

Russian River Estuary Management Project

Marine Mammal Protection Act Incidental Harassment Authorization (No. 14426)

Report of Activities and Monitoring Results – April 1 to December 31, 2010

Prepared for
Office of Protected Resources and Southwest Regional Administrator
National Marine Fisheries Service

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EXECUTIVE SUMMARY

The purpose of this report of activities and monitoring results is to comply with the requirements of the Incidental Harassment Authorization (IHA) issued pursuant to Section 101(a)(5)(D) of the Marine Mammal Protection Act (16 U.S.C 1361 et seq.) to take small numbers of marine mammals, by Level B harassment, incidental to the Sonoma County Water Agency's (Water Agency) Russian River Estuary Water Level Management Activities (dated March 30, 2010, NMFS IHA No. 14426, Attachment A).

The Water Agency applied in 2009 to the National Marine Fisheries Service (NMFS) Office of Protected Resources for an IHA under the Marine Mammal Protection Act (MMPA) for activities associated with water level management activities in the Russian River estuary (Estuary). NMFS issued IHA No. 14426 to the Water Agency on March 30, 2010. This report provides the results of baseline monitoring and water level management activities during the term of IHA No. 14426 from April 1 to December 31, 2010.

The Estuary may close throughout the year as a result of a barrier beach forming across the mouth of the Russian River. Closures result in ponding of the Russian River behind the barrier beach and, as water surface levels rise in the Estuary, flooding may occur. The Water Agency's artificial breaching activities are conducted in accordance with the Russian River Estuary Management Plan recommended in the Heckel (1994) study. The purpose of artificially breaching the barrier beach is to alleviate potential flooding of low-lying properties along the Estuary. The Water Agency and the U.S. Army Corps of Engineers (Corps) consulted with the NMFS under Section 7 of the Endangered Species Act (ESA) regarding the potential effects of their operations and maintenance activities, including the Water Agency's estuary management program, on federally-listed steelhead (*Oncorhynchus mykiss*), coho salmon (*O. kisutch*), and Chinook salmon (*O. tshawytscha*). As a result of this consultation, the NMFS issued the Russian River Biological Opinion (NMFS 2008) finding that artificially elevated inflows to the Russian River estuary during the low flow season (May through October) and historic artificial breaching practices have significant adverse effects on the Russian River's estuarine rearing habitat for steelhead, coho salmon, and Chinook salmon. The historic method of artificial sandbar breaching, which is done in response to rising water levels behind the barrier beach, adversely affects the Estuary's water quality and freshwater depths.

The Biological Opinion (NMFS 2008) concludes that the combination of high inflows and breaching practices impact rearing habitat because they interfere with natural processes that cause a freshwater lagoon to form behind the barrier beach. Fresh or brackish water lagoons at the mouths of many streams in central and southern California often provide depths and water quality that are highly favorable to the survival of rearing salmon and steelhead.

The Biological Opinion's Reasonable and Prudent Alternative (RPA) 2 (NMFS 2008) requires the Water Agency to collaborate with NMFS and to modify estuary water level management in order to reduce marine influence (high salinity and tidal inflow) and promote a higher water surface elevation in the estuary (formation of a fresh or brackish lagoon) for purposes of enhancing the quality of rearing habitat for juvenile (age 0+ and 1+) steelhead from May 15 to October 15 (referred to hereafter as the lagoon

management period). A program of potential, incremental steps are prescribed to accomplish this, including adaptive management of a lagoon outlet channel on the barrier beach.

Harbor seals (*Phoca vitulina richardii*) regularly haul out at the mouth of the Russian River (Jenner haulout). California sea lions (*Zalophus californianus*) and northern elephant seals (*Mirounga angustirostris*) are occasionally observed at the haulout. There are also several known river haulouts at logs and rock piles in the Russian River estuary. The Water Agency applied for an IHA under the MMPA for activities associated with Russian River estuary management activities, which occur in the vicinity of these haulouts, including:

- construction and maintenance of a lagoon outlet channel that would facilitate management of a barrier beach (closed sandbar) at the mouth of the Russian River and creation of a summer lagoon to improve rearing habitat for listed steelhead as mandated by the Russian River Biological Opinion (NMFS 2008);
- artificially breaching the barrier beach to minimize the potential for flooding of low-lying properties along the Estuary; and
- monitoring activities associated with the management actions described above.

Monitoring was performed in accordance with the requirements of NMFS IHA No. 14426 and the Russian River Estuary Management Activities Pinniped Monitoring Plan (Sonoma County Water Agency and Stewards of the Coast and Redwoods 2009).

In an attempt to understand possible relationships between use of the Jenner haulout and nearby coastal and river (peripheral) haulouts, several other haulouts on the coast and in the Russian River estuary were monitored. These haulouts included North Jenner and Odin Cove to the north, Pocked Rock, Kabemali, and Rock Point to the south, and Penny Logs, Patty's Rock, and Chalanchawi in the Russian River estuary.

Two types of monitoring were performed: baseline and water level management activities. Baseline monitoring was performed to gather additional information regarding a possible relationship between tides, time of day, and the highest pinniped counts at the Jenner haulout and to gain a better understanding about which specific conditions harbor seals may prefer for hauling out at the mouth. Baseline monitoring of the peripheral haulouts was completed concurrently with the monitoring of the Jenner haulout. Pinniped use of the haulouts was also monitored in relation to Water Agency water level management events (lagoon outlet channel implementation and artificial breaching). Each of the peripheral haulouts were monitored concurrently with baseline and monitoring of water level management activities in the vicinity of the Jenner haulout.

The July 8, 2010, beach management event was the only lagoon management event in 2010. There were two artificial breaching events during the lagoon management period, September 30-October 1, and October 11-12, 2010. The September 30-October 1 was an artificial breaching event over two days. The first attempt to breach occurred on September 30, 2010, but was unsuccessful due to high wave activity and did not result in a decrease in water surface elevation in the estuary; a second attempt to artificially breach the estuary on October 1, 2010, was successful. The October 11-12 was also an

artificial breaching event over two days due to high wave activity affecting the breaching activity. Pinniped monitoring occurred the day before, the day of, and the day after each water level management activity. Data collected included counts of seals occupying the Jenner haulout every 30 minutes and recording of pinniped response to disturbances of the haulout. The peripheral haulouts were monitored similarly, with the exception of all seals were counted for 10 minutes at each haulout and visited twice each day. The NMFS IHA No. 14426 allows 4,200 occurrences of incidental harassment during the lagoon management period and 258 occurred.

The Water Agency surveys the sandbar (or barrier beach) monthly to collect a topographic map of the beach, as required by the Russian River Biological Opinion. A monitor was present during these surveys to record any disturbances of the Jenner haulout during the survey. The count and disturbance data was utilized to estimate the number of takes by incidental harassment for the April through December 2010 water level management work. The NMFS IHA No. 14426 allows 64 occurrences of incidental harassment and an estimated 32 occurred.

The Russian River Estuary Management Activities from April to December 2010 resulted in incidental harassment (Level B harassment) of 290 marine mammals, well under the total allowed by NMFS IHA No. 14426.

INTRODUCTION

The purpose of this report of activities and monitoring results is to comply with the requirements of the Incidental Harassment Authorization (IHA) issued pursuant to Section 101(a)(5)(D) of the Marine Mammal Protection Act (16 U.S.C 1361 et seq.) to take small numbers of marine mammals, by Level B harassment, incidental to the Sonoma County Water Agency's (Water Agency) Russian River Estuary Water Level Management Activities (dated March 30, 2010, NMFS IHA No. 14426, Attachment A).

The Water Agency applied in 2009 to the National Marine Fisheries Service (NMFS) Office of Protected Resources for an IHA under the Marine Mammal Protection Act (MMPA) for activities associated with water level management activities in the Russian River estuary. NMFS issued IHA No. 14426 to the Water Agency on March 30, 2010. This report provides the results of baseline monitoring and water level management activities during the term of IHA No. 14426 from April 1 to December 31, 2010.

BACKGROUND

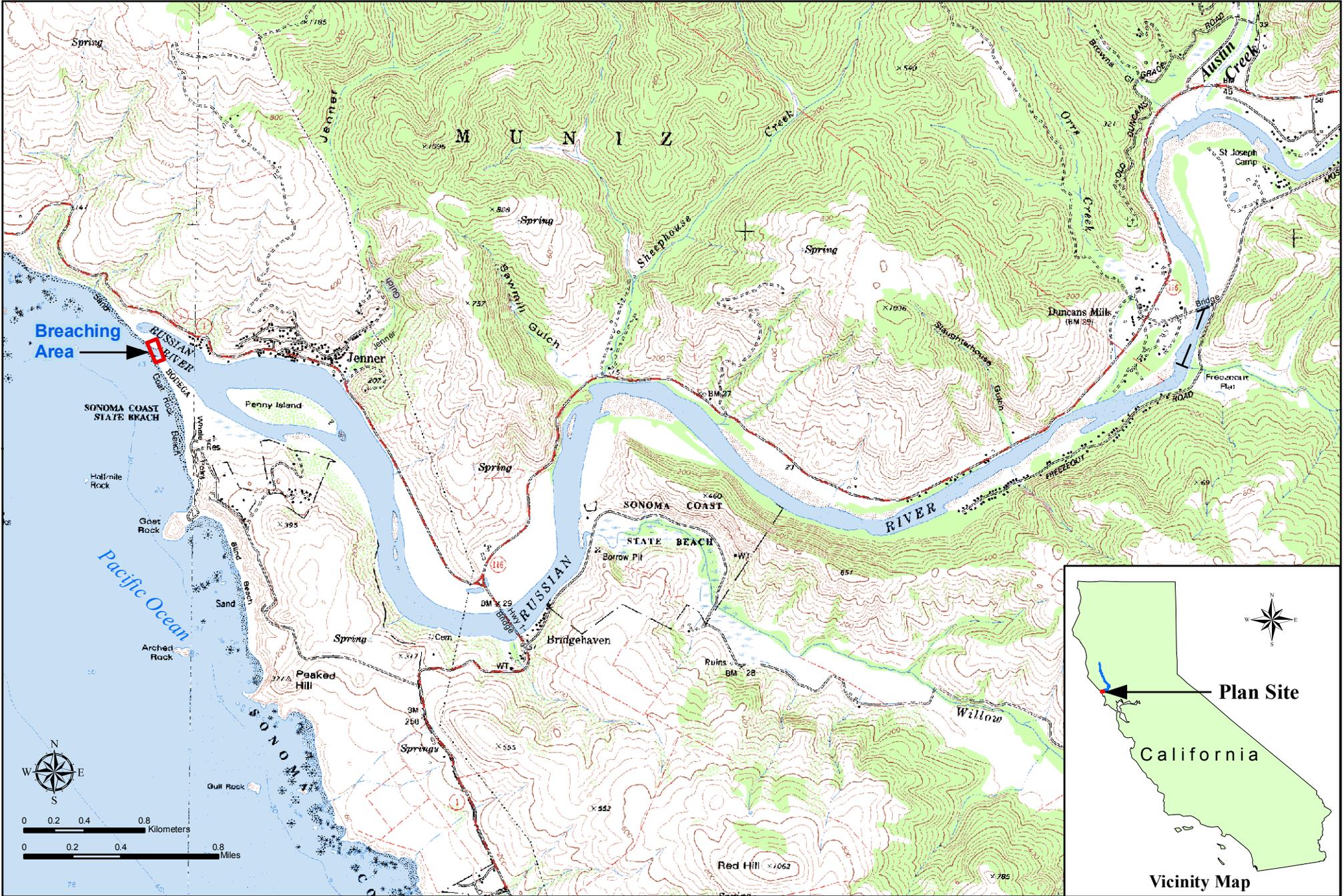
The Russian River estuary (Estuary) is located about 97 kilometers (km; 60 miles) northwest of San Francisco in Jenner, Sonoma County, California (Figure 1). The Russian River watershed encompasses 3,847 square kilometers (km) (1,485 square miles) in Sonoma, Mendocino, and Lake counties. The Estuary extends from the mouth of the Russian River upstream approximately 10 to 11 km (6 to 7 miles) between Austin Creek and the community of Duncans Mills (Heckel 1994).

The Estuary may close throughout the year as a result of a barrier beach forming across the mouth of the Russian River. The mouth is located at Goat Rock State Beach (California Department of Parks and Recreation). Closures result in ponding of the Russian River behind the barrier beach and, as water surface levels rise in the Estuary, flooding may occur. Natural breaching events occur when Estuary water surface levels exceed the capability of the barrier beach to impound water, causing localized erosion of the barrier beach and creation of a tidal channel that reconnects the Russian River to the Pacific Ocean.

The barrier beach has also been artificially breached for decades; first by local citizens, then the County of Sonoma Public Works Department, and, since 1995, by the Water Agency. The Water Agency's artificial breaching activities are conducted in accordance with the Russian River Estuary Management Plan recommended in the Heckel (1994) study. The purpose of artificially breaching the barrier beach is to alleviate potential flooding of low-lying properties along the Estuary.

Biological Opinion and the Estuary

The Water Agency and the U.S. Army Corps of Engineers (Corps) consulted with the NMFS under Section 7 of the Endangered Species Act (ESA) regarding the potential effects of their operations and maintenance activities, including the Water Agency's estuary management program, on federally-listed steelhead (*Oncorhynchus mykiss*), coho salmon (*O. kisutch*), and Chinook salmon (*O. tshawytscha*). As a



result of this consultation, the NMFS issued the Russian River Biological Opinion (NMFS 2008) finding that artificially elevated inflows to the Russian River estuary during the low flow season (May through October) and historic artificial breaching practices have significant adverse effects on the Russian River's estuarine rearing habitat for steelhead, coho salmon, and Chinook salmon. The historic method of artificial sandbar breaching, which is done in response to rising water levels behind the barrier beach, adversely affects the estuary's water quality and freshwater depths.

The historic artificial breaching practices create a tidal marine environment with shallow freshwater depths and high salinity. Salinity stratification contributes to low dissolved oxygen at the bottom in some areas. The Biological Opinion (NMFS 2008) concludes that the combination of high inflows and breaching practices impact rearing habitat because they interfere with natural processes that cause a freshwater lagoon to form behind the barrier beach. Fresh or brackish water lagoons at the mouths of many streams in central and southern California often provide depths and water quality that are highly favorable to the survival of rearing salmon and steelhead.

The Biological Opinion's Reasonable and Prudent Alternative (RPA) 2 (NMFS 2008) requires the Water Agency to collaborate with NMFS and to modify estuary water level management in order to reduce marine influence (high salinity and tidal inflow) and promote a higher water surface elevation in the estuary (formation of a fresh or brackish lagoon) for purposes of enhancing the quality of rearing habitat for juvenile (age 0+ and 1+) steelhead from May 15 to October 15 (referred to hereafter as the lagoon management period). A program of potential, incremental steps are prescribed to accomplish this, including adaptive management of a lagoon outlet channel on the barrier beach.

Harbor seals (*Phoca vitulina richardii*) regularly haul out at the mouth of the Russian River (Jenner haulout) (Figure 2). California sea lions (*Zalophus californianus*) and northern elephant seals (*Mirounga angustirostris*) are occasionally observed at the haulout. There are also several known river haulouts at logs and rock piles in the Russian River estuary (Figure 2). The Water Agency applied for an IHA under the MMPA for activities associated with Russian River estuary management activities, including:

- construction and maintenance of a lagoon outlet channel that would facilitate management of a barrier beach (closed sandbar) at the mouth of the Russian River and creation of a summer lagoon to improve rearing habitat for listed steelhead as mandated by the Russian River Biological Opinion (NMFS 2008);
- artificially breaching the barrier beach to minimize the potential for flooding of low-lying properties along the Estuary; and
- monitoring activities associated with the management actions described above.



SPECIAL PROJECTS/RUSSIAN RIVER/7104-ESTUARY/HARBOR SEAL-2009-JENNER FEBRUARY 10,2011

Pinniped Haulouts at the Russian River Estuary and Surrounds



Figure 2

METHODS

Monitoring was performed in accordance with the requirements of NMFS IHA No. 14426 and the Russian River Estuary Management Activities Pinniped Monitoring Plan (Sonoma County Water Agency and Stewards of the Coast and Redwoods 2009, Appendix B).

Water Agency biologists and Stewards of the Coast and Redwoods (Stewards) volunteers and staff monitored pinnipeds at the Jenner and peripheral haulouts. The Stewards provided training for all volunteers on March 10, 2010. The training session was also attended by Water Agency biologists participating in the monitoring program. The training agenda covered:

- the Marine Mammal Protection Act;
- anticipated IHA monitoring requirements;
- the Russian River Estuary Management Activities Pinniped Monitoring Plan and monitoring methods therein, including completion of data sheets;
- field identification of pinnipeds of the California coast, including harbor seals, California sea lions, Stellar sea lions, and northern elephant seals;
- field identification of neonates (pups less than 1 week old);
- care and use of field equipment (e.g. cameras, spotting scopes, binoculars); and
- field visits to each haulout monitoring location.

In an attempt to understand possible relationships between use of the Jenner haulout and nearby coastal and river (peripheral) haulouts, several other haulouts on the coast and in the Russian River estuary were monitored (Figure 2). These haulouts included North Jenner and Odin Cove to the north, Pocked Rock, Kabemali, and Rock Point to the south, and Penny Logs, Patty's Rock, and Chalanchawi in the Russian River estuary. These are known harbor seal haulouts that have been monitored by Joe Mortenson for the past 8 years.

Two types of monitoring were performed: baseline and water level management activities. Baseline monitoring of the Jenner haulout was shared by Water Agency biologists and Stewards volunteers (each group monitored once a month), with volunteers monitoring the peripheral haulouts for all baseline monitoring. The water level management activity monitoring at the Jenner haulout was also shared, but Water Agency biologists monitored lagoon outlet channel and artificial breaching activities on the day of the event. Pre- and post-management activity monitoring was shared by the organizations depending on the availability of volunteers and Water Agency staff. Stewards volunteers monitored the peripheral haulouts during most of the pre- and post-management monitoring events.

Baseline (Jenner Haulout Use)

Baseline monitoring was performed to gather additional information regarding a possible relationship between tides, time of day, and the highest pinniped counts at the Jenner haulout and to gain a better understanding about which specific conditions harbor seals may prefer for hauling out at the mouth. Baseline monitoring of the peripheral haulouts was completed concurrently with the monitoring of the

Jenner haulout. Baseline counts were scheduled for two days out of each month with the intention of capturing a low and high tide each in the morning and afternoon.

Pinnipeds at the Jenner and peripheral haulouts were counted twice monthly. This census began at local dawn and continued for 8 hours. All pinnipeds hauled out on the beach were counted every 30 minutes from the overlook on the bluff along Highway 1 adjacent to the Jenner haulout using a high-powered spotting scope. Depending on how the sandbar is formed, harbor seals may haul out in multiple groups at the Jenner haulout. At each 30-minute count, the observer would indicate where groups of seals are hauled out on the sandbar (e.g. Site A, Site B mapped on datasheet) and provide a total count for each group. Adults and pups were counted separately through June, after which it became difficult to differentiate between age classes. All neonates were also recorded and were identified by one or more of the following characteristics: less than 1 week old, less than 15 kg, thin for their body length, an umbilicus or natal pelage present, wrinkled skin, or awkward or “jerky” movement.

The peripheral haulouts were visited for 10 minute counts twice during each baseline monitoring day. All pinnipeds hauled out during the 10 minutes were counted from the same vantage points at each haulout using a high-powered spotting scope or binoculars.

In addition to the census data, disturbances of the haulouts were recorded. The methods for recording disturbances followed those in Mortenson (1996). Disturbances were recorded on a three-point scale that represents an increasing seal response to the disturbance (Table 1). The time, source, and duration of the disturbance, as well as an estimated distance between the source and haulout, were recorded.

Table 1. Levels of pinniped response to disturbance used for Russian River Estuary Management Activities pinniped monitoring.

Level	Type of Response	Definition
1	Alert	Seal head orientation changes in response to disturbance. This may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, or changing from a lying to a sitting position.
2	Moving	Movements away from the source of disturbance, ranging from short withdrawals over short distances to hurried retreats many meters in length.
3	Flight	All retreats (flushes) to the water, another group of seals, or over the beach.
SOURCE: Mortenson, J. 1996. Human interference with harbor seals at Jenner, California, 1994-1995. Prepared for Stewards of Slavianka and Sonoma Coast State Beaches, Russian River/Mendocino Park District. July 11. 1996.		

Weather conditions were recorded at the beginning of each census. These included temperature, visibility, ocean conditions and wind speed (Beaufort scale). Tide levels and Estuary water surface elevations were correlated to each monitoring day.

Water Level Management Activities

Pinniped use of the haulouts was also monitored in relation to Water Agency water level management events (lagoon outlet channel implementation and artificial breaching). Each of the peripheral haulouts were monitored concurrently with monitoring of water level management activities in the vicinity of the

Jenner haulout. This provided an opportunity to qualitatively assess if these haulouts were being used by seals displaced from the Jenner haulout during water level management activities.

A one-day, pre-event survey was made within 1 to 3 days prior to all water level management events. On the day of the management event, pinniped monitoring began at least one hour prior to the crew and equipment accessing the beach work area and continued during the duration of the event until at least one hour after the crew and equipment left the beach. Monitoring continued on the day following each water level management event to document the number of seals utilizing the haulouts. Methods followed the census and disturbance monitoring protocols described in the “Baseline (Jenner Haulout Use)” section above.

Monitoring During Pupping Season

If any pup which was potentially abandoned was observed during monitoring, the Water Agency contacted the NMFS stranding response network (Marine Mammal Center in Sausalito, CA) immediately and also reported the incident to NMFS’ Southwest Regional Office and NMFS Headquarters within 48 hours. Monitors were instructed not to approach or move the pup. Monitors used the following potential indications that a pup may be abandoned: no observed contacts with adult seals, no movement of the pup, and the pup’s attempts to nurse were rebuffed.

Additional Training

A worker training on the MMPA, pinniped identification, and the conditions of the NMFS IHA No. 14426 was held on May 12, 2010, for Water Agency staff and contractors assigned to Russian River Estuary Management Activities. The training included equipment operators, safety crew members, and surveyors and was led by a Water Agency biologist. In addition, prior to each water surface elevation management event beginning (lagoon outlet channel implementation or artificial breaching), the biologist monitoring the event participated in the onsite tailgate safety meeting to discuss the location(s) of pinnipeds at the Jenner haulout that day and methods of avoiding and minimizing disturbances to the haulout as outlined in NMFS IHA No. 14426.

RESULTS

The NMFS IHA No. 14426 requires the following information be provided in this report:

- (a) the number of seals taken, by species and age class (if possible);
- (b) behavior prior to and during water level management events;
- (c) start and end time of activity;
- (d) estimated distances between source and seals when disturbance occurs;
- (e) weather conditions (e.g., temperature, wind, etc.);
- (f) haulout reoccupation time of any seals based on post activity monitoring;
- (g) tide levels and estuary water surface elevation; and

(h) seal census from bi-monthly and nearby haulout monitoring.

Estuary water surface elevations are recorded at the Jenner gage (operated by the Water Agency), located at the State Parks visitor center in the town of Jenner. Appendix C includes the Estuary water surface elevations associated with pinniped monitoring in 2010, including both baseline and water elevation management events.

Baseline (Jenner Haulout Use)

Baseline monitoring of the Jenner and peripheral haulouts was performed two days out of each month with the intention of capturing a low and high tide each in the morning and afternoon (Table 2).

Table 2. Baseline pinniped monitoring events for Russian River Estuary Management Activities under the NMFS IHA No. 14426 from April to December 2010. Tides are corrected for Fort Ross, CA.

Date	Corrected AM Tide Time	Corrected AM Tide (feet)	Corrected PM Tide Time	Corrected PM Tide (feet)
29-April	05:54	-0.34	13:01	4.51
6-May	05:52	3.94	11:45	0.58
27-May	04:59	-0.34	12:14	4.42
14-June	06:47	-0.64	14:13	4.61
21-June	08:10	3.65	12:46	1.92
13-July	05:44	-0.54	12:58	4.90
19-July	06:45	3.65	11:20	2.21
9-August	04:38	-0.96	11:42	4.99
16-August	05:11	4.03	09:55	2.30
9-September	05:28	0.29	12:07	6.05
16-September	07:45	4.42	12:23	2.98
7-October	04:15	0.77	10:47	6.24
14-October	06:05	4.42	10:53	3.07
3-November	05:05	2.69	11:10	6.14
18-November	07:50	5.57	14:37	0.19
2-December	07:17	6.34	14:03	-0.58
23-December	05:15	2.78	11:17	6.24

SOURCE: Pacific Publishers, 2010 Tidelog.

Appendix D provides the harbor seal baseline census (count) and weather conditions data collected at the Jenner from April to December 2010. Appendix D provides the harbor seal baseline census for the Jenner and peripheral haulouts, including all weather observations. No other species of pinnipeds were observed at the Jenner or peripheral haulouts during the baseline monitoring. Table 3 shows the mean number of harbor seal adults and pups (identified only during the pupping season) during twice monthly baseline monitoring events. The highest means were observed from the end of the pupping season into molt in 2010. Comparison of count data between the Jenner and peripheral haulouts did not show any obvious correlations (e.g. the number of seals occupying peripherals did not necessarily increase or decrease compared to the Jenner haulout).

Appendix E provides harbor seal disturbance observations during baseline monitoring. Disturbances to the Jenner haulout were regularly observed. Disturbances were infrequently observed at the peripheral haulouts and Appendix E includes alert response to a biological survey (not associated with the Water Agency) observed at the North Jenner haulout and a motor boat at the Penny Logs haulout.

Table 3. Mean number of harbor seals observed at the Jenner haulout (Goat Rock State Beach) during Russian River Estuary Management Project baseline pinniped monitoring from April to December 2010. Pups are counted separately through June, after which all seals are counted as adults as it becomes more difficult to accurately age individuals.

Date	No. Harbor Seals at Jenner Haulout				
	Adults	Neonate pups (<1 week old)	Pups (>1 week old)	Total Pups	Total Harbor Seals
29-April	142			19	162
6-May	111	3	15	19	130
27-May	78	1	10	10	88
14-June	101	0	1	0	102
21-June	184				184
13-July	295				295
19-July	230				230
9-August	133				133
16-August	94				94
9-September	47				47
16-September	72				72
7-October	13				13
14-October	37				37
3-November	102				102
18-November	75				75
2-December	71				71
23-December	0				0

Water Level Management Activities

There were 6 barrier beach formations (sandbar closures) at the mouth of the Russian River in 2010 (Table 4). Implementation of the 2010 Lagoon Outlet Channel Adaptive Management Plan (PWA 2010) occurred once in 2010 on July 8. The outlet channel closed during high tide on the same day and the barrier beach naturally breached on July 11, 2010. The Water Agency artificially breached the barrier beach 3 times in 2010. Two of the artificial breaching events occurred during the lagoon management period (May 15 to October 15) following consultation with the NMFS and California Department of Fish and Game (CDFG) regarding potential flood risk associated with high wave events and inflows into the Russian River estuary. The timing of the closures late in the lagoon management period provided little or no habitat benefit to juvenile steelhead and the potential for flooding was high due to the limited beach access caused by high wave events breaking across the beach. The artificial breaching events

during the lagoon management period were covered under the Incidental Take Statement provided in the Russian River Biological Opinion (NMFS 2008).

Table 4. Russian River Estuary barrier beach closures in 2010 and summary of Sonoma County Water Agency water level management activities under the NMFS IHA No. 14426 from April to December 2010.

Approx. Sandbar Closure Date	Approx. No. Days Closed	Event Type and Date	Jenner Gage Water Surface Elevation at Event (feet)
8-January	3	Artificial breach -11-January	7.5
4-July	4	Lagoon outlet implementation - 8-July ^a	5.6
8-July	3	Natural breach – 11-July	7.2
21-September	10	Artificial breach -1-October ^b	7.7
4-October	8	Artificial breach – 12-October ^c	6.9
21-October	3	Natural breach – 24-October	8.7
2-November	1	Natural breach – 2-November	6.7

^a Water Agency implemented the 2010 lagoon outlet channel adaptive management plan on July 8, 2010. The outlet channel closed during a high tide event on the same day. The barrier beach naturally breached July 11, 2010.

^b Water Agency consulted with National Marine Fisheries Service and California Department of Fish and Game regarding the potential flood risk posed by high surf activity and inflows making access to the beach difficult. Consensus was that artificial breaching should be done to minimize flood risk. Attempted to breach on September 30, 2010, but high wave activity reformed the barrier beach. Successfully breached the barrier beach on October 1, 2010.

^c Water Agency consulted with National Marine Fisheries Service and California Department of Fish and Game regarding the potential flood risk posed by high surf activity and inflows making access to the beach difficult. Consensus was that artificial breaching should be done to minimize flood risk. Attempted to breach on October 11, 2010, but high wave activity reformed the barrier beach. Successfully breached the barrier beach on October 12, 2010.

Monitoring of the Jenner and peripheral haulouts occurred the day before, day of, and day after each water level management activity. Table 5 provides a summary of the pinniped monitoring events, tides, and an approximate Estuary water surface elevation during each monitoring day.

Appendix F provides the pinniped monitoring census data collected at the Jenner and peripheral haulouts from April to December 2010 during water level management activities. Appendix G provides the observations of pinniped responses to disturbance, including the responses to staff and equipment presence in the vicinity of the Jenner haulout.

Lagoon Outlet Channel Implementation – July 8, 2010

The July 8, 2010, beach management event was the only lagoon management event in 2010. The barrier beach formed, closing the mouth of the Russian River, on July 4, 2010. Prior to the closure, the river channel had been flowing to the northwest in an orientation similar to the target orientation for the lagoon outlet channel (Figure 3). Prior to the closure, harbor seals were observed at the Jenner haulout. The most recent Baseline census was on June 21, 2010, when a mean of 184 harbor seals was observed (Table 3).

Table 5. Pinniped monitoring for Russian River Estuary water level management activities under the NMFS IHA No. 14426 from April to December 2010.

Pinniped Monitoring Date	Pinniped Monitoring Type	Event Type	Corrected Low Tide (feet)	Corrected High Tide (feet)	Jenner Gage Water Surface Elevation at Event (feet)
7-July	Day before event	Lagoon outlet implementation	0.29	5.86	5.6
8-July	Day of event	Lagoon outlet implementation	-0.19	6.14	
9-July	Day after event	Lagoon outlet implementation	-0.67	5.94	
29-Sept.	Day before event	Artificial breaching	0.29	4.80	7.7
30-Sept.	Breach attempt/ Day before event ^a	Artificial breaching			
1-October	Day of event	Artificial breaching			
2-October	Day after event	Artificial breaching			
10-October	Day before event	Artificial breaching	-0.48	5.95	6.9
11-October	Breach event/ Day before event ^a	Artificial breaching			
12-October	Day of event	Artificial breaching			
13-October	Day after event	Artificial breaching			

^a This artificial breaching event was unsuccessful on the first day due to high wave events closing the pilot channel and required a second attempt on the following day.



July 1, 2010 Natural Open Channel. Photo from Highway 1 Overlook.



July 7, 2010 Channel Closed by Tidal Action. Photo from Highway 1 Overlook.



July 8, 2010 Created Outlet Channel. Photo from Highway 1 Overlook.

Figure 3. Russian River Estuary: Natural outlet channel closed and created outlet channel conditions, July 2010

The Jenner and peripheral haulouts were monitored for the pre-lagoon outlet channel implementation on July 7, 2010. The mean number of harbor seals at the Jenner haulout on July 7 was 101 individuals (Figure 4). Implementation of the lagoon outlet channel adaptive management plan occurred on July 8, 2010 (Table 5). A Water Agency biologist began monitoring the Jenner haulout at 04:45, with the first count at 05:15 (estimated 123 harbor seals, Appendix F). Observations of harbor seal responses to disturbance on July 8 are provided in Appendix G. The first response to Water Agency beach management activities occurred at 06:31, when 4 seals alerted (zero flushed) and briefly looked toward the Goat Rock State Beach parking lot in the direction of equipment beeping (heavy equipment beeps when it is operated in reverse). At 06:35, staff and equipment approaching on the beach resulted in 143 harbor seals alerting (zero flushed). The first movements and flushing from the beach resulting from the approaching crew began at 06:44 over a course of two minutes as 135 harbor seals left the beach (8 remained hauled out). At 07:11, over 5 minutes, 9 harbor seals alerted to a surveyor taking points, with 4 seals flushing from the haulout to the river and 5 remaining at the haulout. A Stewards monitor recorded 5 disturbed seals (zero flushed) from 07:13 to 07:26 and noted “dredging of channel,” but did not indicate an alert or movement response to the disturbance. A seal response of alert and movement of 14 harbor seals at the haulout, with 6 flushes and commented “dredging channel open” was noted at 09:02, but did not indicate the number of harbor seals remaining when the disturbance ended at 09:12. However, the seal count taken at 09:15 shows 9 harbor seals hauled out on the river side of the beach (Appendix F). The next harbor seal response to disturbance began at 09:16 and ended at 09:20 as the crew and equipment began to leave the beach for the parking lot. The first responses to two safety crew members approaching was 9 harbor seals alerting and moving, with 3 seals flushing from the haulout to the river/estuary side of the beach and 6 remaining at the haulout. The second response was alert and movement behavior of 5 of the 6 previously remaining seals to the river/estuary as the two safety crew members escorted the two pieces of equipment past the haulout. One harbor seal remained on the beach at 09:20 when equipment and crews had left the beach. At 09:45, one harbor seal was hauled out on the river side of the beach. For the Water Agency’s final count at 10:15, 3 harbor seals were hauled out on the river side of the beach, with the monitor noting “movement back and forth across the bar into and out of the water,” and 4 harbor seals hauled out on the ocean side. The Steward’s monitors made a count from 11:30 to 11:40 and counted 60 harbor seals at the Jenner haulout, noting “10 very active, move across sand, in and out of water” (Appendix F). Sixty-five harbor seals were counted at the Jenner haulout from 13:26 to 13:33. The barrier beach was re-formed and the outlet channel closed during the high tide on July 8. It is difficult to provide a definite time between when the equipment left the beach and the first haulout was formed, but the first harbor seal hauled out approximately 25 minutes after the equipment left and had increased to 65 seals approximately 3 hours later.

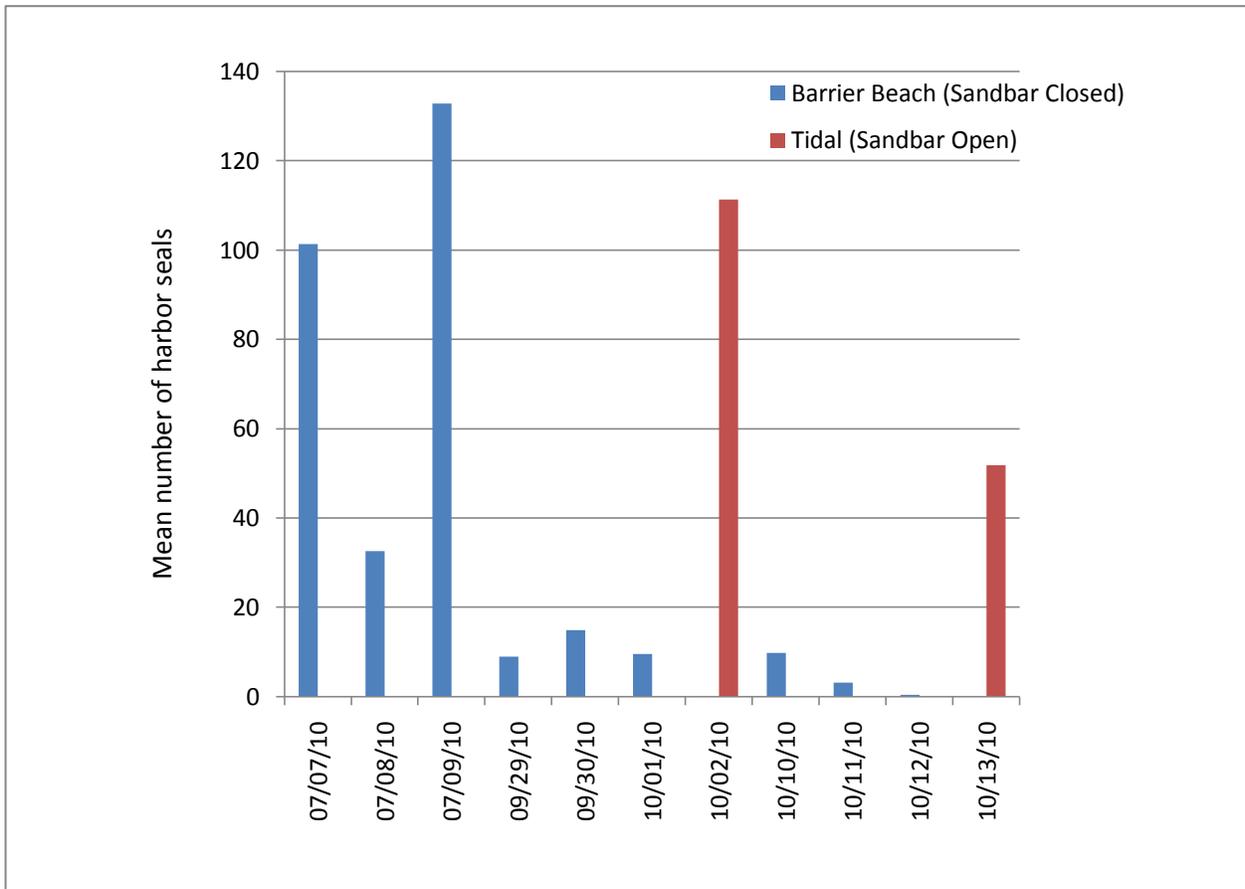


Figure 4. Mean number of harbor seals observed at the Jenner haulout (Goat Rock State Beach) during pinniped monitoring for Russian River Estuary Project water level management activities from April to December 2010.

Post-lagoon outlet channel monitoring occurred on July 9, although the barrier beach remained closed. The first census at 06:00 counted 204 harbor seals at the Jenner haulout. The barrier beach naturally breached on July 11, 2010. Baseline monitoring was already scheduled for July 12 and at 06:00, 244 seals were hauled out and from 06:58 to 07:08, 270 harbor seals were at the Jenner haulout.

The estimated take by incidental harassment (Level B), as defined by the Marine Mammal Protection Act,¹ of harbor seals during the July 8, 2010, lagoon outlet channel adaptive management plan implementation is 170 harbor seals (4 seals, then 143 seals, then 14 seals, plus 9 seals responded, Table 6). All of the seals flushed from the haulout over the course of the outlet channel implementation event. Take included all alerts, movements, or flushes from the haulout as a result of Water Agency staff or equipment presence near the Jenner haulout. It was assumed that the same individual seals were present during the entire event.

¹ Under the Marine Mammal Protection Act, take is defined as “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal.” Level B Harassment (provided for in NMFS IHA. 14426) is defined as “any act of pursuit, torment, or annoyance which... has the potential to disturb a marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.”

Table 6. Estimated incidental harassment (Level B harassment) of pinnipeds protected under the Marine Mammal Protection Act during Russian River Estuary Management Activities from April to December 2010. Level B harassment is authorized under the NMFS IHA No. 14426.

Date	Event Type	Estimated Take		
		Species	Age class	Number
8-July	Lagoon outlet implementation	Harbor seal	Adult ^a	170
30-Sept and 1-October	Artificial breaching	Harbor seal	Adult	80
11-October and 12-October	Artificial breaching	Harbor seal	Adult	8
Subtotal		Harbor seal	Adult	258
14-June	Biological and physical monitoring in the Estuary	Harbor seal	Adult ^a	5
30-June	Beach topographic survey		Adult	5
17-November	Beach topographic survey		Adult	22
Subtotal		Harbor seal		32
Total Estimated Take		Harbor seal	Adult	290

^a Pups are counted separately through June, after which all seals are counted as adults as it becomes more difficult to accurately age individuals.

Artificial Breach – September 30 and October 1, 2010

The next formation of the barrier beach occurred on September 21, 2010, during a series of high wave events that remained an issue over the next several weeks, making safe access to the beach difficult. Implementation of the lagoon outlet channel implementation adaptive management plan was scheduled for September 29, but high surf made accessing the beach too dangerous and following consultation with the NMFS and CDFG, an artificial breach was scheduled for September 30. The September 30-October 1 activity was an artificial breaching event over two days. The first attempt to breach occurred on September 30, 2010, but was unsuccessful due to high wave activity and did not result in a decrease in water surface elevation in the estuary; a second attempt to artificially breach the estuary on October 1, 2010, was successful. The failed attempt and subsequent successful breaching is considered a single event. Baseline monitoring of the Jenner haulout on September 16, 2010, indicated a mean of 72 harbor seals (Table 3). Pre-breaching monitoring on September 29 and breaching/pre-breaching monitoring on September 29 counted low numbers of harbor seals at the Jenner haulout (Appendix F).

Observations of harbor seal responses to disturbance on October 1 are provided in Appendix G. The first census of harbor seals for the September 30 breach attempt was at 07:00, with 23 harbor seals at the Jenner haulout. The bulldozer and excavator began excavation of the barrier beach at 07:59, cut the berm to allow outflow to the ocean at 10:35, and left the beach at 12:04. The monitor at the Jenner overlook first heard the equipment entering the beach from Goat Rock State Beach parking lot at 07:36, without response from the harbor seals at the haulout. At 07:42, two Water Agency crew members walked past the jetty without response from the seals. From 07:49 to 07:52, the harbor seals began to respond to the approaching excavator as it passed within approximately 75 feet of the haulout. At

07:49, 33 harbor seals alerted and/or moved, with 24 flushing from and 9 remaining at the haulout. Then a second response resulted in the remaining 9 harbor seals leaving the haulout by 07:52. During the 08:00 seal census, 5 harbor seals were hauled out on the beach. At 08:09, 5 harbor seals flushed from the haulout. Following the excavator opening the berm to allow outflow from the estuary towards the ocean, harbor seals were observed hauling out on the beach for short periods of time in the vicinity of the equipment, sometimes crossing part or the entire beach or entering the channel but staying on the ocean side of the beach. The equipment left the beach at 12:04. At 12:22, one harbor seal hauled out, but was shortly swamped by a large wave. At 12:35, 3 harbor seals hauled out on the beach south of the channel. The last count of the day occurred at 14:10 and 10 harbor seals were hauled out on the beach. However, by this time the barrier beach had re-formed and the mouth of the river was closed.

A second attempt at breaching the barrier beach was successful on October 1, 2010. The first census was taken at 07:10 and counted 36 harbor seals hauled out. Between 08:13 and 08:17, 38 harbor seals flushed from the haulout when the safety crew approached. Harbor seals crossed the barrier beach to the ocean approximately 300 feet away from the breaching operation, and 3 harbor seals were hauled out at the ocean shoreline during the 10:15 census. The barrier beach was breached at 11:45. At 12:45, two harbor seals were hauled out. The last count of the day was taken at 1310 and no harbor seals were at the Jenner haulout.

The time between when the equipment left the beach and the first haulout reoccupation by a single harbor seal on September 30 was approximately 18 minutes after the equipment left. The haulout had increased to 10 seals approximately 2 hours later. On October 1, the haulout was re-occupied by harbor seals approximately 1 hour after equipment and staff completed the artificial breaching of the barrier beach (Appendix F).

Post-breaching monitoring occurred on October 2, 2010. The first census of the day at 07:00 counted 85 harbor seals at the Jenner haulout. Poor visibility due to fog hampered some the early morning counts, but by 09:00, the visibility improved and the harbor seal count at the Jenner haulout increased to 124.

The estimated take by incidental harassment (Level B), as defined by the Marine Mammal Protection Act,² of harbor seals during the September 30-October 1, 2010, artificial breaching is 80 harbor seals (on September 30, 33 plus 9, and October 1, 38 seals responded, Table 6-). Take included all alerts, movements, or flushes from the haulout as a result of Water Agency staff or equipment presence near the Jenner haulout. It was assumed that the same individual seals were present during the entire event.

Artificial Breach – October 11 and 12, 2010

A barrier beach closed the mouth of the Russian River again on October 4, 2010, during a series of high wave events that remained an issue over the next several weeks, making safe access to the beach difficult. The high surf made accessing the beach too dangerous and following consultation with the NMFS and CDFG regarding the safety of the crews, potential for flooding of low-lying properties, increased releases from reservoirs upstream, and the closure occurring at the end of the lagoon

² Ibid.

management period, an artificial breach was scheduled for October 11, 2010. The October 11-12 was an artificial breaching event over two days due to high wave activity affecting the breaching activity. The October 11-12 activity was an artificial breaching event over two days. The first attempt to breach occurred on October 11, 2010, but was unsuccessful due to high wave activity and did not result in a decrease in water surface elevation in the estuary; a second attempt to artificially breach the estuary on October 12, 2010, was successful. The failed attempt and subsequent successful breaching is considered a single event. Baseline monitoring of the Jenner haulout on October 7 indicated a mean of 13 harbor seals (Table 3). Pre-breaching monitoring on October 10, 2010, counted a maximum of 37 harbor seals at the Jenner haulout (Appendix F).

