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HARBOR SEAL, PHOCA VITULINA RICHARDSI, CENSUS IN CALIFORNIA, MAY-JUNE, 1991

By

Doyle A. Hanan, Lisa M. Jones
And
Marilyn J. Beeson

ADMINISTRATIVE REPORT LJ-92-03



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HARBOR SEAL, PHOCA VITULINA RICHARDSI, CENSUS
IN CALIFORNIA, MAY-JUNE, 1991

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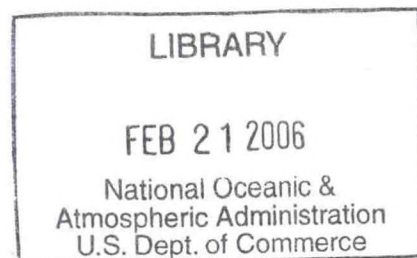
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by

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INTRODUCTION AND METHODS

California Department of Fish and Game (CDFG) initiated a harbor seal, Phoca vitulina richardsi, census along the California coast in 1981. The census is part of an assessment program conducted cooperatively with NOAA/National Marine Fisheries Service (NMFS). The census data are to be used as an index of abundance to detect changes in population abundance or distribution. The index is not an estimate of the total number of harbor seals in California; it is an estimate of the total number of seals hauled out on the rocks and beaches, which is probably about 50 to 70 percent of the peak seasonal abundance (Boveng 1988). The first census was incomplete, but allowed refinement of techniques used in subsequent censuses. Those techniques and the results of the 1982 to 1990 censuses are reported in Miller et al. (1983), Hanan (1990), and Hanan et al. (1985, 1986a, 1986b, 1987, 1988, 1989, and 1991). This report presents results of the 1991 census, which employed previous survey techniques as closely as field conditions permitted.

For the survey, we flew at an altitude of 600 feet in the CDFG's Partenavia P68 Observer¹, which was equipped with a large photographic port (approximately 70 cm X 70 cm) located in the floor behind the copilot seat. This port enabled the photographer to see hauling seals well before passing over them and to take nearly vertical pictures of the seals, which contributes less counting bias to the survey than oblique pictures.

We photographed (weather permitting) sequentially northward, attempting to take advantage of the northward progression by time and location of the low tide; although, because of aircraft availability, the series of tide heights during the survey were higher than preferred. Since the tides progress northward faster than the survey plane, we could only survey a section of the coast; therefore, we started each day at the southern-most hauling site approximately one hour before local low tide and surveyed northward until approximately an hour and a half after local low tide. We surveyed some sites on consecutive days to assure adequate photographic coverage. If a discrepancy occurred between the counts for the two days, the better photographs or the higher counts were used for the site count.

In contrast to the coastal sites, we attempted to survey the major bays and estuaries during the high tide window of one hour

¹ Use of brand names does not imply endorsement by CDFG or NMFS.

before to an hour and a half after local high tide. The Channel Islands were surveyed between 1030 and 1430 hours.

The survey team consisted of a pilot, data recorder, computer operator, and photographer. We photographed the seals with motor-driven Hasselblad cameras (models 2000FCW and 500-ELM), 80 mm or 100 mm lenses, pistol grip, and large capacity (70 frame) film magazines. We used either Kodak 64 or 200 ASA Ektachrome film and utilized a Soligor II spotmeter to assess lighting conditions. A Nikon 35 mm camera with motor-drive and a 100 mm lens served as a backup camera system in case the Hasselblad malfunctioned. The data recorder kept track of position, time, frames exposed, estimated number of seals in a flight book of coastal charts. These same data were maintained by the computer operator in a laptop computer with software interfacing the camera, navigational LORAN C, and computer.

Because the Hasselblad malfunctioned at two mainland sites in a manner that could not be detected until the film was developed, counts for those sites (Appendix I) are based on the photographer's estimates, which were routinely taken as each site was photographed. Hanan et al (1991) compared photographer's estimates for 1986-1990 to the film counts and showed the estimates to be on average somewhat lower than the film counts; thus the estimates were a conservative measure of the seals at the sites.

The database includes both aerial and ground count information stored by year (Appendix II). We used the database management program DBASE IV² to create and maintain the files as individual records for each hauling site along the California coast. The records contain descriptive information about each site as well as the seal counts (Appendix III).

² A trademark of Ashton-Tate, 10150 W. Jefferson Blvd., Culver City, CA 90230

Besides the aerial survey, a group of observers counted seals from the shore (ground counts) at 47 mainland hauling sites during the survey. Depending on their availability of time to donate, they counted during one to four days of the survey. These observers counted seals each half hour or, if numbers were large, as frequently as conditions permitted. They counted, using binoculars or spotting scopes, from approximately one hour before low tide to one and one half hours after low tide. If the ground count for a site exceeded the aerial count, we used the ground count for the estimated mainland total (Appendix I).

The exposed film from the aerial photographs was developed in fifteen foot lengths, without cutting, using the E-6 process. After identifying the sites, we cut the film into the strips of frames for each site. We used dissecting microscopes to view the film, identify the sites, and count the seals. For each hauling site, we counted the seals by marking a thin plastic sheet laid over the film. We counted all seals as adults except those easily identified and recorded as pups. After identifying the sites and counting the seals, we transferred the data into a microcomputer database for storage and analysis.

We examined all previous photographs and compared them for consistency of site identification. Any misidentified sites or counts attributed to the wrong site were corrected resulting in 30 new and previously unlisted sites.

RESULTS

We surveyed the mainland coast of California on June 24-29 and the southern California Channel Islands on June 3, 1991 using the same techniques as in previous surveys. The mainland total count was 18,346 seals, occupying 311 hauling sites, including 30 new sites. The proportion of seals north of San Francisco Bay was higher than the proportion south of the Bay (Table 1). There were more seals per site and more occupied sites than the previous year. The total island count was 4,743 seals (Table 2).

The combined counts of the mainland and islands was 23,089 harbor seals hauled out during the 1991 survey (Table 3).

ACKNOWLEDGMENTS

We thank the pilots Larry Heitz, Jeff Veal, and Bob Morgan of CDFG who flew this survey for us. We also thank the people who donated their time to do the ground counts: S. Kruse, D. Ono, K. Barsky, S. Allen, C. Kuizenga, M. Weber, N. Burgett, M. Donohue, C. Woodhouse, K. Danufsky, M. McElligott, S. Krenn, E. Danner, J. Lindsey, B. Stephens, M. Harris, B. Cunningham, C. Voss, A. Field, J. Carroll, S. Benech, C. Tolman, R. Hardy, K. Casmon, S. Owen, J. Gerace, J. Hardwick, A. Baldridge, J. Harvey, M. Lamont, D. Kopec, S. Trumble, D. Oxman, M. Torok, M. Resk, S. Allen, J. Mortenson, E. Twohy, L. Hanson, C. Talbot, L. Quirollo, R. Warner, P. Collier, and B. Sydeman.

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TABLE 1. Harbor seal mainland counts with the number of sites and occupied sites by county for the June 1991 census (DN=Del Norte, H=Humbolt, MEN=Mendocino, SON=Sonoma, MAR=Marin, CC=Contra Costa, SF=San Francisco, ALA=Alameda, SM=San Mateo, FI=Farallon Islands, SC=Santa Cruz, SCL=Santa Clara, M=Monterey, SLO=San Luis Obispo, SB=Santa Barbara, V=Ventura, SD=San Diego).

County	Seals	% Total	# Sites	# Occupied	Seals/site
DN	886	5	16	9	98
H	2050	11	70	25	82
MEN	1808	10	109	48	38
SON	1399	7	128	56	25
MAR	3899	21	67	22	177
CC	143	1	1	1	143
SF	107	1	2	1	107
ALA	6	<1	3	1	6
SM	1339	8	52	21	64
FI	62	<1	*	*	*
SC	673	4	14	6	112
SCL	0	0	1	0	0
M	1959	11	149	49	40
SLO	2636	14	125	57	46
V	127	1	1	1	127
SB	1216	7	32	12	101
SD	36	<1	4	1	36
	18,346	100	775	311	59

*Multiple sites included as one count

TABLE 2. Southern California Channel Island harbor seal counts by year (SCL=San Clemente Island, CAT=Santa Catalina Island, SBI=Santa Barbara Island, SNI=San Nicolas Island, ANA=Anacapa Island, SCR=Santa Cruz Island, SRI=Santa Rosa Island, SMI=San Miguel Island).

YEAR	SCL	CAT	SBI	SNI	ANA	SCR	SRI	SMI	TOT
1983	31 ¹	82 ¹	0 ¹	694 ²	163 ³	588 ³	910 ³	1004 ³	3472
1984 ⁴	58	174	0	380	116	888	938	664	3218
1985 ⁵	67	117	31	139	207	515	585	619	2280
1986 ¹	46	37	11	207	47 ⁶	117	487	1123	2075
1987 ⁶	180	205	8	470	292	902	1114	1150	4321
1988 ⁸	54	262	35	550	75	635	1200	1136	3947
1989 ⁹	245	372	12	434	293	922	1073	928	4279
1990 ¹⁰	111	234	15	468	36	335	652	957	2808
1991	119	253	16	674	228	1014	1180	1259	4743

1 Hanan et al. 1987
 2 Stewart and Yochem 1984a
 3 Stewart and Yochem 1984b
 4 Hanan et al. 1986a
 5 Hanan et al. 1986b

6 Only one site due to fog
 7 Hanan et al. 1988
 8 Hanan et al. 1989
 9 Hanan et al. 1990
 10 Hanan et al. 1991

TABLE 3. Summary of May-June harbor seal counts for the years 1982-1991.

Year	Mainland			SoCal	Island	California
	Total	# sites	% occupied	Total		Total
1982	12,776	428	56	-		-
1983	10,945	493	38	3,472		14,417
1984	10,946	531	41	3,218		14,164
1985	12,598	588	47	2,280*		14,878
1986	13,831	653	49	1,801*		15,632
1987	15,124	683	46	4,322		19,446
1988	14,095	701	40	3,947		18,042
1989	16,034	714	40	4,279		20,313
1990	15,675	740	40	2,808*		18,483
1991	18,346	775	40	4,743		23,089

*Late June count-possibly missed peak abundance (see Table 2)

APPENDIX I. Census results for the 1991 harbor seal survey along the mainland California coast. Date=date of count; Site=site number; Prob (source of problem possibly affecting count): C=camera, D=disturbance, F=fog; Time=time of count or photograph; FA=adult seal count from photograph; FP=count of pups from photograph; FT=total seals from photograph; GA=ground count of adult seals; GP=ground count of pups; GT=total seals from ground count; ET=higher number from FT or GT; Max=maximum count to date for a site.

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	000.1			0	0	0	0	0	0	0	7
	001.0			0	0	0	0	0	0	0	0
	002.0			0	0	0	0	0	0	0	10
6/26/91	003.0		15:45	0	0	0	29	7	36	36	37
6/24/91	004.0		15:54	123	4	127	0	0	0	127	139
6/26/91	005.0		14:30	0	0	0	44	0	44	44	116
	006.0			0	0	0	0	0	0	0	70
	007.0			0	0	0	0	0	0	0	53
	008.0			0	0	0	0	0	0	0	11
6/27/91	009.0		16:30	0	0	1	0	0	2	2	70
	010.0			0	0	0	0	0	0	0	205
	010.1			0	0	0	0	0	0	0	1
	010.8			0	0	0	0	0	0	0	3
6/26/91	011.0		16:00	0	0	57	86	1	87	87	554
6/24/91	011.1		14:42	380	17	397	302	84	386	397	397
6/24/91	012.0	C	14:43	0	0	0	0	0	0	1	38
	013.0			0	0	0	0	0	0	0	19
	013.1			0	0	0	0	0	0	0	12
	013.2			0	0	0	0	0	0	0	15
	014.0			0	0	0	0	0	0	0	13
6/24/91	014.1		14:52	250	24	274	0	0	291	291	291
	017.0			0	0	0	0	0	0	0	57
	017.1			0	0	0	0	0	0	0	48
	018.0			0	0	0	0	0	0	0	314
	018.1			0	0	0	0	0	0	0	228
	018.3			0	0	0	0	0	0	0	239
6/24/91	019.0		15:00	49	4	53	0	0	0	53	100
6/24/91	019.1		15:01	0	0	26	0	0	0	26	7
	019.2			0	0	0	0	0	0	0	13
6/24/91	020.0		15:01	34	1	35	0	0	0	35	43
6/24/91	021.0		15:07	0	0	5	0	0	0	5	19
	021.1			0	0	0	0	0	0	0	10
	021.2			0	0	0	0	0	0	0	26
	021.3			0	0	0	0	0	0	0	2
	021.5			0	0	0	0	0	0	0	8
6/24/91	022.0			0	0	72	0	0	0	72	72

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	023.0			0	0	0	0	0	0	0	13
6/24/91	023.1		15:21	0	0	8	0	0	0	8	9
	024.0			0	0	0	0	0	0	0	58
6/24/91	025.0		15:22	0	0	83	10	0	10	83	138
6/24/91	026.0		15:23	0	0	30	29	0	29	30	51
	026.1			0	0	0	0	0	0	0	22
	027.0			0	0	0	0	0	0	0	29
	028.0			0	0	0	0	0	0	0	20
	029.0			0	0	0	0	0	0	0	2
	030.0			0	0	0	0	0	0	0	2
	031.0			0	0	0	0	0	0	0	67
6/25/91	031.1		16:15	0	0	12	35	2	37	37	45
	032.0			0	0	0	0	0	0	0	4
6/26/91	032.1		15:00	0	0	0	42	2	44	44	93
6/24/91	033.0		15:30	0	0	19	0	0	0	19	22
	033.1			0	0	0	0	0	0	0	16
6/24/91	033.2			0	0	17	0	0	0	17	98
6/24/91	034.0		15:30	43	2	45	53	1	54	54	54
6/24/91	034.1		16:15	0	0	0	44	1	45	45	45
6/24/91	035.0		15:30	33	4	37	0	0	15	37	67
6/24/91	035.1		15:31	0	0	6	0	0	0	6	6
6/24/91	036.0		15:32	0	0	6	10	0	11	11	42
6/24/91	036.1		13:45	0	0	0	0	0	0	0	2
6/24/91	037.0		15:30	0	0	152	149	13	162	162	162
6/24/91	038.0	C	15:33	39	2	41	0	0	0	41	41
6/24/91	039.0		16:15	115	3	118	121	21	142	142	199
6/26/91	039.05		16:00	0	0	0	128	2	130	130	130
6/24/91	039.1		15:35	24	2	26	0	0	0	26	129
6/24/91	039.2		13:45	0	0	0	0	0	0	0	8
	040.0			0	0	0	0	0	0	0	126
	040.1			0	0	0	0	0	0	0	1
6/24/91	041.0		15:30	0	0	61	67	3	70	70	78
6/26/91	041.05		16:15	0	0	0	14	0	14	14	24
6/25/91	041.1		16:45	0	0	0	148	23	171	171	171
6/24/91	041.2		15:37	0	0	2	0	0	0	2	73
6/24/91	042.0		15:37	0	0	14	0	0	0	14	58
6/25/91	042.1		15:00	15	3	18	21	1	22	22	61
6/26/91	043.0		16:15	0	0	0	32	5	37	37	37
	043.1			0	0	0	0	0	0	0	13
6/24/91	044.0		15:40	0	0	4	0	0	0	4	24
	045.0			0	0	0	0	0	0	0	22
6/25/91	046.0		14:15	0	0	42	0	0	43	43	43
	046.1			0	0	0	0	0	0	0	1
	047.0			0	0	0	0	0	0	0	13

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	048.0			0	0	0	0	0	0	0	22
6/24/91	049.0		15:50	0	0	28	0	0	0	28	95
	050.0			0	0	0	0	0	0	0	86
	051.0			0	0	0	0	0	0	0	62
6/24/91	052.0		15:45	0	0	0	47	1	48	48	126
6/24/91	053.0		15:51	43	3	46	0	0	0	46	197
6/24/91	054.0		15:58	0	0	18	0	0	0	18	96
6/24/91	055.0		15:58	0	0	233	0	0	189	233	233
	055.1			0	0	0	0	0	0	0	75
6/24/91	055.2		15:54	0	0	32	0	0	0	32	32
	055.3			0	0	0	0	0	0	0	1
	055.4			0	0	0	0	0	0	0	9
6/24/91	055.5		15:55	0	0	5	0	0	0	5	16
	056.0			0	0	0	0	0	0	0	50
	056.1			0	0	0	0	0	0	0	39
6/24/91	056.2		15:54	0	0	2	0	0	0	2	33
	057.0			0	0	0	0	0	0	0	46
	057.1			0	0	0	0	0	0	0	30
	057.2			0	0	0	0	0	0	0	14
	058.0			0	0	0	0	0	0	0	67
6/24/91	058.1		15:58	0	0	42	0	0	0	42	51
	058.5			0	0	0	0	0	0	0	18
6/24/91	058.7		15:58	0	0	7	0	0	0	7	21
	058.8			0	0	0	0	0	0	0	75
6/24/91	058.9		15:58	0	0	2	0	0	0	2	43
	059.0			0	0	0	0	0	0	0	23
	060.0			0	0	0	0	0	0	0	11
	060.5			0	0	0	0	0	0	0	7
	061.0			0	0	0	0	0	0	0	12
	061.8			0	0	0	0	0	0	0	7
6/24/91	062.0		15:58	30	1	31	0	0	0	31	31
	063.0			0	0	0	0	0	0	0	19
	064.0			0	0	0	0	0	0	0	27
	064.5			0	0	0	0	0	0	0	2
6/24/91	065.0		15:59	0	0	49	0	0	0	49	49
	065.1			0	0	0	0	0	0	0	1
6/24/91	065.2		15:59	0	0	41	0	0	0	41	61
6/24/91	066.0		16:00	0	0	1	0	0	0	1	51
	066.1			0	0	0	0	0	0	0	45
6/24/91	066.2		16:01	0	0	2	0	0	0	2	2
6/24/91	067.0		16:02	0	0	49	0	0	0	49	65
	067.5			0	0	0	0	0	0	0	3
6/24/91	068.0		16:03	0	0	22	0	0	0	22	22
	068.1			0	0	0	0	0	0	0	52

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	068.2			0	0	0	0	0	0	0	42
	068.3			0	0	0	0	0	0	0	1
6/24/91	069.0		16:05	0	0	33	0	0	0	33	33
	070.0			0	0	0	0	0	0	0	28
6/24/91	070.1		16:07	0	0	15	0	0	0	15	15
6/24/91	071.0		16:08	118	2	120	0	0	0	120	120
	071.1			0	0	0	0	0	0	0	2
	072.0			0	0	0	0	0	0	0	68
	073.0			0	0	0	0	0	0	0	13
	073.1			0	0	0	0	0	0	0	22
6/24/91	074.0		16:10	0	0	20	0	0	0	20	68
	074.1			0	0	0	0	0	0	0	2
6/24/91	075.0		16:12	0	0	49	0	0	0	49	69
	075.1			0	0	0	0	0	0	0	2
	076.0			0	0	0	0	0	0	0	102
6/24/91	076.1		16:13	0	0	59	0	0	0	59	59
6/24/91	076.8		16:13	6	1	7	0	0	0	7	79
	077.0			0	0	0	0	0	0	0	33
	077.1			0	0	0	0	0	0	0	23
	078.0			0	0	0	0	0	0	0	104
6/24/91	079.0		16:14	124	4	128	0	0	0	128	128
	079.1			0	0	0	0	0	0	0	4
	080.0			0	0	0	0	0	0	0	33
6/24/91	080.1		16:14	0	0	15	0	0	0	15	18
	081.0			0	0	0	0	0	0	0	18
	081.1			0	0	0	0	0	0	0	8
	081.2			0	0	0	0	0	0	0	20
	081.3			0	0	0	0	0	0	0	26
6/24/91	082.0		16:16	0	0	9	0	0	0	9	70
6/24/91	083.0		16:16	0	0	9	0	0	0	9	58
	084.0			0	0	0	0	0	0	0	14
6/24/91	085.0		16:19	0	0	95	0	0	0	95	122
	086.0			0	0	0	0	0	0	0	68
	086.8			0	0	0	0	0	0	0	1
6/24/91	087.0		16:21	139	11	150	0	0	0	150	175
	087.1			0	0	0	0	0	0	0	1
	088.0			0	0	0	0	0	0	0	5
	089.0			0	0	0	0	0	0	0	20
	090.0			0	0	0	0	0	0	0	15
6/24/91	091.0		16:26	0	0	2	0	0	0	2	13
	091.1			0	0	0	0	0	0	0	21
	092.0			0	0	0	0	0	0	0	12
	093.0			0	0	0	0	0	0	0	6
	093.1			0	0	0	0	0	0	0	18

