

December 15, 2006

Permits, Conservation, and Education Division  
National Marine Fisheries Service (NMFS)  
Office of Protected Resources  
1315 East-West Highway  
Silver Spring, MD 20910-3226

To whom it may concern,

Please find enclosed a request for an Incidental Harassment Authorization (IHA) under the Marine Mammal Protection Act. This submission is a joint application by PRBO Conservation Science, Oikonos Ecosystem Knowledge, and Point Reyes National Seashore to request IHA takes resulting from central California seabird research operations on Southeast Farallon Island, Año Nuevo Island, and Point Reyes National Seashore. These requested takes are independent from those involved in our pinniped research, NMFS Scientific Permit 373-1575. As our seabird studies are long term and continuous, this request is for an IHA of 5 years duration.

Marine mammals species that could be potentially impacted by these activities include the California stocks of northern elephant seal (*Mirounga angustirostris*), harbor seal (*Phoca vitulina richardii*), Steller sea lion (*Eumetopias jubatus*), and California sea lion (*Zalophus californianus*).

Thank you for reviewing this request and we look forward to hearing from you.

Sincerely,

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PRBO Conservation Science  
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Request for Marine Mammal Protection Act  
Incidental Harassment Authorization

**Seabird Research on Southeast Farallon Island, Año Nuevo Island,  
and Point Reyes National Seashore**

Submitted by

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To:

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1315 East-West Highway  
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## **1. Detailed Description of the Activities**

### **Southeast Farallon Island**

PRBO Conservation Science has conducted year round wildlife research and monitoring activities on Southeast Farallon Island (SEFI), part of the Farallon National Wildlife Refuge, since 1968. This work is conducted through a collaborative agreement with the USFWS. While some research focuses on marine mammals, see NMFS Scientific Permit 373-1575, other research focusing on seabirds, and some procedures involved in maintaining the SEFI field station may involve incidental take of marine mammals.

Seabird research activities involve observational and “hands on” ecological studies of breeding seabirds. Occasionally researchers may travel to coastal areas of the island to conduct observational seabird research where non breeding marine mammals are present. These sorts of tasks include viewing breeding seabirds from an observation blind or censusing shorebirds. This activity usually involves one or two observers. Access to the refuge involves landing in small boats, 14-18ft open motorboats which are hoisted onto the island using a derrick system. These activities can also result in incidental take of pinnipeds.

### **Año Nuevo Island**

PRBO has also conducted seabird research and monitoring activities on Año Nuevo Island (ANI), part of the Año Nuevo State Reserve, since 1992. Collaborations with Oikonos - Ecosystem Knowledge began in 2001 to research seabird burrow nesting habitat quality and restoration. All work is conducted through a collaborative agreement with California State Parks. Some procedures involved in accessing the island (by 12' Zodiac boat) or seabird research may involve incidental take of marine mammals. Non-breeding pinnipeds may occasionally be present on the small beach in the center of the island where the boat is landed. Sea lions may also occasionally be present near a small group of subterranean seabird nest boxes on the island terrace. There are usually 2-3 researchers involved in island visits.

### **Point Reyes**

The National Park Service conducts research, resource management and routine maintenance services at Point Reyes National Seashore. While some research focuses on marine mammals, see NMFS Scientific Permit 373-1575, other research focuses on seabirds, and some procedures involved in maintaining the facilities around the Seashore may involve incidental take of marine mammals. Additionally, habitat restoration of the seashore includes restoration of removal of non-native invasive plants, and coastal dune habitat. Non-native plant removal is timed to avoid the breeding seasons of pinnipeds; however, on occasion non-breeding animals may be present at various beaches throughout the year. Additionally, elephant seals will haul out on human structures and block access to facilities. For example, they haul out on a boat ramp at the Life Boat Station and in various car parking lots around the seashore.

Research along the Seashore includes monitoring seabird breeding and roosting colonies. Seabird monitoring usually involves one or two observers. Surveys are conducted by small boats, 14-22 ft open motorboats that survey along the shoreline. These activities can also result in incidental take of pinnipeds.

## **2. Dates, Duration, and Region of Activity**

As all of this research constitutes long term continuous studies, we therefore request that this IHA permit be effective for 5 years after the date of its granting.

