*Permit 16337*

The NWFSC is seeking a 5-year permit to conduct Pacific hake Acoustic Inter-vessel Calibration (IVC) research and gear trial cruises along the West Coast of the U.S. to make hake stock assessment and improve hake biomass estimates. The researchers would take individuals from all species covered in this notice except for OC coho and SR steelhead. The goals of the IVC research are to: (1) Compare acoustic estimates for hake between two vessels; (2) research acoustic differentiation between hake and Humboldt squid (*Dosidicus gigas*); and (3) confirm that groundtruthing tows (mid-water and bottom trawls) are adequately characterizing schools of hake. The IVC research would take place in the ocean from a point off the Strait of Juan de Fuca, Washington down to the central Oregon coast. If hake and Humboldt squid are not present at the time of the study, the cruise may extend to the south until they are found or until the vessels reach a point 100 nautical miles south of Monterey Bay, California. The IVC research would be conducted in June and July. The goal of the gear trial cruises is to test new equipment and methods to ensure that the best available science is used when conducting the biennial hake survey. The gear trial cruises would take place from August through September and would extend from Monterey, California to Dixon Entrance, Alaska, in depths from about 50 meters to 1,500 meters.

The proposed research would benefit listed species by generating information that, ultimately, will be used to help reduce the number of listed fish being accidentally caught in the hake fishery. The researchers do not intend to kill any listed fish, but a few may die as an inadvertent result of the proposed activities.

*Permit 16338*

The NWFSC is seeking a 5-year permit to test the efficacy of an open escape window bycatch reduction device to reduce Chinook salmon and rockfish bycatch in the Pacific hake fishery. The proposed activities would be conducted from May to September off the Central Oregon coast and, although it is unlikely, sampling may also occur off the coasts of Washington and northern California. All research tows would take place over the continental shelf and slope in depths of less than 1,000 meters; all captured fish would be identified, and some would be retained for the scientific analyses necessary for the research.

The research would benefit listed species by helping develop fishing methods and equipment that allow large-scale fisheries (like the hake fishery) to catch fewer threatened and endangered fish. The researchers do not intend to kill any listed fish, but a few may die as an inadvertent result of the proposed activities.

This notice is provided pursuant to section 10(c) of the ESA. NMFS will evaluate the applications, associated documents, and comments submitted to determine whether the applications meet the requirements of section 10(a) of the ESA and Federal regulations. The final permit decisions will not be made until after the end of the 30-day comment period. NMFS will publish notice of its final action in the **Federal Register**.

Dated: March 15, 2011.

**Angela Somma,**

*Chief, Endangered Species Division, Office of Protected Resources, National Marine Fisheries Service.*

[FR Doc. 2011–6441 Filed 3–17–11; 8:45 am]

**BILLING CODE 3510–22–P**

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

**RIN 0648–XA244**

### Takes of Marine Mammals Incidental to Specified Activities; Russian River Estuary Management Activities

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Notice; proposed incidental harassment authorization; request for comments.

**SUMMARY:** NMFS has received an application from the Sonoma County Water Agency (SCWA) for an Incidental Harassment Authorization (IHA) to take marine mammals incidental to Russian River estuary management activities. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an IHA to SCWA to take, by Level B Harassment only, several species of marine mammals during the specified activity.

**DATES:** Comments and information must be received no later than April 18, 2011.

**ADDRESSES:** Comments on the application should be addressed to Michael Payne, Chief, Permits, Conservation and Education Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East West Highway, Silver Spring, MD 20910. The mailbox address for providing e-mail comments is *ITP.Laws@noaa.gov.* NMFS is not responsible for e-mail comments sent to addresses other than the one provided here. Comments sent via e-mail, including all attachments, must not exceed a 10-megabyte file size.

*Instructions:* All comments received are a part of the public record and will generally be posted to *http://www.nmfs.noaa.gov/pr/permits/incidental.htm* without change. All Personal Identifying Information (*e.g.,* name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information.

A copy of the application containing a list of the references used in this document may be obtained by writing to the address specified above, telephoning the contact listed below (*see* **FOR FURTHER INFORMATION CONTACT**), or visiting the Internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental.htm.* Supplemental documents provided by SCWA may also be found at the same address: Pinniped Monitoring Plan; Report of Activities and Monitoring Results—April 1 to December 31, 2010; and Russian River Estuary Outlet Channel Adaptive Management Plan. NMFS' Environmental Assessment (2010) and associated Finding of No Significant Impact, prepared pursuant to the National Environmental Policy Act, are available at the same site. Documents cited in this notice, including NMFS' Biological Opinion (2008) on the effects of Russian River management activities on salmonids, may also be viewed, by appointment, during regular business hours, at the aforementioned address.

**FOR FURTHER INFORMATION CONTACT:** Ben Laws, Office of Protected Resources, NMFS, (301) 713–2289.

**SUPPLEMENTARY INFORMATION:**

#### Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is published in the **Federal Register** to provide public

notice and initiate a 30-day comment period.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. NMFS has defined "negligible impact" in 50 CFR 216.103 as "* * * an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival."

Section 101(a)(5)(D) of the MMPA established an expedited process by which citizens of the United States can apply for an authorization to incidentally take small numbers of marine mammals by Level B harassment as defined below. Section 101(a)(5)(D) establishes a 45-day time limit for NMFS review of an application followed by a 30-day public notice and comment period on any proposed authorizations for the incidental harassment of marine mammals. Within 45 days of the close of the comment period, NMFS must either issue or deny the authorization. If authorized, the IHA would be effective for one year from date of issuance.

Except with respect to certain activities not pertinent here, the MMPA defines "harassment" as:

> Any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

**Summary of Request**

NMFS received an application on February 15, 2011 from SCWA for renewal of an IHA for the taking, by Level B harassment only, of marine mammals incidental to activities conducted in management of the Russian River estuary in Sonoma County, California. SCWA was first issued an IHA, valid for a period of one year, on April 1, 2010 (75 FR 17382). Management activities include management of a naturally-formed barrier beach at the mouth of the river in order to minimize potential for flooding of properties adjacent to the Russian River estuary and enhance habitat for juvenile salmonids, and biological and physical monitoring of the estuary. Flood control-related breaching of barrier beach at the mouth of the river may include artificial breaches, as well as construction and maintenance of a lagoon outlet channel. The latter activity, an alternative management technique conducted to mitigate impacts of flood control on rearing habitat for Endangered Species Act (ESA)-listed salmonids, occurs only from May 15 through October 15 (hereafter, the "lagoon management period"). Species known from the haul-out at the mouth of the Russian River, and analyzed in this document, include the harbor seal (*Phoca vitulina*), California sea lion (*Zalophus californianus*), and northern elephant seal (*Mirounga angustirostris*).

Breaching of naturally formed barrier beach at the mouth of the Russian River requires the use of heavy equipment (*e.g.,* bulldozer, excavator) and increased human presence. As a result, pinnipeds hauled out on the beach may exhibit behavioral responses that indicate incidental take by Level B harassment under the MMPA. Numbers of harbor seals, the species most commonly encountered at the haul-out, have been recorded extensively since 1972 at the haul-out near the mouth of the Russian River. Based on these monitoring data and SCWA's estimated number of management events, SCWA is requesting authorization to incidentally harass up to 2,735 harbor seals, nineteen California sea lions, and fifteen northern elephant seals during the one-year time span of the proposed IHA, from April 15, 2011 to April 14, 2012.

**Description of the Specified Activity**

The estuary is located about 97 km (60 mi) northwest of San Francisco in Sonoma County, near Jenner, California (see Figure 1 of SCWA's application). The Russian River watershed encompasses 3,847 $km^2$ (1,485 $mi^2$) in Sonoma, Mendocino, and Lake Counties. The mouth of the Russian River is located at Goat Rock State Beach; the estuary extends from the mouth upstream approximately 10 to 11 km (6–7 mi) between Austin Creek and the community of Duncans Mills (Heckel 1994). The proposed action involves management of the estuary to prevent flooding while preventing adverse modification to critical habitat for ESA-listed salmonids. During the lagoon management period, this involves construction and maintenance of a lagoon outlet channel that would facilitate formation of a perched lagoon. A perched lagoon, which is an estuary closed to tidal influence in which water surface elevation is above mean high tide, would reduce flooding while maintaining appropriate conditions for juvenile salmonids. Additional breaches of barrier beach may be conducted for the sole purpose of reducing flood risk.

The Russian River estuary is a drowned river valley formed via erosion during the early Pleistocene, when sea level was lower (Erskian and Lipps 1977). The bed of the estuary rises above mean sea level near Duncans Mills, about five miles from the river's mouth. Ocean tides can influence water surface elevation in the river as far as ten miles upstream near Monte Rio (Corps and SCWA 2004), and directly affect water elevation about five to seven miles upstream in the vicinity of Austin Creek (Erskian and Lipps 1977; Corps and SCWA 2004). Tides range approximately six feet and are diurnal (Erskian and Lipps 1977).

Closure of the estuary's bar is a complex process related to tides, waves and swells, sediment transport, and river flows (Largier 2008; RREITF 1994). Prior to dams and diversions in the Russian River watershed, the estuary was likely open to ocean tides for several months between late fall and early spring, when high stream flows coincided with larger coastal waves. As stream flow waned in the spring, sufficient hydraulic energy was not available to maintain a direct connection to the ocean. This, combined with the presence of bar building wave events, would often cause a barrier beach to form at the outlet of the estuary (NMFS 2008). Historically, flows during the summers were low and were unlikely to have breached the barrier beach once it formed. This pattern of open estuarine conditions in the late fall, winter and early spring, followed by estuary closure to ocean tides in the spring, summer, or early fall, remains evident today, though it is altered by management activity in the Russian River watershed.

Estuaries in California can become productive freshwater lagoons following formation of a barrier beach (Smith 1990), dependent upon the time of initial closure and freshwater inflow to the estuary. Conversion to freshwater occurs when freshwater from upstream builds up on top of the salt water layer, gradually forcing the salt water layer to seep back into the ocean through the barrier beach, or when freshwater outflow entrains some of the salt water at the boundary between fresh and salt layers; the process may take one month or more (Smith 1990). Until the conversion process has completed, stratification of the water by salinity

occurs. Saltwater, being denser, is located at the bottom, while freshwater is found on top. Stratification can limit both the quantity and quality of freshwater habitat, relative to a freshwater lagoon. When conversion of an estuary to a lagoon is complete, fish may have more abundant space and prey for survival. It is likely that, with reduced inflow and without artificial breaching, in the spring and summer the Russian River estuary would naturally form a perched or closed lagoon that in many years would contain a highly productive environment for rearing juvenile salmonids (NMFS 2008).

Closure of the bar can result in flooding of low-lying properties adjacent to the estuary. When the estuary closes, it may breach naturally or require mechanical breaching to open. Table 1 describes breaching events occurring in the estuary from 1996–2010. Artificial breaching may have occurred as far back as the 1800s; the County of Sonoma Department of Public Works (DPW) was responsible for breaching beginning in the early 1950s. SCWA took over breaching from DPW in 1995 (SCWA 2004). The historic method of artificial breaching causes the lagoon to return to a tidal system reconnected to the ocean, creating a near marine environment, with shallow depths and high salinity throughout most of the water column. In some areas salinity stratification contributes to low dissolved oxygen at the bottom. These conditions are neither natural nor optimal for the survival of juvenile salmonids (NMFS 2008).