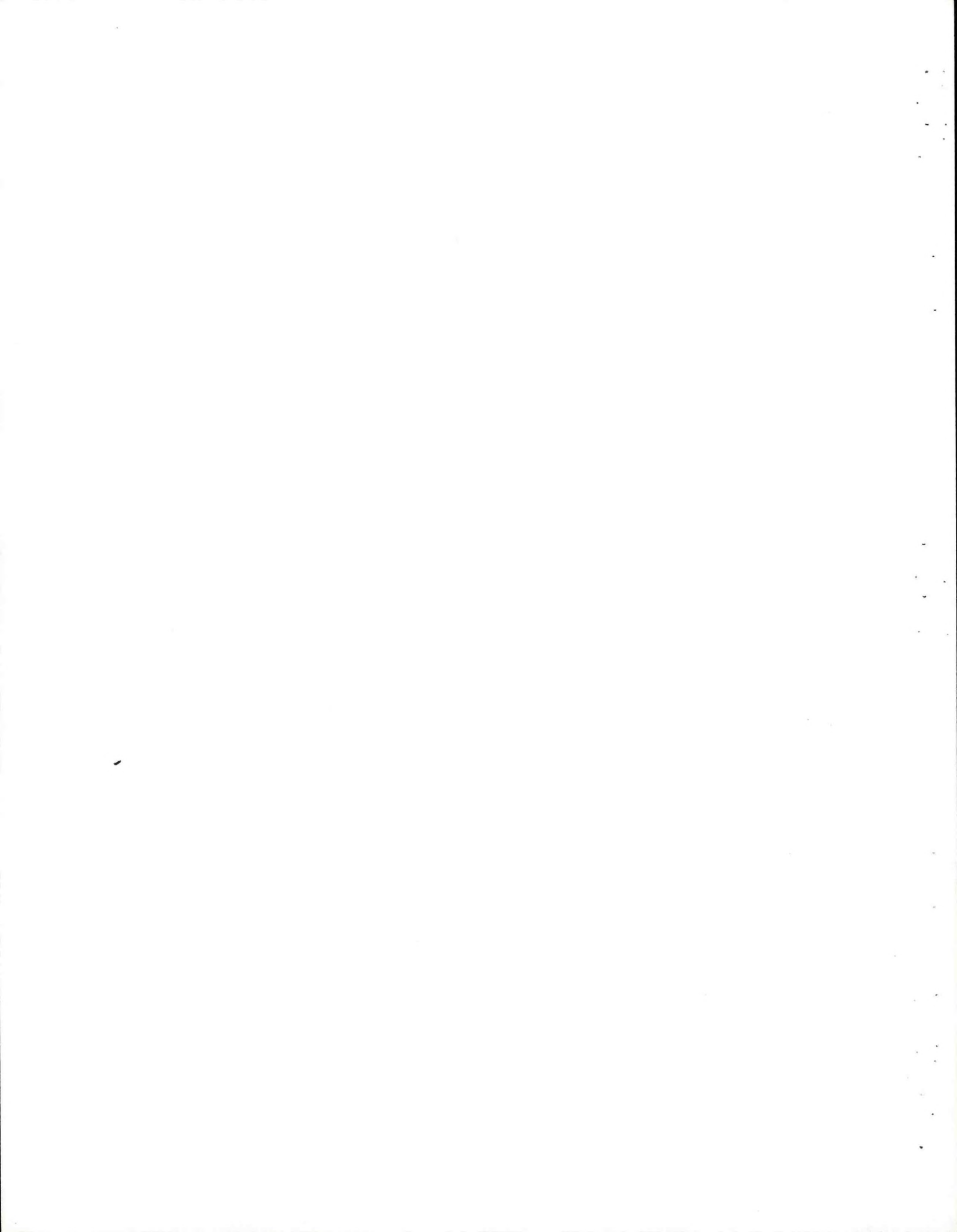
DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	093.3			0	0	0	0	0	0	0	1
	094.0			0	0	0	0	0	0	0	2
	094.1			0	0	0	0	0	0	0	10
	094.2			0	0	0	0	0	0	0	5
	094.3			0	0	0	0	0	0	0	1
	094.4			0	0	0	0	0	0	0	6
	094.5			0	0	0	0	0	0	0	1
	095.0			0	0	0	0	0	0	0	15
	096.0			0	0	0	0	0	0	0	19
	096.1			0	0	0	0	0	0	0	14
	096.2			0	0	0	0	0	0	0	2
	096.3			0	0	0	0	0	0	0	1
	096.4			0	0	0	0	0	0	0	3
	097.0			0	0	0	0	0	0	0	23
	098.0			0	0	0	0	0	0	0	59
	098.5			0	0	0	0	0	0	0	16
	099.0			0	0	0	0	0	0	0	5
	099.1			0	0	0	0	0	0	0	7
	099.2			0	0	0	0	0	0	0	6
	099.3			0	0	0	0	0	0	0	2
	099.5			0	0	0	0	0	0	0	3
6/24/91	100.0		16:33	0	0	1	0	0	0	1	9
6/24/91	101.0		16:34	0	0	21	0	0	0	21	29
6/24/91	101.5		16:36	0	0	3	0	0	0	3	3
	102.0			0	0	0	0	0	0	0	44
	102.1			0	0	0	0	0	0	0	2
	103.0			0	0	0	0	0	0	0	1
6/24/91	103.2		16:39	0	0	16	0	0	0	16	16
	103.8			0	0	0	0	0	0	0	9
	104.0			0	0	0	0	0	0	0	11
	104.1			0	0	0	0	0	0	0	3
	104.2			0	0	0	0	0	0	0	1
	104.3			0	0	0	0	0	0	0	1
	104.5			0	0	0	0	0	0	0	11
	104.8			0	0	0	0	0	0	0	4
6/24/91	105.0		16:39	0	0	8	0	0	0	8	8
	105.1			0	0	0	0	0	0	0	5
	106.0			0	0	0	0	0	0	0	1
	106.1			0	0	0	0	0	0	0	1
	107.0			0	0	0	0	0	0	0	34
	107.1			0	0	0	0	0	0	0	5
	108.0			0	0	0	0	0	0	0	15
	109.0			0	0	0	0	0	0	0	10
	109.5			0	0	0	0	0	0	0	1

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	109.6			0	0	0	0	0	0	0	3
	109.8			0	0	0	0	0	0	0	3
6/24/91	110.0		16:42	0	0	257	0	0	0	257	257
6/24/91	111.0		16:42	0	0	53	0	0	0	53	98
	112.0			0	0	0	0	0	0	0	43
	113.0			0	0	0	0	0	0	0	0
6/24/91	114.0		16:43	0	0	6	0	0	0	6	51
	114.1			0	0	0	0	0	0	0	3
	114.2			0	0	0	0	0	0	0	8
	114.3			0	0	0	0	0	0	0	3
	114.4			0	0	0	0	0	0	0	9
	114.5			0	0	0	0	0	0	0	6
	115.0			0	0	0	0	0	0	0	46
6/24/91	116.0		16:46	0	0	3	0	0	0	3	6
	117.0			0	0	0	0	0	0	0	29
	118.0			0	0	0	0	0	0	0	13
6/24/91	118.1		16:48	0	0	7	0	0	0	7	7
	118.5			0	0	0	0	0	0	0	3
	119.0			0	0	0	0	0	0	0	9
	119.1			0	0	0	0	0	0	0	12
	120.0			0	0	0	0	0	0	0	2
6/24/91	121.0		16:49	0	0	6	0	0	0	6	6
6/24/91	121.5		16:50	0	0	6	0	0	0	6	6
	122.0			0	0	0	0	0	0	0	18
	123.0			0	0	0	0	0	0	0	4
	124.0			0	0	0	0	0	0	0	1
	125.0			0	0	0	0	0	0	0	13
	126.0			0	0	0	0	0	0	0	11
	126.4			0	0	0	0	0	0	0	7
	126.5			0	0	0	0	0	0	0	13
6/24/91	126.6		16:53	0	0	8	0	0	0	8	8
	127.0			0	0	0	0	0	0	0	118
	128.0			0	0	0	0	0	0	0	1
	129.0			0	0	0	0	0	0	0	54
6/24/91	130.0		17:00	78	7	85	0	0	0	85	266
	130.1			0	0	0	0	0	0	0	30
6/24/91	131.0		17:01	0	0	53	0	0	0	53	71
6/24/91	131.1		17:01	0	0	5	0	0	0	5	56
6/24/91	131.2		17:01	0	0	16	0	0	0	16	21
6/24/91	131.3	C	17:01	0	0	11	0	0	0	11	64
	132.0			0	0	0	0	0	0	0	107
	132.1			0	0	0	0	0	0	0	8
6/24/91	133.0		17:01	0	0	47	0	0	0	47	159
	134.0			0	0	0	0	0	0	0	12

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	134.1			0	0	0	0	0	0	0	4
	134.2			0	0	0	0	0	0	0	10
6/24/91	134.5	C	17:04	0	0	37	0	0	0	37	37
6/24/91	135.0	C	17:05	0	0	53	0	0	0	53	53
6/24/91	135.3	C	17:07	0	0	0	0	0	0	80	80
	136.0			0	0	0	0	0	0	0	14
	137.0			0	0	0	0	0	0	0	5
	137.1			0	0	0	0	0	0	0	2
	138.0		13:59	0	0	0	0	0	0	0	26
6/25/91	138.1			0	0	18	0	0	0	18	30
	139.0			0	0	0	0	0	0	0	14
6/25/91	139.1		14:00	0	0	20	0	0	0	20	20
6/25/91	140.0		14:00	0	0	1	0	0	0	1	19
	140.1			0	0	0	0	0	0	0	1
6/25/91	141.0		14:00	0	0	72	0	0	0	72	78
	141.1			0	0	0	0	0	0	0	24
6/25/91	142.0		14:05	0	0	19	0	0	0	19	31
6/25/91	142.1		14:05	0	0	5	0	0	0	5	5
	143.0			0	0	0	0	0	0	0	8
	143.5			0	0	0	0	0	0	0	2
	144.0			0	0	0	0	0	0	0	28
	144.5			0	0	0	0	0	0	0	10
6/25/91	145.0		14:14	0	0	3	0	0	0	3	8
	146.0			0	0	0	0	0	0	0	7
6/25/91	147.0		14:15	87	1	88	0	0	0	88	103
6/25/91	147.1		14:17	0	0	18	0	0	0	18	72
6/25/91	148.0		14:19	69	7	76	0	0	0	76	94
	149.0			0	0	0	0	0	0	0	71
6/25/91	150.0		14:21	56	4	60	0	0	0	60	97
6/25/91	151.0	C	14:21	0	0	56	0	0	0	56	80
6/25/91	152.0	C	14:28	0	0	54	0	0	0	54	85
6/25/91	153.0		15:45	0	0	0	0	0	7	7	28
6/25/91	154.0		14:28	101	2	103	0	0	0	103	118
	154.1			0	0	0	0	0	0	0	2
6/26/91	155.0		17:15	0	0	51	96	8	104	104	104
6/25/91	155.1	C	14:23	25	2	27	0	0	0	27	102
	156.0			0	0	0	0	0	0	0	61
6/25/91	157.0		14:28	111	4	115	0	0	0	115	175
	157.1			0	0	0	0	0	0	0	1
	158.0			0	0	0	0	0	0	0	18
	159.0			0	0	0	0	0	0	0	9
6/25/91	160.0		14:33	0	0	1	0	0	0	1	45
	160.05			0	0	0	0	0	0	0	3
6/25/91	160.1		14:33	0	0	9	0	0	0	9	9

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
6/25/91	161.0	C	14:34	0	0	28	0	0	0	28	55
	161.1			0	0	0	0	0	0	0	32
	161.2			0	0	0	0	0	0	0	6
6/25/91	162.0		16:00	0	0	0	65	6	71	71	149
	162.03			0	0	0	0	0	0	0	91
	162.1			0	0	0	0	0	0	0	1
6/25/91	162.2		14:34	21	1	22	0	0	0	22	22
6/25/91	162.3		14:35	0	0	17	0	0	0	17	19
	163.0			0	0	0	0	0	0	0	7
6/25/91	164.0		1443-1445	166	11	177	0	0	0	177	177
6/25/91	164.7		14:54	0	0	4	0	0	0	4	41
	165.0			0	0	0	0	0	0	0	89
6/27/91	166.0		16:30	141	6	147	172	4	176	176	190
6/25/91	167.0		15:03	153	6	159	137	2	139	159	169
	167.8			0	0	0	0	0	0	0	1
	168.0			0	0	0	0	0	0	0	29
6/25/91	168.5		15:06	0	0	1	0	0	0	1	1
6/24/91	169.0		14:00	0	0	12	0	0	18	18	40
	170.0			0	0	0	0	0	0	0	1
	170.1			0	0	0	0	0	0	0	1
6/25/91	172.0		15:11	295	9	304	0	0	0	304	304
	173.0			0	0	0	0	0	0	0	53
	174.0			0	0	0	0	0	0	0	139
	175.0			0	0	0	0	0	0	0	81
	175.5			0	0	0	0	0	0	0	1
6/25/91	176.0		15:13	0	0	5	0	0	0	5	31
6/25/91	177.0		15:14	0	0	20	0	0	15	20	124
	178.0			0	0	0	0	0	0	0	116
6/25/91	179.0		15:18	0	0	11	0	0	0	11	36
6/25/91	180.0		15:19	0	0	1	0	0	0	1	44
	181.0			0	0	0	0	0	0	0	17
6/25/91	182.0		15:22	17	1	18	0	0	0	18	26
	182.1			0	0	0	0	0	0	0	3
	182.2			0	0	0	0	0	0	0	4
	182.7			0	0	0	0	0	0	0	1
	183.0			0	0	0	0	0	0	0	4
	183.5			0	0	0	0	0	0	0	2
	184.0			0	0	0	0	0	0	0	1
6/25/91	184.5		15:24	0	0	1	0	0	0	1	1
6/25/91	185.0		15:24	22	2	24	0	0	0	24	43
	186.0			0	0	0	0	0	0	0	12
	186.1			0	0	0	0	0	0	0	1
	187.0			0	0	0	0	0	0	0	8
	187.7			0	0	0	0	0	0	0	1

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
6/25/91	188.0		15:26	132	15	147	0	0	0	147	185
	189.0			0	0	0	0	0	0	0	11
6/25/91	190.0	C	15:27	173	12	185	0	0	0	185	185
	191.1			0	0	0	0	0	0	0	6
	192.0			0	0	0	0	0	0	0	34
	193.0			0	0	0	0	0	0	0	24
	193.1			0	0	0	0	0	0	0	5
6/25/91	194.0		15:29	0	0	65	0	0	0	65	65
	194.1			0	0	0	0	0	0	0	1
6/25/91	195.0		15:34	0	0	36	0	0	0	36	40
6/25/91	195.1	C	15:35	0	0	186	0	0	0	186	186
	196.0			0	0	0	0	0	0	0	0
	196.1			0	0	0	0	0	0	0	33
6/25/91	197.0		15:39	103	8	111	0	0	0	111	122
6/25/91	197.05		15:39	129	16	145	0	0	0	145	145
	197.07		15:39	0	0	42	0	0	0	42	42
	197.1			0	0	0	0	0	0	0	100
	198.0			0	0	0	0	0	0	0	135
	198.1			0	0	0	0	0	0	0	25
	198.2			0	0	0	0	0	0	0	125
6/25/91	199.0		15:40	0	0	12	0	0	0	12	12
	199.5			0	0	0	0	0	0	0	24
	200.0			0	0	0	0	0	0	0	19
	200.05			0	0	0	0	0	0	0	58
	200.1			0	0	0	0	0	0	0	24
	201.0			0	0	0	0	0	0	0	68
	201.1			0	0	0	0	0	0	0	3
6/25/91	202.0		15:43	93	6	99	0	0	0	99	121
	202.1			0	0	0	0	0	0	0	1
	203.0			0	0	0	0	0	0	0	67
	204.0			0	0	0	0	0	0	0	98
6/25/91	205.0		13:12	0	0	6	0	0	0	6	328
	206.0			0	0	0	0	0	0	0	53
6/25/91	207.0	C	13:19	0	0	27	0	0	0	27	74
6/25/91	208.0		13:20	0	0	17	0	0	0	17	17
6/26/91	209.0		08:30	0	0	0	107	0	107	107	107
	210.0			0	0	0	0	0	0	0	18
	210.8			0	0	0	0	0	0	0	13
	211.0			0	0	0	0	0	0	0	30
	212.0			0	0	0	0	0	0	0	97
6/24/91	212.5		14:30	0	0	14	18	0	18	18	18
6/29/91	213.0		09:45	0	0	0	143	0	143	143	143
6/26/91	214.0		13:23	0	0	1	0	0	0	1	34
6/25/91	215.0		15:52	0	0	22	0	0	0	22	67



DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	242.0			0	0	0	0	0	0	0	2
	242.1			0	0	0	0	0	0	0	1
6/25/91	242.5		16:32	0	0	27	0	0	0	27	28
6/25/91	243.0		16:33	0	0	38	0	0	0	38	111
6/25/91	244.0	C	16:33	192	14	206	0	0	0	206	234
	244.1			0	0	0	0	0	0	0	1
6/25/91	245.0		16:37	0	0	538	0	0	0	538	538
6/25/91	245.3		16:34	0	0	14	0	0	0	14	14
6/25/91	246.0		16:37	0	0	26	0	0	0	26	35
	247.0			0	0	0	0	0	0	0	5
	247.1			0	0	0	0	0	0	0	41
6/25/91	248.0		16:41	194	13	207	0	0	0	207	431
	248.1			0	0	0	0	0	0	0	72
	248.5			0	0	0	0	0	0	0	30
6/25/91	249.0		16:43	0	0	65	0	0	0	65	236
	249.1			0	0	0	0	0	0	0	173
	249.5			0	0	0	0	0	0	0	22
	250.0			0	0	0	0	0	0	0	3
6/25/91	251.0		16:51	81	6	87	0	0	0	87	115
	252.0			0	0	0	0	0	0	0	12
6/25/91	252.5		16:54	0	0	7	0	0	0	7	7
	253.0			0	0	0	0	0	0	0	12
	254.0			0	0	0	0	0	0	0	9
6/25/91	255.0		17:15	49	3	52	0	0	59	59	59
	255.1			0	0	0	0	0	0	0	16
6/24/91	256.0		14:30	0	0	0	0	0	1	1	8
6/24/91	257.0		16:00	0	0	38	0	0	44	44	60
	257.8			0	0	0	0	0	0	0	3
	258.0			0	0	0	0	0	0	0	2
	259.0			0	0	0	0	0	0	0	1
	259.1			0	0	0	0	0	0	0	1
	260.0			0	0	0	0	0	0	0	2
	260.1			0	0	0	0	0	0	0	1
6/25/91	260.5		17:00	0	0	3	0	0	0	3	3
	261.0			0	0	0	0	0	0	0	3
	261.1			0	0	0	0	0	0	0	10
6/24/91	261.2		17:00	0	0	1	0	0	3	3	18
6/24/91	262.0		15:00	136	2	138	0	0	195	195	318
	263.0			0	0	0	0	0	0	0	31
	263.1			0	0	0	0	0	0	0	25
	264.0			0	0	0	0	0	0	0	15
6/25/91	264.1		15:30	61	7	68	80	6	86	86	86
	264.2			0	0	0	0	0	0	0	26
	264.3			0	0	0	0	0	0	0	23

