4	1.5	3.8
<i>Macclintockia scabra</i>		0.6	1.3	4.0	5.9	2.6	4.8	5.4	11.0	3.2
Nemertea unid.		0.6	0.6	2.4	2.2	5.0	1.0	1.8	3.5	2.5
<i>Leptasterias</i> spp.		0.8	0.8	3.4	2.3	3.6	2.5	2.0	1.7	2.5
<i>Pachygrapsus crassipes</i>		0.2	0.5	1.8	1.5	4.6	3.9	1.8	1.8	2.1

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, South Diablo Point
Station SDP 2 +.9m (continued)

Survey Date	128		129		130		131		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
<i>Tectura scutum</i>	0.0	0.0	5.4	10.5	0.4	0.9	0.2	0.5	1.5
<i>Fissurella volcano</i>	2.4	2.1	0.6	0.9	0.4	0.9	1.2	1.3	1.2
<i>Anthopleura xanthogrammica</i>	1.0	2.2	0.8	1.3	1.0	0.7	1.2	2.2	1.0
<i>Pollicipes polymerus</i>	0.0	0.0	3.2	4.3	0.8	1.8	0.0	0.0	1.0
<i>Pagurus</i> spp.	1.2	2.7	1.0	1.0	1.4	1.1	0.0	0.0	0.9
<i>Lottia limatula</i>	0.0	0.0	3.4	7.6	0.0	0.0	<.1	<.01	0.9
<i>Lottia ochracea</i>	0.0	0.0	3.0	2.6	<.1	<.01	0.0	0.0	0.8
<i>Mytilus</i> spp.	2.6	5.3	0.2	0.5	0.0	0.0	0.0	0.0	0.7
<i>Tonicella lineata</i>	0.2	0.5	0.6	0.9	1.0	1.0	0.6	0.9	0.6
<i>Nuttallina californica</i>	0.4	0.6	0.0	0.0	1.0	2.2	0.4	0.9	0.5
<i>Lottia digitalis</i>	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.6	0.4
<i>Sipuncula</i> unid.	<.1	<.01	0.2	0.5	0.8	1.8	<.1	<.01	0.3
<i>Dodecaceria fewkesi</i>	<.1	<.01	0.4	0.6	0.3	0.7	0.2	0.5	0.2
<i>Mopalia</i> spp.	0.0	0.0	0.4	0.6	0.4	0.6	0.0	0.0	0.2
<i>Diodora</i> spp.	0.4	0.6	0.0	0.0	0.2	0.5	0.0	0.0	0.2
<i>Nucella emarginata</i>	0.2	0.5	0.2	0.5	0.0	0.0	0.2	0.5	0.2
<i>Pododesmus cepio</i>	0.2	0.5	0.0	0.0	0.4	0.9	0.0	0.0	0.2
<i>Chthamalus fissus</i>	<.1	<.01	<.1	<.01	0.4	1.3	<.1	<.01	0.1
<i>Acmaea mitra</i>	0.2	0.5	0.2	0.5	<.1	<.01	<.1	<.01	0.1
<i>Tegula funebris</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.2	0.5	<.1
<i>Discurria inessa</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9	<.1
<i>Nereididae</i> unid.	0.0	0.0	0.4	0.6	0.0	0.0	0.0	0.0	<.1
<i>Calliostoma ligatum</i>	0.2	0.5	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Epiactis prolifera</i>	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Hemissenda crassicornis</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Hemigrapsus nudus</i>	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Idotea</i> spp.	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
<i>Eupentacta quinquesemita</i>	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1
<i>Porifera</i> unid. (encrusting)	<.1	<.01	<.1	0.2	<.1	0.2	<.1	0.0	<.1
<i>Phragmatopoma californica</i>	<.1	<.01	<.1	<.01	<.1	<.01	0.1	0.4	<.1
<i>Haliotis</i> spp.	<.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Acmaeidae</i> unid.	<.1	0.0	<.1	0.0	<.1	0.0	<.1	<.01	<.1
<i>Spirorbidae</i>	<.1	0.0	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Pelecypoda</i> unid. boring	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Bryozoa</i> , unid. (encrusting)	<.1	<.01	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Corynactis californica</i>	0.0	0.0	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Ischnochitonidae</i>	0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
tunicates, colonial/social unid.	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Cyanoplax</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Stylantheca</i> spp.	0.0	0.0	<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Ophiothrix</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Hydroida</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Substrate									
rock	5.3	2.6	6.0	3.3	6.3	4.7	5.2	3.0	5.7
sand (shell gravel)	0.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0	<.1
cobble	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, South Control
Station SC 1 +.3m

	Survey Date	128 15-Jan-02	129 15-May-02	130 10-Jul-02	131 2-Dec-02					
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae										
<i>Mazzaella flaccida</i>		22.9	16.3	48.3	18.3	56.0	20.2	12.0	8.4	34.8
<i>Chondracanthus canaliculatus</i>		23.5	20.0	34.7	19.3	38.3	19.5	19.9	10.1	29.1
Non-coralline crust		14.8	8.8	13.0	9.0	8.4	6.3	21.3	9.9	14.4
coralline crust		8.1	4.7	3.4	2.0	4.9	4.5	11.9	6.2	7.1
<i>Gastroclonium subarticulatum</i>		12.2	10.8	5.0	4.1	1.7	3.0	4.1	3.9	5.7
<i>Ulva/Enteromorpha</i> spp.		2.7	2.4	2.2	1.9	5.0	10.2	2.1	2.2	3.0
<i>Egria menziesii</i>		0.1	0.3	0.7	2.2	3.1	4.6	7.0	7.0	2.7
<i>Cryptopleura violacea</i>		2.8	4.1	1.8	1.1	3.8	3.3	1.3	2.1	2.4
<i>Mastocarpus papillatus</i>		2.2	2.1	3.1	1.2	2.6	1.0	1.3	1.2	2.3
<i>Mastocarpus jardinii</i>		2.6	3.9	1.5	1.9	2.4	3.3	<.1	0.2	1.6
<i>Corallina vancouveriensis</i>		2.1	1.8	0.5	0.6	0.7	0.9	2.8	2.0	1.5
<i>Prionitis</i> spp.		1.5	1.2	1.5	1.6	1.3	1.3	1.7	1.4	1.5
<i>Phyllospadix</i> spp.		3.0	5.9	1.0	1.8	0.7	1.7	1.3	2.0	1.5
<i>Mazzaella heterocarpa</i>		1.0	0.9	3.0	3.4	1.4	0.7	0.4	1.1	1.4
<i>Mazzaella affinis</i>		0.6	1.1	2.4	1.9	1.6	1.5	0.6	0.7	1.3
juv. articulated coralline algae		1.5	1.8	0.5	0.7	0.4	0.9	1.7	1.2	1.0
<i>Chondracanthus corymbiferus</i>		1.0	1.2	0.6	0.9	0.3	0.5	1.3	1.4	0.8
<i>Calliarth./Bossie.</i> spp.-complex		0.9	1.4	0.7	1.5	0.3	0.5	0.8	0.7	0.7
<i>Endocladia muricata</i>		0.4	1.1	1.0	1.9	1.0	1.6	0.2	0.5	0.6
<i>Osmundea</i> spp.		1.0	1.1	0.1	0.3	<.1	0.2	1.3	1.4	0.6
<i>Halosaccion americanum</i>		0.0	0.0	0.4	1.3	0.8	1.7	0.4	1.1	0.4
filamentous red algae-complex		0.3	0.9	0.8	1.6	0.5	0.7	<.1	<.01	0.4
<i>Mazzaella lilacina</i>		0.0	0.0	1.0	1.2	0.5	1.1	0.0	0.0	0.4
<i>Gelidium coulteri</i>		0.3	0.5	0.2	0.7	<.1	0.2	0.6	0.9	0.3
<i>Gelidium pusillum</i>		0.2	0.5	0.3	0.5	0.1	0.4	0.3	0.9	0.2
<i>Polyneura latissima</i>		0.4	1.3	0.0	0.0	0.2	0.5	0.1	0.4	0.2
<i>Callithamnion pikeanum</i>		<.1	<.01	0.4	0.5	0.3	0.6	0.0	0.0	0.2
<i>Spongo./Acrosiphon.</i> -complex		0.0	0.0	0.0	0.0	0.8	2.0	0.0	0.0	0.2
<i>Halymen./Schizy.</i> spp.-complex		0.4	0.7	0.0	0.0	<.1	0.2	0.0	0.0	0.1
<i>Sarcodiotheca gaudichaudii</i>		0.1	0.4	0.0	0.0	0.1	0.4	0.0	0.0	<.1
<i>Corallina officinalis</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Colpomenia</i> spp.		0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.0	<.1
<i>Mazzaella leptorhynchus</i>		<.1	<.01	0.1	0.4	0.0	0.0	0.0	0.0	<.1
<i>Smithora naiadum</i>		0.1	0.4	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Callophyllis</i> spp.		<.1	0.2	<.1	<.01	0.0	0.0	<.1	0.2	<.1
<i>Cryptosiphonia woodii</i>		0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.0	<.1
<i>Microcladia coulteri</i>		<.1	<.01	<.1	<.01	<.1	<.01	<.1	0.2	<.1
<i>Porphyra</i> spp.		0.0	0.0	<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Cladophora</i> spp.		0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Melobesia mediocris</i>		0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Desmarestia</i> spp.		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Nereocystis luetkeana</i>		0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Rhodomenia</i> spp.		0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Callitham.</i> spp./ <i>Pleonospor.</i> spp.		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
Laminariales		0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Bryopsis</i> spp.		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Farlowia/Pikea</i> spp.-complex		0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, South Control
Station SC 1 +3m (continued)

Survey Survey Date	128 15-Jan-02		129 15-May-02		130 10-Jul-02		131 2-Dec-02		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates									
<i>Tetraclita rubescens</i>	18.6	25.0	28.2	21.7	21.0	19.1	114.2	117.0	45.5
<i>Pagurus</i> spp.	6.0	6.0	20.6	17.0	26.2	12.7	10.8	5.4	15.9
<i>Tegula brunnea</i>	4.2	6.7	4.2	3.4	4.4	5.1	14.8	17.2	6.9
<i>Macclintockia scabra</i>	1.2	1.8	4.2	6.4	7.0	6.3	14.2	21.0	6.7
<i>Tectura scutum</i>	1.0	2.2	13.6	3.7	4.6	5.0	2.0	2.1	5.3
<i>Anthopleura elegantissima</i>	2.4	3.4	2.4	3.3	2.4	2.0	2.6	3.1	2.5
<i>Tegula funebris</i>	1.8	4.0	1.2	2.7	0.4	0.9	5.6	5.2	2.3
<i>Lottia pelta</i>	0.6	0.6	5.6	5.9	2.6	2.0	0.2	0.5	2.3
<i>Lottia limatula</i>	1.0	1.4	0.2	0.5	3.4	3.4	1.6	1.3	1.6
<i>Phragmatopoma californica</i>	0.9	1.5	0.2	0.7	0.3	0.6	2.8	1.7	1.1
<i>Fissurella volcano</i>	0.0	0.0	0.4	0.6	0.0	0.0	3.2	3.8	0.9
<i>Leptasterias</i> spp.	0.4	0.9	0.0	0.0	0.8	0.8	2.4	3.6	0.9
<i>Epiactis prolifera</i>	0.8	0.8	0.8	0.8	0.4	0.9	1.0	0.7	0.8
Serpulidae unid.	<.1	<.01	0.4	0.6	0.4	0.9	1.2	1.3	0.5
Nemertea unid.	0.0	0.0	0.2	0.5	0.8	0.5	0.6	0.9	0.4
<i>Diopatra ornata</i>	0.4	0.9	0.2	0.5	0.0	0.0	1.0	1.4	0.4
<i>Mopalia</i> spp.	0.2	0.5	0.2	0.5	0.2	0.5	0.6	0.6	0.3
<i>Asterina miniata</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.1	0.2
<i>Pycnopodia helianthoides</i>	0.6	0.6	0.0	0.0	0.0	0.0	0.2	0.5	0.2
tunicates, colonial/social unid.	<.1	<.01	<.1	<.01	<.1	0.2	0.7	1.1	0.2
<i>Ocenebra</i> spp.	0.6	0.6	<.1	<.01	0.0	0.0	0.0	0.0	0.2
<i>Serpulorbis squamigerus</i>	0.0	0.0	0.2	0.5	0.4	0.9	0.0	0.0	0.2
<i>Tonicella lineata</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.4	0.6	0.2
<i>Pugettia</i> spp.	0.2	0.5	0.2	0.5	0.2	0.5	0.0	0.0	0.2
<i>Conus californicus</i>	0.0	0.0	0.0	0.0	0.6	1.3	0.0	0.0	0.2
Nereididae unid.	0.0	0.0	0.0	0.0	0.6	0.6	0.0	0.0	0.2
<i>Ophiothrix</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.2
<i>Cryptochiton stelleri</i>	0.0	0.0	0.0	0.0	0.2	0.5	0.2	0.5	<.1
Porifera unid. (encrusting)	<.1	0.2	<.1	<.01	0.0	0.0	0.2	0.3	<.1
Bryozoa, unid. (encrusting)	0.0	0.0	<.1	<.01	<.1	<.01	0.2	0.3	<.1
<i>Lottia ochracea</i>	0.0	0.0	0.2	0.5	0.0	0.0	<.1	<.01	<.1
<i>Anthopleura artemisia</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
<i>Anthopleura xanthogrammica</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Calliostoma ligatum</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Cyanoplax</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Nuttallina californica</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Hemigrapsus nudus</i>	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1
<i>Strongylocentrotus purpuratus</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.0	0.0	<.1
Spirorbidae	<.1	0.0	<.1	0.0	0.1	0.4	<.1	<.01	<.1
<i>Chthamalus fissus</i>	<.1	<.01	0.1	0.3	<.1	<.01	<.1	<.01	<.1
Acmaeidae unid.	<.1	<.01	<.1	0.0	<.1	0.0	<.1	0.0	<.1
<i>Lacuna</i> spp.	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Homo. luridum/Lirular. succin.</i>	<.1	<.01	<.1	0.0	<.1	<.01	<.1	<.01	<.1
Ischnochitonidae	0.0	0.0	0.0	0.0	<.1	<.01	<.1	0.0	<.1
<i>Crepidula</i> spp.	<.1	<.01	0.0	0.0	<.1	<.01	<.1	<.01	<.1

(continued)

Horizontal Band Transects Survey Means, Standard Deviations and Annual Mean, South Control
Station SC 1 +.9m

Survey	128	129	130	131	
Survey Date	15-Jan-02	15-May-02	10-Jul-02	2-Dec-02	
	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae					
Non-coralline crust	20.7	12.9	18.1	17.1	15.0
<i>Endocladia muricata</i>	18.0	7.7	22.2	7.3	19.7
<i>Mastocarpus papillatus</i>	9.4	7.4	9.4	6.3	16.9
<i>Pelvetia compressa</i>	10.5	10.5	3.1	3.7	12.7
coralline crust	8.2	4.9	4.2	2.7	2.2
<i>Mazzaella flaccida</i>	4.0	2.8	2.7	2.9	2.2
<i>Mastocarpus jardinii</i>	3.3	4.1	1.5	1.9	1.5
<i>Corallina vancouveriensis</i>	2.4	3.1	1.7	2.5	0.7
<i>Fucus gardneri</i>	0.0	0.0	2.6	6.6	0.1
<i>Mazzaella affinis</i>	1.0	0.9	0.1	0.3	0.2
<i>Mazzaella heterocarpa</i>	0.4	1.1	0.3	0.5	0.5
<i>Porphyra</i> spp.	0.2	0.7	0.6	1.0	0.3
<i>Gelidium pusillum</i>	0.3	0.6	0.2	0.5	0.3
<i>Pterosiphonia dendroidea</i>	0.5	0.9	0.0	0.0	0.0
<i>Cladophora</i> spp.	<.1	0.2	<.1	<.01	<.1
<i>Chondracanthus canaliculatus</i>	0.3	0.7	<.1	<.01	<.1
<i>Cryptopleura violacea</i>	0.1	0.4	0.2	0.7	<.1
<i>Gelidium coulteri</i>	0.0	0.0	0.1	0.3	<.1
juv. articulated coralline algae	0.2	0.3	0.0	0.0	<.1
<i>Ulva/Enteromorpha</i> spp.	<.1	<.01	<.1	<.01	<.1
<i>Callithamnion pikeanum</i>	0.0	0.0	<.1	0.2	<.1
<i>Osmundea</i> spp.	0.1	0.4	0.0	0.0	0.0
<i>Mazzaella leptorhynchus</i>	<.1	<.01	<.1	<.01	0.0
<i>Phyllospadix</i> spp.	<.1	<.01	0.0	0.0	0.0
<i>Spongo./Acrosiphon</i> -complex	0.0	0.0	0.0	0.0	<.1
Invertebrates					
<i>Tegula funebris</i>	122.8	65.8	185.8	93.1	74.6
<i>Pagurus</i> spp.	40.4	39.7	10.0	5.9	21.4
<i>Macclintockia scabra</i>	14.2	11.8	16.0	11.3	11.8
<i>Tectura scutum</i>	0.4	0.6	8.4	3.6	12.2
<i>Lottia limatula</i>	8.2	6.7	3.6	2.1	10.4
<i>Lottia pelta</i>	10.0	8.9	5.6	4.8	7.8
<i>Anthopleura elegantissima</i>	8.6	6.5	3.0	2.7	5.8
<i>Chthamalus fissus</i>	1.3	1.9	0.8	1.4	1.9
Nemertea unid.	0.0	0.0	0.2	0.5	0.0
<i>Tetraclita rubescens</i>	0.0	0.0	0.0	0.0	1.0
<i>Hemigrapsus nudus</i>	0.0	0.0	1.0	0.7	1.6
<i>Pachygrapsus crassipes</i>	0.0	0.0	1.4	1.7	1.2
<i>Phragmatopoma californica</i>	0.8	1.6	0.8	1.8	0.5
<i>Ocenebra</i> spp.	0.8	1.1	0.2	0.5	0.2
<i>Anthopleura xanthogrammica</i>	0.0	0.0	0.4	0.9	0.6
<i>Acanthina</i> spp.	0.6	0.9	0.4	0.6	0.6
<i>Mytilus galloprovincialis</i>	1.4	2.6	0.0	0.0	0.0
<i>Tegula brunnea</i>	1.0	2.2	0.0	0.0	0.0
<i>Pisaster ochraceus</i>	0.0	0.0	0.0	0.0	0.8

(continued)

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, South Control
Station SC 1 +.3m (continued)

	Survey Survey Date		128 15-Jan-02	129 15-May-02	130 10-Jul-02	131 2-Dec-02			
			Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)									
<i>Acmaea mitra</i>			0.0	0.0	0.0	0.0	0.0	<.01	<.1
Grapsidae (juv.)			0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Discurria insessa</i>			0.0	0.0	0.0	0.0	0.0	<.1	<.1
<i>Lottia asmi</i>			<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Amphissa</i> spp.			<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Lepidozona</i> spp.			0.0	0.0	<.1	<.01	0.0	0.0	<.1
Polyplacophora unid. a			0.0	0.0	0.0	0.0	0.0	<.1	<.1
<i>Alia</i> spp.			<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Nitidiscala/Opalia</i> spp.			0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Pista</i> spp.			0.0	0.0	0.0	0.0	0.0	<.1	<.1
<i>Pseudomelatoma torosa</i>			0.0	0.0	0.0	0.0	0.0	<.1	<.1
<i>Bittium</i> spp.			0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Pisaster/Henricia</i> (juv.)			0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Lissothuria nutriens</i>			0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Salmacina tribranchiata</i>			0.0	0.0	0.0	0.0	<.1	<.01	<.1
Substrate									
cobble			6.7	3.5	7.6	5.2	6.0	4.4	9.1
sand (shell gravel)			6.0	5.8	9.5	14.3	3.8	4.7	4.5
rock			3.1	2.0	3.7	2.4	6.1	3.8	10.6

Horizontal Band Transects Survey Means and Standard Deviations and Annual Mean, South Control
Station SC 1 +.9m (continued)