Table 1. Breaching of the Russian River estuary from 1996 to 2010

| Month | Year | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **1996** | **1997** | **1998*** | **1999** | **2000** | **2001** | **2002** | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** | **Total** |
| Jan | | | | | | 1 | | | | | | | | 1,[1] | 1 | **4** |
| Feb | | | | | | | | | | | | 2 | | | | **2** |
| Mar | | 1,[1] | | | | | | [1] | | | | | | | | **3** |
| Apr | | [1] | | | | 2 | | | [1] | | | 3 | [1] | [1] | | **9** |
| May | | 1,[1] | | | 1 | 3 | | | 1 | | | | 5 | | | **12** |
| Jun | | 2 | | 1 | 1 | | 1 | [1] | | | | | | 1 | | **7** |
| Jul | 1 | | | 1 | | | | | | | | | 1 | | {1},[1] | **5** |
| Aug | (2) | 1 | | | | | | | [1] | | | | | | | **4** |
| Sep | 1,(1) | 2 | 4 | 1 | 1 | | | | | 1 | | | 1 | 1 | | **13** |
| Oct | 1 | 1 | 3 | 2 | 2 | 2 | [1] | 2 | (1) | 1 | [1] | [1] | 1 | 4 | 2,[1] | **26** |
| Nov | [1] | 1 | 1 | 1,[1] | 4 | [1] | 3 | 1 | (2) | 2 | [3] | 2 | 1 | 4 | [1] | **29** |
| Dec | | | | | 2 | | 1 | | | | [1] | 2 | 1,[1] | 4 | | **12** |
| **Total** | **7** | **12** | **8** | **7** | **11** | **9** | **6** | **5** | **6** | **4** | **5** | **10** | **12** | **17** | **6** | |
| **SCWA** | **3** | **9** | **8** | **6** | **11** | **8** | **5** | **3** | **1** | **4** | **0** | **9** | **10** | **15** | **3** | |

Number of times breached by year and month, including artificial breaches by SCWA; natural breaches, denoted by [#]); unpermitted breaches conducted by private individuals, denoted by (#); and an outlet channel management event, conducted in accordance with NMFS' Biological Opinion (2008) and denoted by {#}.

* Type of breach was not recorded for 1998. All breaching events for 1998 are treated as done by SCWA.

Within the Russian River watershed, the U.S. Army Corps of Engineers (Corps), SCWA and the Mendocino County Russian River Flood Control and Water Conservation Improvement District (MCRRFCD) operate and maintain Federal facilities and conduct activities in addition to the previously described estuary management, including flood control, water diversion and storage, instream flow releases, hydroelectric power generation, channel maintenance, and fish hatchery production. The Corps, SCWA, and the MCRRFCD conducted these activities for many years before salmonid species in the Russian River—Central California Coast (CCC) steelhead (*Oncorhynchus mykiss*), CCC coho salmon (*O. kisutch*), and California Coastal Chinook salmon (*O. tshawytscha*)—were protected under the ESA. Starting with the listing of coho salmon in 1996 (61 FR 56138), SCWA and the Corps engaged NMFS in pre-consultation technical assistance to evaluate the potential risk their activities posed to these species. Upon determination that these actions were likely to affect salmonids, as well as designated critical habitat for these species, formal consultation was initiated. In 2008, NMFS issued a Biological Opinion (BiOp) for Water Supply, Flood Control Operations, and Channel Maintenance conducted by the Corps, SCWA, and MCRRFCD in the Russian River watershed (NMFS 2008). This BiOp found that the activities—including SCWA's estuary management activities—authorized by the Corps and undertaken by SCWA and MCRRFCD, if continued in a manner similar to recent historic practices, were likely to jeopardize the continued existence of threatened CCC steelhead and endangered CCC coho salmon and were likely to adversely modify critical habitat for those two species.

If a project is found to jeopardize a species or adversely modify its critical habitat, NMFS must develop a Reasonable and Prudent Alternative (RPA) to the proposed project in coordination with the Federal action agency and any applicant. A component of the RPA described in the 2008 BiOp requires SCWA to collaborate with NMFS and modify their estuary water level management in order to reduce marine influence (*i.e.,* high salinity and tidal inflow) and promote a higher water surface elevation in the estuary in order to enhance the quality of rearing habitat for juvenile steelhead. A program of potential incremental steps prescribed to reach that goal includes adaptive

management of the outlet channel. SCWA is also required to monitor the response of water quality, invertebrate production, and salmonids in and near the estuary to water surface elevation management in the estuary-lagoon system.

The analysis contained in the BiOp found that maintenance of lagoon conditions was necessary only for the lagoon management period. See NMFS' BiOp (2008) for details of that analysis. As a result of that determination, there are three components to SCWA's estuary management activities: (1) Lagoon outlet channel management, during the lagoon management period only, required to accomplish the dual purposes of flood risk abatement and maintenance of juvenile salmonid habitat; (2) traditional artificial breaching, with the sole goal of flood risk abatement; and (3) physical and biological monitoring.

*Lagoon Outlet Channel Management*

SCWA, in compliance with the BiOp, adaptively manages estuary water surface elevations during the lagoon management period. Maintaining the lagoon water levels in a perched state that is also below flood stage requires an outlet channel to convey water from the estuary to the ocean over the beach berm. Active management of estuarine/lagoon water levels commences following the first closure of the barrier beach during this period. When this happens, SCWA monitors lagoon water surface elevation and creates an outlet channel when water levels in the estuary are between 4.5 and 7.0 ft (1.4–2.1 m) in elevation. Water levels above 4.0 ft (1.2 m) are expected to indicate reduced marine influence and would be likely to improve habitat. The ideal lagoon water level is 7.0–9.0 ft (2.1–2.7 m)—the BiOp specifies a target average daily water surface elevation of 7.0 ft during the lagoon management period, and flood stage is reached at 9.0 ft. However, in practice, this target leaves SCWA with little margin for error. The Russian River Estuary Outlet Channel Adaptive Management Plan (hereafter, "Plan"; PWA 2010) employs an incremental approach to channel management, favoring smaller, more frequent modifications over larger, less frequent, modification with less certain outcome. To the extent feasible, estuary water levels will initially be managed at the lower end of the 4.0–9.0 ft range in order to: (1) Reduce the scour potential associated with larger water surface differences between the lagoon and ocean and (2) provide a larger flood buffer if the channel closes and water levels rise. As experience is gained from implementing the channel and observing its response, SCWA will seek to make larger changes during each incremental modification. These larger changes will decrease the duration and frequency of management activity, thereby reducing the disturbance impact over time. Management practices will be incrementally modified over the course of the lagoon management period in an effort to improve performance in meeting the goals of the BiOp while preventing flooding.

The adaptive lagoon outlet channel management plan seeks to work with natural processes and site conditions to maintain an outlet channel that reduces tidal inflow of saline water into the estuary, as described in the Plan. The location of the outlet channel, at the interface of the estuary and the surf zone, is a dynamic system influenced by river discharge, ocean waves, and sand transport (*see* Figure 2 of SCWA's application). As such, the outlet channel will be subject to variable forcing at hourly, tidal, and monthly timescales. To sustainably meet its performance criteria, the outlet channel must be resilient in the face of this variable forcing. The outlet channel geometry must simultaneously meet two key objectives: Convey sufficient discharge from the estuary to the ocean to preserve constant water levels in the estuary and preserve channel function by avoiding closure or breaching. These two objectives can be in conflict, since both conveyance capacity and the potential for breaching increase with flow rates, but closure is more likely for lower flow rates.

The target outlet channel is subject to two failure modes: (1) Closure caused by deposition, leading to rising water levels and possible flooding, and (2) breaching caused by scour, leading to tidal exchange and marine conditions in the estuary. Conceptual models of these conditions may be found in Figures 2–4 of the Plan. Of the two failure modes, breaching is more detrimental. Once breaching occurs, exposing the estuary to tidal water levels and saline inflow, the estuary may persist in a breached state for weeks or months before the barrier beach can re-form. Closure results in increasing estuary water levels, which allows time for further management action to prevent flooding.

A pilot channel will be created in the sandbar at a sufficient depth to allow river flows to begin transporting sand to the ocean. The pilot channel would not be excavated as deeply, narrowly, or with as steep a gradient as typical artificial breaching channels, which are designed to allow the current velocities to erode a wider and deeper channel and downcut into the barrier beach. While the channel is dug, it will remain disconnected from the estuary by a portion of the sand bar. Excavated sand will be placed on the beach adjacent to the pilot channel. In the past, excavation work associated with artificial breaching has usually generated a maximum of 1,000 $yd^3$ (765 $m^3$) of sand, sidecast onto the sand bar below the high tide line (NMFS 2005). However, SCWA is in the process of requesting permit renewals that would allow maximum excavations of 2,000 $yd^3$ (1,529 $m^3$) to accommodate the maximum volume of sand excavation that could be needed for certain outlet channel configurations. Once the channel is complete, the remaining portion of the sandbar will be removed by heavy equipment allowing the river water to flow to the ocean. The channel configuration—and thus the size of the resulting pilot channel—varies, depending on the height of the sand bar to be breached, the tide level, and the elevation of the estuary at the time of breaching. Two types of channel configurations will be initially considered for implementation: A wide and short channel that seeks to minimize scour potential; or a narrow and long channel aligned to the north that seeks to minimize closure potential. The channel selected for implementation will be based on site conditions at the time of closure. Monitoring of the outlet channel and estuary response will be used to inform adaptive management during the lagoon management period.

Some uncertainty remains about the exact outlet channel configuration that may best achieve the target performance criteria. This uncertainty arises from the dynamic natural setting for the outlet channel and from the unquantified tradeoffs between channel specifications which may benefit one performance criterion while impairing another criterion. For example, to reduce the likelihood of closure, it may be beneficial to locate the mouth of the channel further north where the coastline's aspect is more sheltered from waves from the north. However, extending the channel's length to the northern location necessitates narrowing its width to keep excavation within currently-permitted volumes (*i.e.,* 1,000 $yd^3$). A narrower channel increases the likelihood of scour-induced breaching. The relative importance of these factors is not known, precluding an exact determination of optimal channel configuration. In addition to these uncertainties, actual conditions at the

time of closure, such as beach berm topography, may inform the selected configuration (PWA 2010).

The wide/short approach will be to construct the channel in the same general location and alignment as the preexisting channel (*i.e.,* the location just prior to closure). When pursuing this approach, excavation will simply widen and connect the channel in place. As the channel migrates during the management season, the location of new excavation may follow this migration. The narrow/long approach will angle the channel to the northwest with an approximate aspect of 30–40 degrees with respect to the beach. This angled alignment tests possible advantages of site features such as areas of reduced wave energy and rocks imbedded in the beach.

