



BILLING CODE: 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XD110

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

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

ACTION: Notice; issuance of an incidental harassment authorization.

SUMMARY: In accordance with the regulations implementing the Marine Mammal Protection Act (MMPA) as amended, notification is hereby given that NMFS has issued an incidental harassment authorization (IHA) to the Sonoma County Water Agency (SCWA) to incidentally harass, by Level B harassment only, three species of marine mammals during estuary management activities conducted at the mouth of the Russian River, Sonoma County, California.

DATES: This IHA is effective for the period of one year, from April 21, 2014, through April 20, 2015.

FOR FURTHER INFORMATION CONTACT: Ben Laws, Office of Protected Resources, NMFS, (301) 427-8401.

SUPPLEMENTARY INFORMATION:

Availability

Electronic copies of SCWA's application and any supporting documents, as well as a list of the references cited in this document, may be obtained by visiting the internet at:

<http://www.nmfs.noaa.gov/pr/permits/incidental.htm>. In the case of problems accessing these

documents, please call the contact listed above. NMFS' Environmental Assessment (2010) and associated Finding of No Significant Impact, prepared pursuant to the National Environmental Policy Act, and NMFS' Biological Opinion (2008) on the effects of Russian River management activities on salmonids, prepared pursuant to the Endangered Species Act, are also available at the same site.

## Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 et seq.) direct the Secretary of Commerce (Secretary) to allow, upon request by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified area, the incidental, but not intentional, taking of small numbers of marine mammals, providing that certain findings are made and the necessary prescriptions are established.

The incidental taking of small numbers of marine mammals may be allowed only if NMFS (through authority delegated by the Secretary) finds that the total taking by the specified activity during the specified time period will (i) have a negligible impact on the species or stock(s) and (ii) not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant). Further, the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such taking must be set forth, either in specific regulations or in an authorization.

The allowance of such incidental taking under section 101(a)(5)(A), by harassment, serious injury, death or a combination thereof, requires that regulations be established. Subsequently, a Letter of Authorization may be issued pursuant to the prescriptions established in such regulations, providing that the level of taking will be consistent with the findings made for the total taking allowable under the specific regulations. Under section 101(a)(5)(D), NMFS

may authorize such incidental taking by harassment only, for periods of not more than 1 year, pursuant to requirements and conditions contained within an IHA. The establishment of prescriptions through either specific regulations or an authorization requires notice and opportunity for public comment.

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.” Except with respect to certain activities not pertinent here, section 3(18) of 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; 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.” The former is termed Level A harassment and the latter is termed Level B harassment.

#### Summary of Request

On January 17, 2014, we received an adequate and complete request from SCWA for authorization of the taking of marine mammals incidental to Russian River estuary management activities in Sonoma County, California. SCWA plans to continue ongoing actions necessary to manage the naturally-formed barrier beach at the mouth of the Russian River in order to minimize potential for flooding adjacent to the estuary and to enhance habitat for juvenile salmonids, as well as to conduct biological and physical monitoring of the barrier beach and 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”). Artificial breaching and monitoring activities may occur at any time during the one-year period of validity of the IHA.

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, and monitoring in the estuary requires the use of small boats. As a result, pinnipeds hauled out on the beach or at peripheral haul-outs in the estuary may exhibit behavioral responses that indicate incidental take by Level B harassment under the MMPA. Species known from the haul-out at the mouth of the Russian River or from peripheral haul-outs, and therefore anticipated to be taken incidental to the specified activity, include the harbor seal (*Phoca vitulina richardii*), California sea lion (*Zalophus californianus*), and northern elephant seal (*Mirounga angustirostris*).

This is the fifth such IHA issued to SCWA. SCWA was first issued an IHA, valid for a period of one year, effective on April 1, 2010 (75 FR 17382), and was subsequently issued one-year IHAs for incidental take associated with the same activities, effective on April 21, 2011 (76 FR 23306), April 21, 2012 (77 FR 24471), and April 21, 2013 (78 FR 23746).