On October 11, 2010, the first census of the Jenner haulout was made at 11:55 and 7 harbor seals were counted. At 11:56, a visitor walked down the beach from the north and “startled” 9 harbor seals causing them to flush (Appendix G). Three harbor seals remained and were shortly joined by 2 harbor seals returning to the haulout. At 13:06, the Water Agency staff and equipment began to enter the beach. The 5 harbor seals alerted and moved to the water from the shallows of the estuary. Excavation of the pilot channel began at 13:06 and ended at 14:57 with an unsuccessful breach.

A second, successful attempt to artificially breach the barrier beach occurred on October 12, 2010. There were no pinnipeds hauled out on the beach at the first census at 11:30. The Water Agency staff entered the beach at 13:33 and began excavating the channel at 13:45. The pilot channel was open at 15:45 and excavation ended at 16:45. The staff and equipment were off the beach at 17:08. At 13:35, 1 harbor seal flushed from the beach. At 13:48, two harbor seals were observed: 1 harbor seal at the shoreline alerted and 1 harbor seal crossed the beach. At 14:00, one harbor seal was observed at the haulout (while equipment was still operating). No other seals were observed during the census counts between 14:00 and the last count at 17:00. Reoccupation of the Jenner haulout following completion of the artificial breaching activity was not observed.

Post-breaching monitoring occurred on October 13, 2010. The first census was made at 07:00 and 98 harbor seals were observed at the Jenner haulout.

The estimated take by incidental harassment (Level B), as defined by the Marine Mammal Protection Act,³ of harbor seals during the October 11-October 12, 2010, artificial breaching is 8 harbor seals (on October 11, 5 harbor seals; on October 12, 3 seals responded, Table 6). Take included all alerts, movements, or flushes from the haulout as a result of Water Agency staff or equipment presence near the Jenner haulout. It was assumed that the same individual seals were present during the entire event.

Natural Breaches – October 24 and November 2, 2010

There were two additional barrier beach formations and closure of the mouth of the Russian River. The Water Agency did not have to respond to these closures. The first was on October 21, which resulted in a natural breach on October 24, 2010. Baseline monitoring of the Jenner haulout on October 14, 2010, had a mean of 50 harbor seals hauled out.

³ Ibid.

The second closure was on November 2 with a natural breach on the same day. Baseline conditions at the Jenner haulout were monitored on November 3, 2010. Thirty-one harbor seals were counted at 07:00, with a maximum count for the day at 14:30 of 149 harbor seals.

The estimated Level B Harassment (incidental take) of pinnipeds under the NMFS IHA No. 14426 during Russian River Estuary water level management activities is summarized in Table 6. The IHA allows 4,200 occurrences of incidental harassment during the lagoon management period and 258 occurred.

Biological and Physical Monitoring

The NMFS IHA No. 14426 also provides incidental take for Level B harassment of pinnipeds that may result from monitoring of biological resources and physical processes in the Russian River estuary. The number of harbor seals flushed from haulouts in the Russian River estuary during monitoring were not recorded during the surveys, but are expected to be within the take limits based on the baseline monitoring counts of the peripheral haulouts (Appendix D).

The Russian River Biological Opinion requires monthly topographic surveys of the sandbar at the mouth of the Russian River. Although not specified in the NMFS IHA No. 14426, a Water Agency biologist was present during topographic surveys to provide guidance to the survey crews on minimizing disturbance of the haulout and to observe pinniped response to the survey work in the vicinity of the Jenner haulout. Appendices H and I provide the pinniped counts and behavioral responses, respectively, during the monthly topographic surveys.

The estimated Level B Harassment (incidental take) of pinnipeds under the NMFS IHA No. 14426 during Russian River Estuary biological and physical monitoring activities is summarized in Table 5. The IHA allows 64 occurrences of incidental harassment and an estimated 32 occurred.

CONCLUSIONS

The Russian River Estuary Management Activities from April to December 2010 resulted in incidental harassment (Level B harassment) of 290 marine mammals, well under the total allowed by NMFS IHA No. 14426.

The purpose of the Russian River Estuary Management Activities Pinniped Monitoring Plan (Sonoma County Water Agency and Stewards of the Coast and Redwoods 2009) is to detect the response of pinnipeds to estuary management activities at the Russian River estuary. Specifically, the following questions are of interest:

1. Under what conditions do pinnipeds haul out at the Russian River estuary mouth at Jenner?
2. How do seals at the Jenner haulout respond to activities associated with the construction and maintenance of the lagoon outlet channel and artificial breaching activities?
3. Does the number of seals at the Jenner haulout significantly differ from historic averages with formation of a summer (May 15th to October 15th) lagoon in the Russian River estuary?

4. Are seals at the Jenner haulout displaced to nearby river and coastal haulouts when the mouth remains closed in the summer?

The baseline data collected in 2010 shows the highest number of pinnipeds observed at the Jenner haulout during molt and the late part of pupping season (Table 3). The 2010 baseline effort focused on understanding if tides affected the timing of the use of the Jenner haulout by harbor seals (Table 2). There does not appear to be a clear pattern in the data that the haulout is used by a greater number of seals during high or low tides. Additional evaluation and data is needed to understand the influence of tides on the daily timing of harbor seal use of the Jenner haulout. It is likely multiple factors (e.g. season, tides, wave heights, level of beach disturbance) influence when the haulout is most utilized.

The Water Agency implemented the lagoon outlet channel in a single event on July 8, 2010. The response of harbor seals at the Jenner haulout to the outlet channel implementation activities (Question 2 above) was similar to the responses observed during artificial breaching events in 2010 and in previous years of monitoring the Jenner haulout during breaching events (Merritt Smith Consulting 1997, 1998, 1999, 2000; Sonoma County Water Agency and Merritt Smith Consulting 2001). The harbor seals alerted to the sound of equipment on the beach and left the haulout as the crew and equipment approached closer on the beach. Harbor seals hauled out on the beach while equipment was operating, left the beach when equipment and staff were leaving the beach, and began to return to the haulout within 30 minutes to 3 hours of the work ending. Because the barrier beach reformed soon after outlet channel implementation and subsequently breached on its own, maintenance of the outlet channel was not necessary and the response of pinnipeds at the Jenner haulout to maintenance of the outlet channel and management of the lagoon for the duration of the lagoon management period was not possible in 2010. For the same reason, Question 3 above cannot be definitively answered as the duration of closure associated with the lagoon outlet channel implementation was not dissimilar from the duration of closure that have been previously observed at the Estuary.

Responding to Question 4 is also difficult due to the lack of extended lagoon conditions in 2010. However, initial comparisons of peripheral (river and coastal) haulout baseline and water level management activity count data (Appendix D) to the Jenner haulout counts provide a clearer picture of the need to bring additional information into the analysis. For example, during the October 11-12 breaching event, low numbers (or zero) of harbor seals were observed at the peripheral haulouts, particularly the coastal haulouts, during the closure of the mouth, which initially could be interpreted that seals are not utilizing these haulouts during closure. However, we know that high surf conditions were present during this event and could have affected access to the haulouts. Further analysis evaluating water surface elevations in the Estuary (for the river haulouts) and wave height (for the coastal haulouts) could help in this evaluation.

Remedial Measures

Based on the results of the pinniped monitoring, several changes to the monitoring methods will be implemented for the remainder of the term of the NMFS IHA No. 14426 and during future monitoring. Visibility ratings will be recorded for each census taken at the Jenner and peripheral haulouts, rather than at the beginning of each monitoring event. The Beaufort wind speed scale will be replaced with

handheld wind meters to increase consistency and accuracy of data collection. The Beaufort scale will continue to be used for ocean state observation. Disturbance narratives will be prepared by monitors at the Jenner overlook to more fully document incidental harassment of pinnipeds at the Jenner haulout during water level management activities. During biological and water quality monitoring in the Estuary, the number of pinnipeds flushing from the peripheral haulouts in the Estuary (Chalanchawi, Patty's Rock, and Penny Logs) will be recorded to document the Level B harassment of pinnipeds utilizing these haulouts.

ACKNOWLEDGEMENTS

Much appreciation is extended to the Stewards of the Coast and Redwoods staff and volunteers for their hard work and commitment to gathering data on the pinnipeds and haulouts in and around the Russian River estuary. M. Luna, J. Mortenson, and D. Dekelaita provided the training and support that made the monitoring effort possible. Special thanks to the volunteers that provided their time and keen observations to monitoring pinnipeds: B. Bambrick, L. Cole, J. Cross, D. Dekelaita, C. Else, C. Farnes, L. Fisher, K. Ludwig, B. Madrone, J. Mortenson, K. O'Conner, T. Pohlmann, Pointe, and A. Southwick.

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Appendix A. Incidental Harassment Authorization No. 14426



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

MAR 30 2010

Grant Davis
Interim General Manager
Sonoma County Water Agency
404 Aviation Blvd
Santa Rosa, California 95403

Dear Mr. Davis

Enclosed is an Incidental Harassment Authorization (IHA) issued pursuant to Section 101(a)(5)(D) of the Marine Mammal Protection Act (16 U.S.C. 1361 et seq.), to take small numbers of marine mammals, by Level B harassment, incidental to the Sonoma County Water Agency's Russian River Estuary Water Level Management Activities.

You are required to comply with the conditions contained in the IHA, including all mitigation, monitoring and reporting requirements. In addition, you must cooperate with any Federal, state, or local agency monitoring the impacts of your activities. Along with mitigation measures to be incorporated, the IHA requires monitoring for the presence and behavior of marine mammals prior to, during, and after all management events.

If you have any questions concerning the IHA or its requirements, please contact Jaclyn Daly, Office of Protected Resources (NMFS), at 301-713-2289.

Sincerely,

James H. Lecky,
Director, Office of Protected Resources,
National Marine Fisheries Service.

Enclosure



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INCIDENTAL HARASSMENT AUTHORIZATION

The Sonoma County Water Agency (herein after "Agency") is hereby authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1371(a)(5)(D)) and 50 CFR 216.107, to harass small numbers of marine mammals incidental to Russian River Estuary water level management and monitoring activities, Jenner, California.

1. This Authorization is valid from April 1, 2010 through March 31, 2011.
2. This Authorization is valid only for water level management and monitoring activities, as described in the Agency's MMPA application. These activities include mechanical breaching, mechanical lagoon outlet channel creation and maintenance, and physical and biological monitoring of the Russian River Estuary.
3. This Authorization allows the incidental taking, by Level B harassment only, of the following number of marine mammals, by species: 2,861 harbor seals (*Phoca vitulina richardii*), 16 California sea lions (*Zalophus californianus*), and 11 northern elephant seals (*Mirounga angustirostris*).
4. The taking by Level A (injurious) harassment, serious injury or death of any of the species listed in Condition 3 above or the taking of any species of marine mammal not listed in 3 above is prohibited and may result in the modification, suspension or revocation of this Authorization.
5. The taking of any marine mammal in a manner not allowed for under this Authorization must be reported immediately to the Southwest Region (NMFS) 501 West Ocean Blvd., Suite 4200, Long Beach, CA 90802; phone (562) 980-4020; fax (562) 980-4027, and the Office of Protected Resources (NMFS); 1315 East-West Hwy, Silver Spring, MD 20910; phone (301) 713-2289; fax (301) 713-0376.
6. Mitigation Measures

The Agency is required to abide by the following mitigation measures listed in 6(a)-(k). Failure to comply with these conditions may result in the modification, suspension or revocation of this Authorization.

Pupping Season (March 15- June 30): The following mitigation measures apply only during the pupping season:

- (a) If a pup less than one week old is on the beach where heavy machinery would be used or on the path used to access the work location, the breaching event will be delayed until the pup has left the site or the latest day possible to prevent flooding while still

maintaining suitable fish rearing habitat. Pups less than one week old should be characterized by being up to 15 kg, thin for their body length, or an umbilicus or natal pelage is present. The Agency shall coordinate with the locally established seal monitoring program to determine if pups less than one week old are on the beach prior to a breaching event;

(b) A water level management event may not occur for more than two consecutive days unless flooding threats cannot be controlled;

(c) The Agency must maintain a one week (7 day) "no work" period between water level management events (unless flooding is a threat to the low-lying residential community) to allow for adequate disturbance recovery period. During the "no-work" period, equipment must be removed from the beach;

(d) If crew or marine mammal observers sight any pup which may be abandoned, the Agency must contact NMFS stranding response network [Marine Mammal Center, 415-289-7350] immediately and report the incident to NMFS' Southwest Regional Office and NMFS Headquarters within 48 hours. Observers are not to approach or move the pup; and

(e) Physical and biological monitoring, as described in Table 2 in the application, shall not be conducted if a pup less than one week old is present at the monitoring site or on a path to the site.

Year-Round: The following mitigation measures apply year-round:

(f) Agency crew shall slowly and cautiously approach the haulout ahead of heavy equipment to minimize the potential for flushes to result in a stampede;

(g) Agency staff shall avoid walking or driving equipment through the seal haulout;

(h) Crews on foot will take caution to approach the haulout slowly and to make an effort to be seen by the seals from a distance, if possible, rather than appearing suddenly at the top of the sandbar;

(i) Equipment will be driven slowly on the beach and care will be taken to minimize the number of equipment shut-downs and start-ups;

(j) The Agency will contact NMFS' Southwest Regional Office, Santa Rosa Office, and Headquarters to inform them of the potential flooding threat and event schedule; and

(k) Physical and biological monitoring, as described in Table 2 of the application, shall be conducted in a manner which results in the least amount of pinniped harassment

practical. Agency personnel shall approach the haulout slowly and cautiously and only when necessary to carry out monitoring.

7. Monitoring Measures

The Agency is required to abide by the following monitoring measures listed in 7(a)-(f). Failure to comply with these conditions may result in the modification, suspension or revocation of this Authorization.

(a) Pinnipeds will be monitored from the overlook on the bluff along Highway 1 adjacent to the haulout with high powered spotting scopes. The method and disturbance behavior would be recorded following Mortenson (2006).

(b) During the pupping season (March 15- June 30), the Agency will conduct a pre-lagoon outlet channel survey one to three days prior to an event to determine the number of animals on the beach and if any pups are present.

(c) The day of an event, the Agency will begin pinniped monitoring at least one hour prior to crew and equipment accessing the beach.

(d) Monitoring will continue for the duration of an event to determine how many animals have been taken and end no sooner than one hour after equipment leaves the beach.

(e) In addition to event days, seal counts will also be conducted twice monthly when no machinery is on the beach to determine if any long terms impacts are occurring at the haulout, as described in the Agency's Russian River Estuary Management Activities Pinniped Monitoring Plan, dated September 9, 2009. On these days, seals will be counted in ½ hour increments starting early in the morning (e.g., dawn) and ending eight hours later, weather permitting. Census days will be scheduled to capture a low and high tide each in the morning and afternoon.

f) Nearby coastal and upriver haulouts shall also be monitored, as described in the Agency's Russian River Estuary Management Activities Pinniped Monitoring Plan, dated September 9, 2009.

8. Reporting

The Agency is required to submit a report on all activities and marine mammal monitoring results to the Office of Protected Resources, NMFS, and the Southwest Regional Administrator, NMFS, 90 days prior to the expiration of the IHA if a renewal is sought, or within 90 days of the expiration of the permit otherwise. This report must contain the following information:

- (a) the number of seals taken, by species and age class (if possible);
 - (b) behavior prior to and during water level management events;
 - (c) start and end time of activity;
 - (d) estimated distances between source and seals when disturbance occurs;
 - (e) weather conditions (e.g., temperature, wind, etc.);
 - (f) haulout reoccupation time of any seals based on post activity monitoring;
 - (g) tide levels and estuary water surface elevation; and
 - (h) seal census from bi-monthly and nearby haulout monitoring.
9. A copy of this Authorization must be in the possession of the lead contractor and marine mammal observer operating under the authority of this Incidental Harassment Authorization.



James H. Lecky
Director, Office of Protected Resources
National Marine Fisheries Service

MAR 30 2010

Date

Appendix B. Russian River Estuary Management Activities Pinniped Monitoring Plan



Russian River Estuary Management Activities Pinniped Monitoring Plan

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Introduction

The Russian River estuary (Estuary) is located about 97 kilometers (km; 60 miles) northwest of San Francisco in Jenner, Sonoma County, California (Figure 1). The Russian River watershed encompasses 3,847 km² (1,485 square miles) in Sonoma, Mendocino, and Lake counties. The Estuary extends from the mouth of the Russian River upstream approximately 10 to 11 km (6 to 7 miles) between Austin Creek and the community of Duncans Mills (Heckel 1994).

Harbor seals (*Phoca vitulina richardii*) regularly haul out at the mouth of the Russian River (Jenner haulout) (Figure 2). California sea lions (*Zalophus californianus*) and northern elephant seals (*Mirounga angustirostris*) are occasionally observed at the mouth. There are also several known river haulouts at logs and rock piles in the Russian River estuary. This monitoring plan has been prepared as part of the Sonoma County Water Agency's (Agency) application for incidental harassment authorization (IHA) under the Marine Mammal Protection Act (MMPA) for activities associated with the Russian River Estuary Management Activities. These activities include:

- construction and maintenance of a lagoon outlet channel that would facilitate management of a closed barrier beach at the mouth of the Russian River and create a summer lagoon to improve rearing habitat for listed steelhead as mandated by the Russian River Biological Opinion (NMFS 2008); and
- artificially breaching the barrier beach to minimize the potential for flooding of low-lying properties along the Estuary.

The monitoring plan is a collaborative effort between the Agency and the Stewards of the Coast and Redwoods' (Stewards).

Background

The Estuary may close throughout the year as a result of a barrier beach forming across the mouth of the Russian River. The mouth is located at Goat Rock State Beach (California Department of Parks and Recreation). Although closures may occur at anytime of the year, the mouth usually closes during the spring, summer, and fall (Heckel 1994; Merritt Smith Consulting 1997, 1998, 1999, 2000; Sonoma County Water Agency and Merritt Smith Consulting 2001). Closures result in ponding of the Russian River behind the barrier beach and, as water surface levels rise in the Estuary, flooding may occur. Natural breaching events occur when estuary water surface levels exceed the height of the barrier beach and overtop it, scouring an outlet channel that reconnects the Russian River to the Pacific Ocean.

The barrier beach has also been artificially breached for decades; first by local citizens, then the County of Sonoma Public Works Department, and, since 1995, by the Sonoma County Water Agency (Agency). The Agency's artificial breaching activities are conducted in accordance with the Russian River Estuary Management Plan recommended in the Heckel (1994) study.



SPECIAL PROJECTS/RUSSIAN RIVER/7104-ESTUARY/HARBOR SEAL-2009-JENNER JUNE 18, 2009



04/20/09
Locations provided by Joe Mortenson



Pinniped Haulouts at the Russian River Estuary and Surrounds



Figure 2

Biological Opinion and the Estuary

The Agency and the U.S. Army Corps of Engineers (Corps) consulted with the National Marine Fisheries Service (NMFS) under Section 7 of the Endangered Species Act (ESA) regarding the potential effects of their operations and maintenance activities, including the Agency's estuary management program, on federally-listed steelhead (*Oncorhynchus mykiss*), coho salmon (*O. kisutch*), and Chinook salmon (*O. tshawytscha*). As a result of this consultation, the NMFS issued the Russian River Biological Opinion (NMFS 2008) finding that artificially elevated inflows to the Russian River estuary during the low flow season (May through October) and historic artificial breaching practices have significant adverse effects on the Russian River's estuarine rearing habitat for steelhead, coho salmon, and Chinook salmon. The historic method of artificial breaching, which is done in response to rising water levels behind the barrier beach, adversely affects the estuary's water quality and depths.

The historic breaching practices create a tidal marine environment with shallow depths and high salinity. Salinity stratification contributes to low dissolved oxygen at the bottom in some areas. The Biological Opinion (NMFS 2008) concludes that the combination of high inflows and breaching practices impact rearing habitat because they interfere with natural processes that cause a freshwater lagoon to form behind the barrier beach. Fresh or brackish water lagoons at the mouths of many streams in central and southern California often provide depths and water quality that are highly favorable to the survival of rearing salmon and steelhead.

The Biological Opinion's Reasonable and Prudent Alternative (RPA) 2 (NMFS 2008) requires the Agency to collaborate with NMFS and to modify estuary water level management in order to reduce marine influence (high salinity and tidal inflow) and promote a higher water surface elevation in the estuary (*i.e.*, formation of a fresh or brackish lagoon) for purposes of enhancing the quality of rearing habitat for juvenile (age 0+ and 1+) steelhead from May 15th to October 15th (lagoon management period). A program of potential, incremental steps are prescribed to accomplish this, including adaptive management of a lagoon outlet channel.

The Agency anticipates that lagoon outlet channel management activities would occur in accordance with the Russian River Biological Opinion and that they would primarily occur between July 1 and October 15, 2009. Artificial breaching activities would occur in accordance with the Russian River Biological Opinion primarily from October 16, 2009, to May 14, 2010. However, if estuary water surface elevations rise above 7.0 feet (at the Jenner gage) during the lagoon management period, the Agency would artificially breach the barrier beach to alleviate potential flooding, as discussed in the Biological Opinion. The Biological Opinion incidental take statement estimates that the Agency may need to artificially breach the the barrier beach "twice per year between May 15 and October 15 during the first three years covered by this opinion, and once per year between May 15 and October 15 during years 4-15 covered by this opinion" (NMFS 2008).

Previous Monitoring Efforts

The Jenner haulout has been extensively monitored. The Stewards' Seal Watch Public Education Program began in 1985, when Dian Hardy and other local activists from Jenner

discovered that the harbor seals at Goat Rock State Beach were in greater danger from beach visitors and unleashed dogs than from the pollution of a recent sewage spill into the Russian River. In response to these concerns, they organized and set up four-hour shifts on the beach at the river mouth where they asked visitors to abide by the Marine Mammal Protection Act and stay at least 50 yards from the harbor seals. Today, State Parks Volunteer Docents assist the public in safeguarding this local harbor seal habitat, the largest on the Sonoma Coast. Docents are available at Goat Rock State Beach on weekends during the annual pupping and molting season (March through Labor Day weekend) when the seals are most vulnerable to public interactions. In addition to public outreach, the volunteers record the numbers of visitors and seals on the beach, other marine mammals observed, and the number of boats and kayaks present.

Joe Mortenson began his ongoing monthly seal counts at the Jenner haulout and Bodega Rock in January 1987, with nearby haulouts added to the counts thereafter. Elinor Twohy began daily counts of seals and people at the Jenner haulout, including photographing the haulout, on November 1, 1989. Her daily counts were taken at different times on successive days to determine if there were diurnal patterns in use of the haulout (Mortenson and Twohy 1993). She also photographed and noted whether the mouth at the Jenner haulout was opened or closed each day. The information that has emerged from these data sets is that the Jenner haulout is atypical in terms of the time of year that the peak numbers of harbor seals are present. The numbers of seals at the Jenner haulout peaks in the winter; at other harbor seal haulouts, peaks are typically observed during the pupping and molting season (spring and summer; Mortenson and Twohy 1993). The Jenner haulout is also atypical in terms of the time of day seal count peaks are observed. At other harbor seal haulouts, daily peaks are typically observed at midafternoon low tides regardless of the season. Although daily harbor seal numbers at the Jenner haulout do peak at midday during the winter and in the pupping and molting seasons, a midday peak is not observed during the fall (Mortenson and Twohy 1993).

The Agency monitored biological and water quality conditions before, during, and after artificial breaching events from 1996 to 2000. Harbor seals regularly hauled out at the mouth of the Russian River, with the greatest numbers observed in late winter and mid-summer. California sea lions and elephant seals were occasionally observed at the river mouth. In all five years of monitoring, the number of pinnipeds hauled out at the mouth of the Estuary declined when the barrier beach was closed and increased soon after it was breached (Sonoma County Water Agency and Merritt Smith Consulting 2001). Seals at the haulout responded most negatively to human disturbances on the beach (typically beach visitors approaching the haulout). When approaching the breaching location, Agency crews walked ahead of the bulldozer to ensure that no pinnipeds were harmed on the beach. Most pinnipeds usually abandoned the haulout prior to the bulldozer reaching the breaching location due to disturbance from visitors prior to crews arriving onsite. The remaining pinnipeds flushed as the crew approached with breaching location ahead of the heavy equipment. Once breaching was completed, equipment and crews left the beach and pinnipeds returned to the haulout within a day.

Goals and Objectives

The purpose of this monitoring plan is to detect the response of pinnipeds to estuary management activities at the Russian River estuary. Specifically, the following questions are of interest:

- Under what conditions do pinnipeds haul out at the Russian River estuary mouth at Jenner?
- How do seals at the Jenner haulout respond to activities associated with the construction and maintenance of the lagoon outlet channel and artificial breaching activities?
- Does the number of seals at the Jenner haulout significantly differ from historic averages with formation of a summer (May 15th to October 15th) lagoon in the Russian River estuary?
- Are seals at the Jenner haulout displaced to nearby river and coastal haulouts when the mouth remains closed in the summer?

Monitoring Components

Pinnipeds will be monitored to meet the plan's goals and objectives. The results would provide information on the effects of estuary management activities on the pinnipeds, primarily Pacific harbor seals, that haul out at the mouth of the Russian River estuary. Methods may be revised as data are collected and evaluated in the field. Any significant changes in methodology would be documented and included in the annual report (see below).

Schedule

The term of the monitoring plan would correspond with the MMPA IHA issued by NMFS. Baseline data on conditions associated with seal presence at the Jenner haulout would be collected for the term of the IHA. Generally, monitoring associated with implementation and maintenance of the lagoon outlet channel would occur between July 1 and October 15, 2009. Monitoring of artificial breaching activities would occur with each event, generally from October 16, 2009, to May 14, 2010. Should the mouth remain open during the lagoon management period, biweekly monitoring of the Jenner and river and coastal haulouts would continue as described below.

Methodology

Jenner Haulout Use

Based on previous monitoring efforts, it is known that harbor seals haul out at the mouth of the Russian River at various times of day, with the highest counts in the afternoon, except in the fall (Mortenson and Twohy 1993, Mortenson 1996). Additional information is needed for the Jenner haulout regarding a possible relationship between tides, time of day, and the highest seal counts. Other studies have found that the optimum time to census seals is afternoon low tides (Allen 1987, Pauli and Terhune 1987). It is important to gain a better understanding about what specific conditions seals may prefer for hauling out at the mouth. This baseline information could be a foundation for planning future estuary management activities to minimize disturbances at the Jenner haulout.

Seals at the Jenner haulout would be counted twice monthly for the term of the IHA. This census would begin at local dawn and continue for 8 hours. All seals hauled out on the beach would be counted every 30 minutes from the overlook on the bluff along Highway 1 adjacent to the haulout (Figure 2). Monitoring may conclude for the day if weather conditions affect visibility (e.g. heavy fog in the afternoon). Counts would be scheduled for two days out of each month with the intention of capturing a low and high tide each in the morning and afternoon. Depending on how the sandbar is formed, seals may haul out in multiple groups at the mouth. At each 30-minute count, the observer would indicate where groups of seals are hauled out on the sandbar (e.g. Site A, Site B mapped on datasheet) and provide a total count for each group. If possible, adults and pups should be counted separately.

In addition to the census data, disturbances of the haulout would be recorded. The methods for recording disturbances would follow those in Mortenson (2006). Disturbances would be recorded on a three-point scale that represents an increasing seal response to the disturbance

(Table 1). The time, source, and duration of the disturbance, as well as an estimated distance between the source and haulout, would be recorded.

Table 1. Seal response to disturbance.

Level	Type of Response	Definition
1	Alert	Seal head orientation in response to disturbance. This may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, or changing from a lying to a sitting position.
2	Moving	Movements away from the source of disturbance, ranging from short withdrawals over short distances to hurried retreats many meters in length.
3	Flight	All retreats (flushes) to the water, another group of seals, or over the beach.
SOURCE: Mortenson, J. 1996. Human interference with harbor seals at Jenner, California, 1994-1995. Prepared for Stewards of Slavianka and Sonoma Coast State Beaches, Russian River/Mendocino Park District. July 11. 1996.		

Weather conditions would be recorded at the beginning of each census. These include temperature, percent cloud cover, and wind speed (Beaufort scale). Tide levels and Estuary water surface elevations can be correlated to the monitoring start and end times in the office at the end of each day.

In an attempt to understand possible relationships between use of the Jenner haulout and nearby coastal and river haulouts, several other haulouts on the coast and in the Russian River estuary would be monitored (Figure 2). These haulouts include North Jenner and Odin Cove to the north, Pocked Rock, Kabemali, and Rock Point to the south, and Jenner logs, Patty’s Rock, and Chalanchawi in the Russian River estuary. These are known harbor seal haulouts that have been monitored by Joe Mortenson, researcher with the Stewards from 1994 to 1995, with Merritt-Smith on breaching studies from 1996 though 1999, and with the Gulf of the Farallones Marine Sanctuary Association for 7 years.

Lagoon Outlet Channel Monitoring

Should the mouth close lagoon management period, the Agency would construct a lagoon outlet channel as required by the Russian River Biological Opinion and described in the MMPA IHA. Activities associated with the initial construction of the outlet channel, as well as the maintenance of the channel that may be required, would be monitored for disturbances to the seals at the Jenner haulout.

A one-day pre-outlet channel survey would be made within 1 to 3 days prior to constructing the outlet channel. The haulout would be monitored on the day the outlet channel is constructed and daily for up to 4 days during channel excavation activities. Monitoring would also occur on each day that the outlet channel is maintained using heavy equipment for the duration of the outlet channel period (July 1 to October 15). Monitoring of outlet channel maintenance can correspond with the monitoring described under the “Jenner Haulout Use” section above. Methods would

follow the census and disturbance monitoring protocols described in the “Jenner Haulout Use” section.

Displacement. In an attempt to understand if seals from the Jenner haulout are displaced to coastal and river haulouts nearby when the mouth remains closed in the summer, several other haulouts, on the coast and in the Russian River estuary, would be monitored (Figure 2). These haulouts include North Jenner and Odin Cove to the north, Pocked Rock, Kabemali, and Rock Point to the south, and Jenner logs, Patty’s Rock, and Chalanchawi in the Russian River estuary. Each of these coastal and river haulouts would be monitored concurrent with monitoring of outlet channel construction and maintenance activities. This would provide an opportunity to qualitatively assess if these haulouts are being used by seals displaced from the Jenner haulout during lagoon outlet channel excavation and maintenance. This monitoring would not provide definitive results that individuals from the Jenner haulout are displaced to the coastal and river haulouts as individual seals would not be marked; however, it would be useful to track general trends in haulout use during lagoon outlet channel excavation and maintenance.

As volunteers would be required to monitor these haulouts (please see “Staffing” below), haulout locations may need to be prioritized if there are not enough volunteers available. In that case, priority would be assigned to the North Jenner and Odin Cove haulouts, followed by the Russian River estuary haulouts, and finally the Pocked Rock, Kabemali, and Rock Point haulouts.

To obtain more definitive data on displacement of harbor seals from the Jenner haulout and use of the coastal and river haulouts, a mark/tagging program should be considered for future studies. Such a program would be valuable for long-term management of the Jenner haulout and would be an effective method of identifying seasonal activity patterns and seal response to estuary management activities. A similar program implemented at the Point Reyes National Seashore for the Drakes Estero harbor seal population would be an example that could be reviewed in development of a mark/tagging program (Allen et al. 1987a, 1987b).

Artificial Breaching Events

Pinniped responses to the Agency’s artificial breaching activities were extensively monitored from 1996 to 2000 (Merritt-Smith Consulting 1997, 1998, 1999, 2000; Sonoma County Water Agency and Merritt-Smith Consulting 2001). In accordance with the Russian River Biological Opinion (NMFS 2008), the Agency would artificially breach the barrier beach outside of the summer lagoon management period (from October 16 to May 14), unless Estuary water surface elevations from July 1 to October 15 rise above 7 feet at the Jenner gage. In that case, an artificial breaching event would be scheduled to open the barrier beach and reduce flooding risk.

Pinniped response to artificial breaching would be monitored at each such event during the term of the MMPA IHA. Methods would follow the census and disturbance monitoring protocols described in the “Jenner Haulout Use” section, which were also used for the 1996 to 2000 monitoring events (Merritt-Smith Consulting 1997, 1998, 1999, 2000; Sonoma County Water Agency and Merritt-Smith Consulting 2001). Half-hour counts of all seals hauled out on the beach would begin at local dawn and continue for approximately five hours. Monitoring may occasionally last longer than five hours when artificial breaching activities occur in late morning or early afternoon.

Staffing

Monitoring would be conducted by qualified individuals with prior approval by NMFS. Generally, these individuals would include professional biologists employed by NMFS or the Sonoma County Water Agency or volunteers trained by the Stewards.

Generally, Agency staff and volunteers would collect baseline data on Jenner haulout use during the twice monthly monitoring events. A schedule for this monitoring would be established with Stewards of the Coasts and Redwoods once volunteers are available for the monitoring effort. Agency staff would monitor lagoon outlet channel excavation and maintenance activities and artificial breaching events at the Jenner haulout, with assistance from Seal Watch volunteers as available. Seal Watch volunteers would monitor the coastal and river haulout locations during lagoon outlet channel excavation and maintenance activities.

Reporting

An annual report would be prepared and distributed to the NMFS, California State Parks, and Stewards of the Coasts and Redwoods. The report would also be available to the public on the Agency's website.

The annual report would include an executive summary, monitoring methodology, tabulation of estuary management events, summary of monitoring results, and discussion of problems noted and proposed remedial measures.

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Applicant: Sonoma County Water Agency
Project: Russian River Estuary Management Activities

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**Appendix C. Russian River Estuary Water Surface Elevations during Pinniped
Baseline and Management Activity Monitoring**

Russian River Estuary Water Surface Elevations during Pinniped Baseline and Management Activity Monitoring, 2010

Date	Time	Jenner Gage Surface Elevation (feet, NGVD 29)	Pinniped Monitoring Type
5/6/10	7:30	1.1245	Baseline
5/6/10	8:00	0.929875	Baseline
5/6/10	8:30	0.7785	Baseline
5/6/10	9:00	0.627125	Baseline
5/6/10	9:30	0.454125	Baseline
5/6/10	10:00	0.281125	Baseline
5/6/10	10:00	0.281125	Baseline
5/6/10	10:30	0.12975	Baseline
5/6/10	11:00	0	Baseline
5/6/10	11:30	-0.108125	Baseline
5/6/10	12:00	-0.237875	Baseline
5/6/10	12:30	-0.237875	Baseline
5/6/10	13:00	-0.237875	Baseline
5/6/10	13:30	-0.12975	Baseline
5/6/10	14:00	-0.12975	Baseline
5/6/10	14:30	-0.12975	Baseline
5/6/10	15:00	-0.12975	Baseline
5/6/10	15:30	-0.12975	Baseline
6/14/10	5:30	2.249	Baseline
6/14/10	6:00	2.097625	Baseline
6/14/10	6:30	1.924625	Baseline
6/14/10	7:00	1.77325	Baseline
6/14/10	7:30	1.621875	Baseline
6/14/10	8:00	1.4705	Baseline
6/14/10	8:30	1.319125	Baseline
6/14/10	9:00	1.189375	Baseline
6/14/10	9:30	1.038	Baseline
6/14/10	10:00	0.90825	Baseline
6/14/10	10:30	0.7785	Baseline
6/14/10	11:00	0.7785	Baseline
6/14/10	11:30	0.64875	Baseline
6/14/10	12:00	0.64875	Baseline
6/14/10	12:30	0.973125	Baseline
6/14/10	13:00	1.102875	Baseline
6/14/10	13:30	1.319125	Baseline
6/14/10	14:00	1.51375	Baseline
6/14/10	14:30	1.68675	Baseline
6/14/10	15:00	1.68675	Baseline
6/14/10	15:30	1.85975	Baseline
6/14/10	16:00	1.85975	Baseline
6/14/10	16:30	1.85975	Baseline
6/14/10	17:00	1.73	Baseline
6/14/10	17:30	1.73	Baseline
6/14/10	18:00	1.578625	Baseline
6/14/10	18:30	1.4705	Baseline
6/14/10	19:00	1.4705	Baseline

Russian River Estuary Water Surface Elevations during Pinniped Baseline and Management Activity Monitoring, 2010

Date	Time	Jenner Gage Surface Elevation (feet, NGVD 29)	Pinniped Monitoring Type
6/14/10	19:30	1.319125	Baseline
6/14/10	20:00	1.319125	Baseline
6/14/10	20:30	1.319125	Baseline
6/14/10	21:00	1.319125	Baseline
6/14/10	21:30	1.319125	Baseline
6/14/10	22:00	1.60025	Baseline
6/14/10	22:30	1.77325	Baseline
6/14/10	23:00	1.9895	Baseline
6/14/10	23:30	2.20575	Baseline
6/30/10	9:00	4.173625	Monthly beach topo survey
6/30/10	9:30	4.173625	Monthly beach topo survey
6/30/10	10:00	4.173625	Monthly beach topo survey
6/30/10	10:30	4.173625	Monthly beach topo survey
6/30/10	11:00	4.173625	Monthly beach topo survey
6/30/10	11:30	4.173625	Monthly beach topo survey
6/30/10	12:00	4.173625	Monthly beach topo survey
6/30/10	12:30	4.0655	Monthly beach topo survey
6/30/10	13:00	4.0655	Monthly beach topo survey
7/1/10	8:30	3.84925	Monthly beach topo survey
7/1/10	9:00	3.84925	Monthly beach topo survey
7/1/10	9:30	3.84925	Monthly beach topo survey
7/1/10	10:00	3.741125	Monthly beach topo survey
7/1/10	10:30	3.741125	Monthly beach topo survey
7/1/10	11:00	3.741125	Monthly beach topo survey
7/1/10	11:30	3.741125	Monthly beach topo survey
7/1/10	12:00	3.741125	Monthly beach topo survey
7/7/10	6:00	4.995375	Pre-Lagoon Outlet
7/7/10	6:30	4.995375	Pre-Lagoon Outlet
7/7/10	7:00	4.995375	Pre-Lagoon Outlet
7/7/10	7:30	4.995375	Pre-Lagoon Outlet
7/7/10	8:00	4.995375	Pre-Lagoon Outlet
7/7/10	8:30	5.1035	Pre-Lagoon Outlet
7/7/10	9:00	5.1035	Pre-Lagoon Outlet
7/7/10	9:30	5.1035	Pre-Lagoon Outlet
7/7/10	10:00	5.1035	Pre-Lagoon Outlet
7/7/10	10:30	5.1035	Pre-Lagoon Outlet
7/7/10	11:00	5.1035	Pre-Lagoon Outlet
7/7/10	11:30	5.1035	Pre-Lagoon Outlet
7/7/10	12:00	5.1035	Pre-Lagoon Outlet
7/7/10	12:30	5.1035	Pre-Lagoon Outlet
7/7/10	13:00	5.1035	Pre-Lagoon Outlet
7/7/10	13:30	5.1035	Pre-Lagoon Outlet
7/7/10	14:00	5.1035	Pre-Lagoon Outlet
7/8/10	4:30	5.536	Lagoon Outlet Implementation
7/8/10	5:00	5.536	Lagoon Outlet Implementation
7/8/10	5:30	5.644125	Lagoon Outlet Implementation

Russian River Estuary Water Surface Elevations during Pinniped Baseline and Management Activity Monitoring, 2010

Date	Time	Jenner Gage Surface Elevation (feet, NGVD 29)	Pinniped Monitoring Type
7/8/10	6:00	5.644125	Lagoon Outlet Implementation
7/8/10	6:30	5.644125	Lagoon Outlet Implementation
7/8/10	7:00	5.644125	Lagoon Outlet Implementation
7/8/10	7:30	5.644125	Lagoon Outlet Implementation
7/8/10	8:00	5.644125	Lagoon Outlet Implementation
7/8/10	8:30	5.644125	Lagoon Outlet Implementation
7/8/10	9:00	5.644125	Lagoon Outlet Implementation
7/8/10	9:30	5.644125	Lagoon Outlet Implementation
7/8/10	10:00	5.644125	Lagoon Outlet Implementation
7/8/10	10:30	5.644125	Lagoon Outlet Implementation
7/8/10	11:00	5.75225	Lagoon Outlet Implementation
7/8/10	11:30	5.75225	Lagoon Outlet Implementation
7/8/10	12:00	5.75225	Lagoon Outlet Implementation
7/8/10	12:30	5.75225	Lagoon Outlet Implementation
7/8/10	13:00	5.75225	Lagoon Outlet Implementation
7/8/10	13:30	5.75225	Lagoon Outlet Implementation
7/8/10	14:00	5.75225	Lagoon Outlet Implementation
7/8/10	14:30	5.75225	Lagoon Outlet Implementation
7/8/10	15:00	5.75225	Lagoon Outlet Implementation
7/9/10	6:00	6.09825	Post Lagoon Outlet
7/9/10	6:30	6.09825	Post Lagoon Outlet
7/9/10	7:00	6.09825	Post Lagoon Outlet
7/9/10	7:30	6.09825	Post Lagoon Outlet
7/9/10	8:00	6.09825	Post Lagoon Outlet
7/9/10	8:30	6.206375	Post Lagoon Outlet
7/9/10	9:00	6.206375	Post Lagoon Outlet
7/9/10	9:30	6.206375	Post Lagoon Outlet
7/9/10	10:00	6.206375	Post Lagoon Outlet
7/9/10	10:30	6.206375	Post Lagoon Outlet
7/9/10	11:00	6.206375	Post Lagoon Outlet
7/9/10	11:30	6.206375	Post Lagoon Outlet
7/9/10	12:00	6.206375	Post Lagoon Outlet
7/9/10	12:30	-8.628375	Post Lagoon Outlet
7/9/10	12:30	-8.628375	Post Lagoon Outlet
7/9/10	12:33	-8.628375	Post Lagoon Outlet
7/9/10	12:34	-8.628375	Post Lagoon Outlet
7/9/10	12:35	-8.628375	Post Lagoon Outlet
7/9/10	13:00	6.249625	Post Lagoon Outlet
7/9/10	13:01	6.249625	Post Lagoon Outlet
7/9/10	13:30	6.249625	Post Lagoon Outlet
7/9/10	14:00	6.249625	Post Lagoon Outlet
7/12/10	0:00	5.017	Baseline
7/12/10	0:30	4.80075	Baseline
7/12/10	1:00	4.5845	Baseline
7/12/10	1:30	4.325	Baseline
7/12/10	2:00	4.0655	Baseline

Russian River Estuary Water Surface Elevations during Pinniped Baseline and Management Activity Monitoring, 2010

Date	Time	Jenner Gage Surface Elevation (feet, NGVD 29)	Pinniped Monitoring Type
7/12/10	2:30	3.741125	Baseline
7/12/10	3:00	3.33025	Baseline
7/12/10	3:30	2.876125	Baseline
7/12/10	4:00	2.313875	Baseline
7/12/10	4:30	1.708375	Baseline
7/12/10	5:00	1.038	Baseline
7/12/10	5:30	0.346	Baseline
7/12/10	6:00	-0.151375	Baseline
7/12/10	6:30	-0.151375	Baseline
7/12/10	7:00	-0.151375	Baseline
7/13/10 Gauge not working, no data for BASELINE MONITORING			
7/19/10	7:00	0.886625	Baseline
7/19/10	7:30	0.886625	Baseline
7/19/10	8:00	0.7785	Baseline
7/19/10	8:30	0.6055	Baseline
7/19/10	9:00	0.497375	Baseline
7/19/10	9:30	0.30275	Baseline
7/19/10	10:00	0.12975	Baseline
7/19/10	10:30	0	Baseline
7/19/10	11:00	-0.108125	Baseline
7/19/10	11:30	-0.108125	Baseline
7/19/10	12:00	-0.21625	Baseline
7/19/10	12:30	-0.21625	Baseline
7/19/10	13:00	-0.04325	Baseline
7/19/10	13:30	0.12975	Baseline
7/19/10	14:00	0.324375	Baseline
7/19/10	14:30	0.627125	Baseline
7/19/10	15:00	0.929875	Baseline
7/19/10	15:30	1.25425	Baseline
7/19/10	16:00	1.60025	Baseline
8/3/10	8:00	0.627125	Monthly Beach Topo Survey
8/3/10	8:30	0.627125	Monthly Beach Topo Survey
8/3/10	9:00	0.47575	Monthly Beach Topo Survey
8/3/10	9:30	0.47575	Monthly Beach Topo Survey
8/3/10	10:00	0.367625	Monthly Beach Topo Survey
8/3/10	10:30	0.367625	Monthly Beach Topo Survey
8/3/10	11:00	0.367625	Monthly Beach Topo Survey
8/3/10	11:30	0.367625	Monthly Beach Topo Survey
8/3/10	12:00	0.367625	Monthly Beach Topo Survey
8/3/10	12:30	0.367625	Monthly Beach Topo Survey
8/3/10	13:00	0.47575	Monthly Beach Topo Survey
8/3/10	13:30	0.6055	Monthly Beach Topo Survey
8/3/10	14:00	0.756875	Monthly Beach Topo Survey
8/3/10	14:30	0.90825	Monthly Beach Topo Survey
8/3/10	15:00	1.102875	Monthly Beach Topo Survey
8/9/10	6:00	0.173	Baseline Monitoring