The quantity of sand moved will depend on antecedent beach topography. Once either the wide/short or narrow/long planform alignment is selected, limits on excavation volume will largely set channel dimensions. Any sand excavated from the channel will be placed on the adjacent beach and graded to heights of approximately 1–2 ft (0.3–0.6 m) above existing grade. The placed sand will be distributed in such a way as to minimize changes to beach topography. The bed will be excavated 0.5–1 ft (0.15–0.3 m) below the lagoon water level along its entire length, to achieve target channel depths upon initiation of flow. The bed slope should be nearly flat within the outlet channel to minimize the likelihood of bed scour, which may result in breaching. The target range of water depths, 0.5–2 ft, is constrained on the upper end by the maximum depth at which the channel is likely to be stable (*i.e.,* not scour). The lower end of the range is constrained by the width; shallower depths would require impractically large channel widths to provide sufficient cross-sectional area to convey flow. For the wide/short configuration, the channel bottom would be excavated to a width of approximately 100 ft (30 m), the Corps-permitted maximum, to reduce the potential for scour. For the narrow/long configuration, the channel bottom width will be approximately 30 ft (9 m) to achieve the desired channel length and slope while still staying within the excavation volume limits. The wide/short configuration would result in channel lengths of 100–200 ft (30–60 m) while the narrow/long configuration would result in channel lengths approaching the maximum of 400 ft (120 m). Channel modifications will be initiated during low tide so that after several hours of work, the channel will be completed near high tide (PWA 2010).

Ideally, initial implementation of the outlet channel would produce a stable channel for the duration of the lagoon management period. However, the sheer number of variables and lack of past site-specific experience likely preclude this outcome. Given the conservative approach, in which excavation technique disproportionately seeks to avoid failure by breaching rather than closure, attempted channel implementation is most likely to fail through closure. In this case, succeeding excavation attempts may be required. The precise number of excavations would depend on uncontrollable variables such as seasonal ocean wave conditions (*e.g.,* wave heights and lengths), river inflows, and the success of previous excavations (*e.g.,* the success of selected channel widths and meander patterns) in forming an outlet channel that effectively maintains lagoon water surface elevations. Based on lagoon management operations under similar conditions at Carmel River, and expectations regarding how wave action and sand deposition may increase beach height or result in closure, it is predicted that up to three successive outlet channel excavation events, at increasingly higher beach elevations, may be necessary to produce a successful outlet channel. In the event that an outlet channel fails through breaching (*i.e.,* erodes the barrier beach and forms a tidal inlet), SCWA would resume adaptive management of the outlet channel's width, slope, and alignment in consultation with NMFS and the California Department of Fish and Game (CDFG), only after ocean wave action naturally reforms a barrier beach and closes the river's mouth during the lagoon management period.

SCWA's lagoon outlet channel management activities would involve the use of heavy equipment and increased human presence on the beach, in order to excavate and maintain an outlet channel from the lagoon to the ocean. SCWA has estimated that a maximum of three such events could be necessary during this period. During pupping season, management events may occur over a maximum of two consecutive days per event and all estuary management events on the beach must be separated by a minimum no-work period of one week. The use of heavy equipment and increased human presence has the potential to harass hauled-out marine mammals by causing movement or flushing into the water. Mitigation and monitoring measures described later in this document are designed to minimize this harassment to the lowest practicable level.

*Implementation and Maintenance*—SCWA accesses the beach from the paved parking lot at Goat Rock State Beach, (*see* Figure 2 of SCWA's application), and would contact State Parks lifeguards, as well as State Park District headquarters and the Monte Rio Fire Protection District, within 24 hours prior to excavating and maintaining the lagoon outlet channel to minimize potential hazards to beach visitors. Signs and barriers would be posted 750 ft (229 m) from each side of the outlet channel for 24 hours prior to and after excavation events to warn beach visitors of the hazards in the area and the presence of pinnipeds on the beach. Notifications for the general public would also be posted at the Jenner visitor's center boat launch. Equipment (*e.g.,* bulldozer, excavator) is off-loaded in the parking lot and driven onto the beach via an existing access point. Personnel on the beach would include up to two equipment operators, three safety team members on the beach (one on each side of the channel observing the equipment operators, and one at the barrier to warn beach visitors away from the activities), and one safety team member at the overlook on Highway 1 above the beach. Occasionally, there would be two or more additional people on the beach (SCWA staff or regulatory agency staff) to observe the activities. SCWA staff would be followed by the equipment, which would then be followed by an SCWA vehicle (typically a small pickup truck, to be parked at the previously posted signs and barriers on the south side of the excavation location).

Upon successful construction of an outlet channel, adaptive management, or maintenance, may be required for the channel to continue achieving performance criteria. In order to reduce disturbance to seals and other wildlife, as well as beach visitors, the amount and frequency of mechanical intervention will be minimized. As technical staff and maintenance crews gain more experience with implementing the outlet channel and observing its response, maintenance is anticipated to be less frequent, with events of lesser intensity. During pupping season, machinery may only operate on up to two consecutive working days, including during initial construction of the outlet channel. In addition, SCWA must maintain a one week no-work period between management events during pupping season, unless flooding is a threat, to allow for adequate disturbance recovery period. During the no-work period,

equipment must be removed from the beach. SCWA seeks to avoid conducting management activities on weekends (Friday to Sunday) in order to reduce disturbance of beach visitors. In addition, activities are to be conducted in such a manner as to effect the least practicable adverse impacts to pinnipeds and their habitat as described later in this document (*see* "Mitigation").

*Artificial Breaching*

As described previously, the estuary may close naturally throughout the year as a result of barrier beach formation at the mouth of the Russian River. Although closures may occur at any time of the year, the mouth usually closes during the spring, summer, and fall (Heckel 1994; Merritt Smith Consulting 1997, 1998, 1999, 2000; SCWA and Merritt Smith Consulting 2001). 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. Closures result in lagoon formation in the estuary and, as water surface levels rise, flooding may occur. For decades, artificial breaching has been performed in the absence of natural breaching, in order to alleviate potential flooding of low-lying shoreline properties near the town of Jenner.

Estuary management events, as described previously in this document, may be carefully engineered for the dual purpose of reducing flood risk while maintaining lagoon conditions appropriate for juvenile salmonids. However, artificial breaching, as defined here, is conducted for the sole purpose of reducing flood risk, and may occur at any time of the year. As prescribed in the BiOp, artificial breaching is limited to two events during the lagoon management period, but is unlimited outside the lagoon management period. Any estuary management event occurring outside of the lagoon management period will be an artificial breaching.

Breaching has historically been performed in accordance with the Russian River Estuary Study 1992–1993 (Heckel 1994). The beach berm is artificially breached by SCWA when the water surface elevation in the estuary is 4.5–7.0 ft (1.4–2.1 m) as read at the Jenner gage. Breaching is performed by creating a deep cut in the closed beach berm, approximately 100 ft long by 25 ft wide and 6 ft deep (30 x 8 x 2 m), by moving up to 1,000 $yd^3$ (765 $m^3$) of sand. Based on experience and beach topography at the time of the breach, the planform alignment of the breach is selected to maximize the success of the breaches. Breaching activities are typically conducted on outgoing tides to maximize the elevation head difference between the estuary water surface and the ocean.

After the last portion of the beach berm is removed, water typically begins flowing out the channel at high velocities, scouring and enlarging the channel to widths of 50–100 ft (15–30 m). As the channel evolves and meanders, it may reach lengths in excess of 400 ft (122 m). After breaching, the estuary is subject to saline water inflow throughout incoming tides. As with other outlet channel management activities, sand is placed onto the beach adjacent to the pilot channel. The size of the pilot channel may vary depending on the height of the sandbar to be breached, the tide level, and the water surface elevation in the estuary.

Artificial breaching activities occur in accordance with the BiOp, and primarily occur outside the lagoon management period, *i.e.,* October 16 to May 14. However, if conditions present unacceptable risk of flooding during the lagoon management period, SCWA may artificially breach the sandbar a maximum of two times during that period. Implementation protocol would follow that described previously for lagoon outlet channel management events, with the exception that only one piece of heavy equipment is likely to be required per event, rather than two.

SCWA's artificial breaching activities would involve the use of heavy equipment and increased human presence on the beach, in order to breach the barrier between the lagoon and the ocean. The use of heavy equipment and increased human presence has the potential to harass hauled-out marine mammals by causing movement or flushing into the water. Mitigation measures described later in this document are designed to minimize this harassment to the lowest practicable level.

*Physical and Biological Monitoring*

Implementation of the lagoon outlet channel adaptive management plan requires monitoring to measure changes in the bar and channel elevation, lengths, and widths, as well as flow velocities and observations of the bed structure (to identify bed forms and depth-dependent grain size distribution indicative of armoring) in the channel. In addition to the activities described for the lagoon outlet channel adaptive management plan, SCWA is required by the BiOp and other state and Federal permits to collect biological and physical habitat data in conjunction with estuary management. Fisheries seining and trapping, water quality monitoring, invertebrate/sediment sampling, and physical habitat measurements require the use of boats and nets in the estuary. Boating and other monitoring activities occur in the vicinity of river haul-outs (*see* Figure 4 of SCWA's application); these monitoring activities have the potential to disturb pinnipeds. Table 2 provides a summary of the monitoring tasks and the frequency of their implementation. The majority of monitoring is required under the BiOp and occurs approximately during the lagoon management period (mid-May through October or November, depending on river dynamics. Beach topographic surveys occur year-round.

Table 2. Monitoring tasks associated with Russian River estuary management with potential to disturb pinnipeds

| Task | Description | Field activities | Frequency |
|---|---|---|---|
| **Lagoon Outlet Channel Management on the Barrier Beach** | | | |
| Discharge measurements | Collected within the outlet channel to verify the channel's conveyance | Two field staff to complete cross sectional flow velocity surveys using flow meter attached to a wading rod with electronic data logger; bank pins to be installed on either bank and fiberglass measuring tape stretched from bank to bank | Every two weeks |
| Outlet channel bed structure | Observe the bed for bed forms and depth-dependent grain size distribution indicative of armoring; Sediment sampler used | Two field staff to collect sediment sample from the surface of the channel bed | Monthly |
| Outlet channel topography | Collect outlet channel elevation and width | Two field staff would capture outlet channel features using a prism mounted on a survey rod | Monthly |
| **Biological and Physical Habitat Monitoring in the Estuary** | | | |
| Fisheries seining | Deploy seine to collect fish at up to eight locations in the estuary | One or two boats with approximately six field staff | Monthly |
| Invertebrate/salmonid prey study | Collection of benthic invertebrates and zooplankton | One boat with two field staff | Weekly |
| Water quality | Collection of temperature, dissolved oxygen, conductivity, pH, depth, nutrient and bacteriological samples | A boat with two or three field staff, six datasonde arrays submerged in estuary at various locations from mouth to Duncans Mills | Every three weeks |
| Topographic survey of sandbar | Survey of sandbar height and widths | Two field staff on beach equipped with a survey rod | Monthly |
| Flow circulation | Survey of cross-sectional velocity data in estuary and collection of temperature and salinity profile data at various locations from mouth to Duncans Mills | A boat with two or three field staff, collecting cross-sectional data from mouth to Duncans Mills | Weekly |

**Description of Marine Mammals in the Area of the Specified Activity**

Harbor seals are the most common species inhabiting the haul-out at the mouth of the Russian River (Jenner haul-out). California sea lions and northern elephant seals have also been observed infrequently in the project area. In addition to the Jenner haul-out, there are eight additional haul-outs nearby (*see* Figure 2 of SCWA's Report of Activities and Monitoring Results). These include 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 upstream within the estuary.