#### Description of the Specified Activity

Additional detail regarding the specified activity was provided in our Federal Register notice of proposed authorization (79 FR 12472; March, 5, 2014) and in past notices cited herein; please see those documents or SCWA’s application for more information.

#### Overview

The planned action involves management of the estuary to prevent flooding while preventing adverse modification to critical habitat for ESA-listed salmonids. Requirements

related to the ESA are described in further detail below. 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, reduces flooding while maintaining beneficial conditions for juvenile salmonids. Additional breaches of barrier beach may be conducted for the sole purpose of reducing flood risk. SCWA's planned activity was described in detail in our notice of proposed authorization prior to the 2011 IHA (76 FR 14924; March 18, 2011); please see that document for a detailed description of SCWA's estuary management activities. Aside from the additional elements of a jetty study, described below, and minor additions to SCWA's biological and physical estuary monitoring measures, the specified activity remains the same as that described in the 2011 document.

#### Dates and Duration

The specified activity may occur at any time during the one-year timeframe (April 21, 2014, through April 20, 2015) of the IHA, although construction and maintenance of a lagoon outlet channel will occur only during the lagoon management period. In addition, there are certain restrictions placed on SCWA during the harbor seal pupping season. These, as well as periodicity and frequency of the specified activities, are described in further detail below.

#### Specific Geographic Region

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<sup>2</sup> (1,485 mi<sup>2</sup>) in Sonoma, Mendocino, and Lake Counties. The mouth of the Russian River is located at Goat Rock State Beach (see Figure 2 of SCWA's

application); 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 and McIver, 1994).

#### Detailed Description of Activities

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 (District) operate and maintain federal facilities and conduct activities in addition to the estuary management, including flood control, water diversion and storage, instream flow releases, hydroelectric power generation, channel maintenance, and fish hatchery production. As described in the notice of proposed IHA, NMFS issued a 2008 Biological Opinion (BiOp) for Water Supply, Flood Control Operations, and Channel Maintenance conducted by the Corps, SCWA and the District in the Russian River watershed (NMFS, 2008). This BiOp found that the activities – including SCWA’s estuary management activities prior to the BiOp – authorized by the Corps and undertaken by SCWA and the District, if continued in a manner similar to recent historic practices, were likely to jeopardize the continued existence of ESA-listed salmonids and were likely to adversely modify critical habitat. In part, therefore, the 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 salmonids. 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.

There are three components to SCWA’s ongoing 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 objective of flood risk abatement; and (3) physical and biological monitoring in and near the estuary, required under the terms of the BiOp, to understand response to water surface elevation management in the estuary-lagoon system. The latter category (physical and biological monitoring) includes all ancillary beach and/or estuary monitoring activities, including topographic and geophysical beach surveys and biological and physical habitat monitoring in the estuary. Biological monitoring will include a new component – acoustic telemetry of tagged steelhead – during the period of this IHA. Please see the previously referenced Federal Register notice (76 FR 14924; March 18, 2011) for detailed discussion of lagoon outlet channel management, artificial breaching, and other physical and biological monitoring activities.

In addition to these ongoing management activities, SCWA will conduct new monitoring work at the mouth of the Russian River during the period of this IHA. This additional activity comprises a plan to study the effects of a historical, dilapidated jetty on the formation and maintenance of the Russian River estuary, as required under the 2008 BiOp. Through several phases from 1929-1948, the jetty and associated seawall, roadway, and railroad were

constructed, reinforced and then abandoned by various entities. For a detailed description of the jetty study, please see our notice of proposed authorization prior to the 2013 IHA (78 FR 14985; March 8, 2013) or SCWA's 'Feasibility of Alternatives to the Goat Rock State Beach Jetty for

Managing Lagoon Water Surface Elevations – A Study Plan’ (ESA PWA, 2011), available online (see Addresses).