### **Southeast Farallon Island**

SEFI is located 28 miles offshore of San Francisco, California (37° 41'55" / 123° 00'10""). Research on SEFI is conducted year round. Most intertidal areas of the island, where marine mammals are present, are rarely visited in seabird research. Most potential for incidental take will occur at the island's 2 landings, North Landing and East Landing (Figure 1). These sites are visited ~ 1-3 times per day by researchers. In both locations researchers are located >50 ft above any pinnipeds which may be hauled out. Most visits to these areas are brief (~15 minutes), though seabird observers are present from 2-5 hours daily at North Landing from early April – early August each year to conduct observational studies on breeding Common Murres. Boat landings to re-supply the field station, lasting 1-3 hours, are conducted once every 2 weeks at one of the these locations. Activities involve launching of the boat with one operator, with 2-4 other researchers assisting with the operations from land. At East Landing, the primary landing site, all personnel assisting with the landing stay on the loading platform 30 ft above the water. At North Landing, loading operations occur at the water level in the intertidal.

### **Año Nuevo Island**

ANI is located 1/4 mile offshore of Año Nuevo Point in San Mateo County (37°06' N, 122°20' W). Research on ANI is conducted once/week April-August, and occasional intermittent visits are made during the rest of the year. A component of the seabird research involves nesting habitat restoration and monitoring which requires sporadic visits from September-November, between the seabird breeding season and the elephant seal pupping season. Most intertidal areas of the island where marine mammals are present are not ever visited during seabird research, excepting the landing beach. (Figure 2) Most potential for incidental take will occur at this location as well as just north of this beach up on the island's terrace where a small number of seabird nest boxes are located. The landing beach is visited upon arrival and departure during the weekly visit, and the nest boxes are checked one time that day. In both locations researchers are located >50 ft away from any pinnipeds which may be hauled out. Landings and visits to nest boxes are brief (~15 minutes).

### **Point Reyes National Seashore**

Point Reyes National Seashore (PRNS) is located 40 miles north of San Francisco Bay. Research at PRNS is conducted year round, with an emphasis during the seabird nesting season with occasional intermittent visits the rest of the year. A component of the seabird research involves habitat restoration and monitoring which requires sporadic visits from

September-November, between the seabird breeding season and the elephant seal pupping season. Most areas where research occurs and where marine mammals are present are not ever visited, excepting the landing beaches along Point Reyes Headland. In all locations researchers are located >50 ft away from any pinnipeds which may be hauled out. Elephant seals may haul out on boat ramps and parking lots year round. To maintain access of the boat ramps for park enforcement rangers and researchers, we will need to move seals from the boat ramp and adjacent parking lot for safety to seals and people. Removal will use the minimum tool which includes shaking a blue tarp or using plywood boards created by the Marine Mammal Center for moving seals. Both methods are effective in moving all age classes of elephant seals (F. Gulland MMC; R. DeLong, NMFS, pers. com.).

### 3. Species and Numbers of Affected Marine Mammals in Area

California stock of:

Northern elephant seal (*Mirounga angustirostris*)

Harbor seal (*Phoca vitulina richardii*)

Steller sea lion (*Eumetopias jubatus*)

California sea lion (*Zalophus californianus*)

Farallon Islands populations (approximate annual range, PRBO unpublished data)

Northern elephant seal (*Mirounga angustirostris*) (~50-750)

Harbor seal (*Phoca vitulina richardii*) (~40-120)

Steller sea lion (*Eumetopias jubatus*) (~50-150)

California sea lion (*Zalophus californianus*) (~1,000–7,000)

Año Nuevo Island populations (approximate annual range, UCSC and NOAA- Mark Lowry, Southwest Fisheries Science Center, La Jolla, CA, unpublished data)

Northern elephant seal (*Mirounga angustirostris*) (~900-1000)

Harbor seal (*Phoca vitulina richardii*) (~100-150)

Steller sea lion (*Eumetopias jubatus*) (~400-600)

California sea lion (*Zalophus californianus*) (~4,000–9,500)

Point Reyes populations (approximate annual range, NPS unpublished data)

Northern elephant seal (*Mirounga angustirostris*) (~100-2000)

Harbor seal (*Phoca vitulina richardii*) (~20-4,000 at nine locations)

California sea lion (*Zalophus californianus*) (~100–500)