Survey Date	128 15-Jan-02		129 15-May-02		130 10-Jul-02		131 2-Dec-02		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates (continued)									
<i>Mytilus californianus</i>	<.1	<.01	0.2	0.5	0.0	0.0	0.6	1.3	0.2
<i>Mopalia</i> spp.	0.4	0.6	0.0	0.0	0.2	0.5	0.2	0.5	0.2
<i>Nuttallina californica</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.6	1.3	0.2
<i>Leptasterias</i> spp.	0.4	0.9	0.0	0.0	0.4	0.9	0.0	0.0	0.2
<i>Strongylocentrotus purpuratus</i>	0.0	0.0	0.2	0.5	0.0	0.0	0.4	0.6	0.2
<i>Lottia digitalis</i>	0.0	0.0	0.0	0.0	0.6	1.3	0.0	0.0	0.2
<i>Nucella emarginata</i>	0.0	0.0	0.6	1.3	0.0	0.0	0.0	0.0	0.2
<i>Petrolisthes</i> spp.	0.0	0.0	0.0	0.0	0.4	0.9	0.0	0.0	<.1
<i>Epiactis prolifera</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	<.1
<i>Tonicella lineata</i>	0.0	0.0	0.0	0.0	0.2	0.5	0.0	0.0	<.1
<i>Haliotis</i> spp.	<.1	0.3	<.1	0.3	0.0	0.0	0.0	0.0	<.1
Acmaeidae unid.	<.1	<.01	<.1	<.01	<.1	<.01	<.1	0.0	<.1
<i>Littorina</i> spp.	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Lottia asmi</i>	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Crepidula</i> spp.	0.0	0.0	<.1	<.01	<.1	<.01	<.1	<.01	<.1
Spirorbidae	0.0	0.0	<.1	<.01	0.0	0.0	<.1	<.01	<.1
<i>Cyanoplax</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Grapsidae (juv.)	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Mytilus</i> spp.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Homo. luridum/Lirular. succin.</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Substrate									
cobble	22.2	21.3	26.0	22.9	17.5	14.4	18.6	12.9	21.1
rock	11.7	7.4	15.8	9.5	22.8	16.9	21.0	15.9	17.8
sand (shell gravel)	5.6	4.7	3.2	2.8	2.6	4.2	4.7	4.1	4.0

Table D-1. Results for Intertidal Vertical Band Transects, for the 2002 Survey Period (April 10-12, 2002)

Depth (m)	Depth (m)	Depth (m)	Depth (m)	Depth (m)	Depth (m)
0.0	0.5	1.0	1.5	2.0	2.5
0.0	0.0	0.0	0.0	0.0	0.0
0.5	0.5	0.5	0.5	0.5	0.5
1.0	1.0	1.0	1.0	1.0	1.0
1.5	1.5	1.5	1.5	1.5	1.5
2.0	2.0	2.0	2.0	2.0	2.0
2.5	2.5	2.5	2.5	2.5	2.5
3.0	3.0	3.0	3.0	3.0	3.0
3.5	3.5	3.5	3.5	3.5	3.5
4.0	4.0	4.0	4.0	4.0	4.0
4.5	4.5	4.5	4.5	4.5	4.5
5.0	5.0	5.0	5.0	5.0	5.0
5.5	5.5	5.5	5.5	5.5	5.5
6.0	6.0	6.0	6.0	6.0	6.0
6.5	6.5	6.5	6.5	6.5	6.5
7.0	7.0	7.0	7.0	7.0	7.0
7.5	7.5	7.5	7.5	7.5	7.5
8.0	8.0	8.0	8.0	8.0	8.0
8.5	8.5	8.5	8.5	8.5	8.5
9.0	9.0	9.0	9.0	9.0	9.0
9.5	9.5	9.5	9.5	9.5	9.5
10.0	10.0	10.0	10.0	10.0	10.0

Appendix D

Results for Intertidal Vertical Band Transects

Table D-2. Results for Intertidal Vertical Band Transects, for the 2002 Survey Period (April 10-12, 2002)

Depth (m)	Depth (m)	Depth (m)	Depth (m)	Depth (m)	Depth (m)
0.0	0.5	1.0	1.5	2.0	2.5
0.0	0.0	0.0	0.0	0.0	0.0
0.5	0.5	0.5	0.5	0.5	0.5
1.0	1.0	1.0	1.0	1.0	1.0
1.5	1.5	1.5	1.5	1.5	1.5
2.0	2.0	2.0	2.0	2.0	2.0
2.5	2.5	2.5	2.5	2.5	2.5
3.0	3.0	3.0	3.0	3.0	3.0
3.5	3.5	3.5	3.5	3.5	3.5
4.0	4.0	4.0	4.0	4.0	4.0
4.5	4.5	4.5	4.5	4.5	4.5
5.0	5.0	5.0	5.0	5.0	5.0
5.5	5.5	5.5	5.5	5.5	5.5
6.0	6.0	6.0	6.0	6.0	6.0
6.5	6.5	6.5	6.5	6.5	6.5
7.0	7.0	7.0	7.0	7.0	7.0
7.5	7.5	7.5	7.5	7.5	7.5
8.0	8.0	8.0	8.0	8.0	8.0
8.5	8.5	8.5	8.5	8.5	8.5
9.0	9.0	9.0	9.0	9.0	9.0
9.5	9.5	9.5	9.5	9.5	9.5
10.0	10.0	10.0	10.0	10.0	10.0

Vertical Band Transect Survey Total, Annual Mean, and Standard Deviations, North Control,
Station NC-1V

Survey Survey Date	88 8-Feb-02 Survey Total	89 1-May-02 Survey Total	90 27-Jul-02 Survey Total	91 4-Dec-02 Survey Total	Annual Mean	Std. Dev.
<i>Xiphister atropurpureus</i>	13	10	0	41	16.0	17.6
<i>Xiphister</i> spp.	0	0	52	0	13.0	26.0
<i>Xiphister mucosus</i>	6	14	29	2	12.8	11.9
<i>Gobiesox maeandricus</i>	8	9	8	14	9.8	2.9
Pholididae/Stichaeidae unid.	6	6	0	8	5.0	3.5
<i>Anoplarchus purpureus</i>	2	3	1	8	3.5	3.1
<i>Xerperes fucorum</i>	0	3	2	0	1.3	1.5
<i>Oligocottus snyderi</i>	0	1	4	0	1.3	1.9
<i>Cebidichthys violaceus</i>	0	2	1	0	0.8	1.0
Cottidae unid.	1	2	0	0	0.8	1.0
<i>Typhlogobius californiensis</i>	0	1	1	1	0.8	0.5
<i>Gibbonsia metzi</i>	0	0	0	1	0.3	0.5

Vertical Band Transect Survey Total, Annual Mean, and Standard Deviations, Field's Cove,
Station FC-1V

Survey Survey Date	88 12-Feb-02 Survey Total	89 22-Apr-02 Survey Total	90 8-Jul-02 Survey Total	91 30-Dec-02 Survey Total	Annual Mean	Std. Dev.
<i>Xiphister mucosus</i>	3	4	6	58	17.8	26.9
<i>Oligocottus snyderi</i>	15	0	1	28	11.0	13.2
<i>Cebidichthys violaceus</i>	4	0	3	26	8.3	12.0
Pholididae/Stichaeidae unid.	4	4	5	6	4.8	1.0
<i>Gobiesox maeandricus</i>	1	2	0	16	4.8	7.5
<i>Anoplarchus purpureus</i>	2	3	1	7	3.3	2.6
<i>Xiphister atropurpureus</i>	2	3	2	3	2.5	0.6
Cottidae unid.	1	5	0	0	1.5	2.4
<i>Gibbonsia metzi</i>	0	0	0	4	1.0	2.0
<i>Xiphister</i> spp.	0	1	0	0	0.3	0.5
<i>Artedius</i> spp.	1	0	0	0	0.3	0.5

Vertical Band Transect Survey Total, Annual Mean, and Standard Deviations, North Diablo Cove,
Station NDC-1V

	Survey Date	88 6-Feb-02	89 23-Apr-02	90 27-Jun-02	91 31-Dec-02	Annual Mean	Std. Dev.
		Total	Total	Total	Total		
<i>Cebidichthys violaceus</i>		0	8	18	0	6.5	8.5
Pholididae/Stichaeidae unid.		1	0	3	0	1.0	1.4
<i>Oligocottus snyderi</i>		2	0	0	1	0.8	1.0
<i>Anoplarchus/Cebidichthys</i> spp.		0	0	2	0	0.5	1.0
<i>Xiphister mucosus</i>		0	0	1	0	0.3	0.5
<i>Xiphister atropurpureus</i>		0	0	0	1	0.3	0.5

Vertical Band Transect Survey Total, Annual Mean, and Standard Deviations, South Diablo Cove,
Station SDC-2V

	Survey Date	88 6-Feb-02	89 25-Apr-02	90 28-Jun-02	91 3-Dec-02	Annual Mean	Std. Dev.
		Total	Total	Total	Total		
<i>Cebidichthys violaceus</i>		9	6	63	30	27.0	26.3
<i>Scytalina cerdale</i>		0	7	11	2	5.0	5.0
<i>Xiphister atropurpureus</i>		2	1	10	1	3.5	4.4
<i>Xiphister mucosus</i>		0	0	3	5	2.0	2.5
Pholididae/Stichaeidae unid.		2	0	2	1	1.3	1.0
<i>Xerperes fucorum</i>		0	0	0	5	1.3	2.5
<i>Gobiesox maeandricus</i>		0	0	0	3	0.8	1.5
<i>Anoplarchus</i> spp.		0	0	2	0	0.5	1.0
<i>Oligocottus snyderi</i>		0	0	0	1	0.3	0.5
Cottidae unid.		0	1	0	0	0.3	0.5

Vertical Band Transect Survey Total, Annual Mean, and Standard Deviations, South Control,
Station SC-IV

	Survey Date	88 11-Feb-02 Survey Total	89 24-Apr-02 Survey Total	90 26-Jul-02 Survey Total	91 5-Dec-02 Survey Total	Annual Mean	Std. Dev.
<i>Cebidichthys violaceus</i>		35	30	26	82	43.3	26.1
<i>Xiphister mucosus</i>		14	20	31	25	22.5	7.2
<i>Anoplarchus purpureus</i>		23	16	8	37	21.0	12.3
<i>Gobiesox maeandricus</i>		14	22	5	27	17.0	9.6
Pholididae/Stichacidae unid.		16	14	15	16	15.3	1.0
<i>Xiphister atropurpureus</i>		8	18	3	12	10.3	6.3
<i>Oligocottus snyderi</i>		0	1	4	0	1.3	1.9
Cottidae unid.		0	5	0	0	1.3	2.5
<i>Anoplarchus/Cebidichthys</i> spp.		0	2	2	0	1.0	1.2
<i>Xerperes fucorum</i>		0	0	2	0	0.5	1.0
<i>Gibbonsia</i> spp.		0	1	0	0	0.3	0.5
<i>Apodichthys flavidus</i>		0	1	0	0	0.3	0.5
<i>Gibbonsia metzi</i>		0	0	0	1	0.3	0.5

Results for Subtidal Arc Quadrants

Appendix E

Results for

Subtidal Arc Quadrants

Subtidal Arc Quadrant Survey Means, Standard Deviations and Annual Mean, Field's Cove,
Station FC 1 -3m

Survey Survey Date	116		117		118		119		Annual Mean
	20-Mar-02		14-Jun-02		15-Aug-02		19-Nov-02		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae									
<i>Laminaria setchellii</i>	109.8	27.6	92.8	14.3	129.5	57.1	69.3	9.8	100.3
Laminariales	9.3	8.2	17.5	8.4	0.0	0.0	3.0	6.0	7.4
<i>Cystoseira osmundacea</i>	4.8	1.5	3.8	1.9	2.8	1.9	1.5	1.0	3.2
<i>Nereocystis luetkeana</i>	0.0	0.0	5.3	4.6	2.8	3.6	0.8	0.5	2.2
<i>Pterygophora californica</i>	0.3	0.5	2.8	1.0	1.3	1.5	1.3	1.5	1.4
Invertebrates									
<i>Tegula brunnea</i>	131.3	40.9	77.3	27.5	64.5	22.0	48.8	20.1	80.4
<i>Acmaea mitra</i>	6.0	2.5	3.0	2.5	8.3	3.8	4.5	3.9	5.4
<i>Tonicella lineata</i>	4.5	3.0	4.5	3.9	7.5	3.9	3.8	7.5	5.1
<i>Pagurus</i> spp.	4.8	1.7	5.0	2.6	3.3	1.9	5.5	1.3	4.6
<i>Asterina miniata</i>	4.0	0.8	7.0	3.7	3.3	2.1	3.3	1.3	4.4
<i>Anthopleura elegantissima</i>	1.5	1.0	2.3	0.5	1.3	0.5	1.5	1.7	1.6
<i>Cryptochiton stelleri</i>	0.5	0.6	0.0	0.0	2.5	1.7	1.8	1.3	1.2
<i>Diopatra ornata</i>	0.5	1.0	0.0	0.0	0.0	0.0	4.0	3.4	1.1
<i>Tegula montereyi</i>	3.0	2.5	0.0	0.0	0.8	1.5	0.0	0.0	0.9
<i>Serpulorbis squamigerus</i>	3.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.8
<i>Strongylocentro. purpuratus</i>	2.0	2.8	0.3	0.5	0.0	0.0	0.0	0.0	0.6
<i>Mitra idae</i>	1.0	1.4	0.8	0.5	0.0	0.0	0.5	1.0	0.6
<i>Leptasterias</i> spp.	0.8	0.5	0.8	1.0	0.3	0.5	0.0	0.0	0.4
<i>Calliostoma ligatum</i>	0.0	0.0	0.8	1.5	0.0	0.0	0.8	1.5	0.4
<i>Hermisenda crassicornis</i>	0.0	0.0	0.3	0.5	0.8	1.0	0.5	0.6	0.4
<i>Pycnopodia helianthoides</i>	0.5	0.6	0.0	0.0	0.8	1.5	0.3	0.5	0.4
<i>Pisaster ochraceus</i>	0.3	0.5	0.0	0.0	0.0	0.0	0.8	1.5	0.3
<i>Lithopoma gibberosum</i>	0.5	0.6	0.0	0.0	0.3	0.5	0.0	0.0	0.2
<i>Henricia leviuscula</i>	0.5	0.6	0.0	0.0	0.0	0.0	0.3	0.5	0.2
<i>Tethya aurantia</i>	0.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
<i>Doriopsilla albopunctata</i>	0.3	0.5	0.0	0.0	0.5	1.0	0.0	0.0	0.2
<i>Fusinus luteopictus</i>	0.8	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.2
<i>Pisaster giganteus</i>	0.3	0.5	0.3	0.5	0.3	0.5	0.0	0.0	0.2
<i>Archidoris</i> spp.	0.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
<i>Epiactis prolifera</i>	0.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1
<i>Pista</i> spp.	0.0	0.0	0.5	1.0	0.0	0.0	0.0	0.0	0.1
<i>Pisaster brevispinus</i>	0.3	0.5	0.3	0.5	0.0	0.0	0.0	0.0	0.1
<i>Anthopleura artemisia</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Diodora</i> spp.	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Halcampa decemtentaculata</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Phidiana hiltoni</i>	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
<i>Pseudomelatoma torosa</i>	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
<i>Paraxanthias taylori</i>	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Megathura crenulata</i>	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1

Subtidal Arc Quadrant Survey Means, Standard Deviations and Annual Mean, North Diablo Cove,
Station NDC 2-3m

	Survey Date	26-Mar-02	4-Jun-02	20-Aug-02	3-Dec-02	Annual
		Mean	Mean	Mean	Mean	Mean
		Std. Dev.	Std. Dev.	Std. Dev.	Std. Dev.	Std. Dev.
Algae						
<i>Cystoseira osmundacea</i>		11.8	19.3	14.0	11.3	9.1
<i>Macrocystis</i> spp.		6.8	17.8	6.3	4.5	6.3
Laminariales		6.5	3.5	0.0	0.5	2.6
<i>Sargassum muticum</i>		5.0	0.8	0.3	1.0	1.8
Invertebrates						
<i>Strongylocentrotus purpuratus</i>		65.0	22.5	21.0	70.0	44.6
<i>Acmaea mitra</i>		3.8	63.0	37.5	67.5	42.9
<i>Anthopleura elegantissima</i>		14.0	12.8	13.0	7.0	4.2
<i>Serpulorbis squamigerus</i>		0.8	4.5	0.0	2.5	1.9
<i>Tonicella lineata</i>		0.0	0.0	0.0	3.8	0.9
<i>Diodora</i> spp.		0.3	0.5	0.6	2.0	0.7
Serpulidae unid.		0.0	0.0	0.0	2.8	0.7
<i>Phidiana hiltoni</i>		0.8	0.8	0.5	0.5	0.6
<i>Pagurus</i> spp.		0.0	0.8	0.0	1.5	0.6
<i>Epiactis prolifera</i>		0.0	0.5	0.0	0.3	0.4
<i>Diopatra ornata</i>		0.0	0.3	0.8	0.5	0.4
<i>Fissurella volcano</i>		0.0	0.0	0.0	1.3	0.3
<i>Parastichopus</i> spp.		0.3	0.5	0.3	0.3	0.3
<i>Ophiothrix</i> spp.		1.0	0.0	0.0	0.3	0.3
<i>Haliotis</i> spp.		0.3	0.3	0.0	0.5	0.3
<i>Archidoris</i> spp.		0.3	0.0	0.5	0.3	0.3
<i>Anthopleura artemisia</i>		0.3	0.5	0.0	0.0	0.2
<i>Doriopsilla albopunctata</i>		0.0	0.5	0.0	0.3	0.2
<i>Halcanpa decemtentaculata</i>		0.0	0.3	0.0	0.0	<.1
<i>Diaulula sandiegensis</i>		0.0	0.0	0.0	0.3	<.1
<i>Eudistylia polymorpha</i>		0.0	0.3	0.0	0.0	<.1
Pectinidae		0.0	0.3	0.0	0.0	<.1

Subtidal Arc Quadrant Survey Means, Standard Deviations and Annual Mean, North Diablo Cove,
Station NDC 3-3m

	Survey 116		117		118		119			
	Survey Date	27-Mar-02	24-May-02	16-Aug-02	25-Oct-02					
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae										
<i>Cystoseira osmundacea</i>		23.3	19.1	11.0	10.9	18.8	26.0	10.3	13.7	15.8
<i>Sargassum muticum</i>		12.0	17.1	9.0	10.4	5.0	8.7	7.8	10.8	8.4
<i>Macrocystis</i> spp.		0.0	0.0	0.5	1.0	0.5	1.0	1.0	1.4	0.5
Invertebrates										
<i>Strongylocentro. purpuratus</i>		418.3	247.3	404.8	233.0	678.8	531.3	506.5	446.9	502.1
<i>Ophiothrix</i> spp.		0.0	0.0	0.5	1.0	58.8	32.0	45.5	39.4	26.2
<i>Acmaea mitra</i>		6.0	2.5	0.8	1.5	19.5	17.8	24.8	13.7	12.8
<i>Anthopleura elegantissima</i>		1.8	1.3	2.3	2.1	6.3	4.6	7.5	4.9	4.4
<i>Serpulidae</i> unid.		0.0	0.0	2.8	3.8	4.0	6.2	0.0	0.0	1.7
<i>Diodora</i> spp.		0.5	1.0	0.0	0.0	1.0	0.0	2.0	2.2	0.9
<i>Parastichopus</i> spp.		0.5	0.6	1.3	1.9	1.5	1.7	0.0	0.0	0.8
<i>Fissurella volcano</i>		1.0	0.8	1.5	1.3	0.0	0.0	0.0	0.0	0.6
<i>Serpulorbis squamigerus</i>		0.8	0.5	1.3	1.0	0.0	0.0	0.0	0.0	0.5
<i>Megathura crenulata</i>		0.0	0.0	0.3	0.5	0.0	0.0	0.5	0.6	0.2
<i>Archidoris</i> spp.		0.0	0.0	0.0	0.0	0.3	0.5	0.3	0.5	0.1
<i>Diopatra ornata</i>		0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Doriopsilla albopunctata</i>		0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
<i>Eudistylia polymorpha</i>		0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1

Subtidal Arc Quadrant Survey Means, Standard Deviations and Annual Mean, North Diablo Cove, Station NDC 4-4m

