high cost and low income, support mechanisms;

(iii) Administration of the application process, including activities to ensure compliance with Federal Communications Commission rules and regulations;

(iv) Performance of audits of beneficiaries under the high cost and low income support mechanisms; and

(v) Development and implementation of other functions unique to the high cost and low income support mechanisms.

(2) [Reserved]

* * * * *

■ 16. Revise the heading for subpart K to read as follows:

Subpart K—Connect America Fund Broadband Loop Support for Rate-of-Return Carriers

■ 17. Amend § 54.902 by revising the introductory text of paragraph (a) and paragraph (b) to read as follows:

§ 54.902 Calculation of CAF BLS Support for transferred exchanges.

(a) In the event that a rate-of-return carrier receiving CAF BLS acquires exchanges from an entity that also receives CAF BLS, CAF BLS for the transferred exchanges shall be distributed as follows:

* * * * *

(b) In the event that a rate-of-return carrier receiving CAF BLS acquires exchanges from an entity receiving frozen support, model-based support, or auction-based support, absent further action by the Commission, the exchanges shall receive the same amount of support and be subject to the same public interest obligations as specified pursuant to the frozen, model-based, or auction-based program.

* * * * *

§ 54.903 [Amended]

■ 18. Delayed indefinitely, amend § 54.903 by removing and reserving paragraph (a)(2).

■ 19. Amend § 54.1301 by revising paragraph (b) to read as follows:

§ 54.1301 General.

* * * * *

(b) The expense adjustment will be computed on the basis of data for a preceding calendar year.

■ 20. Amend § 54.1302 by revising paragraph (a) to read as follows:

§ 54.1302 Calculation of the incumbent local exchange carrier portion of the nationwide loop cost expense adjustment for rate-of-return carriers.

(a) Beginning January 1, 2013, and each calendar year thereafter, the total annual amount of the incumbent local exchange carrier portion of the nationwide loop cost expense adjustment shall not exceed the amount for the immediately preceding calendar year, multiplied times one plus the Rural Growth Factor calculated pursuant to § 54.1303. Beginning January 1, 2021, and each calendar year thereafter, the base amount of the nationwide loop cost expense adjustment shall be the annualized amount of the final six months of the preceding calendar year. The total amount of the incumbent local exchange carrier portion of the nationwide loop cost expense adjustment for the first six months of the calendar year shall be the base amount divided by two and for the second six months of the calendar year shall be the base amount divided by two, multiplied times one plus the Rural Growth Factor calculated pursuant to § 54.1303.

* * * * *

■ 21. Amend § 54.1305 by revising paragraph (a) to read as follows:

§ 54.1305 Submission of information to the National Exchange Carrier Association (NECA).

(a) In order to allow determination of the study areas and wire centers that are entitled to an expense adjustment pursuant to § 54.1310, each incumbent local exchange carrier (LEC) must provide the National Exchange Carrier Association (NECA) (established pursuant to part 69 of this chapter) with the information listed for each study area in which such incumbent LEC operates, with the exception of the information listed in paragraph (h) of this section, which must be provided for each study area. This information is to be filed with NECA by July 31st of each year. Rural telephone companies that acquired exchanges subsequent to May 7, 1997, and incorporated those acquired exchanges into existing study areas shall separately provide the information required by paragraphs (b) through (i) of this section for both the acquired and existing exchanges.

* * * * *

§ 54.1306 [Removed and Reserved]

■ 22. Delayed indefinitely, remove and reserve § 54.1306.

■ 23. Amend § 54.1309 by revising paragraph (b) to read as follows:

§ 54.1309 National and study area average unseparated loop costs.

* * * * *

(b) *Study area average unseparated loop cost per working loop.* This is equal to the unseparated loop costs for the study area as calculated pursuant to § 54.1308(a) divided by the number of working loops reported in § 54.1305(i) for the study area.

* * * * *

§ 54.1310 [Amended]

■ 24. Amend § 54.1310 by removing and reserving paragraph (c).

■ 25. Amend § 54.1508 by revising the first sentence of paragraph (e)(1) to read as follows:

§ 54.1508 Letter of credit for stage 2 fixed support recipients.