*Harbor Seals*

Harbor seals in the eastern Pacific inhabit near-shore coastal and estuarine areas from Baja California, Mexico, to the Pribilof Islands in Alaska. In California, approximately 400–600 harbor seal haul-outs are widely distributed along the mainland and on offshore islands, including intertidal sandbars, rocky shores and beaches (Hanan 1996).

The harbor seal population in California is estimated at approximately 34,233 (Carretta *et al.* 2007). Counts of harbor seals in California showed a rapid increase from approximately 1972 to 1990, though net production rates appeared to decline from 1982 to 1994. The decrease in population growth rate has occurred at the same time as a decrease in human-caused mortality and may be an indication that the population is reaching its environmental carrying capacity.

In general, harbor seals do not undertake long migrations, but do travel 300–500 km on occasion to find food or suitable breeding areas (Herder 1986). Harbor seals are rarely found in pelagic waters and typically stay within the tidal and intertidal zones. On land, harbor seals haul out on rocky outcrops, mudflats, sandbars and sandy beaches with unrestricted access to water and with minimal human presence. Haul-out sites are important as resting sites for harbor seals, who feed opportunistically in shallow waters on fish, crustaceans, and cephalopods. Harbor seals are typically solitary while foraging, although small groups have been observed. They normally choose isolated sites for pupping, which normally occurs at the Russian River from March until late June, and sometimes into early July. The Jenner haul-out is the largest in Sonoma County.

A substantial amount of monitoring effort has been conducted at the Jenner haul-out and surrounding areas. Concerned local residents formed the Stewards' Seal Watch Public Education Program in 1985 to educate beach visitors and monitor seal populations. State Parks Volunteer Docents continue this effort towards safeguarding local harbor seal habitat. On weekends during the pupping and molting season (approximately March-August), volunteers conduct public outreach and record the numbers of visitors and seals on the beach, other marine mammals observed, and the number of boats and kayaks present.

Ongoing monthly seal counts at the Jenner haul-out were begun by J. Mortenson in January 1987, with additional nearby haul-outs added to the counts thereafter. In addition, local resident E. Twohy began daily observations of seals and people at the Jenner haul-out in November 1989.

Table 3 shows average daily numbers of seals observed at the mouth of the Russian River from 1993–2005. These datasets note whether the mouth at the Jenner haul-out was opened or closed at each observation, as well as various other daily and annual patterns of haul-out usage (Mortenson and Twohy 1994).

Table 3. Average daily number of seals observed at Russian River mouth for each month, 1993-2005

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1993** | 140 | 219 | 269 | 210 | 203 | 238 | 197 | 34 | 8 | 38 | 78 | 163 |
| **1994** | 138 | 221 | 243 | 213 | 208 | 212 | 246 | 98 | 26 | 31 | 101 | 162 |
| **1995** | 133 | 270 | 254 | 261 | 222 | 182 | 216 | 74 | 37 | 24 | 38 | 148 |
| **1996** | 144 | 175 | 261 | 247 | 157 | 104 | 142 | 65 | 17 | 29 | 76 | 139 |
| **1997** | 154 | 177 | 209 | 188 | 154 | 119 | 186 | 58 | 20 | 29 | 30 | 112 |
| **1998** | 119 | 151 | 192 | 93 | 170 | 213 | 232 | 53 | 33 | 21 | 93 | 147 |
| **1999** | 161 | 170 | 215 | 210 | 202 | 128 | 216 | 98 | 57 | 20 | 74 | 123 |
| **2000** | 151 | 185 | 240 | 180 | 158 | 245 | 256 | 63 | 46 | 50 | 86 | 127 |
| **2001** | 155 | 189 | 161 | 168 | 135 | 212 | 275 | 75 | 64 | 20 | 127 | 185 |
| **2002** | 117 | 12 | 20 | 154 | 134 | 213 | 215 | 89 | 43 | 26 | 73 | 126 |
| **2003** | - | 1 | 26 | 161 | 164 | 222 | 282 | 100 | 43 | 51 | 109 | 116 |
| **2004** | 2 | 5 | 39 | 180 | 202 | 318 | 307 | 35 | 40 | 47 | 68 | 61 |
| **2005** | 0 | 7 | 42 | 222 | 220 | 233 | 320 | 145 | - | - | - | - |
| **Avg** | **118** | **137** | **167** | **191** | **179** | **203** | **238** | **76** | **36** | **32** | **79** | **134** |

Adapted from Mortenson and Twohy 1994 and E. Twohy unpublished data.
Months represented by dash indicate periods where data were missing or incomplete.

The number of seals present at the Jenner haul-out generally declines during bar-closed conditions (Mortenson 1996). SCWA's pinniped monitoring efforts from 1996 to 2000 focused on artificial breaching activities and their effects on the Jenner haul-out. Seal counts and disturbances were recorded from one to two days prior to breaching, the day of breaching, and the day after breaching (Merritt Smith Consulting 1997, 1998, 1999, 2000; SCWA and Merritt Smith Consulting 2001). In each year, the trend observed was that harbor seal numbers generally declined during a beach closure and increased the day following an artificial breaching event. Heckel (1994) speculated that the loss of easy access to the haul-out and ready escape to the sea during bar-closed conditions may account for the lower numbers. Table 4 shows average daily seal counts recorded during SCWA monitoring of breaching events from 1996–2000, representing bar-closed conditions, when seal numbers decline.

Table 4. Average number of harbor seals observed at the mouth of the Russian River during breaching events (i.e., bar-closed conditions) by month from 1996-2000.

| Apr | May | Jun | Jul | Aug | Sep | Oct | Nov |
|---|---|---|---|---|---|---|---|
| 173 | 103 | 100 | 75 | 17 | 5 | 22 | 11 |
| | | | | | | | |

Mortenson (1996) observed that pups were first seen at the Jenner haul-out in late March, with maximum counts in May. In this study, pups were not counted separately from other age classes at the haul-out after August due to the difficulty in discriminating pups from small yearlings. From 1989 to 1991, Hanson (1993) observed that pupping began at the Jenner haul-out in mid-April, with a maximum number of pups observed during the first two weeks of May. This corresponds with the peaks observed at Point Reyes, where the first viable pups are born in March and the peak is the last week of April to early May (SCWA 2011). Based on this information, pupping season at the Jenner haul-out is conservatively defined here as March 15 to June 30.

*California Sea Lions*

California sea lions range from southern Mexico to British Columbia, Canada. The entire U.S. population has been estimated at 238,000, and grew at a rate of approximately six percent annually between 1975 and 2005 (Carretta *et al.* 2007). Sea lions can be found at sea from the surf zone out to nearshore and pelagic waters. On land, sea lions are found resting and breeding in groups of various sizes, and haul out on rocky surfaces and outcroppings and beaches, as well as on manmade structures such as jetties. Sea lions prefer haul-out sites and rookeries near abundant food supplies, with easy access to water; although they may occasionally travel up rivers and bays in search of food.

California sea lions exhibit seasonal migration patterns organized around their breeding activity. Sea lions breed at large rookeries in the Channel Islands in southern California, and on both sides of the Baja California peninsula, typically from May to August. Females tend to remain close to the rookeries throughout the year, while males migrate north after the breeding season in the late summer before migrating back south to the breeding grounds in the spring (CDFG 1990). No established rookeries are known north of Point Reyes, California, but large numbers of subadult and non-breeding or post-breeding male California sea lions are found throughout the Pacific Northwest. There is a mean seasonal pattern of peak numbers occurring in the northwest during fall, but local areas show high

annual and seasonal variability. Sea lions feed on fish and cephalopods. Although solitary feeders, sea lions often hunt in groups, which can vary in size according to the abundance of prey (CDFG 1990).

Solitary California sea lions have occasionally been observed at or in the vicinity of the haul-out (Merritt Smith Consulting 1999, 2000). Individual sea lions were observed near the mouth of the Russian River in November and December of 2009; a single individual was observed hauled-out on one occasion in November 2009. Juvenile sea lions were observed during the summer of 2009 at the Patty's Rock haul-out, and some sea lions were observed during monitoring of peripheral haul-outs in October 2009. The occurrence of individual California sea lions in the action area may generally occur from September through April, but is infrequent and sporadic.

*Northern Elephant Seals*

Populations of northern elephant seals in the U.S. and Mexico are derived from a few tens or hundreds of individuals surviving in Mexico after being nearly hunted to extinction (Stewart *et al.* 1994). Given the recent derivation of most rookeries, no genetic differentiation would be expected. Although movement and genetic exchange continues between rookeries, most elephant seals return to their natal rookeries when they start breeding (Huber *et al.* 1991). The California breeding population is now demographically isolated from the Baja California population and is considered to be a separate stock. Based on the estimated 35,549 pups born in California in 2005, the California stock was estimated at approximately 124,000 (Carretta *et al.* 2009). Based on trends in pup counts, northern elephant seal colonies were continuing to grow in California through 2005 (Carretta *et al.* 2009).

Northern elephant seals breed and give birth in California and Baja California, Mexico, primarily on offshore islands from December to March (Stewart *et al.* 1994; Stewart and Huber 1993). Males feed near the eastern Aleutian Islands and in the Gulf of Alaska, and females feed further south (Stewart and Huber 1993; Le Boeuf *et al.* 1993). Adults return to land between March and August to molt, with males returning later than females. Adults return to their feeding areas again between their spring/summer molting and their winter breeding seasons. Pups are born in early winter from December to January. Breeding occurs from December to March, and gestation lasts around eleven months. Northern elephant seals are polygamous; males establish dominance over large groups of females during the breeding season.

Northern elephant seals range along the entire California coast, with breeding occurring in dense rookeries on offshore islands and at several mainland locations. From April to November, they feed at sea or haul out to molt at rookeries. Elephant seals feed at night in deep water, primarily on fish and cephalopods (CDFG 2009). Entanglement in marine debris, fishery interactions, and boat collisions are the main threats to elephant seals.

Censuses of pinnipeds at the mouth of the Russian River have been taken at least semi-monthly since 1987. Elephant seals were noted from 1987–95, with one or two elephant seals typically counted during May censuses, and occasional records during the fall and winter (Mortenson and Follis 1997). A single, tagged northern elephant seal sub-adult was present at the Jenner haul-out from 2002–07. This individual seal, which was observed harassing harbor seals also present at the haul-out, was generally present during molt and again from late December through March. A single juvenile elephant seal was observed at the Jenner haul-out in June 2009. The occurrence of individual northern elephant seals in the action area has generally been infrequent and sporadic from December through March in the past ten years.