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	215.1			0	0	0	0	0	0	0	1
6/25/91	216.0		15:55	0	0	3	0	0	0	3	5
	216.1			0	0	0	0	0	0	0	1
6/25/91	217.0		16:00	230	20	250	0	0	0	250	250
	217.1			0	0	0	0	0	0	0	65
6/25/91	218.0		16:04	0	0	79	0	0	0	79	193
	218.1			0	0	0	0	0	0	0	24
	219.0			0	0	0	0	0	0	0	25
	219.1			0	0	0	0	0	0	0	1
	219.2			0	0	0	0	0	0	0	1
	219.3			0	0	0	0	0	0	0	4
6/25/91	220.0		15:00	0	0	4	0	0	9	9	91
6/25/91	221.0		16:00	888	94	982	0	0	987	987	987
6/25/91	222.0		16:10	0	0	3	0	0	0	3	11
	223.0			0	0	0	0	0	0	0	3
6/25/91	224.0		1615-1617	641	104	745	0	0	646	745	745
6/25/91	225.0		16:18	68	3	71	0	0	22	71	649
	226.0			0	0	0	0	0	0	0	66
	226.1			0	0	0	0	0	0	0	105
	226.15			0	0	0	0	0	0	0	26
	226.2			0	0	0	0	0	0	0	72
	226.25			0	0	0	0	0	0	0	15
	226.3			0	0	0	0	0	0	0	12
	227.0			0	0	0	0	0	0	0	34
	228.0			0	0	0	0	0	0	0	29
	229.0			0	0	0	0	0	0	0	6
	230.0			0	0	0	0	0	0	0	124
6/25/91	231.0		16:22	132	16	148	0	0	0	148	148
6/25/91	232.0		16:23	327	31	358	0	0	0	358	358
	232.1			0	0	0	0	0	0	0	28
	232.2			0	0	0	0	0	0	0	70
6/25/91	232.3		16:24	0	0	8	0	0	0	8	17
	232.4			0	0	0	0	0	0	0	64
	233.0			0	0	0	0	0	0	0	31
	234.0			0	0	0	0	0	0	0	13
	235.0			0	0	0	0	0	0	0	17
	235.1			0	0	0	0	0	0	0	2
	236.0			0	0	0	0	0	0	0	19
	237.0			0	0	0	0	0	0	0	1
	238.0			0	0	0	0	0	0	0	20
	239.0			0	0	0	0	0	0	0	46
	240.0			0	0	0	0	0	0	0	10
	240.1			0	0	0	0	0	0	0	3
6/25/91	241.0		16:32	0	0	77	0	0	0	77	135

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	286.0			0	0	0	0	0	0	0	6
	286.1			0	0	0	0	0	0	0	9
6/26/91	286.5		14:36	9	4	13	0	0	0	13	16
6/26/91	287.0		14:38	42	3	45	0	0	0	45	67
	287.05			0	0	0	0	0	0	0	3
	287.1			0	0	0	0	0	0	0	3
6/26/91	287.15		14:38	0	0	1	0	0	0	1	1
	287.2			0	0	0	0	0	0	0	1
	287.3			0	0	0	0	0	0	0	2
6/26/91	288.0		14:39	0	0	4	0	0	0	4	10
6/26/91	289.0		14:41	0	0	8	0	0	0	8	17
6/26/91	290.0		14:42	0	0	10	0	0	0	10	34
6/26/91	291.0		14:42	0	0	21	0	0	0	21	21
	291.1			0	0	0	0	0	0	0	1
	292.0			0	0	0	0	0	0	0	1
6/26/91	292.1		14:43	0	0	21	0	0	0	21	21
	293.0			0	0	0	0	0	0	0	30
6/26/91	293.5		14:45	0	0	40	0	0	0	40	43
	294.0			0	0	0	0	0	0	0	30
6/26/91	294.1		14:45	0	0	5	0	0	0	5	5
	295.0			0	0	0	0	0	0	0	40
6/26/91	296.0		14:45	0	0	110	0	0	0	110	115
	296.1			0	0	0	0	0	0	0	2
6/26/91	297.0		14:46	0	0	4	0	0	0	4	15
	297.05			0	0	0	0	0	0	0	3
	297.1			0	0	0	0	0	0	0	35
	297.2			0	0	0	0	0	0	0	3
6/26/91	298.0		14:46	16	1	17	0	0	0	17	26
6/26/91	298.05		14:46	0	0	1	0	0	0	1	1
6/26/91	298.1		14:46	0	0	32	0	0	0	32	48
	298.2			0	0	0	0	0	0	0	4
6/26/91	299.0			20	2	22	0	0	0	22	36
	299.1			0	0	0	0	0	0	0	29
6/26/91	299.6		14:47	0	0	1	0	0	0	1	1
6/26/91	299.8		14:47	0	0	2	0	0	0	2	2
	300.0			0	0	0	0	0	0	0	18
	300.1			0	0	0	0	0	0	0	0
	300.2			0	0	0	0	0	0	0	1
6/26/91	300.8		14:47	16	2	18	0	0	0	18	18
	301.0			0	0	0	0	0	0	0	15
6/26/91	301.1		14:48	9	1	10	0	0	0	10	23
	302.0			0	0	0	0	0	0	0	125
6/26/91	303.0			0	0	22	0	0	0	22	22
6/26/91	304.0		14:49	17	1	18	0	0	0	18	47

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
6/26/91	305.0		14:50	0	0	14	0	0	0	14	53
6/26/91	305.3		14:50	0	0	12	0	0	0	12	12
6/26/91	306.0	D	14:51	0	0	4	0	0	0	4	4
	307.0			0	0	0	0	0	0	0	164
6/26/91	308.0		14:52	0	0	58	0	0	0	58	74
	309.0			0	0	0	0	0	0	0	45
	310.0			0	0	0	0	0	0	0	3
	310.1			0	0	0	0	0	0	0	1
6/26/91	311.0		14:55	12	2	14	0	0	0	14	20
	312.0			0	0	0	0	0	0	0	21
	312.1			0	0	0	0	0	0	0	27
6/26/91	313.0		15:01	0	0	26	0	0	0	26	79
	313.1			0	0	0	0	0	0	0	9
6/26/91	314.0		15:03	0	0	0	0	0	0	0	4
6/26/91	315.0		15:05	22	2	24	0	0	0	24	75
	315.1			0	0	0	0	0	0	0	4
	315.2			0	0	0	0	0	0	0	9
	315.6			0	0	0	0	0	0	0	21
6/26/91	316.0		15:09	0	0	31	0	0	0	31	35
	316.1			0	0	0	0	0	0	0	3
	317.0			0	0	0	0	0	0	0	13
	317.05			0	0	0	0	0	0	0	5
	317.1			0	0	0	0	0	0	0	3
6/26/91	318.0		15:12	51	5	56	0	0	0	56	56
	318.1			0	0	0	0	0	0	0	25
	319.0			0	0	0	0	0	0	0	7
6/26/91	320.0		15:14	24	2	26	0	0	0	26	69
	320.5			0	0	0	0	0	0	0	10
6/26/91	321.0		15:14	0	0	7	0	0	0	7	32
6/26/91	322.0		15:15	0	0	6	0	0	0	6	25
	323.0			0	0	0	0	0	0	0	28
	323.1			0	0	0	0	0	0	0	1
6/26/91	324.0		15:17	0	0	35	0	0	0	35	53
	324.1			0	0	0	0	0	0	0	2
	324.9			0	0	0	0	0	0	0	1
	325.0			0	0	0	0	0	0	0	27
6/26/91	325.1		15:20	69	17	86	0	0	0	86	86
6/26/91	325.2		15:23	0	0	8	0	0	0	8	15
6/26/91	325.7		15:24	0	0	0	0	0	0	0	19
6/26/91	326.0		15:25	111	9	120	0	0	0	120	145
	327.0			0	0	0	0	0	0	0	28
	327.1			0	0	0	0	0	0	0	66
6/26/91	328.0		15:29	0	0	7	0	0	0	7	49
6/26/91	328.3		15:29	20	1	21	0	0	0	21	21

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
6/26/91	329.0		15:30	0	0	25	0	0	0	25	84
	329.1			0	0	0	0	0	0	0	2
	329.5			0	0	0	0	0	0	0	1
6/26/91	330.0		15:32	15	3	18	0	0	0	18	42
	331.0			0	0	0	0	0	0	0	1
6/26/91	331.1		15:34	0	0	11	0	0	0	11	11
	332.0			0	0	0	0	0	0	0	176
	332.1			0	0	0	0	0	0	0	14
6/26/91	332.5		15:36	0	0	1	0	0	0	1	17
6/26/91	333.0		15:37	56	4	60	0	0	0	60	65
6/26/91	334.0		15:38	15	3	18	0	0	0	18	73
	335.0			0	0	0	0	0	0	0	0
	335.05			0	0	0	0	0	0	0	36
	335.2			0	0	0	0	0	0	0	1
	335.4			0	0	0	0	0	0	0	5
6/26/91	336.0		15:39	0	0	6	0	0	0	6	23
6/26/91	336.02	C	15:39	0	0	2	0	0	0	2	2
	336.03			0	0	0	0	0	0	0	2
	336.05			0	0	0	0	0	0	0	11
	336.1			0	0	0	0	0	0	0	9
6/26/91	336.2		15:42	0	0	7	0	0	0	7	10
6/26/91	337.0		15:42	0	0	7	0	0	0	7	37
	337.1			0	0	0	0	0	0	0	20
6/26/91	338.0		15:48	53	4	57	0	0	0	57	74
	338.1			0	0	0	0	0	0	0	1
6/26/91	338.2		15:48	0	0	6	0	0	0	6	14
	339.0			0	0	0	0	0	0	0	38
	339.1			0	0	0	0	0	0	0	17
6/26/91	340.0		15:49	10	1	11	0	0	0	11	28
	340.05			0	0	0	0	0	0	0	15
6/26/91	340.1		15:49	0	0	10	0	0	0	10	23
6/26/91	341.0		15:49	41	5	46	0	0	0	46	98
	342.0			0	0	0	0	0	0	0	29
6/26/91	342.1		15:50	25	5	30	0	0	0	30	32
	343.0			0	0	0	0	0	0	0	34
	343.1			0	0	0	0	0	0	0	20
6/26/91	344.0		15:52	11	1	12	0	0	0	12	22
6/26/91	344.1		15:53	18	1	19	0	0	0	19	19
	345.0			0	0	0	0	0	0	0	31
	345.05			0	0	0	0	0	0	0	13
6/26/91	345.1		15:54	4	1	5	0	0	0	5	24
	345.2			0	0	0	0	0	0	0	25
6/26/91	345.3		15:54	15	1	16	0	0	0	16	21
	346.0			0	0	0	0	0	0	0	41

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
6/29/91	347.0	C	11:58	0	0	4	0	0	0	4	21
6/29/91	348.0		12:00	83	8	91	0	0	0	91	91
6/29/91	349.0		12:01	0	0	19	0	0	0	19	51
	349.1			0	0	0	0	0	0	0	16
	350.0			0	0	0	0	0	0	0	27
	351.0			0	0	0	0	0	0	0	18
6/29/91	351.5		12:03	0	0	4	0	0	0	4	4
6/27/91	352.0		16:30	74	5	79	129	4	133	133	183
	352.05			0	0	0	0	0	0	0	1
6/29/91	352.1		12:04	51	1	52	0	0	0	52	52
6/29/91	352.2		12:07	0	0	17	0	0	0	17	26
	352.75			0	0	0	0	0	0	0	39
6/29/91	352.8			0	0	1	0	0	0	1	1
6/29/91	353.0		12:09	41	1	42	0	0	0	42	55
6/29/91	354.0		12:10	69	10	79	0	0	0	79	79
6/29/91	355.0		12:10	0	0	1	0	0	0	1	9
	355.03			0	0	0	0	0	0	0	20
6/29/91	355.5		12:13	0	0	46	0	0	0	46	46
6/29/91	356.0		12:16	25	1	26	0	0	0	26	67
	356.1			0	0	0	0	0	0	0	100
	357.0			0	0	0	0	0	0	0	14
	358.0			0	0	0	0	0	0	0	25
	359.0			0	0	0	0	0	0	0	14
	359.1			0	0	0	0	0	0	0	1
	360.0			0	0	0	0	0	0	0	58
	361.0			0	0	0	0	0	0	0	186
	362.0			0	0	0	0	0	0	0	239
6/29/91	363.0		12:22	386	83	469	0	0	0	469	839
	364.0			0	0	0	0	0	0	0	13
	365.0			0	0	0	0	0	0	0	154
6/29/91	366.0		12:26	0	0	9	0	0	0	9	240
	366.1			0	0	0	0	0	0	0	142
6/29/91	367.0	C	12:35	0	0	21	0	0	0	21	21
	367.1			0	0	0	0	0	0	0	26
6/29/91	367.2	C	12:35	0	0	3	0	0	0	3	23
	368.0			0	0	0	0	0	0	0	43
	368.05			0	0	0	0	0	0	0	14
6/29/91	368.1		12:39	0	0	5	0	0	0	5	33
	369.0			0	0	0	0	0	0	0	13
	369.1			0	0	0	0	0	0	0	1
	370.0			0	0	0	0	0	0	0	3
	371.0			0	0	0	0	0	0	0	25
	372.0			0	0	0	0	0	0	0	3
	372.1			0	0	0	0	0	0	0	16

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
6/29/91	373.0		12:51	187	5	192	0	0	0	192	206
	373.1			0	0	0	0	0	0	0	34
	373.2			0	0	0	0	0	0	0	7
	374.0			0	0	0	0	0	0	0	43
	375.0			0	0	0	0	0	0	0	7
	376.0			0	0	0	0	0	0	0	4
	377.0			0	0	0	0	0	0	0	4
	378.0			0	0	0	0	0	0	0	5
	378.1			0	0	0	0	0	0	0	2
6/29/91	379.0		12:58	0	0	1	0	0	0	1	4
	380.0			0	0	0	0	0	0	0	15
	380.1			0	0	0	0	0	0	0	4
	380.2			0	0	0	0	0	0	0	2
6/29/91	380.9		12:59	69	7	76	0	0	0	76	76
6/29/91	381.0		13:01	0	0	11	0	0	0	11	73
	381.1			0	0	0	0	0	0	0	441
	381.2			0	0	0	0	0	0	0	282
6/29/91	381.3		13:01	0	0	2	0	0	0	2	15
6/27/91	382.0	C	15:48	0	0	793	0	0	544	793	1060
6/27/91	383.0	C	18:41	0	0	684	0	0	0	684	830
	384.0			0	0	0	0	0	0	0	518
6/27/91	384.1		18:36	0	0	34	0	0	0	34	66
6/27/91	385.0		18:34	0	0	77	0	0	0	77	170
6/29/91	386.0		13:19	0	0	17	0	0	0	17	17
	386.1			0	0	0	0	0	0	0	1
	386.2			0	0	0	0	0	0	0	11
	387.0			0	0	0	0	0	0	0	25
6/29/91	387.5		13:20	0	0	1	0	0	0	1	1
	388.0			0	0	0	0	0	0	0	39
	389.0			0	0	0	0	0	0	0	31
6/29/91	390.0		13:22	31	1	32	0	0	0	32	79
	390.1			0	0	0	0	0	0	0	14
	391.0			0	0	0	0	0	0	0	43
6/29/91	391.5		13:22	0	0	4	0	0	0	4	4
	392.0			0	0	0	0	0	0	0	19
	393.0			0	0	0	0	0	0	0	93
	394.0			0	0	0	0	0	0	0	29
6/25/91	395.0		16:00	0	0	10	45	2	47	47	47
	395.1			0	0	0	0	0	0	0	1
	396.0			0	0	0	0	0	0	0	23
6/29/91	396.1		13:24	0	0	1	0	0	0	1	16
6/29/91	397.0		13:26	0	0	7	0	0	0	7	12
6/29/91	397.1		13:24	0	0	8	0	0	0	8	8
	398.0			0	0	0	0	0	0	0	43

DATE	SITE	P R O B	TIME	FA	FP	FT	GA	GP	GT	ET	MAX
	398.1			0	0	0	0	0	0	0	6
	399.0			0	0	0	0	0	0	0	69
	399.1			0	0	0	0	0	0	0	25
6/29/91	400.0		13:28	0	0	13	0	0	0	13	67
	401.0			0	0	0	0	0	0	0	24
	402.0			0	0	0	0	0	0	0	15
	403.0			0	0	0	0	0	0	0	27
6/29/91	404.0		13:29	16	2	18	0	0	0	18	31
6/29/91	404.02		13:29	0	0	3	0	0	0	3	3
6/29/91	405.0		13:30	0	0	7	0	0	0	7	30
	405.05			0	0	0	0	0	0	0	3
	405.1			0	0	0	0	0	0	0	1
	406.0			0	0	0	0	0	0	0	55
	407.0			0	0	0	0	0	0	0	9
6/29/91	407.1		13:40	0	0	8	0	0	0	8	13
6/29/91	408.0		13:41	0	0	6	0	0	0	6	10
6/29/91	408.5	C	13:45	0	0	2	0	0	0	2	2
6/29/91	408.6		13:46	0	0	1	0	0	0	1	1
6/29/91	409.0	D	13:48	0	0	154	0	0	0	154	341
6/29/91	410.0		13:48	0	0	15	0	0	0	15	48
	411.0			0	0	0	0	0	0	0	20
6/29/91	412.0		13:49	0	0	18	0	0	0	18	56
6/29/91	413.0		13:50	0	0	23	0	0	0	23	96
	413.1			0	0	0	0	0	0	0	1
6/29/91	414.0		13:55	348	43	391	0	0	0	391	516
	415.0			0	0	0	0	0	0	0	100
	416.0			0	0	0	0	0	0	0	61
	417.0			0	0	0	0	0	0	0	3
6/29/91	418.0		14:03	0	0	239	0	0	0	239	542
	419.0			0	0	0	0	0	0	0	3
6/27/91	420.0		17:58	0	0	43	0	0	0	43	43
	421.0			0	0	0	0	0	0	0	9
6/25/91	422.0		16:45	0	0	0	0	0	62	62	84

APPENDIX II. Harbor seal mainland counts by site and census
 (82R=April 1982, 83R= April 1983, 82=May-June 1982, 83=June
 1983, 84=June 1984, 85=May-June 1985, 86=June 1986, 87=June
 1987, 88=June 1988, 89=June 1989, 90=June 1990, 91=June
 1991); sites are underlined for those censuses conducted
 during pupping season. Sites are blank until the census when
 seals were first observed or for censuses when not surveyed.