	Survey	116	117	118	119					
	Survey Date	19-Mar-02	13-Jun-02	23-Aug-02	26-Dec-02					
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae										
<i>Cystoseira osmundacea</i>		16.5	12.7	7.8	2.5	9.0	2.6	11.0	6.2	11.1
<i>Macrocystis</i> spp.		2.5	2.4	8.8	3.6	12.8	1.5	4.0	1.8	7.7
<i>Laminariales</i>		7.5	4.1	7.3	2.5	0.0	0.0	0.0	0.0	3.7
<i>Sargassum muticum</i>		1.0	2.0	3.8	2.8	0.0	0.0	0.0	0.0	1.2
<i>Pterygophora californica</i>		0.0	0.0	0.0	0.0	2.8	2.2	0.0	0.0	0.7
<i>Laminaria setchellii</i>		0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.0	0.3
Invertebrates										
<i>Strongylocentro. purpuratus</i>		91.8	94.2	57.8	37.4	120.5	115.8	81.0	72.1	87.8
<i>Acmaea mitra</i>		2.3	1.5	3.0	2.5	36.8	11.3	30.8	13.7	18.2
<i>Anthopleura elegantissima</i>		8.5	1.3	13.8	6.4	8.0	1.4	8.0	4.1	9.6
<i>Serpulidae</i> unid.		0.0	0.0	13.3	5.4	0.0	0.0	0.0	0.0	3.3
<i>Diopatra ornata</i>		2.3	0.5	0.8	1.0	1.8	2.4	3.0	2.5	1.9
<i>Tethya aurantia</i>		1.5	2.4	1.3	1.3	1.3	1.9	2.0	1.4	1.5
<i>Doriopsilla albopunctata</i>		1.3	1.0	4.0	2.6	0.3	0.5	0.3	0.5	1.4
<i>Serpulorbis squamigerus</i>		0.0	0.0	2.8	1.5	0.0	0.0	2.3	1.7	1.3
<i>Parastichopus</i> spp.		2.3	1.9	1.3	1.3	0.5	1.0	0.3	0.5	1.1
<i>Archidoris</i> spp.		1.0	1.4	1.0	1.2	0.8	1.5	0.0	0.0	0.7
<i>Tonicella lineata</i>		0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.7	0.4
<i>Phidiana hiltoni</i>		1.0	1.2	0.5	1.0	0.0	0.0	0.0	0.0	0.4
<i>Diodora</i> spp.		0.3	0.5	0.0	0.0	0.8	1.5	0.3	0.5	0.3
<i>Mitra idae</i>		0.0	0.0	1.3	1.0	0.0	0.0	0.0	0.0	0.3
<i>Pycnopodia helianthoides</i>		0.0	0.0	0.3	0.5	0.5	0.6	0.3	0.5	0.3
<i>Pisaster giganteus</i>		0.3	0.5	0.3	0.5	0.3	0.5	0.3	0.5	0.3
<i>Eudistylia polymorpha</i>		0.0	0.0	0.0	0.0	1.0	0.8	0.0	0.0	0.3
<i>Urticina</i> spp.		0.0	0.0	0.8	1.5	0.0	0.0	0.0	0.0	0.2
<i>Tegula brunnea</i>		0.0	0.0	0.0	0.0	0.8	1.5	0.0	0.0	0.2
<i>Asterina miniata</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.5	0.2
<i>Megathura crenulata</i>		0.5	0.6	0.0	0.0	0.3	0.5	0.0	0.0	0.2
<i>Pagurus</i> spp.		0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.1
<i>Halcapa decemtentaculata</i>		0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
<i>Lithopoma undosa</i>		0.3	0.5	0.0	0.0	0.3	0.5	0.0	0.0	0.1
<i>Anthopleura artemisia</i>		0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Epiactis prolifera</i>		0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Fissurella volcano</i>		0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Mopalia</i> spp.		0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Octopus</i> spp.		0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Hermisenda crassicornis</i>		0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Ceratostoma foliatum</i>		0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Pectinidae</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1

Subtidal Arc Quadrant Survey Means, Standard Deviations and Annual Mean, South Diablo Cove,
Station SDC 2 -3m

	Survey	116	117	118	119					
	Survey Date	27-Mar-02	8-May-02	13-Aug-02	26-Nov-02					
		Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean				
Algae										
<i>Cystoseira osmundacea</i>		20.8	7.5	15.0	7.2	9.0	2.9	10.0	5.1	13.7
<i>Macrocystis</i> spp.		5.5	3.9	8.8	3.9	6.3	2.2	1.3	1.0	5.4
<i>Sargassum muticum</i>		3.0	2.2	4.5	7.7	1.0	1.2	0.0	0.0	2.1
Laminariales		1.5	1.3	2.0	1.4	0.0	0.0	0.0	0.0	0.9
<i>Pterygophora californica</i>		0.0	0.0	0.8	1.5	0.3	0.5	0.0	0.0	0.3
<i>Laminaria setchellii</i>		0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Invertebrates										
<i>Diopatra ornata</i>		4.0	8.0	0.5	1.0	2.8	1.7	4.8	5.3	3.0
<i>Strongylocentro. purpuratus</i>		2.5	3.3	1.3	1.5	0.5	0.6	4.3	2.6	2.1
<i>Acmaea mitra</i>		1.5	1.7	2.3	1.5	2.3	2.9	2.3	2.9	2.1
<i>Anthopleura elegantissima</i>		1.3	1.3	3.0	1.4	0.0	0.0	3.5	2.4	1.9
<i>Mitra idae</i>		0.5	0.6	1.0	0.8	2.0	0.8	0.3	0.5	0.9
<i>Anthopleura artemisia</i>		0.8	1.0	0.5	0.6	1.3	0.5	0.5	0.6	0.8
<i>Serpulorbis squamigerus</i>		0.3	0.5	0.5	0.6	1.8	1.7	0.0	0.0	0.6
<i>Tegula brunnea</i>		1.5	1.7	0.0	0.0	0.8	1.5	0.0	0.0	0.6
<i>Parastichopus</i> spp.		1.3	1.3	0.3	0.5	0.5	0.6	0.3	0.5	0.6
<i>Pisaster giganteus</i>		0.8	0.5	0.5	0.6	0.3	0.5	0.8	0.5	0.6
<i>Ophiothrix</i> spp.		0.0	0.0	0.0	0.0	1.8	2.1	0.0	0.0	0.4
<i>Asterina miniata</i>		0.3	0.5	0.0	0.0	0.3	0.5	1.0	1.4	0.4
<i>Pagurus</i> spp.		0.0	0.0	0.0	0.0	0.5	1.0	0.3	0.5	0.2
<i>Pisaster brevispinus</i>		0.0	0.0	0.3	0.5	0.3	0.5	0.3	0.5	0.2
<i>Loxorhynchus</i> spp.		0.3	0.5	0.3	0.5	0.0	0.0	0.0	0.0	0.1
<i>Halcanpa decemtentaculata</i>		0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.1
<i>Doriopsilla albopunctata</i>		0.3	0.5	0.0	0.0	0.3	0.5	0.0	0.0	0.1
<i>Cucumaria</i> spp.		0.3	0.5	0.0	0.0	0.3	0.5	0.0	0.0	0.1
<i>Lottia instabilis</i>		0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Pycnopodia helianthoides</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1
<i>Pugettia</i> spp.		0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
<i>Norrisia norrisi</i>		0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Archidoris</i> spp.		0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Pectinidae		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1

Subtidal Arc Quadrant Survey Means, Standard Deviations and Annual Mean, South Diablo Cove, Station SDC 3-4m

Survey		116		117		118		119		
Survey Date		22-Mar-02		20-Jun-02		19-Aug-02		25-Nov-02		
Group	Site	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae										
		1.8	1.3	5.0	0.8	5.0	0.8	4.0	1.8	3.9
		4.5	1.7	5.0	2.6	2.3	1.0	3.3	1.9	3.8
		1.8	1.7	0.5	1.0	2.5	0.6	5.5	2.9	2.6
		6.0	4.8	4.0	6.7	0.0	0.0	0.0	0.0	2.5
		1.5	1.9	2.5	1.7	2.0	1.8	1.3	0.5	1.8
Invertebrates										
		13.5	7.6	12.0	16.7	14.5	5.8	29.0	14.5	17.3
		28.0	26.1	3.8	1.7	21.3	12.3	6.0	4.1	14.8
		12.5	3.0	8.0	4.7	8.8	3.1	13.0	3.2	10.6
		5.3	4.5	3.0	2.5	5.3	2.9	4.5	1.7	4.5
		3.8	1.7	2.8	1.7	1.5	1.3	2.0	0.8	2.5
		1.3	1.0	1.3	1.3	1.5	1.0	1.3	1.3	1.3
		1.3	1.0	2.0	0.8	1.3	1.3	0.3	0.5	1.2
		1.8	1.5	1.3	1.5	0.5	0.6	1.0	0.8	1.1
		1.3	1.5	1.8	2.4	0.0	0.0	0.0	0.0	0.8
		0.0	0.0	1.0	1.2	0.5	0.6	0.5	1.0	0.5
		0.0	0.0	0.8	1.0	0.0	0.0	0.8	0.5	0.4
		1.3	1.3	0.3	0.5	0.0	0.0	0.0	0.0	0.4
		0.0	0.0	1.5	1.3	0.0	0.0	0.0	0.0	0.4
		0.0	0.0	0.3	0.5	1.3	1.0	0.0	0.0	0.4
		0.0	0.0	0.3	0.5	0.8	0.5	0.3	0.5	0.3
		0.0	0.0	0.0	0.0	0.8	0.5	0.5	1.0	0.3
		0.0	0.0	0.5	0.6	0.5	1.0	0.0	0.0	0.3
		0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.5	0.2
		0.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
		0.0	0.0	0.8	1.5	0.0	0.0	0.0	0.0	0.2
		0.0	0.0	0.3	0.5	0.3	0.5	0.3	0.5	0.2
		0.3	0.5	0.3	0.5	0.0	0.0	0.0	0.0	0.1
		0.0	0.0	0.3	0.5	0.0	0.0	0.3	0.5	0.1
		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1
		0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
		0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
		0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
		0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
		0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
		0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
		0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
		0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
		0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
		0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1

Subtidal Arc Quadrant Survey Means, Standard Deviations and Annual Mean, South Control,
Station SC 1 -3m

	Survey	116	117	118	119					
	Survey Date	21-Mar-02	10-May-02	21-Aug-02	3-Dec-02	Annual				
		Mean	Std. Dev.	Mean	Std. Dev.	Mean				
Algae										
<i>Pterygophora californica</i>		100.0	36.6	100.0	20.5	92.5	36.9	85.3	20.8	94.4
<i>Laminaria setchellii</i>		37.8	13.6	104.5	14.2	48.3	16.5	46.0	18.3	59.1
<i>Nereocystis luetkeana</i>		3.0	3.5	24.8	24.3	7.0	10.2	0.5	0.6	8.8
Laminariales		25.5	12.5	0.0	0.0	9.3	11.9	0.0	0.0	8.7
<i>Cystoseira osmundacea</i>		6.8	2.9	8.3	3.4	5.8	2.5	2.3	1.3	5.8
<i>Egregia menziesii</i>		0.0	0.0	0.0	0.0	0.3	0.5	0.3	0.5	0.1
Invertebrates										
<i>Tegula brunnea</i>		319.5	53.1	226.5	33.8	36.0	25.6	201.8	52.6	195.9
<i>Tonicella lineata</i>		6.0	2.5	6.8	3.8	2.3	1.5	11.3	2.9	6.6
<i>Acmaea mitra</i>		1.5	1.7	5.3	1.5	4.5	1.7	14.3	8.3	6.4
<i>Asterina miniata</i>		9.3	3.3	3.0	1.4	3.0	0.8	8.5	3.7	5.9
<i>Anthopleura elegantissima</i>		9.0	4.2	4.8	2.2	3.0	0.8	6.0	2.2	5.7
<i>Pagurus</i> spp.		3.5	1.3	8.3	4.1	2.0	2.8	2.5	1.7	4.1
<i>Diopatra ornata</i>		3.3	1.5	1.3	1.0	5.8	7.1	4.5	3.0	3.7
<i>Lottia instabilis</i>		0.8	1.0	6.8	4.9	0.0	0.0	6.3	2.8	3.4
<i>Halcampa decemtentaculata</i>		0.0	0.0	4.0	1.6	0.0	0.0	1.8	2.1	1.4
<i>Cryptochiton stelleri</i>		1.3	1.3	1.3	0.5	1.0	0.0	1.8	1.7	1.3
<i>Calliostoma ligatum</i>		0.8	1.5	2.3	1.5	0.0	0.0	1.5	3.0	1.1
<i>Tegula montereyi</i>		1.5	1.7	1.5	1.7	0.0	0.0	1.5	1.7	1.1
Serpulidae unid.		0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	0.9
<i>Pycnopodia helianthoides</i>		0.0	0.0	0.3	0.5	1.0	0.8	1.8	0.5	0.8
<i>Epiactis prolifera</i>		0.0	0.0	0.3	0.5	0.0	0.0	1.5	1.3	0.4
<i>Anthopleura artemisia</i>		0.5	0.6	0.0	0.0	0.5	0.6	0.5	1.0	0.4
<i>Urticina</i> spp.		0.3	0.5	0.3	0.5	0.5	0.6	0.5	0.6	0.4
<i>Leptasterias</i> spp.		0.8	0.5	0.0	0.0	0.0	0.0	0.8	1.0	0.4
<i>Lithopoma gibberosum</i>		0.0	0.0	0.3	0.5	0.0	0.0	0.8	0.5	0.3
<i>Serpulorbis squamigerus</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.0	0.2
<i>Mitra idae</i>		0.5	0.6	0.3	0.5	0.0	0.0	0.0	0.0	0.2
<i>Strongylocentro. purpuratus</i>		0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
<i>Pisaster/Henricia</i> (juv.)		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.1
Pectinidae		0.3	0.5	0.0	0.0	0.0	0.0	0.3	0.5	0.1
<i>Diodora</i> spp.		0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Mopalia</i> spp.		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1
<i>Pisaster ochraceus</i>		0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Parastichopus</i> spp.		0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Doriopsilla albopunctata</i>		0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
<i>Pseudomelatoma torosa</i>		0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Cadlina</i> spp.		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1

Subtidal Arc Quadrant Survey Means, Standard Deviations and Annual Mean, South Control,
Station SC 2 -6m

Survey Survey Date	116 22-Feb-02		117 5-Jun-02		118 14-Aug-02		119 15-Jan-03		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae									
<i>Nereocystis luetkeana</i>	0.5	1.0	112.0	32.1	34.5	15.9	0.0	0.0	36.8
<i>Pterygophora californica</i>	38.5	15.2	13.5	9.7	34.3	16.7	51.8	14.2	34.5
<i>Laminaria setchellii</i>	37.3	17.7	17.5	4.0	17.8	5.4	9.8	1.7	20.6
<i>Cystoseira osmundacea</i>	0.8	0.5	0.8	1.0	0.0	0.0	0.0	0.0	0.4
Invertebrates									
<i>Tegula brunnea</i>	79.5	30.1	58.5	7.1	19.5	5.7	39.8	12.6	49.3
<i>Asterina miniata</i>	14.3	7.3	9.8	2.1	11.0	5.2	15.3	11.3	12.6
<i>Acmaea mitra</i>	17.3	5.7	15.0	9.5	3.0	2.5	3.8	2.9	9.8
<i>Calliostoma ligatum</i>	29.3	16.5	2.3	1.5	3.8	3.8	0.8	1.5	9.0
<i>Anthopleura elegantissima</i>	10.3	5.6	8.0	3.7	7.0	4.2	10.5	5.7	8.9
<i>Tonicella lineata</i>	17.3	9.6	9.0	5.5	6.8	3.8	0.0	0.0	8.3
<i>Pagurus</i> spp.	5.3	4.6	0.8	1.0	9.8	3.6	3.5	3.5	4.8
<i>Serpulorbis squamigerus</i>	10.8	8.2	0.0	0.0	3.3	2.5	4.0	4.2	4.5
<i>Pisaster giganteus</i>	1.0	0.8	2.0	0.8	1.3	1.0	6.3	3.8	2.6
<i>Diopatra ornata</i>	1.5	1.9	1.3	1.5	7.0	5.1	0.5	1.0	2.6
<i>Mitra idae</i>	6.5	1.3	2.3	1.3	0.3	0.5	0.3	0.5	2.3
<i>Tegula montereyi</i>	3.0	2.5	3.0	2.5	0.0	0.0	0.8	1.5	1.7
<i>Cryptochiton stelleri</i>	1.0	0.8	2.8	1.0	0.3	0.5	1.8	1.5	1.4
<i>Epiactis prolifera</i>	1.5	1.9	3.0	4.2	0.0	0.0	0.0	0.0	1.1
<i>Pisaster ochraceus</i>	0.8	0.5	1.3	1.3	1.0	0.8	1.0	2.0	1.0
<i>Pycnopodia helianthoides</i>	2.0	1.6	0.3	0.5	0.5	0.6	0.5	0.6	0.8
<i>Tethya aurantia</i>	0.3	0.5	0.5	1.0	0.8	1.0	0.5	1.0	0.5
<i>Archidoris</i> spp.	0.8	0.5	0.0	0.0	0.3	0.5	1.0	1.4	0.5
<i>Haliotis</i> spp.	0.0	0.0	0.8	1.5	0.8	1.5	0.0	0.0	0.4
<i>Doriopsilla albopunctata</i>	0.8	0.5	0.0	0.0	0.5	1.0	0.0	0.0	0.3
<i>Cerastostoma foliatum</i>	0.0	0.0	0.0	0.0	0.3	0.5	1.0	2.0	0.3
<i>Lottia instabilis</i>	0.0	0.0	0.0	0.0	0.8	1.5	0.3	0.5	0.3
<i>Anthopleura artemisia</i>	0.0	0.0	0.5	0.6	0.0	0.0	0.3	0.5	0.2
<i>Urticina</i> spp.	0.3	0.5	0.5	0.6	0.0	0.0	0.0	0.0	0.2
<i>Lithopoma gibberosum</i>	0.3	0.5	0.3	0.5	0.0	0.0	0.3	0.5	0.2
<i>Leptasterias</i> spp.	0.3	0.5	0.5	0.6	0.0	0.0	0.0	0.0	0.2
<i>Orthasterias koehleri</i>	0.0	0.0	0.3	0.5	0.3	0.5	0.3	0.5	0.2
<i>Diodora</i> spp.	0.0	0.0	0.5	0.6	0.0	0.0	0.0	0.0	0.1
<i>Mopalia</i> spp.	0.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1
<i>Anthopleura xanthogram.</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
Nemertea unid.	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Calliostoma annulatum</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Balanus</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1
<i>Chthamalus fissus</i>	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Cancer antennarius</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Henricia leviuscula</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Loxorhynchus</i> spp.	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Parastichopus</i> spp.	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
Ischnochitonidae	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Pisaster/Henricia</i> (juv.)	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Ophioplocus</i> spp.	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1

Subtidal Line Contact Survey Means, Standard Deviations and Annual Mean, Field's Cove, Station FC 1 -3m

Survey Survey Date	116 20-Mar-02		117 14-Jun-02		118 15-Aug-02		119 20-Nov-02		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae									
coralline crust	92.0	1.6	40.0	4.3	50.5	10.0	21.0	10.4	50.9
<i>Calliart./Bossie. spp.-comp.</i>	38.5	6.0	53.0	10.4	57.0	7.4	54.5	12.8	50.8
<i>Chondracanth. corymbiferus</i>	8.5	4.4	19.0	4.8	12.5	5.3	9.0	4.8	12.3
<i>Cryptopleura ruprechtiana</i>	8.5	2.5	16.5	8.4	16.5	3.8	6.0	2.8	11.9
<i>Laminaria seichellii</i>	6.5	1.9	9.5	4.1	11.0	5.3	6.5	3.0	8.4
<i>Prionitis spp.</i>	4.5	1.0	10.0	4.3	8.5	3.4	5.5	6.4	7.1
<i>Rhodymenia spp.</i>	8.5	3.0	8.0	1.6	7.5	1.9	3.5	4.4	6.9
Non-coralline crust	1.5	1.9	6.0	3.7	3.5	3.0	1.5	1.9	3.1
<i>Farlow./Pikea spp.-complex</i>	2.5	1.0	4.5	5.7	3.5	4.4	0.5	1.0	2.8
<i>Prionitis australis</i>	7.0	4.2	<.1	<.01	1.0	2.0	<.1	<.01	2.0
<i>Microcladia coulteri</i>	3.0	3.5	3.5	3.4	1.5	1.9	<.1	<.01	2.0
<i>Neoptilota densa</i>	3.0	3.5	1.0	2.0	1.0	1.2	2.0	2.8	1.8
<i>Gelidium robustum</i>	1.5	1.9	<.1	0.0	2.0	2.3	1.0	2.0	1.1
<i>Cystoseira osmundacea</i>	0.5	1.0	1.0	2.0	2.0	1.6	<.1	<.01	0.9
<i>Ahrfeltiopsis linearis</i>	<.1	<.01	1.5	1.9	0.5	1.0	<.1	<.01	0.5
<i>Nereocystis luetkeana</i>	0.0	0.0	1.0	1.2	<.1	0.0	<.1	<.01	0.3
<i>Halyme./Schizy. spp.-comp.</i>	0.5	1.0	0.5	1.0	0.0	0.0	<.1	<.01	0.3
<i>Pterygophora californica</i>	<.1	<.01	<.1	<.01	0.5	1.0	0.0	0.0	0.1
<i>Cryptopleura violacea</i>	0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.1
<i>Ulva/Enteromorpha spp.</i>	<.1	<.01	<.1	<.01	<.1	0.0	<.1	<.01	<.1
<i>Callophyllis spp.</i>	<.1	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Callophyllis flabellulata</i>	<.1	<.01	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Osmundea spp.</i>	0.0	0.0	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Scinaia confusa</i>	<.1	<.01	<.1	<.01	<.1	<.01	0.0	0.0	<.1
Laminariales	0.0	0.0	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Desmarestia spp.</i>	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Corallina officinalis</i>	0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Erythrophyllum delesserioides</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Callophyllis firma</i>	0.0	0.0	<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Coilodesme californica</i>	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Opuntiella californica</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Sarcodiotheca gaudichaudii</i>	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Polyneura latissima</i>	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Mazzaella lilacina</i>	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Mazzaella rosea</i>	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Chrysophyta unid.	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Invertebrates									
<i>Phragmatopoma californica</i>	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Substrate									
colonized rock	90.5	5.7	81.0	9.9	82.5	3.4	66.0	10.7	80.0
colonized cobble	9.0	4.8	17.0	8.9	13.5	1.9	6.0	3.3	11.4
cobble	0.5	1.0	2.0	1.6	3.5	1.0	23.5	13.0	7.4
rock	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.5	0.8
sand (shell gravel)	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	0.1