**Potential Effects of the Specified Activity on Marine Mammals**

As described previously, a significant body of monitoring data exists for pinnipeds at the mouth of the Russian River. In addition, pinnipeds have co-existed with regular estuary management activity for decades, as well as with regular human use activity at the beach, and are likely habituated to human presence and activity. Nevertheless, SCWA's estuary management activities have the potential to harass pinnipeds present on the beach. During breaching operations, past monitoring has revealed that some or all of the seals present typically move or flush from the beach in response to the presence of crew and equipment, though some may remain hauled-out. No stampeding of seals—a potentially dangerous occurrence in which large numbers of animals succumb to mass panic and rush away from a stimulus—has been documented since SCWA developed protocols to prevent such events in 1999. While it is likely impossible to conduct required estuary management activities without provoking some response in hauled-out animals, precautionary mitigation measures, described later in this document, ensure that animals are gradually apprised of human approach. Under these conditions, seals typically exhibit a continuum of responses, beginning with alert movements (*e.g.,* raising the head), which may then escalate to movement away from the stimulus and possible flushing into the water. Flushed seals typically re-occupy the haul-out within minutes to hours of the stimulus. In addition, eight other haul-outs exist nearby that may accommodate flushed seals. In the absence of appropriate mitigation measures, it is possible that pinnipeds could be subject to injury, serious injury, or mortality, likely through stampeding or abandonment of pups.

Therefore, based on a significant body of site-specific data, harbor seals are unlikely to sustain any harassment that may be considered biologically significant. Individual animals would, at most, flush into the water in response to maintenance activities but may also simply become alert or move across the beach away from equipment and crews. California sea lions and northern elephant seals have been observed as less sensitive to stimulus than harbor seals during monitoring at numerous other sites. For example, monitoring of pinniped disturbance as a result of abalone research in the Channel Islands showed that while harbor seals flushed at a rate of 84 percent, California sea lions flushed at a rate of only sixteen percent. The rate for elephant seals declined to 0.2 percent (VanBlaricom 2010). In the unlikely event that either of these species is present during management activities, they would be expected to display a minimal reaction to maintenance activities—less than that expected of harbor seals.

Although the Jenner haul-out is not known as a primary pupping beach, pups have been observed during the pupping season; therefore, NMFS has evaluated the potential for injury, serious injury or mortality to pups. There is a lack of published data regarding pupping at the mouth of the Russian River, but SCWA monitors have observed pups on the beach. No births were observed during monitoring in 2010, but were inferred based on signs indicating pupping (*e.g.,* blood spots on the sand, birds consuming possible placental remains). Pup injury or mortality would be most likely to occur in the event of extended separation of a mother and pup, or trampling in a stampede. As discussed previously, no stampedes have been recorded since development of appropriate protocols in

1999. Any California sea lions or northern elephant seals present would be independent juveniles or adults; therefore, analysis of impacts on pups is not relevant for those species. Pups less than one week old are characterized by being up to 15 kg, thin for their body length, or having an umbilicus or natal pelage.

Similarly, the period of mother-pup bonding, critical time needed to ensure pup survival and maximize pup health, is not expected to be impacted by estuary management activities. Harbor seal pups are extremely precocious, swimming and diving immediately after birth and throughout the lactation period, unlike most other phocids which normally enter the sea only after weaning (Lawson and Renouf 1985; Cottrell *et al.* 2002; Burns *et al.* 2005). Lawson and Renouf (1987) investigated harbor seal mother-pup bonding in response to natural and anthropogenic disturbance. In summary, they found that the most critical bonding time is within minutes after birth. As described previously, the peak of pupping season is typically concluded by mid-May, when the lagoon management period begins. As such, it is expected that mother-pup bonding would likely be concluded as well. The number of management events during the months of March and April has been relatively low in the past (*see* Table 1), and the breaching activities occur in a single day over several hours. In addition, mitigation measures described later in this document further reduce the likelihood of any impacts to pups, whether through injury or mortality or interruption of mother-pup bonding.

Based on extensive monitoring data, NMFS has preliminarily determined that impacts to hauled-out pinnipeds during estuary management activities would be behavioral harassment of limited duration (*i.e.,* less than one day) and limited intensity (*i.e.,* temporary flushing at most). Stampeding, and therefore injury or mortality, is not expected—nor been documented—in the years since appropriate protocols were established (*see* "Mitigation" for more details). Further, the continued, and increasingly heavy, use of the haul-out despite decades of breaching events indicates that abandonment of the haul-out is unlikely.

**Anticipated Effects on Habitat**

The purposes of the estuary management activities are to improve summer rearing habitat for juvenile salmonids in the Russian River estuary and/or to minimize potential flood risk to properties adjacent to the estuary. These activities would result in temporary physical alteration of the Jenner haul-out, but are essential to conserving and recovering endangered salmonid species, as prescribed by the BiOp. These salmonids are themselves prey for pinnipeds. In addition, with barrier beach closure, seal usage of the beach haul-out declines, and the three nearby river haul-outs may not be available for usage due to rising water surface elevations. Breaching of the barrier beach, subsequent to the temporary habitat disturbance, would likely increase suitability and availability of habitat for pinnipeds. Biological and water quality monitoring would not physically alter pinniped habitat.

Construction of the lagoon outlet channel would alter the beach by creating a shallow outlet channel to convey river flow over the sandbar and minimize or eliminate tidal exchange during the lagoon management period. The gentle slope of the outlet channel would allow seals to travel through the channel, although the shallow depths would likely not allow for swimming through the channel. Depending on the barrier beach height and the location of the river's thalweg when the beach closes, part of the outlet channel may be constructed in areas where seals typically haul out. Artificial breaching activities, as opposed to lagoon outlet channel creation, alter the habitat by creating a pilot channel through the closed sandbar. The location of the pilot channel is dependent on the height and width of the sandbar and the location of the river's thalweg. The pilot channel could be constructed in areas where seals typically haul out. Construction of pilot channels for the lagoon outlet channel and artificial breaching events requires excavated sand to be sidecast on the beach. Any sand excavated would be graded on the adjacent beach in such a way as to minimize changes to beach topography.

During SCWA's pinniped monitoring associated with artificial breaching activities from 1996 to 2000, the number of harbor seals hauled out declined when the barrier beach closed and then increased the day following an artificial breaching event (Merritt Smith Consulting 1997, 1998, 1999, and 2000; SCWA and Merritt Smith Consulting 2001). This response to barrier beach closure followed by artificial breaching is anticipated to continue. However, it is possible that the number of pinnipeds using the haul-out could decline during the extended lagoon management period, when SCWA would seek to maintain a shallow outlet channel rather than the deeper channel associated with artificial breaching. Collection of baseline information during the lagoon management period is included in the monitoring requirements described later in this document. SCWA's previous monitoring, as well as Twohy's daily counts of seals at the sandbar (Table 3) indicate that the number of seals at the haul-out declines from August to October, so management of the lagoon outlet channel (and managing the sandbar as a summer lagoon) would have little effect on haul-out use during the latter portion of the lagoon management period. The early portion of the lagoon management period coincides with the pupping season. Past monitoring during this period, which represents some of the longest beach closures in the late spring and early summer months, shows that the number of pinnipeds at the haul-out tends to fluctuate, rather than showing the more straightforward declines and increases associated with closures and openings seen at other times of year (Merritt Smith Consulting 1998). This may indicate that seal haul-out usage during the pupping season is less dependent on bar status. As such, the number of seals hauled out from May through July would be expected to fluctuate, but is unlikely to respond dramatically to the absence of artificial breaching events. Regardless, any impacts to habitat resulting from SCWA's management of the estuary during the lagoon management period are not in relation to natural conditions, but rather in relation to conditions resulting from SCWA's discontinued approach of artificial breaching during this period.

Changes in haul-out elevation regularly occur with the tides at this site and any habitat that would be impacted by sidecast sand would be temporary. Pinnipeds seeking to haul out would still have access to the estuary/lagoon waters and would likely continue to naturally flush into the water during high water surface elevation periods. Therefore, the natural cycle of using the Jenner haul-out on a daily basis is not expected to change. Modification of habitat resulting from construction of the lagoon outlet channel or artificial breaching pilot channel would also be temporary in nature. Harbor seals are regularly observed crossing overland from the Pacific Ocean to haul out on the estuary side of the beach, even in bar-open conditions, so it is anticipated that seals would continue to use the haul-out in bar-closed, lagoon conditions.

In summary, there will be temporary physical alteration of the beach. However, natural opening and closure of the beach results in the same impacts to habitat; therefore, seals are likely

adapted to this cycle. In addition, the increase in rearing habitat quality has the goal of increasing salmon abundance, ultimately providing more food for seals present within the action area.

**Summary of Previous Monitoring**

SCWA complied with the mitigation and monitoring required under the previous authorization. In accordance with the 2010 IHA, SCWA submitted a Report of Activities and Monitoring Results, covering the period of April 1 through December 31, 2010. During the dates covered by the 2010 monitoring report, SCWA conducted one outlet channel implementation event, two artificial breaching events, and associated biological and physical monitoring. During the course of these activities, SCWA did not exceed the take levels authorized under the 2010 IHA.

*Baseline Monitoring*—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 haul-out 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 haul-outs was conducted concurrently with monitoring at the mouth of the Russian River, and was scheduled for two days out of each month with the intention of capturing a low and high tide each in the morning and afternoon. Appendix D of SCWA's monitoring report provides additional data, including weather conditions data collected during baseline monitoring. No species of pinnipeds other than harbor seals were observed at the Jenner or peripheral haul-outs during the baseline monitoring. Table 5 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 haul-outs did not show any obvious correlations (*e.g.,* the number of seals occupying peripheral haul-outs compared to the Jenner haul-out did not necessarily increase or decrease as a result of disturbance caused by beach visitors).

Table 5. Mean number of harbor seals observed at the mouth of the Russian River during baseline pinniped monitoring from April to December 2010.

| Date | Number of harbor seals at mouth of Russian River | | | | |
|---|---|---|---|---|---|
| | Adults | Neonate pups (less than one week old)* | Pups (greater than one week old)* | Total pups* | Total harbor seals |
| April 29 | 142 | - | - | 19 | 161 |
| May 6 | 111 | 3 | 15 | 19 | 130 |
| May 27 | 78 | 1 | 10 | 11 | 89 |
| June 14 | 101 | - | 1 | 1 | 102 |
| June 21 | 184 | - | - | - | 184 |
| July 13 | 295 | - | - | - | 295 |
| July 19 | 230 | - | - | - | 230 |
| August 9 | 133 | - | - | - | 133 |
| August 16 | 94 | - | - | - | 94 |
| September 9 | 47 | - | - | - | 47 |
| September 16 | 72 | - | - | - | 72 |
| October 7 | 13 | - | - | - | 13 |
| October 14 | 37 | - | - | - | 37 |
| November 3 | 102 | - | - | - | 102 |
| November 18 | 75 | - | - | - | 75 |
| December 2 | 71 | - | - | - | 71 |
| December 23 | - | - | - | - | - |

*Pups are counted separately through June. After June, all seals are counted as adults as it becomes more difficult to accurately age individuals.

*Water Level Management Activities*—There were five barrier beach formations (bar closures) at the mouth of the Russian River from April through December, 2010 (Table 6). Implementation of the 2010 Lagoon Outlet Channel Adaptive Management Plan (PWA 2010) (*i.e.,* construction of an outlet channel) 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. SCWA artificially breached the barrier beach two times in 2010. Both artificial breaching events occurred during the lagoon management period, following consultation with NMFS and 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 meant that artificial breaching posed little or no risk to habitat for juvenile salmonids, while the potential for flooding was high. The artificial breaching events during the lagoon management period were allowed under the Incidental Take Statement provided in the BiOp (NMFS 2008).