#### Comments and Responses

We published a notice of receipt of SCWA’s application and proposed IHA in the Federal Register on March 5, 2014 (79 FR 12472). During the thirty-day comment period, we received a letter from the Marine Mammal Commission (Commission). The Commission recommends that we issue the requested authorization, subject to inclusion of the proposed mitigation and monitoring measures as described in our notice of proposed IHA and the application. All measures proposed in the initial Federal Register notice are included within the IHA.

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

The marine mammal species that may be harassed incidental to estuary management activities are the harbor seal, California sea lion, and the northern elephant seal. We presented a detailed discussion of the status of these stocks and their occurrence in the action area in the notice of the proposed IHA (79 FR 12472, March 5, 2013).

Ongoing monthly harbor 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. 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). Recently, SCWA began regular baseline monitoring of the haul-out as a component of its estuary management activity. In the notice of proposed IHA, we presented average daily numbers of seals observed at the mouth of the Russian River from 1993-2005 and from 2009-13 (see Table 1; 79 FR 12472, March 5, 2013). Here, we present additional

clarifying information regarding the derivation of mean average daily numbers of harbor seals observed from 2011-13 (see Table 1 below). Averages (bottom row, Table 1) were calculated as weighted means on the basis of sample size (i.e., total number of pinniped counts conducted in given month). In order to calculate a weighted mean, the following formula is used:

$$[(n1 \times N1) + (n2 \times N2) + (n3 \times N3)] / (n1 + n2 + n3)$$

Where n = counts conducted in given month in Year x, N = average number of harbor seals observed per count in given month in Year x

Example:

For the month of January,  $[(35 \times 116) + (35 \times 108) + (26 \times 51)] / (35 + 35 + 26) = 95$ .

Table 1. Average daily number of seals observed at Russian River mouth for each month, 2011-13

<b>Year</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
<b>2011</b>	116	92	162	124	128	145	219	98	31	53	92	48
<b>Counts</b>	35	35	36	31	35	30	26	25	39	34	35	35
<b>2012</b>	108	74	115	169	164	166	156	128	100	71	137	51
<b>Counts</b>	35	37	35	35	36	35	39	35	35	34	27	35
<b>2013</b>	51	108	158	112	162	139	411	175	77	58	34	94
<b>Counts</b>	26	17	31	35	35	34	24	35	28	33	18	35
<b>Mean, 2011-13</b>	95	88	145	135	151	150	243	137	67	61	94	64

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

We provided a detailed discussion of the potential effects of the specified activity on marine mammals in the notice of the proposed IHA (79 FR 12472, March 5, 2013). A summary of anticipated effects is provided below.

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 disturb pinnipeds present on the beach or at peripheral haul-outs in the estuary.

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.

California sea lions and northern elephant seals, which have been noted only infrequently in the action area, 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 69 percent, California sea lions flushed at a rate of only 21 percent. The rate for elephant seals declined to 0.1 percent (VanBlaricom, 2011). In the 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, harbor seal pups have been observed during the pupping season; therefore, we have 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 recent monitoring, 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.

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. Although pupping season is defined as March 15-June 30, the peak of pupping season is typically concluded by mid-May, when the lagoon management period begins. As such, it is expected that most 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, 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.

In summary, and based on extensive monitoring data, we believe 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 (Figure 4; SCWA, 2014), use of the haul-out despite decades of breaching events indicates that abandonment of the haul-out is unlikely.

#### Anticipated Effects on Habitat

We provided a detailed discussion of the potential effects of this action on marine mammal habitat in the notice of the proposed IHA (79 FR 12472, March 5, 2013). SCWA’s estuary management activities will result in temporary physical alteration of the Jenner haul-out. 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, will likely increase suitability and availability of habitat for pinnipeds. Biological and water quality monitoring will not physically alter pinniped habitat.

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 salmonid abundance, ultimately providing more food for seals present within the

action area. Thus, any impacts to marine mammal habitat are not expected to cause significant or long-term consequences for individual marine mammals or their populations.