Subtidal Line Contact Survey Means, Standard Deviations and Annual Mean, North Diablo Cove,
Station NDC 2 -3m

Survey Date		116	117	118	119				
26-Mar-02		4-Jun-02	20-Aug-02	3-Dec-02					
Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean			
Algae									
coralline crust	90.0	1.6	88.0	8.8	37.0	10.7	47.5	1.9	65.6
<i>Callia./Bossie. spp.-complex</i>	23.5	6.6	31.0	7.0	28.5	16.1	34.5	8.5	29.4
<i>Farlow./Pikea spp.-complex</i>	12.5	4.1	8.0	3.7	5.5	4.1	8.0	4.3	8.5
<i>Macrocyctis spp.</i>	4.5	3.0	4.0	5.4	11.5	13.5	7.0	7.4	6.8
Chrysophyta unid.	6.0	2.8	0.0	0.0	15.0	18.1	<.1	<.01	5.3
<i>Cryptopleura violacea</i>	9.5	1.9	5.5	3.0	1.0	1.2	<.1	<.01	4.0
<i>Cystoseira osmundacea</i>	4.5	2.5	4.5	3.0	2.0	0.0	3.0	2.6	3.5
<i>Prionitis spp.</i>	13.5	1.9	1.0	1.2	5.0	3.8	4.5	3.4	3.5
<i>Gelidium robustum</i>	3.0	2.6	2.5	1.9	1.0	1.2	5.5	1.9	3.0
<i>Chondracan. corymbiferus</i>	4.5	3.8	2.5	3.8	1.0	1.2	1.5	1.9	2.4
<i>Acrosorium uncinatum</i>	1.5	1.9	2.5	1.9	0.5	1.0	3.0	2.6	1.9
filamentous red algae-comp.	0.5	1.0	<.1	<.01	0.0	0.0	4.0	3.7	1.1
Non-coralline crust	0.5	1.0	0.5	1.0	<.1	<.01	3.5	2.5	1.1
<i>Rhodymenia spp.</i>	0.0	0.0	0.5	1.0	1.0	2.0	2.0	1.6	1.1
<i>Sargassum muticum</i>	2.5	1.9	1.0	1.2	<.1	<.01	<.1	<.01	0.9
<i>Nereocystis luetkeana</i>	0.0	0.0	3.5	5.7	0.0	0.0	0.0	0.0	0.9
<i>Pterosiphonia dendroidea</i>	1.5	1.9	<.1	0.0	1.5	1.0	<.1	<.01	0.8
<i>Desmarestia spp.</i>	1.0	1.2	1.0	1.2	0.0	0.0	0.0	0.0	0.5
<i>Halyme./Schizy. spp.-comp.</i>	0.0	0.0	1.5	1.9	0.0	0.0	0.0	0.0	0.4
<i>Callophyllis flabellulata</i>	0.5	1.0	0.5	1.0	<.1	<.01	<.1	<.01	0.3
<i>Callophyllis spp.</i>	0.5	1.0	0.5	1.0	<.1	<.01	0.0	0.0	0.3
<i>Prionitis australis</i>	<.1	<.01	1.0	2.0	0.0	0.0	0.0	0.0	0.3
<i>Ahnfeltiopsis linearis</i>	0.5	1.0	2.0	0.0	0.0	0.0	<.1	<.01	0.1
<i>Sarcoditheca gaudichaudii</i>	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
<i>Ulva/Enteromorpha spp.</i>	<.1	0.0	<.1	0.0	0.0	0.0	<.1	<.01	<.1
<i>Colpomenia spp.</i>	<.1	<.01	<.1	0.0	0.0	0.0	0.0	0.0	<.1
<i>Spongo./Acrosiphon.-comp.</i>	<.1	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Bryopsis spp.</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Corallina officinalis</i>	10.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Grateloupia doryphora</i>	<.1	<.01	1.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Osmundea spp.</i>	<.1	<.01	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Nienburgia andersoniana</i>	0.0	0.0	1.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Cladophora spp.</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Laminaria setchellii</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Gelidium coulteri</i>	<.1	<.01	1.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Halicystis ovalis</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Laminariales	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Antitha./Platyth. spp.-comp.</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Invertebrates									
<i>Phragmatopoma californica</i>	0.0	0.0	0.0	0.0	0.0	0.0	12.5	4.1	3.1
Substrate	81.5	7.4	79.5	5.0	58.0	11.4	75.0	6.6	73.5
colonized rock	14.0	6.3	16.0	1.6	18.0	5.9	15.0	6.2	15.8
colonized cobble	20.5	1.0	2.0	0.0	14.5	9.4	5.0	2.6	5.0
sand (shell gravel)	3.5	3.0	1.0	1.2	7.0	3.8	3.5	2.5	3.8
rock	0.5	1.0	3.5	3.4	2.5	3.8	1.5	1.0	2.0

Subtidal Line Contact Survey Means, Standard Deviations and Annual Mean, North Diablo Cove,
Station NDC 3 -3m

Survey	116		117		118		119		Annual Mean
	Survey Date	27-Mar-02	24-May-02	16-Aug-02	25-Oct-02				
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae									
coralline crust	94.0	1.6	44.0	11.2	46.0	10.8	87.0	7.0	67.8
Chrysophyta unid.	8.5	6.8	21.0	13.1	24.0	25.7	29.5	17.8	20.8
<i>Calliart./Bossie. spp.-comp.</i>	13.5	7.7	14.5	4.7	13.0	8.7	12.0	3.3	13.3
<i>Cryptopleura violacea</i>	14.0	5.9	2.0	4.0	9.0	10.5	10.5	12.8	8.9
<i>Farlow./Pikea spp.-complex</i>	10.0	3.3	8.0	8.5	1.0	2.0	1.0	2.0	5.0
<i>Cystoseira osmundacea</i>	4.5	4.1	5.0	4.8	4.5	5.7	3.0	3.5	4.3
<i>Sargassum muticum</i>	5.0	6.0	3.5	5.7	<.1	<.01	2.5	1.9	2.8
<i>Acrosorium uncinatum</i>	5.0	2.6	0.5	1.0	<.1	<.01	4.5	2.5	2.5
<i>Prionitis spp.</i>	0.5	1.0	4.0	3.3	3.5	4.7	1.5	3.0	2.4
<i>Chondracanthus corymbiferus</i>	0.5	1.0	2.0	2.8	2.0	4.0	2.5	1.9	1.8
<i>Gelidium robustum</i>	3.0	3.5	1.0	2.0	1.5	3.0	1.0	1.2	1.6
<i>Rhodomenia spp.</i>	0.5	1.0	2.0	2.8	<.1	<.01	3.0	3.8	1.4
<i>Ulva/Enteromorpha spp.</i>	<.1	0.0	4.5	3.4	0.0	0.0	<.1	<.01	1.1
Non-coralline crust	0.0	0.0	2.0	1.6	1.5	3.0	1.0	1.2	1.1
<i>Pterosiphonia dendroidea</i>	2.0	2.8	0.5	1.0	<.1	<.01	1.0	2.0	0.9
<i>Macrocystis spp.</i>	0.0	0.0	<.1	<.01	1.0	2.0	1.0	1.2	0.5
<i>Ahnfeltiopsis linearis</i>	1.0	2.0	0.5	1.0	0.5	1.0	0.0	0.0	0.5
<i>Colpomenia spp.</i>	0.5	1.0	<.1	<.01	0.0	0.0	0.5	1.0	0.3
<i>Cladophora spp.</i>	0.0	0.0	0.5	1.0	0.5	1.0	0.0	0.0	0.3
<i>Desmarestia spp.</i>	0.0	0.0	0.5	1.0	0.0	0.0	0.5	1.0	0.3
filamentous red algae-comp.	0.5	1.0	<.1	<.01	<.1	<.01	<.1	<.01	0.1
<i>Prionitis australis</i>	<.1	<.01	0.0	0.0	0.5	1.0	0.0	0.0	0.1
<i>Grateloupia doryphora</i>	<.1	<.01	0.5	1.0	0.0	0.0	0.0	0.0	0.1
<i>Corallina officinalis</i>	0.0	0.0	0.5	1.0	0.0	0.0	0.0	0.0	0.1
<i>Nienburgia andersoniana</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	0.1
<i>Spongo./Acrosiphon.-comp.</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Bryopsis spp.</i>	<.1	<.01	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Antitha./Platyth. spp.-comp.</i>	0.0	0.0	<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Callophyllis flabellulata</i>	0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Gastroclon. subarticulatum</i>	0.0	0.0	<.1	<.01	0.0	0.0	<.1	<.01	<.1
<i>Callophyllis spp.</i>	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Halyme./Schizy. spp.-comp.</i>	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Fauchea laciniata</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Mazzaella rosea</i>	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Chondra. harveyan./spino.</i>	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
Invertebrates									
<i>Phragmatopoma californica</i>	2.0	2.8	1.5	3.0	2.5	5.0	0.5	1.0	1.6
<i>Balanus spp.</i>	0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.1
Substrate									
colonized rock	88.5	5.7	72.5	12.8	61.5	13.0	83.5	1.9	76.5
colonized cobble	8.5	3.4	11.0	6.2	12.5	5.5	9.0	3.5	10.3
rock	0.5	1.0	9.0	8.3	13.0	14.5	4.5	3.4	6.8
sand (shell gravel)	2.0	2.8	1.0	2.0	9.5	8.5	1.0	2.0	3.4
cobble	0.5	1.0	6.5	4.1	3.5	3.4	2.0	1.6	3.1

Subtidal Line Contact Survey Means, Standard Deviations and Annual Mean, North Diablo Cove,
Station NDC 4-4m

Survey Date	116		117		118		119		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Algae									
coralline crust	96.5	1.0	56.0	4.9	53.0	6.6	45.5	10.4	62.8
<i>Calliart./Bossie. spp.-comp.</i>	24.5	10.1	36.0	15.6	45.0	13.7	30.5	8.4	34.0
<i>Farlow./Pikea spp.-complex</i>	14.0	3.7	21.0	3.5	9.5	3.0	9.5	5.0	13.5
<i>Chondracanth. corymbiferus</i>	7.5	3.0	5.0	2.6	7.5	1.0	2.5	1.9	5.6
<i>Prionitis spp.</i>	1.5	1.9	6.0	4.9	7.0	2.0	3.5	1.0	4.5
<i>Rhodymenia spp.</i>	5.5	2.5	5.0	2.6	5.5	2.5	0.5	1.0	4.1
<i>Cryptopleura violacea</i>	5.5	5.7	4.0	1.6	5.5	2.5	<.1	<.01	3.8
<i>Desmarestia spp.</i>	2.5	1.0	9.0	5.8	3.5	1.9	0.0	0.0	3.8
<i>Cystoseira osmundacea</i>	4.5	6.6	3.0	3.5	5.0	6.0	1.0	2.0	3.4
<i>Macrocystis spp.</i>	0.5	1.0	3.5	1.0	7.0	3.5	2.0	2.8	3.3
Chrysophyta unid.	4.5	1.9	0.0	0.0	7.0	4.8	0.0	0.0	2.9
<i>Acrosorium uncinatum</i>	5.5	1.0	0.0	0.0	0.5	1.0	3.5	3.0	2.4
<i>Gelidium robustum</i>	<.1	<.01	2.5	3.8	3.0	3.5	3.0	1.2	2.1
<i>Callophyllis flabellulata</i>	4.0	3.7	1.5	1.9	2.0	1.6	<.1	<.01	1.9
Non-coralline crust	1.5	1.9	0.5	1.0	0.0	0.0	4.5	1.9	1.6
<i>Pterosiphonia dendroidea</i>	5.0	3.8	0.0	0.0	1.5	3.0	<.1	<.01	1.6
<i>Prionitis australis</i>	1.5	3.0	4.0	5.4	1.0	2.0	0.0	0.0	1.6
<i>Callophyllis spp.</i>	2.5	3.0	<.1	<.01	0.5	1.0	0.0	0.0	0.8
<i>Ahnfeltiopsis linearis</i>	<.1	<.01	0.5	1.0	1.5	1.9	<.1	<.01	0.5
<i>Laminaria setchellii</i>	<.1	0.0	0.5	1.0	<.1	<.01	<.1	<.01	0.1
<i>Halyme./Schizy. spp.-comp.</i>	<.1	<.01	0.5	1.0	<.1	<.01	0.0	0.0	0.1
<i>Sargassum muticum</i>	0.5	1.0	<.1	<.01	<.1	<.01	0.0	0.0	0.1
<i>Microcladia coulteri</i>	0.0	0.0	0.5	1.0	0.0	0.0	0.0	0.0	0.1
<i>Chondra. harveyan./spinos.</i>	0.0	0.0	0.5	1.0	0.0	0.0	0.0	0.0	0.1
filamentous red algae-comp.	<.1	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Nienburgia andersoniana</i>	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Ulva/Enteromorpha spp.</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Osmundea spp.</i>	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Laminariales	0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Antitha./Platyth. spp.-comp.</i>	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
Invertebrates									
<i>Phragmatopoma californica</i>	0.0	0.0	4.0	2.8	0.0	0.0	17.0	4.2	5.3
Porifera unid. (encrusting)	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	0.1
Substrate									
colonized rock	91.0	76.2	78.5	10.1	76.0	9.4	74.5	10.1	80.0
colonized cobble	8.0	5.4	6.0	4.3	8.0	8.2	9.5	1.9	7.9
sand (shell gravel)	0.5	1.0	7.5	4.7	14.0	8.5	4.0	4.3	6.5
cobble	0.5	1.0	6.0	1.6	2.0	1.6	5.5	4.4	3.5
rock	0.0	0.0	1.5	1.9	0.0	0.0	6.5	1.9	2.0

Subtidal Line Contact Survey Means, Standard Deviations and Annual Mean, South Diablo Cove,
Station SDC 2-3m

Survey	116		117		118		119		
Survey Date	27-Mar-02		18-May-02		13-Aug-02		26-Nov-02		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Algae									
coralline crust	35.0	9.6	32.5	7.7	83.5	1.0	49.5	11.1	50.1
<i>Cryptopleura violacea</i>	68.5	3.4	73.5	14.0	21.0	3.5	4.0	2.8	41.8
<i>Acrosorium uncinatum</i>	28.0	6.3	7.5	1.0	2.5	1.0	<.1	<.01	9.5
<i>Nienburgia andersoniana</i>	10.0	4.3	8.0	7.1	15.5	3.8	4.0	1.6	9.4
<i>Cystoseira osmundacea</i>	8.5	4.4	5.0	3.5	8.0	5.9	6.5	3.4	7.0
<i>Calliart./Bossie. spp.-comp.</i>	10.0	6.7	8.0	1.6	2.0	0.0	5.0	2.6	6.3
<i>Farlow./Pikea spp.-complex</i>	8.0	2.8	5.5	3.0	6.0	4.3	3.0	3.5	5.6
<i>Prionitis spp.</i>	10.0	7.1	2.5	1.0	1.0	1.2	9.0	4.8	5.6
<i>Rhodomenia spp.</i>	1.0	1.2	6.5	2.5	7.0	5.3	6.0	1.6	5.1
<i>Chondracan. corymbiferus</i>	1.5	1.9	6.0	1.6	5.5	3.4	1.5	1.0	3.6
<i>Macrocystis spp.</i>	3.0	3.8	1.0	1.2	2.5	2.5	1.5	1.9	2.0
Chrysophyta unid.	6.0	5.2	0.0	0.0	2.0	1.6	0.0	0.0	2.0
<i>Pterosiphonia dendroidea</i>	<.1	<.01	6.5	1.0	1.0	2.0	0.0	0.0	1.9
<i>Chondra. harveyan./spinos.</i>	5.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	1.3
filamentous red algae-comp.	4.0	5.4	0.0	0.0	<.1	0.0	0.0	0.0	1.0
<i>Sargassum muticum</i>	2.0	1.6	0.5	1.0	0.0	0.0	0.0	0.0	0.6
<i>Gelidium robustum</i>	<.1	<.01	0.0	0.0	<.1	<.01	2.5	2.5	0.6
<i>Prionitis australis</i>	0.0	0.0	0.0	0.0	1.0	1.2	1.5	1.9	0.6
<i>Sarcodiotheca gaudichaudii</i>	1.5	1.9	0.0	0.0	0.0	0.0	<.1	<.01	0.4
<i>Osmundea spp.</i>	<.1	<.01	0.0	0.0	0.5	1.0	1.0	2.0	0.4
<i>Desmarestia spp.</i>	<.1	<.01	1.0	1.2	<.1	<.01	0.0	0.0	0.3
Non-coralline crust	0.5	1.0	<.1	<.01	0.0	0.0	0.5	1.0	0.3
<i>Ahnfeltiopsis linearis</i>	<.1	<.01	0.5	1.0	0.5	1.0	0.0	0.0	0.3
<i>Microcladia coulteri</i>	0.0	0.0	<.1	<.01	0.5	1.0	<.1	<.01	0.1
<i>Cryptopleura ruprechtiana</i>	0.0	0.0	0.5	1.0	<.1	<.01	0.0	0.0	0.1
<i>Antutha./Platyth. spp.-comp.</i>	<.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Corallina officinalis</i>	<.1	<.01	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Callophyllis spp.</i>	0.0	0.0	<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Laminaria setchellii</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Callophyllis flabellulata</i>	0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Gelidium spp.</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Laminariales	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Ulva/Enteromorpha spp.</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Substrate									
colonized rock	56.5	4.4	75.0	5.0	82.0	2.8	56.5	9.9	67.5
sand (shell gravel)	38.0	4.3	21.5	6.8	12.5	3.0	39.5	12.9	27.9
cobble	4.5	1.0	2.5	2.5	0.5	1.0	1.5	3.0	2.3
colonized cobble	0.0	0.0	0.0	0.0	5.0	2.6	2.5	1.9	1.9
rock	0.5	1.0	1.0	1.2	0.0	0.0	0.0	0.0	0.4

Subtidal Line Contact Survey Means, Standard Deviations and Annual Mean, South Diablo Cove,
Station SDC 3 -4m

Survey		116	117	118	119					
Survey Date		22-Mar-02	20-Jun-02	19-Aug-02	25-Nov-02					
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean		
Algae										
coralline crust		93.0	2.0	91.0	6.6	35.5	8.2	53.0	7.8	68.1
<i>Calliarh./Bossie. spp.-comp.</i>		22.5	1.0	17.0	6.2	32.0	13.0	26.0	7.1	24.4
<i>Cryptopleura violacea</i>		13.5	4.4	14.5	3.0	12.0	7.1	2.5	3.8	10.6
<i>Chondracanth. corymbiferus</i>		9.0	2.0	8.5	4.1	11.0	8.9	8.0	7.7	9.1
<i>Rhodomenia spp.</i>		10.0	1.6	9.0	4.2	14.5	5.5	2.5	3.8	9.0
<i>Cryptopleura ruprechtiana</i>		0.0	0.0	8.0	0.0	15.5	6.0	8.0	1.6	7.9
<i>Macrocyctis spp.</i>		2.0	1.6	5.5	4.1	12.5	8.5	2.5	3.8	5.6
<i>Cystoseira osmundacea</i>		2.5	1.9	7.5	6.2	2.0	2.3	3.0	3.8	3.8
<i>Acrosorium uncinatum</i>		10.0	3.7	4.0	3.7	0.0	0.0	0.0	0.0	3.5
<i>Farlow./Pikea spp.-complex</i>		2.5	3.8	2.5	1.0	1.0	1.2	2.5	1.9	2.1
<i>Desmarestia spp.</i>		1.5	1.9	2.0	1.6	4.0	3.7	<.1	<.01	1.9
<i>Nienburgia andersoniana</i>		<.1	<.01	3.0	2.0	<.1	<.01	1.0	2.0	1.0
Chrysophyta unid.		1.5	1.9	0.0	0.0	2.5	3.8	0.0	0.0	1.0
<i>Prionitis spp.</i>		<.1	<.01	0.5	1.0	2.5	5.0	0.5	1.0	0.9
<i>Pterosiphonia dendroidea</i>		2.5	1.9	1.0	1.2	0.0	0.0	0.0	0.0	0.9
Non-coralline crust		0.5	1.0	0.5	1.0	1.5	1.0	<.1	<.01	0.6
<i>Callophyllis spp.</i>		0.5	1.0	1.5	1.9	<.1	<.01	<.1	<.01	0.5
<i>Gelidium robustum</i>		1.0	1.2	0.5	1.0	0.0	0.0	<.1	<.01	0.4
<i>Callophyllis flabellulata</i>		0.5	1.0	0.5	1.0	<.1	0.0	0.0	0.0	0.3
<i>Sarcoditheca gaudichaudii</i>		<.1	<.01	0.5	1.0	<.1	<.01	0.0	0.0	0.1
<i>Ahnfeltiopsis linearis</i>		0.5	1.0	0.0	0.0	<.1	<.01	0.0	0.0	0.1
<i>Rhodoptilum plumosum</i>		0.0	0.0	0.5	1.0	0.0	0.0	0.0	0.0	0.1
<i>Osmundea spp.</i>		0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
<i>Laminaria setchellii</i>		<.1	<.01	<.1	<.01	<.1	0.0	<.1	0.0	<.1
filamentous red algae-comp.		<.1	0.0	<.1	0.0	<.1	<.01	0.0	0.0	<.1
<i>Pterygophora californica</i>		0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Colpomenia spp.</i>		<.1	<.01	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Mazzaella lilacina</i>		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Halicystis ovalis</i>		<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Prionitis australis</i>		<.1	<.01	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Corallina officinalis</i>		0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Microcladia coulteri</i>		0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Polyneura latissima</i>		0.0	0.0	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Dictyota binghamiae</i>		0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
Laminariales		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
Invertebrates										
<i>Phragmatopoma californica</i>		0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	0.3
Substrate										
colonized rock		93.0	1.2	92.5	3.4	86.0	7.8	70.5	6.6	85.5
cobble		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
sand (shell gravel)		2.5	1.9	0.0	0.0	2.0	2.3	5.0	3.8	4.1
rock		0.5	1.0	0.0	0.0	2.0	2.3	11.5	3.8	3.5
colonized cobble		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Subtidal Line Contact Survey Means, Standard Deviations and Annual Mean, South Control,
Station SC 1 -3m