* * * * *

(e) * * *

(1) Failure by a Uniendo a Puerto Rico Fund and the Connect USVI Fund Stage 2 fixed support recipient to meet its service milestones as required by § 54.1506 will trigger reporting obligations and the withholding of support as described in § 54.320(d). * * *

* * * * *

[FR Doc. 2024–06292 Filed 4–9–24; 8:45 am]

BILLING CODE 6712–01–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 217

[Docket No. 240404–0097]

RIN 0648–BM48

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to U.S. Space Force Launches and Supporting Activities at Vandenberg Space Force Base, Vandenberg, California

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

ACTION: Final rule; notice of issuance of Letter of Authorization.

SUMMARY: NMFS, in response to the request of the U.S. Space Force (USSF), hereby issues regulations and a Letter of Authorization (LOA) to govern the unintentional taking of marine mammals incidental to launches and supporting activities at Vandenberg Space Force Base (VSFB) in Vandenberg, California, from April 2024 to April 2029. Missile launches conducted at VSFB, which comprise a portion of the activities, are considered military readiness activities under the Marine Mammal Protection Act (MMPA), as amended by the National Defense Authorization Act for Fiscal

Year 2004 (2004 NDAA). These regulations, which allow for the issuance of LOAs for the incidental take of marine mammals during the described activities and specified timeframes, prescribe the permissible methods of taking and other means of effecting the least practicable adverse impact on marine mammal species or stocks and their habitat, as well as requirements pertaining to the monitoring and reporting of such taking.

DATES: Effective from April 10, 2024, through April 9, 2029.

FOR FURTHER INFORMATION CONTACT: Leah Davis, Office of Protected Resources, NMFS, (301) 427–8401.

SUPPLEMENTARY INFORMATION:

Availability

A copy of USSF's Incidental Take Authorization (ITA) application, supporting documents, received public comments, and the proposed rule, as well as a list of the references cited in this document, may be obtained online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-military-readiness-activities.* In case of problems accessing these documents, please call the contact listed above (see **FOR FURTHER INFORMATION CONTACT**).

Purpose and Need for Regulatory Action

This final rule provides a framework under the authority of the MMPA (16 U.S.C. 1361 *et seq.*) for NMFS to authorize the take of marine mammals incidental to space vehicle (rocket) launches, missile launches, and aircraft operations at VSFB. NMFS received a request from USSF to incidentally take six species of marine mammals (with six managed stocks) by Level B harassment incidental to launch noise and sonic booms. No take by Level A harassment, mortality or serious injury is anticipated or authorized in this final rulemaking. Please see the *Legal Authority for the Final Action* section below for definitions of harassment, serious injury, and incidental take.

Legal Authority for the Final Action

The MMPA prohibits the ''take'' of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) generally direct the Secretary of Commerce (as delegated to NMFS) 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, regulations are promulgated (when applicable), and public notice and an opportunity for public comment are provided.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the affected species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for taking for subsistence uses (where relevant). If such findings are made, NMFS must prescribe the permissible methods of taking and ''other means of effecting the least practicable adverse impact'' on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stocks for taking for certain subsistence uses (referred to as ''mitigation'') and requirements pertaining to the monitoring and reporting of such takings.

As noted above, no serious injury or mortality is anticipated or authorized in this final rule. Relevant definitions of MMPA statutory and regulatory terms are included below:

- *U.S. Citizens*—individual U.S. citizens or any corporation or similar entity if it is organized under the laws of the United States or any governmental unit defined in 16 U.S.C. 1362(13) (50 CFR 216.103);
- *Take*—to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal (16 U.S.C. 1362(13); 50 CFR 216.3);
- *Incidental harassment, incidental taking, and incidental, but not intentional, taking*—an accidental taking. This does not mean that the taking is unexpected, but rather it includes those takings that are infrequent, unavoidable, or accidental (see 50 CFR 216.103);
- *Serious Injury*—any injury that will likely result in mortality (50 CFR 216.3);
- *Level A harassment*—any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal or marine mammal stock in the wild (16 U.S.C. 1362(18); 50 CFR 216.3); and
- *Level B harassment*—any act of pursuit, torment, or annoyance which 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 (16 U.S.C. 1362(18); 50 CFR 216.3).

