

previous conclusions in its prior rulemaking.

NMFS also notes here that stress from long-term cumulative sound exposures can result in physiological effects on reproduction, metabolism, and general health, or on the animals' resistance to disease. However, this is not likely to occur here, because of the infrequent nature and short duration of the noise, including the occasional sonic boom. Research shows that population levels at these haul-out sites have remained constant in recent years, giving support to this conclusion.

The USAF does not anticipate a significant impact on any of the species or stocks of marine mammals from launches from VAFB. For even the largest launch vehicles, such as Titan IV and Delta IV, the launch noises and sonic booms can be expected to cause a startle response and flight to water for those harbor seals, California sea lions and other pinnipeds that are hauled out on the coastline of VAFB and on the northern Channel Islands. The noise may cause TTS in hearing depending on exposure levels but no PTS is anticipated.

Numbers of Marine Mammals Expected to Be Taken by Harassment

It is estimated that up to approximately 25 percent of the marine mammals may be disturbed by SMI due to the rare occurrence of a sonic boom. Up to approximately 200 harbor seals of all age classes and sexes may be taken by level B harassment per launch on the northern Channel Islands, with an expected range of between zero and 200 harbor seals. Up to approximately 5,800 California sea lion pups and 2,500 juvenile and adult sea lions of either sex may be harassed at SMI per launch, with an expected range of between zero and 8,300 sea lions. Up to approximately 3,000 northern elephant seal pups and 10,000 northern elephant seals of all age classes and sexes may be taken, by level B harassment, per launch on the northern Channel Islands, with an expected range of between zero and 13,000 elephant seals. Up to approximately 300 northern fur seal pups and 1,100 juvenile and adult northern fur seals of both sexes may be taken, by level B harassment, per launch at SMI, with an expected range of between zero and 1,100 fur seals. One Steller sea lion of any age class or sex may be harassed during the period of the regulations. Up to two Guadalupe fur seals of any age class or sex may be harassed over the period of the proposed regulations. The numbers taken will depend on the type of rocket, location of the sonic boom, weather

conditions that influence the size of the sonic boom, the time of day and time of year. For this reason, ranges are given for the harassment of marine mammals.

Effects of Rocket and Missile Launches and Associated Activities on Subsistence Needs

There are no subsistence uses for these pinniped species in California waters, and, thus, there are no anticipated effects on subsistence needs.

Marine Mammal Habitat at VAFB

Harbor seals, California sea lions, northern elephant seals, northern fur seals, Guadalupe fur seals, and Steller sea lions are known to inhabit VAFB and the surrounding islands. There will only be short-term disturbance effects to the behavior of the marine mammals and this will not affect their habitat.

Mitigation

To minimize impacts on pinnipeds on beach haul-out sites and to avoid any possible sensitizing or predisposing of pinnipeds to greater responsiveness towards the sights and sounds of a launch, the USAF has prepared the following mitigation measures.

All aircraft and helicopter flight paths must maintain a minimum distance of 1,000 ft (305 m) from recognized seal haul-outs and rookeries (e.g., Point Sal, Purisima Point, Rocky Point), except in emergencies or for real-time security incidents (e.g., search-and-rescue, fire-fighting) which may require approaching pinniped rookeries closer than 1,000 ft (305 m). For missile and rocket launches, unless constrained by other factors including, but not limited to, human safety, national security or launch trajectories, holders of Letters of Authorization must schedule launches to avoid, whenever possible, launches during the harbor seal pupping season of March through June. NMFS also proposes to expand the requirement so that VAFB must avoid, whenever possible, launches which are predicted to produce a sonic boom on the Northern Channel Islands during harbor seal, elephant seal, and California sea lion pupping seasons.

If post-launch surveys determine that an injurious or lethal take of a marine mammal has occurred, the launch procedure and the monitoring methods must be reviewed, in cooperation with NMFS, and appropriate changes must be made through modification to an LOA, prior to conducting the next launch of the same vehicle under that LOA.

Monitoring

As part of its application, VAFB provided a monitoring plan, similar to

that in the current regulations (50 CFR 216.125), for assessing impacts to marine mammals from rocket and missile launches at VAFB. This monitoring plan is described, in detail, in their application (VAFB, 2003). The Air Force will conduct the following monitoring under the regulations.

The monitoring will be conducted by a NMFS-approved marine mammal biologist experienced in surveying large numbers of marine mammals. Monitoring at the haul-out site closest to the launch facility will commence at least 72 hours prior to the launch and continue until at least 48 hours after the launch.

Monitoring for Vandenberg Air Force Base

Biological monitoring at VAFB will be conducted for all launches during the harbor seal pupping season, 1 March to 30 June. Acoustic and biological monitoring will be conducted on new space and missile launch vehicles during at least the first launch, whether it occurs within the pupping season or not. The first three launches of the Delta IV will also be monitored. In addition, the hearing of harbor seals will be tested before and after each launch under a scientific research permit issued under Section 104 of the MMPA, which continues the hearing tests covered under a previous scientific research permit that expired in 2002.

Monitoring will include multiple surveys each day that record, when possible, the species, number of animals, general behavior, presence of pups, age class, gender, and reaction to launch noise, sonic booms or other natural or human-caused disturbances. Environmental conditions such as tide, wind speed, air temperature, and swell will also be recorded. Time-lapse photography or video will be used during daylight launches to document the behavior of mother-pup pairs during launch activities. For launches during the harbor seal pupping season (March through June), follow-up surveys will be made within two weeks of the launch to ensure that there were no adverse effects on any marine mammals. A report detailing the species, number of animals observed, behavior, reaction to the launch noise, time to return to the haul-out site, any adverse behavior and environmental conditions will be submitted to NMFS within 120 days of the launch.

Monitoring for the Northern Channel Islands

Monitoring will be conducted on the northern Channel Islands (San Miguel, Santa Cruz, and Santa Rosa Islands)