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
0.1					7							
1.0	0	0	0	0	0	0	0	0	0	0	0	0
2.0	0	0	0	0	0	0	0	10	4	0	0	0
3.0	19	24	6	13	9	16	13	4	12	25	37	36
4.0	<u>43</u>	<u>67</u>	85	95	94	72	99	94	120	139	138	127
5.0	0	<u>93</u>	0	0	5	48	68	31	87	3	22	44
6.0	8	13	0	0	22	0	3	41	70	66	33	0
7.0	<u>14</u>	23	53	0	0	52	35	15	14	0	21	0
8.0	0	0	0	0	0	0	0	11	0	0	0	0
9.0	0	0	0	0	0	19	4	38	18	21	22	2
10.0	<u>12</u>	0	0	205	29	0	62	4	0	0	0	0
10.1							1	0	0	0	0	0
10.8								3	0	1	0	0
11.0	<u>242</u>	<u>223</u>	387	554	375	388	385	303	203	377	294	87
11.1								56	213	16	196	397
12.0	3	4	38	0	18	30	18	12	0	29	24	1
13.0	<u>19</u>	0	9	0	0	0	1	0	0	0	0	0
13.1		2	0	0	0	0	0	12	5	0	0	0
13.2		3	15	13	0	0	0	0	0	0	0	0
14.0	0	0	0	0	0	0	0	0	0	9	0	0
14.1				31	0	65	128	277	173	263	263	291
17.0	0	143	0	247	0	35	290	113	150	0	0	0
17.1									0	0	0	48
18.0	<u>17</u>	0	38	47	73	100	107	76	98	87	314	0
18.1						228				94	59	0
18.3						119	0	56	0	239	59	0
19.0	<u>70</u>	<u>21</u>	0	94	100	70	92	53	50	65	69	53
19.1								4	7	0	0	26
19.2								13	0	0	0	0
20.0	2	0	18	0	0	33	43	0	32	34	0	35
21.0	0	0	0	4	0	6	3	0	0	19	0	5
21.1				10	0	0	0	0	0	0	0	0
21.2					26	0	0	0	0	0	0	0
21.3					2	0	0	0	0	0	0	0
21.5								8	0	0	0	0

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
22.0	<u>60</u>	18	46	51	62	67	67	26	48	52	68	72
23.0	0	0	0	0	0	0	0	0	0	10	0	0
23.1				2	0	34	0	0	0	3	9	8
24.0	<u>19</u>	0	0	58	0	39	0	3	0	0	0	0
25.0	81	<u>39</u>	138	0	30	44	110	28	36	36	77	83
26.0	51	0	0	0	0	0	0	0	0	4	19	30
26.1	0	22	0	0	0	0	0	0	0	0	0	0
27.0	22	0	29	0	0	19	0	19	13	0	14	0
28.0	0	0	0	0	0	0	0	0	0	0	0	0
29.0	0	2	0	0	0	0	0	0	0	0	0	0
30.0	0	0	0	0	0	0	0	0	0	0	0	0
31.0	40	0	67	0	0	0	0	13	0	0	5	0
31.1						12	6	0	45	32	20	37
32.0	0	0	1	0	0	0	0	0	0	0	0	0
32.1									52	93	82	44
33.0	<u>13</u>	14	0	0	0	0	0	7	22	0	17	19
33.1		16		0	0	0	0	0	0	0	0	0
33.2						28	17	17	6	56	98	17
34.0	11	<u>3</u>	0	0	20	0	10	0	17	38	42	54
34.1					38	0	0	0	0	0	0	45
35.0	<u>20</u>	14	58	20	2	29	26	19	59	41	67	37
35.1		3		0	0	0	0	0	0	0	0	6
36.0	0	0	22	13	15	18	32	0	42	19	35	11
36.1											2	0
37.0	<u>25</u>	0	60	0	61	15	34	48	56	27	40	162
38.0	<u>0</u>	0	0	0	0	0	0	0	68	48	15	41
39.0	<u>29</u>	0	132	66	124	55	146	118	178	163	163	142
39.05								15	0	0	42	130
39.1							9	2	0	0	129	26
39.2											8	0
40.0	0	0	0	0	0	0	0	0	0	0	0	0
40.1						1	0	0	0	0	0	0
41.0	23	5	7	5	21	0	41	45	18	54	78	70
41.05											24	14
41.1					49	0	0	0	94	116	84	171
41.2							14	3	73	44	54	2
42.0	<u>17</u>	12	9	36	0	27	5	0	0	4	58	14
42.1				12	0	0	16	0	0	0	61	22
43.0	0	0	21	0	0	12	0	12	39	0	0	37
43.1		1		0	0	0	2	13	0	0	0	0
44.0	24	12	0	0	0	0	1	0	7	0	0	4
45.0	1	<u>22</u>	0	0	0	0	14	0	0	0	1	0
46.0	<u>41</u>	<u>37</u>	29	41	33	31	29	38	39	35	32	43
46.1		1		0	0	0	0	0	0	0	0	0
47.0	1	0	0	0	0	0	0	0	0	0	0	0
48.0	19	0	0	0	0	0	0	0	0	0	0	0

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
49.0	<u>15</u>	0	0	10	0	95	53	27	50	45	41	28
50.0	86	0	53	0	0	0	0	6	44	0	0	0
51.0	<u>15</u>	0	0	0	0	0	0	0	62	0	0	0
52.0	<u>23</u>	0	24	0	0	100	24	0	126	0	10	48
53.0	<u>90</u>	<u>80</u>	197	27	13	60	97	85	6	139	16	46
54.0	0	0	49	43	0	63	14	0	0	96	27	18
55.0	0	29	35	101	0	0	47	0	0	130	124	233
55.1					30	12	0	75	0	28	0	0
55.2							12	0	0	20	0	32
55.3								1	0	0	0	0
55.4											9	0
55.5								1	13	0	16	5
56.0	<u>30</u>	<u>50</u>	0	0	0	8	0	0	42	0	0	0
56.1		39		12	0	0	0	0	0	0	0	0
56.2		7		0	0	2	0	33	0	11	0	2
57.0	46	0	0	2	0	0	0	0	0	0	0	0
57.1						10	30	0	0	0	16	0
57.2						14	0	0	0	0	3	0
58.0	0	0	0	18	15	0	15	20	0	0	12	0
58.1				51	0	0	34	0	0	47	29	42
58.5									18	0	0	0
58.7								6	21	0	15	7
58.8											75	0
58.9	3	0	4	0	0	0	0	10	43	0	28	17
59.0	0	0	0	0	0	8	0	17	14	23	0	0
60.0	10	11	0	0	0	0	0	0	0	0	0	0
60.5											7	31
61.0	0	0	0	0	12	0	0	0	0	0	0	0
61.8									7	0	0	0
62.0	0	0	17	0	0	0	0	0	0	0	0	0
63.0	<u>8</u>	0	19	0	0	0	0	0	0	0	0	0
64.0	<u>27</u>	11	0	9	0	0	11	0	0	0	0	0
64.5									2	0	0	0
65.0	<u>32</u>	8	42	43	0	12	21	23	18	0	25	49
65.1		1		0	0	0	0	0	0	0	0	0
65.2					28	2	0	51	0	51	61	41
66.0	<u>17</u>	14	0	51	15	0	0	4	0	7	24	1
66.1		10		8	0	9	45	39	43	0	0	0
66.2		1		0	0	0	0	0	0	0	0	2
67.0	8	0	0	0	0	3	6	0	0	65	30	49
67.5											3	0
68.0	0	0	0	0	14	0	0	0	0	0	0	22
68.1						15	0	12	36	43	52	0
68.2							13	0	0	42	0	0
68.3							1	0	0	1	0	0
69.0	9	0	15	0	0	0	4	5	4	12	12	33

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
70.0	18	10	11	0	0	0	28	10	0	0	12	0
70.1				8	0	0	0	0	0	0	0	15
71.0	23	0	8	87	28	56	74	27	101	102	104	120
71.1				2	0	0	0	0	0	0	0	0
72.0	<u>68</u>	0	23	0	0	21	20	0	0	0	0	0
73.0	8	13	0	0	0	0	0	0	0	0	0	0
73.1	0	5	0	0	0	1	0	0	0	0	15	0
74.0	<u>33</u>	<u>33</u>	50	48	33	45	55	49	61	63	52	20
74.1						2	0	0	0	0	0	0
75.0	17	7	0	23	20	3	11	32	0	69	0	49
75.1						2	0	0	0	0	0	0
76.0	71	48	0	90	25	58	82	51	75	102	82	0
76.1					40	0	24	6	0	0	0	59
76.8												7
77.0	5	0	0	17	0	0	0	0	0	8	33	0
77.1				1	0	0	4	0	0	23	0	0
78.0	<u>54</u>	<u>13</u>	41	0	0	0	25	39	38	0	0	0
79.0	<u>45</u>	0	48	34	30	0	36	27	43	41	73	135
79.1							4	0	0	0	0	0
80.0	12	0	33	0	0	0	0	0	0	0	0	0
80.1						16	0	14	0	11	18	15
81.0	0	0	0	0	0	8	0	0	0	0	0	0
81.1						8	0	0	0	0	0	0
81.2						20	0	0	0	0	0	0
81.3						10	0	24	13	21	26	0
82.0	0	0	0	0	13	0	0	0	0	0	0	9
83.0	0	0	0	3	0	0	0	0	0	0	0	9
84.0	0	0	0	0	0	11	4	7	14	0	13	0
85.0	67	14	122	64	77	37	109	102	74	120	66	95
86.0	25	26	18	4	0	0	3	0	0	0	0	0
86.8									0	0	0	0
87.0	80	0	138	101	121	28	53	46	79	131	175	150
87.1	0	0	0	0	0	0	0	0	0	0	0	0
88.0	0	0	0	0	0	0	0	0	0	0	0	0
89.0	0	0	0	0	0	0	0	0	0	0	0	0
90.0	0	0	0	0	0	0	0	0	0	11	8	0
91.0	0	0	0	0	0	0	1	1	0	13	12	2
91.1	0			21	0	0	0	0	0	0	18	0
92.0	0	0	0	0	0	0	6	0	0	0	0	0
93.0	0	0	1	0	0	0	1	6	0	0	0	0
93.1					9	0	0	9	0	18	0	0
93.3										1	0	0
94.0	0	0	2	0	0	0	0	0	0	0	0	0
94.1						10	9	0	0	0	8	0
94.2						4	0	0	5	0	4	0
94.3						1	0	0	0	0	0	0

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
94.4							6	0	0	0	0	0
94.5							1	0	0	0	0	0
95.0	1	0	7	0	15	0	0	0	0	0	0	0
96.0	0	0	1	0	0	0	1	0	0	19	0	0
96.1					14	0	1	0	3	0	0	0
96.2						2	0	0	0	0	3	0
96.3						1	0	0	0	0	10	0
96.4						3	0	0	0	0	0	0
97.0	22	0	1	0	10	15	20	20	9	23	8	0
98.0	24	0	59	10	0	0	43	31	14	25	26	0
98.5											16	0
99.0	0	0	0	0	0	0	0	0	0	0	24	0
99.1						7	1	2	0	0	0	0
99.2						3	0	6	6	0	4	0
99.3											2	0
99.5								3	0	0	0	0
100.0	0	0	9	0	0	0	0	4	0	0	0	1
101.0	14	0	9	9	0	0	0	18	25	0	29	21
101.5												3
102.0	20	0	44	4	0	0	28	14	15	16	5	0
102.1							2	0	0	0	0	0
103.0	0	0	1	0	0	0	0	0	0	0	0	0
103.2												16
103.8									9	0	6	0
104.0	0	0	7	0	0	0	5	0	0	11	7	0
104.1							3	0	0	0	0	0
104.2							1	0	0	0	0	0
104.3							1	0	0	0	0	0
104.5										11	0	0
104.8											4	0
105.0	0	0	6	0	0	0	0	1	2	0	7	8
105.1							5	0	0	0	0	0
106.0	0	0	1	0	0	0	0	0	1	0	0	0
106.1							1	0	1	0	0	0
107.0	29	0	34	18	0	8	6	0	33	0	0	0
107.1							5	0	0	0	0	0
108.0	0	0	15	0	0	0	10	0	0	0	0	0
109.0	4	0	0	0	0	10	0	0	0	0	0	0
109.5											1	0
109.6											3	0
109.8											3	0
110.0	<u>128</u>	<u>150</u>	125	79	82	159	190	99	208	127	122	257
111.0	0	0	13	10	15	6	0	25	21	98	48	53
112.0	13	0	7	0	0	0	0	0	43	28	28	0
113.0	0	0	0	0	0	0	0	0	0	0	0	0
114.0	0	0	27	0	0	37	0	51	19	0	0	6

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
114.1		3		0	1	0	0	0	0	0	0	0
114.2		8		0	0	0	0	0	0	0	0	0
114.3							3	0	0	0	0	0
114.4							9	0	0	0	0	0
114.5							6	2	0	0	0	0
115.0	0	0	0	0	0	0	0	0	0	0	0	0
116.0	0	0	0	0	0	4	2	6	0	0	0	3
117.0	0	0	29	13	4	11	0	0	10	0	11	0
118.0	7	0	10	0	0	0	0	0	0	0	0	0
118.1							4	3	0	0	0	7
118.5									0	0	0	0
119.0	0	0	0	0	0	0	0	0	9	0	0	0
119.1						12	6	0	0	0	0	0
120.0	2	0	0	0	0	0	0	0	0	0	0	0
121.0	2	0	3	0	0	0	0	1	0	1	0	6
121.5												6
122.0	0	2	18	0	0	0	0	2	0	0	0	0
123.0	0	0	1	0	0	0	0	0	0	0	0	0
124.0	0	0	1	0	0	0	0	0	0	0	0	0
125.0	13	0	7	5	0	0	4	5	2	0	0	0
126.0	0	0	11	0	0	0	0	0	0	0	6	0
126.4											7	0
126.5								2	0	13	0	0
126.6												8
127.0	71	17	97	43	87	56	43	59	118	102	118	0
128.0	0	0	0	0	0	0	0	0	0	0	0	0
129.0	4	0	39	0	20	35	33	27	15	48	30	0
130.0	266	<u>106</u>	190	159	64	110	119	140	153	109	96	85
130.1							8	0	0	30	20	0
131.0	29	18	0	0	0	0	0	71	33	0	19	53
131.1		56		0	0	0	0	0	0	0	5	5
131.2		3		0	0	1	0	0	0	14	21	16
131.3					64	0	0	0	0	0	0	11
132.0	32	0	0	15	0	0	0	107	33	0	0	0
132.1							8	0	0	0	0	0
133.0	61	0	158	0	19	149	159	0	114	127	78	47
134.0	6	0	0	0	0	12	6	0	0	0	6	0
134.1						4	0	0	0	0	0	0
134.2						10	0	1	0	0	0	0
134.5							10	0	0	0	23	37
135.0	<u>38</u>	0	12	0	0	0	0	0	0	0	0	53
135.3												80
136.0	5	0	10	0	0	0	0	7	0	0	14	0
137.0	5	0	0	0	0	0	0	0	0	0	0	0
137.1				2	0	0	0	0	0	0	0	0
138.0	0	0	26	14	20	24	16	16	0	0	0	27

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
138.1							2	0	0	0	30	18
139.0	0	0	14	12	0	0	0	7	0	0	0	0
139.1							9	14	0	0	0	20
140.0	0	0	12	0	0	0	3	5	9	6	0	1
140.1		1		0	0	0	0	0	0	0	0	0
141.0	22	0	71	24	23	0	10	44	20	78	76	72
141.1		3		0	0	0	0	0	0	24	0	0
142.0	<u>11</u>	0	22	0	3	2	6	7	0	0	0	19
142.1												5
143.0	0	0	2	0	0	0	0	0	0	8	0	0
143.5								2	0	0	0	0
144.0	<u>28</u>	0	19	0	11	0	11	17	0	0	0	0
144.5								1	0	10	0	0
145.0	<u>2</u>	0	8	7	0	0	0	5	0	0	0	3
146.0	0	0	0	7	0	0	0	0	0	0	0	0
147.0	25	0	17	27	18	0	37	0	35	0	103	88
147.1								50	0	72	0	18
148.0	10	0	25	0	12	33	22	62	6	70	94	76
149.0	<u>36</u>	<u>51</u>	71	24	1	0	30	39	6	0	0	0
150.0	<u>51</u>	<u>56</u>	96	58	64	52	49	42	331	97	29	60
151.0	36	14	53	8	23	41	78	80	22	66	0	56
152.0	<u>29</u>	20	41	0	39	42	32	85	55	70	0	54
153.0	28	13	6	13	5	0	24	0	9	14	23	7
154.0	0	40	18	54	19	20	0	118	12	67	103	103
154.1					2	0	0	0	0	0	0	0
155.0	0	7	29	27	1	0	65	55	0	0	0	104
155.1						17	0	63	18	0	102	27
156.0	<u>14</u>	<u>31</u>	47	0	9	2	18	61	0	48	0	0
157.0	<u>145</u>	<u>129</u>	145	120	98	102	175	151	132	106	123	115
157.1							1	0	0	0	0	0
158.0	2	0	0	0	1	18	0	0	0	0	0	0
159.0	6	0	0	0	0	0	0	9	0	0	8	0
160.0	30	21	23	43	8	0	45	8	34	7	0	1
160.05							3	0	0	0	0	0
160.1		2		0	1	0	0	5	0	0	0	9
161.0	7	21	49	0	22	13	0	0	0	50	55	28
161.1						9	0	32	0	0	0	0
161.2						6	0	2	0	0	0	0
162.0	100	76	133	108	85	101	103	105	59	53	0	71
162.03											91	0
162.1		1		0	0	0	0	0	0	0	0	0
162.2										9	14	22
162.3											19	17
163.0	0	0	0	7	0	0	0	0	0	0	0	0
164.0	0	5	17	34	35	38	22	29	54	92	149	177
164.7									41	0	0	4

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
165.0	33	0	28	34	8	68	20	2	20	89	89	0
166.0	41	36	138	0	49	82	113	122	149	175	190	176
167.0	0	58	28	45	136	73	169	69	67	55	0	159
167.8									0	0	0	0
168.0	0	0	1	0	0	0	0	0	0	0	0	0
168.5												1
169.0	39	31	37	40	31	32	28	17	22	23	15	18
170.0	0	0	1	0	0	0	0	0	1	0	0	0
170.1							1	0	0	0	0	0
172.0	0	52	128	86	63	65	0	136	144	145	78	304
173.0	23	53	12	0	0	4	0	0	12	21	34	0
174.0	<u>80</u>	0	23	0	18	0	5	0	0	139	49	15
175.0	<u>76</u>	<u>46</u>	53	26	0	35	26	24	26	0	11	0
175.5										1	0	0
176.0	25	31	3	1	20	0	0	23	7	0	17	5
177.0	60	5	71	16	90	0	87	48	5	124	0	20
178.0	<u>43</u>	<u>43</u>	83	74	10	92	116	71	10	30	0	0
179.0	0	0	36	0	0	3	0	0	13	0	0	11
180.0	<u>21</u>	20	44	22	0	21	5	2	22	29	2	1
181.0	7	17	0	0	0	0	0	1	1	11	0	0
182.0	0	0	3	0	0	0	2	0	0	26	9	8
182.1						3	1	0	0	0	0	0
182.2							4	3	3	0	0	0
182.7									1	0	0	0
183.0	0	4	1	0	0	0	0	0	0	0	0	0
183.5											2	0
184.0	0	1	1	0	0	0	0	1	1	0	0	0
184.5												1
185.0	0	1	3	0	19	12	10	23	22	43	19	24
186.0	12	0	9	0	0	0	2	0	0	0	0	0
186.1							1	0	0	0	0	0
187.0	4	2	0	0	1	8	0	0	0	0	0	0
187.7										1	0	0
188.0	<u>50</u>	39	70	95	109	57	106	106	138	185	167	147
189.0	0	0	0	0	0	0	0	3	0	0	0	0
190.0	43	0	23	53	71	0	42	73	69	105	172	185
191.1							6	5	0	0	0	0
192.0	9	29	10	20	0	0	11	7	5	0	0	0
193.0	0	<u>24</u>	0	0	0	0	0	9	5	0	0	0
193.1						5	0	0	0	0	0	0
194.0	20	33	45	29	6	41	54	38	1	42	36	65
194.1							1	0	0	0	0	0
195.0	0	26	34	40	12	0	2	0	0	0	32	36
195.1		20	7	0	21	33	29	47	146	144	84	186
196.0	0	0	0	0	0	0	0	0	0	0	0	0
196.1						19	15	33	0	0	0	0

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
197.0	57	11	104	84	38	122	121	72	50	109	113	111
197.05		36	118	0	125	0	90	0	0	39	135	145
197.07											22	42
197.1		80		0	0	100	0	0	59	0	0	0
198.0	23	0	0	45	0	0	0	7	0	0	0	0
198.1				45	0	0	25	0	27	15	0	0
198.2								125	0	0	0	0
199.0	0	25	0	0	0	0	0	0	0	0	11	12
199.5										24	0	0
200.0	0	0	7	5	0	0	19	0	0	0	0	0
200.05				58	0	0	0	0	0	0	0	0
200.1						24	0	0	0	0	0	0
201.0	30	34	0	0	0	0	0	38	68	2	0	0
201.1						3	0	0	0	0	0	0
202.0	0	11	25	35	11	23	58	45	23	49	121	99
202.1					0	0	0	0	0	0	0	0
203.0	0	0	0	0	1	67	0	0	0	59	0	0
204.0	0	13	0	1	0	0	11	0	0	12	98	0
205.0	283	154	197	125	311	76	147	328	122	162	127	6
206.0	0	0	0	7	0	0	24	5	41	53	52	0
207.0	0	8	60	17	40	39	41	74	31	32	34	27
208.0	0	0	7	0	0	0	0	0	0	9	10	17
209.0	0	8	0	58	47	53	63	30	65	38	0	0
210.0	0	0	0	0	0	0	0	0	18	0	0	0
210.8								13	0	0	0	0
211.0	0	0	0	0	0	0	0	0	0	0	0	0
212.0	0	0	0	0	0	0	0	0	0	0	0	0
212.5										8	2	14
213.0	40	71	85	85	64	99	86	123	105	55	34	0
214.0	0	0	8	3	0	0	0	1	0	0	0	1
215.0	12	5	10	3	20	13	24	24	13	55	67	22
215.1					1	0	0	0	0	0	0	0
216.0	0	0	1	0	5	0	4	0	0	0	2	3
216.1							1	0	0	0	0	0
217.0	36	61	88	103	143	54	69	153	113	182	168	250
217.1					2	0	0	0	0	0	0	0
218.0	115	101	112	118	7	185	183	85	72	193	152	79
218.1		24		0	0	0	0	0	0	0	0	0
219.0	5	19	4	19	8	0	9	11	0	0	0	0
219.1						1	1	0	0	0	0	0
219.2						1	0	0	0	0	0	0
219.3						4	0	0	0	0	0	0
220.0	0	32	66	30	81	49	19	70	66	58	91	9
221.0	465	634	500	583	797	505	589	717	762	714	676	987
222.0	11	0	0	0	0	0	9	0	0	0	0	3
223.0	0	0	0	0	0	3	0	0	0	0	0	0