Section 101(a)(5)(A) of the MMPA and the implementing regulations at 50 CFR part 216, subpart I provide the legal basis for proposing and, if appropriate, issuing regulations and an associated LOA(s). This final rule describes permissible methods of taking and mitigation, monitoring, and reporting requirements for USSF's activities.

The National Defense Authorization Act for Fiscal Year 2004 (2004 NDAA, Pub. L. 108–136) amended the MMPA to remove the ''small numbers'' and ''specified geographical region'' limitations indicated above and amended the definition of ''harassment'' as applied to a ''military readiness activity.'' Missile launches conducted at VSFB, which comprise a small portion of the activities, are considered military readiness activities pursuant to the MMPA, as amended by the 2004 NDAA.

Summary of Major Provisions Within the Final Rule

The major provisions of this final rule are:

- Scheduling launches to avoid lowest tides during harbor seal and California sea lion pupping seasons, when practicable;
- Required flight paths for aircraft takeoffs and landings and minimum altitude requirements to reduce disturbance to haul out areas;
- Required minimum altitudes for unscrewed aerial systems (UAS);
- Required acoustic and biological monitoring during a subset of launches to record the presence of marine mammals and document marine mammal responses to the launches; and
- Required semi-monthly surveys of marine mammal haulouts at VSFB and Northern Channel Islands (NCI).

Summary of Request

On November 2, 2022, NMFS received a request from USSF requesting authorization for the take of marine mammals incidental to rocket and missile launch activities and aircraft operations at VSFB in Vandenberg, California. Following NMFS' review of the materials provided, USSF submitted a revised application on May 25, 2023. The application was deemed adequate and complete on May 26, 2023. USSF's request for authorization pertains to incidental take of six species of marine mammals, by Level B harassment only.

On June 15, 2023, we published a notice of receipt of the USSF's application in the **Federal Register** (88 FR 39231), requesting comments and information related to the USSF request for 30 days. We received no responsive comments. On January 29, 2024, NMFS published a proposed rule in the **Federal Register** (89 FR 5451). The public comment period on the proposed rule was open for 30 days on *https://*

www.regulations.gov starting on January 29, 2024, and closed after February 28, 2024. The public comments can be viewed at *https://www.regulations.gov/document/NOAA-NMFS-2024-0008-0003/comment;* a summary of public comments received during this 30-day period and NMFS responses are described in the Comments and Responses section.

The take of marine mammals incidental to rocket and missile launches and aircraft operations at VSFB is currently authorized via an LOA issued under current incidental take regulations, which are effective through April 10, 2024 (84 FR 14314; April 10, 2019). To date, NMFS has promulgated incidental take regulations under the MMPA for substantially similar activities at the site four times.

Responsibility for activities at the site were transferred from the U.S. Air Force (USAF) to the USSF in May 2021, and both entities complied with the requirements (*e.g.,* mitigation, monitoring, and reporting) of the current LOA. Information regarding the monitoring results may be found in the Potential Effects of the Specified Activity on Marine Mammals and their Habitat section.

Description of the Specified Activity

USSF operations include rocket and missile launch activities that create noise (launch noise and/or sonic booms (overpressure of high-energy impulsive sound)) and visual stimulus that can take pinnipeds hauled out on shore along the periphery of VSFB by Level B harassment. In addition, a subset of rocket launches can create noise that affects pinniped haul outs along the shoreline of the Northern Channel Islands (NCI), particularly San Miguel and Santa Rosa islands. In addition to rocket and missile launch activities at VSFB, aircraft (crewed fixed wing airplanes and rotary wing helicopters, and different types of UAS) conduct flight operations to support activities at VSFB, and USSF operates a small harbor on the south coast. The activities will occur over the 5-year period of the regulations, from April 2024 through April 2029. Activities will occur year-round and could occur at any time of day, during any or all days of the week. As annual launch numbers increase, more than one launch could occur on some days.

A detailed description of the planned activities comprising the specified activity is provided in the proposed rule (89 FR 5451, January 29, 2024) and is not repeated here. Since that time, there have been minor changes to the schedule for rocket launches and the amount of harbor operations that do not affect the analyses in the proposed rule, as described below in the Changes from the Proposed to Final Rule section of this final rule.

Required mitigation, monitoring, and reporting measures are described in detail later in this document (see the Mitigation and Monitoring and Reporting sections of this final rule).