Russian River Estuary Water Surface Elevations during Pinniped Baseline and Management Activity Monitoring, 2010

Date	Time	Jenner Gage Surface Elevation (feet, NGVD 29)	Pinniped Monitoring Type
8/9/10	6:30	-0.021625	Baseline Monitoring
8/9/10	7:00	-0.21625	Baseline Monitoring
8/9/10	7:30	-0.21625	Baseline Monitoring
8/9/10	8:00	-0.21625	Baseline Monitoring
8/9/10	8:30	-0.21625	Baseline Monitoring
8/9/10	9:00	-0.21625	Baseline Monitoring
8/9/10	9:30	-0.064875	Baseline Monitoring
8/9/10	10:00	0.30275	Baseline Monitoring
8/9/10	10:30	0.692	Baseline Monitoring
8/9/10	11:00	1.038	Baseline Monitoring
8/9/10	11:30	1.362375	Baseline Monitoring
8/9/10	12:00	1.6435	Baseline Monitoring
8/9/10	12:30	1.794875	Baseline Monitoring
8/9/10	13:00	1.794875	Baseline Monitoring
8/9/10	13:30	1.665125	Baseline Monitoring
8/9/10	14:00	1.535375	Baseline Monitoring
8/16/10	7:00	0.800125	Baseline Monitoring
8/16/10	7:30	0.583875	Baseline Monitoring
8/16/10	8:00	0.454125	Baseline Monitoring
8/16/10	8:30	0.2595	Baseline Monitoring
8/16/10	9:00	0.108125	Baseline Monitoring
8/16/10	9:30	0	Baseline Monitoring
8/16/10	10:00	-0.151375	Baseline Monitoring
8/16/10	10:30	-0.151375	Baseline Monitoring
8/16/10	10:30	-0.151375	Baseline Monitoring
8/16/10	11:00	-0.281125	Baseline Monitoring
8/16/10	11:30	-0.281125	Baseline Monitoring
8/16/10	12:00	-0.021625	Baseline Monitoring
8/16/10	12:30	0.151375	Baseline Monitoring
8/16/10	13:00	0.4325	Baseline Monitoring
8/16/10	13:30	0.692	Baseline Monitoring
8/16/10	14:00	1.038	Baseline Monitoring
8/16/10	14:30	1.384	Baseline Monitoring
8/16/10	15:00	1.708375	Baseline Monitoring
8/16/10	15:30	2.054375	Baseline Monitoring
9/7/10	9:00	1.4705	Monthly Beach Topo Survey
9/7/10	9:30	1.4705	Monthly Beach Topo Survey
9/7/10	10:00	1.6435	Monthly Beach Topo Survey
9/7/10	10:30	1.6435	Monthly Beach Topo Survey
9/7/10	11:00	1.838125	Monthly Beach Topo Survey
9/7/10	11:30	1.94625	Monthly Beach Topo Survey
9/7/10	12:00	1.94625	Monthly Beach Topo Survey
9/7/10	12:30	2.076	Monthly Beach Topo Survey
9/9/10	17:30	0.973125	Baseline
9/9/10	18:00	0.800125	Baseline
9/9/10	18:30	0.583875	Baseline

Russian River Estuary Water Surface Elevations during Pinniped Baseline and Management Activity Monitoring, 2010

Date	Time	Jenner Gage Surface Elevation (feet, NGVD 29)	Pinniped Monitoring Type
9/9/10	19:00	0.38925	Baseline
9/9/10	19:30	0.21625	Baseline
9/9/10	20:00	0.021625	Baseline
9/9/10	20:30	-0.108125	Baseline
9/9/10	21:00	-0.108125	Baseline
9/9/10	21:30	-0.108125	Baseline
9/9/10	22:00	0.12975	Baseline
9/9/10	22:30	0.454125	Baseline
9/9/10	23:00	0.7785	Baseline
9/9/10	23:30	1.1245	Baseline
9/16/10	7:30	0.90825	Baseline
9/16/10	8:00	1.102875	Baseline
9/16/10	8:30	1.211	Baseline
9/16/10	9:00	1.211	Baseline
9/16/10	9:30	1.211	Baseline
9/16/10	10:00	1.211	Baseline
9/16/10	10:30	1.038	Baseline
9/16/10	11:00	1.038	Baseline
9/16/10	11:30	0.886625	Baseline
9/16/10	12:00	0.7785	Baseline
9/16/10	12:30	0.7785	Baseline
9/16/10	13:00	0.670375	Baseline
9/16/10	13:30	0.670375	Baseline
9/16/10	14:00	0.670375	Baseline
9/16/10	14:30	0.800125	Baseline
9/16/10	15:00	0.9515	Baseline
9/27/10	7:00	5.773875	Pre-breaching
9/27/10	7:30	5.773875	Pre-breaching
9/27/10	8:00	5.773875	Pre-breaching
9/27/10	8:30	5.773875	Pre-breaching
9/27/10	9:00	5.773875	Pre-breaching
9/27/10	9:30	5.773875	Pre-breaching
9/27/10	10:00	5.773875	Pre-breaching
9/27/10	10:30	5.773875	Pre-breaching
9/27/10	11:00	5.773875	Pre-breaching
9/27/10	11:30	5.882	Pre-breaching
9/27/10	12:00	5.882	Pre-breaching
9/27/10	12:30	5.882	Pre-breaching
9/27/10	13:00	5.882	Pre-breaching
9/27/10	13:30	5.882	Pre-breaching
9/27/10	14:00	6.01175	Pre-breaching
9/27/10	14:30	6.01175	Pre-breaching
9/27/10	15:00	6.01175	Pre-breaching
9/29/10	12:00	6.768625	Lagoon Outlet Implementation
9/29/10	12:30	6.768625	Lagoon Outlet Implementation
9/29/10	13:00	6.768625	Lagoon Outlet Implementation

Russian River Estuary Water Surface Elevations during Pinniped Baseline and Management Activity Monitoring, 2010

Date	Time	Jenner Gage Surface Elevation (feet, NGVD 29)	Pinniped Monitoring Type
9/29/10	13:30	6.768625	Lagoon Outlet Implementation
9/30/10	6:30	7.093	Breaching
9/30/10	7:00	7.093	Breaching
9/30/10	7:30	7.093	Breaching
9/30/10	8:00	7.093	Breaching
9/30/10	8:30	7.093	Breaching
9/30/10	9:00	7.093	Breaching
9/30/10	9:30	7.093	Breaching
9/30/10	10:00	7.093	Breaching
9/30/10	10:30	7.093	Breaching
9/30/10	11:00	7.093	Breaching
9/30/10	11:30	7.093	Breaching
9/30/10	12:00	7.093	Breaching
9/30/10	12:30	7.093	Breaching
9/30/10	13:00	7.093	Breaching
9/30/10	13:30	7.201125	Breaching
9/30/10	17:00	7.30925	Breaching
10/1/10	6:30	7.547125	Breaching
10/1/10	7:00	7.547125	Breaching
10/1/10	7:30	7.547125	Breaching
10/1/10	8:00	7.547125	Breaching
10/1/10	8:30	7.547125	Breaching
10/1/10	9:00	7.547125	Breaching
10/1/10	9:30	7.65525	Breaching
10/1/10	10:00	7.65525	Breaching
10/1/10	10:00	7.65525	Breaching
10/1/10	10:30	7.65525	Breaching
10/1/10	11:00	7.65525	Breaching
10/1/10	11:30	7.65525	Breaching
10/1/10	12:00	7.65525	Breaching
10/1/10	12:30	7.65525	Breaching
10/1/10	13:00	7.65525	Breaching
10/1/10	13:30	7.65525	Breaching
10/2/10	7:00	1.708375	Post-Breaching
10/2/10	7:30	1.94625	Post-Breaching
10/2/10	8:00	1.94625	Post-Breaching
10/2/10	8:30	1.94625	Post-Breaching
10/2/10	9:00	1.94625	Post-Breaching
10/2/10	9:30	1.94625	Post-Breaching
10/2/10	10:00	1.708375	Post-Breaching
10/2/10	10:30	1.60025	Post-Breaching
10/2/10	11:00	1.492125	Post-Breaching
10/2/10	11:30	1.492125	Post-Breaching
10/2/10	12:00	1.362375	Post-Breaching
10/2/10	12:30	1.362375	Post-Breaching
10/2/10	13:00	1.362375	Post-Breaching

Russian River Estuary Water Surface Elevations during Pinniped Baseline and Management Activity Monitoring, 2010

Date	Time	Jenner Gage Surface Elevation (feet, NGVD 29)	Pinniped Monitoring Type
10/2/10	13:30	1.232625	Post-Breaching
10/2/10	14:00	1.232625	Post-Breaching
10/2/10	14:30	1.232625	Post-Breaching
10/2/10	15:00	1.232625	Post-Breaching
10/2/10	15:30	1.42725	Post-Breaching
10/7/10	17:30	5.06025	Lagoon Outlet Implementation
10/7/10	18:00	5.06025	Lagoon Outlet Implementation
10/7/10	18:30	5.06025	Lagoon Outlet Implementation
10/7/10	19:00	5.06025	Lagoon Outlet Implementation
10/7/10	19:30	5.168375	Lagoon Outlet Implementation
10/7/10	20:00	5.168375	Lagoon Outlet Implementation
10/7/10	20:30	5.168375	Lagoon Outlet Implementation
10/7/10	21:00	5.168375	Lagoon Outlet Implementation
10/7/10	21:30	5.168375	Lagoon Outlet Implementation
10/7/10	22:00	5.168375	Lagoon Outlet Implementation
10/7/10	22:30	5.168375	Lagoon Outlet Implementation
10/7/10	23:00	5.168375	Lagoon Outlet Implementation
10/7/10	23:30	5.168375	Lagoon Outlet Implementation
10/10/10	7:00	6.033375	Pre-Lagoon Outlet
10/10/10	7:30	6.033375	Pre-Lagoon Outlet
10/10/10	8:00	6.033375	Pre-Lagoon Outlet
10/10/10	8:30	6.033375	Pre-Lagoon Outlet
10/10/10	9:00	6.033375	Pre-Lagoon Outlet
10/10/10	9:30	6.033375	Pre-Lagoon Outlet
10/10/10	10:00	6.033375	Pre-Lagoon Outlet
10/10/10	10:30	6.033375	Pre-Lagoon Outlet
10/10/10	11:00	6.1415	Pre-Lagoon Outlet
10/10/10	11:30	6.1415	Pre-Breaching
10/10/10	12:00	6.1415	Pre-Breaching
10/10/10	12:30	6.1415	Pre-Breaching
10/10/10	13:00	6.1415	Pre-Breaching
10/10/10	13:30	6.1415	Pre-Breaching
10/10/10	14:00	6.1415	Pre-Breaching
10/10/10	14:30	6.1415	Pre-Breaching
10/10/10	15:00	6.1415	Pre-Breaching
10/10/10	15:30	6.1415	Pre-Breaching
10/11/10	11:30	6.465875	Breaching
10/11/10	12:00	6.465875	Breaching
10/11/10	12:30	6.465875	Breaching
10/11/10	13:00	6.574	Breaching
10/11/10	13:30	6.574	Breaching
10/11/10	14:00	6.574	Breaching
10/11/10	14:30	6.574	Breaching
10/11/10	15:00	6.574	Breaching
10/11/10	15:30	6.574	Breaching
10/11/10	16:00	6.574	Breaching

Russian River Estuary Water Surface Elevations during Pinniped Baseline and Management Activity Monitoring, 2010

Date	Time	Jenner Gage Surface Elevation (feet, NGVD 29)	Pinniped Monitoring Type
10/12/10	11:30	6.898375	Breaching
10/12/10	12:00	6.898375	Breaching
10/12/10	12:30	6.898375	Breaching
10/12/10	13:00	6.898375	Breaching
10/12/10	13:30	6.898375	Breaching
10/12/10	14:00	6.898375	Breaching
10/12/10	14:30	7.0065	Breaching
10/12/10	15:00	7.0065	Breaching
10/12/10	15:30	7.0065	Breaching
10/12/10	16:00	7.0065	Breaching
10/12/10	16:30	7.0065	Breaching
10/12/10	16:56	7.0065	Breaching
10/12/10	17:00	7.0065	Breaching
10/12/10	17:30	7.0065	Breaching
10/12/10	18:00	7.0065	Breaching
10/12/10	18:30	7.0065	Breaching
10/12/10	19:00	7.0065	Breaching
10/12/10	19:30	7.0065	Breaching
10/12/10	20:00	7.0065	Breaching
10/12/10	20:30	7.0065	Breaching
10/12/10	21:00	7.0065	Breaching
10/12/10	21:30	6.811875	Breaching
10/12/10	22:00	6.4875	Breaching
10/12/10	22:30	5.817125	Breaching
10/12/10	23:00	4.865625	Breaching
10/12/10	23:30	3.827625	Breaching
10/13/10	7:00	1.362375	Post-Breaching
10/13/10	7:30	1.211	Post-Breaching
10/13/10	8:00	1.08125	Post-Breaching
10/13/10	8:30	0.90825	Post-Breaching
10/13/10	9:00	0.90825	Post-Breaching
10/13/10	9:30	0.800125	Post-Breaching
10/13/10	10:00	0.800125	Post-Breaching
10/13/10	10:30	0.800125	Post-Breaching
10/13/10	11:00	0.973125	Post-Breaching
10/13/10	11:30	1.1245	Baseline
10/13/10	12:00	1.25425	Baseline
10/13/10	12:30	1.557	Baseline
10/13/10	13:00	1.751625	Baseline
10/13/10	13:30	2.054375	Baseline
10/13/10	14:00	2.249	Baseline
10/13/10	14:30	2.443625	Baseline
10/13/10	15:00	2.63825	Baseline
10/13/10	15:30	2.63825	Baseline
10/14/10	7:00	1.68675	Baseline
10/14/10	7:30	1.68675	Baseline

Russian River Estuary Water Surface Elevations during Pinniped Baseline and Management Activity Monitoring, 2010

Date	Time	Jenner Gage Surface Elevation (feet, NGVD 29)	Pinniped Monitoring Type
10/14/10	8:00	1.557	Baseline
10/14/10	8:30	1.557	Baseline
10/14/10	9:00	1.34075	Baseline
10/14/10	9:30	1.34075	Baseline
10/14/10	10:00	1.1245	Baseline
10/14/10	10:30	0.99475	Baseline
10/14/10	11:00	0.99475	Baseline
10/20/10	8:00	1.68675	Monthly Beach Topo Survey
10/20/10	8:30	1.85975	Monthly Beach Topo Survey
10/20/10	9:00	2.03275	Monthly Beach Topo Survey
10/20/10	9:30	2.184125	Monthly Beach Topo Survey
10/20/10	10:00	2.3355	Monthly Beach Topo Survey
10/20/10	10:30	2.46525	Monthly Beach Topo Survey
10/20/10	11:00	2.46525	Monthly Beach Topo Survey
10/20/10	11:30	2.616625	Monthly Beach Topo Survey
11/3/10	7:00	3.633	Baseline
11/3/10	7:30	3.806	Baseline
11/3/10	8:00	3.957375	Baseline
11/3/10	8:30	4.087125	Baseline
11/3/10	9:00	4.2385	Baseline
11/3/10	9:30	4.2385	Baseline
11/3/10	10:00	4.2385	Baseline
11/3/10	10:30	4.2385	Baseline
11/3/10	11:00	4.0655	Baseline
11/3/10	11:30	3.93575	Baseline
11/3/10	12:00	3.76275	Baseline
11/3/10	12:30	3.58975	Baseline
11/3/10	13:00	3.351875	Baseline
11/3/10	13:31	3.092375	Baseline
11/3/10	14:00	2.81125	Baseline
11/3/10	14:30	2.530125	Baseline
11/3/10	15:00	2.20575	Baseline
11/17/10	7:00	2.746375	Monthly Beach Topo Survey
11/17/10	20:00	2.595	Monthly Beach Topo Survey
11/17/10	20:30	2.595	Monthly Beach Topo Survey
11/17/10	21:00	2.595	Monthly Beach Topo Survey
11/17/10	21:30	2.595	Monthly Beach Topo Survey
11/17/10	22:00	2.595	Monthly Beach Topo Survey
11/17/10	22:30	2.595	Monthly Beach Topo Survey
11/17/10	23:00	2.595	Monthly Beach Topo Survey
11/17/10	23:30	2.595	Monthly Beach Topo Survey
12/2/10	7:00	3.395125	Baseline
12/2/10	7:30	3.611375	Baseline
12/2/10	8:00	3.784375	Baseline
12/2/10	8:30	3.784375	Baseline
12/2/10	9:00	3.784375	Baseline

Russian River Estuary Water Surface Elevations during Pinniped Baseline and Management Activity Monitoring, 2010

Date	Time	Jenner Gage Surface Elevation (feet, NGVD 29)	Pinniped Monitoring Type
12/2/10	9:30	3.67625	Baseline
12/2/10	10:00	3.50325	Baseline
12/2/10	10:30	3.3735	Baseline
12/2/10	11:00	3.15725	Baseline
12/2/10	11:30	2.962625	Baseline
12/2/10	12:00	2.72475	Baseline
12/2/10	12:30	2.530125	Baseline
12/2/10	13:00	2.313875	Baseline
12/2/10	13:30	2.11925	Baseline
12/2/10	14:00	1.94625	Baseline
12/2/10	14:30	1.751625	Baseline
12/2/10	15:00	1.557	Baseline

Appendix D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, strong breeze later	7:00	A	46	\	\	1	47
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, strong breeze later	7:00	B	16	\	\	7	23
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, strong breeze later	7:30	A	53	\	\	5	58
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	7:30	B	24	\	\	11	35
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	8:00	A	72	\	\	6	78
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	8:00	B	22	\	\	10	32
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	8:30	A	88	\	\	5	93
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	8:30	B	26	\	\	6	32
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	9:00	A	104	\	\	6	110
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	9:00	B	27	\	\	8	35
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	9:30	A	103	\	\	6	109
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	9:30	B	29	\	\	10	39
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	10:00	A	117	\	\	5	122
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	10:00	B	35	\	\	10	45
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	10:30	A	98	\	\	6	104
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	10:30	B	38	\	\	9	47
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	11:00	A	119	\	\	10	129
04/29/10	Jenner	7:00	11:00			1 - Clear			\	Sunny and cold, gentle start to strong breeze later	11:00	B	25	\	\	10	35
04/29/10	Jenner	11:30	4:00	54	Clear	1 - Clear	5 - Fresh Breeze				11:30	\	156	\	\	30	186
04/29/10	Jenner	11:30	4:00	54	Clear	1 - Clear	5 - Fresh Breeze				12:00	\	159	\	\	22	181
04/29/10	Jenner	11:30	4:00	54	Clear	1 - Clear	5 - Fresh Breeze			Very Windy	12:30	\	173	\	\	21	194
04/29/10	Jenner	11:30	4:00	54	Clear	1 - Clear	5 - Fresh Breeze			Beach disappearing, point of beach almost gone	13:00	\	172	\	\	21	193
04/29/10	Jenner	11:30	4:00	54	Clear	1 - Clear	5 - Fresh Breeze				13:30	\	154	\	\	19	173
04/29/10	Jenner	11:30	4:00	54	Clear	1 - Clear	5 - Fresh Breeze			Point after rock gone, no beach	14:00	\	160	\	\	20	180
04/29/10	Jenner	11:30	4:00	54	Clear	1 - Clear	5 - Fresh Breeze			Point after rock gone, with 2 seals	14:30	\	170	\	\	21	191
04/29/10	Jenner	11:30	4:00	54	Clear	1 - Clear	5 - Fresh Breeze			Windy still, a little haze	15:00	\	172	\	\	25	197
04/29/10	Jenner	11:30	4:00	54	Clear	1 - Clear	5 - Fresh Breeze			Point after rock back to beach	15:30	\	168	\	\	31	199
04/29/10	Jenner	11:30	4:00	54	Clear	1 - Clear	5 - Fresh Breeze			Bright windy from SW ? Mostly	16:00	\	177	\	\	25	202
04/29/10	North Jenner	7:11	7:21		Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Odin Cove	7:14	7:24		Clear	1 - Clear	\	\	\				0	\	\	0	0

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
04/29/10	Jenner (Ask Count)	7:28	7:38		Clear	1 - Clear	\	\	\				68	\	\	9	77
04/29/10	Penny Logs	7:45	7:55		Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Paddy's Rock	7:46	7:56		Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Chalanchawi	8:00	8:11		Clear	1 - Clear	\	\	\				3	\	\	0	3
04/29/10	Pocked Rock	8:21	8:30		Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Kabemali	8:32			Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Rock Point	8:45			Clear	1 - Clear	\	\	\				1	\	\	0	1
04/29/10	North Jenner	9:12	9:22		Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Odin Cove	9:15	9:25		Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Jenner (Ask Count)	9:30	9:40		Clear	1 - Clear	\	\	\				127	\	\	14	141
04/29/10	Penny Logs	9:44	9:54		Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Paddy's Rock	9:46	9:56		Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Chalanchawi	9:58	10:08		Clear	1 - Clear	\	\	\				5	\	\	0	5
04/29/10	Pocked Rock	10:16	10:25		Clear	1 - Clear	\	\	\				3	\	\	0	3
04/29/10	Kabemali	10:27	10:34		Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Rock Point	10:35	10:45		Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	North Jenner	11:35	11:50	\	Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Odin Cove	11:35	11:50	\	Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Jenner (Ask Count)	11:55	11:55	\	Clear	1 - Clear	\	\	\				126	\	\	30	156
04/29/10	Penny Logs	12:15	12:30	\	Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Paddy's Rock	12:15	12:30	\	Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Chalanchawi	12:35	12:50	\	Clear	1 - Clear	\	\	\				2	\	\	0	2
04/29/10	Pocked Rock	13:00	13:15	\	Clear	1 - Clear	\	\	\				1	\	\	0	1
04/29/10	Kabemali	13:17	13:37	\	Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Rock Point	13:38	13:53	\	Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	North Jenner	14:00	14:15	\	Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Odin Cove	14:00	14:15	\	Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Jenner (Ask Count)	14:20	14:20	\	Clear	1 - Clear	\	\	\				140	\	\	20	160
04/29/10	Penny Logs	14:25	14:40	\	Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Paddy's Rock	14:25	14:40	\	Clear	1 - Clear	\	\	\				0	\	\	0	0

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
04/29/10	Chalanchawi	14:42	14:57	\	Clear	1 - Clear	\	\	\				2	\	\	0	2
04/29/10	Pocked Rock	14:59	15:15	\	Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Kabemali	15:16	15:31	\	Clear	1 - Clear	\	\	\				0	\	\	0	0
04/29/10	Rock Point	15:32	15:37	\	Clear	1 - Clear	\	\	\				0	\	\	0	0
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		7:30		63	1	8		72
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		8:00		83	1	12		96
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		8:30		114	1	13		127
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		9:00		118	1	14		132
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		9:30		131	3	20		154
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		10:00		130	3	12		145
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		10:30		136	3	16		145
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		11:00		117	3	15		135
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		11:30		111	3	18		132
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		12:00		113	4	11		128
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		12:30		118	4	14		136
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		13:00		113	4	14		131
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		13:30		122	4	23		148
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		14:00		126	5	17		148
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		14:30		127	5	20		152
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		15:00		83	5	17		105
5/6/2010	Jenner	7:15	3:30			1 - Clear	3 - Gentle Breeze	West	2 - Light Breeze		15:30		89	5	19		109
05/06/10	North Jenner	7:15	7:25	51	None	1 - Clear	0 - Calm	\	0 - Calm				0	0	0	0	0
05/06/10	Odin Cove	7:19	7:28	51	None	1 - Clear	0 - Calm	\	0 - Calm				0	0	0	0	0
05/06/10	Jenner (Ask Count)	7:32	7:42	51	None	1 - Clear	0 - Calm	\	0 - Calm				63	0	9	9	72
05/06/10	Penny Logs	7:44	7:55	51	None	1 - Clear	0 - Calm	\	0 - Calm				0	0	0	0	0
05/06/10	Paddy's Rock	7:47	7:57	51	None	1 - Clear	0 - Calm	\	0 - Calm				0	0	0	0	0
05/06/10	Chalanchawi	7:58	8:08	51	None	1 - Clear	0 - Calm	\	0 - Calm				1	0	0	0	1
05/06/10	Pocked Rock	8:16	8:26	51	None	1 - Clear	0 - Calm	\	0 - Calm	Wind = 2			4	0	0	0	4
05/06/10	Kabemali	8:30	8:38	51	None	1 - Clear	0 - Calm	\	0 - Calm				7	0	0	0	7
05/06/10	Rock Point	8:39	8:49	51	None	1 - Clear	0 - Calm	\	0 - Calm				3	0	0	0	3

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
05/06/10	North Jenner	9:07	9:17	51	None	1 - Clear	0 - Calm	\	0 - Calm				1	0	0	0	1
05/06/10	Odin Cove	9:10	9:19	51	None	1 - Clear	0 - Calm	\	0 - Calm				0	0	0	0	0
05/06/10	Jenner (Ask Count)	9:25	9:35	51	None	1 - Clear	0 - Calm	\	0 - Calm				137	3	20	23	160
05/06/10	Penny Logs	9:40	9:50	51	None	1 - Clear	0 - Calm	\	0 - Calm				1	0	0	0	1
05/06/10	Paddy's Rock	9:42	9:52	51	None	1 - Clear	0 - Calm	\	0 - Calm				0	0	0	0	0
05/06/10	Chalanchawi	9:57	10:06	51	None	1 - Clear	2 - Light Breeze	\	0 - Calm	Wind = 2			5	0	0	0	5
05/06/10	Pocked Rock	10:14	10:24	51	None	1 - Clear	2 - Light Breeze	\	0 - Calm				6	1	0	1	7
05/06/10	Kabemali	10:27	10:36	51	None	1 - Clear	2 - Light Breeze	\	0 - Calm				12	0	0	0	12
05/06/10	Rock Point	10:37	10:48	51	None	1 - Clear	2 - Light Breeze	\	0 - Calm				9	0	0	0	9
05/06/10	North Jenner	11:43	11:55	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				0	0	0	0	0
05/06/10	Odin Cove	11:43	11:55	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				4	1	1	2	6
05/06/10	Jenner (Ask Count)	12:05	12:16	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				128	4	11	15	143
05/06/10	Penny Logs	12:18	12:29	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				0	0	0	0	0
05/06/10	Paddy's Rock	12:18	12:29	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				0	0	0	0	0
05/06/10	Chalanchawi	12:27	12:39	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				5	0	0	0	5
05/06/10	Pocked Rock	12:46	12:58	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				9	0	0	0	9
05/06/10	Kabemali	13:03	13:10	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				5	0	0	0	5
05/06/10	Rock Point	13:16	13:25	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				15	0	2	2	17
05/06/10	North Jenner	13:45	14:00	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				8	0	0	0	8
05/06/10	Odin Cove	13:45	14:00	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				6	1	0	1	7
05/06/10	Jenner (Ask Count)	14:01	14:06	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				136	4	17	21	157
05/06/10	Penny Logs	14:09	14:19	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				0	0	0	0	0
05/06/10	Paddy's Rock	14:09	14:19	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				0	0	0	0	0
05/06/10	Chalanchawi	14:22	14:29	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				7	0	0	0	7
05/06/10	Pocked Rock	14:34	14:45	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				2	0	0	0	2
05/06/10	Kabemali	14:48	14:58	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				4	0	0	0	4
05/06/10	Rock Point	15:01	15:11	65	None	1 - Clear	3 - Gentle Breeze	NW	2 - Light Breeze				13	0	0	0	13
05/27/10	Jenner	7:00	11:00	57	Rain Off and On	1 - Clear	1.5	SW	1.5	Cold, Rainy Day	7:00	A	38	0	4	4	42
05/27/10	Jenner	7:00	11:00	57	Rain Off and On	1 - Clear	1.5	SW	1.5	Cold, Rainy Day	7:30	A	39	0	5	5	44
05/27/10	Jenner	7:00	11:00	57	Rain Off and On	1 - Clear	1.5	SW	1.5	Cold, Rainy Day	8:00	A	50	0	7	7	57

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
05/27/10	Jenner	7:00	11:00	57	Rain Off and On	1 - Clear	1.5	SW	1.5	Cold, Rainy Day	8:30	A	56	0	11	11	67
05/27/10	Jenner	7:00	11:00	57	Rain Off and On	1 - Clear	1.5	SW	1.5	Cold, Rainy Day	9:00	A	59	0	12	12	71
05/27/10	Jenner	7:00	11:00	57	Rain Off and On	1 - Clear	1.5	SW	1.5	Cold, Rainy Day	9:30	A	65	0	10	10	75
05/27/10	Jenner	7:00	11:00	57	Rain Off and On	1 - Clear	1.5	SW	1.5	Cold, Rainy Day	10:00	A	70	0	14	14	84
05/27/10	Jenner	7:00	11:00	57	Rain Off and On	1 - Clear	1.5	SW	1.5	Cold, Rainy Day	10:30	A	70	0	11	11	81
05/27/10	Jenner	7:00	11:00	57	Rain Off and On	1 - Clear	1.5	SW	1.5	Cold, Rainy Day	11:00	A	87	0	13	13	100
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	11:30	A	15	0	2	2	17
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	11:30	B	80	1	4	5	85
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	12:00	A	14	0	2	2	16
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	12:00	B	74	1	2	3	77
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	12:30	A	14	0	2	2	16
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	12:30	B	85	1	4	5	90
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	13:00	A	15	0	3	3	18
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	13:00	B	85	1	4	5	90
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	13:30	A	15	0	4	4	19
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	13:30	B	84	1	3	4	88
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	14:00	A	15	0	4	4	19
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	14:00	B	87	1	8	9	96
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	14:30	A	12	0	4	4	16
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	14:30	B	85	1	9	10	95
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	15:00	A	8	0	2	2	10
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	15:00	B	91	1	11	12	103
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	15:30	A	6	0	5	5	11
05/27/10	Jenner	11:30	15:30	61	None	1 - Clear	3.5	NW	4	Somewhat overcast, quiet, post storm conditions	15:30	B	91	1	11	12	103
05/27/10	North Jenner	7:04	7:14	49	Rain	\	2 - Light Breeze	NW	2 - Light Breeze				0	0	0	0	0
05/27/10	Odin Cove	7:07	7:17	49	Rain	\	2 - Light Breeze	NW	2 - Light Breeze	Low Tide			0	0	0	0	0
05/27/10	Jenner (Ask Count)	7:28	7:38	49	Rain	\	2 - Light Breeze	NW	2 - Light Breeze				38	0	5	5	43
05/27/10	Penny Logs	7:44	7:54	49	Rain	\	2 - Light Breeze	NW	2 - Light Breeze				0	0	0	0	0
05/27/10	Paddy's Rock	7:46	7:56	49	Rain	\	2 - Light Breeze	NW	2 - Light Breeze				0	0	0	0	0
05/27/10	Chalanchawi	7:58	8:06	49	Rain	\	2 - Light Breeze	NW	2 - Light Breeze				1	0	0	0	1

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
05/27/10	Pocked Rock	8:14	8:25	49	Rain	\	2 - Light Breeze	NW	2 - Light Breeze				1	0	0	0	1
05/27/10	Kabemali	8:27	8:36	49	Rain	\	2 - Light Breeze	NW	2 - Light Breeze				1	0	0	0	1
05/27/10	Rock Point	8:37	8:46	49	Rain	\	2 - Light Breeze	NW	2 - Light Breeze				0	0	0	0	0
05/27/10	North Jenner	9:01	9:11	49	Rain	\	2 - Light Breeze	NW	2 - Light Breeze	Raining gently			0	0	0	0	0
05/27/10	Odin Cove	9:02	9:12	49	Rain	\	2 - Light Breeze	NW	2 - Light Breeze				0	0	0	0	0
05/27/10	Jenner (Ask Count)	9:15	9:23	49	Rain	\	0 - Calm	NW	2 - Light Breeze	Modarate rain, no wind			49	0	9	9	58
05/27/10	Penny Logs	9:26	9:34	49	Rain	\	0 - Calm	NW	2 - Light Breeze	Visibility down			0	0	0	0	0
05/27/10	Paddy's Rock	9:27	9:36	49	Rain	\	0 - Calm	NW	2 - Light Breeze	Visibility down			0	0	0	0	0
05/27/10	Chalanchawi	9:37	9:42	49	Rain	\	0 - Calm	NW	2 - Light Breeze	Rain			0	0	0	0	0
05/27/10	Pocked Rock	9:50	9:55	49	Rain	\	0 - Calm	NW	2 - Light Breeze				0	0	0	0	0
05/27/10	Kabemali	9:57	10:08	49	Rain	\	0 - Calm	NW	2 - Light Breeze	Rain no equipment use			0	0	0	0	0
05/27/10	Rock Point	10:10	10:19	49	Rain	\	0 - Calm	NW	2 - Light Breeze	Rain continues			0	0	0	0	0
05/27/10	North Jenner	11:30	11:40	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				0	0	0	0	0
05/27/10	Odin Cove	11:40	11:50	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze	Rain in AM			1	0	1	1	2
05/27/10	Jenner (Ask Count)	12:00	12:10	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze	Clouds and overcast			88	1	4	5	93
05/27/10	Penny Logs	12:20	12:30	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				1	0	0	0	1
05/27/10	Paddy's Rock	12:30	12:40	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				0	0	0	0	0
05/27/10	Chalanchawi	12:45	12:55	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				2	0	0	0	2
05/27/10	Pocked Rock	13:10	13:20	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze	Some distance to offshore rock			8	0	0	0	8
05/27/10	Kabemali	13:30	13:40	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				1	0	0	0	1
05/27/10	Rock Point	13:45	13:55	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				1	0	0	0	1
05/27/10	North Jenner	14:10	14:20	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				0	0	0	0	0
05/27/10	Odin Cove	14:20	14:30	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				3	0	1	1	4
05/27/10	Jenner (Ask Count)	14:32	14:42	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				97	1	4	5	102
05/27/10	Penny Logs	14:43	14:53	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				0	0	0	0	0
05/27/10	Paddy's Rock	14:43	14:53	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				0	0	0	0	0
05/27/10	Pocked Rock	15:10	15:20	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				10	0	0	0	10
05/27/10	Kabemali	15:22	15:32	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				2	0	0	0	2
05/27/10	Rock Point	15:34	15:44	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				1	0	0	0	1
05/27/10	Chalanchawi	15:58	15:08	61	\	1 - Clear	3 - Gentle Breeze	S	3 - Gentle Breeze				2	0	0	0	2

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		5:46						
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		6:14	A	19	0	0		19
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		6:14	B	106	0	0		106
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		6:46						
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		7:16						
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		7:46						
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		7:58	A	16	0	1		17
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		7:58	B					
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		8:16						
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		8:46						
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		9:16						
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		9:25	A	12	0	2		14
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		9:25	B	94	0	0		94
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		9:46	A	12	0	2		14
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		9:46	B	105	0	0		101
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		10:16	A	10	0	2		12
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		10:16	B	105	0	0		105
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		10:46	A	6	0	1		7
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		10:46	B					
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		11:11	A	7	0	0		7
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		11:11	B	100	0	0		100
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		11:46	A	5	0	0		5
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		11:46	B	107	0	0		107
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		12:20	A	5	0	0		5
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		12:26	B	105	0	0		105
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		12:46	A	7	0	0		7
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		12:46	B	100	0	7		107
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		13:16	A	10	0	0		10
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		13:26	B	100	0	0		100
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		13:46	A	9	0	0		9

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
06/14/10	Jenner	5:46	13:46	48	Clear	3 - Unable to conduct an accurate or full count	Less than 1	W	Light breeze @ 1300		13:46	B	102	0	0		102
06/14/10	Jenner (Ask Count)	6:14		48	Fog	2 - Slightly obscured but still able to count	0 - Calm		2 - Light Breeze				106	0	0	0	106
06/14/10	North Jenner	7:40	7:50	48	Fog	3 - Unable to conduct an accurate or full count	\		2 - Light Breeze				\			0	\
06/14/10	Odin Cove	7:40	7:50	48	Fog	3 - Unable to conduct an accurate or full count	\		2 - Light Breeze				\			0	\
06/14/10	Penny Logs	8:05	8:15	48	Fog	3 - Unable to conduct an accurate or full count	\		2 - Light Breeze				\			0	\
06/14/10	Paddy's Rock	8:05	8:15	48	Fog	3 - Unable to conduct an accurate or full count	\		2 - Light Breeze				\			0	\
06/14/10	Chalanchawi	8:20	8:30	48		2 - Slightly obscured but still able to count	\		2 - Light Breeze				5	0	0	0	5
06/14/10	Pocked Rock	8:40	8:50	48	Fog	3 - Unable to conduct an accurate or full count	\		2 - Light Breeze				\			0	\
06/14/10	Kabemali	8:52	9:02	48		2 - Slightly obscured but still able to count	\		2 - Light Breeze				1	0	0	0	1
06/14/10	Rock Point	9:04	9:14	48		2 - Slightly obscured but still able to count	\		2 - Light Breeze				3	0	0	0	3
06/14/10	Jenner (Ask Count)	9:46		48		2 - Slightly obscured but still able to count	\		2 - Light Breeze				115	0	0	0	115
06/14/10	North Jenner	9:50	10:00	48		2 - Slightly obscured but still able to count	\		2 - Light Breeze				0	0	0	0	0
06/14/10	Odin Cove	9:50	10:00	48		2 - Slightly obscured but still able to count	\		2 - Light Breeze				0	0	0	0	0
06/14/10	Penny Logs	10:15	10:25	48		2 - Slightly obscured but still able to count	\		2 - Light Breeze				0	0	0	0	0
06/14/10	Paddy's Rock	10:15	10:25	48		2 - Slightly obscured but still able to count	\		2 - Light Breeze				0	0	0	0	0
06/14/10	Chalanchawi	10:30	10:40	48		2 - Slightly obscured but still able to count	\		2 - Light Breeze				9	0	0	0	9
06/14/10	Pocked Rock	10:45	10:55	48	Fog	3 - Unable to conduct an accurate or full count	\		2 - Light Breeze				\			0	\
06/14/10	Kabemali	11:05	11:15	48		2 - Slightly obscured but still able to count	\		2 - Light Breeze				1	0	0	0	1
06/14/10	Rock Point	11:17	11:27	48		2 - Slightly obscured but still able to count	1 - Light Air		2 - Light Breeze				0	0	0	0	0
06/14/10	North Jenner	11:35	11:45	55	Fog	2 - Slightly obscured but still able to count	1 - Light Air		2 - Light Breeze				0	0	0	0	0
06/14/10	Odin Cove	11:35	11:45	55	Fog	2 - Slightly obscured but still able to count	1 - Light Air		2 - Light Breeze				0	0	0	0	0
06/14/10	Jenner (Ask Count)	11:46		55	Fog	2 - Slightly obscured but still able to count	1 - Light Air		2 - Light Breeze				112	0	0	0	112
06/14/10	Penny Logs	12:20	12:30	55	None	1 - Clear	1 - Light Air		2 - Light Breeze				0	0	0	0	0
06/14/10	Paddy's Rock	12:20	12:30	55	None	1 - Clear	1 - Light Air		2 - Light Breeze				0	0	0	0	0
06/14/10	Chalanchawi	12:35	12:45	55	None	1 - Clear	1 - Light Air		2 - Light Breeze				7	0	0	0	7
06/14/10	Pocked Rock	12:55	13:05	55	None	1 - Clear	1 - Light Air		2 - Light Breeze				0	0	0	0	0
06/14/10	Kabemali	13:07	13:17	55	None	1 - Clear	1 - Light Air		2 - Light Breeze				0	0	0	0	0
06/14/10	Rock Point	13:19	13:29	55	None	1 - Clear	1 - Light Air		2 - Light Breeze				1	0	0	0	1
06/14/10	North Jenner	13:40	13:50	55	None	1 - Clear	1 - Light Air		2 - Light Breeze				0	0	0	0	0
06/14/10	Odin Cove	13:40	13:50	55	None	1 - Clear	1 - Light Air		2 - Light Breeze				0	0	0	0	0

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
06/14/10	Jenner (Ask Count)	13:45		55	None	1 - Clear	1 - Light Air		2 - Light Breeze				111	0	0	0	111
06/14/10	Penny Logs	13:55	14:05	55	None	1 - Clear	1 - Light Air		2 - Light Breeze				0	0	0	0	0
06/14/10	Paddy's Rock	13:55	14:05	55	None	1 - Clear	1 - Light Air		2 - Light Breeze				0	0	0	0	0
06/14/10	Chalanchawi	14:07	14:17	55	None	1 - Clear	1 - Light Air		2 - Light Breeze				8	0	0	0	8
06/14/10	Pocked Rock	14:21	14:31	55	None	1 - Clear	1 - Light Air		2 - Light Breeze				9	0	0	0	9
06/14/10	Rock Point	14:25	14:55	55	None	1 - Clear	1 - Light Air		2 - Light Breeze				0	0	0	0	0
06/14/10	Kabemali	14:33	14:43	55	None	1 - Clear	1 - Light Air		2 - Light Breeze				0	0	0	0	0
06/21/10	Jenner	7:00	11:00	60	None	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze		7:00	A	202	0	0	0	202
06/21/10	Jenner	7:00	11:00	60	None	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze		7:30	A	202	0	0	0	202
06/21/10	Jenner	7:00	11:00	60	None	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze		8:00	A	198	0	0	0	198
06/21/10	Jenner	7:00	11:00	60	None	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze		8:30	A	195	0	0	0	195
06/21/10	Jenner	7:00	11:00	60	None	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze		9:00	A	195	0	0	0	195
06/21/10	Jenner	7:00	11:00	60	None	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze		9:30	A	175	0	0	0	175
06/21/10	Jenner	7:00	11:00	60	None	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze		10:00	A	183	0	0	0	183
06/21/10	Jenner	7:00	11:00	60	None	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze		10:30	A	147	0	0	0	147
06/21/10	Jenner	7:00	11:00	60	None	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze		11:00	A	156	0	0	0	156
06/21/10	North Jenner	7:00	7:10	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			0	0	0	0	0
06/21/10	Odin Cove	7:00	7:10	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			0	0	0	0	0
06/21/10	Jenner (Ask Count)	7:15	7:25	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			192	10	10	0	192
06/21/10	Penny Logs	7:30	7:40	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			0	0	0	0	0
06/21/10	Paddy's Rock	7:30	7:40	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			0	0	0	0	0
06/21/10	Chalanchawi	7:44	7:54	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			0	0	0	0	0
06/21/10	Pocked Rock	8:02	8:12	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			0	0	0	0	0
06/21/10	Kabemali	8:15	8:25	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			3	0	0	0	3
06/21/10	Rock Point	8:27	8:37	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			4	0	0	0	4
06/21/10	North Jenner	8:58	9:08	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			0	0	0	0	0
06/21/10	Odin Cove	8:58	9:08	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			0	0	0	0	0
06/21/10	Jenner (Ask Count)	9:12	9:22	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			191	6	6	0	191
06/21/10	Penny Logs	9:23	9:33	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			0	0	0	0	0
06/21/10	Paddy's Rock	9:23	9:33	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			0	0	0	0	0