## 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 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 will continue the following mitigation measures, as implemented during the previous IHAs, designed to minimize impact to affected species and stocks:

- SCWA crews will 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 will avoid walking or driving equipment through the seal haul-out.
- Crews on foot will 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 will 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 will continue 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 will 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 will consult with NMFS 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 (including topographic and geophysical beach surveys) 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.

- Any jetty study activities in the vicinity of the harbor seal haul-out will not occur during the pupping season.

Equipment will be driven slowly on the beach and care will be taken to minimize the number of shutdowns and start-ups when the equipment is on the beach. All work will 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 will be kept within posted speed limits and driven as far from the haul-outs as safely possible to minimize flushing seals.

We have carefully evaluated SCWA's planned mitigation measures and considered their effectiveness in past implementation to determine whether they are likely to effect the least

practicable impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included 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; and (3) the practicability of the measure for applicant implementation.

Any mitigation measure(s) we prescribe should be able to accomplish, have a reasonable likelihood of accomplishing (based on current science), or contribute to the accomplishment of one or more of the general goals listed below:

- Avoidance or minimization of injury or death of marine mammals wherever possible (goals 2, 3, and 4 may contribute to this goal).
- A reduction in the number (total number or number at biologically important time or location) of individual marine mammals exposed to stimuli expected to result in incidental take (this goal may contribute to 1, above, or to reducing takes by behavioral harassment only).
- A reduction in the number (total number or number at biologically important time or location) of times any individual marine mammal would be exposed to stimuli expected to result in incidental take (this goal may contribute to 1, above, or to reducing takes by behavioral harassment only).
- A reduction in the intensity of exposure to stimuli expected to result in incidental take (this goal may contribute to 1, above, or to reducing the severity of behavioral harassment only).
- Avoidance or minimization of adverse effects to marine mammal habitat, paying particular attention to the prey base, blockage or limitation of passage to or from biologically

important areas, permanent destruction of habitat, or temporary disturbance of habitat during a biologically important time.

- For monitoring directly related to mitigation, an increase in the probability of detecting marine mammals, thus allowing for more effective implementation of the mitigation.

Based on our evaluation of SCWA's planned measures and on SCWA's record of management at the mouth of the Russian River including information from monitoring of SCWA's implementation of the mitigation measures as prescribed under the previous IHAs, we have determined that the planned mitigation measures provide the means of effecting the least practicable impact on marine mammal species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

#### Monitoring and Reporting

In order to issue an IHA 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 incidental take authorizations 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 in the proposed action area.

Any monitoring requirement we prescribe should accomplish one or more of the following general goals:

1. An increase in the probability of detecting marine mammals, both within defined zones of effect (thus allowing for more effective implementation of the mitigation) and in general to generate more data to contribute to the analyses mentioned below;

2. An increase in our understanding of how many marine mammals are likely to be exposed to stimuli that we associate with specific adverse effects, such as behavioral harassment or hearing threshold shifts;

3. An increase in our understanding of how marine mammals respond to stimuli expected to result in incidental take and how anticipated adverse effects on individuals may impact the population, stock, or species (specifically through effects on annual rates of recruitment or survival) through any of the following methods:

- Behavioral observations in the presence of stimuli compared to observations in the absence of stimuli (need to be able to accurately predict pertinent information, e.g., received level, distance from source);

- Physiological measurements in the presence of stimuli compared to observations in the absence of stimuli (need to be able to accurately predict pertinent information, e.g., received level, distance from source);

- Distribution and/or abundance comparisons in times or areas with concentrated stimuli versus times or areas without stimuli;

4. An increased knowledge of the affected species; or

5. An increase in our understanding of the effectiveness of certain mitigation and monitoring measures.

SCWA submitted a marine mammal monitoring plan as part of the IHA application. It can be found on the Internet at <http://www.nmfs.noaa.gov/pr/permits/incidental.htm>. The plan has been successfully implemented by SCWA under previous IHAs. 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:

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?