	Survey	116	117	118	119					
	Survey Date	21-Mar-02	10-May-02	21-Aug-02	3-Dec-02					
		Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean				
Algae										
coralline crust		81.0	6.0	68.0	8.2	25.5	6.2	50.5	8.2	56.3
<i>Rhodomenia</i> spp.		21.5	1.9	17.5	5.3	45.0	9.3	20.0	4.9	26.0
<i>Calliart./Bossie.</i> spp.-comp.		16.5	5.7	20.0	6.9	23.5	17.5	24.5	12.4	21.1
<i>Pterygophora californica</i>		9.5	4.7	12.0	4.3	7.5	3.0	10.5	4.4	9.9
<i>Chondracan. corymbiferus</i>		8.5	3.0	12.0	6.3	8.0	5.2	8.0	4.0	9.1
<i>Laminaria setchellii</i>		8.0	2.8	8.5	4.4	7.0	3.5	4.0	2.8	6.9
<i>Cryptopleura ruprechtiana</i>		<.1	<.01	13.5	15.6	1.0	2.0	<.1	<.01	3.6
<i>Cystoseira osmundacea</i>		3.5	1.9	2.5	1.0	3.0	3.5	2.5	3.0	2.9
<i>Gelidium robustum</i>		4.5	3.0	2.0	2.3	2.0	2.3	2.0	1.6	2.6
<i>Microcladia coulteri</i>		4.5	1.0	5.0	1.2	<.1	<.01	<.1	0.0	2.4
<i>Callophyllis</i> spp.		2.0	4.0	5.0	2.6	<.1	<.01	0.0	0.0	1.8
<i>Prionitis</i> spp.		3.0	3.5	0.5	1.0	1.0	2.0	2.0	2.3	1.6
<i>Osmundea</i> spp.		3.0	2.6	1.0	1.2	0.5	1.0	0.5	1.0	1.3
<i>Desmarestia</i> spp.		0.5	1.0	4.0	2.8	<.1	<.01	0.0	0.0	1.1
<i>Prionitis australis</i>		2.5	3.0	2.0	1.6	0.0	0.0	0.0	0.0	1.1
<i>Farlow./Pikea</i> spp.-complex		2.0	1.6	1.0	2.0	<.1	<.01	0.5	1.0	0.9
<i>Mazzaella lilacina</i>		0.0	0.0	0.0	0.0	2.0	4.0	0.5	1.0	0.6
<i>Neoptilota densa</i>		1.5	1.0	1.0	1.2	0.0	0.0	<.1	<.01	0.6
<i>Callophyllis flabellulata</i>		0.5	1.0	1.0	2.0	<.1	<.01	0.0	0.0	0.4
<i>Ahnfeltiopsis linearis</i>		0.5	1.0	0.5	1.0	<.1	<.01	0.5	1.0	0.4
Non-coralline crust		0.0	0.0	0.0	0.0	<.1	<.01	1.0	1.2	0.3
<i>Nereocystis luetkeana</i>		0.0	0.0	<.1	<.01	0.5	1.0	<.1	<.01	0.1
<i>Ulva/Enteromorpha</i> spp.		<.1	0.0	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Corallina officinalis</i>		0.0	0.0	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Halicystis ovalis</i>		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Bryopsis</i> spp.		<.1	<.01	<.1	<.01	0.0	0.0	0.0	0.0	<.1
filamentous red algae-comp.		<.1	<.01	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Dictyonium californicum</i>		<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Gastroclonium subarticula</i>		<.1	<.01	0.0	0.0	<.1	<.01	0.0	0.0	<.1
<i>Sarcoditheca gaudichaudii</i>		<.1	<.01	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Egria menziesii</i>		0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Rhodoptilum plumosum</i>		<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Phyllospadix</i> spp.		<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Pterosiphonia dendroidea</i>		<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Gelidium</i> spp.		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
Invertebrates										
<i>Phragmatopoma californica</i>		1.0	1.2	1.5	3.0	0.5	1.0	4.0	4.9	1.8
Bryozoa, unid. (encrusting)		0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.3	0.5
Porifera unid. (encrusting)		0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.2	0.3
Substrate										
colonized rock		95.5	3.0	97.0	2.6	90.0	9.4	62.0	41.6	86.1
rock		0.5	1.0	0.0	0.0	6.5	9.2	25.5	40.4	8.1
sand (shell gravel)		0.5	1.0	0.0	0.0	1.0	1.2	9.5	3.0	2.8
colonized cobble		3.5	1.9	3.0	2.6	0.0	0.0	0.0	0.0	1.6
cobble		0.0	0.0	0.0	0.0	2.0	1.6	3.0	1.2	1.3

Subtidal Line Contact Survey Means, Standard Deviations and Annual Mean, South Control,
Station SC 2-6m

Survey	Survey Date	116		117		118		119		Annual Mean
		22-Feb-02	5-Jun-02	14-Aug-02	15-Jan-03	Mean	Std. Dev.	Mean	Std. Dev.	
Algae										
coralline crust		73.0	11.6	52.5	9.6	58.5	9.2	64.0	3.3	62.0
<i>Calliart./Bossie. spp.-comp.</i>		17.5	9.2	38.5	15.4	20.5	7.6	21.5	5.5	24.5
<i>Desmarestia spp.</i>		<.1	<.01	38.0	5.9	26.5	10.6	0.0	0.0	16.1
<i>Rhodomenia spp.</i>		7.5	6.8	19.5	8.7	16.0	5.9	5.0	4.8	12.0
<i>Chondracanth. corymbiferus</i>		12.0	1.6	14.0	4.3	13.0	5.3	7.0	4.2	11.5
<i>Nereocystis luetkeana</i>		0.5	1.0	8.0	5.2	5.5	2.5	0.0	0.0	3.5
<i>Cryptopleura ruprechtiana</i>		1.5	1.9	10.0	2.8	1.5	3.0	<.1	<.01	3.3
<i>Pterygophora californica</i>		0.5	1.0	4.5	2.5	2.0	2.8	3.5	1.9	2.6
Non-coralline crust		<.1	0.0	3.0	2.6	0.5	1.0	4.5	3.0	2.0
<i>Laminaria setchellii</i>		0.5	1.0	<.1	0.0	1.0	1.2	2.5	1.0	1.0
<i>Dictyota binghamiae</i>		1.0	2.0	1.0	1.2	0.5	1.0	0.0	0.0	0.6
<i>Polyneura latissima</i>		2.0	2.3	0.0	0.0	<.1	<.01	0.0	0.0	0.5
<i>Delesseriaceae (juv.)</i>		1.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
<i>Mazzaella lilacina</i>		0.0	0.0	1.0	2.0	0.0	0.0	0.0	0.0	0.3
<i>Microcladia coulteri</i>		0.0	0.0	0.5	1.0	<.1	<.01	0.0	0.0	0.1
<i>Callophyllis firma</i>		0.5	1.0	<.1	<.01	0.0	0.0	0.0	0.0	0.1
<i>Callophyllis spp.</i>		0.0	0.0	0.5	1.0	<.1	<.01	0.0	0.0	0.1
<i>Halyme./Schizy. spp.-comp.</i>		0.5	1.0	<.1	<.01	0.0	0.0	0.0	0.0	0.1
<i>Hymenena spp.</i>		0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.1
<i>Callophyllis flabellulata</i>		0.0	0.0	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Farlow./Pikea spp.-complex</i>		<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1
<i>Rhodoptilum plumosum</i>		<.1	<.01	<.1	<.01	0.0	0.0	0.0	0.0	<.1
filamentous red algae-comp.		<.1	<.01	<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Cystoseira osmundacea</i>		<.1	<.01	0.0	0.0	0.0	0.0	<.1	<.01	<.1
<i>Gelidium robustum</i>		<.1	<.01	0.0	0.0	<.1	<.01	<.1	<.01	<.1
<i>Ulva/Enteromorpha spp.</i>		<.1	<.01	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Erythrophyllum delesserioid.</i>		<.1	<.01	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Prionitis spp.</i>		0.0	0.0	<.1	<.01	<.1	<.01	0.0	0.0	<.1
<i>Scinaia confusa</i>		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
Laminariales		<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Neoptilota densa</i>		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Corallina officinalis</i>		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Sarcoditheca gaudichaudii</i>		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Halicystis ovalis</i>		0.0	0.0	<.1	<.01	0.0	0.0	0.0	0.0	<.1
<i>Osmundea spp.</i>		<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Invertebrates										
<i>Balanus spp.</i>		0.0	0.0	5.5	3.0	6.5	5.7	0.5	1.0	3.1
Bryozoa, unid. (encrusting)		1.5	1.0	0.5	1.0	1.0	2.0	7.0	5.3	2.5
Porifera unid. (encrusting)		0.0	0.0	0.0	0.0	0.0	0.0	4.5	1.9	1.1
<i>Phragmatopoma californica</i>		0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	0.6
tunicates, colon./social unid.		0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	0.1
<i>Balanophyllia elegans</i>		0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1

(continued)

Subtidal Line Contact Survey Means, Standard Deviations and Annual Mean, South Control,
Station SC 2-6m (continued)

	Survey Date	116 22-Feb-02		117 5-Jun-02		118 14-Aug-02		119 15-Jan-03		Annual Mean
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Substrate										
colonized rock		86.0	11.0	87.5	9.3	90.0	8.5	85.5	6.6	87.3
colonized cobble		8.0	6.9	12.0	8.6	6.0	6.9	4.5	4.4	7.6
rock		1.5	3.0	0.0	0.0	2.5	1.0	5.5	3.4	2.4
cobble		4.0	4.9	0.0	0.0	1.5	1.9	3.0	3.5	2.1
sand (shell gravel)		0.5	1.0	0.5	1.0	0.0	0.0	1.5	1.9	0.6

Subtidal Fixed Quadrats

Quadrat	10/11/03		11/11/03		12/11/03		1/11/04		2/11/04	
	Area	Depth	Area	Depth	Area	Depth	Area	Depth	Area	Depth
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix G Results for Subtidal Fixed Quadrats

Subtidal Fixed Quadrat Survey Means, Standard Deviations and Annual Mean, Field's Cove,
Station FC 1 -3m

Survey Survey Date	116 20-Mar-02		117 14-Jun-02		118 15-Aug-02		119 20-Nov-02		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates									
<i>Tegula brunnea</i>	6.3	6.0	6.0	0.8	4.8	4.3	9.8	2.9	6.7
<i>Homo. lurid./Lirular. succin.</i>	1.8	1.3	5.8	2.8	6.8	1.0	8.3	2.2	5.6
<i>Pagurus</i> spp.	0.0	0.0	1.0	1.2	7.3	4.3	8.3	3.0	4.1
Pelecypoda unid. boring	3.5	5.7	2.0	2.8	1.8	1.3	8.8	6.3	4.0
<i>Phragmatopoma californica</i>	0.0	0.0	0.5	1.0	2.0	0.8	8.3	5.6	2.7
Bryozoa, unid. (encrusting)	0.5	1.0	1.8	1.0	2.8	2.4	2.0	1.4	1.8
<i>Pugettia</i> spp.	1.3	1.0	1.0	0.8	1.8	1.0	2.5	1.9	1.6
<i>Epiactis prolifera</i>	1.3	1.9	1.3	1.3	2.5	4.4	0.8	1.0	1.4
<i>Amphissa</i> spp.	0.3	0.5	0.0	0.0	3.5	5.2	2.0	2.2	1.4
tunicates, colon./social unid.	<.1	<.01	1.0	0.8	2.5	3.8	2.0	2.7	1.4
<i>Acmaea mitra</i>	0.0	0.0	0.8	0.5	2.8	2.8	2.0	2.2	1.4
Porifera unid. (encrusting)	<.1	<.01	0.0	0.0	1.5	1.3	3.5	1.7	1.3
<i>Fusinus luteopictus</i>	0.5	0.6	0.8	0.5	1.3	1.0	2.3	1.0	1.2
<i>Leptasterias</i> spp.	0.3	0.5	0.8	0.5	0.8	1.0	2.3	1.3	1.0
<i>Lissothuria nutriens</i>	0.3	0.5	0.0	0.0	2.3	1.7	1.0	0.8	0.9
<i>Tonicella lineata</i>	0.3	0.5	1.3	0.5	0.3	0.5	1.3	1.3	0.8
<i>Calliostoma ligatum</i>	0.0	0.0	0.8	1.0	0.8	1.0	1.3	1.0	0.7
Sipuncula unid.	0.5	1.0	0.0	0.0	0.8	1.5	1.5	3.0	0.7
<i>Tethya aurantia</i>	0.0	0.0	2.3	2.5	0.3	0.5	0.0	0.0	0.6
<i>Strongylocentro. purpuratus</i>	1.0	1.4	0.3	0.5	0.8	0.5	0.3	0.5	0.6
Serpulidae unid.	0.3	0.5	0.3	0.5	0.8	1.0	0.5	1.0	0.4
<i>Ocenebra</i> spp.	0.0	0.0	0.3	0.5	0.5	0.6	0.8	1.0	0.4
<i>Alia</i> spp.	1.3	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.3
<i>Lottia instabilis</i>	0.0	0.0	0.3	0.5	0.3	0.5	0.8	1.0	0.3
<i>Balanus/Tetraclita</i> spp.	1.3	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.3
<i>Crepidula</i> spp.	0.0	0.0	1.0	2.0	0.0	0.0	0.0	0.0	0.3
<i>Lottia ochracea</i>	0.5	1.0	0.3	0.5	0.3	0.5	0.0	0.0	0.3
<i>Pista</i> spp.	0.0	0.0	0.0	0.0	0.5	0.6	0.3	0.5	0.2
tunicate, solitary unid.	0.0	0.0	0.0	0.0	0.8	1.0	0.0	0.0	0.2
<i>Pseudomelasma torosa</i>	0.3	0.5	0.5	0.6	0.0	0.0	0.0	0.0	0.2
<i>Pisaster/Henricia</i> (juv.)	0.3	0.5	0.0	0.0	0.3	0.5	0.3	0.5	0.2
<i>Haliotis</i> spp.	0.0	0.0	0.3	0.5	0.3	0.5	0.3	0.5	0.2
Chaetopteridae	0.0	0.0	0.0	0.0	0.8	1.5	0.0	0.0	0.2
Spirorbidae	<.1	<.01	0.0	0.0	0.0	0.0	0.5	0.6	0.1
<i>Eurystomella bilabiata</i>	0.0	0.0	0.0	0.0	0.3	0.5	0.3	0.5	0.1
<i>Diodora</i> spp.	0.3	0.5	0.3	0.5	0.0	0.0	0.0	0.0	0.1
<i>Fissurella volcano</i>	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
<i>Henricia leviuscula</i>	0.0	0.0	0.3	0.5	0.3	0.5	0.0	0.0	0.1
<i>Balanophyllia elegans</i>	0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.1
<i>Cryptochiton stelleri</i>	0.0	0.0	0.3	0.5	0.3	0.5	0.0	0.0	0.1
<i>Lophopanopeus</i> spp.	0.0	0.0	0.0	0.0	0.3	0.5	0.3	0.5	0.1
<i>Ophiothrix</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	0.1
<i>Lepidozoma</i> spp.	0.0	0.0	0.3	0.5	0.0	0.0	0.3	0.5	0.1
<i>Cadlina</i> spp.	0.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
<i>Archidoris</i> spp.	0.0	0.0	0.3	0.5	0.3	0.5	0.0	0.0	0.1

(continued)

Subtidal Fixed Quadrat Survey Means, Standard Deviations and Annual Mean, Field's Cove, Station FC 1-3m (continued)

Survey				116		117		118		119		Annual Mean
Survey Date				20-Mar-02		14-Jun-02		15-Aug-02		20-Nov-02		
Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.			
Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.			
Invertebrates (continued)												
<i>Anthopleura elegantissima</i>	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<.1	
<i>Lithopoma gibberosum</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1	
<i>Tegula montereyi</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1	
<i>Cactosoma arenaria</i>	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<.1	
<i>Cancer antennarius</i>	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<.1	
<i>Asterina miniata</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1	
<i>Pycnopodia helianthoides</i>	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<.1	
<i>Doriopsilla albopunctata</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1	
<i>Mitra idae</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1	
<i>Cryptolithodes sitchensis</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1	
<i>Hymenaphys. cyanocryp.</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1	
<i>Salmacina tribranchiata</i>	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1	
<i>Hydroidea</i>	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<.1	
1.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
3.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
4.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
5.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
6.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
7.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
12.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
13.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
15.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
19.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
21.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
23.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
24.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
28.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
30.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
31.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
32.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
33.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
34.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
35.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
36.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
37.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
38.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
39.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
40.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
41.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
42.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
43.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
44.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
45.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
46.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
47.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
48.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
49.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
50.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Subtidal Fixed Quadrat Survey Means, Standard Deviations and Annual Mean, North Diablo Cove,
Station NDC 2 -3m

	Survey Date	116 26-Mar-02	117 4-Jun-02	118 20-Aug-02	119 3-Dec-02	Annual Mean				
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates										
<i>Phragmatopoma californica</i>		61.0	60.0	45.3	17.1	40.3	23.7	65.8	55.1	53.1
<i>Ophiactis simplex</i>		26.3	16.5	11.3	16.5	43.8	17.0	23.8	18.0	26.3
<i>Strongylocentro. purpuratus</i>		12.3	2.9	12.8	4.0	13.3	7.8	12.8	6.9	12.8
Pelecypoda unid. boring		4.3	5.4	18.0	15.1	8.0	14.1	1.5	3.0	7.9
<i>Acmaea mitra</i>		1.0	1.4	3.8	5.2	10.5	15.2	5.0	3.2	5.1
<i>Lissothuria nutriens</i>		2.5	2.4	0.5	1.0	2.5	2.4	2.3	2.9	1.9
<i>Pista</i> spp.		2.5	3.1	1.5	1.3	1.5	0.6	2.0	3.4	1.9
<i>Ophiothrix</i> spp.		2.3	2.2	1.8	2.4	2.0	1.4	1.0	2.0	1.8
<i>Fissurella volcano</i>		2.3	3.3	2.8	1.9	0.8	1.0	0.3	0.5	1.5
Serpulidae unid.		1.0	0.8	0.8	1.5	2.0	1.4	1.5	1.7	1.3
<i>Lottia ochracea</i>		0.0	0.0	2.0	2.2	1.8	1.5	0.0	0.0	0.9
<i>Tetracita rubescens</i>		3.3	6.5	0.0	0.0	0.5	1.0	0.0	0.0	0.9
Porifera unid. (encrusting)		<.1	<.01	<.1	<.01	2.0	2.8	<.1	<.01	0.5
<i>Leucilla nuttingi</i>		0.0	0.0	0.0	0.0	1.8	1.7	0.0	0.0	0.4
<i>Anthopleura elegantissima</i>		0.3	0.5	0.3	0.5	0.3	0.5	0.5	0.6	0.3
<i>Serpulorbis squamigerus</i>		0.5	1.0	0.3	0.5	0.3	0.5	0.3	0.5	0.3
<i>Pugettia</i> spp.		0.0	0.0	0.8	1.0	0.3	0.5	0.3	0.5	0.3
Chaetopteridae		0.5	1.0	0.0	0.0	0.3	0.5	0.5	0.6	0.3
<i>Balanus/Tetracita</i> spp.		0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.4	0.3
<i>Phidiana hiltoni</i>		0.0	0.0	0.3	0.5	0.0	0.0	0.5	0.6	0.2
tunicates, colon./social unid.		<.1	<.01	<.1	<.01	0.5	0.6	<.1	<.01	0.1
<i>Anthopleura artemisia</i>		0.3	0.5	0.0	0.0	0.0	0.0	0.3	0.5	0.1
<i>Mitra idae</i>		0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.1
Sipuncula unid.		0.0	0.0	0.3	0.5	0.3	0.5	0.0	0.0	0.1
<i>Diodora</i> spp.		0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Sabellidae		0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
<i>Dodecaceria fewkesi</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1
<i>Balanus</i> spp.		0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
<i>Pagurus</i> spp.		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1
<i>Haliotis</i> spp.		0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
Mytilidae		0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
Bryozoa, unid. (encrusting)		<.1	<.01	<.1	<.01	0.0	0.0	<.1	<.01	<.1
Spirorbidae		<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1