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
06/21/10	Chalanchawi	9:35	9:45	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			1	0	0	0	1
06/21/10	Pocked Rock	9:54	10:04	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			6	0	0	0	6
06/21/10	Kabemali	10:07	10:17	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			1	0	0	0	1
06/21/10	Rock Point	10:19	10:29	55	None	1 - Clear	0 - Calm		0 - Calm	Very quiet			5	0	0	0	5
06/21/10	North Jenner	11:42	11:52	64	None	1 - Clear	0 - Calm	West	0 - Calm				0	0	0	0	0
06/21/10	Odin Cove	11:46	11:56	64	None	1 - Clear	0 - Calm	West	0 - Calm				0	0	0	0	0
06/21/10	Jenner (Ask Count)	12:03	12:14	64	None	1 - Clear	0 - Calm	West	0 - Calm				117	0	0	0	117
06/21/10	Penny Logs	12:26	12:36	64	None	1 - Clear	0 - Calm	West	0 - Calm				0	0	0	0	0
06/21/10	Paddy's Rock	12:30	12:40	64	None	1 - Clear	0 - Calm	West	0 - Calm				0	0	0	0	0
06/21/10	Chalanchawi	12:42	12:52	64	None	1 - Clear	0 - Calm	West	0 - Calm				5	0	0	0	5
06/21/10	Pocked Rock	13:00	13:10	64	None	1 - Clear	0 - Calm	West	0 - Calm				4	0	0	0	4
06/21/10	Kabemali	13:13	13:23	64	None	1 - Clear	0 - Calm	West	0 - Calm				3	0	0	0	3
06/21/10	Rock Point	13:25	13:34	64	None	1 - Clear	0 - Calm	West	0 - Calm				3	0	0	0	3
06/21/10	North Jenner	13:52	14:01	64	None	1 - Clear	0 - Calm	West	0 - Calm				0	0	0	0	0
06/21/10	Odin Cove	13:55	14:04	64	None	1 - Clear	0 - Calm	West	0 - Calm				0	0	0	0	0
06/21/10	Jenner (Ask Count)	14:10	14:30	64	None	1 - Clear	0 - Calm	West	0 - Calm				72	0	0	0	72
06/21/10	Penny Logs	14:37	14:46	64	None	1 - Clear	0 - Calm	West	0 - Calm				0	0	0	0	0
06/21/10	Paddy's Rock	14:39	14:48	64	None	1 - Clear	0 - Calm	West	0 - Calm				0	0	0	0	0
06/21/10	Chalanchawi	14:50	14:59	64	None	1 - Clear	0 - Calm	West	0 - Calm				6	0	0	0	6
06/21/10	Pocked Rock	15:07	15:17	64	None	1 - Clear	0 - Calm	West	0 - Calm				3	0	0	0	3
06/21/10	Kabemali	15:19	15:24	64	None	1 - Clear	0 - Calm	West	0 - Calm				0	0	0	0	0
06/21/10	Rock Point	15:27	\	64	None	1 - Clear	0 - Calm	West	0 - Calm				7	0	0	0	7
07/12/10	North Jenner	6:30	6:40	50	Fog		1 - Light Air	West			-9999	0	0	0	0	0	0
07/12/10	Odin Cove	6:40	6:50	50	Fog		1 - Light Air	West			-9999	0	0	0	0	0	0
07/12/10	Jenner (Ask Count)	6:58	7:08	50	Fog		1 - Light Air	West			-9999	270	270	0	0	0	270
07/12/10	Penny Logs	7:15	7:25	50	Fog		1 - Light Air	West			-9999	0	0	0	0	0	0
07/12/10	Paddy's Rock	7:25	7:35	50	Fog		1 - Light Air	West			-9999	0	0	0	0	0	0
07/12/10	Chalanchawi	7:38	7:48	50	Fog		1 - Light Air	West			-9999	0	0	0	0	0	0
07/12/10	Pocked Rock	7:56	8:06	50	Fog		1 - Light Air	West			-9999	3	3	0	0	0	3
07/12/10	Kabemali	8:10	8:20	50	Fog		1 - Light Air	West			-9999	2	2	0	0	0	2

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
07/12/10	Rock Point	8:22	8:32	50	Fog		1 - Light Air	West			-9999	15	15	0	0		15
07/12/10	North Jenner	8:47	8:57	50	Fog		1 - Light Air	West			-9999	0	0	0	0		0
07/12/10	Odin Cove	8:57	9:07	50	Fog		1 - Light Air	West			-9999	0	0	0	0		0
07/12/10	Jenner (Ask Count)	9:10	9:20	50	Fog		1 - Light Air	West			-9999	261	258	0	3		261
07/12/10	Penny Logs	9:26	9:36	50	Fog		1 - Light Air	West			-9999	0	0	0	0		0
07/12/10	Paddy's Rock	9:36	9:46	50	Fog		1 - Light Air	West			-9999	0	0	0	0		0
07/12/10	Chalanchawi	9:48	9:58	50	Fog		1 - Light Air	West			-9999	0	0	0	0		0
07/12/10	Pocked Rock	10:06	10:16	50	Fog		1 - Light Air	West			-9999	4	4	0	0		4
07/12/10	Kabemali	10:20	10:30	50	Fog		1 - Light Air	West			-9999	2	2	0	0		2
07/12/10	Rock Point	10:32	10:42	50	Fog		1 - Light Air	West			-9999	0	0	0	0		0
07/12/10	North Jenner	11:30	11:40	59	Fog	1 - Clear				Deserted	-9999	0	0	0	0		0
07/12/10	Odin Cove	11:30	11:40	59	Fog	1 - Clear				Deserted	-9999	9	8	0	1		9
07/12/10	Jenner (Ask Count)	11:45	11:55	59	Fog	1 - Clear				Deserted	-9999	196	183	0	13		196
07/12/10	Penny Logs	11:58	12:08	59	Fog	1 - Clear				Deserted	-9999	0	0	0	0		0
07/12/10	Paddy's Rock	11:58	12:08	59	Fog	1 - Clear				Deserted	-9999	0	0	0	0		0
07/12/10	Chalanchawi	12:10	12:20	59	Fog	1 - Clear				Deserted	-9999	4	4	0	0		4
07/12/10	Pocked Rock	12:25	12:35	59	Fog	1 - Clear				Deserted	-9999	4	4	0	0		4
07/12/10	Kabemali	12:37	12:47	59	Fog	1 - Clear				Deserted	-9999	0	0	0	0		0
07/12/10	Rock Point	12:48	12:58	59	Fog	1 - Clear				Deserted	-9999	13	12	0	1		13
07/12/10	North Jenner	13:11	13:21	59	Fog	1 - Clear				Deserted	-9999	0	0	0	0		0
07/12/10	Odin Cove	13:11	13:21	59	Fog	1 - Clear				Deserted	-9999	10	9	0	1		10
07/12/10	Jenner (Ask Count)	13:27	13:37	59	Fog	1 - Clear				Deserted	-9999	189	174	0	15		189
07/12/10	Penny Logs	13:40	13:50	59	Fog	1 - Clear				Deserted	-9999	0	0	0	0		0
07/12/10	Paddy's Rock	13:40	13:50	59	Fog	1 - Clear				Deserted	-9999	0	0	0	0		0
07/12/10	Chalanchawi	13:52	14:02	59	Fog	1 - Clear				Deserted	-9999	3	3	0	0		3
07/12/10	Pocked Rock	14:06	14:16	59	Fog	1 - Clear				Deserted	-9999	4	4	0	0		4
07/12/10	Kabemali	14:18	14:28	59	Fog	1 - Clear				Deserted	-9999	0	0	0	0		0
07/12/10	Rock Point	14:29	14:39	59	Fog	1 - Clear				Deserted	-9999	14	13	0	1		14
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	6:00	A	242				242
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	6:00	B	4				4

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	6:30	A	272				272
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	6:30	B	11				11
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	7:00	A	264				264
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	7:00	B	25				25
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	7:30	A	269				269
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	7:30	B	26				26
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	8:00	A	269				269
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	8:00	B	33				33
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	8:30	A	271				271
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	8:30	B	36				36
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	9:00	A	269				269
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	9:00	B	38				38
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	9:30	A	271				271
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	9:30	B	41				41
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	10:00	A	275				275
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	10:00	B	42				42
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	10:30	A	273				273
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	10:30	B	47				47
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	11:00	A	272				272
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	11:00	B	51				51
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	11:30	A	269				269
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	11:30	B	53				53
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	12:00	A	236				236
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	12:00	B	60				60
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	12:30	A	210				210
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	12:30	B	43				43
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	13:00	A	210				210
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	13:00	B	59				59
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	13:30	A	204				204
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	13:30	B	62				62

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	14:00	A	201				201
07/13/10	Jenner	6:00	14:00	60	Fog	1 - Clear	2 - Light Breeze	sw	2 - Light Breeze	beach occurred naturally yesterday (NOTE:actually	14:00	B	63				63
07/13/10	North Jenner	7:00	7:10	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		0	0	0		0
07/13/10	Odin Cove	7:00	7:10	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		4	0	0		4
07/13/10	Jenner (Ask Count)	7:16	7:26	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		273	0	12		285
07/13/10	Penny Logs	7:29	7:39	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		0	0	0		0
07/13/10	Paddy's Rock	7:29	7:39	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		0	0	0		0
07/13/10	Chalanchawi	7:41	7:51	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		2	0	0		2
07/13/10	Pocked Rock	8:02	8:12	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		4	0	0		4
07/13/10	Kabemali	8:14	8:24	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		0	0	0		0
07/13/10	Rock Point	8:27	8:37	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		18	0	1		19
07/13/10	North Jenner	8:58	9:08	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		0	0	0		0
07/13/10	Odin Cove	8:58	9:08	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		5	0	0		5
07/13/10	Jenner (Ask Count)	9:13	9:23	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		285	0	12		297
07/13/10	Penny Logs	9:27	9:37	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		0	0	0		0
07/13/10	Paddy's Rock	9:27	9:37	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		0	0	0		0
07/13/10	Chalanchawi	9:39	9:49	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		3	0	0		3
07/13/10	Pocked Rock	10:00	10:10	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		4	0	0		4
07/13/10	Kabemali	10:13	10:23	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		0	0	0		0
07/13/10	Rock Point	10:25	10:35	56	Fog	2 - Slightly obscured but still able to count	1 - Light Air	Southeast	1 - Light Air	Quiet survey does not appear to affect seals	-9999		27	0	1		28
07/13/10	North Jenner	11:30	11:40	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		0	0	0		0
07/13/10	Odin Cove	11:30	11:40	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		2	0	1		3
07/13/10	Jenner (Ask Count)	11:45	11:55	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		277	0	10		287
07/13/10	Penny Logs	11:59	12:09	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		0	0	0		0
07/13/10	Paddy's Rock	11:59	12:09	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		0	0	0		0
07/13/10	Chalanchawi	12:12	12:22	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		4	0	0		4
07/13/10	Kabemali	12:43	12:53	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		0	0	0		0
07/13/10	Rock Point	12:55	13:05	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		12	0	1		13
07/13/10	North Jenner	13:26	13:36	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		0	0	0		0
07/13/10	Odin Cove	13:26	13:36	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		2	0	0		2

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
07/13/10	Pocked Rock	13:30	12:40	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		2	0	0		2
07/13/10	Jenner (Ask Count)	13:42	13:52	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		255	0	10		265
07/13/10	Penny Logs	13:56	14:06	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		0	0	0		0
07/13/10	Paddy's Rock	13:56	14:06	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		0	0	0		0
07/13/10	Chalanchawi	14:09	14:19	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		2	0	0		2
07/13/10	Pocked Rock	14:28	14:38	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		2	0	0		2
07/13/10	Kabemali	14:41	14:51	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		0	0	0		0
07/13/10	Rock Point	14:53	15:03	62	Fog	1 - Clear	1 - Light Air	Southeast	1 - Light Air		-9999		11	0	0		11
07/19/10	Jenner	7:00	11:00	53	1	3 - Unable to conduct an accurate or full count	0 - Calm		-9999	ocean obscured at start of shift	7:00	-9999					180
07/19/10	Jenner	7:00	11:00	53	1	3 - Unable to conduct an accurate or full count	0 - Calm		-9999	ocean obscured at start of shift	7:30	-9999	175				175
07/19/10	Jenner	7:00	11:00	53	1	3 - Unable to conduct an accurate or full count	0 - Calm		-9999	ocean obscured at start of shift	8:00	-9999	240				240
07/19/10	Jenner	7:00	11:00	53	1	3 - Unable to conduct an accurate or full count	0 - Calm		-9999	ocean obscured at start of shift	8:30	-9999	410		5		415
07/19/10	Jenner	7:00	11:00	53	1	3 - Unable to conduct an accurate or full count	0 - Calm		-9999	ocean obscured at start of shift	9:00	-9999	390		5		395
07/19/10	Jenner	7:00	11:00	53	1	3 - Unable to conduct an accurate or full count	0 - Calm		-9999	ocean obscured at start of shift	9:30	-9999	382		5		382
07/19/10	Jenner	7:00	11:00	53	1	3 - Unable to conduct an accurate or full count	0 - Calm		-9999	ocean obscured at start of shift	10:00	-9999	232		5		237
07/19/10	Jenner	7:00	11:00	53	1	3 - Unable to conduct an accurate or full count	0 - Calm		-9999	ocean obscured at start of shift	10:30	-9999	220		4		224
07/19/10	Jenner	7:00	11:00	53	1	3 - Unable to conduct an accurate or full count	0 - Calm		-9999	ocean obscured at start of shift	11:00	-9999	142		0		142
07/19/10	Jenner	11:30	15:45	72		1 - Clear	3 - Gentle Breeze	nw	3 - Gentle Breeze	warm summer day	12:00	-9999	203		5		208
07/19/10	Jenner	11:30	15:45	72		1 - Clear	3 - Gentle Breeze	nw	3 - Gentle Breeze	warm summer day	12:30	-9999	195		5		200
07/19/10	Jenner	11:30	15:45	72		1 - Clear	3 - Gentle Breeze	nw	3 - Gentle Breeze	warm summer day	13:00	-9999	210		5		215
07/19/10	Jenner	11:30	15:45	72		1 - Clear	3 - Gentle Breeze	nw	3 - Gentle Breeze	warm summer day	13:30	-9999	208		6		214
07/19/10	Jenner	11:30	15:45	72		1 - Clear	3 - Gentle Breeze	nw	3 - Gentle Breeze	warm summer day	14:00	-9999	173		5		178
07/19/10	Jenner	11:30	15:45	72		1 - Clear	3 - Gentle Breeze	nw	3 - Gentle Breeze	warm summer day	14:30	-9999	170		4		174
07/19/10	Jenner	11:30	15:45	72		1 - Clear	3 - Gentle Breeze	nw	3 - Gentle Breeze	warm summer day	15:00	-9999	169		6		175
07/19/10	Jenner	11:30	15:45	72		1 - Clear	3 - Gentle Breeze	nw	3 - Gentle Breeze	warm summer day	15:30	-9999	148		3		151
07/19/10	North Jenner	7:00	7:10	50	Fog	3 - Unable to conduct an accurate or full count	1 - Light Air	Southeast		Calm	-9999		\	\	\		\
07/19/10	Odin Cove	7:00	7:10	50	Fog	3 - Unable to conduct an accurate or full count	1 - Light Air	Southeast		Calm	-9999		\	\	\		\
07/19/10	Jenner (Ask Count)	7:13	7:23	50	Fog	3 - Unable to conduct an accurate or full count	1 - Light Air	Southeast		Calm	-9999		\	\	\		\
07/19/10	Penny Logs	7:26	7:36	50	Fog		1 - Light Air	Southeast		Calm	-9999		0	0	0		0
07/19/10	Paddy's Rock	7:26	7:36	50	Fog		1 - Light Air	Southeast		Calm	-9999		\	\	\		\

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
07/19/10	Chalanchawi	7:38	7:48	50	Fog		1 - Light Air	Southeast		Calm	-9999		2	0	0		2
07/19/10	Pocked Rock	7:55	8:05	50	Fog		1 - Light Air	Southeast		Calm	-9999		2	0	0		2
07/19/10	Kabemali	8:08	8:18	50	Fog		1 - Light Air	Southeast		Calm	-9999		0	0	0		0
07/19/10	Rock Point	8:20	8:30	50	Fog		1 - Light Air	Southeast		Calm	-9999		8	0	0		8
07/19/10	North Jenner	8:48	8:58	50	Fog		1 - Light Air	Southeast		Calm	-9999		0	0	0		0
07/19/10	Odin Cove	8:48	8:58	50	Fog		1 - Light Air	Southeast		Calm	-9999		0	0	0		0
07/19/10	Jenner (Ask Count)	9:02	9:12	50	Fog		1 - Light Air	Southeast		Calm	-9999		390	0	7		397
07/19/10	Penny Logs	9:17	9:27	50	Fog		1 - Light Air	Southeast		Calm	-9999		0	0	0		0
07/19/10	Paddy's Rock	9:17	9:27	50	Fog		1 - Light Air	Southeast		Calm	-9999		0	0	0		0
07/19/10	Chalanchawi	9:29	9:39	50	Fog		1 - Light Air	Southeast		Calm	-9999		5	0	0		5
07/19/10	Pocked Rock	9:48	9:58	50	Fog		1 - Light Air	Southeast		Calm	-9999		3	0	0		3
07/19/10	Kabemali	10:00	10:10	50	Fog		1 - Light Air	Southeast		Calm	-9999		0	0	0		0
07/19/10	Rock Point	10:12	10:22	50	Fog		1 - Light Air	Southeast		Calm	-9999		14	0	1		15
07/19/10	North Jenner	11:10	11:20	60	None	1 - Clear	2 - Light Breeze	Northeast			-9999		1	0	0		1
07/19/10	Odin Cove	11:10	11:20	60	None	1 - Clear		Northeast			-9999		4	0	0		4
07/19/10	Jenner (Ask Count)	11:30	11:50	60	None	1 - Clear		Northeast			-9999		207	0	0		207
07/19/10	Penny Logs	11:55	12:05	60	None	1 - Clear		Northeast			-9999		0	0	0		0
07/19/10	Paddy's Rock	11:55	12:05	60	None	1 - Clear		Northeast			-9999		0	0	0		0
07/19/10	Chalanchawi	12:08	12:18	60	None	1 - Clear		Northeast			-9999		6	0	0		6
07/19/10	Pocked Rock	12:25	12:35	60	None	1 - Clear		Northeast			-9999		2	0	0		2
07/19/10	Kabemali	12:38	12:48	60	None	1 - Clear		Northeast			-9999		0	0	0		0
07/19/10	Rock Point	12:50	13:00	60	None	1 - Clear		Northeast			-9999		21	0	0		21
07/19/10	North Jenner	13:15	15:30	60	None	1 - Clear		Northeast			-9999		1	0	0		1
07/19/10	Odin Cove	13:15	15:30	60	None	1 - Clear		Northeast			-9999		6	0	0		6
07/19/10	Jenner (Ask Count)	13:38	13:48	60	None	1 - Clear		Northeast			-9999		219	0	0		219
07/19/10	Penny Logs	13:50	14:00	60	None	1 - Clear		Northeast			-9999		0	0	0		0
07/19/10	Paddy's Rock	13:50	14:00	60	None	1 - Clear		Northeast			-9999		0	0	0		0
07/19/10	Chalanchawi	14:03	14:13	60	None	1 - Clear		Northeast			-9999		6	0	0		6
07/19/10	Pocked Rock	14:23	14:33	60	None	1 - Clear		Northeast			-9999		1	0	0		1
07/19/10	Kabemali	14:35	14:45	60	None	1 - Clear		Northeast			-9999		0	0	0		0

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
07/19/10	Rock Point	\	\	60	None	1 - Clear	4 - Moderate Breeze	Northeast			-9999		\	\	\		\
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	6:00	A	6				6
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	6:00	B	83				83
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	6:30	A	15				15
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	6:30	B	100				100
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	7:00	A	19				19
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	7:00	B	107				107
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	7:30	A	24				24
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	7:30	B	122				122
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	8:00	A	30				30
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	8:00	B	127				127
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	8:30	A	36				36
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	8:30	B	129				129
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	9:00	A	41				41
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	9:00	B	126				126
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	9:30	A	45				45
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	9:30	B	126				126
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	10:00	A	50				50
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	10:00	B	121				121
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	10:30	A	47				47
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	10:30	B	97				97
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	11:00	A	39				39
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	11:00	B	107				107
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	11:30	B	106				106
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	12:00	B	100				100
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	12:30	B	104				104
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	13:00	B	100				100
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	13:30	A	24				24
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	13:30	B	97				97
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	14:00	A	43				43

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
08/09/10	Jenner	6:00	14:00	55	Clear	1 - Clear	1 - Light Air		1 - Light Air	2 haulouts: A=Right of anchor rock, B=L of anchor rock	14:00	B	97				97
08/09/10	North Jenner	7:40	7:50	52	Fog	1 - Clear	0 - Calm		\		-9999		0	0	0		0
08/09/10	Odin Cove	7:40	7:50		Fog	1 - Clear	0 - Calm		\		-9999		1	0	0		1
08/09/10	Jenner (Ask Count)	8:00	8:00		Fog	1 - Clear	0 - Calm		\		-9999		157	0	0		157
08/09/10	Penny Logs	8:05	8:15		Fog	1 - Clear	0 - Calm		\		-9999		0	0	0		0
08/09/10	Paddy's Rock	8:05	8:15		Fog	1 - Clear	0 - Calm		\		-9999		0	0	0		0
08/09/10	Chalanchawi	8:18	8:28		Fog	1 - Clear	0 - Calm		\		-9999		3	0	0		3
08/09/10	Pocked Rock	8:33	8:43		Fog	1 - Clear	0 - Calm		\		-9999		0	0	0		0
08/09/10	Kabemali	8:48	8:58		Fog	1 - Clear	0 - Calm		\		-9999		0	0	0		0
08/09/10	Rock Point	9:03	9:13		Fog	1 - Clear	0 - Calm		\		-9999		12	0	0		12
08/09/10	North Jenner	9:28	9:38		Fog	1 - Clear	0 - Calm		\		-9999		0	0	0		0
08/09/10	Odin Cove	9:28	9:38		Fog	1 - Clear	0 - Calm		\		-9999		1	0	0		1
08/09/10	Jenner (Ask Count)	9:30	9:30		Fog	1 - Clear	0 - Calm		\		-9999		171	0	0		171
08/09/10	Penny Logs	9:45	9:55		Fog	1 - Clear	0 - Calm		\		-9999		0	0	0		0
08/09/10	Paddy's Rock	9:45	9:55		Fog	1 - Clear	0 - Calm		\		-9999		0	0	0		0
08/09/10	Chalanchawi	9:57	10:07		Fog	1 - Clear	0 - Calm		\		-9999		3	0	0		3
08/09/10	Pocked Rock	10:20	10:30		Fog	1 - Clear	0 - Calm		\		-9999		0	0	0		0
08/09/10	Kabemali	10:32	10:42		Fog	1 - Clear	0 - Calm		\		-9999		1	0	0		1
08/09/10	Rock Point	10:44	10:54	54	Fog	1 - Clear	0 - Calm		\		-9999		16	0	0		16
08/09/10	Jenner (Ask Count)	11:00	11:00	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		146	0	0		146
08/09/10	North Jenner	11:02	11:12	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		0	0	0		0
08/09/10	Odin Cove	11:02	11:12	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		1	0	0		1
08/09/10	Penny Logs	11:32	11:42	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		0	0	0		0
08/09/10	Paddy's Rock	11:32	11:42	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		0	0	0		0
08/09/10	Chalanchawi	11:44	11:54	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		0	0	0		0
08/09/10	Pocked Rock	12:15	12:25	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		0	0	0		0
08/09/10	Kabemali	12:30	12:40	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		2	0	0		2
08/09/10	Rock Point	12:42	12:52	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		15	0	0		15
08/09/10	Jenner (Ask Count)	13:00	13:00	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		100	0	0		100
08/09/10	North Jenner	13:10	13:20	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		0	0	0		0

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
08/09/10	Odin Cove	13:10	13:20	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		5	0	0		5
08/09/10	Penny Logs	13:24	13:34	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		0	0	0		0
08/09/10	Paddy's Rock	13:24	13:34	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		0	0	0		0
08/09/10	Chalanchawi	13:36	13:46	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		0	0	0		0
08/09/10	Pocked Rock	14:08	14:18	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		1	0	0		1
08/09/10	Kabemali	14:20	14:30	54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		2	0	0		2
08/09/10	Rock Point			54	Fog	1 - Clear	2 - Light Breeze	Northwest	\		-9999		\	\	\		\
08/16/10	Jenner	7:00	11:30	50	Fog	2 - Slightly obscured but still able to count	2 - Light Breeze	Northwest	0 - Calm	Alternating fog and partial sun	7:00	A	105				105
08/16/10	Jenner	7:00	11:30	50	Fog	2 - Slightly obscured but still able to count	2 - Light Breeze	Northwest	0 - Calm	Alternating fog and partial sun	7:30	A	120				120
08/16/10	Jenner	7:00	11:30	50	Fog	2 - Slightly obscured but still able to count	2 - Light Breeze	Northwest	0 - Calm	Alternating fog and partial sun	8:00	A	119				119
08/16/10	Jenner	7:00	11:30	50	Fog	2 - Slightly obscured but still able to count	2 - Light Breeze	Northwest	0 - Calm	Alternating fog and partial sun	8:30	A	58				58
08/16/10	Jenner	7:00	11:30	50	Fog	2 - Slightly obscured but still able to count	2 - Light Breeze	Northwest	0 - Calm	Alternating fog and partial sun	8:30	B	68				68
08/16/10	Jenner	7:00	11:30	50	Fog	2 - Slightly obscured but still able to count	2 - Light Breeze	Northwest	0 - Calm	Alternating fog and partial sun	9:00	A	58				58
08/16/10	Jenner	7:00	11:30	50	Fog	2 - Slightly obscured but still able to count	2 - Light Breeze	Northwest	0 - Calm	Alternating fog and partial sun	9:00	B	73				73
08/16/10	Jenner	7:00	11:30	50	Fog	2 - Slightly obscured but still able to count	2 - Light Breeze	Northwest	0 - Calm	Alternating fog and partial sun	9:30	A	60				60
08/16/10	Jenner	7:00	11:30	50	Fog	2 - Slightly obscured but still able to count	2 - Light Breeze	Northwest	0 - Calm	Alternating fog and partial sun	9:30	B	102				102
08/16/10	Jenner	7:00	11:30	50	Fog	2 - Slightly obscured but still able to count	2 - Light Breeze	Northwest	0 - Calm	Alternating fog and partial sun	10:00	A	29				29
08/16/10	Jenner	7:00	11:30	50	Fog	2 - Slightly obscured but still able to count	2 - Light Breeze	Northwest	0 - Calm	Alternating fog and partial sun	10:00	B	102				102
08/16/10	Jenner	7:00	11:30	50	Fog	2 - Slightly obscured but still able to count	2 - Light Breeze	Northwest	0 - Calm	Alternating fog and partial sun	10:30	A	32				32
08/16/10	Jenner	7:00	11:30	50	Fog	2 - Slightly obscured but still able to count	2 - Light Breeze	Northwest	0 - Calm	Alternating fog and partial sun	10:30	B	109				109
08/16/10	Jenner	11:30	15:30	62	Fog	1 - Clear	1 - Light Air	West	1 - Light Air	Quiet	11:30	A	7				7
08/16/10	Jenner	11:30	15:30	62	Fog	1 - Clear	1 - Light Air	West	1 - Light Air	Quiet	11:30	B	70				70
08/16/10	Jenner	11:30	15:30	62	Fog	1 - Clear	1 - Light Air	West	1 - Light Air	Quiet	12:00	A	9				9
08/16/10	Jenner	11:30	15:30	62	Fog	1 - Clear	1 - Light Air	West	1 - Light Air	Quiet	12:00	B	79				79
08/16/10	Jenner	11:30	15:30	62	Fog	1 - Clear	1 - Light Air	West	1 - Light Air	Quiet	12:30	A	10				10
08/16/10	Jenner	11:30	15:30	62	Fog	1 - Clear	1 - Light Air	West	1 - Light Air	Quiet	12:30	B	83				83
08/16/10	Jenner	11:30	15:30	62	Fog	1 - Clear	1 - Light Air	West	1 - Light Air	Quiet	13:00	A	5				5
08/16/10	Jenner	11:30	15:30	62	Fog	1 - Clear	1 - Light Air	West	1 - Light Air	Quiet	13:00	B	79				79
08/16/10	Jenner	11:30	15:30	62	Fog	1 - Clear	1 - Light Air	West	1 - Light Air	Quiet	13:03	B	82				82
08/16/10	Jenner	11:30	15:30	62	Fog	1 - Clear	1 - Light Air	West	1 - Light Air	Quiet	14:00	B	76				76

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
08/16/10	Jenner	11:30	15:30	62	Fog	1 - Clear	1 - Light Air	West	1 - Light Air	Quiet	14:30	B	53				53
08/16/10	Jenner	11:30	15:30	62	Fog	1 - Clear	1 - Light Air	West	1 - Light Air	Quiet	15:00	B	15				15
08/16/10	Jenner	11:30	15:30	62	Fog	1 - Clear	1 - Light Air	West	1 - Light Air	Quiet	15:30	B	0				0
08/16/10	North Jenner	6:30	6:40	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		0	0	0		1
08/16/10	Odin Cove	6:40	6:50	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		0	0	0		0
08/16/10	Jenner (Ask Count)	7:00	7:10	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		80	0	0		80
08/16/10	Penny Logs	7:12	7:22	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		0	0	0		0
08/16/10	Paddy's Rock	7:22	7:32	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		0	0	0		0
08/16/10	Chalanchawi	7:35	7:45	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		2	0	0		2
08/16/10	Pocked Rock	7:52	8:02	52	Fog	3 - Unable to conduct an accurate or full count	3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		\	\	\		\
08/16/10	Kabemali	8:03	8:13	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		2	0	0		2
08/16/10	Rock Point	8:15	8:25	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		7	0	0		7
08/16/10	North Jenner	8:40	8:50	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		2	0	0		2
08/16/10	Odin Cove	8:50	9:00	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		0	0	0		0
08/16/10	Jenner (Ask Count)	9:01	9:11	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		131	0	0		131
08/16/10	Penny Logs	9:13	9:23	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		0	0	0		0
08/16/10	Paddy's Rock	9:23	9:33	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		0	0	0		0
08/16/10	Chalanchawi	9:36	9:46	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		4	0	0		4
08/16/10	Pocked Rock	9:53	10:03	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		3	0	0		3
08/16/10	Kabemali	10:06	10:16	52	Fog	3 - Unable to conduct an accurate or full count	3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		5	0	0		5
08/16/10	Rock Point	10:17	10:27	52	Fog		3 - Gentle Breeze	Northeast	3 - Gentle Breeze		-9999		19	0	0		19
08/16/10	North Jenner	11:25	11:35	57		2 - Slightly obscured but still able to count		West	0 - Calm		-9999		10	0	0		10
08/16/10	Odin Cove	11:35	11:45	57		1 - Clear		West	0 - Calm		-9999		7	0	0		7
08/16/10	Jenner (Ask Count)	11:50	12:00	57		2 - Slightly obscured but still able to count		West	0 - Calm		-9999		88	0	0		88
08/16/10	Penny Logs	12:05	12:15	57		1 - Clear		West	0 - Calm		-9999		0	0	0		0
08/16/10	Paddy's Rock	12:15	12:25	57		1 - Clear		West	0 - Calm		-9999		0	0	0		0
08/16/10	Chalanchawi	12:28	12:38	57		1 - Clear		West	0 - Calm		-9999		4	0	0		4
08/16/10	Pocked Rock	12:47	12:57	57		1 - Clear		West	0 - Calm		-9999		3	0	0		3
08/16/10	Kabemali	13:00	13:10	57		1 - Clear		West	0 - Calm		-9999		11	0	0		11
08/16/10	Rock Point	13:12	13:22	57		1 - Clear		West	0 - Calm		-9999		25	0	0		25

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
08/16/10	North Jenner	13:35	13:45	57				West	0 - Calm		-9999		0	0	0		0
08/16/10	Odin Cove	13:45	13:55	57				West	0 - Calm		-9999		3	0	0		3
08/16/10	Jenner (Ask Count)	14:00	14:10	57				West	0 - Calm		-9999		76	0	0		76
08/16/10	Penny Logs	14:15	14:25	57				West	0 - Calm		-9999		0	0	0		0
08/16/10	Paddy's Rock	14:25	14:35	57		1 - Clear		West	0 - Calm		-9999		0	0	0		0
08/16/10	Chalanchawi	14:38	14:48	57		1 - Clear		West	0 - Calm		-9999		3	0	0		3
08/16/10	Pocked Rock	14:58	15:08	57				West	0 - Calm		-9999		2	0	0		2
08/16/10	Kabemali	15:10	15:20	57				West	0 - Calm		-9999		9	0	0		9
08/16/10	Rock Point	15:22	15:32	57		1 - Clear		West	0 - Calm		-9999		14	0	0		14
09/08/10	North Jenner	7:08	7:18	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0		0
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		6:00	-9999					
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		6:30	-9999	45				45
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		7:00	-9999	48				48
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		7:30	-9999	49				49
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		8:00	-9999	51				51
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		8:30	-9999	36				36
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		9:00	-9999	42				42
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		9:30	-9999	48				48
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		10:00	-9999	45				45
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		10:30	-9999	45				45
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		11:00	-9999	43				43
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		11:30	-9999	43				43
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		12:00	-9999	45				45
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		12:30	-9999	46				46
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		13:00	-9999	48				48
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		13:30	-9999	51				51
09/09/10	Jenner	6:00	14:00	55		1 - Clear	2 - Light Breeze	se	1 - Light Air		14:00	-9999	60				60
09/09/10	Odin Cove	7:08	7:18	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0		0
09/09/10	Jenner (Ask Count)	7:22	7:28	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		49	0	0		49
09/09/10	Penny Logs	7:30	7:39	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0		0

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
09/09/10	Paddy's Rock	7:30	7:39	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0		0
09/09/10	Chalanchawi	7:42	7:55	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		2	0	0		2
09/09/10	Pocked Rock	8:05	8:15	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		12	0	0		12
09/09/10	Kabemali	8:19	8:25	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		6	0	0		6
09/09/10	Rock Point	8:28	8:36	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		17	0	0		17
09/09/10	North Jenner	8:55	9:03	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0		0
09/09/10	Odin Cove	8:55	9:03	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		1	0	0		1
09/09/10	Jenner (Ask Count)	9:07	9:15	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		42	0	0		42
09/09/10	Penny Logs	9:17	9:25	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0		0
09/09/10	Paddy's Rock	9:17	9:25	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0		0
09/09/10	Chalanchawi	9:29	9:39	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		7	0	0		7
09/09/10	Pocked Rock	9:54	10:03	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0		0
09/09/10	Kabemali	10:05	10:14	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0		0
09/09/10	Rock Point	10:16	10:26	55		1 - Clear	1 - Light Air	South	1 - Light Air		-9999		15	0	0		15
09/09/10	North Jenner	11:36	11:46			1 - Clear	1 - Light Air	North	\		-9999		0	0	0		0
09/09/10	Odin Cove	11:40	11:50			1 - Clear	1 - Light Air	North	\		-9999		0	0	0		0
09/09/10	Jenner (Ask Count)	11:55	12:05			1 - Clear	1 - Light Air	North	\		-9999		45	0	0		45
09/09/10	Penny Logs	12:09	12:19			1 - Clear	1 - Light Air	North	\		-9999		0	0	0		0
09/09/10	Paddy's Rock	12:13	12:23			1 - Clear	1 - Light Air	North	\		-9999		0	0	0		0
09/09/10	Chalanchawi	12:25	12:35			1 - Clear	1 - Light Air	North	\		-9999		2	0	0		2
09/09/10	Pocked Rock	12:43	12:55			1 - Clear	1 - Light Air	North	\		-9999		0	0	0		0
09/09/10	Kabemali	12:55	13:03			1 - Clear	1 - Light Air	North	\		-9999		0	0	0		0
09/09/10	Rock Point	13:04	13:14			1 - Clear	1 - Light Air	North	\		-9999		0	0	0		0
09/09/10	North Jenner	13:32	13:42			1 - Clear	1 - Light Air	North			-9999		0	0	0		0
09/09/10	Odin Cove	13:36	13:46			1 - Clear	1 - Light Air	North			-9999		0	0	0		0
09/09/10	Jenner (Ask Count)	13:50	14:00			1 - Clear	1 - Light Air	North			-9999		60	0	0		60
09/09/10	Penny Logs	14:11	14:21			1 - Clear	1 - Light Air	North			-9999		0	0	0		0
09/09/10	Paddy's Rock	14:15	14:24			1 - Clear	1 - Light Air	North			-9999		0	0	0		0
09/09/10	Chalanchawi	14:25	14:35			1 - Clear	1 - Light Air	North			-9999		2	0	0		2
09/09/10	Pocked Rock	14:44	14:35			1 - Clear	1 - Light Air	North			-9999		0	0	0		0

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
09/09/10	Kabemali	14:56	15:06			1 - Clear	1 - Light Air	North			-9999		4	0	0		4
09/09/10	Rock Point	15:08	15:15			1 - Clear	1 - Light Air	North			-9999		10	0	0		10
09/16/10	Jenner	7:30	11:00	49	None	1 - Clear	1 - Light Air	Northwest	2 - Light Breeze		7:30	A	26	0	0		26
09/16/10	Jenner	7:30	11:30	49	None	1 - Clear	1 - Light Air	Northwest	2 - Light Breeze		8:00	A	36	0	0		36
09/16/10	Jenner	7:30	11:30	49	None	1 - Clear	1 - Light Air	Northwest	2 - Light Breeze		8:30	A	43	0	0		43
09/16/10	Jenner	7:30	11:30	49	None	1 - Clear	1 - Light Air	Northwest	2 - Light Breeze		9:00	A	54	0	0		54
09/16/10	Jenner	7:30	11:30	49	None	1 - Clear	1 - Light Air	Northwest	2 - Light Breeze		9:30	A	67	0	0		67
09/16/10	Jenner	7:30	11:30	49	None	1 - Clear	1 - Light Air	Northwest	2 - Light Breeze		10:00	A	71	0	0		71
09/16/10	Jenner	7:30	11:30	49	None	1 - Clear	1 - Light Air	Northwest	2 - Light Breeze		10:30	A	79	0	0		79
09/16/10	Jenner	7:30	11:30	49	None	1 - Clear	1 - Light Air	Northwest	2 - Light Breeze		11:00	A	90	0	0		90
09/16/10	Jenner	11:30	13:30	64	None	Varies	1 - Light Air	Northwest	0 - Calm		11:30	A	98	0	0		98
09/16/10	Jenner	11:30	13:30	64	None	Varies	1 - Light Air	Northwest	0 - Calm		12:00	A	103	0	0		103
09/16/10	Jenner	11:30	13:30	64	None	Varies	1 - Light Air	Northwest	0 - Calm		12:30	A + B	75	0	0		75
09/16/10	Jenner	11:30	13:30	64	None	Varies	1 - Light Air	Northwest	0 - Calm		13:00	A + B	101	0	0		101
09/16/10	Jenner	11:30	13:30	64	None	Varies	1 - Light Air	Northwest	0 - Calm		13:30	A + B	95	0	0		95
09/16/10	Jenner	11:30	13:30	64	None	Varies	1 - Light Air	Northwest	0 - Calm		14:00	A + B	78	0	0		78
09/16/10	Jenner	11:30	13:30	64	None	Varies	1 - Light Air	Northwest	0 - Calm		14:30	A + B	80	0	0		80
09/16/10	Jenner	11:30	13:30	64	None	Varies	1 - Light Air	Northwest	0 - Calm		15:00	A + B	69	0	0		69
09/16/10	Jenner	11:30	13:30	64	None	Varies	1 - Light Air	Northwest	0 - Calm		15:30		60	0	0		60
09/16/10	North Jenner	7:01	7:11	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		0	0	0		0
09/16/10	Odin Cove	7:01	7:11	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		0	0	0		0
09/16/10	Jenner (Ask Count)	7:17	7:27	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		23	0	0		23
09/16/10	Penny Logs	7:30	7:40	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		0	0	0		0
09/16/10	Paddy's Rock	7:30	7:40	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		0	0	0		0
09/16/10	Chalanchawi	7:44	7:54	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		0	0	0		0
09/16/10	Pocked Rock	8:05	8:15	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		0	0	0		0
09/16/10	Kabemali	8:18	8:28	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		0	0	0		0
09/16/10	Rock Point	8:30	8:40	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		0	0	0		0
09/16/10	North Jenner	8:58	9:08	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		0	0	0		0
09/16/10	Odin Cove	8:58	9:08	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		0	0	0		0

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
09/16/10	Jenner (Ask Count)	9:12	9:22	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		54	0	0		54
09/16/10	Penny Logs	9:25	9:35	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		0	0	0		0
09/16/10	Paddy's Rock	9:25	9:35	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		0	0	0		0
09/16/10	Chalanchawi	9:38	9:48	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		4	0	0		4
09/16/10	Pocked Rock	9:55	10:05	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		0	0	0		0
09/16/10	Kabemali	10:08	10:18	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		0	0	0		0
09/16/10	Rock Point	10:19	10:29	52		1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted	-9999		1	0	0		1
09/16/10	North Jenner	11:30	11:40	62		1 - Clear	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		0	0	0		0
09/16/10	Odin Cove	11:30	11:40	62		1 - Clear	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		0	0	0		0
09/16/10	Jenner (Ask Count)	11:42	11:52	62		1 - Clear	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		98	0	0		98
09/16/10	Penny Logs	11:54	12:04	62		1 - Clear	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		0	0	0		0
09/16/10	Paddy's Rock	11:54	12:04	62		1 - Clear	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		0	0	0		0
09/16/10	Chalanchawi	12:06	12:16	62		1 - Clear	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		8	0	0		8
09/16/10	Pocked Rock	12:24	12:34	62		1 - Clear	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		0	0	0		0
09/16/10	Kabemali	12:36	12:46	62		1 - Clear	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		0	0	0		0
09/16/10	Rock Point	12:48	12:58	62		1 - Clear	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		8	0	0		8
09/16/10	North Jenner	13:17	13:27	62		1 - Clear	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		0	0	0		0
09/16/10	Odin Cove	13:17	13:27	62	Fog	2 - Slightly obscured but still able to count	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		\	\	\		\
09/16/10	Jenner (Ask Count)	13:32	13:42	62	Fog	2 - Slightly obscured but still able to count	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		95	0	0		95
09/16/10	Penny Logs	13:45	13:48	62	Fog	3 - Unable to conduct an accurate or full count	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		\	\	\		\
09/16/10	Paddy's Rock	13:45	13:48	62	Fog	3 - Unable to conduct an accurate or full count	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		\	\	\		\
09/16/10	Chalanchawi	13:51	14:01	62	Fog	3 - Unable to conduct an accurate or full count	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		8	0	0		8
09/16/10	Pocked Rock	14:09	14:10	62	Fog	3 - Unable to conduct an accurate or full count	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		\	\	\		\
09/16/10	Kabemali	14:11	14:21	62	Fog	3 - Unable to conduct an accurate or full count	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		0	0	0		0
09/16/10	Rock Point	14:23	14:28	62	Fog	3 - Unable to conduct an accurate or full count	6 - Strong Breeze	Northwest	4 - Moderate Breeze	Deserted	-9999		6	0	0		6
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		7:00	-9999	33				33
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		7:30	-9999	42				42
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		8:00	-9999	42				42
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		8:30	-9999	12				12
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		9:00	-9999	5				5

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		9:30	-9999	13				13
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		10:00	-9999	21				21
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		10:30	-9999	17				17
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		11:00	-9999	15				15
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		11:30	-9999	0				0
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		12:00	-9999	0				0
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		12:30	-9999	0				0
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		13:00	-9999	0				0
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		13:30	-9999	0				0
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		14:00	-9999	0				0
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		14:30	-9999	1				1
10/07/10	Jenner	7:00	15:00	60	Fog	1 - Clear	0 - Calm		1 - Light Air		15:00	-9999	0				0
10/07/10	North Jenner	7:10	7:25	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		0	0	0		0
10/07/10	Odin Cove	7:10	7:25	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		13	0	0		13
10/07/10	Jenner (Ask Count)	7:30	7:40	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		38	0	0		38
10/07/10	Penny Logs	7:44	7:54	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		0	0	0		0
10/07/10	Paddy's Rock	7:44	7:54	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		0	0	0		0
10/07/10	Chalanchawi	7:56	8:03	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		0	0	0		0
10/07/10	Pocked Rock	8:10	8:20	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		1	0	0		1
10/07/10	Kabemali	8:21	8:30	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		5	0	0		5
10/07/10	Rock Point	8:32	8:42	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		12	0	0		12
10/07/10	North Jenner	9:10	9:20	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		0	0	0		0
10/07/10	Odin Cove	9:10	9:20	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		2	0	0		2
10/07/10	Jenner (Ask Count)	9:35	9:40	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		13	0	0		13
10/07/10	Penny Logs	9:41	9:51	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		0	0	0		0
10/07/10	Paddy's Rock	9:41	9:51	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		0	0	0		0
10/07/10	Chalanchawi	9:52	9:55	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		0	0	0		0
10/07/10	Pocked Rock	9:58	10:07	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		0	0	0		0
10/07/10	Kabemali	10:10	10:20	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		5	0	0		5
10/07/10	Rock Point	10:21	10:31	65	None	1 - Clear	2 - Light Breeze	Northwest	2 - Light Breeze		-9999		14	0	0		14