Table 6. Russian River Estuary barrier beach closures, April-December 2010, and summary of SCWA water level management activities under 2010 IHA

| Closure date | Number of days closed | Resulting event type and date |
|---|---|---|
| July 4 | 4 | Lagoon outlet implementation; July 8[a] |
| July 8 | 3 | Natural breach; July 11[a] |
| September 21 | 9 | Artificial breach attempt; September 30[b] |
| September 30 | 1 | Artificial breach; October 1[b] |
| October 4 | 7 | Artificial breach attempt; October 11[c] |
| October 11 | 1 | Artificial breach; October 12[c] |
| October 21 | 3 | Natural breach; October 24 |
| November 2 | 1 | Natural breach; November 2 |

[a] SCWA implemented the 2010 lagoon outlet channel adaptive management plan on July 8, 2010, following July 4 closure. The outlet channel closed during a high tide event on the same day. The barrier beach naturally breached on July 11, 2010.
[b] SCWA consulted with NMFS and CDFG regarding the potential flood risk associated with closure. First breach attempted on September 30, 2010, but was unsuccessful as high wave activity re-formed the barrier beach. Successfully breached the barrier beach on October 1, 2010.
[c] SCWA consulted with NMFS and CDFG regarding the potential flood risk associated with closure. First breach attempted on October 11, 2010, but was unsuccessful as high wave activity re-formed the barrier beach. Successfully breached the barrier beach on October 12, 2010.

Monitoring was conducted before, during, and after each of these management events. Monitoring for the July 8 outlet channel implementation was conducted from July 7–9. For each of the two artificial breaching events, monitoring was conducted for four days; monitoring began the day before the event, was conducted on the day of the initial event (which failed in both cases) and on the day of the subsequent effort, and on the day after the successful effort. These dates were September 29–October 2 and October 10–13, respectively. As shown in Table 7, post-event seal counts increased in all cases. In addition, seals began returning to the beach following removal of equipment and crews within thirty minutes for two events (no return was observed due to lack of visibility for the October 12 event), with large numbers of seals returning to the haul-outs within a maximum of three hours.

No injuries or mortalities were observed during 2010, and harbor seal reactions ranged from merely alerting to crew presence to flushing from the beach. Please see SCWA's Monitoring Report for narrative descriptions of each event. Appendix C of the Report contains estuary water surface elevations during baseline and water level management activity monitoring and Appendix F contains weather observations collected during water level management event monitoring. No species other than harbor seals were observed during monitoring. Total observed take of marine mammals resulting from SCWA's estuary management activity during 2010 is shown in Table 7. Total observed take, by harassment only, from three estuary management events, and associated biological and physical monitoring prescribed by the BiOp, was 290 harbor seals. SCWA was authorized to take, by harassment only, 2,861 harbor seals, sixteen California sea lions, and eleven northern elephant seals. While the observed take was significantly lower than the level authorized, it is possible that incidental take in future years could approach the level authorized. Actual take is dependent largely upon the number of water level management events that occur, which is unpredictable. Take of species other than harbor seals depends upon whether those species, which do not consistently utilize the Jenner haul-out, are present. The authorized take, though much higher than the actual take, was justified based on conservative estimated scenarios for animal presence and necessity of water level management. No significant departure from the method of estimation is used for the proposed IHA (*see* "Estimated Take by Incidental Harassment") for the same activities in 2011.

Table 7. Observed incidental harassment (Level B harassment only) of harbor seals during Russian River estuary management activities, April-December, 2010

| Date | Event Type | Counts[a] | | Observed take | |
|---|---|---|---|---|---|
| | | Pre-event | Post-event | Age class[b] | Number |
| Jul 8 | Lagoon outlet implementation | 101 | 204 | Adult | 170 |
| Sep 30-Oct 1 | Artificial breaching | 23 | 124 | Adult | 80 |
| Oct 11-12 | Artificial breaching | 37 | 98 | Adult | 8 |
| | | | | **Subtotal** | **258** |
| Jun 14 | Biological and physical monitoring in the estuary | - | - | Adult | 5 |
| Jun 30 | Beach topographic survey | - | - | Adult | 5 |
| Nov 17 | Beach topographic survey | - | - | Adult | 22 |
| | | | | **Subtotal** | **32** |
| | | | | **Total** | **290** |

[a] Pre- and post-event counts (day before and day after) are conducted only for water level management events.
[b] Pups are counted separately through June, after which all seals are counted as adults as it becomes more difficult to accurately age individuals.

The primary purpose of SCWA's Pinniped Monitoring Plan is to detect the response of pinnipeds to estuary management activities at the Russian River estuary. However, the following questions are also of specific interest:

1. Under what conditions do pinnipeds haul out at the Russian River estuary mouth at Jenner?
2. How do seals at the Jenner haul-out 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 haul-out significantly differ from historic averages with formation of a summer lagoon in the Russian River estuary?
4. Are seals at the Jenner haul-out displaced to nearby river and coastal haul-outs when the mouth remains closed in the summer?

The baseline data collected in 2010 shows the highest number of pinnipeds observed at the Jenner haul-out during molt and the late part of pupping season (Table 5). The 2010 baseline effort focused on understanding whether tides affected the timing of the use of the Jenner haul-out by harbor seals. With limited data thus far, there does not appear to be a clear pattern indicating whether the haul-out 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 haul-out. It is likely that multiple factors (*e.g.,* season, tides, wave heights, level of beach disturbance) influence level of haul-out use. Similarly, limited data collected in 2010, when only three management events took place and the duration of closure associated with the lagoon outlet channel implementation was not dissimilar from the duration of closures that have been previously observed at the estuary, precludes drawing conclusions regarding the key questions in SCWA's Monitoring Plan.

**Proposed Mitigation**

In order to issue an IHA under Section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable adverse impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses.

SCWA has proposed to continue the following mitigation measures, as implemented during the previous IHA, designed to minimize impact to affected species and stocks:

- SCWA crews would cautiously approach the haul-out ahead of heavy equipment to minimize the potential for sudden flushes, which may result in a stampede—a particular concern during pupping season.
- SCWA staff would avoid walking or driving equipment through the seal haul-out.
- Crews on foot would make an effort to be seen by seals from a distance, if possible, rather than appearing suddenly at the top of the sandbar, again preventing sudden flushes.
- During breaching events, all monitoring would be conducted from the overlook on the bluff along Highway 1 adjacent to the haul-out in order to minimize potential for harassment.
- A water level management event may not occur for more than two consecutive days unless flooding threats cannot be controlled.

In addition, SCWA has proposed mitigation measures specific to pupping season (March 15–June 30), as implemented in the previous IHA:

- SCWA will maintain a one week no-work period between water level management events (unless flooding is an immediate threat) to allow for an adequate disturbance recovery period. During the no-work period, equipment must be removed from the beach.
- 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 management action 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. In the event that a pup remains present on the beach in the presence of flood risk, SCWA would consult with NMFS and CDFG to determine the appropriate course of action. SCWA will coordinate with the locally established seal monitoring program (Stewards' Seal Watch) to determine if pups less than one week old are on the beach prior to a breaching event.

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

Personnel on the beach would include up to two equipment operators, three safety team members on the beach (one on each side of the channel observing the equipment operators, and one at the barrier to warn beach visitors away from the activities), and one safety team member at the overlook on Highway 1 above the beach. Occasionally, there would be two or more additional people on the beach (SCWA staff or regulatory agency staff) on the beach to observe the activities. SCWA staff would be followed by the equipment, which would then be followed by an SCWA vehicle (typically a small pickup truck, the vehicle would be parked at the previously posted signs and barriers on the south side of the excavation location). Equipment would be driven slowly on the beach and care would be taken to minimize the number of shut downs and start-ups when the equipment is on the beach. All work would be completed as efficiently as possible, with the smallest amount of heavy equipment possible, to minimize disturbance of seals at the haul-out. Boats operating near river haul-outs during monitoring would be kept within posted speed limits and driven as far from the haul-outs as safely possible to minimize flushing seals.

NMFS has carefully evaluated the applicant's mitigation measures as proposed and considered their effectiveness in past implementation, to preliminarily determine whether they are likely to effect the least practicable adverse impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures includes consideration of the following factors in relation to one another: (1) The manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals, (2) the proven or likely efficacy of the specific measure to minimize adverse impacts as planned; (3) the practicability of the measure for applicant implementation, including consideration of personnel safety, and practicality of implementation.

Injury, serious injury, or mortality to pinnipeds would likely result from startling animals inhabiting the haul-out into a stampede reaction, or from extended mother-pup separation as a result of such a stampede. Long-term impacts to pinniped usage of the haul-out could result from significantly increased presence of humans and equipment on the beach. To avoid these possibilities, NMFS and SCWA have developed the previously described mitigation measures. These are designed to reduce the possibility of startling pinnipeds, by gradually apprising them of the presence of humans and equipment on the beach, and to reduce the possibility of impacts to pups by eliminating or altering management activities on the beach when pups are present and by setting limits on the frequency and duration of events during pupping season. During the past fifteen years of flood control management, implementation of similar mitigation measures has resulted in no known stampede events and no known injury, serious injury, or mortality. Over the course of that time period, management events have generally been infrequent and of limited duration. Based upon the SCWA's record of management at the mouth of the Russian River, as well as information from monitoring SCWA's implementation of the improved mitigation measures as prescribed under the previous IHA, NMFS has preliminarily determined that the proposed mitigation measures provide the means of effecting the least practicable adverse impacts on marine mammal species or stocks and their habitat.

**Proposed Monitoring and Reporting**

In order to issue an ITA for an activity, Section 101(a)(5)(D) of the MMPA states that NMFS must set forth "requirements pertaining to the monitoring and reporting of such taking". The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for IHAs must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present.

The applicant has developed a Pinniped Monitoring Plan which describes the proposed monitoring efforts. This Monitoring Plan can be found on the NMFS Web site at *http://www.nmfs.noaa.gov/pr/permits/incidental.htm.* The purpose of this monitoring plan, which is carried out collaboratively with the Stewards of the Coasts and Redwoods (Stewards) organization, is to detect the response of pinnipeds to estuary management activities at the Russian River estuary. SCWA has designed the plan both to satisfy the requirements of the IHA, and to address the following questions of interest (as described previously):

1. Under what conditions do pinnipeds haul out at the Russian River estuary mouth at Jenner?

2. How do seals at the Jenner haul-out 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 haul-out significantly differ from historic averages with formation of a summer (May 15 to October 15) lagoon in the Russian River estuary?

4. Are seals at the Jenner haul-out displaced to nearby river and coastal haul-outs when the mouth remains closed in the summer?

In summary, monitoring includes the following:

*Baseline Monitoring*

Seals at the Jenner haul-out are counted twice monthly for the term of the IHA. This baseline information will provide SCWA with details that may help to plan estuary management activities in the future to minimize pinniped interaction. This census begins at local dawn and continues for eight hours. All seals hauled out on the beach are counted every thirty minutes from the overlook on the bluff along Highway 1 adjacent to the haul-out using high powered spotting scopes. Monitoring may conclude for the day if weather conditions affect visibility (*e.g.,* heavy fog in the afternoon). Counts are 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 thirty-minute count, the observer indicates where groups of seals are hauled out on the sandbar and provides a total count for each group. If possible, adults and pups are counted separately.