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
224.0	0	286	509	135	679	200	300	204	61	484	100	745
225.0	<u>543</u>	<u>127</u>	516	230	0	453	309	649	276	382	386	71
226.0	10	0	0	66	0	0	0	0	0	0	0	0
226.1				105	0	0	0	0	0	35	0	0
226.15				26	0	0	0	0	0	0	0	0
226.2				72	0	0	0	0	0	0	0	0
226.25				13	0	0	0	0	0	0	0	0
226.3				12	0	0	0	0	0	0	0	0
227.0	0	0	34	0	0	0	0	10	0	0	0	0
228.0	29	0	0	0	0	0	0	3	0	0	0	0
229.0	0	0	0	0	0	0	0	0	0	0	0	0
230.0	7	0	1	0	0	124	0	2	0	0	0	0
231.0	38	73	101	0	0	0	22	101	65	131	12	148
232.0	3	0	64	0	66	0	90	0	86	121	83	358
232.1					11	0	0	28	0	0	0	0
232.2					3	0	70	0	0	0	0	0
232.3							1	17	0	0	10	8
232.4		64	0	0	0	0	0	0	0	0	0	0
233.0	<u>24</u>	0	31	0	3	0	0	2	0	0	0	0
234.0	13	0	0	0	0	0	0	0	1	0	3	0
235.0	17	0	0	0	0	0	0	0	0	0	17	0
235.1											2	0
236.0	19	11	1	0	0	0	0	0	0	0	0	0
237.0	0	0	0	0	0	0	0	0	0	0	0	0
238.0	12	0	4	0	0	20	11	1	0	0	0	0
239.0	0	0	1	0	0	24	0	20	46	0	0	0
240.0	0	0	0	0	0	0	0	0	0	0	0	0
240.1		3		0	0	0	0	0	0	0	0	0
241.0	122	28	86	105	135	0	32	0	0	0	0	77
242.0	2	0	1	0	0	0	0	0	0	0	0	0
242.1		1		0	0	0	0	0	0	0	0	0
242.5											28	27
243.0	<u>53</u>	0	53	30	0	29	0	111	78	30	32	38
244.0	<u>59</u>	<u>41</u>	86	20	39	71	144	0	83	234	186	206
244.1					1	1	0	0	0	0	0	0
245.0	<u>165</u>	37	256	247	142	370	205	178	256	201	286	538
245.3												14
246.0	0	0	12	0	8	5	8	9	17	0	35	26
247.0	5	3	0	0	0	0	3	0	3	0	1	0
247.1									13	41	0	0
248.0	<u>338</u>	<u>289</u>	196	215	0	283	280	431	289	0	347	207
248.1					72	0	0	0	0	0	0	0
248.5							30	15	0	0	0	0
249.0	<u>27</u>	31	136	44	47	76	35	14	17	14	0	65
249.1						1	0	0	5	173	0	0
249.5							22	0	0	0	0	0

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
250.0	3	0	1	0	0	0	0	0	0	0	1	0
251.0	106	36	115	0	99	71	88	82	58	88	75	87
252.0	0	0	0	0	0	0	1	12	0	0	0	0
252.5												7
253.0	0	0	11	0	0	1	4	12	3	0	0	0
254.0	9	0	1	0	0	0	0	0	1	0	0	0
255.0	0	0	8	0	0	18	17	14	0	45	24	59
255.1					16	0	0	0	0	0	0	0
256.0	0	0	8	0	0	0	0	3	0	0	3	1
257.0	29	16	47	13	38	35	15	28	17	60	38	44
257.8									3	0	0	0
258.0	2	0	0	0	0	0	0	1	0	0	0	0
259.0	0	0	0	0	0	0	0	0	0	0	0	0
259.1							1	0	0	0	0	0
260.0	2	0	0	0	0	0	0	0	0	0	0	0
260.1							1	0	0	0	0	0
260.5												3
261.0	0	0	0	0	0	0	0	0	0	0	0	0
261.1		10		0	0	7	1	0	0	0	0	0
261.2		8		6	0	0	18	8	3	0	6	3
262.0	<u>119</u>	183	127	140	93	188	258	239	226	318	258	195
263.0	31	0	0	0	0	0	0	0	0	0	14	0
263.1						21	0	1	25	16	0	0
264.0	2	0	0	0	0	8	0	15	15	0	1	0
264.1							12	24	26	25	19	86
264.2					26	0	0	0	0	0	9	0
264.3		23	0	0	0	0	0	0	0	0	0	0
265.0	0	0	0	0	1	0	0	0	0	0	0	0
265.1				2	0	5	4	4	0	0	14	15
266.0	2	0	8	0	0	0	0	0	0	0	0	0
266.1										2	0	0
267.0	5	0	0	0	3	0	0	0	0	0	0	0
268.0	8	16	0	0	5	14	15	33	37	35	0	4
268.1				0	0	4	0	0	0	0	0	0
269.0	12	0	13	0	0	0	0	0	0	0	0	0
270.0	0	0	0	0	0	1	0	0	0	0	0	0
270.1		3		0	0	0	1	0	0	4	0	0
270.2		1		0	0	0	0	0	0	0	0	0
271.0	28	0	8	0	10	21	14	18	11	14	14	13
272.0	1	0	12	6	14	0	0	0	0	9	4	9
272.1					1	0	0	0	0	0	0	0
272.2											2	0
273.0	<u>70</u>	34	49	24	6	4	10	23	0	44	41	21
273.1							1	0	0	0	0	0
274.0	13	22	18	0	3	0	4	33	25	36	21	25
274.1		1		0	3	17	0	0	3	0	0	75

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
275.0	0	0	20	17	10	0	12	12	0	37	20	25
276.0	3	0	0	0	0	21	0	0	6	39	0	0
276.1							29	24	16	0	0	22
277.0	27	0	51	0	15	36	37	20	0	28	18	19
277.1		3		0	0	0	1	0	0	0	0	0
278.0	0	0	0	0	0	0	0	0	0	0	0	0
279.0	0	0	1	0	0	0	0	0	0	0	0	0
280.0	9	3	0	0	0	0	0	0	0	0	0	0
281.0	0	0	21	0	15	57	32	20	24	28	21	21
281.5												1
282.0	11	31	0	50	48	0	0	11	21	16	17	22
282.1						3	2	3	7	4	11	0
283.0	10	0	0	0	0	0	0	0	0	2	5	5
283.1					1	0	1	0	1	0	1	0
283.15											3	0
283.17									11	17	0	10
283.2						10	12	12	28	6	19	27
284.0	24	14	29	0	0	14	5	9	12	0	110	36
284.1				5	0	0	0	0	0	0	0	0
284.2					3	0	0	0	0	0	0	0
284.3					1	0	0	0	0	0	0	0
285.0	0	0	0	0	0	0	0	0	0	0	0	0
285.1					16	0	0	0	0	0	0	0
285.2					10	2	0	0	0	0	0	0
285.4							4	0	0	0	0	10
286.0	0	0	0	0	0	0	0	0	0	0	0	0
286.1										9	0	0
286.5							3	0	0	16	2	13
287.0	4	24	64	39	67	46	49	51	54	62	60	45
287.05		3	0	0	0	0	0	0	0	0	0	0
287.1		0		0	0	0	0	0	3	0	0	0
287.15												1
287.2							1	0	0	0	0	0
287.3								2	0	2	0	0
288.0	0	0	2	0	0	0	10	2	0	0	2	4
289.0	10	2	9	0	0	0	0	0	4	15	0	8
290.0	31	34	0	27	0	26	0	34	22	17	0	10
291.0	0	0	1	0	9	3	7	0	14	11	20	21
291.1					1	0	0	0	0	0	0	0
292.0	1	0	0	0	0	0	0	1	1	0	0	0
292.1								2	0	12	15	21
293.0	18	0	0	0	0	0	0	0	0	0	30	0
293.5								7	9	43	30	40
294.0	0	21	4	0	8	26	14	15	0	11	30	0
294.1					5	0	0	0	0	0	0	5
295.0	0	0	40	0	0	20	0	0	0	0	2	0

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
296.0	35	30	52	34	79	44	69	115	77	43	0	110
296.1							2	0	0	0	0	0
297.0	0	0	2	0	0	0	0	1	0	7	15	4
297.05		3	0	0	0	0	0	0	3	0	0	0
297.1		0		2	35	0	0	1	0	0	0	0
297.2									3	1	0	0
298.0	26	1	0	0	0	0	21	26	0	9	2	17
298.05												1
298.1		23		14	0	13	48	48	33	37	0	32
298.2						4	0	0	0	0	0	0
299.0	10	9	25	0	36	21	0	22	0	21	2	22
299.1					29	2	0	0	1	0	10	0
299.6												1
299.8												2
300.0	0	0	1	0	0	0	0	2	0	0	0	0
300.1							0	0	0	0	0	0
300.2								1	0	0	0	0
300.8										15	18	18
301.0	1	0	0	0	0	0	0	3	5	0	15	0
301.1							23	0	0	0	0	10
302.0	87	55	125	74	67	70	62	59	56	31	20	0
303.0	10	17	4	2	13	0	6	6	4	3	20	22
304.0	26	18	39	0	0	18	17	30	23	47	0	18
305.0	29	6	45	0	0	53	41	8	5	14	20	14
305.3												12
306.0	0	0	1	0	0	0	0	0	0	0	0	4
307.0	131	73	109	46	51	164	71	159	75	105	30	0
308.0	0	0	0	0	72	0	74	0	0	0	0	58
309.0	18	37	0	44	45	0	43	0	25	0	0	0
310.0	3	0	0	0	0	0	0	0	0	0	0	0
310.1						1	0	0	0	0	0	0
311.0	8	10	0	0	6	0	18	1	0	20	10	14
312.0	6	5	0	0	7	0	17	10	21	17	10	0
312.1					0	0	0	0	0	0	0	0
313.0	27	17	0	15	27	54	27	79	22	14	0	26
313.1							9	0	0	0	0	0
314.0	4	0	0	0	0	0	0	0	0	1	0	0
315.0	39	31	0	25	33	48	41	55	70	48	75	24
315.1						4	0	0	0	0	0	0
315.2								9	0	0	0	0
315.6										21	0	0
316.0	27	2	0	0	0	35	28	16	0	27	24	31
316.1		1		0	0	0	0	3	0	0	0	0
317.0	13	0	0	0	0	0	0	0	0	0	0	0
317.05									5	0	0	0
317.1						3	0	0	1	0	0	0

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
318.0	6	14	15	15	19	19	16	22	29	32	47	56
318.1							25	0	0	0	0	0
319.0	5	2	0	0	0	0	0	7	0	0	0	0
320.0	<u>42</u>	40	57	49	69	4	56	36	0	64	29	26
320.5											10	0
321.0	0	4	4	0	0	14	15	23	32	26	0	7
322.0	0	0	0	0	0	0	0	0	0	0	0	6
323.0	25	0	17	0	0	28	0	23	17	0	0	0
323.1									1	0	0	0
324.0	36	53	0	0	14	15	0	7	9	29	24	35
324.1					2	0	0	0	0	0	0	0
324.9											1	0
325.0	0	0	0	27	2	0	25	4	4	0	9	0
325.1							35	35	32	74	42	86
325.2								15	0	10	0	8
325.7										14	19	1
326.0	63	48	84	46	86	74	145	74	95	53	80	120
327.0	33	0	0	28	0	0	22	1	17	0	9	0
327.1		48				24	0	57	66	0	0	0
328.0	20	0	0	27	49	33	16	23	5	14	19	7
328.3												21
329.0	2	0	0	0	1	0	46	57	27	83	84	25
329.1							2	0	0	0	0	0
329.5									1	0	0	0
330.0	25	16	32	21	0	37	32	42	23	16	4	18
331.0	0	0	0	0	1	0	0	0	0	0	0	0
331.1								11	9	10	5	11
332.0	33	83	176	89	76	54	94	103	76	65	53	0
332.1								14	0	0	0	0
332.5							7	0	0	17	1	1
333.0	35	0	33	0	60	43	35	50	27	25	65	60
334.0	19	0	45	33	36	19	73	11	0	39	26	18
335.0	0	0	4	0	0	0	0	0	0	0	0	0
335.05		36	0	0	0	0	0	0	0	0	0	0
335.1						0	0	0	0	0	0	0
335.2								1	0	0	0	0
335.4						5	0	0	0	0	0	0
336.0	12	6	12	12	19	3	6	9	10	23	20	6
336.02												2
336.03											2	0
336.05								11	0	0	10	0
336.1		0		0	0	0	0	9	0	0	0	0
336.2		10	0	0	0	1	0	0	0	0	3	7
337.0	33	13	0	25	24	37	19	32	35	16	0	7
337.1		2	0	0	0	0	0	0	0	0	20	0
338.0	9	43	48	52	48	25	37	26	74	52	63	57

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
338.1						1	0	0	0	0	0	0
338.2								13	6	0	14	6
339.0	<u>28</u>	<u>11</u>	38	22	7	0	0	0	0	5	0	0
339.1						17	12	0	0	0	0	0
340.0	0	0	0	8	18	0	13	7	0	5	28	11
340.05							1	0	0	0	15	0
340.1					14	1	23	16	14	0	0	10
341.0	36	66	49	50	69	73	98	71	41	89	96	46
342.0	29	23	0	0	0	0	0	0	0	0	5	0
342.1			32	7	0	25	0	23	24	31	0	30
343.0	11	31	27	0	2	24	24	34	9	18	0	0
343.1						20	0	0	0	0	0	0
344.0	17	19	18	15	20	22	19	11	13	3	0	12
344.1								3	0	0	0	19
345.0	0	0	31	0	0	0	0	0	0	0	0	0
345.05							13	0	0	0	0	0
345.1							24	5	0	0	0	5
345.2								12	25	0	0	0
345.3								21	0	0	0	16
346.0	0	41	0	26	18	0	0	0	0	0	0	0
347.0	0	21	0	13	0	0	0	0	17	0	0	4
348.0	0	27	0	31	28	33	0	33	43	53	0	91
349.0	<u>44</u>	28	51	26	24	20	16	24	36	37	0	19
349.1						7	16	0	0	0	0	0
350.0	0	20	27	18	9	25	4	5	0	0	0	0
351.0	2	0	0	0	0	0	0	0	18	6	0	0
351.5												4
352.0	<u>85</u>	<u>123</u>	183	105	107	120	138	106	151	120	127	133
352.05		1	0	0	0	0	0	0	0	0	0	4
352.1		0		0	0	0	29	0	0	31	0	52
352.2						20	24	14	26	12	15	17
352.75									39	0	0	0
352.8												1
353.0	23	11	55	22	0	39	17	0	0	42	40	42
354.0	0	34	30	44	29	30	46	46	46	34	68	79
355.0	0	0	9	4	2	4	0	1	0	0	1	1
355.03										20	0	0
355.5						4				32	30	46
356.0	46	0	67	0	0	0	0	0	0	0	30	26
356.1					100	40	92	25	0	27	0	0
357.0	0	0	0	0	0	14	0	6	11	3	5	0
358.0	25	0	13	0	0	0	0	0	0	0	0	0
359.0	5	0	0	0	0	14	4	1	0	0	2	0
359.1						1	0	0	0	0	0	0
360.0	<u>58</u>	0	0	0	0	0	44	0	0	0	0	0
361.0	<u>97</u>	<u>186</u>	0	0	0	0	0	0	0	0	0	0

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
362.0	<u>21</u>	<u>78</u>	9	0	0	0	0	239	0	0	0	0
363.0	<u>354</u>	<u>279</u>	583	333	784	460	401	510	627	387	500	469
364.0	0	<u>12</u>	13	0	1	0	0	0	13	0	0	0
365.0	0	<u>246</u>	52	86	0	0	142	24	154	50	37	0
366.0	0	<u>0</u>	16	0	0	40	0	11	4	0	2	9
366.1				0	0	1	0	0	0	0	0	0
367.0	0	0	10	0	0	1	0	0	0	0	17	21
367.1							21	0	7	26	0	0
367.2								23	0	0	0	3
368.0	43	0	0	0	0	1	0	0	0	0	0	0
368.05		14	0	0	0	0	0	0	0	0	0	0
368.1	10	0	0	0	0	33	0	13	22	0	0	5
369.0	11	8	0	0	1	13	0	0	0	0	0	0
369.1						1	0	0	0	0	0	0
370.0	0	0	0	0	0	3	0	0	0	0	0	0
371.0	25	19	14	0	0	0	9	11	9	0	0	0
372.0	3	0	0	0	0	0	0	0	0	0	0	0
372.1								9	16	0	0	0
373.0	<u>101</u>	<u>104</u>	172	117	138	159	133	206	143	0	125	192
373.1		34		0	0	26	0	0	26	0	0	0
373.2											7	0
374.0	<u>29</u>	0	76	0	0	32	23	0	63	0	0	0
375.0	<u>7</u>	0	6	4	0	0	0	0	0	0	0	0
376.0	1	0	0	0	0	0	4	0	0	0	0	0
377.0	4	0	0	0	0	0	0	0	0	0	0	0
378.0	5	1	0	0	0	2	0	0	0	0	0	0
378.1		2		0	0	0	0	0	0	0	0	0
379.0	1	2	0	0	3	0	0	4	0	0	0	1
380.0	15	0	0	0	0	0	0	0	0	0	0	0
380.1						4	0	0	0	0	0	0
380.2							2	0	0	0	0	0
380.9												76
381.0	32	39	46	46	16	42	0	55	73	0	0	11
381.1					410	441	0	0	0	0	0	0
381.2		282			81	0	0	0	0	0	0	0
381.3						15	0	0	0	0	0	2
382.0	<u>325</u>	<u>192</u>	483	423	0	0	354	452	1060	533	513	793
383.0	0	<u>492</u>	0	457	464	426	281	830	316	305	576	684
384.0	<u>518</u>	1	269	7	12	5	15	14	22	20	39	0
384.1											66	34
385.0	<u>146</u>	<u>117</u>	131	96	55	148	76	144	88	93	120	77
386.0	0	0	0	0	9	0	0	0	0	0	0	17
386.1						1	0	0	0	0	0	0
386.2											11	0
387.0	0	0	0	0	0	0	0	0	0	0	25	0
387.5												1

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
388.0	0	0	0	0	0	0	0	0	0	20	22	0
389.0	0	0	0	0	0	0	0	0	0	17	9	0
390.0	0	0	21	48	57	24	55	14	35	18	10	32
390.1						14	0	0	0	0	0	0
391.0	0	0	0	0	0	0	0	0	0	8	0	0
391.5												4
392.0	0	0	0	0	0	0	10	13	0	17	0	0
393.0	20	22	0	21	0	40	22	0	18	1	2	0
394.0	0	0	0	0	0	7	3	0	0	29	13	0
395.0	0	10	0	32	21	23	20	36	36	42	34	47
395.1							1	0	0	0	0	0
396.0	0	0	0	0	4	11	8	4	0	0	2	0
396.1							16	0	0	0	0	1
397.0	0	0	2	12	8	7	9	0	0	0	10	0
397.1												8
398.0	0	2	0	0	0	43	6	0	0	0	0	0
398.1							5	0	0	0	0	0
399.0	10	9	15	46	49	67	24	0	0	55	0	0
399.1										25	0	0
400.0	0	58	0	0	0	0	53	38	0	0	41	13
401.0	0	0	0	0	3	6	1	0	0	0	0	0
402.0	0	0	0	0	0	0	0	2	0	0	0	0
403.0	0	0	0	0	0	3	0	0	0	0	0	0
404.0	0	0	0	79	28	13	3	14	0	0	0	18
404.02												3
405.0	<u>56</u>	8	0	7	9	14	13	0	0	15	0	7
405.05										3	0	0
405.1							1	0	0	0	0	0
406.0	0	0	0	0	0	0	0	0	0	0	0	0
407.0	0	0	0	0	0	0	0	0	0	0	0	0
407.1							13	9	0	5	0	8
408.0	0	0	0	0	0	0	1	0	0	0	3	6
408.5												2
408.6												1
409.0	0	0	0	0	0	20	61	209	42	0	0	154
410.0	0	0	48	0	10	28	30	0	0	0	0	15
411.0	0	0	0	0	0	0	0	0	0	0	0	0
412.0	0	0	35	0	0	0	6	0	0	0	0	18
413.0	66	24	52	33	5	96	72	0	48	0	0	23
413.1		1		0	0	0	0	0	0	0	0	0
414.0	<u>263</u>	<u>215</u>	0	363	328	379	516	386	186	440	424	391
415.0	63	0	0	0	0	0	2	5	33	8	0	0
416.0	0	0	0	0	0	8	0	0	0	0	0	0
417.0	0	0	0	0	0	0	1	0	0	0	0	0
418.0	<u>208</u>	<u>109</u>	129	542	139	328	266	278	176	304	210	239
419.0	0		0	0	0	1	0	0	0	0	0	0

YEAR SITE	82R	83R	82	83	84	85	86	87	88	89	90	91
420.0	0		0	0	9	10	23	0	0	37	0	43
421.0	0	0	0	0	0	0	0	0	0	0	0	0
422.0	51	69	50	56	41	32	42	25	40	42	58	62

APPENDIX III. Harbor seal mainland hauling sites with site descriptions as available. (SITE= site number; LOCATION= name of site; COUNTY= county of site; LAT/LONG= exact location of site; SUBST= primary type of substrate [1= extended reef, 2= offshore rock, 3= onshore rock, 4= harbor or estuary, 5= ocean sandy beach, 6= river log, 7= floats, 8= 9= ocean rocky beach]; MAX= maximum number counted at site; ?= some question as to location; blanks indicate data not available).