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
10/07/10	North Jenner	11:30				1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		0	0	0		0
10/07/10	Rock Point	16:10	16:20			1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		14	0	0		14
10/07/10	Odin Cove					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		0	0	0		0
10/07/10	Jenner (Ask Count)					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		0	0	0		0
10/07/10	Penny Logs					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		5	0	0		5
10/07/10	Paddy's Rock					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		0	0	0		0
10/07/10	Chalanchawi					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		0	0	0		0
10/07/10	Pocked Rock					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		0	0	0		0
10/07/10	Kabemali					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		15	0	0		15
10/07/10	Rock Point					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		11	0	0		11
10/07/10	North Jenner					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		0	0	0		0
10/07/10	Odin Cove					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		13	0	0		13
10/07/10	Jenner (Ask Count)					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		0	0	0		0
10/07/10	Penny Logs					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		6	0	0		6
10/07/10	Paddy's Rock					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		0	0	0		0
10/07/10	Chalanchawi					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		0	0	0		0
10/07/10	Pocked Rock					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		3	0	0		3
10/07/10	Kabemali					1 - Clear	1 - Light Air	Northeast	1 - Light Air	Quiet overcast until noon, warm and sunny all afternoon	-9999		15	0	0		15
10/14/10	Jenner	7:00	11:00	61	None	1 - Clear	1 - Light Air	Northwest			7:00		30				30
10/14/10	Jenner	7:00	11:00	61	None	1 - Clear	1 - Light Air	Northwest			7:30		42				42
10/14/10	Jenner	7:00	11:00	61	None	1 - Clear	1 - Light Air	Northwest			8:00		47				47
10/14/10	Jenner	7:00	11:00	61	None	1 - Clear	1 - Light Air	Northwest			8:30		47				47
10/14/10	Jenner	7:00	11:00	61	None	1 - Clear	1 - Light Air	Northwest			9:00		47				47
10/14/10	Jenner	7:00	11:00	61	None	1 - Clear	1 - Light Air	Northwest			9:30		53				53
10/14/10	Jenner	7:00	11:00	61	None	1 - Clear	1 - Light Air	Northwest			10:00		63				63

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
10/14/10	Jenner	7:00	11:00	61	None	1 - Clear	1 - Light Air	Northwest			10:30		66				66
10/14/10	Jenner	7:00	11:00	61	None	1 - Clear	1 - Light Air	Northwest			11:00		58				58
10/14/10	Jenner	11:00	15:00	60	None	1 - Clear	1 - Light Air	East	2 - Light Breeze		11:00	A	58				58
10/14/10	Jenner	11:30	15:30	60	None	1 - Clear	1 - Light Air	East	2 - Light Breeze		11:30		43				43
10/14/10	Jenner	11:30	15:30	60	None	1 - Clear	1 - Light Air	East	2 - Light Breeze		12:00		54				54
10/14/10	Jenner	11:30	15:30	60	None	1 - Clear	1 - Light Air	East	2 - Light Breeze		12:30		41				41
10/14/10	Jenner	11:30	15:30	60	None	1 - Clear	1 - Light Air	East	2 - Light Breeze		13:00		31				31
10/14/10	Jenner	11:30	15:30	60	None	1 - Clear	1 - Light Air	East	2 - Light Breeze		13:30		31				31
10/14/10	Jenner	11:30	15:30	60	None	1 - Clear	1 - Light Air	East	2 - Light Breeze		14:00		3				3
10/14/10	Jenner	11:30	15:30	60	None	1 - Clear	1 - Light Air	East	2 - Light Breeze		14:30		1				1
10/14/10	Jenner	11:30	15:30	60	None	1 - Clear	1 - Light Air	East	2 - Light Breeze		15:00		0				0
10/14/10	Jenner	11:30	15:30	60	None	1 - Clear	1 - Light Air	East	2 - Light Breeze		15:30		0				0
10/14/10	North Jenner	7:00	7:10	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		0	0	0		0
10/14/10	Odin Cove	7:10	7:20	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		1	0	0		1
10/14/10	Jenner (Ask Count)	7:24	7:34	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		40	0	0		40
10/14/10	Penny Logs	7:36	7:46	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		0	0	0		0
10/14/10	Paddy's Rock	7:46	7:56	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		0	0	0		0
10/14/10	Chalanchawi	7:58	8:08	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		0	0	0		0
10/14/10	Pocked Rock	8:16	8:26	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		0	0	0		0
10/14/10	Kabemali	8:28	8:38	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		2	0	0		2
10/14/10	Rock Point	8:40	8:50	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		5	0	0		5
10/14/10	North Jenner	9:05	9:15	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		0	0	0		0
10/14/10	Odin Cove	9:15	9:25	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		0	0	0		0
10/14/10	Jenner (Ask Count)	9:29	9:39	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		53	0	0		53
10/14/10	Penny Logs	9:42	9:52	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		0	0	0		0
10/14/10	Paddy's Rock	9:52	10:02	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		0	0	0		0
10/14/10	Chalanchawi	10:05	10:15	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		3	0	0		3
10/14/10	Pocked Rock	10:23	10:33	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		0	0	0		0
10/14/10	Kabemali	10:35	10:45	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		7	0	0		7
10/14/10	Rock Point	10:47	10:57	61	None	1 - Clear	1 - Light Air		1 - Light Air		-9999		8	0	0		8

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
10/14/10	North Jenner	11:30	11:40	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		0	0	0		0
10/14/10	Odin Cove	11:30	11:40	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		7	0	0		7
10/14/10	Jenner (Ask Count)	11:44	11:55	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		59	0	0		59
10/14/10	Penny Logs	11:56	12:06	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		0	0	0		0
10/14/10	Paddy's Rock	11:56	12:06	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		0	0	0		0
10/14/10	Chalanchawi	12:08	12:18	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		9	0	0		9
10/14/10	Pocked Rock	12:25	12:35	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		0	0	0		0
10/14/10	Kabemali	12:37	12:47	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		14	0	0		14
10/14/10	Rock Point	12:50	13:00	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		7	0	0		7
10/14/10	North Jenner	13:17	13:27	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		1	0	0		1
10/14/10	Odin Cove	13:17	13:27	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		8	0	0		8
10/14/10	Jenner (Ask Count)	13:35	13:45	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		2	0	0		2
10/14/10	Penny Logs	13:49	14:00	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		0	0	0		0
10/14/10	Paddy's Rock	13:49	14:00	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		0	0	0		0
10/14/10	Chalanchawi	14:02	14:12	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		4	0	0		4
10/14/10	Pocked Rock	14:21	14:31	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		0	0	0		0
10/14/10	Kabemali	14:33	14:43	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		9	0	0		9
10/14/10	Rock Point	14:45	14:55	69	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air	Calm Deserted	-9999		3	0	0		3
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		7:00	A	31				31
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		7:30	A	40				40
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		8:00	A	47				47
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		8:30	A	55				55
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		9:00	A	64				64
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		9:30	A	75				75
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		10:00	A	109				109
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		10:30	A	114				114
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		11:00	A	119				119
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		11:30	A	117				117
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		12:00	A	132				132
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		12:30	A	138				138

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		13:00	A	136				136
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		13:30	A	141				141
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		14:00	A	138				138
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		14:00	B	4				4
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		14:30	A	129				129
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		14:30	B	12				12
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		15:00	A	127				127
11/03/10	Jenner	7:00	15:00	60		1 - Clear	0 - Calm		6 - Strong Breeze		15:00	B	13				13
11/03/10	North Jenner	7:00	7:10	50	None	1 - Clear		West		Large Wave Action			0	0	0		0
11/03/10	Odin Cove	7:10	7:20	50	None	1 - Clear		West		Large Wave Action			0	0	0		0
11/03/10	Jenner (Ask Count)	7:25	7:35	50	None	1 - Clear		West		Large Wave Action			40	0	0		40
11/03/10	Penny Logs	7:35	7:45	50	None	1 - Clear		West		Large Wave Action			0	0	0		0
11/03/10	Paddy's Rock	7:45	7:55	50	None	1 - Clear		West		Large Wave Action			0	0	0		0
11/03/10	Chalanchawi	7:58	8:08	50	None	1 - Clear		West		Large Wave Action			2	0	0		2
11/03/10	Pocked Rock	8:16	8:26	50	None	1 - Clear		West		Large Wave Action			0	0	0		0
11/03/10	Kabemali	8:28	8:38	50	None	1 - Clear		West		Large Wave Action			0	0	0		0
11/03/10	Rock Point	8:40	8:50	50	None	1 - Clear		West		Large Wave Action			0	0	0		0
11/03/10	North Jenner	9:05	9:15	50	None	1 - Clear		West		Large Wave Action			0	0	0		0
11/03/10	Odin Cove	9:15	9:25	50	None	1 - Clear		West		Large Wave Action			0	0	0		0
11/03/10	Jenner (Ask Count)	9:28	9:38	50	None	1 - Clear		West		Large Wave Action			75	0	0		75
11/03/10	Penny Logs	9:40	9:50	50	None	1 - Clear		West		Large Wave Action			0	0	0		0
11/03/10	Paddy's Rock	9:50	10:00	50	None	1 - Clear		West		Large Wave Action			0	0	0		0
11/03/10	Chalanchawi	10:10	10:20	50	None	1 - Clear		West		Large Wave Action			1	0	0		1
11/03/10	Pocked Rock	10:30	10:40	50	None	1 - Clear		West		Large Wave Action			0	0	0		0
11/03/10	Kabemali	10:42	10:52	50	None	1 - Clear		West		Large Wave Action			0	0	0		0
11/03/10	Rock Point	10:52	11:02	50	None	1 - Clear		West		Large Wave Action			0	0	0		0
11/03/10	North Jenner	11:00	11:10		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				0	0	0		0
11/03/10	Odin Cove	11:05	11:15		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				0	0	0		0
11/03/10	Jenner (Ask Count)	11:22	11:28		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				119	0	0		119
11/03/10	Penny Logs	11:33	11:43		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				0	0	0		0

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
11/03/10	Paddy's Rock	11:33	11:43		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				0	0	0		0
11/03/10	Chalanchawi	11:50	12:00		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				2	0	0		2
11/03/10	Pocked Rock	12:08	12:18		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				0	0	0		0
11/03/10	Kabemali	12:25	12:35		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				0	0	0		0
11/03/10	Rock Point	12:38	12:48		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				0	0	0		0
11/03/10	North Jenner	13:17	13:27		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				0	0	0		0
11/03/10	Odin Cove	13:17	13:27		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				0	0	0		0
11/03/10	Jenner (Ask Count)	13:35	13:45		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				141	0	0		141
11/03/10	Penny Logs	13:45	13:55		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				0	0	0		0
11/03/10	Paddy's Rock	13:45	13:55		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				1	0	0		1
11/03/10	Chalanchawi	13:58	14:08		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				2	0	0		2
11/03/10	Pocked Rock	14:16	14:26		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				0	0	0		0
11/03/10	Kabemali	14:32	14:42		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				0	0	0		0
11/03/10	Rock Point	14:49	14:59		Haze	2 - Slightly obscured but still able to count	0 - Calm	\	1 - Light Air				0	0	0		0
11/18/10	Jenner	7:00	10:30	40	None	1 - Clear	2 - Light Breeze	Northwest			7:00		23				23
11/18/10	Jenner	7:00	10:30	40	None	1 - Clear	2 - Light Breeze	Northwest			7:30		21				21
11/18/10	Jenner	7:00	10:30	40	None	1 - Clear	2 - Light Breeze	Northwest			8:00		26				26
11/18/10	Jenner	7:00	10:30	40	None	1 - Clear	2 - Light Breeze	Northwest			8:30		28				28
11/18/10	Jenner	7:00	10:30	40	None	1 - Clear	2 - Light Breeze	Northwest			9:00		37				37
11/18/10	Jenner	7:00	10:30	40	None	1 - Clear	2 - Light Breeze	Northwest			9:30		52				52
11/18/10	Jenner	7:00	10:30	40	None	1 - Clear	2 - Light Breeze	Northwest			10:00		82				82
11/18/10	Jenner	7:00	10:30	40	None	1 - Clear	2 - Light Breeze	Northwest			10:30		109				109
11/18/10	Jenner	12:00	16:00	53	None	1 - Clear		North	2 - Light Breeze		12:00		113				113
11/18/10	Jenner	12:00	16:00	53	None	1 - Clear		North	2 - Light Breeze		12:30		120				120
11/18/10	Jenner	12:00	16:00	53	None	1 - Clear		North	2 - Light Breeze		13:00		97				97
11/18/10	Jenner	12:00	16:00	53	None	1 - Clear		North	2 - Light Breeze		13:30		95				95
11/18/10	Jenner	12:00	16:00	53	None	1 - Clear		North	2 - Light Breeze		14:00		97				97
11/18/10	Jenner	12:00	16:00	53	None	1 - Clear		North	2 - Light Breeze		14:30		95				95
11/18/10	Jenner	12:00	16:00	53	None	1 - Clear		North	2 - Light Breeze		15:00		94				94
11/18/10	Jenner	12:00	16:00	53	None	1 - Clear		North	2 - Light Breeze		15:30		91				91

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
11/18/10	Jenner	12:00	16:00	53	None	1 - Clear		North	2 - Light Breeze		16:00		87				87
11/18/10	North Jenner	6:40	6:50		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			0	0	0		0
11/18/10	Odin Cove	6:50	7:00		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			0	0	0		0
11/18/10	Jenner (Ask Count)	7:05	7:15		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			23	0	0		0
11/18/10	Penny Logs	7:20	7:30		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			0	0	0		0
11/18/10	Paddy's Rock	7:30	7:40		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			0	0	0		1
11/18/10	Chalanchawi	7:45	7:55		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			1	0	0		0
11/18/10	Pocked Rock	8:00	8:10		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			0	0	0		0
11/18/10	Kabemali	8:15	8:25		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			0	0	0		0
11/18/10	Rock Point	8:30	8:40		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			14	0	0		0
11/18/10	North Jenner	9:00	9:10		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			0	0	0		0
11/18/10	Odin Cove	9:10	9:20		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			1	0	0		0
11/18/10	Jenner (Ask Count)	9:25	9:35		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			38	0	0		0
11/18/10	Penny Logs	9:40	9:50		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			0	0	0		0
11/18/10	Paddy's Rock	9:50	10:00		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			0	0	0		0
11/18/10	Chalanchawi	10:05	10:15		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			1	0	0		0
11/18/10	Pocked Rock	10:20	10:30		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			2	0	0		0
11/18/10	Kabemali	10:35	10:40		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			0	0	0		0
11/18/10	Rock Point	10:45	10:55		None	1 - Clear	2 - Light Breeze	North	1 - Light Air	Mouth of river moved to Jetty			21	0	0		0
11/18/10	North Jenner	11:25	11:35	55	None	1 - Clear			0 - Calm	Lots of HASE today			0	0	0		0
11/18/10	Odin Cove	11:35	11:48	55	None	1 - Clear			0 - Calm	Lots of HASE today			10	0	0		0
11/18/10	Jenner (Ask Count)	11:50	12:00	55	None	1 - Clear			0 - Calm	Lots of HASE today			113	0	0		0
11/18/10	Penny Logs	12:03	12:13	55	None	1 - Clear			0 - Calm	Lots of HASE today			0	0	0		0
11/18/10	Paddy's Rock	12:13	12:23	55	None	1 - Clear			0 - Calm	Lots of HASE today			0	0	0		0
11/18/10	Chalanchawi	11:25	11:35	55	None	1 - Clear			0 - Calm	Lots of HASE today			3	0	0		0
11/18/10	Pocked Rock	12:42	12:52	55	None	1 - Clear			0 - Calm	Lots of HASE today			2	0	0		0
11/18/10	Kabemali	12:55	13:05	55	None	1 - Clear			0 - Calm	Lots of HASE today			24	0	0		0
11/18/10	Rock Point	13:07	13:17	55	None	1 - Clear			0 - Calm	Lots of HASE today			22	0	0		0
11/18/10	North Jenner	13:30	13:40	55	None	1 - Clear			0 - Calm	Lots of HASE today			0	0	0		0
11/18/10	Odin Cove	13:40	13:50	55	None	1 - Clear			0 - Calm	Lots of HASE today			15	0	0		0

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
11/18/10	Jenner (Ask Count)	13:55	14:05	55	None	1 - Clear			0 - Calm	Lots of HASE today			95	0	0		0
11/18/10	Penny Logs	14:08	14:18	55	None	1 - Clear			0 - Calm	Lots of HASE today			0	0	0		0
11/18/10	Paddy's Rock	14:18	14:28	55	None	1 - Clear			0 - Calm	Lots of HASE today			0	0	0		0
11/18/10	Chalanchawi	14:30	14:40	55	None	1 - Clear			0 - Calm	Lots of HASE today			3	0	0		0
11/18/10	Pocked Rock	14:47	14:57	55	None	1 - Clear			0 - Calm	Lots of HASE today			5	0	0		0
11/18/10	Kabemali	15:00	15:10	55	None	1 - Clear			0 - Calm	Lots of HASE today			24	0	0		0
11/18/10	Rock Point	15:14	15:24	55	None	1 - Clear			0 - Calm	Lots of HASE today			17	0	0		0
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	7:00		0				0
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	7:30		0				0
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	8:00		0				0
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	8:30		0				0
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	9:00	A	6				6
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	9:30	A	18				18
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	10:00	A	25				25
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	10:00	B	30				30
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	10:30	A	23				23
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	10:30	B	49				49
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	11:00	A	22				22
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	11:00	B	60				60
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	11:30	A	22				22
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	11:30	B	63				63
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	12:00	A	17				17
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	12:00	B	67				67
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	12:30	A	17				17
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	12:30	B	71				71

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	13:00	A	19				19
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	13:00	B	69				69
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	13:30	A	18				18
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	13:30	B	68				68
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	14:00	A	18				18
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	14:00	B	67				67
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	14:30	A	19				19
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	14:30	B	67				67
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	15:00	A	19				19
12/02/10	Jenner	7:00	15:00	55	Rain	1 - Clear	1 - Light Air	s	2 - Light Breeze	Actual precip: overcast all day with light periodic sprinkling	15:00	B	64				64
12/02/10	North Jenner	7:04	7:14	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0
12/02/10	Odin Cove	7:04	7:14	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0
12/02/10	Jenner (Ask Count)	7:20	7:30	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0
12/02/10	Penny Logs	7:32	7:42	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0
12/02/10	Paddy's Rock	7:32	7:42	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0
12/02/10	Chalanchawi	7:45	7:55	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			1	0	0		1
12/02/10	Pocked Rock	8:04	8:14	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0
12/02/10	Kabemali	8:17	8:27	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0
12/02/10	Rock Point	8:29	8:39	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0
12/02/10	North Jenner	8:54	9:04	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0
12/02/10	Odin Cove	8:54	9:04	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0
12/02/10	Jenner (Ask Count)	9:08	9:18	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			7	0	0		7
12/02/10	Penny Logs	9:20	9:30	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0
12/02/10	Paddy's Rock	9:20	9:30	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0
12/02/10	Chalanchawi	9:32	9:42	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			1	0	0		1
12/02/10	Pocked Rock	9:49	9:59	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0
12/02/10	Kabemali	10:02	10:12	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0

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Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
12/02/10	Rock Point	10:14	10:24	48	Rain	1 - Clear	1 - Light Air	Southeast	1 - Light Air	Deserted			0	0	0		0
12/02/10	North Jenner	11:25	11:35	55	\	1 - Clear	\	Southeast	2 - Light Breeze				0	0	0		0
12/02/10	Odin Cove	11:25	11:35	55	\	1 - Clear	\	Southeast	2 - Light Breeze				0	0	0		0
12/02/10	Jenner (Ask Count)	11:44	11:49	55	\	1 - Clear	\	Southeast	2 - Light Breeze			85	0	0		85	
12/02/10	Penny Logs	11:53	12:02	55	\	1 - Clear	\	Southeast	2 - Light Breeze			0	0	0		0	
12/02/10	Paddy's Rock	11:53	12:02	55	\	1 - Clear	\	Southeast	2 - Light Breeze			0	0	0		0	
12/02/10	Chalanchawi	12:05	12:15	55	\	1 - Clear	\	Southeast	2 - Light Breeze			2	0	0		2	
12/02/10	Pocked Rock	12:28	12:38	55	\	1 - Clear	\	Southeast	2 - Light Breeze			1	0	0		1	
12/02/10	Kabemali	12:42	12:52	55	\	1 - Clear	\	Southeast	2 - Light Breeze			3	0	0		3	
12/02/10	Rock Point	12:54	13:04	55	\	1 - Clear	\	Southeast	2 - Light Breeze			0	0	0		0	
12/02/10	North Jenner	13:23	13:33	55	\	1 - Clear	\	Southeast	2 - Light Breeze			0	0	0		0	
12/02/10	Odin Cove	13:23	13:33	55	\	1 - Clear	\	Southeast	2 - Light Breeze			5	0	0		5	
12/02/10	Jenner (Ask Count)	13:36	13:45	55	\	1 - Clear	\	Southeast	2 - Light Breeze			96	0	0		96	
12/02/10	Penny Logs	13:36	13:45	55	\	1 - Clear	\	Southeast	2 - Light Breeze			0	0	0		0	
12/02/10	Paddy's Rock	13:47	13:55	55	\	1 - Clear	\	Southeast	2 - Light Breeze			0	0	0		0	
12/02/10	Chalanchawi	13:58	14:05	55	\	1 - Clear	\	Southeast	2 - Light Breeze			1	0	0		1	
12/02/10	Pocked Rock	14:14	14:22	55	\	1 - Clear	\	Southeast	2 - Light Breeze			2	0	0		2	
12/02/10	Kabemali	14:24	14:34	55	\	1 - Clear	\	Southeast	2 - Light Breeze			4	0	0		4	
12/02/10	Rock Point	14:36	14:45	55	\	1 - Clear	\	Southeast	2 - Light Breeze			0	0	0		0	
12/23/10	Jenner	7:00	11:00AM	50	None	1 - Clear	2 - Light Breeze	Southeast	1 - Light Air	Wide river mouth-small waves into mouth; minus tides AM; No seals AM	7:00		0		0		0
12/23/10	Jenner	7:00	11:00AM	50	None	1 - Clear	2 - Light Breeze	Southeast	1 - Light Air	Wide river mouth-small waves into mouth; minus tides AM; No seals AM	7:30		0		0		0
12/23/10	Jenner	7:00	11:00AM	50	None	1 - Clear	2 - Light Breeze	Southeast	1 - Light Air	Wide river mouth-small waves into mouth; minus tides AM; No seals AM	8:00		0		0		0
12/23/10	Jenner	7:00	11:00AM	50	None	1 - Clear	2 - Light Breeze	Southeast	1 - Light Air	Wide river mouth-small waves into mouth; minus tides AM; No seals AM	8:30		0		0		0
12/23/10	Jenner	7:00	11:00AM	50	None	1 - Clear	2 - Light Breeze	Southeast	1 - Light Air	Wide river mouth-small waves into mouth; minus tides AM; No seals AM	9:00		0		0		0
12/23/10	Jenner	7:00	11:00AM	50	None	1 - Clear	2 - Light Breeze	Southeast	1 - Light Air	Wide river mouth-small waves into mouth; minus tides AM; No seals AM	9:30		0		0		0
12/23/10	Jenner	7:00	11:00AM	50	None	1 - Clear	2 - Light Breeze	Southeast	1 - Light Air	Wide river mouth-small waves into mouth; minus tides AM; No seals AM	10:00		0		0		0
12/23/10	Jenner	7:00	11:00AM	50	None	1 - Clear	2 - Light Breeze	Southeast	1 - Light Air	Wide river mouth-small waves into mouth; minus tides AM; No seals AM	10:30		0		0		0
12/23/10	Jenner	7:00	11:00AM	50	None	1 - Clear	2 - Light Breeze	Southeast	1 - Light Air	Wide river mouth-small waves into mouth; minus tides AM; No seals AM	11:00		0		0		0

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
12/23/10	Jenner	11:30	15:30	52	None	1 - Clear	1 - Light Air	West	1 - Light Air	Wide mouth; lots of gulls; No seals PM	11:30		0		0		0
12/23/10	Jenner	11:30	15:30		None	1 - Clear	1 - Light Air	West	1 - Light Air	Wide mouth; lots of gulls; No seals PM	12:00		0		0		0
12/23/10	Jenner	11:30	15:30		None	1 - Clear	1 - Light Air	West	1 - Light Air	Wide mouth; lots of gulls; No seals PM	12:30		0		0		0
12/23/10	Jenner	11:30	15:30		None	1 - Clear	1 - Light Air	West	1 - Light Air	Wide mouth; lots of gulls; No seals PM	13:00		0		0		0
12/23/10	Jenner	11:30	15:30		None	1 - Clear	1 - Light Air	West	1 - Light Air	Wide mouth; lots of gulls; No seals PM	13:30		0		0		0
12/23/10	Jenner	11:30	15:30		None	1 - Clear	1 - Light Air	West	1 - Light Air	Wide mouth; lots of gulls; No seals PM	14:00		0		0		0
12/23/10	Jenner	11:30	15:30		None	1 - Clear	1 - Light Air	West	1 - Light Air	Wide mouth; lots of gulls; No seals PM	14:30		0		0		0
12/23/10	Jenner	11:30	15:30		None	1 - Clear	1 - Light Air	West	1 - Light Air	Wide mouth; lots of gulls; No seals PM	15:00		0		0		0
12/23/10	Jenner	11:30	15:30		None	1 - Clear	1 - Light Air	West	1 - Light Air	Wide mouth; lots of gulls; No seals PM	15:30		0		0		0
12/23/10	North Jenner	7:00	7:10	45	\	1 - Clear	\	West	1 - Light Air				0	0	0		0
12/23/10	Odin Cove	7:10	7:20	\	\	1 - Clear	\	West	1 - Light Air			10	0	0			10
12/23/10	Jenner (Ask Count)	7:25	7:35	\	\	1 - Clear	\	West	1 - Light Air			0	0	0			0
12/23/10	Penny Logs	7:38	7:48	\	\	1 - Clear	\	West	1 - Light Air			0	0	0			0
12/23/10	Paddy's Rock	7:48	7:58	\	\	1 - Clear	\	West	1 - Light Air			8	0	0			8
12/23/10	Chalanchawi	8:00	8:10	\	\	1 - Clear	\	West	1 - Light Air			0	0	0			0
12/23/10	Pocked Rock	8:20	8:30	\	\	1 - Clear	\	West	1 - Light Air			5	0	0			5
12/23/10	Kabemali	8:32	8:42	\	\	1 - Clear	\	West	1 - Light Air			\	\	\			\
12/23/10	Rock Point	8:44	8:54	\	\	1 - Clear	\	West	1 - Light Air			8	0	0			8
12/23/10	North Jenner	9:06	9:16	\	\	1 - Clear	\	West	1 - Light Air			0	0	0			0
12/23/10	Odin Cove	9:16	9:26	\	\	1 - Clear	\	West	1 - Light Air			0	0	0			0
12/23/10	Jenner (Ask Count)	9:30	9:40	\	\	1 - Clear	\	West	1 - Light Air			0	0	0			0
12/23/10	Penny Logs	9:42	9:52	\	\	1 - Clear	\	West	1 - Light Air			0	0	0			0
12/23/10	Paddy's Rock	9:52	10:02	\	\	1 - Clear	\	West	1 - Light Air			10	0	0			10
12/23/10	Chalanchawi	10:04	10:14	\	\	1 - Clear	\	West	1 - Light Air			0	0	0			0
12/23/10	Pocked Rock	10:24	10:34	\	\	1 - Clear	\	West	1 - Light Air			0	0	0			0
12/23/10	Kabemali	10:36	10:46	\	\	1 - Clear	\	West	1 - Light Air			\	\	\			\
12/23/10	Rock Point	10:48	11:08	\	\	1 - Clear	\	West	1 - Light Air			14	0	0			0
12/23/10	Penny Logs	11:30	11:37	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			0	0	0		0
12/23/10	Odin Cove	11:40	11:48	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			0	0	0		0
12/23/10	Jenner (Ask Count)	11:56	11:58	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			0	0	0		0

Append D. Harbor seal census and weather observations collected during baseline pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Start Time	End Time	Air Temp (F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pups	Total Pinnipeds
12/23/10	Penny Logs	12:05	12:15	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			0	0	0		0
12/23/10	Paddy's Rock	12:15	12:25	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			0	0	0		0
12/23/10	Chalanchawi	12:30	12:35	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			0	0	0		0
12/23/10	Pocked Rock	12:40	12:50	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			0	0	0		0
12/23/10	Kabemali	12:55	13:07	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			0	0	0		0
12/23/10	Rock Point	13:15	13:25	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			9	0	0		9
12/23/10	North Jenner	13:50	14:00	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			0	0	0		0
12/23/10	Odin Cove	14:00	14:10	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			1	0	0		1
12/23/10	Jenner (Ask Count)	14:12		65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			0	0	0		0
12/23/10	Penny Logs	14:17	14:25	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			0	0	0		0
12/23/10	Paddy's Rock	14:25	14:35	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			4	0	0		4
12/23/10	Chalanchawi	14:40	14:50	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			0	0	0		0
12/23/10	Pocked Rock	15:00	15:10	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			0	0	0		0
12/23/10	Kabemali	15:15	15:25	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			0	0	0		0
12/23/10	Rock Point	15:28	15:38	65	\	1 - Clear	2 - Light Breeze	Northeast	2 - Light Breeze	Very calm; few people; some with dogs			10	0	0		10

Appendix E. Harbor seal disturbances observed during baseline pinniped monitoring of Russian River Estuary Management Activities from April to December 2010.

Appendix E. Harbor seal disturbances observed during baseline pinniped monitoring of Russian River Estuary Management Activities from April to December 2010.

Observation Date	Haulout	Start Time	End Time	Disturbance	Disturbance Start Time	Disturbance End Time	Duration of Disturbance	Source of Disturbance	Response to Disturbance	Distance to Source (feet)	No. Harbor Seals Disturbed	No. Harbor Seals Flushed	No. Adult (NonPup) Harbor seals Remain at Haulout	No. Harbor Seal Pups Remaining at Haulout	Comments
5/6/10	Jenner	7:30	15:30	yes	9:48	9:48	a few	6- other	F	5'	12	5	4	3	source = great blue heron
5/6/10	Jenner	7:30	15:30	yes	11:35	11:38	3 min	1	A	55'	2		2		
5/6/10	Jenner	7:30	15:30	yes	11:43	11:47	4 min	1	AMF	25'	3	7	2	1	man walking, continued down
5/6/10	Jenner	7:30	15:30	yes	11:47		Continuous	1	F	25'		8	0	0	man walking, continued down
5/6/10	Jenner	7:30	15:30	yes	11:48	11:52	4 min	1	AMF	25'	5	4		2	man walking, continued down
5/6/10	Jenner	7:30	15:30	yes	12:25	12:28	3 min	1	A	40'	11		all		
5/6/10	Jenner	7:30	15:30	yes	12:36			1	AMF		24	5	93	7	
5/6/10	Jenner	7:30	15:30	yes	14:37	14:42	5 min	1	AM	50'	2				Surfers
5/6/10	Jenner	7:30	15:30	yes	14:48			1	AF	25'	120	50	61	4	Surfers
5/6/10	Jenner	7:30	15:30	yes	14:56			1	AF	25'	16	6	54	4	Surfers
5/6/10	Jenner	7:30	15:30	yes	15:08	15:09	1 min	1	A	30'	5	4		4	Surfers
5/6/10	Jenner	7:30	15:30	yes	15:09	15:12	3 min	1	F	10'		5		0	Surfers
6/14/10	Jenner	05:46			09:44	09:45	1 min	3	A	250	14	0	10	2	A, 5 kayaks approached from
6/14/10	Jenner	05:46			09:45	09:46	1 min	3	AF	200	105	16	89	0	B, HASE alert, move & ~16 flush
6/14/10	Jenner	05:46			10:00	10:05	5 min	1	site A	200	0	0	14	0	A, 2 people walking on top of
6/14/10	Jenner	05:46			10:05	10:07	2 min	3	A, site B	75	5	0	5	0	B, 1 kayak from group floats out
6/14/10	Jenner	05:46			10:07	10:14	7 min	3	A, site A	50	1	0	10	2	A, same kayak approaches site A
6/14/10	Jenner	05:46			10:15	10:18	3 min	3	site A & B	50	0	0	10	2	A & B, remaining 4 kayaks begun
6/14/10	Jenner	05:46			10:41	10:44	3 min	4	A, sites A & B	200	5	0	105	0	A&B, SCWA boat passing, alerts
6/14/10	Jenner	05:46			10:55	11:01	6 min	1	-9999	250	0	0	107		1 person walking on top of
6/14/10	Jenner	05:46			13:03	13:03	less than 1	3	site A	200	0	0	10	0	2 kayaks, 3 people
6/14/10	Jenner	05:46			13:03	13:10	7 min	3	AF	150	11	2	98	0	2 kayaks
6/14/10	Jenner	05:46			13:10	13:12	2 min	3	AF	75	4	2	8	0	A, 2 kayaks
6/14/10	Jenner	05:46			13:17	13:21	4 min	1	A, site A	150	5	0	10	0	A, 2 adults, 1 child walking
6/14/10	Jenner	05:46			13:48	13:48	less than 1	1	AF, site B	75	13	1	101	0	B, 2 adults, 1 child walking
7/12/10	North Jenner	6:30	6:40	No	6:30	6:40									
7/12/10	Odin Cove	6:40	6:50	No	6:40	6:50									
7/12/10	Jenner (Ask Count)	6:58	7:08	No	6:58	7:08							270		
7/12/10	Penny Logs	7:15	7:25	No	7:15	7:25									
7/12/10	Paddy's Rock	7:25	7:35	No	7:25	7:35									
7/12/10	Chalanchawi	7:38	7:48	No	7:38	7:48									
7/12/10	Pocked Rock	7:56	8:06	No	7:56	8:06							3		
7/12/10	Kabemali	8:10	8:20	No	8:10	8:20							2		
7/12/10	Rock Point	8:22	8:32	No	8:22	8:32							15		
7/12/10	North Jenner	8:47	8:57	No	8:47	9:57									
7/12/10	Odin Cove	8:57	9:07	No	8:57	9:07									
7/12/10	Jenner (Ask Count)	9:10	9:20	No	9:10	9:20							258	3	
7/12/10	Penny Logs	9:26	9:36	No	9:26	9:36									
7/12/10	Paddy's Rock	9:36	9:46	No	9:36	9:46									
7/12/10	Chalanchawi	9:48	9:58	No	9:48	9:58									
7/12/10	Pocked Rock	10:06	10:16	No	10:06	10:16							4		
7/12/10	Kabemali	10:20	10:30	No	10:20	10:30							2		
7/12/10	Rock Point	10:32	10:42	No	10:32	10:42									
7/12/10	North Jenner	11:30	11:40	No											
7/12/10	Odin Cove	11:30	11:40	No											
7/12/10	Jenner (Ask Count)	11:45	11:55	No											
7/12/10	Penny Logs	11:58	12:08	No											
7/12/10	Paddy's Rock	11:58	12:08	No											
7/12/10	Chalanchawi	12:10	12:20	No											
7/12/10	Pocked Rock	12:25	12:35	No											
7/12/10	Kabemali	12:37	12:47	No											
7/12/10	Rock Point	12:48	12:58	No											
7/12/10	North Jenner	13:11	13:21	No											
7/12/10	Odin Cove	13:11	13:21	No											
7/12/10	Jenner (Ask Count)	13:27	13:37	No											

Source of Disturbance: 1-People; 2-Photographer; 3-Kayak; 4-Other Boat; 5-Surfer; 6-Other

Response to Disturbance: A-Alert; M-Move; F-Flush

Appendix E. Harbor seal disturbances observed during baseline pinniped monitoring of Russian River Estuary Management Activities from April to December 2010.

7/12/10	Penny Logs	13:40	13:50	No													
7/12/10	Paddy's Rock	13:40	13:50	No													
7/12/10	Chalanchawi	13:52	14:02	No													
7/12/10	Pocked Rock	14:06	14:16	No													
7/12/10	Kabemali	14:18	14:28	No													
7/12/10	Rock Point	14:29	14:39	No													
7/13/10	Jenner	06:00	14:00	Yes	09:54	10:00	6 min	1	A	50	14	0	317	0			
7/13/10	Jenner	06:00	14:00	Yes	10:47	11:05	28 min	1	AM	50	50	0	323	0			
7/13/10	Jenner	06:00	14:00	Yes	11:23	11:34	13 min	1	AMF	75	15	1	322	0			
7/13/10	Jenner	06:00	14:00	Yes	12:16	12:37	21 min	1	AMF	50	250	31	265	0		12 people +	
7/13/10	Jenner	06:00	14:00	Yes	13:26	13:45	18 min	3, 1	A	100	20	0	266	0		kayaker w/dog + people	
7/13/10	Jenner	06:00	14:00	Yes	13:48	13:54	6 min	6	AM	100	25	0	264	0		school group 65	
7/13/10	North Jenner	7:00	11:00	unsure			-9999	1	A							biological survey of both	
7/13/10	North Jenner	7:00	11:00	No													
7/13/10	Odin Cove	7:00	11:00	No													
7/13/10	Jenner (Ask Count)	7:16	7:26	No													
7/13/10	Penny Logs	7:29	7:39	No													
7/13/10	Paddy's Rock	7:29	7:39	No													
7/13/10	Chalanchawi	7:41	7:51	No													
7/13/10	Pocked Rock	8:02	8:12	No													
7/13/10	Kabemali	8:14	8:24	No													
7/13/10	Rock Point	8:27	8:37	No													
7/13/10	North Jenner	8:58	9:08	No													
7/13/10	Odin Cove	8:58	9:08	No													
7/13/10	Jenner (Ask Count)	9:13	9:23	No													
7/13/10	Penny Logs	9:27	9:37	No													
7/13/10	Paddy's Rock	9:27	9:37	No													
7/13/10	Chalanchawi	9:39	9:49	No													
7/13/10	Pocked Rock	10:00	10:10	No													
7/13/10	Kabemali	10:13	10:23	No													
7/13/10	Rock Point	10:25	10:35	No													
7/13/10	North Jenner	11:30	11:40	No													
7/13/10	Odin Cove	11:30	11:40	No													
7/13/10	Jenner (Ask Count)	11:45	11:55	No													
7/13/10	Penny Logs	11:59	12:09	No													
7/13/10	Paddy's Rock	11:59	12:09	No													
7/13/10	Chalanchawi	12:12	12:22	No													
7/13/10	Pocked Rock	13:30	12:40	No													
7/13/10	Kabemali	12:43	12:53	No													
7/13/10	Rock Point	12:55	13:05	No													
7/13/10	North Jenner	13:26	13:36	No													
7/13/10	Odin Cove	13:26	13:36	No													
7/13/10	Jenner (Ask Count)	13:42	13:52	No													
7/13/10	Penny Logs	13:56	14:06	No													
7/13/10	Paddy's Rock	13:56	14:06	No													
7/13/10	Chalanchawi	14:09	14:19	No													
7/13/10	Pocked Rock	14:28	14:38	No													
7/13/10	Kabemali	14:41	14:51	No													
7/13/10	Rock Point	14:53	15:03	No													
7/19/10	Jenner	11:30	15:45	yes	12:07	12:18	11 min	2	F	150	15	15	15			3 people looked at sign and	
7/19/10	Jenner	11:30	15:45	yes	12:40	12:48	4 min	1	A	300	6		6			1 person - cayden beach	
7/19/10	Jenner	11:30	15:45	yes	12:48	12:51	3 min	1	F	60	3	3	3			same person moved to small	
7/19/10	Jenner	11:30	15:45	yes	12:50	13:03	11 min	3	FA	80	30	20	20			2 kayaks	
7/19/10	Jenner	11:30	15:45	yes	14:20	14:30	10 min	1	FM	50	40	30	28	2		family of 5	
7/19/10	Jenner	11:30	15:45	yes	14:40	14:42	2 min	1	F			2				family of 4	
7/19/10	Jenner	07:00	11:00	unsure	10:50											no obvious reason for seeds to	
7/19/10	North Jenner	11:10	11:20	No													
7/19/10	Odin Cove	11:10	11:20	No													

Source of Disturbance: 1-People; 2-Photographer; 3-Kayak; 4-Other Boat; 5-Surfer; 6-Other

Response to Disturbance: A-Alert; M-Move; F-Flush

Appendix E. Harbor seal disturbances observed during baseline pinniped monitoring of Russian River Estuary Management Activities from April to December 2010.

8/9/10	Pocked Rock	12:15	12:25	No															
8/9/10	Kabemali	12:30	12:40	No															
8/9/10	Rock Point	12:42	12:52	No															
8/9/10	North Jenner	13:10	13:20	No															
8/9/10	Odin Cove	13:10	13:20	No															
8/9/10	Jenner (Ask Count)	13:00	13:00	No															
8/9/10	Penny Logs	13:24	13:34	No															
8/9/10	Paddy's Rock	13:24	13:34	No															
8/9/10	Chalanchawi	13:36	13:46	No															
8/9/10	Pocked Rock	14:08	14:18	No															
8/9/10	Kabemali	14:20	14:30	No															
8/9/10	Rock Point			No															
8/16/10	North Jenner	6:30	6:40	No															
8/16/10	Odin Cove	6:40	6:50	No															
8/16/10	Jenner (Ask Count)	7:00	7:10	No															
8/16/10	Penny Logs	7:12	7:22	No															
8/16/10	Paddy's Rock	7:22	7:32	No															
8/16/10	Chalanchawi	7:35	7:45	No															
8/16/10	Pocked Rock	7:52	8:02	No															Vision obscured, could not see
8/16/10	Kabemali	8:03	8:13	No															
8/16/10	Rock Point	8:15	8:25	No															
8/16/10	North Jenner	8:40	8:50	No															
8/16/10	Odin Cove	8:50	9:00	No															Foggy
8/16/10	Jenner (Ask Count)	9:01	9:11	No															Foggy
8/16/10	Penny Logs	9:13	9:23	No															
8/16/10	Paddy's Rock	9:23	9:33	No															
8/16/10	Chalanchawi	9:36	9:46	No															
8/16/10	Pocked Rock	9:53	10:03	No															
8/16/10	Kabemali	10:06	10:16	No															Some visibility
8/16/10	Rock Point	10:17	10:27	No															
8/16/10	North Jenner	11:25	11:35	No															Foggy but could count
8/16/10	Odin Cove	11:35	11:45	No															Clear visibility
8/16/10	Jenner (Ask Count)	11:50	12:00	No															Fog in and out
8/16/10	Penny Logs	12:05	12:15	No															5 kayaks. Clear visibility
8/16/10	Paddy's Rock	12:15	12:25	No															25 White Pelicans. Clear
8/16/10	Chalanchawi	12:28	12:38	No															Clear visibility
8/16/10	Pocked Rock	12:47	12:57	No															Clear visibility
8/16/10	Kabemali	13:00	13:10	No															Most were South of main rock
8/16/10	Rock Point	13:12	13:22	No															Clear visibility
8/16/10	North Jenner	13:35	13:45	No															Poor visibility 2/3
8/16/10	Odin Cove	13:45	13:55	No															Poor visibility 2/3
8/16/10	Jenner (Ask Count)	14:00	14:10	No															Seals partially hidden
8/16/10	Penny Logs	14:15	14:25	No															Biologists?
8/16/10	Paddy's Rock	14:25	14:35	No															Clear visibility
8/16/10	Chalanchawi	14:38	14:48	No															Clear visibility
8/16/10	Pocked Rock	14:58	15:08	No															Visibility 2/3
8/16/10	Kabemali	15:10	15:20	No															Visibility 2/3
8/16/10	Rock Point	15:22	15:32	No															Clear visibility
9/9/10	Jenner	06:00	14:00	yes	11:58	12:03	5 min	2	A	125	3	0	45	0					
10/7/10	Jenner	07:00	15:00	yes	08:23	08:28	5 min	1	AMF	5	42	33	9	0					person
10/7/10	Jenner	07:00	15:00	yes	08:43	08:46	3 min	1	AMF	5	12	8	4	0					same person as above
10/7/10	Jenner	07:00	15:00	yes	11:09	11:12	3 min	1	AMF	5	15	15	0	0					2 people + dog. Boat later
10/7/10	Penny Logs			Yes	12:20	12:23	0:03	4 - Other Boat	A - Alert	200	1	0							Fast motorboat
11/3/10	Jenner	07:00	15:00	yes	14:30	14:31	1 min	6	AMF	300	20	5	129	0					helicopter (site A only)
11/3/10	Jenner	07:00	15:00	yes	14:30	14:51	21 min	1	A	30	15	0	129	0					2 people
11/3/10	Jenner	07:00	15:00	yes	14:53	14:54	1 min	6	A	400	25	0	129	0					helicopter
12/2/10	Jenner	7:00	15:00	no															

Source of Disturbance: 1-People; 2-Photographer; 3-Kayak; 4-Other Boat; 5-Surfer; 6-Other

Response to Disturbance: A-Alert; M-Move; F-Flush

Appendix F. Harbor seal census and weather observations collected during pinniped monitoring of the Jenner and peripheral haulouts for Russian River Estuary Management Activities from April to December 2010.