### 4. Status and Distribution of the Affected Species

**Northern Elephant Seal:** The northern elephant breeding population is distributed from central Baja California, Mexico to the Point Reyes Peninsula in northern California. Along this coastline there are 13 major breeding colonies. The Northern elephant seal was exploited for its oil during the 18<sup>th</sup> and 19<sup>th</sup> centuries and by 1900 the population was reduced to 20-30 individuals on Guadalupe Island (Hoelzel et al. 1993, Hoelzel 1999). As a result of this bottleneck the genetic diversity found in this species is extremely low (Hoelzel

1999). The recent formation of most rookeries indicates that there is no genetic differentiation among populations. Although movement and genetic exchange occurs among colonies, most seals return to their natal site to breed (Huber et al. 1991). Recolonization of their former breeding range progressed north from the San Benito and Guadalupe Islands off Baja California to the most recent northernmost breeding site at Point Reyes Headlands. In the last three decades, annual pup production has increased at the rate of  $9.43 \pm 0.51\%$  per year in California and  $5.19 \pm 0.33\%$  per year over the entire range (Barlow et al. 1993). A complete population count of elephant seals is not possible because all age classes are not ashore at the same time. Elephant seal population size is usually estimated by counting the number of pups produced and multiplying by the inverse of the expected ratio of pups to total animals (McCann 1985). Stewart et al. (1994) used McCann's multiplier of 4.5 to extrapolate from 28,164 pups to a population estimate of 127,000 elephant seals in the U.S. and Mexico in 1991. The multiplier of 4.5 was based on a stable population. Boveng (1988) and Barlow et al. (1993) argue that a multiplier of 3.5 is more appropriate for a rapidly growing population such as the California stock of elephant seals. Based on the estimated 28,450 pups born in California and this 3.5 multiplier, the California stock was approximately 101,000 in 2001 (Carretta et al. 2002). At Point Reyes, the population grew at 32.8% per year between 1988 and 1997 (Sydeman and Allen 1999) and around 10% per year since 2000 (S. Allen unpubl. data), and in 2006 around 700 pups were born at three primary breeding areas. The population on the Farallon Islands has declined by 3.4% per year since 1983, and in recent years numbers have fluctuated between 100 and 200 pups (W. Sydeman, D. Lee, unpubl. data).

Elephant seals congregate in central California to breed from late November to March. Females typically give birth to a single pup and attend the pup for up to 6 weeks. Breeding occurs after the pup is weaned by attending males. After breeding, seals migrate to the Gulf of Alaska or deeper waters in the eastern Pacific. Adult females and juveniles return to terrestrial colonies to molt in April and May, and males return in June and July to molt, remaining onshore for around 3 weeks.

**Pacific Harbor Seal:** Harbor seals are one of the most widely distributed northern hemisphere pinnipeds and are found in coastal, estuarine and some times fresh water of both the Atlantic Ocean and Pacific Oceans. There is considerable regional genetic differentiation between harbor seal populations as they are generally limited in migratory movements. Presently, there are three recognized stocks (California, Oregon and Washington Coast, and Inland Washington). There is some question whether the San Francisco Bay population may be a separate stock based on genetic analyses (D. German, Sonoma State University, pers. com.). There is some limited movement among stocks; however, only a small portion of harbor seals move outside state waters (Lamont et al. 1996).

In central California, harbor seals breed annually from March through May and molt in June and July. Females give birth to a single pup and attend the pup for around 30 days, at which time they wean pups. Mating occurs in the water around the time of weaning. Harbor seals are resident year round at terrestrial colonies; however, juveniles may

disperse to other colonies ranging up to ~ 500 km. Individual adult seals may also migrate widely from breeding colonies.

Given the wide distribution of harbor seals it is not surprising that their population trends vary widely. Harbor seal populations in the Eastern North Pacific along the West Coast of the United States are all increasing. Along the coast of Washington and Oregon harbor seals increased in number at a rate of between 4 to 7% per annum with an estimated population of over 30,000 (Jefferies et al 1997). Additionally, along the California coast harbor seal numbers have increased at 3.5% per year from 1982 to 1995 with a minimum population of approximately 28,000 (Hanan and Beeson 1994, Carretta et al. 2001). Brown et al. (2005) estimated a population of 10,087 harbor seals in Oregon. There is evidence that the population may have reached equilibrium off Oregon and Washington and central California (Barlow et al. 1998, Sydeman and Allen 1999, NOAA Stock Assessment 2003). The most recent population estimate for California based on mark-recapture analysis 43,449 based on a correction factor of 1.65, and the population at Point Reyes was estimated to be 7,524 for the molt season based on the same correction factor (Lowry et al. 2005, Manna et al. 2006).