Subtidal Fixed Quadrat Survey Means, Standard Deviations and Annual Mean, North Diablo Cove,
Station NDC 3 -3m

Survey Date		116	117	118	119		
Survey Date		27-Mar-02	24-May-02	16-Aug-02	25-Oct-02		
Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Invertebrates							
Phragmatopoma californica	145.8	26.0	56.8	19.1	72.8	78.1	133.0
Ophiactis simplex	61.3	14.4	63.8	18.0	65.0	23.8	86.3
Strongylocentro. purpuratus	28.8	16.8	29.5	36.3	61.5	43.0	22.0
Pelecypoda unid. boring	3.5	3.4	16.3	13.1	15.3	19.9	0.0
Fissurella volcano	5.5	3.7	3.5	2.1	2.3	1.9	9.5
Acmacia mitra	0.5	1.0	1.0	1.4	11.0	2.9	6.3
Serpulidae unid.	2.5	3.1	2.8	3.6	4.0	3.3	3.5
Ophiothrix spp.	2.5	3.1	3.3	2.1	0.0	0.0	6.8
Lottia ochracea	2.3	3.2	3.8	2.1	3.0	1.4	3.0
Balanus/Tetracita spp.	3.3	5.2	1.8	2.9	4.0	7.4	1.3
Pisaster giganteus	0.0	0.0	0.0	0.0	4.8	3.1	0.0
Anthopleura elegantissima	0.8	1.0	0.5	1.0	0.5	0.6	0.3
Porifera unid. (encrusting)	<.1	<.01	0.0	0.0	0.0	0.0	1.8
Serpulorbis squamigerus	0.5	0.6	0.3	0.5	0.3	0.5	0.3
Pugettia spp.	0.3	0.5	0.0	0.0	0.5	1.0	0.3
Lissothuria nutiens	0.0	0.0	0.0	0.0	1.0	2.0	0.0
Diodora spp.	0.0	0.0	0.0	0.0	0.5	0.6	0.3
Lepidozona spp.	0.0	0.0	0.0	0.0	0.5	0.6	0.3
Haliotis spp.	0.0	0.0	0.5	1.0	0.3	0.5	0.0
Sabellidae	0.0	0.0	0.3	0.5	0.0	0.0	0.3
Cucumaria spp.	0.0	0.0	0.0	0.0	0.3	0.5	0.3
Chaetopteridae	0.0	0.0	0.0	0.0	0.0	0.0	0.5
tunicates, colon./social unid.	0.0	0.0	0.0	0.0	0.3	0.5	<.1
Anthozoa unid.	0.3	0.5	0.0	0.0	0.0	0.0	0.0
Tonicella lineata	0.3	0.5	0.0	0.0	0.0	0.0	0.0
Amphissa spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Sipuncula unid.	0.0	0.0	0.3	0.5	0.0	0.0	0.0
Eupentacta quinquesemita	0.3	0.5	0.0	0.0	0.0	0.0	0.0
Spirorbidae	<.1	<.01	0.0	0.0	0.0	0.0	<.1

Subtidal Fixed Quadrat Survey Means, Standard Deviations and Annual Mean, North Diablo Cove,
Station NDC 4-4m

Survey	116		117		118		119		Annual Mean
Survey Date	19-Mar-02	13-Jun-02	23-Aug-02	26-Dec-02					
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates									
<i>Phragmatopoma californica</i>	43.3	27.8	84.8	55.5	112.8	91.1	210.3	51.6	112.8
<i>Ophiactis simplex</i>	10.8	4.6	25.0	22.0	31.3	10.3	25.0	50.0	23.0
<i>Strongylocentrotus purpuratus</i>	7.3	6.7	8.3	10.5	8.0	11.4	8.5	8.4	8.0
Pelecypoda unid. boring	2.5	3.3	2.0	2.8	8.8	13.3	4.3	6.7	4.4
<i>Acmaea mitra</i>	0.8	1.5	3.0	2.7	6.3	3.6	2.5	2.7	3.1
Serpulidae unid.	1.5	1.9	0.5	0.6	3.8	1.3	2.8	3.1	2.1
<i>Tetraclita rubescens</i>	2.5	2.1	0.8	1.5	1.5	2.4	0.0	0.0	1.2
<i>Fissurella volcano</i>	1.3	0.5	1.0	0.8	1.0	1.4	0.3	0.5	0.9
Porifera unid. (encrusting)	<.1	<.01	<.1	<.01	2.3	2.1	1.0	0.8	0.8
<i>Anthopleura elegantissima</i>	0.8	1.0	0.8	0.5	0.8	1.0	1.0	0.8	0.8
<i>Ophiothrix</i> spp.	0.5	0.6	0.8	1.5	0.5	1.0	0.5	1.0	0.6
<i>Balanus/Tetraclita</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	2.3	4.5	0.6
<i>Serpulorbis squamigerus</i>	0.8	1.0	0.3	0.5	0.3	0.5	0.8	1.0	0.5
<i>Pugettia</i> spp.	0.0	0.0	0.0	0.0	0.8	1.0	1.0	2.0	0.4
<i>Mitra idae</i>	0.3	0.5	0.0	0.0	0.8	1.5	0.5	0.6	0.4
<i>Eudistylia polymorpha</i>	0.0	0.0	0.0	0.0	1.3	1.5	0.3	0.5	0.4
tunicates, colon./social unid.	<.1	<.01	0.3	0.5	0.8	0.5	0.3	0.5	0.3
<i>Diodora</i> spp.	0.3	0.5	0.0	0.0	0.8	1.0	0.3	0.5	0.3
<i>Tonicella lineata</i>	0.0	0.0	0.0	0.0	0.8	1.0	0.5	1.0	0.3
Chaetopteridae	0.5	1.0	0.0	0.0	0.3	0.5	0.3	0.5	0.3
<i>Epiactis prolifera</i>	0.5	1.0	0.3	0.5	0.0	0.0	0.0	0.0	0.2
<i>Hermisenda crassicornis</i>	0.5	1.0	0.0	0.0	0.0	0.0	0.3	0.5	0.2
<i>Leucilla nuttingi</i>	0.0	0.0	0.0	0.0	0.5	0.6	0.0	0.0	0.1
<i>Phidiana hiltoni</i>	0.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Majidae	0.0	0.0	0.5	0.6	0.0	0.0	0.0	0.0	0.1
<i>Archidoris</i> spp.	0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.1
Bryozoa, unid. (encrusting)	0.0	0.0	0.0	0.0	<.1	<.01	0.3	0.5	<.1
Spirorbidae	0.0	0.0	0.0	0.0	<.1	<.01	0.3	0.5	<.1
<i>Anthopleura artemisia</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Lottia ochracea</i>	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
Sabellidae	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
<i>Pagurus</i> spp.	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
tunicate, solitary unid.	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1
<i>Diaulula sandiegensis</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1
<i>Doriopsilla albopunctata</i>	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Cryptolithodes sitchensis</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Aeolidiella oliviae</i>	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Cadlina</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1
Hydroida	<.1	<.01	0.0	0.0	0.0	0.0	0.0	0.0	<.1
Bryozoa, unid. (foliose)	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1

Subtidal Fixed Quadrat Survey Means, Standard Deviations and Annual Mean, South Diablo Cove,
Station SDC 2 -3m

	Survey Date	116	117	118	119	
		27-Mar-02	8-May-02	13-Aug-02	26-Nov-02	
		Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates						
<i>Ophiactis simplex</i>		28.8	25.0	47.5	19.4	37.5
<i>Phragmatopoma californica</i>		66.8	35.5	0.0	0.0	18.5
<i>Pelecypoda unid. boring</i>		2.8	1.9	10.5	12.0	16.5
<i>Pista</i> spp.		3.0	2.5	6.3	2.2	4.3
<i>Chaetopteridae</i>		1.5	2.4	1.0	1.2	2.8
<i>Ophiothrix</i> spp.		0.5	0.6	5.8	4.6	2.8
<i>Sipuncula unid.</i>		0.3	0.5	1.5	1.0	2.5
<i>Serpulorbis squamigerus</i>		1.3	2.5	1.0	2.0	1.0
<i>Serpulidae unid.</i>		0.0	0.0	0.5	1.0	3.0
<i>Mitra idae</i>		0.3	0.5	0.0	0.0	1.5
<i>Pugettia</i> spp.		0.0	0.0	0.0	0.0	1.5
<i>Fissurella volcano</i>		0.8	0.5	0.0	0.0	0.3
<i>Alia</i> spp.		0.3	0.5	0.5	0.6	0.0
<i>Pagurus</i> spp.		0.3	0.5	0.0	0.0	0.5
<i>Balanus/Tetracita</i> spp.		0.0	0.0	0.0	0.0	0.0
<i>Bryozoa, unid. (encrusting)</i>		0.3	0.5	0.0	0.0	0.3
<i>Balanus</i> spp.		0.0	0.0	0.0	0.0	0.5
<i>Anthopleura elegantissima</i>		0.0	0.0	0.3	0.5	0.0
<i>Tegula brunnea</i>		0.0	0.0	0.3	0.5	0.3
<i>Lottia ochracea</i>		0.5	0.6	0.0	0.0	0.0
<i>Diopatra ornata</i>		0.0	0.0	0.0	0.0	0.5
<i>Asterina miniata</i>		0.0	0.0	0.0	0.0	0.0
<i>Mimulus foliatus</i>		0.0	0.0	0.0	0.0	0.5
<i>Amphissa</i> spp.		0.0	0.0	0.0	0.0	0.5
<i>Porifera unid. (encrusting)</i>		0.0	0.0	0.0	0.0	0.3
<i>Anthopleura artemisia</i>		0.0	0.0	0.0	0.0	0.0
<i>Acmaea mitra</i>		0.0	0.0	0.0	0.0	0.0
<i>Pycnopodia helianthoides</i>		0.3	0.5	0.0	0.0	0.0
<i>Doriopsilla albopunctata</i>		0.0	0.0	0.0	0.0	0.0
<i>Pisaster brevispinus</i>		0.0	0.0	0.0	0.0	0.0
<i>Pisaster giganteus</i>		0.0	0.0	0.3	0.5	0.0
<i>Maxwellia santarosana</i>		0.0	0.0	0.0	0.0	0.0
<i>Spirorbidae</i>		<.1	<.01	<.1	<.01	<.1
tunicates, colon./social unid.		0.0	0.0	0.0	0.0	<.1
<i>Bryozoa, unid. (foliose)</i>		<.1	<.01	0.0	0.0	0.0

Subtidal Fixed Quadrat Survey Means, Standard Deviations and Annual Mean, South Diablo Cove,
Station SDC 3 -4m

Survey	116		117		118		119		Annual Mean
Survey Date	22-Mar-02	20-Jun-02	19-Aug-02	25-Nov-02					
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates									
<i>Ophiactis simplex</i>	7.3	2.2	22.5	2.9	17.5	9.6	6.5	7.2	13.4
<i>Balanophyllia elegans</i>	7.3	4.1	3.8	5.0	10.3	4.4	9.3	8.5	7.6
<i>Phragmatopoma californica</i>	1.8	2.4	9.5	12.0	0.0	0.0	14.3	19.9	6.4
Pelecypoda unid. boring	2.3	1.7	1.3	1.9	4.3	3.9	5.3	4.4	3.3
<i>Strongylocentro. purpuratus</i>	4.8	5.5	3.0	1.4	1.8	1.7	2.3	1.7	2.9
Chaetopteridae	0.8	1.0	0.3	0.5	7.5	2.4	2.8	3.4	2.8
<i>Pagurus</i> spp.	3.8	3.3	1.8	1.0	0.8	1.0	0.8	1.0	1.8
<i>Pugettia</i> spp.	0.0	0.0	1.0	0.8	0.5	0.6	4.8	7.1	1.6
<i>Balanus/Tetracita</i> spp.	0.0	0.0	5.8	8.9	0.0	0.0	0.0	0.0	1.4
<i>Anthopleura elegantissima</i>	1.3	1.3	1.8	1.3	1.3	0.5	1.0	0.8	1.3
Serpulidae unid.	1.5	1.7	0.0	0.0	1.3	1.9	1.8	1.5	1.1
<i>Pista</i> spp.	1.8	2.4	0.0	0.0	0.8	1.0	1.3	1.0	0.9
<i>Corynactis californica</i>	3.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
<i>Acmaea mitra</i>	1.5	0.6	0.0	0.0	1.0	0.8	0.5	1.0	0.8
<i>Mitra idae</i>	0.8	0.5	0.5	0.6	0.5	0.6	1.3	0.5	0.8
<i>Ophiothrix</i> spp.	0.0	0.0	1.8	2.4	0.5	0.6	0.5	1.0	0.7
Bryozoa, unid. (encrusting)	<.1	<.01	<.1	0.0	0.8	0.5	1.5	1.0	0.6
<i>Serpulorbis squamigerus</i>	1.3	1.0	0.0	0.0	0.3	0.5	0.8	1.0	0.6
<i>Hymenamphias. cyanocryp.</i>	<.1	<.01	0.5	0.6	0.5	1.0	1.0	0.8	0.5
Porifera unid. (encrusting)	<.1	<.01	0.8	0.5	0.3	0.5	0.8	0.5	0.4
<i>Diopatra ornata</i>	0.0	0.0	0.5	1.0	0.5	0.6	0.3	0.5	0.3
tunicates, colon./social unid.	<.1	<.01	<.1	0.0	0.8	0.5	0.3	0.5	0.3
<i>Leucilla nuttingi</i>	0.0	0.0	1.0	2.0	0.0	0.0	0.0	0.0	0.3
<i>Amphissa</i> spp.	0.0	0.0	0.3	0.5	0.0	0.0	0.8	1.5	0.3
Sipuncula unid.	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.2	0.3
<i>Crepidula</i> spp.	0.0	0.0	0.0	0.0	0.3	0.5	0.5	1.0	0.2
<i>Ophioplacus</i> spp.	0.0	0.0	0.3	0.5	0.0	0.0	0.5	0.6	0.2
<i>Haplogaster cavicauda</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.0	0.2
<i>Pisaster giganteus</i>	0.0	0.0	0.3	0.5	0.3	0.5	0.0	0.0	0.1
<i>Paracyathus stearnsii</i>	0.3	0.5	0.3	0.5	0.0	0.0	0.0	0.0	0.1
<i>Salmacina tribranchiata</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Anthopleura artemisia</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
Anthozoa unid.	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Fissurella volcano</i>	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Lottia ochracea</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1
<i>Loxorhynchus</i> spp.	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
Ischnochitonidae	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1
<i>Cucumaria</i> spp.	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
<i>Ceratostoma foliatum</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Haliotis</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1
<i>Eupentacta quinquesemita</i>	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
<i>Manania</i> spp.	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
<i>Aplysia californica</i>	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Cadlina</i> spp.	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Lytechinus</i> spp.	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
Pectinidae	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	<.1
Spirorbidae	<.1	<.01	0.0	0.0	<.1	<.01	<.1	0.0	<.1
Bryozoa, unid. (foliose)	0.0	0.0	0.0	0.0	0.0	0.0	<.1	<.01	<.1

Subtidal Fixed Quadrat Survey Means, Standard Deviations and Annual Mean, South Control,
Station SC 1-3m

	Survey	116	117	118	119					
	Survey Date	21-Mar-02	10-May-02	21-Aug-02	3-Dec-02					
		Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean				
Invertebrates										
<i>Phragmatopoma californica</i>		1.0	1.4	24.8	30.9	16.3	13.6	13.5	13.1	13.9
<i>Homo. Lurid./Lirula. succin.</i>		7.3	4.2	10.3	2.2	6.8	5.6	8.8	3.6	8.3
<i>Dendropoma</i> spp.		4.5	3.1	1.8	3.5	9.8	11.6	8.8	11.8	6.2
<i>Pagurus</i> spp.		5.3	4.6	4.8	3.6	4.3	3.0	6.5	3.7	5.2
<i>Tegula brunnea</i>		6.0	5.5	4.0	1.4	3.3	2.6	4.3	4.7	4.4
<i>Tetraclita rubescens</i>		0.0	0.0	0.0	0.0	0.0	0.0	11.5	18.1	2.9
<i>Balanus/Tetraclita</i> spp.		0.0	0.0	1.0	2.0	5.0	10.0	0.0	0.0	1.5
tunicates, colon./social unid.		1.5	1.9	1.5	0.6	2.0	0.8	0.8	0.5	1.4
<i>Acmaea mitra</i>		0.0	0.0	0.5	0.6	2.3	1.0	2.8	2.2	1.4
Porifera unid. (encrusting)		0.3	0.5	1.3	0.5	2.0	0.8	1.0	1.4	1.1
<i>Leptasterias</i> spp.		0.5	0.6	0.8	0.5	1.5	1.3	1.0	1.4	0.9
Bryozoa, unid. (encrusting)		<.1	<.01	0.5	0.6	1.3	0.5	1.3	1.0	0.8
<i>Pista</i> spp.		0.5	1.0	1.0	1.4	0.3	0.5	1.3	1.3	0.8
<i>Pisaster/Henricia</i> (juv.)		2.5	5.0	0.0	0.0	0.3	0.5	0.3	0.5	0.8
<i>Lottia ochracea</i>		1.0	1.4	0.3	0.5	1.3	1.9	0.3	0.5	0.7
Serpulidae unid.		1.5	2.4	0.0	0.0	1.3	1.0	0.0	0.0	0.7
<i>Anthopleura elegantissima</i>		0.5	0.6	0.8	1.0	0.5	0.6	0.5	0.6	0.6
<i>Balanophyllia elegans</i>		0.3	0.5	0.5	1.0	0.5	0.6	1.0	1.4	0.6
<i>Tonicella lineata</i>		0.3	0.5	0.8	1.0	0.5	0.6	0.5	0.6	0.5
<i>Epiactis prolifera</i>		0.0	0.0	0.3	0.5	0.8	0.5	0.8	0.5	0.4
<i>Pugettia</i> spp.		0.8	1.0	0.0	0.0	0.8	1.0	0.3	0.5	0.4
<i>Lottia instabilis</i>		0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.4	0.4
<i>Diopatra ornata</i>		0.0	0.0	0.3	0.5	0.3	0.5	1.0	1.2	0.4
Chaetopteridae		0.0	0.0	0.0	0.0	0.5	1.0	1.0	1.2	0.4
<i>Crepidula</i> spp.		0.3	0.5	0.0	0.0	0.0	0.0	1.0	2.0	0.3
<i>Amphissa</i> spp.		0.0	0.0	0.0	0.0	0.8	1.0	0.5	0.6	0.3
<i>Salmacina tribranchiata</i>		0.0	0.0	0.0	0.0	1.3	1.0	0.0	0.0	0.3
<i>Anthopleura artemisia</i>		0.0	0.0	0.3	0.5	0.5	1.0	0.3	0.5	0.3
<i>Henricia leviuscula</i>		0.0	0.0	0.0	0.0	0.5	0.6	0.5	0.6	0.3
<i>Ocenebra</i> spp.		0.0	0.0	0.0	0.0	0.3	0.5	0.8	1.0	0.3
<i>Pseudomelatoma torosa</i>		0.0	0.0	0.5	1.0	0.3	0.5	0.3	0.5	0.3
<i>Asterina miniata</i>		0.0	0.0	0.3	0.5	0.0	0.0	0.5	1.0	0.2
<i>Pycnopodia helianthoides</i>		0.0	0.0	0.0	0.0	0.3	0.5	0.5	0.6	0.2
<i>Halcampa decemtentaculata</i>		0.0	0.0	0.3	0.5	0.3	0.5	0.3	0.5	0.2
<i>Calliostoma ligatum</i>		0.0	0.0	0.0	0.0	0.5	0.6	0.0	0.0	0.1
<i>Alia</i> spp.		0.0	0.0	0.5	1.0	0.0	0.0	0.0	0.0	0.1
tunicate, solitary unid.		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.1
<i>Bittium</i> spp.		0.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Pelecypoda unid. boring		0.0	0.0	0.5	1.0	0.0	0.0	0.0	0.0	0.1
<i>Cucumaria</i> spp.		0.0	0.0	0.3	0.5	0.3	0.5	0.0	0.0	0.1
<i>Mimulus foliatus</i>		0.0	0.0	0.0	0.0	0.5	1.0	0.0	0.0	0.1
<i>Lophopanopeus</i> spp.		0.0	0.0	0.3	0.5	0.3	0.5	0.0	0.0	0.1
Nemertea unid.		0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	<.1
<i>Hermisenda crassicornis</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1
<i>Tegula montereyi</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	<.1
<i>Strongylocentro. purpuratus</i>		0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	<.1