Observation Date	Site	Activity Monitored	Start Time	End Time	River Mouth Condition	Air Temp(F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pinnipeds	Comments
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	6:00	A	55			55	a
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	6:00	B	101			101	b
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	6:00	C	6			6	c
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	6:30	A	65			65	a
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	6:30	B	105			105	b
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	6:30	C	5			5	c
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	7:00	A	70			70	a
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	7:00	B	101			101	b
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	7:30	AC	25			25	a/c Haulout a & c merged
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	8:00	AC	65			65	a/c
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	8:30	AC	83			83	a/c
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	9:00	AC	90			90	a/c
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	9:30	AC	81			81	a/c
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	10:00	AC	97			97	a/c
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	10:30	AC	104			104	a/c
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	11:00	AC	74			74	a/c
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	11:30	AC	90			90	a/c
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	12:00	AC	83			83	a/c
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	12:30	A	46			46	a groups a & c seperated back into two haulouts
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	12:30	C	48			48	c
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	13:00	A	45			45	a
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	13:00	C	58			58	c
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	13:30	A	56			56	a
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	13:30	C	56			56	c
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	14:00	A	56			56	a
7/7/10	Jenner	Pre-Lagoon Outlet	6:00	14:00	2	60	1	1	0 - Calm		1 - Light Air	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	14:00	C	58			58	c
7/7/10	North Jenner	Pre-Lagoon Outlet Implementation	12:37	12:47	Closed	60		1 - Clear	2 - Light Breeze						0	0	0	0	
7/7/10	Odin Cove	Pre-Lagoon Outlet Implementation	12:25	12:35	Closed	60		1 - Clear	2 - Light Breeze						18	0	0	0	
7/7/10	Jenner	Pre-Lagoon Outlet Implementation	12:55	13:05	Closed	60		1 - Clear	2 - Light Breeze						103	0	0	103	
7/7/10	Penny Logs	Pre-Lagoon Outlet Implementation	13:15	13:25	Closed	60		1 - Clear	2 - Light Breeze						0	0	0	0	
7/7/10	Paddy's Rock	Pre-Lagoon Outlet Implementation	13:25	13:35	Closed	60		1 - Clear	2 - Light Breeze						0	0	0	0	

Observation Date	Site	Activity Monitored	Start Time	End Time	River Mouth Condition	Air Temp(F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pinnipeds	Comments
7/7/10	Chalanchawi	Pre-Lagoon Outlet Implementation	13:40	13:50	Closed	62		1 - Clear	2 - Light Breeze						0	0	0	0	
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	4:45	A				0	a too dark to count. Sunrise is at 5:53am
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	5:15	A	123		0	a still too dark for accurate count. This is estimate	
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	5:45	A	131		5	136	a rs
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	5:45	B	5		1	6	b group recently came out of ocean (os)
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	6:15	A	131		6	137	a rs
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	6:15	B	4		2	6	b os
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	6:45	A	6		2	8	a all but 8 flushed (138 rs/ 2os) when staff equipment pass haulout
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	7:15	A	5		0	5	a 1 survey staff taking points within 50' of HS
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	7:45	A	5		1	6	a rs
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	7:45	B	12		0	12	b
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	8:15	A	9		1	10	a rs
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	8:15	B	1		0	1	b os
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	8:45	A	9		1	10	a rs
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	8:45	B	4		0	4	b os
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	9:15	A	9		0	9	a rs
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	9:45	A	1		0	1	a rs
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	10:15	A	2		1	3	a rs movement back and forth across bar into and out of water.
7/8/10	Jenner	Lagoon Outlet Implementation	4:45	10:20	2	55	1	1	2 - Light Breeze	NW	0 - Calm	calm, no people - 1 haulout on riverside N of haystack rock	10:15	B	4		0	4	b os
7/8/10	North Jenner	Lagoon Outlet Implementation	6:45	6:55	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		17	0	0	17	
7/8/10	Odin Cove	Lagoon Outlet Implementation	7:00	7:10	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		0	0	0	0	
7/8/10	Jenner (Ask Count)	Lagoon Outlet Implementation	7:13	7:25	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light Breeze	Equipment on beach-channel opening	-9999		5	0	0	5	Equipment and people for dredging
7/8/10	Penny Logs	Lagoon Outlet Implementation	7:25	7:30	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		0	0	0	0	
7/8/10	Paddy's Rock	Lagoon Outlet Implementation	7:25	7:30	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		0	0	0	0	
7/8/10	Chalanchawi	Lagoon Outlet Implementation	7:35	7:45	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		0	0	0	0	High water no logs
7/8/10	Pocketed Rock	Lagoon Outlet Implementation	7:50	8:00	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		0	0	0	0	
7/8/10	Kabemali	Lagoon Outlet Implementation	8:02	8:12	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		0	0	0	0	
7/8/10	Rock Point	Lagoon Outlet Implementation	8:15	8:25	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		21	0	0	21	
7/8/10	North Jenner	Lagoon Outlet Implementation	8:40	8:50	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		0	0	0	0	
7/8/10	Odin Cove	Lagoon Outlet Implementation	8:50	9:00	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		15	0	0	15	
7/8/10	Jenner (Ask Count)	Lagoon Outlet Implementation	9:02	9:12	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light Breeze	Equipment on beach-channel opening	-9999		14	0	0	14	Channel open, equipment on beach
7/8/10	Penny Logs	Lagoon Outlet Implementation	9:15	9:25	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		0	0	0	0	
7/8/10	Paddy's Rock	Lagoon Outlet Implementation	9:15	9:25	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		0	0	0	0	
7/8/10	Chalanchawi	Lagoon Outlet Implementation	9:27	9:37	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		0	0	0	0	
7/8/10	Pocketed Rock	Lagoon Outlet Implementation	9:45	9:55	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		2	0	0	2	
7/8/10	Kabemali	Lagoon Outlet Implementation	10:00	10:10	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		0	0	0	0	
7/8/10	Rock Point	Lagoon Outlet Implementation	10:12	10:22	Closed	60	Fog	1 - Clear	0 - Calm	North	2 - Light	Equipment on beach-channel opening	-9999		27	0	0	27	
7/8/10	North Jenner	Lagoon Outlet Implementation	11:10	11:20	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		0	0	0	0	
7/8/10	Odin Cove	Lagoon Outlet Implementation	11:10	11:20	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		15	0	2	17	
7/8/10	Jenner (Ask Count)	Lagoon Outlet Implementation	11:30	11:40	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest		No Jenner monitor	-9999		58	0	2	60	10 very active, move across sand, in and out of water
7/8/10	Penny Logs	Lagoon Outlet Implementation	11:45	11:53	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		2	0	0	2	
7/8/10	Paddy's Rock	Lagoon Outlet Implementation	11:45	11:53	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		0	0	0	0	
7/8/10	Chalanchawi	Lagoon Outlet Implementation	11:56	12:03	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		0	0	0	0	logs submerged
7/8/10	Pocketed Rock	Lagoon Outlet Implementation	12:11	12:23	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		2	0	0	2	
7/8/10	Kabemali	Lagoon Outlet Implementation	12:27	12:35	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		0	0	0	0	and dog
7/8/10	Rock Point	Lagoon Outlet Implementation	12:38	12:47	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		38	0	1	39	
7/8/10	North Jenner	Lagoon Outlet Implementation	13:05	13:20	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		5	0	0	5	
7/8/10	Odin Cove	Lagoon Outlet Implementation	13:05	13:20	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		21	0	1	22	2 people plus dog flushed all but 3
7/8/10	Jenner (Ask Count)	Lagoon Outlet Implementation	13:26	13:33	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest		No Jenner monitor	-9999		65	0	1	66	seals calmer
7/8/10	Penny Logs	Lagoon Outlet Implementation	13:34	13:41	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		3	0	0	3	
7/8/10	Paddy's Rock	Lagoon Outlet Implementation	13:34	13:41	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		0	0	0	0	
7/8/10	Chalanchawi	Lagoon Outlet Implementation	13:43	13:49	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		0	0	0	0	logs submerged
7/8/10	Pocketed Rock	Lagoon Outlet Implementation	13:56	14:09	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		2	0	1	3	restless, moved frequently
7/8/10	Kabemali	Lagoon Outlet Implementation	14:11	14:23	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		1	0	0	1	
7/8/10	Rock Point	Lagoon Outlet Implementation	14:25	14:47	Closed	52	Fog	1 - Clear	5 - Fresh Breeze	Northwest			-9999		36	0	2	38	restless, moved frequently
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	6:00	A	166			166	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	6:00	B	38			38	b

Observation Date	Site	Activity Monitored	Start Time	End Time	River Mouth Condition	Air Temp(F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pinnipeds	Comments
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	6:30	A	168			168	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	6:30	B	38			38	b
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	7:00	A	170			170	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	7:00	B	39			38	b
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	7:30	A	181			181	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	7:30	B	4			4	b
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	8:00	A	145			145	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	8:30	A	172			172	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	9:00	A	179			179	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	9:30	A	179			179	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	10:00	A	183			183	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	10:30	A	49			49	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	11:00	A	53			53	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	11:30	A	71			71	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	12:00	A	86			86	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	12:30	A	89			89	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	13:00	A	83			83	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	13:30	A	59			59	a 1 kayaker
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	13:30	C	21			21	c
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	14:00	A	61			61	a
7/9/10	Jenner	Post-Lagoon Outlet	6:00	14:00	2	55	1	1	1 - Light Air		1 - Light Air	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	14:00	C	24			24	c
7/9/10	North Jenner	Post-Lagoon Outlet	7:20	7:30	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		7	0	0	7	
7/9/10	Odin Cove	Post-Lagoon Outlet	7:20	7:30	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		5	1	0	6	1 small pup like
7/9/10	Jenner (Ask Count)	Post-Lagoon Outlet	7:40		Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		185	0	0	185	No CASL on mile rocks
7/9/10	Penny Logs	Post-Lagoon Outlet	7:45	7:55	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		0	0	0	0	Wakes
7/9/10	Paddy's Rock	Post-Lagoon Outlet	7:45	7:55	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		0	0	0	0	
7/9/10	Chalanchawi	Post-Lagoon Outlet	7:59	8:09	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		0	0	0	0	Site underwater, Kayaks
7/9/10	Pocked Rock	Post-Lagoon Outlet	8:18	8:28	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		6	0	0	6	
7/9/10	Kabemali	Post-Lagoon Outlet	8:30	8:40	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		2	0	0	2	Glance at me
7/9/10	Rock Point	Post-Lagoon Outlet	8:41	8:51	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		27	0	0	27	
7/9/10	North Jenner	Post-Lagoon Outlet	9:14	9:24	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		0	0	0	0	
7/9/10	Odin Cove	Post-Lagoon Outlet	9:14	9:24	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		12	1	0	13	1 pup by size
7/9/10	Jenner (Ask Count)	Post-Lagoon Outlet	9:45		Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		179	0	0	179	Couple by signs, out of count area
7/9/10	Penny Logs	Post-Lagoon Outlet	10:00	10:10	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		0	0	0	0	
7/9/10	Paddy's Rock	Post-Lagoon Outlet	10:00	10:10	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		0	0	0	0	
7/9/10	Chalanchawi	Post-Lagoon Outlet	10:12	10:22	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		0	0	0	0	Underwater
7/9/10	Pocked Rock	Post-Lagoon Outlet	10:30	10:40	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		2	0	0	2	
7/9/10	Kabemali	Post-Lagoon Outlet	10:44	10:54	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		2	0	0	2	
7/9/10	Rock Point	Post-Lagoon Outlet	10:57	11:07	Closed	57	None	1 - Clear	0 - Calm		2 - Light	Overcast	-9999		33	0	0	33	
7/9/10	North Jenner	Post-Lagoon Outlet	11:30	11:40	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		5	0	0	5	
7/9/10	Odin Cove	Post-Lagoon Outlet	11:30	11:40	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		27	0	1	28	
7/9/10	Jenner (Ask Count)	Post-Lagoon Outlet	11:44	11:54	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		71	0	0	71	All in a clump
7/9/10	Penny Logs	Post-Lagoon Outlet	11:58	12:04	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		0	0	0	0	
7/9/10	Paddy's Rock	Post-Lagoon Outlet	11:58	12:04	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		0	0	0	0	
7/9/10	Chalanchawi	Post-Lagoon Outlet	12:12	12:22	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		0	0	0	0	Underwater
7/9/10	Pocked Rock	Post-Lagoon Outlet	12:30	12:40	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		3	0	0	3	
7/9/10	Kabemali	Post-Lagoon Outlet	12:42	12:52	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		1	0	1	2	
7/9/10	Rock Point	Post-Lagoon Outlet	12:54	13:04	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		22	0	1	23	
7/9/10	North Jenner	Post-Lagoon Outlet	13:28	13:38	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		8	0	0	8	
7/9/10	Odin Cove	Post-Lagoon Outlet	13:28	13:38	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		29	0	1	30	
7/9/10	Jenner (Ask Count)	Post-Lagoon Outlet	13:43	13:53	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		80	0	0	80	
7/9/10	Penny Logs	Post-Lagoon Outlet	13:56	14:06	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		0	0	0	0	
7/9/10	Paddy's Rock	Post-Lagoon Outlet	13:56	14:06	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		0	0	0	0	
7/9/10	Chalanchawi	Post-Lagoon Outlet	14:09	14:19	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		0	0	0	0	Underwater
7/9/10	Pocked Rock	Post-Lagoon Outlet	14:29	14:39	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		2	0	0	2	
7/9/10	Kabemali	Post-Lagoon Outlet	14:41	14:51	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		1	0	1	2	
7/9/10	Rock Point	Post-Lagoon Outlet	14:52	15:02	Closed	58		1 - Clear	0 - Calm		0 - Calm	Deserted Calm	-9999		28	0	3	31	
9/27/10	North Jenner	Pre-breaching	7:08	7:17	Closed	62	Fog	2 - Slightly obscured but still able to count	0 - Calm		0 - Calm	Large swells	-9999		0	0	0	0	Fog partially obscuring coastal rocks (Outlet implementation was postponed due to high surf)
9/27/10	Odin Cove	Pre-breaching	7:17	7:28	Closed	62	Fog	2 - Slightly obscured but	0 - Calm		0 - Calm	Large swells	-9999		0	0	0	0	Sky clear and blue

Observation Date	Site	Activity Monitored	Start Time	End Time	River Mouth Condition	Air Temp(F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pinnipeds	Comments
9/27/10	Jenner (Ask Count)	Pre-breaching	7:32	7:42	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		25	0	0	25	Per overlook monitor
9/27/10	Penny Logs	Pre-breaching	7:45	7:55	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		0	0	0	0	No fog on river
9/27/10	Paddy's Rock	Pre-breaching	7:50	8:00	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		0	0	0	0	
9/27/10	Chalanchawi	Pre-breaching	8:02	8:11	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		\	\	\	\	Haulout logs not visible
9/27/10	Pocketed Rock	Pre-breaching	8:19	8:30	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		\	\	\	\	Rocks obscured by fog
9/27/10	Kabemali	Pre-breaching	8:33	8:42	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		0	0	0	0	One harbor in water
9/27/10	Rock Point	Pre-breaching	8:44	8:54	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		0	0	0	0	
9/27/10	North Jenner	Pre-breaching	9:08	9:17	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		0	0	0	0	Haze far offshore
9/27/10	Odin Cove	Pre-breaching	9:17	9:26	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		0	0	0	0	
9/27/10	Jenner (Ask Count)	Pre-breaching	9:29	9:43	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		21	0	0	21	Kayak respected distance
9/27/10	Penny Logs	Pre-breaching	9:46	9:56	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		0	0	0	0	
9/27/10	Paddy's Rock	Pre-breaching	9:50	9:58	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		0	0	0	0	
9/27/10	Chalanchawi	Pre-breaching	10:02	10:12	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		0	0	0	0	Logs underwater
9/27/10	Pocketed Rock	Pre-breaching	10:19	10:29	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		0	0	0	0	
9/27/10	Kabemali	Pre-breaching	10:31	10:41	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		0	0	0	0	One harbor in water
9/27/10	Rock Point	Pre-breaching	10:43	10:53	Closed	62	Fog	2 - Slightly obscured but	0 - Calm	\	0 - Calm	Large swells	-9999		0	0	0	0	
9/27/10	North Jenner	Pre-breaching	11:32	11:42	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	
9/27/10	Odin Cove	Pre-breaching	11:42	11:50	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	
9/27/10	Jenner (Ask Count)	Pre-breaching	11:52	12:01	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		21	0	0	21	4 kayaks , 3 people on beach
9/27/10	Penny Logs	Pre-breaching	12:05	12:15	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	
9/27/10	Paddy's Rock	Pre-breaching	12:08	12:18	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	
9/27/10	Chalanchawi	Pre-breaching	12:21	12:25	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	Log not visible
9/27/10	Pocketed Rock	Pre-breaching	12:34	12:44	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	
9/27/10	Kabemali	Pre-breaching	12:46	12:56	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	
9/27/10	Rock Point	Pre-breaching	12:57	13:07	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	
9/27/10	North Jenner	Pre-breaching	13:23	13:33	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	
9/27/10	Odin Cove	Pre-breaching	13:33	13:43	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	
9/27/10	Jenner (Ask Count)	Pre-breaching	13:45	13:55	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		10	0	0	10	1 kayak
9/27/10	Penny Logs	Pre-breaching	13:59	14:08	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	
9/27/10	Paddy's Rock	Pre-breaching	14:02	14:12	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		1	0	0	1	
9/27/10	Chalanchawi	Pre-breaching	14:15	14:25	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	Usual logs not visible, camera died, no
9/27/10	Pocketed Rock	Pre-breaching	14:30	14:40	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	
9/27/10	Kabemali	Pre-breaching	14:41	14:50	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	
9/27/10	Rock Point	Pre-breaching	14:52	15:02	Closed	69		1 - Clear	1 - Light Air	\	1 - Light Air	Large swells, white waves on sand/rocks	-9999		0	0	0	0	
9/29/10	Jenner	Pre-breaching	12:25	13:25	2	70		1	3 - Gentle Breeze	w	-9999	(4=rough) closed bar, one haulout south of haystack. Oceanside wave oversplash. Large flock of seagulls and cormorants between jetty and HSR	12:25	A	5			5	5 HASE r/s ~50' south of the haystack rock. 22 HASE hauled out in adjacent shallows
9/29/10	Jenner	Pre-breaching	12:25	13:25	2	70		1	3 - Gentle Breeze	w	-9999	(4=rough) closed bar, one haulout south of haystack. Oceanside wave oversplash. Large flock of seagulls and cormorants between jetty and HSR	12:55	A	10			10	10 HASE hauled out on beach, 18 HASE in shallows
9/29/10	Jenner	Pre-breaching	12:25	13:25	2	70		1	3 - Gentle Breeze	w	-9999	(4=rough) closed bar, one haulout south of haystack. Oceanside wave oversplash. Large flock of seagulls and cormorants between jetty and HSR	13:25	A	12			12	12 HASE hauled out on beach, 16 HASE in shallows
9/29/10	North Jenner	Pre-breaching	10:15	10:25	Closed	65	Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		\	\	\	\	Visibility 3 Fog!
9/29/10	Odin Cove	Pre-breaching	10:25	10:35	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	Visibility 2
9/29/10	Jenner (Ask Count)	Pre-breaching	10:40	10:50	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		20	0	0	20	2 people in kayak, no monitor
9/29/10	Penny Logs	Pre-breaching	10:53	11:03	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	1/2 visibility
9/29/10	Paddy's Rock	Pre-breaching	11:03	11:13	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	1/2 visibility
9/29/10	Chalanchawi	Pre-breaching	11:15	11:25	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	Logs underwater 1 visibility
9/29/10	Pocketed Rock	Pre-breaching	11:35	11:45	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	2 visibility
9/29/10	Kabemali	Pre-breaching	11:47	11:57	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	2 visibility
9/29/10	Rock Point	Pre-breaching	11:58	12:08	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	1 visibility
9/29/10	North Jenner	Pre-breaching	12:20	12:30	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	1 visibility
9/29/10	Odin Cove	Pre-breaching	12:30	12:40	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	1 visibility
9/29/10	Jenner (Ask Count)	Pre-breaching	12:45	12:55	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		27	0	0	27	1 visibility
9/29/10	Penny Logs	Pre-breaching	12:58	13:08	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		2	0	0	2	1 visibility
9/29/10	Paddy's Rock	Pre-breaching	13:08	13:18	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	1 visibility
9/29/10	Chalanchawi	Pre-breaching	13:20	13:30	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	1 visibility, logs under water
9/29/10	Pocketed Rock	Pre-breaching	13:40	13:50	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	3 visibility
9/29/10	Kabemali	Pre-breaching	13:52	14:02	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	2 visibility
9/29/10	Rock Point	Pre-breaching	14:03	14:13	Closed	65	Patchy Fog	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	2 visibility
9/29/10	North Jenner	Pre-breaching	14:30	14:40	Closed	65	Variable	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	1 visibility
9/29/10	Odin Cove	Pre-breaching	14:40	14:50	Closed	65	Variable	Variable	2 - Light Breeze	Northwest	2 - Light		-9999		0	0	0	0	1 visibility, job called off
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		6:30	-9999					too foggy to count
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		7:00	A	10			10	seals hauled out, too foggy to count
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		7:00	B	13			13	estimate of seal numbers at haulout
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		7:20	A	9			9	fog lifting, light improving, so count is
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		7:20	B	26			26	
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		7:30	A	9			9	
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		7:30	B	33			33	
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		8:00	B	5			5	7:59 - bulldozer & excavator begin
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		8:30	-9999	0			0	1 haulout in estuary water
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		9:00	-9999	0			0	
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		9:15	-9999	0			0	1 HASE cross beach from estuary to
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		9:30	-9999	0			0	
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		10:00	-9999	0			0	
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		10:30	-9999	0			0	10:35 - excavator cut berm to begin

Observation Date	Site	Activity Monitored	Start Time	End Time	River Mouth Condition	Air Temp(F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pinnipeds	Comments
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		10:47	-9999					5 HASE haulout from ocean approx 75 ft south of equipment - 3 went back to ocean, other 2 crossed into
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		11:00	-9999	0			0	
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		11:06	-9999					2 HASE haul out 50 ft north of equipment, stop @ top of bar and
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		11:30	-9999	0			0	
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		11:40	-9999					3 HASE haul out approx 100 ft south of equipment on oceanside, Back into ocean at 11:42
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		11:54	-9999					3 HASE enter outlet channel on the oceanside but stay @ oceanside <1min while excavator operating on estuary side
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		12:00	-9999	0			0	4 HASE enter estuary channel as equipment leaves beach; 12:04 - equipment leaves beach, outflow
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		12:08	-9999					1 HASE hauls out from ocean then heads back up
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		12:08	-9999					3 HASE enters outlet channel from oceanside
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		12:22	C	1			1	First new haulout @ south side of outlet channel on estuary side, swamped by wave though channel
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		12:30	-9999	0			0	5 HASE hauled out in shallows on estuary-side south of outlet
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		12:35	D	3			3	New haulout - 3 on beach, 2 in water (HASE) on estuary side south of outlet channel
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	3	0 - Calm	w	-9999		13:00	D	0			0	7 HASE hauled out in (estuary) shallows but not on beach
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	1	0 - Calm	w	-9999		13:10	A	7			7	2 HASE in the water
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	1	0 - Calm	w	-9999		13:30	A	8			8	2 HASE in the water
9/30/10	Jenner	Breaching	6:30	14:10	2	54	1	1	0 - Calm	w	-9999	Barrier beach formed again - 2nd attempt to breach postponed until next day	14:10	A	10			10	1 HASE in the water
9/30/10	North Jenner	Breaching	6:59	7:09		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	\	\	\	\	0	Too foggy to see
9/30/10	Odin Cove	Breaching	6:59	7:09		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	\	\	\	\	0	Too foggy to see
9/30/10	Jenner (Ask Count)	Breaching	7:13	7:23		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	\	35	0	0	35	
9/30/10	Penny Logs	Breaching	7:27	7:37		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	\	\	\	\	0	Too foggy
9/30/10	Paddy's Rock	Breaching	7:27	7:37		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	\	\	\	\	0	Too foggy
9/30/10	Chalanchawi	Breaching	7:40	7:50		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	\	\	\	\	0	Too foggy, may be under water
9/30/10	Pocketed Rock	Breaching	7:58	8:08		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	\	\	\	\	0	Too foggy
9/30/10	Kabemali	Breaching	8:11	8:21		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	\	\	\	\	0	Too foggy
9/30/10	Rock Point	Breaching	8:22	8:32		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	\	\	\	\	0	
9/30/10	North Jenner	Breaching	8:49	8:59		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	3	0	0	0	3	
9/30/10	Odin Cove	Breaching	8:49	8:59		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	\	\	\	\	0	Still foggy
9/30/10	Jenner (Ask Count)	Breaching	9:02	9:12		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	0	0	0	0	0	Breaching in progress, crew 4
9/30/10	Penny Logs	Breaching	9:14	9:14		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	9	0	0	0	9	
9/30/10	Paddy's Rock	Breaching	9:24	9:24		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	\	\	\	\	0	Foggy
9/30/10	Chalanchawi	Breaching	9:27	9:37		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	0	0	0	0	0	Underwater
9/30/10	Pocketed Rock	Breaching	9:45	9:55		53	Fog	3 - Unable to conduct an accurate or full count	0 - Calm	\	\		-9999	\	\	\	\	0	Foggy
9/30/10	Kabemali	Breaching	9:57	10:07		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	0	0	0	0	0	
9/30/10	Rock Point	Breaching	10:09	10:19		53	Fog	3 - Unable to conduct	0 - Calm	\	\		-9999	0	0	0	0	0	
9/30/10	North Jenner	Breaching	11:00	11:10	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	0	0	0	0	0	
9/30/10	Odin Cove	Breaching	11:00	11:10	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	5	0	0	0	5	
9/30/10	Jenner (Ask Count)	Breaching	11:14	11:24	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	0	0	0	0	0	4 Crew, breach in progress
9/30/10	Penny Logs	Breaching	11:27	11:37	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	6	0	0	0	6	
9/30/10	Paddy's Rock	Breaching	11:27	11:37	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	0	0	0	0	0	
9/30/10	Chalanchawi	Breaching	11:39	11:49	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	0	0	0	0	0	Underwater
9/30/10	Pocketed Rock	Breaching	11:56	12:06	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	0	0	0	0	0	
9/30/10	Kabemali	Breaching	12:08	12:18	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	0	0	0	0	0	
9/30/10	Rock Point	Breaching	12:19	12:29	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	0	0	0	0	0	
9/30/10	North Jenner	Breaching	12:42	12:52	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	0	0	0	0	0	
9/30/10	Odin Cove	Breaching	12:42	12:52	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	4	0	0	0	4	
9/30/10	Jenner (Ask Count)	Breaching	12:55	13:05	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	8	0	0	0	8	Also 7 half in, half out of water
9/30/10	Penny Logs	Breaching	13:08	13:18	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	5	0	0	0	5	
9/30/10	Paddy's Rock	Breaching	13:08	13:18	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	0	0	0	0	0	
9/30/10	Chalanchawi	Breaching	13:20	13:30	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	0	0	0	0	0	Underwater
9/30/10	Pocketed Rock	Breaching	13:38	13:48	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	0	0	0	0	0	
9/30/10	Kabemali	Breaching	13:50	14:00	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	0	0	0	0	0	
9/30/10	Rock Point	Breaching	14:01	14:11	Closed	55	Clearing	2 - Slightly obscured but	0 - Calm	\	0 - Calm		-9999	0	0	0	0	0	
10/1/10	Jenner	Breaching	6:30	13:05	2	58	2	2	0 - Calm	\	-9999		7:10	A	36			36	ocean - 5, estuary side 31
10/1/10	Jenner	Breaching	6:30	13:05	2	58	2	2	0 - Calm	\	-9999		7:40	A	41			41	ocean - 6, estuary -35
10/1/10	Jenner	Breaching	6:30	13:05	2	58	2	2	0 - Calm	\	-9999		8:10	A	38			38	ocean - 1, estuary - 37
10/1/10	Jenner	Breaching	6:30	13:05	2	58	2	2	0 - Calm	\	-9999		8:45	A	3			3	3 seals cross to ocean
10/1/10	Jenner	Breaching	6:30	13:05	2	58	2	2	0 - Calm	\	-9999		9:10	A	0			0	a few seals crossed bar to ocean 300'
10/1/10	Jenner	Breaching	6:30	13:05	2	58	2	2	0 - Calm	\	-9999		9:40	A	0			0	whale 200' off beach

Observation Date	Site	Activity Monitored	Start Time	End Time	River Mouth Condition	Air Temp(F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pinnipeds	Comments
10/1/10	Jenner	Breaching	6:30	13:05	2	58		2	0 - Calm		-9999		10:15	A	3			3	seals at ocean shoreline
10/1/10	Jenner	Breaching	6:30	13:05	2	58		2	0 - Calm		-9999		10:45	A	0			0	all seals in water
10/1/10	Jenner	Breaching	6:30	13:05	2	58		2	0 - Calm		-9999		11:15	A	1			1	estuary side
10/1/10	Jenner	Breaching	6:30	13:05	2	58		2	0 - Calm		-9999		11:45	A	0			0	mouth breached
10/1/10	Jenner	Breaching	6:30	13:05	2	58		2	0 - Calm		-9999		12:15	A	0			0	a few seals playing in trench
10/1/10	Jenner	Breaching	6:30	13:05	2	58		2	0 - Calm		-9999		12:45	A	2			2	seal along beach shore
10/1/10	Jenner	Breaching	6:30	13:05	2	58		2	0 - Calm		-9999		13:05	A	0			0	seals playing in trench stopped when
10/1/10	Chalanchawi	Breaching	7:00	7:10	Closed	50	Fog			West			-9999		0	0	0	0	Fog off deck
10/1/10	Odin Cove	Breaching	7:10	7:20	Closed	50	Fog			West			-9999		0	0	0	0	
10/1/10	Jenner (Ask Count)	Breaching	7:30	7:40	Closed	50	Fog			West			-9999		40	0	0	40	
10/1/10	Penny Logs	Breaching	7:45	7:55	Closed	50	Fog			West			-9999		6	0	0	6	
10/1/10	Paddy's Rock	Breaching	7:55	8:05	Closed	50	Fog			West			-9999		0	0	0	0	
10/1/10	Chalanchawi	Breaching	8:08	8:18	Closed	50	Fog			West			-9999		0	0	0	0	Water level above logs, shrubs
10/1/10	Pocketed Rock	Breaching	8:21	8:31	Closed	50	Fog			West			-9999		0	0	0	0	
10/1/10	Kabemali	Breaching	8:33	8:43	Closed	50	Fog			West			-9999		0	0	0	0	
10/1/10	Rock Point	Breaching	8:45	8:55	Closed	50	Fog			West			-9999		0	0	0	0	
10/1/10	North Jenner	Breaching	9:07	9:17	Closed	50	Fog			West			-9999		0	0	0	0	
10/1/10	Odin Cove	Breaching	9:17	9:27	Closed	50	Fog			West			-9999		0	0	0	0	
10/1/10	Jenner (Ask Count)	Breaching	9:31	9:36	Closed	50	Fog			West			-9999		0	0	0	0	Excavation in progress, haulout gone
10/1/10	Penny Logs	Breaching	9:40	9:50	Closed	50	Fog			West			-9999		0	0	0	0	
10/1/10	Paddy's Rock	Breaching	9:50	10:00	Closed	50	Fog			West			-9999		0	0	0	0	
10/1/10	Chalanchawi	Breaching	10:03	10:13	Closed	50	Fog			West			-9999		0	0	0	0	
10/1/10	Pocketed Rock	Breaching	10:15	10:25	Closed	50	Fog			West			-9999		0	0	0	0	
10/1/10	Kabemali	Breaching	10:28	10:38	Closed	50	Fog			West			-9999		0	0	0	0	
10/1/10	Rock Point	Breaching	10:40	10:50	Closed	50	Fog			West			-9999		0	0	0	0	
10/1/10	North Jenner	Breaching	11:05	11:17	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		3	0	0	3	On far northrock
10/1/10	Odin Cove	Breaching	11:05	11:17	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		7	0	0	7	
10/1/10	Jenner (Ask Count)	Breaching	11:25	11:30	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		0	0	0	0	SCWA equipment
10/1/10	Penny Logs	Breaching	11:35	11:43	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		7	0	0	7	Alerted by kayak
10/1/10	Paddy's Rock	Breaching	11:35	11:43	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		0	0	0	0	
10/1/10	Chalanchawi	Breaching	11:46	11:50	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		0	0	0	0	All logs immersed
10/1/10	Pocketed Rock	Breaching	11:59	12:06	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		0	0	0	0	
10/1/10	Kabemali	Breaching	12:12	12:22	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		0	0	0	0	
10/1/10	Rock Point	Breaching	12:27	12:35	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		0	0	0	0	1 in water
10/1/10	North Jenner	Breaching	12:55	13:03	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		3	0	0	3	
10/1/10	Odin Cove	Breaching	12:55	13:03	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		8	0	0	8	
10/1/10	Jenner (Ask Count)	Breaching	13:10	13:13	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		0	0	0	0	Right by opening
10/1/10	Penny Logs	Breaching	13:17	13:21	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		0	0	0	0	
10/1/10	Paddy's Rock	Breaching	13:17	13:21	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		0	0	0	0	
10/1/10	Chalanchawi	Breaching	13:24	13:25	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		0	0	0	0	All logs immersed
10/1/10	Pocketed Rock	Breaching	13:32	13:42	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		0	0	0	0	
10/1/10	Kabemali	Breaching	13:46	13:50	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		0	0	0	0	
10/1/10	Rock Point	Breaching	13:52	14:01	Closed		Fog	1 - Clear	1 - Light Air	West	1 - Light Air	SCWA opening mouth	-9999		0	0	0	0	1 in water
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				7:00	A	55			55	Poor light approximate counts
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				7:00	B	30			30	Poor light approximate counts
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				7:30	A	61			61	Still a bit foggy
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				7:30	B	31			31	Count more accurate
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				8:00	A	65			65	Foggy heavier
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				8:00	B	30			30	Again approximate count
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				8:30	A	92			92	Count more accurate
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				8:30	B	34			34	Again approximate count
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				9:00	A	91			91	Count pretty accurate now, earlier
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				9:00	B	33			33	Count pretty accurate now, earlier
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				9:30	A	91			91	Count pretty accurate now, earlier
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				9:30	B	32			32	
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				10:00	A	93			93	
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				10:00	B	33			33	
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				10:30	A	102			102	Fog getting thicker
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				10:30	B	33			33	
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				11:00	A	100			100	
10/2/10	Jenner	Post-Breaching	7:00	11:00	Open	50	Fog	3 - Unable to conduct	0 - Calm				11:00	B	32			32	[not clear A or B]
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61	Fog	2 - Slightly obscured but	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	11:30	A	25			25	2 visibility
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61	Fog	2 - Slightly obscured but	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	11:30	B	98			98	2 visibility
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		1 - Clear	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	12:00	A	21			21	1 visibility
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		1 - Clear	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	12:00	B	98			98	1 visibility
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		1 - Clear	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	12:30	A	20			20	1 visibility
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		1 - Clear	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	12:30	B	103			103	1 visibility
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		1 - Clear	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	13:00	A	20			20	
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		1 - Clear	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	13:00	B	106			106	
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		1 - Clear	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	13:30	A	22			22	
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		1 - Clear	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	13:30	B	107			107	
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		1 - Clear	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	14:00	A	31			31	
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		1 - Clear	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	14:00	B	81			81	3 Kids push on seals
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		3 - Unable to conduct	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	14:30	A	24			24	
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		3 - Unable to conduct	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	14:30	B	67			67	
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		3 - Unable to conduct	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	15:00	A	17			17	
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		3 - Unable to conduct	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	15:00	B	59			59	
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		3 - Unable to conduct	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	15:30	A	14			14	
10/2/10	Jenner	Post-Breaching	11:20	15:30	Open	61		3 - Unable to conduct	1 - Light Air	Northwest	1 - Light Air	c. 500 GULL, CORM	15:30	B	53			53	
10/2/10	North Jenner	Post-Breaching	7:08	7:15	Open		Fog			Southwest			-9999		\	\	\	0	Much of rock and beach covered by
10/2/10	Odin Cove	Post-Breaching	7:11	7:18	Open		Fog			Southwest			-9999		\	\	\	0	
10/2/10	Jenner (Ask Count)	Post-Breaching	7:26	7:36	Open		Fog			Southwest			-9999		92	0	0	92	2 pods, per overlook monitor,

Observation Date	Site	Activity Monitored	Start Time	End Time	River Mouth Condition	Air Temp(F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pinnipeds	Comments
10/2/10	Penny Logs	Post-Breaching	7:40	7:50	Open		Fog			Southwest			-9999		\	\	\	0	
10/2/10	Paddy's Rock	Post-Breaching	7:42	7:52	Open		Fog			Southwest			-9999		\	\	\	0	
10/2/10	Chalanchawi	Post-Breaching	7:55	8:04	Open		Fog			Southwest			-9999	1	0	0	1		
10/2/10	Pocked Rock	Post-Breaching	8:11	8:20	Open		Fog			Southwest			-9999	0	0	0	0		
10/2/10	Kabemali	Post-Breaching	8:23	8:33	Open		Fog			Southwest			-9999	\	\	\	0	Partially obscured by fog	
10/2/10	Rock Point	Post-Breaching	8:35	8:44	Open		Fog			Southwest			-9999	0	0	0	0	High waves over rock	
10/2/10	North Jenner	Post-Breaching	8:58	9:08	Open		Fog			Southwest			-9999	0	0	0	0		
10/2/10	Odin Cove	Post-Breaching	9:12	9:22	Open		Fog			Southwest			-9999	0	0	0	0		
10/2/10	Jenner (Ask Count)	Post-Breaching	9:24	9:34	Open		Fog			Southwest			-9999	124	0	0	124		
10/2/10	Penny Logs	Post-Breaching	9:37	9:47	Open		Fog			Southwest			-9999	0	0	0	0		
10/2/10	Paddy's Rock	Post-Breaching	9:40	9:50	Open		Fog			Southwest			-9999	\	\	\	0	Not visible fog	
10/2/10	Chalanchawi	Post-Breaching	9:53	10:03	Open		Fog			Southwest			-9999	5	0	0	5		
10/2/10	Pocked Rock	Post-Breaching	10:10	10:20	Open		Fog			Southwest			-9999	0	0	0	0	Pocked rock fleeting visible through	
10/2/10	Kabemali	Post-Breaching	10:24	10:34	Open		Fog			Southwest			-9999	7	0	0	7		
10/2/10	Rock Point	Post-Breaching	10:35	10:45	Open		Fog			Southwest			-9999	0	0	0	0	Fisherman	
10/2/10	North Jenner	Post-Breaching	11:36	11:47	Open		Fog		1 - Light Air		1 - Light Air		-9999	0	0	0	0	Visibility 2-3	
10/2/10	Odin Cove	Post-Breaching	11:36	11:47	Open		Fog		1 - Light Air		1 - Light Air		-9999	\	\	\	0	Poor visibility	
10/2/10	Jenner (Ask Count)	Post-Breaching	11:50	12:03	Open		Fog		1 - Light Air		1 - Light Air		-9999	125	0	0	125		
10/2/10	Penny Logs	Post-Breaching	12:08	12:20	Open		Fog		1 - Light Air		1 - Light Air		-9999	0	0	0	0		
10/2/10	Paddy's Rock	Post-Breaching	12:08	12:20	Open		Fog		1 - Light Air		1 - Light Air		-9999	0	0	0	0		
10/2/10	Chalanchawi	Post-Breaching	12:22	12:29	Open		Fog		1 - Light Air		1 - Light Air		-9999	5	0	0	5	Kayakers (2) very close	
10/2/10	Pocked Rock	Post-Breaching	12:37	12:45	Open		Fog		1 - Light Air		1 - Light Air		-9999	2	0	0	2		
10/2/10	Kabemali	Post-Breaching	12:48	12:55	Open		Fog		1 - Light Air		1 - Light Air		-9999	9	0	0	9		
10/2/10	Rock Point	Post-Breaching	12:58	13:05	Open		Fog		1 - Light Air		1 - Light Air		-9999	0	0	0	0		
10/2/10	North Jenner	Post-Breaching	13:22	13:32	Open		Fog		1 - Light Air		1 - Light Air		-9999	0	0	0	0		
10/2/10	Odin Cove	Post-Breaching	13:22	13:32	Open		Fog		1 - Light Air		1 - Light Air		-9999	5	0	0	5		
10/2/10	Jenner (Ask Count)	Post-Breaching	13:35	13:44	Open		Fog		1 - Light Air		1 - Light Air		-9999	129	0	0	129		
10/2/10	Penny Logs	Post-Breaching	13:47	13:58	Open		Fog		1 - Light Air		1 - Light Air		-9999	0	0	0	0		
10/2/10	Paddy's Rock	Post-Breaching	13:47	13:58	Open		Fog		1 - Light Air		1 - Light Air		-9999	0	0	0	0		
10/2/10	Chalanchawi	Post-Breaching	14:01	14:08	Open		Fog		1 - Light Air		1 - Light Air		-9999	6	0	0	6	2 at shell beach	
10/2/10	Pocked Rock	Post-Breaching	14:20	14:30	Open		Fog		1 - Light Air		1 - Light Air		-9999	0	0	0	0		
10/2/10	Kabemali	Post-Breaching	14:33	14:43	Open		Fog		1 - Light Air		1 - Light Air		-9999	12	0	0	12		
10/2/10	Rock Point	Post-Breaching	14:44	14:50	Open		Fog		1 - Light Air		1 - Light Air		-9999	0	0	0	0		
10/10/10	Jenner	Pre-breaching	7:00	11:00	Closed	49	None	1 - Clear	0 - Calm				7:00		24		24	Low tide ~ 6:50. 2.3 ft	
10/10/10	Jenner	Pre-breaching	7:00	11:00	Closed	49	None	1 - Clear	0 - Calm				7:30		32		32		
10/10/10	Jenner	Pre-breaching	7:00	11:00	Closed	49	None	1 - Clear	0 - Calm				8:00		25		25		
10/10/10	Jenner	Pre-breaching	7:00	11:00	Closed	49	None	1 - Clear	0 - Calm				8:30		37		37		
10/10/10	Jenner	Pre-breaching	7:00	11:00	Closed	49	None	1 - Clear	0 - Calm				9:00		34		34	1 adult, 2 children over 300 yards	
10/10/10	Jenner	Pre-breaching	7:00	11:00	Closed	49	None	1 - Clear	0 - Calm				9:30		23		23	2 ~ 100 yards away, 4 at jetty	
10/10/10	Jenner	Pre-breaching	7:00	11:00	Closed	49	None	1 - Clear	0 - Calm				10:00		1		1	Water washing over haulout	
10/10/10	Jenner	Pre-breaching	7:00	11:00	Closed	49	None	1 - Clear	0 - Calm				10:30		0		0		
10/10/10	Jenner	Pre-breaching	7:00	11:00	Closed	49	None	1 - Clear	0 - Calm				11:00		0		0		
10/10/10	Jenner	Pre-breaching	11:30	15:30	Closed	77.9	None	2 - Slightly obscured but	2 - Light Breeze	Southeast	2 - Light	c. 700 GULL	11:30	A	0		0	~700 Gull, log offshore attracts seals	
10/10/10	Jenner	Pre-breaching	11:30	15:30	Closed	77.9	None	2 - Slightly obscured but	2 - Light Breeze	Southeast	2 - Light	c. 700 GULL	12:00	A	0		0	5 in kayaks	
10/10/10	Jenner	Pre-breaching	11:30	15:30	Closed	77.9	None	2 - Slightly obscured but	2 - Light Breeze	Southeast	2 - Light	c. 700 GULL	12:30	A	0		0	Seals crossing closed cut	
10/10/10	Jenner	Pre-breaching	11:30	15:30	Closed	77.9	None	2 - Slightly obscured but	2 - Light Breeze	Southeast	2 - Light	c. 700 GULL	13:00	A	0		0		
10/10/10	Jenner	Pre-breaching	11:30	15:30	Closed	77.9	None	2 - Slightly obscured but	2 - Light Breeze	Southeast	2 - Light	c. 700 GULL	13:30	A	0		0		
10/10/10	Jenner	Pre-breaching	11:30	15:30	Closed	77.9	None	2 - Slightly obscured but	2 - Light Breeze	Southeast	2 - Light	c. 700 GULL	14:00	A	0		0		
10/10/10	Jenner	Pre-breaching	11:30	15:30	Closed	77.9	None	2 - Slightly obscured but	2 - Light Breeze	Southeast	2 - Light	c. 700 GULL	14:30	A	0		0		
10/10/10	Jenner	Pre-breaching	11:30	15:30	Closed	77.9	None	2 - Slightly obscured but	2 - Light Breeze	Southeast	2 - Light	c. 700 GULL	15:00	A	0		0		
10/10/10	Jenner	Pre-breaching	11:30	15:30	Closed	77.9	None	2 - Slightly obscured but	2 - Light Breeze	Southeast	2 - Light	c. 700 GULL	15:30	A	0		0		
10/10/10	North Jenner	Pre-breaching	7:00	7:10	Closed	50	None	1 - Clear					-9999	0	0	0	0		
10/10/10	Odin Cove	Pre-breaching	7:10	7:20	Closed	50	None	1 - Clear					-9999	0	0	0	0		
10/10/10	Jenner (Ask Count)	Pre-breaching	7:24	7:30	Closed	50	None	1 - Clear					-9999	24	0	0	24	Beach deserted	
10/10/10	Penny Logs	Pre-breaching	7:34	7:44	Closed	50	None	1 - Clear					-9999	0	0	0	0		
10/10/10	Paddy's Rock	Pre-breaching	7:44	7:54	Closed	50	None	1 - Clear					-9999	0	0	0	0		
10/10/10	Chalanchawi	Pre-breaching	8:00	8:10	Closed	50	None	1 - Clear					-9999	0	0	0	0	Photo taken from Willow Creek Road	
10/10/10	Pocked Rock	Pre-breaching	8:15	8:25	Closed	50	None	1 - Clear					-9999	0	0	0	0		
10/10/10	Kabemali	Pre-breaching	8:27	8:37	Closed	50	None	1 - Clear					-9999	0	0	0	0		
10/10/10	Rock Point	Pre-breaching	8:38	8:48	Closed	50	None	1 - Clear					-9999	0	0	0	0		
10/10/10	North Jenner	Pre-breaching	9:00	9:10	Closed	50	None	1 - Clear					-9999	0	0	0	0		
10/10/10	Odin Cove	Pre-breaching	9:10	9:20	Closed	50	None	1 - Clear					-9999	1	0	0	1		
10/10/10	Jenner (Ask Count)	Pre-breaching	9:21	9:25	Closed	50	None	1 - Clear					-9999	34	0	0	34		
10/10/10	Penny Logs	Pre-breaching	9:29	9:31	Closed	50	None	1 - Clear					-9999	7	0	0	7		
10/10/10	Paddy's Rock	Pre-breaching	9:31	9:38	Closed	50	None	1 - Clear					-9999	0	0	0	0		
10/10/10	Chalanchawi	Pre-breaching	9:42	9:47	Closed	50	None	1 - Clear					-9999	0	0	0	0	Photo from Willow Creek Road	
10/10/10	Pocked Rock	Pre-breaching	9:55	10:01	Closed	50	None	1 - Clear					-9999	0	0	0	0		
10/10/10	Kabemali	Pre-breaching	10:04	10:14	Closed	50	None	1 - Clear					-9999	0	0	0	0		
10/10/10	Rock Point	Pre-breaching	10:15	10:25	Closed	50	None	1 - Clear					-9999	0	0	0	0		
10/10/10	North Jenner	Pre-breaching	11:20	11:30	Closed	60	None	1 - Clear		Northwest			-9999	0	0	0	0	7 HASE near water haulout, Joe	
10/10/10	Odin Cove	Pre-breaching	11:30	11:40	Closed	60	None	1 - Clear		Northwest			-9999	0	0	0	0		
10/10/10	Jenner (Ask Count)	Pre-breaching	11:45	11:55	Closed	60	None	1 - Clear		Northwest			-9999	0	0	0	0	No monitor	
10/10/10	Penny Logs	Pre-breaching	11:58	12:08	Closed	60	None	1 - Clear		Northwest			-9999	0	0	0	0	4 kayaks by log	
10/10/10	Paddy's Rock	Pre-breaching	12:08	12:18	Closed	60	None	1 - Clear		Northwest			-9999	0	0	0	0	2 kayaks near rock	
10/10/10	Chalanchawi	Pre-breaching	12:20	12:30	Closed	60	None	1 - Clear		Northwest			-9999	0	0	0	0	1 kayak, 3 HASE water haulout	
10/10/10	Pocked Rock	Pre-breaching	12:40	12:50	Closed	60	None	1 - Clear		Northwest			-9999	0	0	0	0		
10/10/10	Kabemali	Pre-breaching	12:52	13:02	Closed	60	None	1 - Clear		Northwest			-9999	0	0	0	0		
10/10/10	Rock Point	Pre-breaching	13:04	13:14	Closed	60	None	1 - Clear		Northwest			-9999	0	0	0	0		
10/10/10	North Jenner	Pre-breaching	13:30	13:40	Closed	60	None	1 - Clear		Northwest			-9999	0	0	0	0	3 HASE water hauled out	
10/10/10	Odin Cove	Pre-breaching	13:40	13:50	Closed	60	None	1 - Clear		Northwest			-9999	0	0	0	0		
10/10/10	Jenner (Ask Count)	Pre-breaching	13:55	14:05	Closed	60	None	1 - Clear		Northwest			-9999	0	0	0	0	No monitor	
10/10/10	Penny Logs	Pre-breaching	14:08	14:18	Closed	60	None	1 - Clear		Northwest			-9999	0	0	0	0		