**California Sea Lion:** California sea lions range from southern Mexico up to British Columbia and breed almost entirely on islands in southern California, Western Baja California and the Gulf of California. In recent years, California sea lions have begun to breed annually in small numbers at Año Nuevo Island and South Farallon Island, California. One abandoned pup was found at Point Reyes National Seashore at Wildcat Beach in 2003. This species is separated into three recognized stocks based on three geographic regions (U.S. stock, Western Baja stock, and the Gulf of California stock; Lowry et al. 1992). Some movement has been documented between these geographic stocks, but rookeries in the U.S. are widely separated from major rookeries of western Baja California, Mexico (Barlow et al. 1995). Commercial harvest of the species in southern California and Mexico reduced the population to approximately 1,500 individuals by the 1920s. Since the passage of the Marine Mammal Protection Act in 1972, the California sea lion population has steadily increased along the West Coast of the United States (Carretta et al. 2002). The California sea lion has the largest population of any sea lion species and is the only sea lion whose population is showing a healthy growth rate of 5% to 6.2% per annum. Net production between 1980 and 2001 averaged 15.1%. Annual incidental takes in fisheries is approximately 915 individuals; however, the population is growing by 8.2% per year and fishing mortality is declining (Barlow et al. 1995). Current U.S. population estimates range from 237,000 and 244,000 (NOAA Stock Assessment 2003), and an additional 44,000 to 53,000 animals in Mexico (Aurioules-Gamboa and Zavala-Gonzalez 1994).

California sea lions give birth in May through July and breeding occurs in July and August. Females and pups are resident at breeding colonies year round and males migrate north to feeding areas from central California to British Columbia, Canada. During years of low food availability (ENSO), females and juveniles may also migrate north in search of prey, and in some particularly poor years (1997-1998), there can be mass mortality of pups at rookeries.

On the Farallon Islands California Sea Lions haul out in many intertidal areas year round, fluctuating from several hundred to several thousand animals. Breeding animals are concentrated in areas where researchers do not visit (PRBO unpublished data).

California sea lions at Point Reyes haul out at only a couple locations, but individuals will haul out through out the area and will occur on human structures such as boat ramps. The annual population averages around 300-500 during the fall through spring months, but on occasion, several thousand sea lions can arrive depending upon local prey resources (S. Allen, unpublished data).

**Steller Sea Lion:** Steller sea lions breed from the Kuril Islands and Okhotsk Sea through the Aleutian Islands and the Gulf of Alaska, and south to central California (Merrick et al. 1987). The Steller sea lion was hunted during the sealing era for fur, hides, blubber, and other organs. More recently, Steller sea lions were harvested during a modern pup hunt that lasted from 1959-1972 in which approximately 45,000 pups were taken (Pasquel and Adkison 1994). At the cessation of the modern commercial hunting the Steller sea lion was found along the Pacific Rim from California to Japan with approximately 70% of the population in Alaskan waters. Two separate populations are recognized within US waters: an eastern population that includes animals east of Cape Suckling, Alaska (144° W), and a western population that includes animals' west of Cape Suckling. Despite the cessation of the commercial hunt, the Steller sea lion population has experienced a rapid decrease since the mid-1980s with the western population declining by >64% in the last 30 years (Loughlin et al. 1992). The number in 1989 was estimated at 68,094 individuals. This total includes 10,000 in Russia, 47,960 in Alaska, 6,109 in British Columbia, 2,261 in Oregon, and 1,764 in California (Loughlin et al 1992). Numbers in Alaska have been declining by 7.8 % since 1994 (National Marine Mammal Laboratory 1995) and have declined by 3% in California (Le Boeuf et al. 1991, Ono 1993).