(continued)

Subtidal Fixed Quadrat Survey Means, Standard Deviations and Annual Mean, South Control,
Station SC 1 -3m (continued)

Survey	116	117	118	119	
Survey Date	21-Mar-02	10-May-02	21-Aug-02	3-Dec-02	
	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)					
<i>Leucilla nuttingi</i>	0.0	0.0	0.0	0.0	0.3
Bryozoa, unid. (foliose)	0.0	0.0	0.3	0.5	0.0
<i>Mitra idae</i>	0.0	0.0	0.3	0.5	0.0
<i>Cryptolithodes sitchensis</i>	0.0	0.0	0.3	0.5	0.0
<i>Tricolia</i> spp.	0.0	0.0	0.3	0.5	0.0
<i>Ophiothrix</i> spp.	0.3	0.5	0.0	0.0	0.0
<i>Hapalogaster cavicauda</i>	0.0	0.0	0.0	0.0	0.3
Spirorbidae	<.1	<.01	0.0	0.0	<.1

Subtidal Fixed Quadrat Survey Means, Standard Deviations and Annual Mean, South Control,
Station SC 2 -6m

Survey Date	116		117		118		119		Annual Mean
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Invertebrates									
<i>Balanophyllia elegans</i>	22.0	16.1	33.5	21.6	34.5	21.5	42.0	25.4	33.0
<i>Corynactis californica</i>	17.0	17.7	35.3	24.0	30.0	27.2	27.3	18.3	27.4
<i>Phragmatopoma californica</i>	1.5	3.0	13.0	10.0	3.5	4.1	8.3	10.1	6.6
<i>Serpulorbis squamigerus</i>	5.0	4.8	3.3	5.3	4.8	4.2	10.8	7.9	5.9
<i>Homo. lurid/Lirular. succin.</i>	4.3	5.4	4.8	3.3	5.3	2.6	8.3	2.6	5.6
<i>Hymenaphia. cyanocrypta</i>	4.3	5.4	5.0	4.2	5.8	4.0	5.0	4.7	5.0
<i>Dendropoma</i> spp.	2.5	5.0	5.8	7.2	5.0	5.8	3.0	6.0	4.1
Bryozoa, unid. (encrusting)	3.0	0.8	2.0	0.8	3.0	0.8	8.0	1.6	4.0
<i>Tegula brunnea</i>	2.3	2.6	5.3	2.2	4.5	2.4	2.8	0.5	3.7
Serpulidae unid.	1.5	1.3	1.0	1.4	4.0	4.2	6.5	6.0	3.3
<i>Balanus</i> spp.	0.0	0.0	1.8	1.0	8.5	8.6	2.3	3.3	3.1
<i>Balanus/Tetracita</i> spp.	2.5	5.0	1.0	0.8	1.0	1.2	5.3	6.7	2.4
Porifera unid. (encrusting)	1.0	0.8	2.0	0.0	1.5	1.0	3.8	1.7	2.1
Bryozoa, unid. (erect)	0.0	0.0	0.8	0.5	2.5	1.3	3.5	1.9	1.7
<i>Pagurus</i> spp.	0.3	0.5	1.0	1.4	2.5	2.1	3.0	2.2	1.7
<i>Asterina miniata</i>	0.8	1.0	1.5	2.4	1.3	1.5	1.8	2.9	1.3
Chaetopteridae	0.0	0.0	0.8	1.0	1.0	2.0	2.8	1.7	1.1
<i>Tonicella lineata</i>	0.5	0.6	1.5	1.9	1.3	1.0	1.0	0.8	1.1
tunicate, solitary unid	0.0	0.0	1.5	1.9	2.0	0.8	0.8	0.5	1.1
tunicates, colon./social unid.	<.1	<.01	1.0	0.8	2.0	0.8	1.0	1.2	1.0
Pelecypoda unid. boring	0.8	1.0	0.8	1.0	1.5	1.9	0.8	1.0	0.9
<i>Acmaea mitra</i>	0.5	1.0	0.5	0.6	0.3	0.5	2.3	1.5	0.9
<i>Calliostoma ligatum</i>	1.0	0.8	1.0	1.2	1.3	1.5	0.0	0.0	0.8
<i>Epiactis prolifera</i>	0.8	0.5	0.5	0.6	0.8	1.0	1.0	0.8	0.8
Hydroida	0.0	0.0	0.3	0.5	1.0	2.0	1.5	1.3	0.7
<i>Leptasterias</i> spp.	0.0	0.0	1.0	0.8	0.5	0.6	1.0	0.8	0.6
<i>Crepidula</i> spp.	0.5	1.0	1.8	2.4	0.0	0.0	0.0	0.0	0.6
<i>Mitra idae</i>	0.3	0.5	1.5	1.0	0.5	0.6	0.0	0.0	0.6
<i>Cucumaria</i> spp.	0.5	0.6	0.5	1.0	1.3	1.5	0.0	0.0	0.6
<i>Ocenebra</i> spp.	1.5	1.3	0.0	0.0	0.3	0.5	0.3	0.5	0.5
<i>Anthopleura elegantissima</i>	0.5	0.6	0.0	0.0	0.8	1.0	0.5	1.0	0.4
<i>Pseudomelatoma torosa</i>	0.3	0.5	0.5	0.6	0.3	0.5	0.8	0.5	0.4
<i>Pugettia</i> spp.	0.3	0.5	0.0	0.0	0.3	0.5	1.3	1.9	0.4
<i>Sipuncula</i> unid.	0.0	0.0	0.5	0.6	1.0	1.2	0.0	0.0	0.4
<i>Eupentacta quinquesemita</i>	0.0	0.0	1.0	1.2	0.5	0.6	0.0	0.0	0.4
Bryozoa, unid. (foliose)	0.0	0.0	0.5	0.6	0.5	0.6	0.3	0.5	0.3
<i>Tegula pulligo</i>	0.0	0.0	0.3	0.5	0.3	0.5	0.8	0.5	0.3
<i>Pista</i> spp.	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.5	0.3
<i>Pisaster giganteus</i>	0.0	0.0	0.0	0.0	0.5	1.0	0.8	1.5	0.3
<i>Lottia instabilis</i>	0.3	0.5	0.3	0.5	0.3	0.5	0.3	0.5	0.3
<i>Tethya aurantia</i>	0.3	0.5	0.3	0.5	0.3	0.5	0.3	0.5	0.3
<i>Mimulus foliatus</i>	0.0	0.0	0.0	0.0	0.3	0.5	0.8	1.0	0.3
<i>Pisaster/Henricia</i> (juv.)	0.3	0.5	0.0	0.0	0.3	0.5	0.5	1.0	0.3
<i>Amphissa</i> spp.	0.0	0.0	0.0	0.0	1.0	1.2	0.0	0.0	0.3
<i>Salmacina tribranchiata</i>	0.0	0.0	0.8	0.5	0.0	0.0	0.0	0.0	0.2
<i>Lottia ochracea</i>	0.8	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.2

(continued)

Subtidal Fixed Quadrat Survey Means, Standard Deviations and Annual Mean, South Control,
Station SC 2 -6m (continued)

Survey	116	117	118	119	
Survey Date	22-Feb-02	5-Jun-02	14-Aug-02	15-Jan-03	
	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Invertebrates (continued)					
<i>Tegula montereyi</i>	0.0	0.0	0.5	0.6	0.2
<i>Henricia leviuscula</i>	0.0	0.0	0.5	0.6	0.2
<i>Doriopsilla albopunctata</i>	0.3	0.5	0.0	0.0	0.2
<i>Paracyathus stearnsii</i>	0.0	0.0	0.5	0.6	0.2
<i>Lepidozona</i> spp.	0.0	0.0	0.3	0.5	0.2
<i>Pisaster ochraceus</i>	0.0	0.0	0.3	0.5	0.1
<i>Pycnopodia helianthoides</i>	0.0	0.0	0.0	0.0	0.1
<i>Loxorhynchus</i> spp.	0.0	0.0	0.0	0.0	0.1
<i>Calliostoma canaliculatum</i>	0.0	0.0	0.0	0.0	0.1
<i>Fusinus luteopictus</i>	0.0	0.0	0.0	0.0	0.1
<i>Anthopleura artemisia</i>	0.0	0.0	0.0	0.0	<.1
<i>Lithopoma gibberosum</i>	0.0	0.0	0.0	0.0	<.1
<i>Diopatra ornata</i>	0.0	0.0	0.0	0.0	<.1
<i>Triopha catalinae</i>	0.3	0.5	0.0	0.0	<.1
<i>Cryptochiton stelleri</i>	0.0	0.0	0.3	0.5	<.1
<i>Ceratostoma foliatum</i>	0.0	0.0	0.0	0.0	<.1
<i>Phidolopora pacifica</i>	0.0	0.0	0.0	0.0	<.1
<i>Lophopanopeus</i> spp.	0.0	0.0	0.0	0.0	<.1
<i>Cadlina</i> spp.	0.0	0.0	0.0	0.0	<.1
<i>Spirorbidae</i>	<.1	<.01	<.1	<.01	<.1
<i>Abiet./Sertular./Sertul.</i> spp.	<.1	<.01	0.0	0.0	<.1

Results for Subtidal Fish Transects

١٢٠

Subtidal Fish Observations Survey Means, Standard Deviations and Annual Mean, Field's Cove,
Stations (FC FO-1, FC FO-2, FC FO-3)

Survey Survey Date	114 31-Mar-02		115 11-Jul-02		116 8-Sep-02		117 16-Jan-03		Annual Mean
	Mean	Std.	Mean	Std.	Mean	Std.	Mean	Std.	
		Dev.		Dev.		Dev.		Dev.	
Midwater									
Atherinidae unid.	0.0	0.0	0.0	0.0	0.6	0.8	41.7	<.01	10.6
<i>Sebastes chryso./S. carna.</i> (yoy)	0.0	0.0	32.2	43.2	0.8	1.1	0.0	<.01	8.2
<i>Oxyjulis californica</i>	8.8	6.5	1.8	1.9	1.7	0.5	17.7	<.01	7.5
<i>Aulorhynchus flavidus</i>	7.5	10.6	0.0	0.0	0.6	0.4	0.0	<.01	2.0
<i>Oxyjulis californica</i> (juv.)	4.8	1.9	0.0	0.0	0.0	0.0	0.0	<.01	1.2
<i>Sebastes serran./S. flavid.</i> (yoy)	0.0	0.0	0.0	0.0	1.9	2.2	0.0	<.01	0.5
<i>Aulorhynchus flavidus</i> (juv.)	0.0	0.0	0.2	0.2	1.7	2.4	0.0	<.01	0.5
<i>Damalichthys vacca</i>	1.2	0.2	0.1	0.2	0.0	0.0	0.3	<.01	0.4
<i>Brachyistius frenatus</i>	0.0	0.0	0.3	0.5	<.1	0.1	0.3	<.01	0.2
<i>Embiotoca jacksoni</i>	0.0	0.0	0.0	0.0	0.3	0.4	0.3	<.01	0.1
<i>Atherinopsis californiensis</i>	0.0	0.0	0.0	0.0	0.5	0.7	0.0	<.01	0.1
<i>Sebastes mystinus</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.3	<.01	<.1
<i>Sebastes melanops</i> (yoy)	0.0	0.0	0.0	0.0	0.3	0.4	0.0	<.01	<.1
<i>Rhacochilus toxotes</i>	0.0	0.0	0.0	0.0	0.2	0.2	0.0	<.01	<.1
<i>Sebastes melanops</i>	0.0	0.0	0.0	0.0	0.2	0.2	0.0	<.01	<.1
<i>Sebastes atrovirens</i>	<.1	0.1	<.1	0.1	0.0	0.0	0.0	<.01	<.1
<i>Embiotoca lateralis</i>	0.0	0.0	0.0	0.0	0.2	0.2	0.0	<.01	<.1
<i>Embiotoca jacksoni</i> (juv.)	0.0	0.0	0.0	0.0	0.2	0.2	0.0	<.01	<.1
<i>Sebastes mystinus</i> (yoy)	0.0	0.0	0.0	0.0	0.0	0.0	0.2	<.01	<.1
<i>Embiotoca lateralis</i> (juv.)	0.0	0.0	0.0	0.0	<.1	0.1	0.0	<.01	<.1
<i>Damalichthys vacca</i> (juv.)	0.0	0.0	0.0	0.0	<.1	0.1	0.0	<.01	<.1
<i>Triakis semifasciata</i>	0.0	0.0	0.0	0.0	<.1	0.1	0.0	<.01	<.1
<i>Paralabrax clathratus</i>	0.0	0.0	<.1	0.1	0.0	0.0	0.0	<.01	<.1
<i>Myliobatis californica</i>	0.0	0.0	0.0	0.0	<.1	0.1	0.0	<.01	<.1
<i>Sebastes atrovirens</i> (yoy)	0.0	0.0	0.0	0.0	<.1	0.1	0.0	<.01	<.1
Benthic									
<i>Oxyjulis californica</i>	5.6	0.6	1.4	1.3	0.5	0.7	16.8	<.01	6.1
<i>Oxylebius pictus</i>	2.0	2.1	2.8	0.6	2.4	0.1	2.7	<.01	2.5
<i>Aulorhynchus flavidus</i>	6.7	9.4	0.9	1.3	0.8	0.8	0.0	<.01	2.1
<i>Embiotoca jacksoni</i>	1.4	1.3	1.7	0.5	1.6	0.6	3.2	<.01	2.0
<i>Damalichthys vacca</i>	3.4	3.4	1.3	0.9	0.7	0.5	1.7	<.01	1.8
<i>Embiotoca lateralis</i>	1.5	0.9	1.2	0.2	1.3	0.2	1.8	<.01	1.5
<i>Sebastes mystinus</i> (yoy)	0.0	0.0	1.3	0.2	0.3	0.4	2.8	<.01	1.1
<i>Sebastes chrysomelas</i>	0.8	0.7	0.9	0.4	0.6	0.1	0.8	<.01	0.8
<i>Sebastes melanops</i> (yoy)	0.0	0.0	1.8	1.1	1.3	0.4	0.0	<.01	0.8
<i>Sebastes serran./S. flavid.</i> (yoy)	0.0	0.0	1.5	2.1	1.4	1.3	0.0	<.01	0.7
<i>Brachyistius frenatus</i>	0.0	0.0	<.1	0.1	0.0	0.0	2.5	<.01	0.6
<i>Embiotoca jacksoni</i> (juv.)	<.1	0.1	0.4	0.4	0.9	0.4	0.7	<.01	0.5
<i>Scorpaenichthys marmoratus</i>	0.6	0.4	0.7	0.5	0.3	0.1	0.5	<.01	0.5
<i>Damalichthys vacca</i> (juv.)	0.0	0.0	0.2	0.2	0.5	0.2	1.3	<.01	0.5
<i>Embiotoca lateralis</i> (juv.)	<.1	0.1	0.8	0.2	0.7	0.5	0.3	<.01	0.5
<i>Sebastes atrovirens</i>	0.3	0.1	0.2	0.2	<.1	0.1	1.2	<.01	0.4
<i>Sebastes melanops</i>	0.0	0.0	1.5	2.1	0.0	0.0	0.0	<.01	0.4
<i>Hypsurus caryi</i>	1.0	1.4	0.0	0.0	0.3	0.5	0.0	<.01	0.3
<i>Coryphopterus nicholsi</i>	0.2	0.2	0.5	0.2	0.3	0.1	0.3	<.01	0.3
<i>Rhacochilus toxotes</i>	0.5	0.7	0.3	0.0	0.2	0.2	0.0	<.01	0.3
<i>Oxyjulis californica</i> (juv.)	0.9	1.1	0.0	0.0	0.0	0.0	0.0	<.01	0.2
<i>Sebastes rastrelliger</i>	0.2	0.0	<.1	0.1	0.0	0.0	0.7	<.01	0.2

(continued)

TENERA ESLO2003-010.1

Subtidal Fish Observations Survey Means, Standard Deviations and Annual Mean, North Diablo Cove, Stations (NDC FO-1, NDC FO-2, NDC FO-3)

Survey	114	115	116	117					
Survey Date	2-Apr-02	2-Jul-02	8-Sep-02	16-Jan-03					
	Mean	Std. Dev.	Mean	Std. Dev.	Mean				
					Mean				
					Std. Dev.				
					Annual Mean				
Midwater									
<i>Atherinopsis californiensis</i>	0.0	0.0	0.2	0.2	4.4	5.3	121.7	<.01	31.6
Atherinidae unid.	0.0	0.0	0.0	0.0	1.4	2.0	108.2	<.01	27.4
<i>Oxyjulis californica</i>	3.5	0.0	3.0	0.2	6.5	0.2	5.3	<.01	4.6
<i>Oxyjulis californica</i> (juv.)	6.2	6.1	0.0	0.0	0.3	0.4	0.0	<.01	1.6
<i>Brachyistius frenatus</i>	0.0	0.0	0.8	0.1	2.3	2.5	0.0	<.01	0.8
<i>Triakis semifasciata</i>	<.1	0.1	0.0	0.0	0.0	0.0	2.2	<.01	0.6
<i>Damalichthys vacca</i>	0.5	0.5	0.3	0.1	0.3	0.1	1.0	<.01	0.5
<i>Sebastes serran./S. flavi.</i> (yoy)	0.0	0.0	0.0	0.0	1.5	2.1	0.0	<.01	0.4
<i>Embiotoca jacksoni</i>	0.4	0.4	0.0	0.0	0.8	0.0	0.0	<.01	0.3
<i>Brachyistius frenatus</i> (juv.)	0.0	0.0	1.1	1.1	0.0	0.0	0.0	<.01	0.3
<i>Sebastes atrovirens</i>	0.0	0.0	0.0	0.0	0.9	1.3	0.0	<.01	0.2
<i>Sebastes chryso./S. carna.</i> (yoy)	0.0	0.0	0.8	1.1	<.1	0.1	0.0	<.01	0.2
<i>Sebastes atrovirens</i> (yoy)	0.0	0.0	0.0	0.0	0.8	0.5	0.0	<.01	0.2
<i>Damalichthys vacca</i> (juv.)	0.0	0.0	0.0	0.0	0.8	1.1	0.0	<.01	0.2
<i>Atractoscion nobilis</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.3	<.01	<.1
<i>Sebastes serran./S. flavid.</i> (juv.)	0.0	0.0	0.3	0.4	0.0	0.0	0.0	<.01	<.1
<i>Embiotoca lateralis</i>	0.3	0.4	0.0	0.0	0.0	0.0	0.0	<.01	<.1
<i>Paralabrax clathratus</i>	0.3	0.4	0.0	0.0	0.0	0.0	0.0	<.01	<.1
<i>Sebastes melanops</i> (yoy)	0.0	0.0	0.0	0.0	0.3	0.4	0.0	<.01	<.1
<i>Girella nigricans</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	<.01	<.1
<i>Myliobatis californica</i>	0.0	0.0	0.0	0.0	<.1	0.1	0.0	<.01	<.1
<i>Semicossyphus pulcher</i>	0.0	0.0	0.0	0.0	<.1	0.1	0.0	<.01	<.1
Benthic									
<i>Atherinopsis californiensis</i>	0.0	0.0	0.0	0.0	0.0	0.0	83.2	<.01	20.8
Atherinidae unid.	0.0	0.0	0.0	0.0	0.0	0.0	58.3	<.01	14.6
<i>Oxyjulis californica</i>	12.5	4.0	8.1	3.4	12.7	6.8	24.0	<.01	14.3
<i>Embiotoca jacksoni</i>	9.3	0.6	8.5	2.4	8.4	1.1	9.2	<.01	8.8
<i>Coryphopterus nicholsi</i>	6.9	2.2	3.7	1.4	6.0	1.4	3.5	<.01	5.0
<i>Damalichthys vacca</i>	13.0	9.7	1.8	0.7	1.0	0.0	2.2	<.01	4.5
<i>Embiotoca jacksoni</i> (juv.)	2.9	1.3	4.1	1.1	3.2	1.2	2.2	<.01	3.1
<i>Oxylebius pictus</i>	3.8	1.4	1.8	0.1	2.5	0.0	2.5	<.01	2.6
<i>Oxyjulis californica</i> (juv.)	7.3	3.8	0.4	0.6	0.3	0.5	0.0	<.01	2.0
<i>Damalichthys vacca</i> (juv.)	0.3	0.2	3.3	0.4	1.6	0.6	1.5	<.01	1.7
<i>Brachyistius frenatus</i>	0.0	0.0	1.3	0.9	0.3	0.5	4.2	<.01	1.5
<i>Triakis semifasciata</i>	0.0	0.0	0.6	0.1	0.3	0.0	4.5	<.01	1.4
<i>Embiotoca lateralis</i>	0.9	0.1	0.3	0.2	0.9	1.3	0.8	<.01	0.8
<i>Girella nigricans</i>	1.0	0.7	0.4	0.4	0.3	0.1	0.5	<.01	0.5
<i>Paralabrax clathratus</i>	0.7	0.2	<.1	0.1	0.0	0.0	1.2	<.01	0.5
<i>Myliobatis californica</i>	0.0	0.0	0.3	0.1	1.3	0.1	0.3	<.01	0.5
<i>Sebastes melanops</i> (yoy)	0.0	0.0	0.9	1.3	0.7	0.5	0.2	<.01	0.4
<i>Sebastes serran./S. flavid.</i> (yoy)	0.0	0.0	0.3	0.5	1.4	0.6	0.0	<.01	0.4
<i>Atractoscion nobilis</i>	0.0	0.0	0.0	0.0	1.7	2.4	0.0	<.01	0.4
<i>Gibbonsia</i> spp.	0.5	0.0	0.3	0.1	0.2	0.2	0.7	<.01	0.4
<i>Coryphopterus nicholsi</i> (juv.)	1.0	0.2	0.2	0.2	0.0	0.0	0.2	<.01	0.3
<i>Rhacochilus toxotes</i>	0.2	0.2	<.1	0.1	0.5	0.0	0.3	<.01	0.3
<i>Semicossyphus pulcher</i>	0.5	0.0	<.1	0.1	0.3	0.2	0.0	<.01	0.2
<i>Sebastes chrysomelas</i>	0.3	0.0	0.4	0.1	<.1	0.1	0.0	<.01	0.2
<i>Sebastes chryso./S. carna.</i> (yoy)	0.0	0.0	0.2	0.2	0.7	0.2	0.0	<.01	0.2