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
000.1	N. Point Loma	SD	32 .	117 .	2	7
001.0	1.2km S. Point La Jolla	SD	3250.56	11716.90	1	0
002.0	.6km S.Pt.LaJolla-Childrens Cv	SD	3250.87	11716.68	1	10
003.0	0.5km S. Point La Jolla	SD	3250.90	11716.62	2	37
004.0	Mugu Lagoon	V	3406.11	11904.17	4	139
005.0	.1km E.Std. Oil P. Carpinteria	SB	3423.11	11930.33	5 1	116
006.0	.3km W.Std. Oil P. Carpinteria	SB	3423.13	11930.47	2	70
007.0	Carpinteria State Beach	SB	3423.36	11931.09	1	53
008.0	Sand Point	SB	3423.60	11932.30	2	11
009.0	Moore Mesa-2km E. Goleta River	SB	3425.34	11947.82	2	70
010.0	1.2km W. Ellwood Oil Pier	SB	3426.38	11956.24	5	205
010.1	N. Ellwood	SB	3427.38	12028.03	2	1
010.8	Government Point	SB	3427.	12028.	1	3
011.0	0.8km E. Point Conception	SB	3426.53	12027.50	5 1	554
011.1	Lighthouse/Big Cove	SB	3426.08	12027.76	5	397
012.0	N.Pt. Conception/Off Sewer Hse	SB	3427.36	12028.01	2	38
013.0	N. Point Conception	SB	3429.	12028.	1	19
013.1	1km S. Sudden/2km N. Jalama	SB	3431.70	12034.79	2	15
013.2	S of Rocky Point	SB	3423.	12037.	3	15
014.0	3.0Km N of Sudden	SB	3432.	12034.	3	13
014.1	N of Sudden/S of Rocky Pt.	SB	3433.34	12036.37	5	291
017.0	S. Rocky Point	SB	3434.	12038.	1	290
017.1	S. Rocky Point	SB	3434	12038	1	48
018.0	S. Rocky Point	SB	3444.	12037.	3 5	314
018.1	S. Rocky Point	SB	3433.	12037.	5 9	228
018.2	S. Rocky Point	SB	3433.	12037.	5 1	239
019.0	S. Purisima Point	SB	3444.63	12037.24	1	100
019.1	S. Purisima Point	SB	3444.77	12037.64	2 1	26
019.2	S. Pursiima Point	SB	3445.13	12037.67	2	13
020.0	Purisima Point	SB	3445.35	12038.20	1	43
021.0	Point Sal Area/Lions Head	SB	3452.05	12036.82	3 1	19
021.1	Point Sal Area	SB	3554.	12040.	3	10
021.2	Point Sal Area	SB	3554.	12040.	3	26

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
021.3	Point Sal Area/State Park	SB	3554.	120 .	1	2
021.5	Point Sal Area/Lion Rock	SB	3554.19	12039.85	1	8
022.0	N. Side of Point Sal	SB	3554.31	12040.01	3	72
023.0	Mussel Point	SB	3455.76	12040.04	1	13
023.1	1 km N. Pismo Beach Pier	SLO	3508.90	12038.90	3 2	9
024.0	1.7km N. Pismo Beach Pier	SLO	3509.10	12039.83	2	58
025.0	Shell Beach/South Point	SLO	3509.14	12039.86	2	138
026.0	0.1km N. #25/Rock at lite	SLO	3509.15	12040.	1	51
026.1	E. Mallagh Landing	SLO	3110.	12042.	1	22
027.0	Pirates Cove (Mallagh Landing)	SLO	3511.07	12042.86	2	29
028.0	Fossil Point	SLO	3510.61	12042.45	2	0
029.0	0.8km S. Pecho Rock	SLO	3510.	12049.	1	2
030.0	Pecho Rock	SLO	3510.75	12048.95	2	2
031.0	Deer Canyon (Outside S)	SLO	3511.32	12048.37	1	67
031.1	Vicinity Deer Canyon	SLO	3510.74	12046.06	1 2	45
032.0	Deer Canyon (Inside Cove)	SLO	3511.29	12048.74	1	4
032.1	Red Tail Reef	SLO	3511.	1204 .	1	93
033.0	0.9km N. Deer Canyon	SLO	3511.15	12047.97	1	22
033.1	0.95km N. Deer Canyon	SLO	3511.55	12049.27	3	16
033.2	N. Deer Canyon	SLO	3511.41	12049.89	1 3	98
034.0	1.0km N. Deer Canyon	SLO	3511.56	12049.28	3 1	54
034.1	0.1km N. Deer Canyon	SLO	3511.	12049.	2	45
035.0	1.2km N. Deer Canyon	SLO	3511.58	12049.26	2	67
035.1	1.3km N. Deer Canyon	SLO	3511.68	12049.50	1	6
036.0	1.5km N. Deer Canyon	SLO	3511.73	12049.60	1	42
036.1	Wash Rocks N of Site 36 Rock	SLO	3511.	12049.	3	2
037.0	2.0km N. Deer Canyon	SLO	3511.81	12049.87	1	162
038.0	2.1km N. Deer Canyon	SLO	3511.80	12049.99	1 5	68
039.0	2.4km N. D.C.--Green Peak Cove	SLO	3511.90	12050.11	1 3	199
039.05	N of China Shack	SLO	3512.01	12050.37	1	130
039.1	N. China Shack	SLO	3512.09	12050.42	1	129
039.2	S. of Lion Rock	SLO	3512.	1205 .	2	8
040.0	0.4km S. Diablo Canyon Harbor	SLO	3512.	12052.	2	126
040.1	N. Diablo Nuclear Facility	SLO	3512.	12052.	2	1
041.0	0.6km N. Lion Rock	SLO	3513.44	12052.56	2	78
041.05	N. Lion Rock	SLO	3513.	12052.		24
041.1	N. Lion Rock--Barn Road	SLO	3513.	12052.34	5	171
041.2	N. Lion Rock	SLO	3513.81	12052.48	1	73
042.0	1.8km N. Lion Rock (opp.Res.)	SLO	3513.94	12052.66	1	58
042.1	N. Lion Rock	SLO	3514.28	12053.05	3	61
043.0	2.3km N. Lion Rock	SLO	3514.15	12053.04	2	37
043.1	1.0km N. Pt. Buchon	SLO	3515.00	12053.58	5	13
044.0	0.8km S. Islay Creek	SLO	3516.	12053.	2	24

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
045.0	0.5km S. Hazard Canyon	SLO	3517.34	12053.82	1	22
046.0	Morro Bay (Inside Harbor)	SLO	3520.39	12050.59	4	43
046.1	N. Whale Rock	SLO	3520.30	12051.10	2	1
047.0	0.2km W. Cayucos Pier	SLO	3526.91	12054.44	2	13
048.0	1.0km W. Cayucos Pier	SLO	3526.84	12054.59	1	22
049.0	1.3km W. Cayucos Pier	SLO	3526.87	12055.25	1	95
050.0	0.1km W. Black Rock	SLO	3526.87	12055.50	1	86
051.0	0.9km E. Cayucos Point	SLO	3526.81	12055.80	1	62
052.0	0.2km E. Cayucos Point	SLO	3526.79	12056.22	1	126
053.0	Cayucos Point	SLO	3526.76	12056.37	1	197
054.0	0.2km W. Cayucos Point	SLO	3526.77	12056.47	1	96
055.0	0.4km W. Cayucos Point	SLO	3526.76	12056.66	1	233
055.1	W. Cayucos Point	SLO	3526.73	12056.36	1	75
055.2	S. of Cayucos Point	SLO	3526.76	12056.22	1	32
055.3	S. of Cayucos Point	SLO	3526.	12056.	2	1
055.4	S. of Cayucos Point	SLO	3526.	12056.	2	9
055.5	S. of Cayucos Point	SLO	3526.80	12056.40	1	16
056.0	2.1km NW Cayucos Point	SLO	3527.76	12057.66	1	50
056.1	NW Cayucos Point	SLO	3527.	12057.	1	39
056.2	NW Cayucos Point	SLO	3526.92	12056.76	1	33
057.0	Villa Creek	SLO	3527.	12058.	1	46
057.1	Between Villa Cr. & China Harb	SLO	3527.	12100.	1	30
057.2	China Harbor	SLO	3527.	12100.	3	14
058.0	Point Estero	SLO	3527.	12100.	1	67
058.1	N of Pt. Estero area	SLO	3527.	12100.	1	51
058.5	S of China Shack	SLO	3528.40	12100.60	1	18
058.7	S of China Shack	SLO	3528.67	12100.89	1 3	21
058.8	S of China Shack	SLO	3528.	12100.	1	75
058.9	S of China Shack	SLO	3528.67	12100.89	1	43
059.0	0.4km S. China Shack	SLO	3529.00	12101.03	1	23
060.0	0.3km S. China Shack	SLO	3528.87	12101.39	1	11
060.5	S CHina Shack	SLO	3528.	12101.	1	31
061.0	0.1km S. China Shack	SLO	3529.21	12101.56	2	12
061.8	China Shack	SLO	3529 .	12101.	3	7
062.0	0.1km N. China Shack	SLO	3529.06	12101.44	1	31
063.0	0.4km N. China Shack	SLO	3529.06	12101.58	1	19
064.0	0.5km N. China Shack	SLO	3529.08	12101.65	1	27
064.5	0.6km N. China Shack	SLO	3529.	12101.	2	2
065.0	0.7km N. China Shack	SLO	3529.18	12101.71	1	49
065.1	N China Shack	SLO	3529.	12103	1	1
065.2	N. China Shack	SLO	3529.42	12101.66	1	61
066.0	1.9km S. Radar Station	SLO	3530.33	12103.05	2	51
066.1	S. Radar Station	SLO	3530.50	12103.00	3 1	45

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
066.2	Thompson	SLO	3530.	12103.	3 3	2
067.0	Off Cambria Air Force Station	SLO	3530.89	12103.82	2 1	65
067.5	Near Cambria A F Station	SLO	35	121	1	3
068.0	Dawson	SLO	3531.	12104.	1	22
068.1	Inshore of White Rock	SLO	3531.83	12104.65	1	52
068.2	N. of White Rock	SLO	3531.	12104.	1	42
068.3	S of White Pt/off Widsor Blvd	SLO	3531.	12104.	2	1
069.0	Castle Inn,inshor Cambria Rock	SLO	3534.67	12106.80	2	33
070.0	The Oaks & Pico Rock	SLO	3536.05	12107.86	1	28
070.1	The Oaks	SLO	3536.11	12108.58	1	15
071.0	The Oaks	SLO	3536.14	12108.07	1	120
071.1	N. the Oaks	SLO	3536.18	12108.11	2	2
072.0	1.6km N. San Simeon Creek	SLO	3536.22	12108.43	1	68
073.0	1.8km N. San Simeon Creek	SLO	3536.29	12108.58	1	13
073.1	Pico Creek Cove	SLO	3537.04	12109.01	2	22
074.0	0.6km E. San Simeon Pier	SLO	3538.47	12110.80	2	68
074.1	W San Simeon Point	SLO	3538.39	12110.75	1	2
075.0	1.3km W. San Simeon Point	SLO	3538.40	12111.71	1	69
075.1	W Adobe Creek	SLO	3539.11	12113.22	1	2
076.0	0.4km W. Adobe Creek	SLO	3539.15	12113.22	1	102
076.1	0.8km W. Adobe Creek	SLO	3539.20	12113.79	2	59
076.8	E Hydrographic Station	SLO	3539.	12114.	2	79
077.0	Hydrographic Station	SLO	3539.30	12114.29	1	33
077.1	1.8km W. Adobe Creek	SLO	3539.15	12114.45	1	23
078.0	1.9km W. Adobe Creek	SLO	3539.24	12114.19	2	104
079.0	Cove N of Hydrographic Statn	SLO	3539.65	12114.91	1 2	128
079.1	E. Piedras Blancas Lighthouse	SLO	3539.	12115.	2	4
080.0	2.7km E Piedra Blancas Lthouse	SLO	3539.57	12115.23	1	33
080.1	E. Piedras Blancas	SLO	3539.94	12116.81	1	18
081.0	2.3km E Piedra Blancas Lthouse	SLO	3539.75	12115.48	2	18
081.1	E. Piedras Blancas	SLO	3539.	12115.	1	8
081.2	E. Piedras Blancas	SLO	3539.	12115.	1	20
081.3	Pt. Piedras Blancas-Southside	SLO	3539.94	12116.81	1	26
082.0	Offshore Pt. Piedras Blancas	SLO	3539.76	12116.62	2 1	70
083.0	Beach at Pt. Piedras Blancas	SLO	3539.86	12116.56	1	58
084.0	Harleck Castle Rock Area	SLO	3542.56	12112.40	1	14
085.0	La Cruz Rock	SLO	3542.34	12118.27	2	122
086.0	0.3km S. Pt. Sierra Nevada	SLO	3542.68	12118.82	2	68
086.8	2 km S. Breaker Point	SLO	3543.90	12118.60	1	1
087.0	0.9km S. Breaker Point	SLO	3544.28	12118.72	2	175
087.1	N. Breaker Point	SLO	3544.15	12119.07	1	1
088.0	N. Ragged Point	SLO	3546.	12119.	1	5
089.0	N. Ragged Point	SLO	3547.	12120.	2	20

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
090.0	1.0km S. Salmon Creek	M	3548.	12121.	2	15
091.0	1.6km S. Salmon Creek	M	3548.30	12121.28	1 2	13
091.1	Salmon Creek area	M	3548.	12121.	2	21
092.0	0.3km S. Salmon Creek	M	3548.36	12121.59	2	12
093.0	0.5km N. Salmon Creek	M	3548.58	12121.86	2	6
093.1	S. Redwood Gulch	M	3549.08	12122.77	2	18
093.3	2.5 mi. S. Redwood Gulch	M	3549.84	12123.39	2	1
094.0	Redwood Gulch	M	3550.02	12123.74	2	2
094.1	N of Redwood Gulch	M	3550.	12123.	2	10
094.2	Vicinity Redwood Gulch	M	3550.10	12123.60	2	5
094.3	SE Alder Creek	M	3551.	12124.	2	1
094.4	S of Alder Creek	M	3551.	12124.	2	6
094.5	S of Alder Creek	M	3551.	12124	2	1
095.0	0.3km S. Alder Creek	M	3551.37	12124.86	2	15
096.0	0.8km N. Alder Creek	M	3551.49	12125.01	2	19
096.1	N. Alder Creek	M	3551.70	12125.70	2	14
096.2	N. Alder Creek	M	3551.	12125.	2	2
096.3	N. Alder Creek	M	3551.	12125.	2	1
096.4	N. Alder Creek	M	3551.	12125.	2	3
097.0	S Mud Creek Bridge	M	3551.75	12125.88	2	23
098.0	Bird Rock (Gorda Rock)	M	3552.38	12127.04	2	59
098.5	S Cape San Martin	M	35	121	2	16
099.0	0.6km S. Cape San Martin	M	3553.08	12127.59	5	5
099.1	Vicinity Cape San Martin	M	3552.75	12121.06	2	7
099.2	Vicinity Cape San Martin	M	3552.84	12127.25	2	6
099.3	N of White Bridge	M	3552.	12127.	2	2
099.5	N of White Bridge	M	3553.89	12027.91	2	3
100.0	1.5km S. Plaskett Rock	M	3554.59	12128.04	2	9
101.0	S Gorda	M	3555.69	12128.29	2	29
101.5	S Gorda	M	3555.	12128.	2	3
102.0	Gorda	M	3555.69	12128.29	2	44
102.1	Prewitt Creek	M	3556.	12128.	2	2
103.0	N Prewit Creek	M	3556.47	12128.64	2	1
103.2	S Wild Cattle Creek	M	3557.68	12129.17	2	16
103.8	S. Wild Cattle Creek	M	3557.	12129.	2	9
104.0	0.1km S. Wild Cattle Creek	M	3557.43	12129.02	2	11
104.1	S Wild Cattle Creek	M	3557.	12129.	2	3
104.2	E of Wild Cattle Creek	M	3558.	12130	2	1
104.3	N of Wild Cattle Creek	M	3559.	1213	2	1
104.5	1.5 mi S. Rockland Landing	M	3620.30	12130.84	3	11
104.8	Off Lucia?	M	3620.	12130.	2	4
105.0	1.0km E. Lopez Point	M	3600.87	12132.88	2	8
105.1	E of Lopez Point	M	3600.	12132.	2	5

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
106.0	0.1km E. Lopez Point	M	3601.15	12133.96	2	1
106.1	S Lopez Point	M	3601.	1213 .	2	1
107.0	0.1km W. Lopez Point	M	3601.19	12134.03	1	34
107.1	W Lopez Point	M	3601.	12134.	2	5
108.0	0.7km S. Vicente Creek	M	3602.30	12134.84	2	15
109.0	Vicente Creek	M	3602.68	12135.10	2	10
109.5	N Gamboa Point	M	3602.	12135.	2	1
109.6	N Gamboa Point	M	3602.	12135.	2	3
109.8	N Gamboa Point	M	3602.	12135.	2	3
110.0	.6km N. Big Creek/Sq Blk Rock	M	3604.35	12136.35	5 9	257
111.0	1.0km S. Dolan Rock	M	3604.66	12136.62	2 3	98
112.0	0.6km S. Dolan Rock	M	3604.75	12136.87	2	43
113.0	Dolan Rock	M	3605.	12137.	2	0
114.0	0.2km N. Rat Creek	M	3605.61	12137.23	2	57
114.1	Rat Creek Area	M	3605.	12137.	2	3
114.2	N. Rat Creek	M	3605.	12137.	3	8
114.3	N Rat Creek	M	3605.	12137.	2	3
114.4	S of Lime Creek	M	3605.	12137.	2	9
114.5	Lime Creek	M	3606.	12138.	2	6
115.0	0.3km S. Lime Creek	M	3607.10	12137.94	2	46
116.0	0.4km S. Anderson Canyon	M	3608.72	12139.87	2	6
117.0	N. Anderson Canyon	M	3609.	12140.	2	29
118.0	0.1km S. McWay Rocks	M	3609.80	12140.62	2	13
118.1	S. McWay Rocks	M	3609.	12140.	2	7
118.5	S of Seaview Shoals	M	3529.68	12040.87	2	3
119.0	McWay Rocks	M	3609.80	12140.67	2	9
119.1	Vicinity Mcway Rocks	M	3609.	12140.	1	12
120.0	0.3km N. McWay Rocks	M	3609.95	12140.77	2	2
121.0	1.2km S. Partington Point	M	3609.91	12141.20	2 3	6
121.5	S Partington Point	M	3609.	12141.	2	6
122.0	0.6km S. Partington Creek	M	3610.11	12141.56	2	18
123.0	0.8km S. Torre Canyon	M	3611.24	12142.46	2	4
124.0	Lafler Canyon	M	3611.98	12143.70	2	1
125.0	0.1km N. Lafler Canyon	M	3611.82	12143.64	2	13
126.0	0.8km N. Lafler Canyon	M	3612.	12144.	3	11
126.4	S Grimes Point	M	3612.	12144.	2	7
126.5	Grimes Point	M	3612.16	12144.41	2	13
126.6	N Grimes Point	M	3612.17	12144.45	2	8
127.0	2.7km S. Pfeiffer Point	M	3613.28	12146.55	1 5	118
128.0	Cooper Point	M	3614.	12150.	2	1
129.0	2.4km N. Cooper Point	M	3615.75	12150.72	2	54
130.0	1.7km N. Big Sur River	M	3617.15	12152.56	1 2	266
130.1	Point Sur Lighthouse	M	3617.41	12153.78	1	30