On Southeast Farallon Island, California, the abundance of females declined an average of 3.6% per year from 1974 to 1997 (Sydeman and Allen 1999). Pup counts at Año Nuevo declined 5% annually through the 1990s (NOAA Stock Assessment 2003), and have apparently stabilized between 2001 and 2005 (M. Lowry, SWFSC unpublished data). In 2000, the combined pup estimate for both islands was 349. In 2005, the pup estimate was 204 on Año Nuevo. Pup counts on the Farallon Islands have generally varied from 5-15 (Hastings and Sydeman 2002, PRBO unpublished data). Pups have not been born at Point Reyes Headland since the 1970s and Steller sea lions are seen in very low numbers there currently (S. Allen, unpubl. data).

Steller sea lions give birth in May through July and breeding occurs a couple of weeks after birth. Non-reproductive animals congregate at a few haul out sites, including at Año Nuevo and Point Reyes Headland. Pups are weaned during the winter and spring of the following year.

In 1990, the Steller sea lion was listed as a threatened species under the ESA, and the western stock was listed as endangered in 1997. In the 1960s and 70s the number of sea lions caught in trawl nets peaked, while present day numbers are low. California fisheries



target several of the most important prey items for Steller sea lions and millions of metric tons of prey have been removed by fisheries in recent decades. Incidental mortality of Steller sea lions in fisheries was very low between 1990 and 2001 in California. Shooting of adults during fisheries interactions in central California have been documented by the Marine Mammal Stranding Network and one adult male was found shot at Point Reyes, California in the 1990s. In Alaska, there are also several processes that have been debated as contributing to the decline of the Steller sea lion population, including global climate change and killer whale predation (Springer et al. 2003).

On the Farallon and Año Nuevo Islands, Steller sea lion breeding colonies are located in closed areas where researchers never visited, eliminating any risk of disturbing breeding animals.

### 5. Type of Incidental Taking Authorization Requested

The proposed research and associated activities may result in “take by incidental harassment only” (Level B Harassment). An Incidental Harassment Authorization (IHA) is requested. All takes will involve incidental human presence near pinned haulout areas.

### 6. Number of Marine Mammals that may be Affected

Southeast Farallon Island

M= Male, F= female, not preg = not pregnant, preg = pregnant

Species	# takes per year	# takes per animal per year	Pups M/F	Subadult M/F	Adult M/F(not preg)/F(preg)
Northern Elephant Seal	100	1	0/0	30/30	20/20/10
Harbor Seal	75	1	5/5	20/20	10/10/5
Steller Sea Lion	25	1	0/0	10/10	3/2/0
California Sea Lion	1500	1	0/0	500/500	300/200/0

Año Nuevo Island

Species	# takes per year	# takes per animal per year	Pups M/F	Subadult M/F	Adult M/F(not preg)/F(preg)
Northern Elephant Seal	100	1	0/0	30/30	20/10/10
Harbor Seal	30	1	3/3	5/5	5/5/4
Steller Sea Lion	10	1	0/0	4/2	3/1/0
California Sea	1300	1	0/0	600/400	200/100/0

Lion					
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Point Reyes

M= Male, F= female, not preg = not pregnant, preg = pregnant

Species	# takes per year	# takes per animal per year	Pups M/F	Subadult M/F	Adult M/F(not preg)/F(preg)
Northern Elephant Seal	300	1	0/0	170/100	20/10/0
Harbor Seal	100	1	0/0	25/25	25/25/0
California Sea Lion	500	1	0/0	100/100	250/50/0

### 7. Anticipated Impact of the Activity upon the Species or Stock

The only anticipated impacts would be temporary disturbances caused by pinnipeds observing humans on land. This might alter behaviors and cause animals to flush from the area. Animals may return to the same site once researchers have left or go to an alternate haul out site, which usually occurs within 30 minutes (Allen et al. 1985). Long term affects of this take are likely minimal as very few breeding animals will be present in areas where takes may occur.

### 8. Anticipated Impact on Subsistence Uses

As there is no subsistence hunting of the stocks in question, no impacts on subsistence uses are expected as the result of the proposed project.

### 9. Anticipated Impact of the Activity upon the Habitat of the Marine Mammal Populations, and the Likelihood of Restoration of the Affected Habitat

Incidental marine mammal takes will not result in the physical altering of marine mammal habitat. No major breeding habitat will be affected by this activity.

### 10. Anticipated Impact of the Loss or Modification of Habitat

There is no anticipated loss or modification of habitat.