### Monitoring Measures

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 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 will be recorded on a three-point scale that represents an increasing seal response to the disturbance. 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 (i.e., movement or flight) will be considered as harassment under the MMPA under the terms of the IHA. 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 4 of SCWA's application). 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 spotting scope or binoculars.

Estuary Management Event Monitoring – Activities associated with artificial breaching or initial construction of the outlet channel, as well as the maintenance of the channel that may be required, will be monitored for disturbances to the seals at the Jenner haul-out. A one-day pre-event channel survey will be made within one to three days prior to constructing the outlet channel. The haul-out will 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 will also

occur on each day that the outlet channel is maintained using heavy equipment for the duration of the lagoon management period. Monitoring will 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. This monitoring will 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 disturbance. 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 will 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.

For all counts, the following information will 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 – As described previously, 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 will contact the NMFS stranding response network immediately and also report the incident to NMFS' West Coast Regional Office and Office of Protected Resources 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.

### 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 West Coast 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 website. This report will contain the following information:

- The number of pinnipeds 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 pinnipeds when disturbance occurs;
- Weather conditions (e.g., temperature, wind);
- Haul-out reoccupation time of any pinnipeds 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. SCWA will report any injured or dead marine mammals to NMFS' West Coast Regional Office and Office of Protected Resources.

#### Summary of Previous Monitoring

SCWA complied with the mitigation and monitoring required under all previous authorizations. In accordance with the 2013 IHA, SCWA submitted a Report of Activities and Monitoring Results, covering the period of January 1 through December 31, 2013. Previous monitoring reports (available at [www.nmfs.noaa.gov/pr/permits/incidental.htm](http://www.nmfs.noaa.gov/pr/permits/incidental.htm)) provided additional analysis of monitoring results from 2009-12. A barrier beach was formed eleven times during 2013, but SCWA was required to implement artificial breaching for only five of these closure events (note that the fifth such event occurred on January 2, 2014, following bar closure on December 24, 2013, and is not discussed in SCWA's current 2013 monitoring report). The Russian River outlet was closed to the ocean for a total of 104 days in 2013, including extended closures totaling 56 days during the lagoon management period. However, these closures all culminated in natural breaches and no outlet channel management events were required. In January 2012, the barrier beach was artificially breached after two days of breaching activity.

There were also several periods over the course of the year where the barrier beach closed or became naturally perched and then subsequently breached naturally (SCWA, 2013). In 2011, no water level management activities occurred (SCWA, 2012). In 2010, one lagoon management event and two artificial breaching events occurred (SCWA, 2011). Pinniped monitoring occurred no more than three days before, the day of, and the day after each water level management activity. In addition, SCWA conducted biological and physical monitoring as described previously. During the course of these activities, SCWA did not exceed the take levels authorized under the relevant IHAs. We provided a detailed description of previous monitoring results in the notice of the proposed IHA (79 FR 12472, March 5, 2013).

#### Estimated Take by Incidental Harassment

Except with respect to certain activities not pertinent here, section 3(18) of 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; 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.” The former is termed Level A harassment and the latter is termed Level B harassment.

We are authorizing SCWA 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 behavioral disturbance only. In addition, monitoring activities prescribed in the BiOp may result in harassment of additional individuals at the Jenner haul-out and at the three haul-outs located in the estuary.

Estimates of the number of harbor seals, California sea lions, and northern elephant seals that may be harassed by the 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 2 and 3 detail the total number of authorized takes. Methodology of take estimation was discussed in detail in our notice of proposed IHA (79 FR 12472, March 5, 2013).