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
131.0	1.6km S. Point Sur Lighthouse	M	3617.96	12153.24	2	71
131.1	1.0km S. Point Sur Lighthouse	M	3617.	12153.	1 2	56
131.2	1.0km S. Point Sur Lighthouse	M	3617.	12153.	2	21
131.3	S. Point Sur Lighthouse	M	3617.	12153.	2	64
132.0	1.2km S. Point Sur Lighthouse	M	3618.11	12153.51	1	107
132.1	S. Point Susr Lighthouse	M	3618.	12153.	1	8
133.0	1.1km S. Point Sur Lighthouse	M	3618.17	12153.35	2	159
134.0	S. Hurricane Point	M	3621.10	12154.09	1	12
134.1	S Hurricane Point	M	3621.	12154.	2	4
134.2	S Hurricane Point	M	3621.	12154.47	2	10
134.5	S of Huricane Point	M	3621.	12154.	3 2	37
135.0	Castle Rock (Bixby Ldg.)	M	3622.44	12154.35	5	53
135.3	Rocky Creek	M	3621.89	12154.48	5	80
136.0	0.5km N. Palo Colorado Canyon	M	3624.14	12154.70	2	14
137.0	0.8km S. Soberanes Point	M	3626.59	12155.43	2	5
137.1	Soberanes Point	M	3626.	121	1	2
138.0	Inshore of Lobos Rocks	M	3626.59	12155.43	2	26
138.1	N of Lobos Rocks	M	3627.	12155.	2 3	30
139.0	0.9km S. Malpaso Creek	M	3628.37	12156.25	2	14
139.1	S. Malpaso Creek	M	3628.66	12156.32	3	20
140.0	Yankee Point Cove	M	3629.29	12156.62	2	19
140.1	Yankee Point	M	3628.66	12156.32	1	1
141.0	Yankee Point	M	3628.66	12156.32	3	78
141.1	Yankee Point	M	3629.	12156.	3	24
142.0	Bird Island (Pelican Point)	M	3630.56	12156.51	2	31
142.1	China Cove	M	3630.	12156.	3	5
143.0	0.3km N. Bird Island	M	3630.40	12156.63	2	8
143.5	Devil's Cauldron	M	3631.08	12156.92	2	2
144.0	Headland Cove	M	3631.21	12156.97	3	28
144.5	Granite Point	M	3631.	12156.	3	10
145.0	Whalers Cove	M	3631.20	12156.14	2	8
146.0	The Pit, Whalers Cove	M	3631.42	12156.02	2	7
147.0	Moss Cove (Pt. Lobos Reserve)	M	3631.35	12156.04	2	103
147.1	Vic. N. Carmel State Beach	M	3631.73	12156.28	2	18
148.0	Arrowhead Point (Outside)	M	3632.48	12155.94	1	94
149.0	Arrowhead Point (Inside)	M	3631.34	12156.74	1	71
150.0	Pescadero Rocks	M	3633.70	12156.62	1	97
151.0	.5kmN.Pescadero Pt.-Stwtr.Cove	M	3633.92	12156.97	2 3	80
152.0	Cypress Point- S. Parking Lot	M	3634.58	12158.36	2	85
153.0	0.1km S. Cypress Point	M	3634.75	12158.60	2	28
154.0	Cypress Point	M	3634.82	12158.62	2 3	118
154.1	Cypress Point	M	3634.	12158.	3	2
155.0	0.1km N. Cypress Point	M	3634.83	12158.52	1 2	104

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
155.1	?km N Cypress Point	M	3635.00	12157.44	2 3	102
156.0	0.4km N. Cypress Point	M	3634.92	12158.60	2	61
157.0	Seal Rock	M	3635.30	12157.90	2	175
157.1	N of Seal Rock	M	3635.57	12158.20	2	1
158.0	1.3km N. Seal Rock (Ocean Av.)	M	3635.97	12157.76	1	18
159.0	0.2km S. Point Joe	M	3637.55	12156.44	1	9
160.0	Asilomar (Arena Av.)	M	3637.60	12156.47	1 2	45
160.05	S Asilomar Arena Av	M	3637.60	12156.47	2	3
160.1	Asilomar (Arena Ave)	M	3637.89	12155.28	1 2	9
161.0	.5km W Lovers Pt. (Pacific Av.)	M	3637.70	12155.17	2	55
161.1	SE Lovers Point	M	3637.69	12155.18	2	32
161.2	SE Lovers Point	M	3637.50	12154.89	2	6
162.0	Hopkins Marine Station	M	3637.28	12154.14	1	133
162.03	Hopkins Varine Station	M	3637.	12154.	1	91
162.1	Cannery Row Rock	M	3637.	12154.	2	1
162.2	Aquarium	M	3637.	12154.	2	22
162.3	SE /Aquarium	M	3637.	12154.	8	19
163.0	Monterey Harbor (2km S Brwtr.)	M	3636.42	12153.60	2	7
164.0	Elkhorn Slough(1.6km E. Hwy 1)	M	3648.92	12146.11	4	177
164.7	Cement Ship N. Rio Del Mar	M	3657.80	12154.80	8	41
165.0	Soquel Point	SC	3657.20	12158.60	2	89
166.0	2.0km N. Terrance Point	SC	3657.04	12205.30	3	190
167.0	Table Rock	SC	3657.80	12208.10	1 5	169
167.8	N. Yellow Bank Creek	SC	3639.30	12210.50	2	1
168.0	1.2km N. Yellow Bank Creek	SC	3659.	12210.	2	29
168.5	S. Davenport	SC	3659.62	12210.67	1	1
169.0	Davenport Cement Plant.5km N.P	SC	3700.52	12212.26	3 1	40
170.0	El Jarro Point	SC	3701.50	12213.70	1	1
170.1	N El Jarro Point	SC	3701.24	12213.35	3	1
172.0	2.6km S. Greyhound Rock	SC	3703.35	12215.21	1 5	304
173.0	1.7km S. Greyhound Rock	SC	3703.93	12215.27	1	53
174.0	1.3km S. Greyhound Rock	SC	3704.04	12215.42	3	139
175.0	1.0km N. Greyhound Rock	SC	3704.97	12216.42	2	81
175.5	N Greyhound Rock	SC	370 .	1221 .	1	1
176.0	Ano Nuevo Point	SM	3706.58	12219.75	1	31
177.0	Ano Nuevo Island	SM	3706.55	12220.58	2 3	124
178.0	0.7km N. Ano Nuevo Point	SM	3706.98	12220.12	1	116
179.0	1.1km N. Ano Nuevo Point	SM	3707.11	12220.29	1	36
180.0	1.3km N. Ano Nuevo Point	SM	3707.18	12220.58	2 1	44
181.0	1.8km S. Franklin Point	SM	3708.30	12220.85	2	17
182.0	Franklin Point	SM	3708.93	12221.77	2	26
182.1	Vicinity Franklin Point	SM	3708.	12221.	1	3
182.2	N. Vicinity Franklin Point	SM	3709.93	12221.77	2	4

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
182.7	N. Franklin Point	SM	3710.20	12222.00	1	1
183.0	3.4km N. Franklin Point	SM	3710.66	12222.45	1	4
183.5	S Pigeon Point	SM	3710.	12223.	2	2
184.0	1.4km S. Pigeon Point	SM	3710.71	12223.16	2	2
184.5	0.8km SE Pigeon Point	SM	3710.	12223.	2	1
185.0	0.4km S. Pigeon Point	SM	3710.93	12223.31	2	43
186.0	1.4km N. Pigeon Point	SM	3711.60	12224.01	1	12
186.1	N. Pigeon Point	SM	3711.	12224.	2	1
187.0	1.7km N. Pigeon Point	SM	3711.67	12224.16	2	8
187.7	0.75 mile N. Bolsa Point	SM	3711.71	12224.30	2	1
188.0	N. Bolsa Point	SM	3712.71	12224.43	1	185
189.0	0.5km N. Bean Hollow	SM	3713.81	12224.83	2	11
190.0	0.8km N. Bean Hollow	SM	3713.96	12224.91	1	185
191.1	Pescadero Point	SM	3714.47	12225.14	1	6
192.0	0.2km N. Pescadero Point	SM	3714.74	12225.16	2	34
193.0	0.3km N. Pescadero Point	SM	3714.87	12225.13	2	24
193.1	N Pescadero Point	SM	3714.	12225.	1	5
194.0	Butano Creek Mouth	SM	3716.02	12224.82	2	65
194.1	N. Martins Beach	SM	3716.02	12224.	2	1
195.0	Eel Rock	SM	3724.48	12225.66	2	40
195.1	N. Eel Rock	SM	3724.80	12225.90	1	186
196.0	Miramontes Point	SM	3726.48	12226.66	2	0
196.1	6.0km N. Miramontes Point	SM	3726.95	12226.	2	33
197.0	Sail Rock/ Pillar Point	SM	3729.49	12229.98	2	122
197.05	N Pillar Point	SM	3730.61	12230.28	1 2	145
197.07	N Pillar Point	SM	3730.	12230.	1	42
197.1	Sail Rock/ Pillar Point	SM	3730.16	12230.15	1	100
198.0	1.0km N. Pillar Point	SM	3730.21	12230.22	2	45
198.1	N. Pillar Point	SM	3730.	12230.	2	27
199.0	1.5km N. Pillar Point	SM	3730.27	12230.27	1 2	125
199.5	0.5 mi S. Seal Cove	SM	3730.	12230.	2	24
200.0	Moss Beach (Seal Cove)	SM	3730.54	12230.83	1	19
200.05	Vicinity Seal Cove	SM	3730.	12230.	2	58
200.1	S. Seal Cove	SM	3730.	12230.	2	24
201.0	Moss Beach (N. Seal Cove)	SM	3730.99	12230.94	2	68
201.1	S. Point San Pedro	SM	3735.	12231.	2	3
202.0	San Pedro Rock (South Side)	SM	3735.69	12231.22	3	121
202.1	Mussel Rock	SM	3739.00	12230.00	2	1
203.0	Gaudalupe Slough	SCL	3726.70	12202.14	4	67
204.0	Calaveras Point	ALA	3728.02	12202.99	4	98
205.0	Mowry Slough	ALA	3729.32	12201.98	4	328
206.0	Plummer Creek	ALA	3730.48	12205.2	4	53
207.0	Greco Island	SM	3731.05	12210.78	4	74

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
208.0	Corkscrew Slough	SM	3738.79	12212.88	4	17
209.0	Yerba Buena Island	SF	3748.43	12221.71	2	65
210.0	0.4km W. Blunt Pt., Angel Isl.	MAR	3806.98	12226.69	2	18
210.8	Lighthouse Blunt Point Rock	SF	3751.39	12025.16	2	13
211.0	Sausalito Small Craft Harbor	MAR	3752.30	12229.69	7	30
212.0	Strawberry Spit	MAR	3753.27	12229.89	1	97
212.5	3.0km N. California Point	MAR	3755.94	12230.02	5 4	14
213.0	Castro Rocks	CC	3756.00	12224.99	2	123
214.0	Tubbs Island	SON	3806.98	12226.69	4	34
215.0	Pt. Bonito (.6km N. on inside)	MAR	3749.29	12231.47	2	67
215.1	Point Bonita	MAR	3749.33	12231.	2	1
216.0	0.4km N. Tennessee Cove	MAR	3750.63	12233.30	2	5
216.1	Muir Beach	MAR	375 .	1223 .		1
217.0	Bolinas Lagoon	MAR	3754.82	12240.2	4	250
217.1	Bolinas Lagoon	MAR	3753.24	12241.81	5	65
218.0	Duxbury Reef	MAR	3753.29	12241.88	1	193
218.1	West end Duxberry Reef	MAR	3753.	12241.	1	24
219.0	Bolinas Point	MAR	3754.03	12243.51	1	25
219.1	Vicinity Bolinas Point	MAR	3754.74	12243.75	1	1
219.2	Vicinity Bolinas Point	MAR	3754.	12243.	1	1
219.3	Vicinity Bolinas Point	MAR	3754	12243.	1	4
220.0	Rocks at S. Edge Double Point	MAR	3756.58	12246.54	1	91
221.0	Double Point Beach	MAR	3756.50	12246.61	5 1	987
222.0	Beach 0.4km N. Double Point	MAR	3756.90	12247.69	5 9	11
223.0	Millers Point	MAR	3759.08	12248.64	2	3
224.0	Limantour Spit	MAR	3801.89	12255.34	4	745
225.0	Drakes Estero	MAR	3802.00	12255.78	4	649
226.0	1.7km W. Chimney Rock	MAR	3759.51	12258.83	2	66
226.1	W. Chimney Rock	MAR	3759.	12258.	5	105
226.15	W Chimney Rock	MAR	3759.	12258.	2	26
226.2	W. Chimney Rock	MAR	3759.	12258.	2	72
226.25	W Chimney Rock	MAR	3759.	12258.	2	13
226.3	W. Chimney Rock	MAR	3759.	12258.	2	12
227.0	1.8km W. Chimney Rock	MAR	3759.55	12259.03	2	34
228.0	1.9km W. Chimney Rock	MAR	3759.52	12259.28	2	29
229.0	2.1km W. Chimney Rock	MAR	3759.57	12259.17	2	6
230.0	2.5km W. Chimney Rock	MAR	3759.52	12259.62	2	124
231.0	2.7km W. Chimney Rock	MAR	3759.51	12259.79	5	148
232.0	3.6km W. Chimney Rock	MAR	3759.50	12300.02	5	358
232.1	W. Chimney Rock	MAR	3759.50	12300.02	5	28
232.2	W. Chimney Rock	MAR	3759.03	12300.03	5	70
232.3	W. Chimney Rock	MAR	3759.55	12300.03	5 9	17
232.4	W Chimney Rock	MAR	3759.	12300.	2	64

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
233.0	3.7km W. Chimney Rock	MAR	3759.57	12300.51	1	31
234.0	4.2km W. Chimney Rock-S.Lion	C MAR	3759.70	12300.58	2	13
235.0	4.3km W. Chimney Rock-S.Lion	C MAR	3759.70	12300.67	2	17
235.1	4.4km W. Chimney Rock-S.Lion	C MAR	3759.	12300.	3	2
236.0	1.4km S. Elephant Rock	MAR	3810.23	12257.22	1	19
237.0	0.6km S. Elephant Rock	MAR	3810.69	12257.50	1	1
238.0	0.2km E. Elephant Rock	MAR	3810.80	12257.80	2	20
239.0	N. End Driftwood Beach	MAR	3812.36	12358.61	2	46
240.0	3.2km S. Bird Island	MAR	3813.30	12258.29	2	10
240.1	S. Bird Island	MAR	3818.	12258.	2	3
241.0	2.9km S. Bird Island	MAR	3812.50	12258.42	5 9	135
242.0	1.7km S. Bird Island	MAR	3813.05	12258.88	2	2
242.1	Bird Island	MAR	3813.	12258.	2	1
242.5	Near Bird Island	MAR	3813.70	12259.45	2	28
243.0	0.7km SE Bird Island	MAR	3713.43	12359.39	5 1	111
244.0	0.6km SE Bird Island	MAR	3813.67	12259.20	1 5	234
244.1	SE Bird Island	MAR	3813.	12259.	2	1
245.0	Bird Island	MAR	3813.77	12259.57	2 3	538
245.3	NW Bird Rock	MAR	3814.46	12300.07	3	14
246.0	0.6km S. Tomales Bluff	MAR	3814.15	12259.84	3	35
247.0	Tomales Bluff	MAR	3814.47	12259.61	2	5
247.1	E. Side Tomales Point	MAR	3813.40	12258.60	2	41
248.0	Mud N. Toms Pt., Tomales Bay	MAR	3813.00	12257.26	4	431
248.1	Tomales Bay	MAR	3813.	12257.	4	72
248.5	E. Lower Pierce Ranch	MAR	3813.21	12258.37	4	30
249.0	Hog Island (E. Spit)	MAR	3811.83	12256.38	4	236
249.1	S.E. Hog Island	MAR	3811.60	12256.20	2	173
249.5	N. Dillon Beach	MAR	3817.49	12259.20	2	22
250.0	Pinnacle Rock Area	MAR	3818.	12301.	2	3
251.0	Bodega Rock	SON	3817.75	12302.82	2	115
252.0	New Bodega Head	SON	3818.16	12303.16	1	12
252.5	N Bodega Head	SON	3818.99	12304.97	1 3	7
253.0	Mussel Point	SON	3819.32	12304.63	1	12
254.0	Arched Rock S. Carmet	SON	3822.20	12304.40	1	9
255.0	0.7km S Duncans Pt.-Pocked Rk	SON	3823.39	12305.35	2	59
255.1	Duncans Point	SON	3823.	12305.	2	16
256.0	0.3km E. Duncans Point(Cove)	SON	3823.56	12305.61	2	8
257.0	Wrights Beach	SON	3824.11	12306.16	2	60
257.8	Furlong Gulch	SON	3824.80	12306.20	2	3
258.0	Furlong Gulch Area	SON	3825.26	12206.87	2	2
259.0	0.9km N. Shell Beach	SON	3825.28	12306.84	2	1
259.1	N. of Shell Beach	SON	3825.	12306.	2	1
260.0	1.2km N. Shell Beach	SON	3825.39	12306.90	2	2

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
260.1	Near Gull Rock	SON	3825.	12306.	2	1
260.5	Peaked Hill	SON	3826.13	12309.51	2	3
261.0	Penny Island Russian River	SON	3826.75	12306.83	6	3
261.1	Russian River	SON	3827.50	12306.	6	10
261.2	Russian River	SON	3826.30	12305.80	6	18
262.0	Russian River Spits	SON	3827.02	12307.64	4	318
263.0	1.3km N. Russian River	SON	3827.34	12308.51	2	31
263.1	N. Russian River	SON	3827.22	12208.37	2	25
264.0	1.6km N. Russian River	SON	3827.32	12208.88	2	15
264.1	1.6 km N Russian River	SON	3827.30	12308.50	2	86
264.2	N Russian River	SON	3827.	12300.	2	26
264.3	N Russian River	SON	3827.	12300.	2	23
265.0	2.0km N. Russian River	SON	3827.61	12308.90	2	1
265.1	N. Russian River	SON	3828.39	12309.32	2	15
266.0	1.6km N. Russian Gulch	SON	3827.60	12310.18	2	8
266.1	N Russian Gulch	SON	3827.	12310.	2	2
267.0	1.7km N. Russian Gulch	SON	3828.59	12310.26	2	5
268.0	1.9km N. Russian Gulch	SON	3828.63	12310.32	1	37
268.1	N. Russian Gulch	SON	3828.	12310.	2	4
269.0	0.3km S. Meyer Gulch	SON	3828.96	12310.87	2	13
270.0	1.8km S. Fort Ross Reef	SON	3929.75	12312.46	2	9
270.1	S. Fort Ross Reef	SON	3929.	12312.	2	13
270.2	S. Fort Ross Reef	SON	3929.	12312.	2	1
271.0	0.3km S. Fort Ross Gulch	SON	3830.10	12313.59	2	28
272.0	Fort Ross Reef	SON	3830.06	12313.92	2	14
272.1	N. Fort Ross Reef	SON	3830.	12313.	2	1
272.2	N. Fort Ross Reef	SON	3830.	12313.	2	2
273.0	0.2km N. Fort Ross Reef	SON	3830.23	12313.85	2	70
273.1	N. of Fort Ross Reef	SON	3830.	12313.	2	1
274.0	Fort Ross Cove	SON	3830.68	12314.63	2	36
274.1	N. Side Fort Ross Cove	SON	3830.	12314.	2	75
275.0	0.1Km S Northwest Cape	SON	3830.70	12315.17	2	37
276.0	Northwest Cape	SON	3830.72	12315.27	2	39
276.1	Northwest Cape	SON	3830.70	12315.17	2	29
277.0	0.3km N. Northwest Cape	SON	3831.87	12315.22	3 2	51
277.1	N. Northwest Cape	SON	3831.	12315.	2	3
278.0	0.9km N. Northwest Cape	SON	3831.12	12315.54	1	6
279.0	0.2km S. Windermere Point	SON	3831.42	12316.01	1	1
280.0	1.0km N. Windermere Point	SON	3831.55	12316.09	2	9
281.0	0.5km N. Timber Cove Creek	SON	3831.84	12316.5	2	57
281.5	0.7km N Timber Cove Creek	SON	3831.	12306.	2	1
282.0	0.9km N. Timber Cove Creek	SON	3832.15	12316.91	3 2	50
282.1	South End Stillwater Cove	SON	3832.	12317.	2	11