### 11. Impact Minimization Methods

All possible measures will be taken to reduce marine mammal disturbance for the activities described above. Researchers will keep their voices hushed and bodies low in the visual presence of pinnipeds. Seabird observations at North Landing on SEFI will be conducted in an observation blind where researchers are shielded from the view of hauled

out pinnipeds. Beach landings on ANI will only occur after any pinnipeds that might be present on the landing beach have entered the water. ANI researchers accessing seabird nest boxes will crawl slowly if pinnipeds are within view. These activities and takes are not in breeding areas and reproductive animals will likely not be affected.

If seals need to be moved away from human facilities at Point Reyes, the “minimum tool” will be used. For example, waving a blue tarp at 20-30 feet distance or holding plywood boards and walking towards elephant seals can cause elephant seals to move. Physical touch is not required to cause elephant seals to move away from structures.

## **12. Arctic Subsistence Uses, Plan of Cooperation**

Not applicable. No activities will take place in or near a traditional Arctic subsistence hunting area.

## **13. Monitoring and Reporting**

Researchers will collect information on number and species of animals flushed, and number of flushing events. These will be reported annually to NMFS.

## **14. Coordinating Research to Reduce and Evaluate Incidental Take**

Visits to intertidal areas of SEFI during research activities will be coordinated to reduce potential take. All research goals on ANI will be coordinated to minimize the necessary number of trips to the island. Once on ANI, researchers will coordinate monitoring schedules so areas near any pinnipeds will be accessed only once per visit. The lead biologist will always serve as an observer to evaluate incidental take and halt any research activities should the potential for incidental take be too great.

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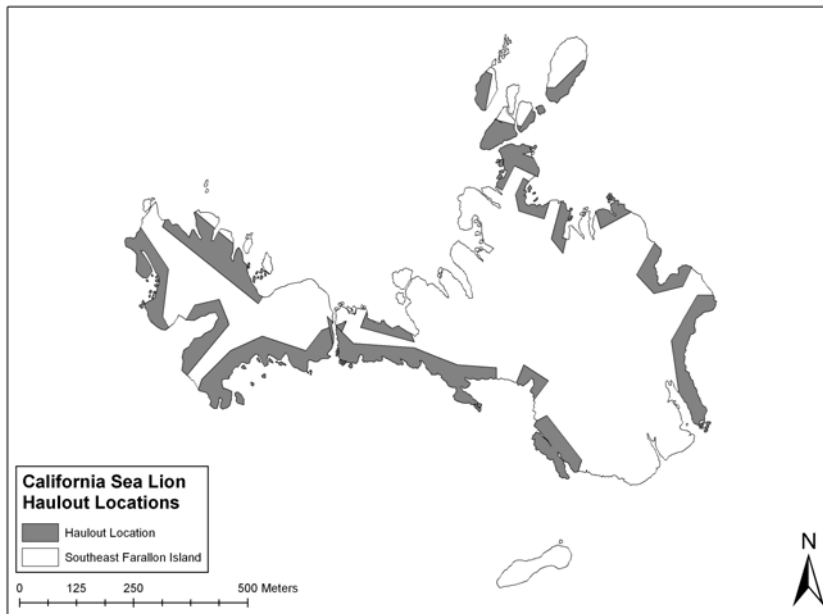
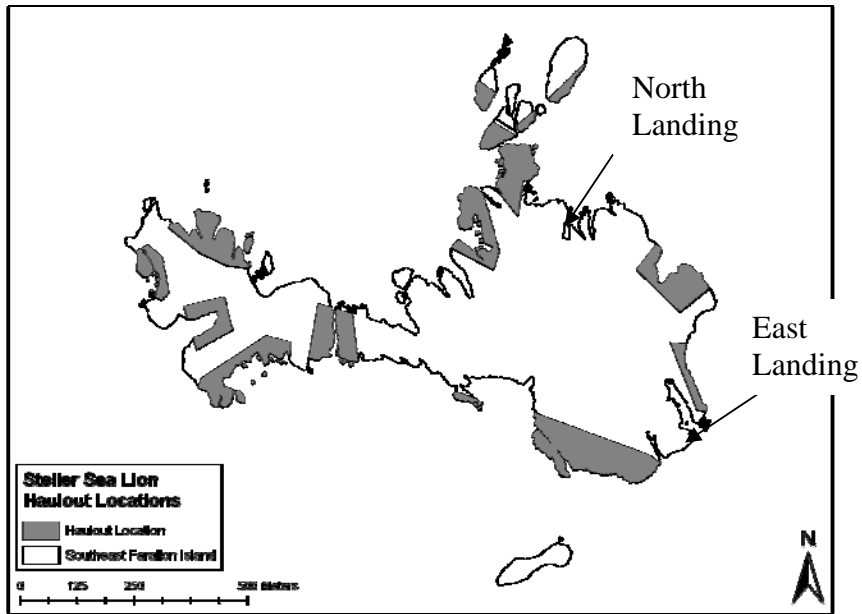
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16. Figures