Observation Date	Site	Activity Monitored	Start Time	End Time	River Mouth Condition	Air Temp(F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pinnipeds	Comments
10/10/10	Paddy's Rock	Pre-breaching	14:18	14:28	Closed	60	None	1 - Clear		Northwest			-9999		0	0	0	0	2 kayaks
10/10/10	Chalanchawi	Pre-breaching	14:31	14:41	Closed	60	None	1 - Clear		Northwest			-9999		0	0	0	0	1 sailboat, 5 HASE water haulout
10/10/10	Pocketed Rock	Pre-breaching	14:56	15:06	Closed	60	None	1 - Clear		Northwest			-9999		0	0	0	0	
10/10/10	Kabemali	Pre-breaching	15:08	15:18	Closed	60	None	1 - Clear		Northwest			-9999		0	0	0	0	
10/10/10	Rock Point	Pre-breaching	15:20	15:30	Closed	60	None	1 - Clear		Northwest			-9999		0	0	0	0	
10/11/10	Jenner	Breaching	11:55	15:55	2	74	0	2	10-Jul	nw	-9999	4=rough. Some wave oversplashat low point on bar adjacent to Haystack Rock. Jenner Gage-6.8'	-9999	-9999	7	0	0	7	7 HASE in shallows riverside ~100ft south of haystack rock
10/11/10	Jenner	Breaching	11:55	15:55	2	74	0	2	10-Jul	nw	-9999	4=rough. Some wave oversplashat low point on bar adjacent to Haystack Rock. Jenner Gage-6.8'	-9999	-9999	9	0	0	9	2 HASE joined group A from the ocean
10/11/10	Jenner	Breaching	11:55	15:55	2	74	0	2	10-Jul	nw	-9999	4=rough. Some wave oversplashat low point on bar adjacent to Haystack Rock. Jenner Gage-6.8'	-9999	-9999	11	1	0	12	8 HASE in shallows. 4 on bar
10/11/10	Jenner	Breaching	11:55	15:55	2	74	0	2	10-Jul	nw	-9999	4=rough. Some wave oversplashat low point on bar adjacent to Haystack Rock. Jenner Gage-6.8'	-9999	-9999	0	0	0	0	SCWA crew of 2+1 excavator
10/11/10	Jenner	Breaching	11:55	15:55	2	74	0	2	10-Jul	nw	-9999	4=rough. Some wave oversplashat low point on bar adjacent to Haystack Rock. Jenner Gage-6.8'	-9999	-9999	0	0	0	0	SCWA crew of 2+1 excavator
10/11/10	Jenner	Breaching	11:55	15:55	2	74	0	2	10-Jul	nw	-9999	4=rough. Some wave oversplashat low point on bar adjacent to Haystack Rock. Jenner Gage-6.8'	-9999	-9999	0	0	0	0	SCWA crew of 2+1 excavator
10/11/10	Jenner	Breaching	11:55	15:55	2	74	0	2	10-Jul	nw	-9999	4=rough. Some wave oversplashat low point on bar adjacent to Haystack Rock. Jenner Gage-6.8'	-9999	-9999	0	0	0	0	4 people flushed 3 HASE. 1 person approached to within 20'
10/11/10	Jenner	Breaching	11:55	15:55	2	74	0	2	10-Jul	nw	-9999	4=rough. Some wave oversplashat low point on bar adjacent to Haystack Rock. Jenner Gage-6.8'	-9999	-9999	0	0	0	0	2 people on beach in area a
10/11/10	North Jenner	Breaching	10:00	10:10		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		0	0	0	0	Camera 2 not functioning
10/11/10	Odin Cove	Breaching	10:05	10:15		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		0	0	0	0	Camera 2 not functioning
10/11/10	Jenner (Ask Count)	Breaching	10:20	10:30		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		8	0	0	8	All harbor seals reclined in shallow
10/11/10	Penny Logs	Breaching	10:40	10:50		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		10	0	0	10	Grunting and crowded seals
10/11/10	Paddy's Rock	Breaching	10:45	10:55		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		0	0	0	0	
10/11/10	Chalanchawi	Breaching	10:58	11:08		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		0	0	0	0	No haulout logs visible
10/11/10	Pocketed Rock	Breaching	11:17	11:27		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		0	0	0	0	
10/11/10	Kabemali	Breaching	11:29	11:39		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		0	0	0	0	2 harbor seal heads visible, reclined
10/11/10	Rock Point	Breaching	11:40	11:50		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		0	0	0	0	
10/11/10	North Jenner	Breaching	12:05	12:15		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		0	0	0	0	
10/11/10	Odin Cove	Breaching	12:08	12:18		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		0	0	0	0	
10/11/10	Jenner (Ask Count)	Breaching	12:22	12:30		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		10	0	0	10	2 kayaks
10/11/10	Penny Logs	Breaching	12:34	12:44		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		2	0	0	2	Crazy loud talking man on bike
10/11/10	Paddy's Rock	Breaching	12:37	12:44		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		0	0	0	0	
10/11/10	Chalanchawi	Breaching	12:46	12:54		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		0	0	0	0	No haulout logs visible
10/11/10	Pocketed Rock	Breaching	13:03	13:13		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		0	0	0	0	
10/11/10	Kabemali	Breaching	13:15	13:24		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		0	0	0	0	1 HASE visible near bed of kelp
10/11/10	Rock Point	Breaching	13:25	13:35		60	None	1 - Clear	1 - Light Air	Northwest	1 - Light Air		-9999		0	0	0	0	
10/11/10	North Jenner	Breaching	14:10	14:20		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0	0	
10/11/10	Odin Cove	Breaching	14:16	14:26		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		1	0	0	1	Attempt at breaching halted due to
10/11/10	Jenner (Ask Count)	Breaching	14:31	14:41		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		4	0	0	4	
10/11/10	Penny Logs	Breaching	14:44	14:54		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		4	0	0	4	
10/11/10	Paddy's Rock	Breaching	14:46	14:56		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0	0	
10/11/10	Chalanchawi	Breaching	14:58	15:08		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0	0	No haulout logs visible
10/11/10	Pocketed Rock	Breaching	15:12	15:22		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0	0	
10/11/10	Kabemali	Breaching	15:23	15:33		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0	0	Fisherman on bluff, 2 harbor seals
10/11/10	Rock Point	Breaching	15:34	15:44		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0	0	
10/11/10	North Jenner	Breaching	16:02	16:12		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0	0	
10/11/10	Odin Cove	Breaching	16:05	16:15		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0	0	
10/11/10	Jenner (Ask Count)	Breaching	16:20	16:30		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0	0	Breaching attempt unsuccessful
10/11/10	Penny Logs	Breaching	16:35	16:45		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		5	0	0	5	
10/11/10	Paddy's Rock	Breaching	16:40	16:50		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0	0	
10/11/10	Chalanchawi	Breaching	16:52	17:02		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0	0	Haulout logs undewater
10/11/10	Pocketed Rock	Breaching	17:05	17:15		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0	0	Base of rock obscured by shadow
10/11/10	Kabemali	Breaching	17:17	17:27		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0	0	Fisherman on bluff, no harbor seals
10/11/10	Rock Point	Breaching	17:29	17:39		64	None	1 - Clear	1 - Light Air	South	1 - Light Air		-9999		0	0	0	0	
10/12/10	Jenner	Breaching	11:30		2	72	0	1	0 - Calm		-9999	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	11:30	-9999	0	0	0	0	1 HASE in waves
10/12/10	Jenner	Breaching	11:30		2	72	0	1	0 - Calm		-9999	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	12:00	-9999	0	0	0	0	
10/12/10	Jenner	Breaching	11:30		2	72	0	1	0 - Calm		-9999	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	12:30	-9999	0	0	0	0	
10/12/10	Jenner	Breaching	11:30		2	72	0	1	0 - Calm		-9999	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	13:00	-9999	2	0	0	2	0 HASE @ shoreline
10/12/10	Jenner	Breaching	11:30		2	72	0	1	0 - Calm		-9999	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	13:30	-9999	2	0	0	2	0 HASE @ shoreline
10/12/10	Jenner	Breaching	11:30		2	72	0	1	0 - Calm		-9999	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	14:00	-9999	1	0	0	1	0 HASE @ shoreline

Observation Date	Site	Activity Monitored	Start Time	End Time	River Mouth Condition	Air Temp(F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pinnipeds	Comments
10/12/10	Jenner	Breaching	11:30		2	72	0	1	0 - Calm		-9999	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	14:30	-9999	0			0	
10/12/10	Jenner	Breaching	11:30		2	72	0	1	0 - Calm		-9999	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	15:00	-9999	0			0	
10/12/10	Jenner	Breaching	11:30		2	72	0	1	0 - Calm		-9999	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	15:30	-9999	0			0	
10/12/10	Jenner	Breaching	11:30		2	72	0	1	0 - Calm		-9999	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	16:00	-9999	0			0	
10/12/10	Jenner	Breaching	11:30		2	72	0	1	0 - Calm		-9999	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	16:30	-9999	0			0	
10/12/10	Jenner	Breaching	11:30		2	72	0	1	0 - Calm		-9999	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	17:00	-9999	0			0	
10/12/10	Penny Logs	Breaching	10:00	10:10	Closed		None	1 - Clear		West			-9999		1	0	0	1	5 underwater
10/12/10	Odin Cove	Breaching	10:10	10:20	Closed		None	1 - Clear		West			-9999		14	0	0	14	Most I have ever seen
10/12/10	Jenner (Ask Count)	Breaching	10:25	10:35	Closed		None	1 - Clear		West			-9999		55	0	0	55	On ocean side, hard to count, no
10/12/10	Penny Logs	Breaching	10:38	10:48	Closed		None	1 - Clear		West			-9999		3	0	0	3	2 kayaks, no Flush
10/12/10	Paddy's Rock	Breaching	10:48	10:58	Closed		None	1 - Clear		West			-9999		0	0	0	0	
10/12/10	Chalanchawi	Breaching	11:00	11:10	Closed		None	1 - Clear		West			-9999		0	0	0	0	
10/12/10	Pocketed Rock	Breaching	11:18	11:28	Closed		None	1 - Clear		West			-9999		0	0	0	0	
10/12/10	Kabemali	Breaching	11:30	11:40	Closed		None	1 - Clear		West			-9999		0	0	0	0	
10/12/10	Rock Point	Breaching	11:42	11:52	Closed		None	1 - Clear		West			-9999		3	0	0	3	
10/12/10	North Jenner	Breaching	12:05	12:15	Closed		None	1 - Clear		West			-9999		0	0	0	0	
10/12/10	Odin Cove	Breaching	12:15	12:25	Closed		None	1 - Clear		West			-9999		5	0	0	5	
10/12/10	Jenner (Ask Count)	Breaching	12:28	12:38	Closed		None	1 - Clear		West			-9999		0	0	0	0	
10/12/10	Penny Logs	Breaching	12:40	12:50	Closed		None	1 - Clear		West			-9999		6	0	0	6	
10/12/10	Paddy's Rock	Breaching	12:50	13:00	Closed		None	1 - Clear		West			-9999		0	0	0	0	
10/12/10	Chalanchawi	Breaching	13:02	13:12	Closed		None	1 - Clear		West			-9999		0	0	0	0	
10/12/10	Pocketed Rock	Breaching	13:25	13:35	Closed		None	1 - Clear		West			-9999		0	0	0	0	
10/12/10	Kabemali	Breaching	13:37	13:47	Closed		None	1 - Clear		West			-9999		0	0	0	0	
10/12/10	Rock Point	Breaching	13:49	13:59	Closed		None	1 - Clear		West			-9999		6	0	0	6	
10/12/10	North Jenner	Breaching	14:00	14:10	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	8 seals floating upright at haulout
10/12/10	Odin Cove	Breaching	14:10	14:20	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	
10/12/10	Jenner (Ask Count)	Breaching	14:24	14:29	Closed	60	None	1 - Clear		Northeast			-9999		1	0	0	1	Breach in progress
10/12/10	Penny Logs	Breaching	14:32	14:42	Closed	60	None	1 - Clear		Northeast			-9999		2	0	0	2	Motorized row boat
10/12/10	Paddy's Rock	Breaching	14:42	14:52	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	
10/12/10	Chalanchawi	Breaching	14:56	15:06	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	Logs under water, obscured view, pic
10/12/10	Pocketed Rock	Breaching	15:13	15:23	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	
10/12/10	Kabemali	Breaching	15:25	15:35	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	
10/12/10	Rock Point	Breaching	15:36	15:46	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	
10/12/10	North Jenner	Breaching	16:00	16:10	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	
10/12/10	Odin Cove	Breaching	16:10	16:20	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	
10/12/10	Jenner (Ask Count)	Breaching	16:22	16:30	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	Breach complete but still digging
10/12/10	Penny Logs	Breaching	16:34	16:44	Closed	60	None	1 - Clear		Northeast			-9999		3	0	0	3	
10/12/10	Paddy's Rock	Breaching	16:44	16:54	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	
10/12/10	Chalanchawi	Breaching	16:57	17:07	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	
10/12/10	Pocketed Rock	Breaching	17:15	17:25	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	
10/12/10	Kabemali	Breaching	17:26	17:36	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	
10/12/10	Rock Point	Breaching	17:37	17:47	Closed	60	None	1 - Clear		Northeast			-9999		0	0	0	0	
10/13/10	Jenner	Post-Breaching	7:00	11:00	Open	54	None	1 - Clear	1 - Light Air		1 - Light Air		7:00		98	0	0	98	4 surfers
10/13/10	Jenner	Post-Breaching	7:00	11:00	Open	54	None	1 - Clear	1 - Light Air		1 - Light Air		7:30		105	0	0	105	5 surfers
10/13/10	Jenner	Post-Breaching	7:00	11:00	Open	54	None	1 - Clear	1 - Light Air		1 - Light Air		8:00		110	0	0	110	9 surfers
10/13/10	Jenner	Post-Breaching	7:00	11:00	Open	54	None	1 - Clear	1 - Light Air		1 - Light Air		8:30		118	0	0	118	9 surfers, 12 photographers
10/13/10	Jenner	Post-Breaching	7:00	11:00	Open	54	None	1 - Clear	1 - Light Air		1 - Light Air		9:00		119	0	0	119	9:05--most seals went in the water
10/13/10	Jenner	Post-Breaching	7:00	11:00	Open	54	None	1 - Clear	1 - Light Air		1 - Light Air		9:30		31	0	0	31	
10/13/10	Jenner	Post-Breaching	7:00	11:00	Open	54	None	1 - Clear	1 - Light Air		1 - Light Air		10:00		47	0	0	47	
10/13/10	Jenner	Post-Breaching	7:00	11:00	Open	54	None	1 - Clear	1 - Light Air		1 - Light Air		10:30		48	0	0	48	12 surfers and 1 walker
10/13/10	Jenner	Post-Breaching	7:00	11:00	Open	54	None	1 - Clear	1 - Light Air		1 - Light Air		11:00		46	0	0	46	
10/13/10	North Jenner	Post-Breaching	6:55	7:05	Open	48	None	1 - Clear					-9999		0	0	0	0	
10/13/10	Odin Cove	Post-Breaching	7:05	7:15	Open	48	None	1 - Clear					-9999		0	0	0	0	
10/13/10	Jenner (Ask Count)	Post-Breaching	7:23	7:28	Open	48	None	1 - Clear					-9999		98	0	0	98	
10/13/10	Penny Logs	Post-Breaching	7:30	7:40	Open	48	None	1 - Clear					-9999		0	0	0	0	
10/13/10	Paddy's Rock	Post-Breaching	7:40	7:50	Open	48	None	1 - Clear					-9999		0	0	0	0	
10/13/10	Chalanchawi	Post-Breaching	7:55	8:05	Open	48	None	1 - Clear				Photo from Willow Creek Road	-9999		0	0	0	0	
10/13/10	Pocketed Rock	Post-Breaching	8:13	8:23	Open	48	None	1 - Clear					-9999		0	0	0	0	
10/13/10	Kabemali	Post-Breaching	8:25	8:35	Open	48	None	1 - Clear					-9999		0	0	0	0	
10/13/10	Rock Point	Post-Breaching	8:37	8:47	Open	48	None	1 - Clear					-9999		0	0	0	0	
10/13/10	North Jenner	Post-Breaching	9:05	9:15	Open	48	None	1 - Clear					-9999		0	0	0	0	
10/13/10	Odin Cove	Post-Breaching	9:15	9:25	Open	48	None	1 - Clear					-9999		0	0	0	0	
10/13/10	Jenner (Ask Count)	Post-Breaching	9:27	9:31	Open	48	None	1 - Clear					-9999		31	0	0	31	
10/13/10	Penny Logs	Post-Breaching	9:34	9:44	Open	48	None	1 - Clear					-9999		0	0	0	0	
10/13/10	Paddy's Rock	Post-Breaching	9:44	9:54	Open	48	None	1 - Clear					-9999		0	0	0	0	

Observation Date	Site	Activity Monitored	Start Time	End Time	River Mouth Condition	Air Temp(F)	Precipitation	Visibility	Wind Speed (Beaufort)	Wind Direction	Ocean State (Beaufort)	Beach Conditions	Count Time	Count Beach Site	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pinnipeds	Comments
10/13/10	Chalanchawi	Post-Breaching	10:09	10:15	Open	48	None	1 - Clear					-9999		0	0	0	0	
10/13/10	Pocked Rock	Post-Breaching	10:25	10:35	Open	48	None	1 - Clear					-9999		0	0	0	0	
10/13/10	Kabemali	Post-Breaching	10:37	10:47	Open	48	None	1 - Clear					-9999		0	0	0	0	
10/13/10	Rock Point	Post-Breaching	10:48	10:58	Open	48	None	1 - Clear					-9999		0	0	0	0	
10/13/10	North Jenner	Post-Breaching	11:45	11:50	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze	Photo from Willow Creek Road	-9999		0	0	0	0	12-20 surfers at mouth
10/13/10	Odin Cove	Post-Breaching	11:55	12:10	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	7	0	0	7		
10/13/10	Jenner (Ask Count)	Post-Breaching	12:15	12:30	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	0	0	0	0	Surfers and hikers, seal in river	
10/13/10	Penny Logs	Post-Breaching	12:25	12:35	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	0	0	0	0	Seal in river	
10/13/10	Paddy's Rock	Post-Breaching	12:25	12:35	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	0	0	0	0		
10/13/10	Chalanchawi	Post-Breaching	12:35	12:45	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	1	0	0	1	From Willow Creek	
10/13/10	Pocked Rock	Post-Breaching	13:05	13:15	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	0	0	0	0		
10/13/10	Kabemali	Post-Breaching	13:20	13:30	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	0	0	0	0		
10/13/10	Rock Point	Post-Breaching	13:35	13:45	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	5	0	0	5		
10/13/10	North Jenner	Post-Breaching	14:00	14:05	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	0	0	0	0		
10/13/10	Odin Cove	Post-Breaching	14:05	14:15	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	4	0	0	4		
10/13/10	Jenner (Ask Count)	Post-Breaching	14:20	14:25	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	0	0	0	0	Surfers, lots of people on beach	
10/13/10	Penny Logs	Post-Breaching	14:30	14:35	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	0	0	0	0		
10/13/10	Paddy's Rock	Post-Breaching	14:35	14:40	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	0	0	0	0	Lots of birds	
10/13/10	Chalanchawi	Post-Breaching	14:50	14:55	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	0	0	0	0	Birds	
10/13/10	Pocked Rock	Post-Breaching	15:00	15:10	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	0	0	0	0		
10/13/10	Kabemali	Post-Breaching	15:15	15:20	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	0	0	0	0	4 in the water	
10/13/10	Rock Point	Post-Breaching	15:25	15:30	Perched		None	1 - Clear	2 - Light Breeze	South	3 - Gentle Breeze		-9999	4	0	0	4		

Appendix G. Harbor seal disturbances observed during pinniped monitoring of Russian River Estuary Management Activities from April to December 2010.

Appendix G. Harbor seal disturbances observed during pinniped monitoring of Russian River Estuary Management Activities from April to December 2010.

Observation Date	Haulout	Activity Monitored	River Mouth Condition	Beach Conditions	Disturbance	Disturbance Start Time	Disturbance End Time	Duration of Disturbance	Source of Disturbance	Response to Disturbance	Distance to Source (feet)	No. Harbor Seals Disturbed	No. Harbor Seals Flushed	No. Adult (NonPup) Harbor seals Remain	No. Harbor Seal Pups Remaining at Haulout	Comments
7/7/10	Jenner	Pre-Lagoon Outlet	Closed	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	yes	07:15	07:20	5 min	4	AMF	5	170	165	5	0	canoe
7/7/10	Jenner	Pre-Lagoon Outlet	Closed	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	yes	07:22	07:26	4 min	3	A	20	15	0	10	0	
7/7/10	Jenner	Pre-Lagoon Outlet	Closed	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	yes	10:30	11:32	2 min	3, 1	AM	200	50	0	104	0	kayakers got out to walk on beach
7/7/10	Jenner	Pre-Lagoon Outlet	Closed	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	yes	10:56	11:01	5 min	1	AM	50	100	20	80	0	
7/7/10	Jenner	Pre-Lagoon Outlet	Closed	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	yes	11:05	11:08	3 min	1, 3	AM	250	20	0	74	0	kayakers walking on beach return
7/7/10	Jenner	Pre-Lagoon Outlet	Closed	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	yes	11:09	11:23	14 min	1	AMF	50	75	5	70	0	
7/7/10	Jenner	Pre-Lagoon Outlet	Closed	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	yes	11:16	11:24	8 min	1	AMF	5	60	8	52	0	
7/7/10	Jenner	Pre-Lagoon Outlet	Closed	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	yes	12:01	12:04	3 min	1, 3	A	125	15	0	83	0	and people
7/7/10	Jenner	Pre-Lagoon Outlet	Closed	Haulout A=Right of anchor rock estuaryside Haulout B=Left of Anchor rock Haulout C= Right of anchor rock oceanside	yes	12:28	12:32	4 min	1	AM	125	30	0	94	0	
7/8/10	Jenner	Lagoon Outlet Implementation	Closed	calm, no people - 1 haulout on riverside N of haystack rock	yes	06:31	06:32	1 min	6	A	1000	4	0	2	2	briefly looked toward parking lot in direction of equipment beeping
7/8/10	Jenner	Lagoon Outlet Implementation	Closed	calm, no people - 1 haulout on riverside N of haystack rock	yes	06:35	06:46	11 min	6	A	200	143	0	8	135	(people and equipment) ALL HS alert to people and equip approaching
7/8/10	Jenner	Lagoon Outlet Implementation	Closed	calm, no people - 1 haulout on riverside N of haystack rock	yes	06:44	06:46	2 min	6	MF	50	135	135	6	2	2 moved to os and 133 moved to rs and 8 stayed on beach
7/8/10	Jenner	Lagoon Outlet Implementation	Closed	calm, no people - 1 haulout on riverside N of haystack rock	yes	07:11	07:16	5 min	1	AMF	50	9	4	5	0	1 survey staff taking poits within 50' of HS
7/8/10	Jenner	Lagoon Outlet Implementation	Closed	calm, no people - 1 haulout on riverside N of haystack rock	yes	09:16	09:20	4 min	1	AMF	100	9	3	6	0	2 safety staff approaching hs (rs). 3 hs moved to rs
7/8/10	Jenner	Lagoon Outlet Implementation	Closed	calm, no people - 1 haulout on riverside N of haystack rock	yes	09:18	09:20	2 min	6	AMF	75	6	5	1	0	2 safety staff escorting 2 equip past hs (rs) 5 hs moved rs
7/8/10	Jenner	Lagoon Outlet Implementation	Closed	calm, no people - 1 haulout on riverside N of haystack rock	yes	09:48	09:49	1 min	3	AMF	100	1	0	1	0	2 kayakers passed hs on opposite bank of river (hs moved closer to os)
7/8/10	Odin Cove	Breaching	Perched	no jenner monitor present	yes	13:10	?	?	1+ dog	FM	40	19	18	3	-9999	People + dog did not leave even when we called to them
7/8/10	Jenner (C)	Lagoon Outlet Implementation	Transition	equipment at jenner river mouth opening channel	-9999	07:13	07:23	-9999	1		200	5	0			dredging of channel
7/8/10	Jenner (C)	Lagoon Outlet Implementation	Transition	equipment at jenner river mouth opening channel	-9999	09:02	09:12	-9999	1	AMF	200	14	6			dredging channel open
7/8/10	North Jenner	Lagoon Outlet Implementation		Equipment on beach-channel opening	No											
7/8/10	Odin Cove	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	Jenner (Ask Count)	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	Yes	7:13	7:23	Continuous	1-People		200	5	0			Dredging of Channel
7/8/10	Penny Logs	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	Paddy's Rock	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	Chalanchawi	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	Pocked Rock	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	Kabemali	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	Rock Point	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	North Jenner	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	Odin Cove	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	Jenner (Ask Count)	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	Yes	9:02	9:12	Continuous	1-People		200	14	6			Dredging Channel Open
7/8/10	Penny Logs	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	Paddy's Rock	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	Chalanchawi	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	Pocked Rock	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	Kabemali	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	Rock Point	Lagoon Outlet Implementation	Transition	Equipment on beach-channel opening	No											
7/8/10	North Jenner	Lagoon Outlet Implementation	Perched		No											
7/8/10	Odin Cove	Lagoon Outlet Implementation	Perched		No											

Source of Disturbance: 1-People; 2-Photographer; 3-Kayak; 4-Other Boat; 5-Surfer; 6-Other

Response to Disturbance: A-Alert; M-Move; F-Flush

Appendix G. Harbor seal disturbances observed during pinniped monitoring of Russian River Estuary Management Activities from April to December 2010.

Observation Date	Haulout	Activity Monitored	River Mouth Condition	Beach Conditions	Disturbance	Disturbance Start Time	Disturbance End Time	Duration of Disturbance	Source of Disturbance	Response to Disturbance	Distance to Source (feet)	No. Harbor Seals Disturbed	No. Harbor Seals Flushed	No. Adult (NonPup) Harbor seals Remain	No. Harbor Seal Pups Remaining at Haulout	Comments
7/8/10	Jenner (Ask Count)	Lagoon Outlet Implementation	Perched	No Jenner monitor	No											
7/8/10	Penny Logs	Lagoon Outlet Implementation	Perched		No											
7/8/10	Paddy's Rock	Lagoon Outlet Implementation	Perched		No											
7/8/10	Chalanchawi	Lagoon Outlet Implementation	Perched		No											
7/8/10	Pocked Rock	Lagoon Outlet Implementation	Perched		No											
7/8/10	Kabemali	Lagoon Outlet Implementation	Perched		No											
7/8/10	Rock Point	Lagoon Outlet Implementation	Perched		No											
7/8/10	North Jenner	Lagoon Outlet Implementation	Perched		No											
7/8/10	Odin Cove	Lagoon Outlet Implementation	Perched		Yes	13:10	\	\	1 person and dog	MF	40	19	3			People did not leave even when we called to them. 18 Flush, 1 moves
7/8/10	Jenner (Ask Count)	Lagoon Outlet Implementation	Perched	No Jenner monito	No											
7/8/10	Penny Logs	Lagoon Outlet Implementation	Perched		No											
7/8/10	Paddy's Rock	Lagoon Outlet Implementation	Perched		No											
7/8/10	Chalanchawi	Lagoon Outlet Implementation	Perched		No											
7/8/10	Pocked Rock	Lagoon Outlet Implementation	Perched		No											
7/8/10	Kabemali	Lagoon Outlet Implementation	Perched		No											
7/8/10	Rock Point	Lagoon Outlet Implementation	Perched		No											
7/9/10	Jenner	Post-Lagoon Outlet	Closed	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	yes	10:21	10:31	10 min	1	AMF	50-75	183	139	44	0	Two groups of people coming from opposite direction. One group 75ft. And one 50ft.
7/9/10	Jenner	Post-Lagoon Outlet	Closed	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	yes	10:39	10:51	12 min	1	AMF	75	15	1	43	0	
7/9/10	Jenner	Post-Lagoon Outlet	Closed	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	yes	12:37	12:41	4 min	3	A	65	5	0	89	0	
7/9/10	Jenner	Post-Lagoon Outlet	Closed	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	yes	12:43	12:46	3 min	3	A	100	5	0	83	0	
7/9/10	Jenner	Post-Lagoon Outlet	Closed	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	yes	12:49	12:51	2 min	3	AMF	50	13	13	76	0	
7/9/10	Jenner	Post-Lagoon Outlet	Closed	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	yes	13:04	13:05	1 min	1	AMF	75	2	2	0	0	Site C left of anchor rock where only 2 seals had hauled out
7/9/10	Jenner	Post-Lagoon Outlet	Closed	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	yes	13:09	13:14	5 min	1	AM	10	83	40	43	0	
7/9/10	Jenner	Post-Lagoon Outlet	Closed	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	yes	13:25	13:28	3 min	3	AMF	75	50	8	62	0	
7/9/10	Jenner	Post-Lagoon Outlet	Closed	A=Right of anchor rock B=Left of anchor rock C= Far left of anchor rock in line with jetty	yes	13:52	13:55	3 min	1, 3	AM	10	59	0	61	0	and kayaker. Sit A only
7/9/10	North Jenner	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Odin Cove	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Jenner (Ask Count)	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Penny Logs	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Paddy's Rock	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Chalanchawi	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Pocked Rock	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Kabemali	Post-Lagoon Outlet	Closed	Overcast	Possible	8:30	8:30	< 10 s	1 People	A?	50	0?	0			Possibly me, momentary glance
7/9/10	Rock Point	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	North Jenner	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Odin Cove	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Jenner (Ask Count)	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Penny Logs	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Paddy's Rock	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Chalanchawi	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Pocked Rock	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Kabemali	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	Rock Point	Post-Lagoon Outlet	Closed	Overcast	No											
7/9/10	North Jenner	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Odin Cove	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Jenner (Ask Count)	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Penny Logs	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Paddy's Rock	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Chalanchawi	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Pocked Rock	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Kabemali	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Rock Point	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	North Jenner	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Odin Cove	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Jenner (Ask Count)	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Penny Logs	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Paddy's Rock	Post-Lagoon Outlet	Closed	Deserted Calm	No											

Source of Disturbance: 1-People; 2-Photographer; 3-Kayak; 4-Other Boat; 5-Surfer; 6-Other

Response to Disturbance: A-Alert; M-Move; F-Flush

Appendix G. Harbor seal disturbances observed during pinniped monitoring of Russian River Estuary Management Activities from April to December 2010.

Observation Date	Haulout	Activity Monitored	River Mouth Condition	Beach Conditions	Disturbance	Disturbance Start Time	Disturbance End Time	Duration of Disturbance	Source of Disturbance	Response to Disturbance	Distance to Source (feet)	No. Harbor Seals Disturbed	No. Harbor Seals Flushed	No. Adult (NonPup) Harbor seals Remain	No. Harbor Seal Pups Remaining at Haulout	Comments
7/9/10	Chalanchawi	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Pocked Rock	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Kabemali	Post-Lagoon Outlet	Closed	Deserted Calm	No											
7/9/10	Rock Point	Post-Lagoon Outlet	Closed	Deserted Calm	No											
9/29/10	Jenner	Lagoon Outlet Implementation	Closed	(4=rough) closed bar, one haulout south of haystack. Oceanside wave oversplash. Large flock of seagulls and cormorants between jetty and HSR	-9999	12:39	12:47	8 mins	3	A	200	5	0	5	0	
9/30/10	Jenner	Breaching	Closed	breach cancelled. 0759- bulldozers and excavatorbegin excavation; 1204- equipment leaves beach, outflow from estuary; 1035 - excavator cut berm to begin outflow	yes	07:34	07:34	less than 1 min	6	A	1000	5	0	5	-9999	garbage truck breaking on HWY 1
9/30/10	Jenner	Breaching	Closed	breach cancelled. 0759- bulldozers and excavatorbegin excavation; 1204- equipment leaves beach, outflow from estuary; 1035 - excavator cut berm to begin outflow	yes	09:36	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	begin to hear equipment on beach. Cannot see it
9/30/10	Jenner	Breaching	Closed	breach cancelled. 0759- bulldozers and excavatorbegin excavation; 1204- equipment leaves beach, outflow from estuary; 1035 - excavator cut berm to begin outflow	yes	07:45	-9999	-9999	1	-9999	100	0	0	42	-9999	2 people walk past jetty (SCWA)
9/30/10	Jenner	Breaching	Closed	breach cancelled. 0759- bulldozers and excavatorbegin excavation; 1204- equipment leaves beach, outflow from estuary; 1035 - excavator cut berm to begin outflow	yes	07:47	07:52	-9999	6	AMF	-9999	33	24	9	-9999	B -0749 BEGIN TO FLUSH - 9 REMAINED ON BEACH AFTER EQUIPMENT PASSED
9/30/10	Jenner	Breaching	Closed	breach cancelled. 0759- bulldozers and excavatorbegin excavation; 1204- equipment leaves beach, outflow from estuary; 1035 - excavator cut berm to begin outflow	yes	07:47	07:52	-9999	6	AF	75	9	9	0	-9999	9 seals @ haulout A flushed as bulldozer passed w/in 75'
9/30/10	Jenner	Breaching	Closed	breach cancelled. 0759- bulldozers and excavatorbegin excavation; 1204- equipment leaves beach, outflow from estuary; 1035 - excavator cut berm to begin outflow	yes	08:09	-9999	-9999	-9999	F	-9999	-9999	5	0	-9999	
9/30/10	Jenner	Breaching	Closed	breach cancelled. 0759- bulldozers and excavatorbegin excavation; 1204- equipment leaves beach, outflow from estuary; 1035 - excavator cut berm to begin outflow	yes	12:39	12:41	2 min	1	-9999	-9999	-9999	-9999	3	-9999	2 people walk past jetty, but didn't approach seals
10/1/10	Jenner	Breaching	Closed	-9999	yes	07:31	07:31	1 min	6	A	1000	9	0	9	0	truck on HWY
10/1/10	Jenner	Breaching	Closed	-9999	yes	07:39	07:39	1 min	6	A	1000	4	0	4	0	truck on HWY
10/1/10	Jenner	Breaching	Closed	-9999	yes	07:48	07:48	1 min	6	A	1000	4	0	4	0	truck on HWY
10/1/10	Jenner	Breaching	Closed	-9999	yes	8:04	8:09	1 min	4	A	1000	17	0	17	0	2 kayaks near mouth
10/1/10	Jenner	Breaching	Closed	-9999	yes	08:13	08:17	4 min	1	F	50	38	38	38	0	safety crew flushed seals
10/1/10	Penny Logs	Lagoon Outlet Implementation	Transition	SCWA opening mouth	Yes	\	\	\	3 - Kayak	A - Alert						Alerted by Kayak in count comments, not recorded in disturbance form
10/11/10	Jenner	Breaching	Closed	4=rough. Some wave oversplashat low point on bar adjacent to Haystack Rock. Jenner Gage- 6.8'	yes	11:56	13:07	11 min	1	AF	150	9	9	3	0	woman startled group - walkedin from North - 2 HASE returned - joined 3 HASE -5 total
10/11/10	Jenner	Breaching	Closed	4=rough. Some wave oversplashat low point on bar adjacent to Haystack Rock. Jenner Gage- 6.8'	yes	13:06	13:07	1 min	1	AM	-9999	5	-9999	0	0	SCWA staff slowly approached group. Group of 5 HASE alerted and moved to waterfrom shallows
10/11/10	Jenner	Breaching	Closed	4=rough. Some wave oversplashat low point on bar adjacent to Haystack Rock. Jenner Gage- 6.8'	yes	13:06	14:57	111 min	1	-9999	-9999	-9999	-9999	-9999	-9999	SCWA crew onsite digging channel
10/11/10	Jenner	Breaching	Closed	4=rough. Some wave oversplashat low point on bar adjacent to Haystack Rock. Jenner Gage- 6.8'	yes	15:20	15:27	7 min	1	AMF	20	3	3	0	0	women approached seals on beach and flushed them to river
10/11/10	Jenner	Breaching	Closed	4=rough. Some wave oversplashat low point on bar adjacent to Haystack Rock. Jenner Gage- 6.8'	yes	15:31	15:38	7 min	1	AM	50	7	7	0	0	3 HASE moved from shallows to open water in riverwhen 2 people approach
10/11/10	Jenner	Breaching	Closed	4=rough. Some wave oversplashat low point on bar adjacent to Haystack Rock. Jenner Gage- 6.8'	yes	15:42	15:44	2 min	1	AM	50	5	5	0	0	5 HASE moving from river to ocean - 3 HASE startled and flushed to ocean - 2 HASE returned to river
10/12/10	Jenner	Breaching	Closed	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	yes	13:07	13:13	6 min	1	F	80	3	3	3	0	HASE on shoreline flushed to ocean

Source of Disturbance: 1-People; 2-Photographer; 3-Kayak; 4-Other Boat; 5-Surfer; 6-Other

Response to Disturbance: A-Alert; M-Move; F-Flush

Appendix G. Harbor seal disturbances observed during pinniped monitoring of Russian River Estuary Management Activities from April to December 2010.

Observation Date	Haulout	Activity Monitored	River Mouth Condition	Beach Conditions	Disturbance	Disturbance Start Time	Disturbance End Time	Duration of Disturbance	Source of Disturbance	Response to Disturbance	Distance to Source (feet)	No. Harbor Seals Disturbed	No. Harbor Seals Flushed	No. Adult (NonPup) Harbor seals Remain	No. Harbor Seal Pups Remaining at Haulout	Comments
10/12/10	Jenner	Breaching	Closed	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	yes	13:31	13:33	2 min	1	MF	120	2	1	2	0	HASE on shoreline flushed to ocean
10/12/10	Jenner	Breaching	Closed	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	yes	13:35	13:36	1 min	1	F	70	1	1	1	0	SCWA staff flushed last HASE on shore
10/12/10	Jenner	Breaching	Closed	a = oceanside. SCWA staff on beach 13:33. Excavate @ jetty 13:40, Digging 13:45, mouth open 15:45, excavation ends 16:45, excavator/staff off beach 17:08	yes	13:48	13:58	10 min	1	A	60	2	0	2	0	1 HASE @ shoreline alert to excavator, 1 HASE crossed to bar
10/12/10	Penny Logs	Breaching	Closed		Yes			0:02	4 - Other Boat	A - Alert	150	2		2		Motorized row boat

Appendix H. Harbor seal census and weather observations collected during pinniped monitoring of the Jenner haulout for Russian River Estuary Management Activities beach topo surveys from April to December 2010.

Append H. Harbor seal census and weather observations collected during pinniped monitoring of the Jenner haulout for Russian River Estuary Management Activities beach topo surveys from April to December 2010.