In addition to the census data, disturbances of the haul-out are recorded. The method for recording disturbances follows those in Mortenson (1996). Disturbances would be recorded on a three-point scale that represents an increasing seal response to the disturbance (Table 5). The time, source, and duration of the disturbance, as well as an estimated distance between the source and haul-out, are recorded. It should be noted that only responses falling into Mortenson's Levels 2 and 3 will be considered as harassment under the MMPA, under the terms of this proposed IHA.

Table 8. 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 | Movement | 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. |

Weather conditions are 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 are correlated to the monitoring start and end times.

In an effort towards understanding possible relationships between use of the Jenner haul-out and nearby coastal and river haul-outs, several other haul-outs on the coast and in the Russian River estuary are monitored as well (*see* Figure 2 of SCWA's Pinniped Monitoring Plan). The peripheral haul-outs are visited for ten minute counts twice during each baseline monitoring day. All pinnipeds hauled out were counted from the same vantage point(s) at each haul-out using a high-powered spotting scope or binoculars.

*Estuary Management Event Monitoring*

*Lagoon Outlet Channel*—Should the mouth close during the lagoon management period, SCWA would construct a lagoon outlet channel as required by the BiOp and described previously in this document. 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 haul-out.

A one-day pre-event channel survey would be made within one to three days prior to constructing the outlet channel. The haul-out would be monitored on the day the outlet channel is constructed and daily for up to the maximum two days allowed for channel excavation activities. Monitoring would also occur on each day that the outlet channel is maintained using heavy equipment for the duration of the lagoon management period. Monitoring of outlet channel construction and maintenance would correspond with that described under the "Baseline" section previously, with the exception that management activity monitoring duration is defined by event duration, rather than being set at eight hours. On the day of the management event, pinniped monitoring begins at least one hour prior to the crew and equipment accessing the beach work area and continues through the duration of the event, until at least one hour after the crew and equipment leave the beach.

In an attempt to understand whether seals from the Jenner haul-out are displaced to coastal and river haul-outs nearby when management events occur, other nearby haul-outs are monitored concurrently with monitoring of outlet channel construction and maintenance activities. This provides an opportunity to qualitatively assess whether these haul-outs are being used by seals displaced from the Jenner haul-out during lagoon outlet channel excavation and maintenance. This monitoring would not provide definitive results regarding displacement to nearby coastal and river haul-outs, as individual seals are not marked, but is useful in tracking general trends in haul-out use during lagoon outlet channel excavation and maintenance. As volunteers are required to monitor these peripheral haul-outs, haul-out locations may need to be prioritized if there are not enough volunteers available. In that case, priority would be assigned to the nearest haul-outs (North Jenner and Odin Cove), followed by the Russian River estuary haul-outs, and finally the more distant coastal haul-outs.

*Artificial Breaching Events*—Pinniped responses to SCWA's artificial breaching activities were extensively monitored from 1996 to 2000 (Merritt Smith Consulting 1997, 1998, 1999, 2000; SCWA and Merritt Smith Consulting 2001). In accordance with the Russian River BiOp, SCWA may artificially breach the barrier beach outside of the summer lagoon management period, and may conduct a maximum of two such breachings during the lagoon management period, when estuary water surface elevations rise above seven feet. In that case, NMFS and CDFG may be consulted regarding potential scheduling of an artificial breaching event to open the barrier beach and reduce flooding risk.

Pinniped response to artificial breaching will be monitored at each such event during the term of the IHA. Methods would follow the census and disturbance monitoring protocols described in the "Baseline" section, which were also used for the 1996 to 2000 monitoring events (Merritt Smith Consulting 1997, 1998, 1999, 2000; SCWA and Merritt Smith Consulting 2001). The exception, as for lagoon management events, is that duration of monitoring is dependent upon duration of the event. On the day of the management event, pinniped monitoring begins at least one hour prior to the crew and equipment accessing the beach work area and continues through the duration of the event, until at least one hour after the crew and equipment leave the beach.

For all counts, the following information would be recorded in thirty minute intervals: (1) Pinniped counts, by species; (2) behavior; (3) time, source and duration of any disturbance; (4) estimated distances between source of disturbance and pinnipeds; (5) weather conditions (*e.g.,* temperature, wind); and (5) tide levels and estuary water surface elevation.

*Monitoring During Pupping Season*—The pupping season is defined as March 15 to June 30. Baseline, lagoon outlet channel, and artificial breaching monitoring during the pupping season will include records of neonate (pups less than one week old) observations. Characteristics of a neonate pup include: Body weight less than 15 kg; thin for their body length; an umbilicus or natal pelage present; wrinkled skin; and awkward or jerky movements on land. SCWA will coordinate with the Seal Watch monitoring program to determine if pups less than one week old are on the beach prior to a water level management event.

If, during monitoring, observers sight any pup that might be abandoned, SCWA would contact the NMFS stranding response network immediately and also report the incident to NMFS' Southwest Regional Office and NMFS Headquarters within

48 hours. Observers will not approach or move the pup. Potential indications that a pup may be abandoned are no observed contact with adult seals, no movement of the pup, and the pup's attempts to nurse are rebuffed.

*Staffing*—Monitoring is conducted by qualified individuals with prior approval by NMFS. Generally, these individuals include professional biologists employed by NMFS or SCWA, or volunteers trained by the Stewards' Seal Watch program (Stewards). All volunteer monitors are required to attend classroom-style training and field site visits to the haul-outs. Training covers the MMPA and conditions of the IHA, SCWA's pinniped monitoring protocols, pinniped species identification, age class identification (including a specific discussion regarding neonates), recording of count and disturbance observations (including completion of datasheets), and use of equipment. Pinniped identification would include harbor seal, California sea lion, and northern elephant seal, as well as other pinniped species with potential to occur in the area. Generally, SCWA staff and volunteers collect baseline data on Jenner haul-out use during the twice monthly monitoring events. A schedule for this monitoring would be established with Stewards once volunteers are available for the monitoring effort. SCWA staff monitors lagoon outlet channel excavation and maintenance activities and artificial breaching events at the Jenner haul-out, with assistance from Stewards volunteers as available. Stewards volunteers monitor the coastal and river haul-out locations during lagoon outlet channel excavation and maintenance activities.

Training on the MMPA, pinniped identification, and the conditions of the IHA is held for staff and contractors assigned to estuary management activities. The training includes equipment operators, safety crew members, and surveyors. In addition, prior to beginning each water surface elevation management event, the biologist monitoring the event participated in the onsite safety meeting to discuss the location(s) of pinnipeds at the Jenner haul-out that day and methods of avoiding and minimizing disturbances to the haul-out as outlined in the IHA.

*Reporting*

SCWA 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 annual report will also be distributed to California State Parks and Stewards, and would be available to the public on SCWA's Web site. This report will contain the following information:

- The number of seals taken, by species and age class (if possible);
- behavior prior to and during water level management events;
- start and end time of activity;
- estimated distances between source and seals when disturbance occurs;
- weather conditions (*e.g.,* temperature, wind, *etc.*);
- haul-out reoccupation time of any seals based on post activity monitoring;
- tide levels and estuary water surface elevation; and
- seal census from bi-monthly and nearby haul-out monitoring.

The annual report includes descriptions of monitoring methodology, tabulation of estuary management events, summary of monitoring results, and discussion of problems noted and proposed remedial measures.

**Estimated Take by Incidental Harassment**

SCWA is requesting, and NMFS is proposing, authorization to take harbor seals, California sea lions, and northern elephant seals, by Level B harassment only, incidental to estuary management activities. These activities, involving increased human presence and the use of heavy equipment and support vehicles, are expected to harass pinnipeds present at the haul-out through disturbance only. In addition, monitoring activities prescribed in the BiOp may harass additional animals at the Jenner haul-out and at the three haul-outs located in the estuary (Penny Logs, Patty's Rock, and Chalanchawi). Estimates of the number of harbor seals, California sea lions, and northern elephant seals that may be harassed by the proposed activities is based upon the number of potential events associated with Russian River estuary management activities and the average number of individuals of each species that are present during conditions appropriate to the activity. As described previously in this document, monitoring effort at the mouth of the Russian River has shown that the number of seals utilizing the haul-out declines during bar-closed conditions. Tables 9 and 10 detail the total number of estimated takes.

Events associated with lagoon outlet channel management would occur only during the lagoon management period, and are split into two categories: (1) Initial channel implementation, which would likely occur between May and September, and (2) maintenance and monitoring of the outlet channel, which would continue until October 15. In addition, it is possible that the initial outlet channel could close through natural processes, requiring additional channel implementation events. Based on past experience, SCWA estimates that a maximum of three outlet channel implementation events could be required. Outlet channel implementation events would only occur when the bar is closed; therefore, it is appropriate to use data from bar-closed monitoring events in estimating take (Table 4). Construction of the outlet channel is designed to produce a perched outflow, resulting in conditions that more closely resemble bar-closed than bar-open with regard to pinniped haul-out usage. As such, bar-closed data is appropriate for estimating take during all lagoon management period maintenance and monitoring activity. As dates of outlet channel implementation cannot be known in advance, the highest daily average of seals per month—from May—is used in estimating take. For maintenance and monitoring activities associated with the lagoon outlet channel, which would occur on a weekly basis following implementation of the outlet channel, the average number of harbor seals for each month was used.

Artificial breaching activities would also occur during bar-closed conditions; however, data collected specifically during bar-closed conditions exists only for April through November (Table 4). These data may be used for estimating take associated with artificial breaching occurring during those months. For activity occurring from December through March, monitoring data that are not specific to bar conditions may be used for estimating take (Table 3).

For biological and physical habitat monitoring activities in the estuary, it was assumed that pinnipeds may be encountered once per event and flush from a river haul-out. The potential for harassment associated with these events is limited to the three haul-outs located in the estuary. In past experience, SCWA typically sees no more than a single harbor seal at these haul-outs, which consist of scattered logs and rocks that often submerge at high tide.