Table 2. Estimated number of harbor seal takes resulting from Russian River estuary management activities

Number of animals expected to occur <sup>a</sup>	Number of events <sup>b,c</sup>	Potential total number of individual animals that may be taken
<b>Lagoon Outlet Channel Management (May 15 to October 15)</b>		
Implementation: 104 <sup>d</sup>	Implementation: 3	Implementation: 312
Maintenance and Monitoring: May: 53 June: 102 July: 104 Aug: 17 Sept: 17 Oct: 25	Maintenance: May: 1 June-Sept: 4/month Oct: 1	Maintenance: 1,038
	Monitoring: June-Sept: 2/month Oct: 1	Monitoring: 505
		<b>Total: 1,855</b>
<b>Artificial Breaching</b>		
Oct: 25	Oct: 2	Oct: 50
Nov: 53	Nov: 2	Nov: 106
Dec: 34	Dec: 2	Dec: 68
Jan: 32	Jan: 1	Jan: 32
Feb: 134	Feb: 1	Feb: 134
Mar: 224	Mar: 1	Mar: 224
Apr: 80	Apr: 1	Apr: 80
May: 53	May: 1	May: 53
	11 events maximum	<b>Total: 747</b>
<b>Topographic and Geophysical Beach Surveys</b>		
Jan: 95 Feb: 88 Mar: 145 Apr: 135 May: 151 Jun: 150 Jul: 243 Aug: 137 Sep: 67 Oct: 61 Nov: 94	1 topographic survey/month; 100 percent of animals present Jun-Feb; 10 percent of animals present Mar-May  2 geophysical surveys/month, Sep-Dec; 1/month, Jul-Aug, Jan-Feb; 10 percent of animals present	Jan: 95 + 10 Feb: 88 + 9 Mar: 15 Apr: 14 May: 15 Jun: 150 Jul: 243 + 24 Aug: 137 + 14 Sep: 67 + 13 Oct: 61 + 12 Nov: 94 + 19

Dec: 64		Dec: 64 + 13 <b>Total: 1,043 + 114 = 1,157</b>
<b>Biological and Physical Habitat Monitoring in the Estuary</b>		
1 <sup>e</sup>	121	121
<b>Total</b>		<b>3,880</b>

<sup>a</sup> For Lagoon Outlet Channel Management and Artificial Breaching, average daily number of animals corresponds with data from Table 2. For Topographic and Geophysical Beach Surveys, average daily number of animals corresponds with 2011-13 data from Table 1.

<sup>b</sup> 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.

<sup>c</sup> Number of events for artificial breaching derived from historical data. 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.

<sup>d</sup> Although implementation could occur at any time during the lagoon management period, the highest daily average per month from the lagoon management period was used.

<sup>e</sup> 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. Number of events includes addition of acoustic telemetry surveys.

Table 3. Estimated number of California sea lion and elephant seal takes resulting from Russian River estuary management activities

Species	Number of animals expected to occur <sup>a</sup>	Number of events <sup>a</sup>	Potential total number of individual animals that may be taken
<b>Lagoon Outlet Channel Management (May 15 to October 15)</b>			
California sea lion (potential to encounter once per event)	1	6	6
Northern elephant seal (potential to encounter once per event)	1	6	6
<b>Artificial Breaching</b>			
California sea lion (potential to encounter once per month, Oct-May)	1	8	8
Northern elephant seal (potential to encounter once per month, Oct-May)	1	8	8
<b>Topographic and Geophysical Beach Surveys</b>			
California sea lion (potential to encounter once per month year-round for topographical surveys; potential to encounter once per month Jul-Feb for geophysical surveys)	1	20	20
Northern elephant seal (potential to encounter once per month year-round for topographical surveys; potential to encounter once per month Jul-Feb for geophysical surveys)	1	20	20
<b>Biological and Physical Habitat Monitoring in the Estuary</b>			
California sea lion (potential to encounter once per month, Jul-Feb)	1	8	8
Northern elephant seal (potential to encounter once per month, Jul-Feb)	1	8	8
<b>Total</b>			

California sea lion	42
Elephant seal	42

<sup>a</sup> SCWA expects that California sea lions and/or northern elephant seals could occur during any month of the year, but that any such occurrence would be infrequent and unlikely to occur more than once per month.