(continued)

Subtidal Fish Observations Survey Means, Standard Deviations and Annual Mean, North Diablo Cove, Stations (NDC FO-1, NDC FO-2, NDC FO-3) (continued)

	Survey Date	114	115	116	117	Annual
	Survey Date	2-Apr-02	2-Jul-02	8-Sep-02	16-Jan-03	Mean
		Mean	Mean	Mean	Mean	Mean
		Std.	Std.	Std.	Std.	Std.
		Dev.	Dev.	Dev.	Dev.	Dev.
Benthic (continued)						
<i>Scorpaenichthys marmoratus</i>		0.2	0.2	0.1	0.5	0.2
<i>Sebastes atrovirens</i>		0.0	0.0	0.0	0.3	0.2
<i>Embiotoca lateralis</i> (juv.)		0.0	0.3	0.4	0.2	0.2
<i>Sebastes atrovirens</i> (yoy)		0.0	0.0	0.4	0.0	0.1
<i>Hypsypops rubicundus</i>		0.0	0.2	0.0	0.0	0.1
<i>Sebastes rastrelliger</i>		0.0	0.2	0.0	0.2	0.1
<i>Sebastes chrysomelas</i> (juv.)		0.3	0.1	0.0	0.0	0.1
<i>Brachyistius frenatus</i> (juv.)		0.0	0.0	0.3	0.0	0.1
<i>Cebidichthys violaceus</i>		0.0	0.2	0.1	0.0	0.1
<i>Artedius</i> spp.		0.0	0.2	0.0	0.0	0.1
<i>Ophiodon elongatus</i>		0.0	0.1	0.0	0.1	0.1
<i>Hypsurus caryi</i>		0.0	0.0	0.0	0.0	0.1
<i>Sebastes serranoides</i>		0.0	0.1	0.0	0.0	0.1
<i>Orthonopias triacis</i>		0.0	0.0	0.1	0.0	0.1
<i>Phanerodon furcatus</i>		0.0	0.0	0.1	0.0	0.1
<i>Citharichthys</i> spp.		0.0	0.0	0.0	0.1	0.1
<i>Urolophus halleri</i>		0.0	0.0	0.1	0.0	0.1
<i>Sebastes miniatus</i> (yoy)		0.0	0.0	0.0	0.1	0.1

Subtidal Fish Observations Survey Means, Standard Deviations and Annual Mean, South Diablo Cove,
Stations (SDC FO-1, SDC FO-2, SDC FO-3)

	Survey 114		Survey 115		Survey 116		Survey 117			
	Survey Date	30-Mar-02	3-Jul-02	11-Sep-02	11-Dec-02					
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Annual Mean
Midwater										
Atherinidae unid.		0.0	0.0	71.8	34.3	15.0	14.1	0.0	<.01	21.7
<i>Oxyjulis californica</i>		20.3	4.2	9.8	5.2	0.2	0.0	0.0	<.01	7.6
<i>Atherinopsis californiensis</i>		0.0	0.0	7.3	10.3	11.9	1.1	0.0	<.01	4.8
<i>Damalichthys vacca</i>		0.5	0.7	15.7	1.4	0.4	0.1	0.3	<.01	4.2
<i>Sebastes serran./S. flavid.</i> (yoy)		0.0	0.0	16.4	6.0	0.0	0.0	0.0	<.01	4.1
<i>Damalichthys vacca</i> (juv.)		0.0	0.0	7.3	2.7	0.0	0.0	0.0	<.01	1.8
<i>Brachyistius frenatus</i>		0.0	0.0	2.7	1.9	0.2	0.0	0.2	<.01	0.8
<i>Sebastes chryso./S. carna.</i> (yoy)		0.0	0.0	2.2	3.1	0.0	0.0	0.0	<.01	0.5
<i>Oxyjulis californica</i> (juv.)		1.1	1.5	0.6	0.8	0.0	0.0	0.0	<.01	0.4
<i>Embiotoca jacksoni</i>		0.6	0.8	<.1	0.1	0.0	0.0	0.3	<.01	0.3
<i>Brachyistius frenatus</i> (juv.)		0.0	0.0	1.0	1.4	0.0	0.0	0.0	<.01	0.3
<i>Embiotoca lateralis</i> (juv.)		0.0	0.0	0.6	0.8	0.0	0.0	0.0	<.01	0.1
<i>Sebastes melanops</i> (yoy)		0.0	0.0	0.6	0.8	0.0	0.0	0.0	<.01	0.1
<i>Embiotoca lateralis</i>		0.0	0.0	0.3	0.0	0.0	0.0	0.2	<.01	0.1
<i>Phanerodon furcatus</i>		0.0	0.0	0.5	0.7	0.0	0.0	0.0	<.01	0.1
<i>Aulorhynchus flavidus</i> (juv.)		0.0	0.0	0.4	0.6	0.0	0.0	0.0	<.01	0.1
<i>Hypsurus caryi</i>		0.0	0.0	<.1	0.1	0.0	0.0	0.0	<.01	<.1
<i>Oxylebius pictus</i>		0.0	0.0	<.1	0.1	0.0	0.0	0.0	<.01	<.1
<i>Myliobatis californica</i>		0.0	0.0	<.1	0.1	0.0	0.0	0.0	<.01	<.1
<i>Sebastes atrovirens</i> (yoy)		0.0	0.0	0.0	0.0	<.1	0.1	0.0	<.01	<.1
Benthic										
<i>Oxyjulis californica</i>		10.7	12.7	1.5	0.7	0.4	0.6	0.3	<.01	3.2
<i>Damalichthys vacca</i>		0.8	0.6	10.6	3.9	0.6	0.8	0.0	<.01	3.0
<i>Oxyjulis californica</i> (juv.)		7.0	8.7	0.0	0.0	0.0	0.0	0.0	<.01	1.8
<i>Sebastes serran./S. flavid.</i> (yoy)		0.0	0.0	6.2	6.4	<.1	0.1	0.0	<.01	1.6
<i>Citharichthys</i> spp.		1.4	0.6	3.1	0.4	0.9	0.1	0.3	<.01	1.4
<i>Oxylebius pictus</i>		1.3	0.2	0.6	0.1	0.4	0.4	2.3	<.01	1.2
<i>Damalichthys vacca</i> (juv.)		0.0	0.0	4.0	1.9	<.1	0.1	0.0	<.01	1.0
Atherinidae unid.		0.0	0.0	3.3	4.7	0.0	0.0	0.0	<.01	0.8
<i>Coryphopterus nicholsi</i>		1.8	0.5	0.3	0.2	0.8	0.9	0.3	<.01	0.8
<i>Aulorhynchus flavidus</i> (juv.)		0.0	0.0	0.0	0.0	3.3	4.7	0.0	<.01	0.8
<i>Embiotoca jacksoni</i>		0.8	0.9	0.8	0.4	<.1	0.1	1.0	<.01	0.7
<i>Embiotoca lateralis</i>		0.5	0.7	1.3	0.7	<.1	0.1	0.3	<.01	0.6
<i>Sebastes melanops</i> (yoy)		0.0	0.0	1.3	0.4	0.5	0.5	0.0	<.01	0.4
<i>Brachyistius frenatus</i>		0.2	0.0	0.5	0.2	0.0	0.0	0.5	<.01	0.3
<i>Triakis semifasciata</i>		<.1	0.1	0.0	0.0	0.5	0.2	0.5	<.01	0.3
<i>Gibbonsia</i> spp.		0.2	0.2	0.4	0.1	0.0	0.0	0.3	<.01	0.2
<i>Sebastes chrysomelas</i>		0.3	0.4	0.2	0.0	0.2	0.2	0.3	<.01	0.2
<i>Artedius</i> spp.		0.4	0.1	0.3	0.4	<.1	0.1	0.0	<.01	0.2
<i>Ophiodon elongatus</i>		0.2	0.2	<.1	0.1	0.3	0.5	0.0	<.01	0.1
<i>Scorpaenichthys marmoratus</i>		0.0	0.0	<.1	0.1	<.1	0.1	0.3	<.01	0.1
<i>Phanerodon furcatus</i>		0.0	0.0	0.5	0.2	0.0	0.0	0.0	<.01	0.1
<i>Sebastes chryso./S. carna.</i> (yoy)		0.0	0.0	0.0	0.0	0.5	0.7	0.0	<.01	0.1
<i>Coryphopterus nicholsi</i> (juv.)		0.3	0.4	0.0	0.0	0.3	0.4	0.0	<.01	0.1
<i>Brachyistius frenatus</i> (juv.)		0.0	0.0	0.4	0.6	0.0	0.0	0.0	<.01	0.1
<i>Rhacochilus toxotes</i>		0.0	0.0	0.0	0.0	<.1	0.1	0.3	<.01	0.1

(continued)

Subtidal Fish Observations Survey Means, Standard Deviations and Annual Mean, South Diablo Cove,
Stations (SDC FO-1, SDC FO-2, SDC FO-3) (continued)

Species	Survey Date	114		115		116		117		Annual Mean
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Benthic (continued)										
<i>Aulorhynchus flavidus</i>		0.3	0.0	0.0	0.0	0.0	0.1	0.0	0.0	<.1
<i>Hypsurus caryi</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Sebastes rastrelliger</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Embiotoca lateralis</i> (juv.)		<.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	<.1
<i>Cephaloscyllium ventriosum</i>		0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.0	<.1
<i>Embiotoca jacksoni</i> (juv.)		0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Urolophus halleri</i>		0.0	0.0	0.0	0.0	0.0	<.1	0.1	0.2	<.1
<i>Sebastes miniatus</i> (yoy)		<.1	0.1	0.0	0.0	0.0	0.2	0.2	0.0	<.1
<i>Sebastes atrovirens</i>		<.1	0.1	<.1	0.1	0.0	0.0	0.0	0.0	<.1
<i>Syngnathus</i> spp.		0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.0	<.1
<i>Paralabrax clathratus</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Myliobatis californica</i>		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	<.1
<i>Pleuronichthys coenosus</i>		<.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Scorpaenichthys marmoratus</i> (juv.)		0.0	0.0	0.0	0.0	<.1	0.1	0.0	0.0	<.1
<i>Neoclinus stephensae</i>		<.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	<.1
<i>Sebastes mystinus</i> (yoy)		0.0	0.0	<.1	0.1	0.0	0.0	0.0	0.0	<.1
Agonidae unid.		0.0	0.0	<.1	0.1	0.0	0.0	0.0	0.0	<.1

Subtidal Fish Observations Survey Means, Standard Deviations and Annual Mean, Patton Cove,
Stations (SC FO-1, SC FO-2, SC FO-3)

	114		115		116		117				
	Survey Date		30-Mar-02		3-Jul-02		13-Sep-02		4-Dec-02		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Annual Mean	
Midwater											
<i>Oxyjulis californica</i>	25.3	<.01	4.0	0.2	2.8	0.4	20.2	<.01	13.1		
<i>Aulorhynchus flavidus</i>	3.3	<.01	0.3	0.0	0.3	0.4	28.0	<.01	8.0		
<i>Aulorhynchus flavidus</i> (juv.)	0.0	<.01	15.7	22.2	0.0	0.0	0.0	<.01	3.9		
<i>Oxyjulis californica</i> (juv.)	4.3	<.01	0.3	0.4	0.0	0.0	0.0	<.01	1.1		
<i>Sebastes chryso./S. carna.</i> (yoy)	0.0	<.01	4.2	5.9	0.0	0.0	0.0	<.01	1.0		
<i>Sebastes atrovirens</i> (yoy)	0.0	<.01	3.8	3.0	0.0	0.0	0.0	<.01	0.9		
<i>Sebastes mystinus</i> (yoy)	0.0	<.01	0.3	0.2	0.0	0.0	3.3	<.01	0.9		
<i>Sebastes mystinus</i>	0.0	<.01	0.5	0.7	0.5	0.4	2.7	<.01	0.9		
<i>Damalichthys vacca</i>	0.0	<.01	0.0	0.0	0.0	0.0	2.2	<.01	0.5		
<i>Sebastes serran./S. flavid.</i> (yoy)	0.0	<.01	1.7	2.4	0.4	0.2	0.0	<.01	0.5		
<i>Sebastes serranoides</i>	0.0	<.01	0.0	0.0	0.0	0.0	1.3	<.01	0.3		
<i>Brachyistius frenatus</i>	0.0	<.01	0.3	0.4	0.4	0.5	0.3	<.01	0.2		
<i>Embiotoca lateralis</i>	0.2	<.01	0.2	0.2	0.0	0.0	0.3	<.01	0.2		
<i>Sebastes atrovirens</i>	0.0	<.01	0.2	0.0	0.0	0.0	0.2	<.01	<.1		
<i>Embiotoca jacksoni</i>	0.0	<.01	0.0	0.0	0.1	0.2	0.2	<.01	<.1		
<i>Sebastes mystinus</i> (juv.)	0.2	<.01	0.0	0.0	0.0	0.0	0.0	<.01	<.1		
<i>Gibbonsia</i> spp.	0.0	<.01	<.1	0.1	0.0	0.0	0.0	<.01	<.1		
<i>Sebastes paucispinis</i> (juv.)	0.0	<.01	<.1	0.1	0.0	0.0	0.0	<.01	<.1		
<i>Brachyistius frenatus</i> (juv.)	0.0	<.01	<.1	0.1	0.0	0.0	0.0	<.01	<.1		
Benthic											
<i>Oxyjulis californica</i>	0.2	0.2	13.1	12.9	1.3	1.8	1.7	<.01	4.0		
<i>Oxylebius pictus</i>	2.3	0.1	2.3	1.1	2.6	0.1	5.3	<.01	3.1		
<i>Embiotoca lateralis</i>	1.8	0.5	2.8	0.2	1.6	0.6	4.8	<.01	2.8		
<i>Embiotoca jacksoni</i>	0.8	0.6	2.5	0.9	2.3	0.1	4.7	<.01	2.5		
<i>Sebastes mystinus</i>	<.1	0.1	3.0	4.0	<.1	0.1	4.7	<.01	2.0		
<i>Sebastes chrysomelas</i>	1.6	0.4	1.4	0.1	2.0	1.2	2.3	<.01	1.8		
<i>Embiotoca lateralis</i> (juv.)	1.0	0.5	0.8	0.7	0.7	0.2	4.2	<.01	1.7		
<i>Damalichthys vacca</i>	0.9	0.1	1.1	0.8	0.6	0.6	3.8	<.01	1.6		
<i>Sebastes melanops</i> (yoy)	0.0	0.0	4.8	6.3	0.4	0.4	0.5	<.01	1.4		
<i>Sebastes mystinus</i> (yoy)	0.0	0.0	2.1	0.8	1.2	0.2	1.7	<.01	1.2		
<i>Sebastes serran./S. flavid.</i> (yoy)	0.0	0.0	3.3	0.8	0.7	0.9	0.0	<.01	1.0		
<i>Oxyjulis californica</i> (juv.)	3.3	1.2	0.3	0.5	0.0	0.0	0.0	<.01	0.9		
<i>Orthonopias triacis</i>	0.4	0.4	0.6	0.1	0.4	0.4	0.8	<.01	0.6		
<i>Embiotoca jacksoni</i> (juv.)	0.0	0.0	0.5	0.7	0.6	0.4	1.2	<.01	0.6		
<i>Hexagrammos decagrammus</i>	0.4	0.4	0.5	0.5	0.3	0.4	1.0	<.01	0.5		
<i>Coryphopterus nicholsi</i>	0.0	0.0	0.9	0.8	0.8	0.2	0.3	<.01	0.5		
<i>Sebastes chryso./S. carna.</i> (yoy)	0.0	0.0	1.4	2.0	0.2	0.2	0.2	<.01	0.4		
<i>Damalichthys vacca</i> (juv.)	0.0	0.0	0.0	0.0	0.3	0.1	1.5	<.01	0.4		
<i>Sebastes atrovirens</i>	<.1	0.1	0.7	0.5	0.4	0.6	0.5	<.01	0.4		
<i>Sebastes rastrelliger</i>	0.4	0.1	<.1	0.1	0.2	0.2	0.7	<.01	0.3		
<i>Ophiodon elongatus</i>	0.7	0.7	0.3	0.2	<.1	0.1	0.0	<.01	0.3		
<i>Aulorhynchus flavidus</i>	0.0	0.0	0.8	1.1	0.2	0.2	0.0	<.01	0.2		
<i>Scorpaenichthys marmoratus</i>	0.2	0.0	0.2	0.2	0.3	0.0	0.2	<.01	0.2		
<i>Rhacochilus toxotes</i>	<.1	0.1	0.0	0.0	0.2	0.2	0.5	<.01	0.2		
<i>Cephaloscyllium ventriosum</i>	0.0	0.0	0.5	0.2	0.3	0.1	0.0	<.01	0.2		
<i>Gibbonsia</i> spp.	0.3	0.2	0.2	0.0	0.2	0.2	0.0	<.01	0.2		
<i>Aulorhynchus flavidus</i> (juv.)	0.0	0.0	0.6	0.8	0.0	0.0	0.0	<.01	0.1		
<i>Hypsurus caryi</i>	0.0	0.0	0.0	0.0	0.2	0.2	0.3	<.01	0.1		

(continued)

Subtidal Fish Observations Survey Means, Standard Deviations and Annual Mean, Patton Cove,
Stations (SC FO-1, SC FO-2, SC FO-3) (continued)

Survey Survey Date	114		115		116		117		Annual Mean
	30-Mar-02		3-Jul-02		13-Sep-02		4-Dec-02		
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Benthic (continued)									
<i>Artedius</i> spp.	0.2	0.0	<.1	0.1	0.0	0.0	0.2	<.01	0.1
Cottidae unid. a	0.0	0.0	0.0	0.0	0.0	0.0	0.3	<.01	<.1
<i>Sebastes chrysomelas</i> (juv.)	0.3	0.1	0.0	0.0	<.1	0.1	0.0	<.01	<.1
<i>Sebastes atrovirens</i> (yoy)	0.0	0.0	0.0	0.0	<.1	0.1	0.2	<.01	<.1
<i>Sebastes serranoides</i>	<.1	0.1	<.1	0.1	0.0	0.0	0.0	<.01	<.1
<i>Sebastes melanops</i>	0.0	0.0	0.2	0.2	0.0	0.0	0.0	<.01	<.1
<i>Sebastes mystinus</i> (juv.)	0.2	0.2	0.0	0.0	0.0	0.0	0.0	<.01	<.1
<i>Cebidichthys violaceus</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	<.01	<.1
<i>Jordania zanope</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	<.01	<.1
Stichaeidae unid.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	<.01	<.1
<i>Urolophus halleri</i>	0.0	0.0	0.2	0.2	0.0	0.0	0.0	<.01	<.1
<i>Sebastes carnatus</i>	0.0	0.0	0.0	0.0	<.1	0.1	0.0	<.01	<.1
<i>Sebastes melanops</i> (juv.)	<.1	0.1	0.0	0.0	0.0	0.0	0.0	<.01	<.1
<i>Semicossyphus pulcher</i>	0.0	0.0	<.1	0.1	0.0	0.0	0.0	<.01	<.1
<i>Sebastes miniatus</i> (yoy)	0.0	0.0	0.0	0.0	<.1	0.1	0.0	<.01	<.1