Observation Date	Start Time	End Time	River Mouth Condition	Air Temp (F)	Precipitation	Visibility	Wind Direction	Ocean State (Beaufort)	Beach Conditions	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pinnipeds	Comments
6/30/10	9:00	12:40	Open			1	ne			203		1	205	
6/30/10	9:00	12:40	Open			1	ne			184		1	185	
6/30/10	9:00	12:40	Open			1	ne			171		1	172	
6/30/10	9:00	12:40	Open			1	ne			163		1	164	
6/30/10	9:00	12:40	Open			1	ne			161		2	163	
6/30/10	9:00	12:40	Open			1	ne			176		2	178	
6/30/10	9:00	12:40	Open			1	ne			178		1	179	
6/30/10	9:00	12:40	Open			1	ne			181		2	183	
7/1/10	8:30	11:51	Open			1			Haulout A= Oceanside of beach Haulout B= Estuaryside of beach	155			155	b
7/1/10	8:30	11:51	Open			1			Haulout A= Oceanside of beach Haulout B= Estuaryside of beach	4			4	a
7/1/10	8:30	11:51	Open			1			Haulout A= Oceanside of beach Haulout B= Estuaryside of beach	134			134	b
7/1/10	8:30	11:51	Open			1			Haulout A= Oceanside of beach Haulout B= Estuaryside of beach	15			15	a
7/1/10	8:30	11:51	Open			1			Haulout A= Oceanside of beach Haulout B= Estuaryside of beach	132			132	b
7/1/10	8:30	11:51	Open			1			Haulout A= Oceanside of beach Haulout B= Estuaryside of beach	15			15	a
7/1/10	8:30	11:51	Open			1			Haulout A= Oceanside of beach Haulout B= Estuaryside of beach	98			98	a +2 kayakers
7/1/10	8:30	11:51	Open			1			Haulout A= Oceanside of beach Haulout B= Estuaryside of beach	18			18	b +2 kayakers
7/1/10	8:30	11:51	Open			1			Haulout A= Oceanside of beach Haulout B= Estuaryside of beach	118			118	a
7/1/10	8:30	11:51	Open			1			Haulout A= Oceanside of beach Haulout B= Estuaryside of beach	12			12	b
7/1/10	8:30	11:51	Open			1			Haulout A= Oceanside of beach Haulout B= Estuaryside of beach	112			112	a
7/1/10	8:30	11:51	Open			1			Haulout A= Oceanside of beach Haulout B= Estuaryside of beach	18			18	b
7/1/10	8:30	11:51	Open			1			Haulout A= Oceanside of beach Haulout B= Estuaryside of beach	117			117	a
7/1/10	8:30	11:51	Open			1			Haulout A= Oceanside of beach Haulout B= Estuaryside of beach	33			33	b
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	180			180	Right of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	38			38	Left of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	185			185	Right of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	38			38	Left of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	190			190	Right of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	40			40	Left of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	197			197	Right of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	40			40	Left of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	181			181	Right of anchor rock, 2 SCWA people + 2 kayaks
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	36			36	Left of anchor rock, 2 SCWA people
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	196			196	Right of anchor rock, 1 SCWA person
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	31			31	Left of anchor rock, 1 SCWA person
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	190			190	Right of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	31			31	Left of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	188			188	Right of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	28			28	Left of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	180			180	Right of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	28			28	Left of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	160			160	Right of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	27			27	Left of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	172			172	Right of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	33			33	Left of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	164			164	Right of anchor rock, 2 SCWA people
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	31			31	Left of anchor rock ,2 SCWA people
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	157			157	Right of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	33			33	Left of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	169			169	Right of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	33			33	Left of anchor rock
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	147			147	Right of anchor rock, seals moved by incoming tide
8/3/10	8:00	15:00	Open	55	1	2	NW		A = right of anchor rock, B = left of anchor rock	34			34	Left of anchor rock, seals moved by incoming tide
9/7/10	9:00	12:30	Open	55	1	1	w			68			68	
9/7/10	9:00	12:30	Open	55	1	1	w			75			75	
9/7/10	9:00	12:30	Open	55	1	1	w			74			74	
9/7/10	9:00	12:30	Open	55	1	1	w			71			71	SCWA workers
9/7/10	9:00	12:30	Open	55	1	1	w			73			73	SCWA workers
9/7/10	9:00	12:30	Open	55	1	1	w			72			72	vis changed to 2
9/7/10	9:00	12:30	Open	55	1	1	w			80			80	(2 SCWA workers) vis 1 again
9/7/10	9:00	12:30	Open	55	1	1	w			80			80	
10/20/10	8:00	11:30	Open	55	1	1	n			25			25	
10/20/10	8:00	11:30	Open	55	1	1	n			13			13	
10/20/10	8:00	11:30	Open	55	1	1	n			10			10	
10/20/10	8:00	11:30	Open	55	1	1	n			5			5	scwa workers
10/20/10	8:00	11:30	Open	55	1	1	n			0			0	
10/20/10	8:00	11:30	Open	55	1	1	n			0			0	

Append H. Harbor seal census and weather observations collected during pinniped monitoring of the Jenner haulout for Russian River Estuary Management Activities beach topo surveys from April to December 2010.

Observation Date	Start Time	End Time	River Mouth Condition	Air Temp (F)	Precipitation	Visibility	Wind Direction	Ocean State (Beaufort)	Beach Conditions	No. Harbor seal Adults	No. Harbor seal Neonates	No. Harbor seal Pups (>1 week)	Total Pinnipeds	Comments
10/20/10	8:00	11:30	Open	55	1	1	n			0			0	scwa workers
10/20/10	8:00	11:30	Open	55	1	1	n			0			0	school group
11/17/10	8:00	11:00	Open	65	0	1				21			21	
11/17/10	8:00	11:00	Open	65	0	1				25			25	
11/17/10	8:00	11:00	Open	65	0	1				37			37	2 SCWA workers
11/17/10	8:00	11:00	Open	65	0	1				50			50	
11/17/10	8:00	11:00	Open	65	0	1				79			79	
11/17/10	8:00	11:00	Open	65	0	1				96			96	2 SCWA workers
11/17/10	8:00	11:00	Open	65	0	1				109			109	

Appendix I. Harbor seal disturbances observed during pinniped monitoring of Russian River Estuary Management Activities beach topo surveys from April to December 2010. Disturbances are at the Jenner haulout.

Observation Date	Disturbance Start Time	Disturbance End Time	Duration of Disturbance	Source of Disturbance	Response to Disturbance	Distance to Source (feet)	No. Harbor Seals Disturbed	No. Harbor Seals Flushed	No. Adult (NonPup) Harbor seals Remain at Haulout	No. Harbor Seal Pups Remaining at Haulout	Comments
6/30/10	9:39	9:40	1 min	6	A	150'	2	0	184	1	6= SCWA survey
6/30/10	09:49	09:52	3 min	1	A	25	20	0	184	1	non SCWA
6/30/10	09:49	09:52	3 min	1	M	25	10	0	184	1	non SCWA
6/30/10	11:26	11:28	1 min	1	A	40	30	0	176	2	
6/30/10	11:26	11:28	1 min	1	M	40	3	0	176	2	same people as above
6/30/10	11:41	11:42	1 min	1	A	40	8	0	176	2	
6/30/10	11:41	11:42	1 min	1	M	40	4	0	176	2	
6/30/10	11:53	11:54	1 min	1	A	40	15	0	178	1	
6/30/10	11:57	11:59	2 min	1	A	100	6	0	178	1	
6/30/10	12:14	12:17	3 min	1	A	30	35	0	178	1	
6/30/10	12:20	12:23	3 min	1	A	200	10	0	178	1	
6/30/10	12:34	12:36	2 min	6	A	40	3	0	181	2	SCWA workers
7/1/10	09:38	09:46	3 min	1	AMF	150	9	1	14	0	a
7/1/10	09:40	09:46	6 min	1	AMF	80	53	5	127	0	b
7/1/10	10:00	10:01	1 min	3	A	50	25	0	116	0	
7/1/10	10:01	10:02	1 min	6	A	100	4	0	98	0	b
7/1/10	10:02	10:04	2 min	6	AM	150	5	0	18	0	a
7/1/10	10:38	11:00	22 min	1	AMF	60	10	1	111	0	crowd affecting both haulouts
7/1/10	10:43	10:50	7 min	3	AMF	25	40	5	107	0	b 5kayakers
7/1/10	11:35	11:39	4 min	1	AM	20	25	0	150	0	
7/1/10	11:41	11:51	10 min	1	A	50	5	0	150	0	
8/3/10	09:06	09:07	1 min	1	AMF	50	1	1	224	0	Jogger
8/3/10	09:48	10:15	27 min	3	AMF	100	50	21	217	0	
8/3/10	10:02	10:04	2 min	6	AMF	100	8	1	216	0	
8/3/10	11:04	11:05	1 min	unknown	AMF	-9999	10	5	26	0	Unknown source, Site B - 1 SCWA worker+ SCWA boat present
8/3/10	11:38	11:42	4 min	6	AMF	100	15	5	211	0	HS furthest from SCWA worker most affected?
8/3/10	11:48	11:49	1 min	1	A	100	2	0	211	0	
8/3/10	11:51	12:09	18 min	1	AMF	50	150	22	180	0	Second group of people joins first
8/3/10	12:17	12:18	1 min	4	AMF	50	150	56	128	0	2 motor boats
8/3/10	12:45	12:49	4 min	1	A	65	7	0	128	0	
8/3/10	13:02	13:34	32 min	1	A	65	18	6	199	0	9 people
8/3/10	13:17	13:20	3 min	1	A	100	5	0	199	0	
8/3/10	13:22	13:23	1 min	6	A	500	5	0	199	0	Motorcycle noise
8/3/10	13:33	13:34	1 min	6	A	1	50	0	195	0	Seagull mass takeoff
8/3/10	13:39	13:41	2 min	6	A	120	5	0	195	0	Brief alert
8/3/10	13:42	13:44	2min	4	A	200	13	0	195	0	Motor boat
8/3/10	13:56	13:57	1 min	6	A	200	5	0	195	0	Motor boat
8/3/10	14:03	14:13	10 min	1	A	125	3	0	202	0	
9/7/10	10:14	10:15	1 min	6	A	75	5	0	74	0	
9/7/10	11:10	11:11	1 min	6	A	100	2	0	73	0	
9/7/10	11:47	12:20	33 min	1	A	75	5	0	72	0	not scwa. Crowd of 5 other people
9/7/10	11:53	12:02	9 min	6	AM	75	7	0	80	0	
11/17/10	09:00	09:02	2 min	6	AMF	100	11	2	35	0	SCWA survey crew
11/17/10	10:11	10:12	1 min	6	AMF	100	6	2	90	0	SCWA survey crew
11/17/10	10:25	10:25	less than 1 min	6	A	100	5	0	96	0	SCWA survey crew
11/17/10	10:52	10:56	4 min	1	A	100	15	0	109	0	

Source of Disturbance: 1-People; 2-Photographer; 3-Kayak; 4-Other Boat; 5-Surfer; 6-Other

Response to Disturbance: A-Alert; M-Move; F-Flush

Appendix J. Photographs

Appendix K. 2010 Pinniped Monitoring Datasheets and Instructions

**Russian River Estuary Management Activities
Pinniped Monitoring Datasheet Instructions**

Pinniped Monitoring at Jenner Haulout – COUNTS Explanation of Fields

The datasheet is used to record the total number of pinnipeds hauled out on the beach at the mouth of the Russian River. Counts are made every 30 minutes.

Please print all data. Complete all fields as directed below. If there is no data for the field, please write a backslash into the field (\).

DATE	Record date as month/day/year (ex: 01/01/2010)
OBSERVERS	Record First and Last Name of each observer (Jane Doe)
ENTERED IN DBASE	Leave blank. To be completed by person entering data into database.
DATA CHECKED	Leave blank. To be completed by person checking data entered into database.
ACTIVITY MONITORED	Circle the type of activity being monitored. Please confirm the type of activity being monitored with either SCWA Project Manager or Stewards Volunteer Coordinator.
START TIME	Record the time of beginning monitoring for the day in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.
END TIME	Record the time of ending monitoring for the day in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.
RIVER MOUTH CONDITION	Circle the condition of the river mouth when beginning monitoring for the day. The river mouth is open (fully tidal), closed (sandbar is built up and there is no tidal exchange into the estuary), transition (partly open with some tidal exchange into the estuary), or perched (closed but with river flowing through outlet channel or over sandbar)
AIR TEMP	Record the estimated air temperature in degrees Fahrenheit
PRECIP	Circle if there is fog or rain
VISIBILITY	Enter a number as shown at the bottom of the datasheet. Measures the amount of fog or rain that may obscure views of seals present at the haulout. Enter 1 for clear; 2 for slightly obscured, but can still accurately count seals hauled out; 3 for unable to conduct an accurate or full count
WIND SPEED	Estimate the wind speed at the overlook using the Beaufort wind scale "Appearance of Wind Effects - On Land." Enter the force number, a dash, and then WMO classification. (On a calm day with little or no wind, write "0 – Calm")

WIND DIRECTION	Circle the letter(s) to record the direction that the wind is blowing <u>from</u> . If the wind is blowing from the west, circle "W." If the wind is blowing from the northwest, circle both directions together (a single circle or oval that includes "N" and "W")
OCEAN STATE	Estimate the wind speed on the open ocean using the Beaufort wind scale "Appearance of Wind Effects - On Water." From the overlook, look out into the open ocean water, not where the waves are breaking on the beach or in the estuary. Enter the force number, a dash, and then WMO classification (On a calm day with little or no wind and the ocean surface is smooth, write "0 - Calm")
NOTE CONDITIONS ON BEACH	Write specific observations of unique or atypically conditions on the beach that may impact the haulout, such as large waves breaking across the sandbar, large numbers of birds resting on the beach, visitors or dogs in the vicinity of the haulout, etc.
COUNT	<p>If there are more than one distinct group of seals hauled out on the beach, use multiple rows for each count. If seals are indiscriminately hauled out across the beach, include counts in a single row. Example: at 0700, there are two groups of seals hauled out, one is on the estuary shoreline near the jetty (label as group "A" and the other is on the ocean side of the sandbar near the mouth (label as group "B"). In the first row, write 0700 under Time, A under Beach Site, and counts of seals in that group. On the following line, write 0700 under Time, B under Beach Site, and counts of seals in that group. Do not add the group counts together in subsequent rows. See COUNT - TIME and COUNT - BEACH SITE below.</p> <p>Count only the pinnipeds that are hauled out on the beach, not those in the water.</p>
COUNT - TIME	<p>Record the exact time of beginning seal counts in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.</p> <p>Seals at the haulout are counted every 30 minutes (1/2 hour) after the first count of the day.</p>
COUNT - BEACH SITE	If seals are hauled out in distinct groups on the beach, draw a sketch of the beach on the back of the data sheet and identify approximate location of each group on the beach. Include the jetty location and Haystack Rock (large rock outcropping inside the estuary near the beach) for reference. Label each group with a capital letter beginning from the south end of the beach and moving north. Example: two groups of seals hauled out, one is on the estuary shoreline near the jetty (label as group "A" and the other is on the ocean side of the sandbar near the mouth (label as group "B"). See COUNTS above for more info.
HASE - No. Non-pups	Write the number of harbor seal (HASE) adults, immature, or other age classes that cannot be accurately identified as pup from this season. Include only harbor seals hauled out on the beach, not those in the water.

HASE – No. Pups, Neonates and ≥1 wk	Write the number of pups that can be accurately identified as being born this season. Write the number of neonates and the number of pups 1 week old or older in separate columns provided. Neonates are identified by exhibiting the general characteristics listed at the bottom of the datasheet (less than 1 week old, less than 15 kg in weight, thing for their body length, an umbilicus or natal pelage present, wrinkled skin when the pup is curled up, awkward or jerky movement). Include only harbor seals hauled out on the beach, not those in the water.
CASL – No. Adult Males and No. Other	Write the number of California sea lions (HASE) adults, immature, or other age classes that cannot be accurately identified as pup from this season. Write the number of adult males that can be accurately identified (based on presence of prominent sagittal crest) under the NO. ADULT MALES field. Write the number of females, immature, or those that cannot be positively identified as adult males in the NO. OTHER field as described at bottom of the datasheet.
OTHER SP. – No. and Age Class	Write the four-letter code and number of other pinniped species hauled out on the beach using the codes provided at the bottom of the datasheet. Include age class if it can be accurately identified (northern elephant seal adult or juv, for example). Additional information or behavioral observations can be written in the COMMENTS field.
TOTAL PINNIPEDS	Add the numbers from each field in the row together (HASE non-pups and pups, plus CASL adult males and other, plus Other SP.)
NO. PEOPLE	Write the number of people present on the beach from the jetty north at the time of the count.
COMMENTS	Use this field to clarify any information in the preceding fields. Notes written here may continue under the COMMENTS column into the following rows. Draw a backslash through the unused fields in the rows and begin a new row for the next count.

Pinniped Monitoring at Jenner Haulout – DISTURBANCES Explanation of Fields

This datasheet is used to record the type and duration of disturbances that elicit a behavioral response from pinnipeds hauled out on the beach. It can also be used to record the time of pinnipeds entering the haulout during or after equipment operation on the beach on days that equipment is excavating a lagoon outlet channel or artificial breaching pilot channel.

Please print all data. Complete all fields as directed below. If there is no data for the field, please write a backslash into the field (\).

MAY BE COPIED FROM COUNTS DATASHEET	DATE	Record date as month/day/year (ex: 01/01/2010)
	OBSERVERS	Record First and Last Name of each observer (Jane Doe)
	ENTERED IN DBASE	Leave blank. To be completed by person entering data into database.
	DATA CHECKED	Leave blank. To be completed by person checking data entered into database.
	ACTIVITY MONITORED	Circle the type of activity being monitored. Please confirm the type of activity being monitored with either SCWA Project Manager or Stewards Volunteer Coordinator.
	START TIME	Record the time of beginning monitoring for the day in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.
	END TIME	Record the time of ending monitoring for the day in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.
	RIVER MOUTH CONDITION	Circle the condition of the river mouth when beginning monitoring for the day. The river mouth is open (fully tidal), closed (sandbar is built up and there is no tidal exchange into the estuary), transition (partly open with some tidal exchange into the estuary), or perched (closed but with river flowing through outlet channel or over sandbar)
	AIR TEMP	Record the estimated air temperature in degrees Fahrenheit
	PRECIP	Circle if there is fog or rain
	VISIBILITY	Enter a number as shown at the bottom of the datasheet. Measures the amount of fog or rain that may obscure views of seals present at the haulout. Enter 1 for clear; 2 for slightly obscured, but can still accurately count seals hauled out; 3 for unable to conduct an accurate or full count
	WIND SPEED	Estimate the wind speed at the overlook using the Beaufort wind scale "Appearance of Wind Effects - On Land." Enter the force number, a dash, and then WMO classification. (On a calm day with little or no wind, write "0 - Calm")
	WIND DIRECTION	Circle the letter(s) to record the direction that the wind is blowing <u>from</u> . If the wind is blowing from the west, circle "W." If the wind is blowing from the northwest, circle both directions together (a single circle or oval that includes "N" and "W")
	OCEAN STATE	Estimate the wind speed on the open ocean using the Beaufort wind scale "Appearance of Wind Effects - On Water." From the overlook, look out into the open ocean water, not where the waves are breaking on the beach or in the estuary. Enter the force number, a dash, and then WMO classification (On a calm day with little or no wind and the ocean surface is smooth, write "0 - Calm")
	NOTE CONDITIONS ON BEACH	Write specific observations of unique or atypically conditions on the beach that may impact the haulout, such as large waves breaking across the sandbar, large numbers of birds resting on the beach, visitors or dogs in the vicinity of the haulout, etc.
DISTURBANCE TIME	Record the time and number of minutes of any occurrences that result in a behavioral response of the pinnipeds hauled out on the beach to the disturbance.	

START	Record the exact time the disturbance begins in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.								
END	Record the exact time the disturbance ends in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.								
DURATION	Write the number of minutes that the disturbance occurs. Subtract the start time from the end time to calculate the number of minutes.								
DISTURBANCE	Record the source of the disturbance and the behavioral response of the pinnipeds hauled out on the beach to the disturbance.								
SOURCE	Write the number of the cause of the disturbance as provided at the bottom of the datasheet. 1 = people; 2 = photographer; 3 = kayak; 4 = other boat; 5 = surfer; 6 = other. If other, specify the source of disturbance in the COMMENTS field.								
RESPONSE	<p>Write the letter code of the pinniped response to the disturbance provided at the bottom of the datasheet. A = alert, M = move, F = flush</p> <table border="1"> <thead> <tr> <th>Type of Response</th> <th>Definition</th> </tr> </thead> <tbody> <tr> <td>Alert</td> <td>Seal head orientation in response to disturbance. This may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, or changing from a lying to a sitting position.</td> </tr> <tr> <td>Moving</td> <td>Movements away from the source of disturbance, ranging from short withdrawals over short distances to hurried retreats many meters in length.</td> </tr> <tr> <td>Flight</td> <td>All retreats (flushes) to the water, another group of seals, or over the beach.</td> </tr> </tbody> </table>	Type of Response	Definition	Alert	Seal head orientation in response to disturbance. This may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, or changing from a lying to a sitting position.	Moving	Movements away from the source of disturbance, ranging from short withdrawals over short distances to hurried retreats many meters in length.	Flight	All retreats (flushes) to the water, another group of seals, or over the beach.
Type of Response	Definition								
Alert	Seal head orientation in response to disturbance. This may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, or changing from a lying to a sitting position.								
Moving	Movements away from the source of disturbance, ranging from short withdrawals over short distances to hurried retreats many meters in length.								
Flight	All retreats (flushes) to the water, another group of seals, or over the beach.								
DISTANCE TO SOURCE	Write the estimated number of feet from the source of the disturbance to the pinnipeds responding to the disturbance.								
NO. TAKEN/DISTURBED	<p>Write the total number of pinnipeds that exhibit a behavioral response to the disturbance. If possible, record the number of seals by response (the number that alert, the number that move, the number that flush), using the most extreme response for each individual. Example, there are two harbor seals hauled out and one harbor seal alerts, and another harbor seal alerts, then moves along the beach, the total number of disturbances would be one alert and one move. This field should include the total number of pinnipeds disturbed, including those that flush into the water.</p> <p><i>On days that equipment is operating on the beach, this field will be used to record the number of pinnipeds that are "taken" or "harassed" as allowed by the Marine Mammal Protection Act Incidental Harassment Authorization issued by the National Marine Fisheries Service. Be sure to note in the COMMENTS field if the disturbance is a result of crews or equipment on the beach/in the vicinity of the haulout.</i></p>								
NO. FLUSH TO WATER	Write the total number of pinnipeds that retreat (flush) to the water in response to the disturbance. This number should be included in the NO. TAKEN/DISTURBED field as well. Record if the pinnipeds flush to the estuary or into the ocean under COMMENTS.								

PINNIPEDS REMAINING	Write the number of non-pups (adults, immature, or other age classes that cannot be accurately identified as pup from this season) and pups, in their respective columns, hauled out on the beach at the end of the disturbance.
COMMENTS	<p>Use this field to clarify any information in the preceding fields.</p> <p><i>During beach management activities, record the following in this field: time that crews enter the beach near the jetty ahead of equipment; time that equipment enters the beach from the Goat Rock State Beach parking lot; time that equipment begins to operate on the beach (begins to excavate the outlet channel or pilot channel); any start or stop time of equipment operation and the number of restarts of equipment; time that equipment ends operations and leaves the work area; time that equipment exits the beach to the parking lot; time that crews leave the work area.</i></p> <p>Notes written here may continue under the COMMENTS column into the following rows. Draw a backslash through the unused fields in the rows and begin a new row for the next disturbance.</p>

Appendix L. 2011 Pinniped Monitoring Datasheets and Instructions

**Russian River Estuary Management Activities
Pinniped Monitoring Datasheet Instructions**

Pinniped Monitoring at Jenner Haulout – COUNTS Explanation of Fields

The datasheet is used to record the total number of pinnipeds hauled out on the beach at the mouth of the Russian River. Counts are made every 30 minutes.

Please print all data. Complete all fields as directed below. If there is no data for the field, please write a backslash into the field (\).

DATE	Record date as month/day/year (ex: 01/01/2010)
OBSERVERS	Record First and Last Name of each observer (Jane Doe)
ENTERED IN DBASE	Leave blank. To be completed by person entering data into database.
DATA CHECKED	Leave blank. To be completed by person checking data entered into database.
ACTIVITY MONITORED	Circle the type of activity being monitored. Please confirm the type of activity being monitored with either SCWA Project Manager or Stewards Volunteer Coordinator.
START TIME	Record the time of beginning monitoring for the day in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.
END TIME	Record the time of ending monitoring for the day in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.
RIVER MOUTH CONDITION	Circle the condition of the river mouth when beginning monitoring for the day. The river mouth is open (fully tidal), closed (sandbar is built up and there is no tidal exchange into the estuary), transition (partly open with some tidal exchange into the estuary), or perched (closed but with river flowing through outlet channel or over sandbar)
AIR TEMP	Record the estimated air temperature in degrees Fahrenheit
PRECIP	Circle if it is clear or if there is fog or rain
WIND SPEED	Estimate the wind speed at the overlook in miles per hour.
WIND DIRECTION	Circle the letter(s) to record the direction that the wind is blowing <u>from</u> . If the wind is blowing from the west, circle "W." If the wind is blowing from the northwest, circle both directions together (a single circle or oval that includes "N" and "W")
OCEAN STATE	Estimate the wind speed on the open ocean using the Beaufort wind scale "Appearance of Wind Effects - On Water." From the overlook, look out into the open ocean water, not where the waves are breaking on the beach or in the estuary. Enter the force number, a dash, and then WMO classification (On a calm day with little or no wind and the ocean surface is smooth, write "0 - Calm")

NOTE CONDITIONS ON BEACH	Write specific observations of unique or atypically conditions on the beach that may impact the haulout, such as large waves breaking across the sandbar, large numbers of birds resting on the beach, visitors or dogs in the vicinity of the haulout, etc.
COUNT	<p>If there are more than one distinct group of seals hauled out on the beach, use multiple rows for each count. If seals are indiscriminately hauled out across the beach, include counts in a single row. Example: at 0700, there are two groups of seals hauled out, one is on the estuary shoreline near the jetty (label as group "A" and the other is on the ocean side of the sandbar near the mouth (label as group "B"). In the first row, write 0700 under Time, A under Beach Site, and counts of seals in that group. On the following line, write 0700 under Time, B under Beach Site, and counts of seals in that group. Do not add the group counts together in subsequent rows. See COUNT – TIME and COUNT – BEACH SITE below.</p> <p>Count only the pinnipeds that are hauled out on the beach, not those in the water.</p>
COUNT – TIME	<p>Record the exact time of beginning seal counts in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.</p> <p>Seals at the haulout are counted every 30 minutes (1/2 hour) after the first count of the day.</p>
COUNT – BEACH SITE	If seals are hauled out in distinct groups on the beach, draw a sketch of the beach on the back of the data sheet and identify approximate location of each group on the beach. Include the jetty location and Haystack Rock (large rock outcropping inside the estuary near the beach) for reference. Label each group with a capital letter beginning from the south end of the beach and moving north. Example: two groups of seals hauled out, one is on the estuary shoreline near the jetty (label as group "A" and the other is on the ocean side of the sandbar near the mouth (label as group "B"). See COUNTS above for more info.
VISIBILITY	Enter a number as shown at the bottom of the datasheet. Measures the amount of fog or rain that may obscure views of seals present at the haulout. Enter 1 for clear; 2 for slightly obscured, but can still accurately count seals hauled out; 3 for unable to conduct an accurate or full count
HASE – No. Non-pups	Write the number of harbor seal (HASE) adults, immature, or other age classes that cannot be accurately identified as pup from this season. Include only harbor seals hauled out on the beach, not those in the water.
HASE – No. Pups, Neonates and ≥1 wk	Write the number of pups that can be accurately identified as being born this season. Write the number of neonates and the number of pups 1 week old or older in separate columns provided. Neonates are identified by exhibiting the general characteristics listed at the bottom of the datasheet (less than 1 week old, less than 15 kg in weight, thing for their body length, an umbilicus or natal pelage present, wrinkled skin when the pup is curled up, awkward or jerky movement). Include only harbor seals hauled out on the beach, not those in the water.

CASL – No. Adult Males and No. Other	Write the number of California sea lions (HASE) adults, immature, or other age classes that cannot be accurately identified as pup from this season. Write the number of adult males that can be accurately identified (based on presence of prominent sagittal crest) under the NO. ADULT MALES field. Write the number of females, immature, or those that cannot be positively identified as adult males in the NO. OTHER field as described at bottom of the datasheet.
OTHER SP. – No. and Age Class	Write the four-letter code and number of other pinniped species hauled out on the beach using the codes provided at the bottom of the datasheet. Include age class if it can be accurately identified (northern elephant seal adult or juv, for example). Additional information or behavioral observations can be written in the COMMENTS field.
TOTAL PINNIPEDS	Add the numbers from each field in the row together (HASE non-pups and pups, plus CASL adult males and other, plus Other SP.)
NO. PEOPLE	Write the number of people present on the beach from the jetty north at the time of the count.
COMMENTS	Use this field to clarify any information in the preceding fields. Notes written here may continue under the COMMENTS column into the following rows. Draw a backslash through the unused fields in the rows and begin a new row for the next count.

Pinniped Monitoring at Jenner Haulout – DISTURBANCES Explanation of Fields

This datasheet is used to record the type and duration of disturbances that elicit a behavioral response from pinnipeds hauled out on the beach. It can also be used to record the time of pinnipeds entering the haulout during or after equipment operation on the beach on days that equipment is excavating a lagoon outlet channel or artificial breaching pilot channel.

Please print all data. Complete all fields as directed below. If there is no data for the field, please write a backslash into the field (\).

COPY FROM COUNTS DATASHEET	DATE	Record date as month/day/year (ex: 01/01/2010)								
	OBSERVERS	Record First and Last Name of each observer (Jane Doe)								
	ENTERED IN DBASE	Leave blank. To be completed by person entering data into database.								
	DATA CHECKED	Leave blank. To be completed by person checking data entered into database.								
	ACTIVITY MONITORED	Circle the type of activity being monitored. Please confirm the type of activity being monitored with either SCWA Project Manager or Stewards Volunteer Coordinator.								
DISTURBANCE TIME		Record the time and number of minutes of any occurrences that result in a behavioral response of the pinnipeds hauled out on the beach to the disturbance.								
START		Record the exact time the disturbance begins in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.								
END		Record the exact time the disturbance ends in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.								
DURATION		Write the number of minutes that the disturbance occurs. Subtract the start time from the end time to calculate the number of minutes.								
DISTURBANCE		Record the source of the disturbance and the behavioral response of the pinnipeds hauled out on the beach to the disturbance.								
SOURCE		Write the number of the cause of the disturbance as provided at the bottom of the datasheet. 1 = people; 2 = photographer; 3 = kayak; 4 = other boat; 5 = surfer; 6 = other. If other, specify the source of disturbance in the COMMENTS field.								
RESPONSE		Write the letter code of the pinniped response to the disturbance provided at the bottom of the datasheet. A = alert, M = move, F = flush <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Type of Response</th> <th style="text-align: center;">Definition</th> </tr> </thead> <tbody> <tr> <td>Alert</td> <td>Seal head orientation in response to disturbance. This may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, or changing from a lying to a sitting position.</td> </tr> <tr> <td>Moving</td> <td>Movements away from the source of disturbance, ranging from short withdrawals over short distances to hurried retreats many meters in length.</td> </tr> <tr> <td>Flight</td> <td>All retreats (flushes) to the water, another group of seals, or over the beach.</td> </tr> </tbody> </table>	Type of Response	Definition	Alert	Seal head orientation in response to disturbance. This may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, or changing from a lying to a sitting position.	Moving	Movements away from the source of disturbance, ranging from short withdrawals over short distances to hurried retreats many meters in length.	Flight	All retreats (flushes) to the water, another group of seals, or over the beach.
Type of Response	Definition									
Alert	Seal head orientation in response to disturbance. This may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, or changing from a lying to a sitting position.									
Moving	Movements away from the source of disturbance, ranging from short withdrawals over short distances to hurried retreats many meters in length.									
Flight	All retreats (flushes) to the water, another group of seals, or over the beach.									
DISTANCE TO		Write the estimated number of feet from the source of the disturbance to the								

SOURCE	pinnipeds responding to the disturbance.
NO. TAKEN/DISTURBED	<p>Write the total number of pinnipeds that exhibit a behavioral response to the disturbance. If possible, record the number of seals by response (the number that alert, the number that move, the number that flush), using the most extreme response for each individual. Example, there are two harbor seals hauled out and one harbor seal alerts, and another harbor seal alerts, then moves along the beach, the total number of disturbances would be one alert and one move. This field should include the total number of pinnipeds disturbed, including those that flush into the water.</p> <p><i>On days that equipment is operating on the beach, this field will be used to record the number of pinnipeds that are "taken" or "harassed" as allowed by the Marine Mammal Protection Act Incidental Harassment Authorization issued by the National Marine Fisheries Service. Be sure to note in the COMMENTS field if the disturbance is a result of crews or equipment on the beach/in the vicinity of the haulout.</i></p>
NO. FLUSH TO WATER	Write the total number of pinnipeds that retreat (flush) to the water in response to the disturbance. This number should be included in the NO. TAKEN/DISTURBED field as well. Record if the pinnipeds flush to the estuary or into the ocean under COMMENTS.
PINNIPEDS REMAINING	Write the number of non-pups (adults, immature, or other age classes that cannot be accurately identified as pup from this season) and pups, in their respective columns, hauled out on the beach at the end of the disturbance.
COMMENTS	<p>Use this field to clarify any information in the preceding fields.</p> <p><i>During beach management activities, record the following in this field: time that crews enter the beach near the jetty ahead of equipment; time that equipment enters the beach from the Goat Rock State Beach parking lot; time that equipment begins to operate on the beach (begins to excavate the outlet channel or pilot channel); any start or stop time of equipment operation and the number of restarts of equipment; time that equipment ends operations and leaves the work area; time that equipment exits the beach to the parking lot; time that crews leave the work area.</i></p> <p>Notes written here may continue under the COMMENTS column into the following rows. Draw a backslash through the unused fields in the rows and begin a new row for the next disturbance.</p>

RUSSIAN RIVER ESTUARY MANAGEMENT ACTIVITIES
Pinniped Monitoring at Peripheral Haulouts - COUNTS

Entered in dbase:
 Data checked:

Date:		Observers:			River mouth condition (circle): Open Closed Transition Perched					
Activity Monitored (circle):										
Baseline		Pre-lagoon Outlet		Lagoon Outlet Implementation		Post-Lagoon Outlet		Pre-Breaching	Breaching	Post-Breaching
Count		HASE (harbor seal)				CASL (CA sea lion)		Other Sp.		
Haulout	Start Time	End Time	No. Adults	No. Pups		No. Adults	No. Others (B)	No. and Age Class	Total Pinnipeds	No. People
				Neonate (A)	≥1 wk					
North Jenner										
Air temp (F): Precip: Clear Fog Rain Visibility*: 1 2 3 Wind spd (mi/hr): Wind direction: N W S E Ocean state (Beaufort water): Comments:										
Odin Cove										
Air temp (F): Precip: Clear Fog Rain Visibility*: 1 2 3 Wind spd (mi/hr): Wind direction: N W S E Ocean state (Beaufort water): Comments:										
Jenner (C)										
Air temp (F): Precip: Clear Fog Rain Visibility*: 1 2 3 Wind spd (mi/hr): Wind direction: N W S E Ocean state (Beaufort water): Comments:										
Penny Logs										
Air temp (F): Precip: Clear Fog Rain Visibility*: 1 2 3 Wind spd (mi/hr): Wind direction: N W S E Ocean state (Beaufort water): Comments:										
Paddy's Rock										
Air temp (F): Precip: Clear Fog Rain Visibility*: 1 2 3 Wind spd (mi/hr): Wind direction: N W S E Ocean state (Beaufort water): Comments:										
Chalanchawi										
Air temp (F): Precip: Clear Fog Rain Visibility*: 1 2 3 Wind spd (mi/hr): Wind direction: N W S E Ocean state (Beaufort water): Comments:										
Pocked Rock										
Air temp (F): Precip: Clear Fog Rain Visibility*: 1 2 3 Wind spd (mi/hr): Wind direction: N W S E Ocean state (Beaufort water): Comments:										
Kabemali										
Air temp (F): Precip: Clear Fog Rain Visibility*: 1 2 3 Wind spd (mi/hr): Wind direction: N W S E Ocean state (Beaufort water): Comments:										
Rock Point										
Air temp (F): Precip: Clear Fog Rain Visibility*: 1 2 3 Wind spd (mi/hr): Wind direction: N W S E Ocean state (Beaufort water): Comments:										

*Visibility (circle): 1=clear, 2=slightly obscured but still able to count, 3=unable to conduct an accurate or full count
(A)-Neonate id: less than 1 week old, less than 15 kg, thin for their body length, or an umbilicus or natal pelage present, wrinkled skin, awkward or "jerky" movement;
(B)-Adult male CASL identified by prominent sagittal crest; "Others" = females, immature, or those that cannot be positively identified as adult male;
(C)-Ask Jenner monitor for most recent count; **Pinniped Species:** HASE-harbor seal; CASL-California sea lion; NELS-northern elephant seal; STSL-Steller sea lion
Abandoned pup criteria : no contact w/adults; hasn't moved; nursing attempts refuted; **CONTACT: Jessica Martini-Lamb (707) 322-8177**

**Russian River Estuary Management Activities
Pinniped Monitoring Datasheet Instructions**

Pinniped Monitoring at Periphery – COUNTS Explanation of Fields

The datasheet is used to record the total number of pinnipeds hauled out at haulouts near Jenner.

Please print all data. Complete all fields as directed below for every peripheral monitoring location. If there is no data for the field, please write a backslash into the field (\).

DATE	Record date as month/day/year (ex: 01/01/2010)
OBSERVERS	Record First and Last Name of each observer (Jane Doe)
ENTERED IN DBASE	Leave blank. To be completed by person entering data into database.
DATA CHECKED	Leave blank. To be completed by person checking data entered into database.
ACTIVITY MONITORED	Circle the type of activity being monitored. Please confirm the type of activity being monitored with either SCWA Project Manager or Stewards Volunteer Coordinator.
START TIME	Record the time of beginning monitoring for the day in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.
END TIME	Record the time of ending monitoring for the day in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.
AIR TEMP	Record the estimated air temperature in degrees Fahrenheit
PRECIP	Circle if there is fog or rain
VISIBILITY	Enter a number as shown at the bottom of the datasheet. Measures the amount of fog or rain that may obscure views of seals present at the haulout. Enter 1 for clear; 2 for slightly obscured, but can still accurately count seals hauled out; 3 for unable to conduct an accurate or full count
WIND SPEED	Estimate the wind speed in miles per hour.
WIND DIRECTION	Circle the letter(s) to record the direction that the wind is blowing <u>from</u> . If the wind is blowing from the west, circle "W." If the wind is blowing from the northwest, circle both directions together (a single circle or oval that includes "N" and "W")
OCEAN STATE	Estimate the wind speed on the open ocean using the Beaufort wind scale "Appearance of Wind Effects - On Water." From the overlook, look out into the open ocean water, not where the waves are breaking on the beach or in the estuary. Enter the force number, a dash, and then WMO classification (On a calm day with little or no wind and the ocean surface is smooth, write "0 – Calm")

NOTE CONDITIONS AT HAULOUTS	Write specific observations of unique or atypical conditions that may impact the haulouts, such as large waves breaking across rocks, high or low tides, visitors or dogs in the vicinity of the haulout, etc.
COUNT	Count all harbor seals at the haulout, as defined in the haulout identification powerpoint, available at the Steward's website. Count only hauled out seals, not those in the water.
COUNT – TIME	Record the exact time of beginning seal counts in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm. Seals at peripheral haulouts are counted four times a day during baseline observations, and two times during activity monitoring.
HASE – No. Non-pups	Write the number of harbor seal (HASE) adults, immature, or other age classes that cannot be accurately identified as pup from this season. Include only harbor seals hauled out on the beach, not those in the water.
HASE – No. Pups, Neonates and ≥1 wk	Write the number of pups that can be accurately identified as being born this season. Please use the telescope. Write the number of neonates and the number of pups 1 week old or older in the separate columns provided. Neonates are identified by exhibiting the general characteristics listed at the bottom of the datasheet (less than 1 week old, less than 15 kg in weight, thin for their body length, an umbilicus or natal pelage present, wrinkled skin when the pup is curled up, awkward or jerky movement). Include only neonatal harbor seals hauled out, not those in the water. Please attempt to photograph neonatals.
CASL – No. Adult Males and No. Other	Write the number of California sea lions (HASE) adults, immature, or other age classes that cannot be accurately identified as pup from this season. Write the number of adult males that can be accurately identified (based on presence of prominent sagittal crest) under the NO. ADULT MALES field. Write the number of females, immature, or those that cannot be positively identified as adult males in the NO. OTHER field as described at bottom of the datasheet.
OTHER SP. – No. and Age Class	Write the four-letter code and number of other pinniped species hauled out on the beach using the codes provided at the bottom of the datasheet. Include age class if it can be accurately identified (northern elephant seal adult or juv, for example). Additional information or behavioral observations can be written in the COMMENTS field.
TOTAL PINNIPEDS	Add the numbers from each field in the row together (HASE non-pups and pups, plus CASL adult males and other, plus Other SP.)
NO. PEOPLE	Write the number of people present that might influence the count.
COMMENTS	Use this field to clarify any information in the preceding fields. Notes written here may continue under the COMMENTS column into the following rows. Draw a backslash through the unused fields in the rows and begin a new row for the next count.

Pinniped Monitoring at Periphery – DISTURBANCES Explanation of Fields

This datasheet is used to record the type and duration of disturbances that elicit a behavioral response from pinnipeds hauled out at peripheral haulouts. It can also be used to record the time of pinnipeds landing or leaving a haulout.

Please print all data. Complete all fields as directed below. If there is no data for the field, please write a backslash into the field (\).

COPY FROM COUNTS	DATE	Record date as month/day/year (ex: 01/01/2010)
	OBSERVERS	Record First and Last Name of each observer (Jane Doe)
	ENTERED IN DBASE	Leave blank. To be completed by person entering data into database.
	DATA CHECKED	Leave blank. To be completed by person checking data entered into database.
	ACTIVITY MONITORED	Circle the type of activity being monitored. Please confirm the type of activity being monitored with either SCWA Project Manager or Stewards Volunteer Coordinator.
HAULOUT	Write the name of the haulout being monitored (should be the same as where the disturbance is occurring).	
DISTURBANCE TIME	Record the time and number of minutes of any occurrences that result in a behavioral response of the pinnipeds hauled out on the beach to the disturbance.	
START	Record the exact time the disturbance begins in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm.	
END	Record the exact time the disturbance ends in 24-hour notation (Write 0700 for 7:00 am, 1430 for 2:30 pm). Midnight is 0000, 1 am is 0100, etc. Noon is 1200, 1 pm is 1300, etc. Do not include a colon or am/pm. Do not wait for the disturbance to end before moving on to the next count site. In the END box, write "continued".	
DURATION	Write the number of minutes that the disturbance occurs. Subtract the start time from the end time to calculate the number of minutes.	
DISTURBANCE	Record the source of the disturbance and the behavioral response of the pinnipeds hauled out to the disturbance.	
SOURCE	Write the number of the cause of the disturbance as provided at the bottom of the datasheet. 1 = people; 2 = photographer; 3 = kayak; 4 = other boat; 5 = surfer; 6 = other. If other, specify the source of disturbance in the COMMENTS field.	

RESPONSE	<p>Write the letter code of the pinniped response to the disturbance provided at the bottom of the datasheet. A = alert, M = move, F = flush</p> <table border="1"> <thead> <tr> <th>Type of Response</th> <th>Definition</th> </tr> </thead> <tbody> <tr> <td>Alert</td> <td>Seal head orientation in response to disturbance. This may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, or changing from a lying to a sitting position.</td> </tr> <tr> <td>Moving</td> <td>Movements away from the source of disturbance, ranging from short withdrawals over short distances to hurried retreats many meters in length.</td> </tr> <tr> <td>Flight</td> <td>All retreats (flushes) to the water, another group of seals, or over the beach.</td> </tr> </tbody> </table>	Type of Response	Definition	Alert	Seal head orientation in response to disturbance. This may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, or changing from a lying to a sitting position.	Moving	Movements away from the source of disturbance, ranging from short withdrawals over short distances to hurried retreats many meters in length.	Flight	All retreats (flushes) to the water, another group of seals, or over the beach.
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DISTANCE TO SOURCE	Write the estimated number of feet from the source of the disturbance to the pinnipeds responding to the disturbance.								
NO. TAKEN/DISTURBED	Write the total number of pinnipeds that exhibit a behavioral response to the disturbance. If possible, record the number of seals by response (the number that alert, the number that move, the number that flush), using the most extreme response for each individual. For example, there are two harbor seals hauled out and one harbor seal alerts, and another harbor seal alerts, then moves along the beach, the total number of disturbances would be one alert and one move. This field should include the total number of pinnipeds disturbed, including those that flush into the water.								
NO. FLUSH TO WATER	Write the total number of pinnipeds that retreat (flush) to the water in response to the disturbance. This number should be included in the NO. TAKEN/DISTURBED field as well.								
PINNIPEDS REMAINING	Write the number of non-pups (adults, immature, or other age classes that cannot be accurately identified as pup from this season) and pups, in their respective columns, hauled out on at the end of the disturbance.								
COMMENTS	<p>Use this field to clarify any information in the preceding fields.</p> <p>Notes written here may continue under the COMMENTS column into the following rows. Draw a backslash through the unused fields in the rows and begin a new row for the next disturbance.</p>								