## Analyses and Determinations

### Negligible Impact Analysis

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."

A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (i.e., population-level effects). An estimate of the number of Level B harassment takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be "taken" through behavioral harassment, we consider other factors, such as the likely nature of any responses (e.g., intensity, duration), the context of any responses (e.g., critical reproductive time or location, migration), as well as the number and nature of estimated Level A harassment takes, the number of estimated mortalities, and effects on habitat.

Although SCWA's estuary management activities may disturb 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. While these impacts can occur year-round, they occur sporadically and for limited duration (e.g., a maximum of two consecutive days for water level management events). Seals will likely become alert or, at most, flush into the water in reaction to the presence of crews and equipment on the beach. While disturbance may occur during a sensitive time (during the March 15-June 30 pupping season), mitigation measures have been specifically designed to further

minimize harm during this period and eliminate the possibility of pup injury or mother-pup separation.

No injury, serious injury, or mortality is anticipated, nor is the proposed action likely to result in long-term impacts such as permanent abandonment of the haul-out. 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, we have worked with SCWA to develop 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.

No pinniped stocks for which incidental take is authorized 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. In summary, and based on extensive monitoring data, we believe 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 (Figure 4; SCWA, 2014), use of the haul-out despite decades of breaching events indicates that abandonment of the haul-out is unlikely. Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the planned monitoring and mitigation measures, we find that the total marine mammal take from SCWA’s estuary management activities will have a negligible impact on the affected marine mammal species or stocks.

#### Small Numbers Analysis

The authorized number of animals taken for each species of pinniped can be considered small relative to the population size. There are an estimated 30,196 harbor seals in the California stock, 296,750 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, we are proposing to authorize take, by Level B harassment only, of 3,880 harbor seals, 42 California sea lions, and 42 northern elephant seals, representing 12.8, 0.01, and 0.03 percent of the populations, respectively. However, this represents an overestimate of the number of individuals harassed over the duration of the IHA, because these totals represent much smaller numbers of individuals that may be harassed multiple times. Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the mitigation and monitoring measures, we find that small numbers of marine mammals will be taken relative to the populations of the affected species or 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. Therefore, we have determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

## Endangered Species Act (ESA)

No species listed under the ESA are expected to be affected by these activities. Therefore, we have determined that a section 7 consultation under the ESA is not required. 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), including Reasonable and Prudent Alternatives, which prescribes modifications to SCWA's estuary management activities. The effects of the planned activities and authorized take would not cause additional effects for which section 7 consultation would be required.

## 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, we prepared an Environmental Assessment (EA) to consider the direct, indirect and cumulative effects to the human environment resulting from issuance of the original IHA to SCWA for the specified activities and found that it would not result in any significant impacts to the human environment. We signed a Finding of No Significant Impact (FONSI) on March 30, 2010. We have reviewed

SWCA's application for a renewed IHA for ongoing estuary management activities for 2014 and the 2013 monitoring report. Based on that review, we have determined that the proposed action follows closely the IHAs issued and implemented in 2010-13 and does not present any substantial changes, or significant new circumstances or information relevant to environmental concerns which would require a supplement to the 2010 EA or preparation of a new NEPA document. Therefore, we have determined that a new or supplemental EA or Environmental Impact Statement is unnecessary, and reaffirm the existing FONSI for this action. The 2010 EA and FONSI for this action are available for review at [www.nmfs.noaa.gov/pr/permits/incidental.htm](http://www.nmfs.noaa.gov/pr/permits/incidental.htm).

#### Authorization

As a result of these determinations, we have issued an IHA to SCWA to conduct estuary management activities in the Russian River from the period of April 21, 2014, through April 20, 2015, provided the previously mentioned mitigation, monitoring, and reporting requirements are implemented.

Dated: April 8, 2014.

---

Donna S. Wieting,  
Director, Office of Protected Resources,  
National Marine Fisheries Service.