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
283.0	Stillwater Cove (inside)	SON	3832.78	12317.96	2	10
283.1	N. Stillwater Cove	SON	3832.80	12317.90	2	5
283.15	N. Stillwater Cove	SON	3832.36	12316.81	2	4
283.17	N Stillwater Cove	SON	3833.77	12318.10	1	10
283.2	Gerstle Cove	SON	3833.50	12319.00	2 3	27
284.0	Salt Point	SON	3833.90	12319.98	2	69
284.1	Salt Point Area	SON	3833.	12319.	2	5
284.2	Salt Point Area	SON	3833.	1231.	2	3
284.3	Salt Point Area	SON	3833.	1231.	2	1
285.0	0.3km N. Salt Point	SON	3834.	12320.	2	57
285.1	Salt Point Area	SON	3834.	12320.	2	16
285.2	Salt Point Area	SON	3834.	12320.	1	10
285.4	Salt Point Area	SON	3834.	12320.	2	10
286.0	0.8km N. Salt Point	SON	3834.23	12320.26	2	6
286.1	0.62 mi N Salt Point	SON	3833.88	12318.88	2	9
286.5	N. of Salt Point	SON	3834.	12320.	3	16
287.0	0.3km S. Chinese Gulch	SON	3835.21	12320.54	2	67
287.05	S Chinese Gulch	SON	3835.	12321.	2	3
287.1	S. Chinese Gulch	SON	3835.80	12321.30	3	3
287.15	S Fisk Mill Cove	SON	3835.	12320.	2	1
287.2	S Fisk Mill Cove	SON	3834.	12320.	2	1
287.3	Fisk Mill Cove	SON	3835.76	12320.86	2	2
288.0	0.7kmN. Cannon Gulch-Fisk Mill	SON	3835.82	12321.47	2	10
289.0	0.7km S. Horseshoe Point	SON	3836.14	12321.94	2	17
290.0	0.7km N. Horseshoe Point	SON	3836.76	12322.02	2	34
291.0	0.7km N. Horseshoe Cove	SON	3836.95	12322.42	1	21
291.1	Horseshoe Cove Area	SON	3836.85	12322.42	2	1
292.0	0.5km S. Rocky Point	SON	3837.62	12323.15	3	1
292.1	Sandy Point	SON	3838.14	12322.41	1	21
293.0	Sandy Point	SON	3838.65	12323.98	3	30
293.5	Sandy Point	SON	3898.60	12323.80	2 1	43
294.0	0.7km S. Stewarts Point	SON	3838.98	12324.15	2	30
294.1	Stewarts Point Area	SON	3838.	12424.	2	5
295.0	0.2km S. Stewarts Point	SON	3839.19	12324.39	3	40
296.0	Stewarts Point Island	SON	3839.28	12324.50	3	115
296.1	Stewarts Point Island	SON	3839.	12324.	2	2
297.0	0.6km N. Stewarts Point	SON	3839.58	12324.54	2	15
297.05	N. Stewarts Point	SON	3839.	12324.	2	3
297.1	Stewarts Point Area	SON	3839.	12324.	1	35
297.2	Vicinity Stewarts Point	SON	3839.	12324.	2	3
298.0	1.0km S. Black Point	SON	3840.34	12325.07	2 3	26
298.05	1.2km S Black Point Landing	SON	3840.	12325.	2	1
298.1	Black Point Area	SON	3840.56	12325.60	3 2	48

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
298.2	S.E. Black Point	SON	3840.	12325.	1	4
299.0	0.4km N. Black Point	SON	3840.87	12326.05	2	36
299.1	Black Point Area	SON	3841.60	12326.40	2	29
299.6	2.? km N of Black Pt. Landing	SON	3841.	12326.	2	1
299.8	N Black Point Landing	SON	3841.	12326.	2	2
300.0	2.8km N. Black Point	SON	3842.06	12327.08	2	2
300.1	N of Black Point	SON	3842.	12327.	2	0
300.2	Vicinity Blackk Point	SON	3841.	12327.	2	1
300.8	3.6 km N of Black Pt. Landing	SON	3842.63	12326.07	3	18
301.0	3.8km N. Black Point	SON	3842.48	12327.16	2	15
301.1	Diamond Rock	SON	3842.	12327.	2	23
302.0	5.2km N. Black Point	SON	3842.92	12327.63	2	125
303.0	6.0km N. Black Point	SON	3843.27	12328.21	2	22
304.0	6.2km N. Black Point	SON	3843.30	12328.27	2	47
305.0	6.7km N. Black Point	SON	3843.46	12328.64	2 3	53
305.3	6.9km N. Black Point Landing	SON	3843.	12328.	3	12
306.0	7.1km N. Black Point	SON	3843.58	12328.92	1	4
307.0	7.3km N. Black Point	SON	3843.46	12329.22	2	164
308.0	7.4km N. Black Point	SON	3843.71	12329.02	2	74
309.0	7.7km N. Black Point	SON	3843.74	12329.09	1	45
310.0	1.3km S. Del Mar Point	SON	3844.25	12329.90	2	3
310.1	S. Del Mar Landing	SON	3844.	12330.	3	1
311.0	Del Mar Point	SON	3844.39	12330.93	1	20
312.0	1.3km N. Del Mar Point	SON	3844.39	12330.93	1	21
312.1	Del Mar Point Area	SON	3845.	12331.	1	0
313.0	Gualala Point	SON	3845.12	12331.60	1	79
313.1	N of Gualala Point	SON	3845.	12331.	2	9
314.0	Robinson Reef	MEN	3846.04	12332.74	2	4
315.0	Bourns Rock	MEN	3846.63	12333.49	2	75
315.1	N. Bourns Rock	MEN	3836.	12333.	1	4
315.2	Bourns Landing	MEN	3846.74	12333.21	2	9
315.6	Collins Landing	MEN	3833.76	12346.92	2	21
316.0	Fish Rocks	MEN	3847.86	12335.44	2	35
316.1	Onshore Near Fish Rocks	MEN	3848.34	12336.36	2	3
317.0	Havens Neck-.3km N. Inside Cove	MEN	3848.62	12335.87	2	13
317.05	Vicinity Havens Neck	MEN	3848.	12335.	2	5
317.1	Vicinity Havens Neck	MEN	3849.	12336.	2	3
318.0	1.2km N. Havens Neck	MEN	3849.08	12336.43	2	56
318.1	Scholl Rock	MEN	3849.	12336.	2	25
319.0	0.6km S. Steen's Landing	MEN	3849.43	12336.74	2	7
320.0	Morrison Gulch	MEN	3850.38	12337.99	3	69
320.5	N. Morrison Gulch	MEN	3850.	12337.	3	10
321.0	Iverson's Landing (S. side)	MEN	3850.60	12338.51	2	32

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
322.0	Iverson's Landing (N. side)	MEN	3850.72	12338.66	2	0
323.0	Saunders Reef Area (inside)	MEN	3852.30	12339.80	2 1	28
323.1	Vicinity Saunders Reef	MEN	3852.	12339.	3	1
324.0	0.8km N. Galloway Creek	MEN	3853.18	12341.14	1	53
324.1	1.2 Km S. Arena Cove	MEN	3854.	12342.	2 2	2
324.9	S. Arena Cove/High Bluff	MEN	3853.	12340.	1	1
325.0	0.8km S. Arena Cove	MEN	3854.24	12342.40	1	27
325.1	S. Point Arena	MEN	3854.24	12342.40	1	86
325.2	Sea Lion Rocks	MEN	3856.61	12344.09	1	15
325.7	0.25 S Point Arena	MEN	3857.09	12344.65	1	19
326.0	Point Arena	MEN	3857.36	12343.73	2	145
327.0	0.4km N. Mallo Pass Creek	MEN	3901.98	12341.41	1	28
327.1	N. Mallo Pass Creek	MEN	3901.98	12341.77	2	66
328.0	0.9km N. Mallo Pass Creek	MEN	3902.32	12341.97	2	49
328.3	Vic. .95km N. Mallo Pass Cr.	MEN	3902.75	12341.93	2	21
329.0	1.0km N. Mallo Pass Creek	MEN	3902.91	12342.60	5 2	84
329.1	Bridgeport Landing	MEN	3902.93	12341.75	2	2
329.5	N. Bridgeport Landing	MEN	3904.10	12342.20	2	1
330.0	0.6km S. S. Elk Creek	MEN	3905.75	12342.84	2 3	42
331.0	Elk Creek	MEN	3906.	12342.	2	1
331.1	Big Rock	MEN	3806.42	12342.99	2	11
332.0	Cuffey's Point	MEN	3904.44	12344.49	2	176
332.1	N. Cuffey's Point	MEN	3909.58	12344.43	3	14
332.5	Taylor Rock	MEN	3909.60	12344.35	2	17
333.0	Devil's Basin	MEN	3910.09	12344.87	2	65
334.0	0.3km S. Saddle Point	MEN	3910.39	12345.17	2	73
335.0	0.2km S. Saddle Point	MEN	3910.53	12345.06	2	4
335.05	S Saddle Point	MEN	3910.	12345.	2	36
335.2	N of Saddle Point	MEN	3910.84	12345.36	3	1
335.4	Vic. Arch of the Navarro	MEN	3911.	12346.	2	5
336.0	0.4km S. Salmon Point	MEN	3911.64	12346.23	2	23
336.02	Salmon Point	MEN	3912.50	12347.89	2	2
336.03	Vicinity Albion Head	MEN	3914.	12347.	2	2
336.05	Albion Head	MEN	3914.	12346.	2	11
336.1	Albion Head	MEN	3914.	12346.	2	9
336.2	3.0Km N. Whitesboro Cove	MEN	3914.21	12346.71	3 2	10
337.0	1.8km N. Albion Head	MEN	3914.65	12347.02	2	37
337.1	N. Albion Head	MEN	3914.	12347.	2	20
338.0	0.2km N. Stillwell Point	MEN	3915.12	12347.22	2	74
338.1	Buckhorn Cove	MEN	3915.	12347.	2	1
338.2	Van Damme State Beach	MEN	3915.80	12347.80	2	14
339.0	Van Damme State Beach	MEN	3916.18	12347.66	2	38
339.1	Van Damme State Beach	MEN	3916.	12347.	2	17

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
340.0	0.7km N. Van Damme State Beach	MEN	3916.28	12348.01	3	28
340.05	N. Van Damme State Beach	MEN	3916.	12348.	2	15
340.1	N. Van Damme State Beach	MEN	3916.	12348.	2	23
341.0	1.5km N. Van Damme State Beach	MEN	3917.27	12348.16	2	98
342.0	Near Goat Isl. Mendocino City	MEN	3918.34	12348.70	2	29
342.1	Goat Island Area	MEN	3918.40	12348.90	3 2	32
343.0	0.6km N. Goat Island	MEN	3918.67	12348.59	2	34
343.1	N. Goat Island	MEN	3918.	12348.	2	20
344.0	1.2km N. Russian Gulch	MEN	3918.90	12349.12	2	22
344.1	Point Cabrillo Light Station	MEN	3920.20	12349.	2	19
345.0	Point Cabrillo	MEN	3921.02	12349.69	2	31
345.05	1.2Km N. Russian Gulch	MEN	3921.65	12349.70	2	13
345.1	Caspar Anchorage	MEN	3921.55	12349.76	2	24
345.2	Caspar Anchorage	MEN	3921.70	12349.80	3 2	25
345.3	Caspar Point	MEN	3921.39	12349.59	3 2	21
346.0	Casper Anchorage Area	MEN	3921.	12349.	2	41
347.0	S. Mitchell Creek	MEN	3923.00	12349.40	2	21
348.0	Soldier Point Area	MEN	3925.92	12349.31	2	91
349.0	.7kmN.Soldier Pt.Ft.Bragg Area	MEN	3926.73	12349.42	2	51
349.1	N. Pudding Creek	MEN	3927.16	12348.64	1	16
350.0	1.8km N. Pudding Creek	MEN	3927.61	12348.56	2	27
351.0	0.8km S. Laguna Point	MEN	3928.30	12348.60	2	18
351.5	S. Laguna Point	MEN	3929.23	12348.48	2	4
352.0	Laguna Point	MEN	3929.28	12348.55	1 2	183
352.05	N Laguna Point	MEN	3929.	12348.	2	1
352.1	N Laguna Point	MEN	3929.83	12347.94	2	52
352.2	N. Ten Mile River Bluff	MEN	3933.87	12346.35	2	26
352.75	N, Ten Mile Rover Bluff	MEN	3934.	12346.	2	39
352.8	S. Kibselliah Rock	MEN	3934.64	12346.81	3	1
353.0	0.3km N. Kibesillah Rock	MEN	3934.71	12346.93	2	55
354.0	Bruhel Point	MEN	3936.27	12347.36	5 2	79
355.0	Bell Point	MEN	3937.67	12347.25	2	9
355.03	Vicinity Bell Point	MEN	3937.	12347.	2	20
355.5	3.2 km N. Abalone Point	MEN	3941.21	12347.89	2	46
356.0	Cape Vizcaino	MEN	3943.66	12349.81	2	67
356.1	Cape Vizcaino Area	MEN	3943.50	12349.95	5	100
357.0	0.4km N. Cottoneva Creek	MEN	3944.06	12350.11	2	14
358.0	Williams Point	MEN	3945.	12450.	1	25
359.0	0.3km N. Soldier Frank Point	MEN	3945.55	12450.54	2	14
359.1	N. Sea Lion Rock	MEN	3945.	12450.	2	1
360.0	0.5km S. Anderson Gulch	MEN	3950.91	12453.45	5	58
361.0	0.3km S. Anderson Gulch	MEN	3951.01	12453.21	5	186
362.0	0.3km N. Anderson Gulch	MEN	3951.16	12453.44	5	239

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
363.0	Northpoint Cove	MEN	3951.18	12453.79	5 2	839
364.0	0.6km N. Mistake Point	MEN	3951.85	12454.41	5	13
365.0	Jackass Creek Area	MEN	3953.92	12455.74	5	246
366.0	Seal Rock 1.5km S. Bear Harbor	MEN	3953.97	12455.96	2	40
366.1	Seal Rock Area	MEN	39	124	5	1
367.0	Point No Pass	MEN	4001.43	12405.50	2 3	21
367.1	Point Delgada	MEN	4000.98	12404.52	2	26
367.2	Point Delgada	H	4001.13	12404.54	2	23
368.0	1.4km N. Point Delgada	H	4001.50	12404.45	2	43
368.05	N. Point Delgada	H	400	1240	2	14
368.1	S.E. Miller Flat	H	4006.50	12402.45	2	33
369.0	5.0km N. Big Flat Creek	H	4009.27	12413.41	2	13
369.1	Reynolds Rock	H	40	124	2	1
370.0	Sea Lion Gulch	H	4014.11	12420.46	2	3
371.0	1.7km S. Punta Gorda	H	4014.20	12420.60	2	25
372.0	1.3km S. Punta Gorda	H	4014.	12421.	2	3
372.1	Mattole Beach	H	4016.16	12422.44	1	16
373.0	Hair Seal Rock	H	4019.47	12421.32	2	206
373.1	N. Hair Seal Rock	H	4020.00	12421.40	2	34
373.2	N. Hair Seal Rock	H	4020.	12421.	2	7
374.0	1.6km N. Hair Seal Rock	H	4019.89	12421.39	2	76
375.0	2.2km N. Hair Seal Rock	H	4020.18	12421.74	1	7
376.0	2.7km N. Hair Seal Rock	H	4020.	12421.74	1	4
377.0	1.7km S. Sugarloaf Rock	H	4025.	12424.	2	4
378.0	0.4km S. Sugarloaf Rock	H	4026.12	12424.56	2	5
378.1	S. Sugarloaf Rock	H	4026.	12424.	1	2
379.0	0.2km S. Sugarloaf Rock	H	4026.24	12424.66	2	4
380.0	0.3km S. Sugarloaf Rock	H	4026.48	12424.69	2	15
380.1	Vicinity Cape Mendocino	H	4026.	12424.	2	4
380.2	N Cape Mendocino	H	4026.82	12424.98	2	2
380.9	S. False Cape	H	4030.21	12423.39	5 9	76
381.0	False Cape	H	4030.12	12423.59	2	73
381.1	Cockrobin Island	H	4030.	12418.	5	441
381.2	S. Cockrobin Island	H	4030.	12418.	5	282
381.3	N. False Cape	H	4030.	12418.	2	15
382.0	Eel River Spit	H	4038.14	12418.99	4	1060
383.0	S. Humboldt Bay	H	4042.24	12413.86	4	830
384.0	Daby Island	H	4048.68	12408.97	4	518
384.1	Samoa Ruins/piling	H	4050.50	12409.94	4	66
385.0	N. Humboldt Bay	H	4050.30	12406.50	4	170
386.0	Luffenholtz Cove	H	4102.44	12407.20	2	17
386.1	Vicinity Tepona Point	H	4102.	12407.	2	1
386.2	Vicinity Tepona Point	H	4102.	12407.	2	11

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
387.0	Cap Rock	H	4102.65	12407.51	2	25
387.5	N. Cap Rock	H	4102.	12407.	2	1
388.0	Tower Rock	H	4103.10	12407.80	1	39
389.0	Seal Rock Shoals	H	4103.04	12407.96	2	31
390.0	Jamieson Shoal	H	4103.25	12408.14	2	79
390.1	Vicinity Trinidad Head	H	4103.	12408.	2	14
391.0	Dome Rock	H	4103.39	12408.43	2	43
391.5	Off Memorial Lighthouse	H	4103.	12408.	2	4
392.0	Lighthouse Shoals	H	4103.40	12408.63	2	19
393.0	Marine Lab Shoals	H	4103.52	12409.45	2	93
394.0	Flatiron Shoals	H	4103.60	12409.61	2	29
395.0	Myer's Cove	H	4104.29	12409.46	2	47
395.1	N. Meyer's Cove	H	4104.	12409.	2	1
396.0	Bench Cove	H	4105.36	12409.32	1	23
396.1	Vicinity Bench Cove	H	4105.	12409.	1	16
397.0	Seal Rock	H	4105.90	12409.56	2	12
397.1	Vicinity Scotty Point	H	4105.	12409.	2	8
398.0	Seagull Rock	H	4107.45	12409.72	2	43
398.1	Vicinity Seagull Rock	H	4107.	12409.	2	6
399.0	Midway Rock	H	4107.48	12409.72	2	69
399.1	Midway Rock at Patrick's Point	H	4107.61	12310.20	2	25
400.0	Close Rock	H	4107.51	12409.56	1 2	67
401.0	Flat Top Rock	H	4107.52	12409.84	2	24
402.0	Little Gibraltar	H	4107.58	12409.72	2	15
403.0	Spearhead	H	4107.63	12409.88	1	27
404.0	Palmers Point	H	4107.75	12409.84	1 2	31
404.02	N. Palmers Point	H	4107.	12409.	2	3
405.0	Cannonball Beach	H	4107.88	12409.80	1 2	30
405.05	Abalone Point	H	4107.50	12410.30	2	3
405.1	Vicinity Patrick's Point	H	4107.	12410.	2	1
406.0	Sharp Point	H	4114.18	12406.48	3	55
407.0	Redwood Creek Spits	H	4117.55	12405.34	4	9
407.1	Mussel Point	H	4118.78	12405.85	2	13
408.0	Major Creek	H	4119.74	12405.01	2	10
408.5	Elk Rock	DN	4129.29	12424.37	2	2
408.6	Marilyn's Rock	DN	4130.31	12424.72	2	1
409.0	Klamath River Spits	DN	4132.71	12404.75	4	341
410.0	N. Klamath Rock	DN	4133.16	12405.41	2	48
411.0	Saddle Rocks	DN	4133.68	12405.76	2	20
412.0	Klamath Cove	DN	4133.98	12405.86	2	56
413.0	Two Rocks	DN	4134.35	12406.09	2	96
413.1	Midway Point	DN	4140.	1240	2	1
414.0	Scat Beach	DN	4140.23	12408.22	5 4	516

SITE	LOCATION	COU NTY	LAT	LONG	S U B S T	MAX
415.0	Millers Point	DN	4140.35	12408.45	1	100
416.0	Mates Point	DN	4140.97	12408.41	3	61
417.0	Battery Point	DN	4144.81	12412.34	1	3
418.0	Castle Rock	DN	4145.68	12414.55	2	542
419.0	Point St. George	DN	4146.00	12415.53	2	3
420.0	Mouth of Smith River	DN	4156.37	12411.82	4	43
421.0	NW Seal Rock	DN	415 .	1241 .	2	9
422.0	Farallon Islands	FIS	3742.	123 .	2	84