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Table 9. Estimated number of harbor seal takes resulting from Russian River estuary management activities

| Number of animals expected to occur[a] | Number of events[b,c] | Potential total number of individual animals that may be taken |
|---|---|---|
| **Lagoon Outlet Channel Management (May 15 to October 15)** | | |
| Implementation: 103[d] | Implementation: 3 | Implementation: 309 |
| Maintenance and Monitoring:<br>May: 103<br>June: 100<br>July: 75<br>Aug: 17<br>Sept: 5<br>Oct: 22 | Maintenance:<br>May: 1<br>June-Sept: 4/month<br>Oct: 1 | Maintenance: 913 |
| | Monitoring:<br>June-Sept: 2/month<br>Oct: 1 | Monitoring: 416 |
| | | **Total: 1,638** |
| **Artificial Breaching** | | |
| Oct: 22 | Oct: 2 | Oct: 44 |
| Nov: 11 | Nov: 2 | Nov: 22 |
| Dec:134 | Dec: 2 | Dec: 268 |
| Jan: 118 | Jan: 1 | Jan: 118 |
| Feb: 137 | Feb: 1 | Feb: 137 |
| Mar: 167 | Mar: 1 | Mar: 167 |
| Apr: 173 | Apr: 1 | Apr: 173 |
| May: 103 | May: 1 | May: 103 |
| | 11 events maximum | **Total: 1,032** |
| **Biological and Physical Habitat Monitoring in the Estuary** | | |
| 1[e] | 65 | 65 |
| **Total** | | **2,735** |

[a] For events occurring from April through November, average daily number of animals corresponds with data from Table 4. For events occurring from December through March, average daily number of animals corresponds with data from Table 5.
[b] For implementation of the lagoon outlet channel, an event is defined as a single, two-day episode. It is assumed that the same individual seals would be hauled out during a single event. For the remaining activities, an event is defined as a single day on which an activity occurs. Some events may include multiple activities listed in Table 2.
[c] Number of events for artificial breaching derived from historical data (Table 1). The average number of events for each month was rounded up to the nearest whole number; estimated number of events for December was increased from one to two because multiple closures resulting from storm events have occurred in recent years during that month. These numbers likely represent an overestimate, as the average annual number of events is six.
[d] Although implementation could occur at any time during the lagoon management period, the highest daily average per month from that period was used.
[e] Based on past experience, SCWA expects that no more than one seal may be present, and thus have the potential to be disturbed, at each of the three river haul-outs.

Table 7. Estimated number of California sea lion and elephant seal takes resulting from Russian River estuary management activities

| Species | Number of animals expected to occur[a] | Number of events[b,c] | Potential total number of individual animals that may be taken |
|---|---|---|---|
| **Lagoon Outlet Channel Management (May 15 to October 15)** | | | |
| California sea lion (potential to encounter once per event) | 1 | 3 | 3 |
| Northern elephant seal (potential to encounter once per event) | 1 | 3 | 3 |
| **Artificial Breaching** | | | |
| California sea lion (potential to encounter once per event, Sept-Apr) | 1 | 8 | 8 |
| Northern elephant seal (potential to encounter once per month Dec-May) | 1 | 6 | 6 |
| **Biological and Physical Habitat Monitoring in the Estuary** | | | |
| California sea lion (potential to encounter once per month Sept-Apr) | 1 | 8 | 8 |
| Northern elephant seal (potential to encounter once per month Dec-May) | 1 | 6 | 6 |
| **Total** | | | |
| **California sea lion** | | | **19** |
| **Elephant seal** | | | **15** |

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## Negligible Impact and Small Numbers Analysis and Determination

NMFS has defined "negligible impact" in 50 CFR 216.103 as "* * * an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival." In determining whether or not authorized incidental take will have a negligible impact on affected species stocks, NMFS considers a number of criteria regarding the impact of the proposed action, including the number, nature, intensity, and duration of Level B harassment take that may occur. Although SCWA's estuary management activities may harass pinnipeds hauled out at the mouth of the Russian River, as well as those hauled out at several locations in the estuary during recurring monitoring activities, impacts are occurring to a small, localized group of animals. No mortality or injury is anticipated, nor will the proposed action result in long-term impacts such as permanent abandonment of the haul-out. Seals will likely become alert or, at most, flush into the water in reaction to the presence of crews and equipment on the beach. However, breaching the sandbar has been shown to increase seal abundance on the beach, with seals quickly re-inhabiting the haul-out following cessation of activity. In addition, the implementation of the lagoon management plan may provide ideal increased availability of prey species (salmonids). No impacts would be expected at the population or stock level.

No pinniped stocks known from the action area are listed as threatened or endangered under the ESA or determined to be strategic or depleted under the MMPA. Recent data suggests that harbor seal populations have reached carrying capacity; populations of California sea lions and northern elephant seals in California are also considered healthy.

The proposed number of animals taken for each species of pinnipeds can be considered small relative to the population size. There are an estimated 34,233 harbor seals in the California stock, 238,000 California sea lions, and 124,000 northern elephant seals in the California breeding population. Based on extensive monitoring effort specific to the affected haul-out and historical data on the frequency of the specified activity, NMFS is proposing to authorize take, by Level B harassment only, of 2,735 harbor seals, nineteen California sea lions, and fifteen northern elephant seals, representing 8.0, 0.008, and 0.012 percent of the populations, respectively. However, this represents an overestimate of the number of individuals harassed over the duration of the proposed IHA, because a given individual is likely to be harassed multiple times.

The proposed action would not be likely to cause injury or mortality to any harbor seal pup, nor would it impact mother-pup bonding. The peak of pupping season occurs during May, when few management activities are anticipated. However, any management activity that is required during pupping season will be delayed in the event that a pup less than one week old is present on the beach. As described previously in this document, harbor seal pups are precocious, and mother-pup bonding is likely to occur within minutes. Delay of events would further ensure that mother-pup bonding is not interfered with.

Based on the foregoing analysis, behavioral disturbance to pinnipeds at the mouth of the Russian River would be of low intensity and limited duration. To ensure minimal disturbance, SCWA will implement the mitigation measures described previously, which NMFS has preliminarily determined will serve as the means for effecting the least practicable adverse effect on marine mammals stocks or populations and their habitat. NMFS preliminarily finds that SCWA's estuary management activities will result in the incidental take of small numbers of marine mammals, and that the requested number of takes will have no more than

a negligible impact on the affected species and stocks.

**Impact on Availability of Affected Species for Taking for Subsistence Uses**

There are no relevant subsistence uses of marine mammals implicated by this action.

**Endangered Species Act (ESA)**

There are no ESA-listed marine mammals found in the action area; therefore, no consultation under the ESA is required. As described elsewhere in this document, SCWA and the Corps consulted with NMFS under Section 7 of the ESA regarding the potential effects of their operations and maintenance activities, including SCWA's estuary management program, on ESA-listed salmonids. As a result of this consultation, NMFS issued the Russian River Biological Opinion (NMFS 2008), which prescribes modifications to SCWA's estuary management activities.

**National Environmental Policy Act (NEPA)**

In compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), as implemented by the regulations published by the Council on Environmental Quality (40 CFR parts 1500–1508), and NOAA Administrative Order 216–6, NMFS prepared an Environmental Assessment (EA) to consider the direct, indirect and cumulative effects to the human environment resulting from issuance of an IHA to SCWA. NMFS signed a Finding of No Significant Impact on March 30, 2010. NMFS has reviewed the proposed application and preliminarily determined that there are no substantial changes to the proposed action or new environmental impacts or concerns. Therefore, NMFS has determined that a new or supplemental EA or Environmental Impact Statement is likely unnecessary. Before making a final determination in this regard and decision on whether or not to issue a Finding of No Significant Impact for this proposed action, NMFS will review public comments and information submitted by the public and others in response to this notice. The March 10, 2010 EA, referenced above is available for review at *http://www.nmfs.noaa.gov/pr/permits/incidental.htm.*

**Proposed Authorization**

As a result of these preliminary determinations, NMFS proposes to authorize the take of marine mammals incidental to SCWA's estuary management activities, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated.

Dated: March 14, 2011.

**Helen M. Golde,**

*Deputy Director, Office of Protected Resources, National Marine Fisheries Service.*

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**BILLING CODE 3510–22–P**

## COMMITTEE FOR PURCHASE FROM PEOPLE WHO ARE BLIND OR SEVERELY DISABLED

### Procurement List; Additions and Deletions

**AGENCY:** Committee for Purchase From People Who Are Blind or Severely Disabled.

**ACTION:** Additions to and deletions from the Procurement List.

**SUMMARY:** This action adds services to the Procurement List that will be provided by nonprofit agencies employing persons who are blind or have other severe disabilities, and deletes products and a service from the Procurement List previously furnished by such agencies.

**DATES:** *Effective Date:* 4/18/2011.

**ADDRESSES:** Committee for Purchase From People Who Are Blind or Severely Disabled, Jefferson Plaza 2, Suite 10800, 1421 Jefferson Davis Highway, Arlington, Virginia 22202–3259.

**FOR FURTHER INFORMATION CONTACT:** Barry S. Lineback, Telephone: (703) 603–7740, Fax: (703) 603–0655, or e-mail *CMTEFedReg@AbilityOne.gov.*

**SUPPLEMENTARY INFORMATION:**

### Additions

*Regulatory Flexibility Act Certification*

I certify that the following action will not have a significant impact on a substantial number of small entities. The major factors considered for this certification were:

1. The action will not result in any additional reporting, recordkeeping or other compliance requirements for small entities other than the small organizations that will provide the services to the Government.

2. The action will result in authorizing small entities to provide the services to the Government.

3. There are no known regulatory alternatives which would accomplish the objectives of the Javits-Wagner-O'Day Act (41 U.S.C. 46–48c) in connection with the services proposed for addition to the Procurement List.

*End of Certification*

Accordingly, the following services are added to the Procurement List:

*Services*

*Service Type/Location:* Contract Cook Support & Dining Facility Attendant, White Sands Missile Range, NM.
*NPA:* Tresco, Inc., Las Cruces, NM.
*Contracting Activity:* Dept of the Army, XR W6BB ACA White Sands Missile, NM.

The DoD contracting activity specifically identified its requirement as Contract Cook Support (CCS) and Dining Facility Attendant (DFA) Service in its Performance Work Statement (PWS). The dining facility (DFAC) associated with this service requirement is newly constructed and will be under the control and military management of the 2D Engineer Battalion when it relocates to White Sands Missile Range (WSMR) under a Base Realignment and Closure action. Food service personnel assigned to the battalion will operate and manage the DFAC and will be augmented by contractor-provided dining facility attendants (DFA).

The PWS describes the DFA service tasks as preparation of vegetables, dining room service (prepare, maintain, clean dining areas; clean condiment containers; clean spills and remove soiled dinnerware; clean dining room tables, chairs, booths; clean dining room walls, baseboards, window ledges, doors, doorframes, ceiling fans, pictures, wall art, artificial plants, light fixtures, etc); buss and replace tray carts during meal serving periods; service and maintain patron self-service area; clean and sanitize food service equipment, utensil cleaning, and dishwashing; clean pots, pans, utensils, storage shelves, and racks; facility maintenance and sanitation; and provide trash and garbage service.

Because the 2d Engineer Battalion is a deployable, combat unit, it may be absent from WSMR as its mission dictates. When deployed, the DFAC will be augmented by contractor-provided cooks to replace absent military food service personnel. The Contracting Officer stated that the military will retain management and operational control during deployments as a Government (civil service) contracting officer's representative will assume those duties. At no time will the contractor be responsible for the management and operational control of the DFAC.

*Service Type/Location:* Laundry & Dry Cleaning Service, F.E. Warren, AFB, WY.
*NPA:* Goodwill Industrial Services Corporation, Colorado Springs, CO.
*Contracting Activity:* Dept of the Air Force, FA4613 90 CONS LGC, F.E. Warren AFB, WY.
*Service Type/Location:* Custodial Service, 185th Air Refueling Wing, Buildings 234 and 241, 2920 Headquarters Avenue, Sioux City, IA.
*NPA:* Goodwill Community Rehabilitation Services, Inc., Sioux City, IA.
*Contracting Activity:* Dept of the Army, XRAW7M8 USPFO Activity IA ARNG, Johnston, IA.