Fig 1. Map of SEFI with pinniped haulout areas and location of North and East Landing



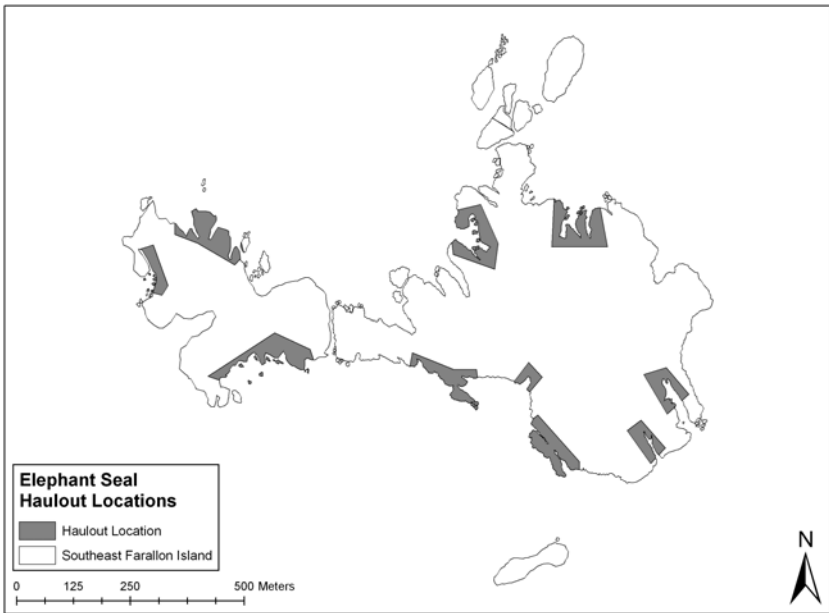
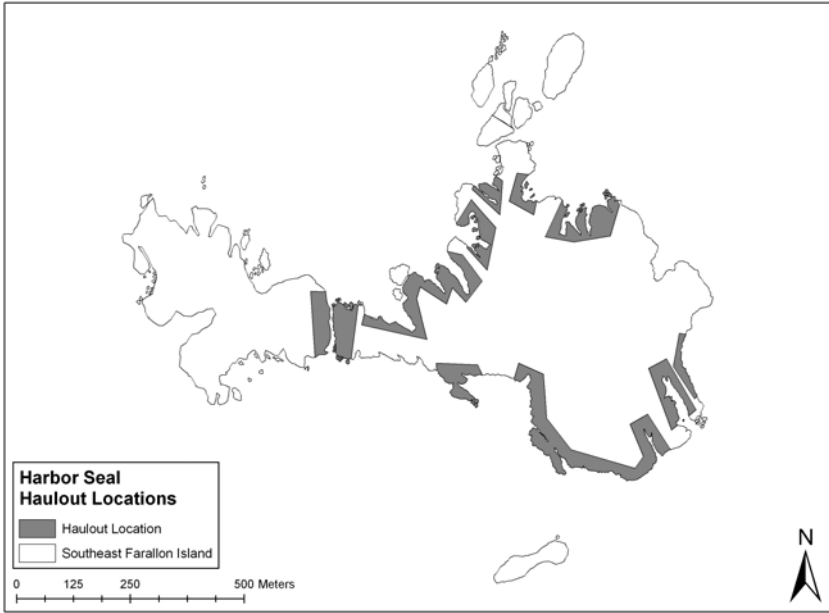




Fig 2. Map of ANI with pinniped haulout areas, Steller sea lion breeding area, and location of researcher trails and landing beach.