Comments and Responses

The proposed rule, which was published in the **Federal Register** on January 29, 2024 (89 FR 5451), described, in detail, USSF's activity, the marine mammal species that may be affected by the activity, and the anticipated effects on marine mammals. The proposed rule also requested public input on the request for authorization described therein, our analyses, our preliminary determinations, and any other aspect of the proposed rule, and requested that interested persons submit relevant information, suggestions, and comments.

During the 30-day public comment period, NMFS received comments from seven members of the general public and recommendations from the Marine Mammal Commission. All relevant substantive comments and NMFS' responses are summarized below. The comments are available online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-military-readiness-activities.* Please see the comment submissions for full details.

Comment 1: A commenter stated that USSF is requesting authorization from NMFS to take the marine mammals out of an area where they will be completing tests for 5 years. The commenter stated that NMFS should require USSF to provide proper shelter and habitat for the marine mammals and that NMFS should not be responsible for transport of the marine mammals.

Response: The commenter appears to have misunderstood the intent of this rulemaking, and NMFS has clarified herein. While this proposed rule is titled ''Taking Marine Mammals Incidental to U.S. Space Force Launches and Supporting Activities at Vandenberg Space Force Base, Vandenberg, California,'' the rule and associated LOA would not authorize USSF to transport marine mammals to another location. Rather, this final rule and LOA authorize USSF to ''take'' marine mammals by Level B harassment. The MMPA defines Level B harassment for military readiness and non-military readiness activities. Take by Level B harassment authorized by this final rule and LOA would be in the form of disruption of behavioral patterns for individual marine mammals resulting from exposure to launch related visual or auditory stimulus. As such, while NMFS considered impacts of USSF's activities to marine mammal habitat, as described in the Potential Effects of the Specified Activity on Marine Mammals and Their Habitat section of the proposed rule (89 FR 5451, January 29, 2024) and this final rule, this final rule does not require USSF to provide shelter and habitat for marine mammals.

Comment 2: NMFS received comments stating that despite not doing substantial harm to pinnipeds, it should be of importance to minimize or potentially eliminate any take to the pinnipeds, and there must be a clear mitigation plan with an end goal of eliminating any takes; that it is imperative for the USSF to find a way that either absorbs or reflects the sound of sonic booms away from seals; and that USSF could explore the use of technology to reduce noise levels during launches.

One comment stated that a study of physical response from pinniped species is not enough to prove minimal harm, although the commenter stated that they admire the amount of research and attention the USSF gave to including biological effects in their research and USSF's acknowledgement of harm from these disturbances.

Another comment stated that it is important to consider the potential effects of launches and supporting activities on marine mammal populations and to implement measures to mitigate any negative impacts. The commenter stated that, for example, USSF could implement monitoring programs to assess the potential impact of their activities on marine mammal populations, and could adjust their operations if necessary to minimize any adverse effects.

Response: NMFS concurs with the commenters that appropriate mitigation for USSF's activity is important. While the statutory criteria for issuance of an ITA does not use the terminology of ''minimal harm'' to marine mammals, as described in the Mitigation section of this final rule, in order to authorize take under section 101(a)(5)(A) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to the activity, and other means of effecting the least practicable impact on the species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stock for taking for certain subsistence uses (the latter not being

applicable for this action). As such, this final rule requires USSF to implement certain mitigation measures for its activities. For launches (rockets and missiles), USSF must provide pupping information to launch proponents at the earliest possible stage in the launch planning process to maximize their ability to schedule launches to minimize pinniped disturbance during pupping seasons on VSFB from 1 March to 30 April and on the Northern Channel Islands from 1 June to 31 July. If practicable, rocket launches predicted to produce a sonic boom on the Northern Channel Islands >3 pounds per square foot (psf) from 1 June—31 July will be scheduled to coincide with tides in excess of +1.0 feet (ft; 0.3 m), with an objective to do so at least 50 percent of the time. USSF will provide to NMFS for approval a detailed plan that outlines how this measure will be implemented. This measure will minimize occurrence of launches during low tides when harbor seals and California sea lions are anticipated to haul out in the greatest numbers during times of year when pupping may be occurring, thereby further reducing the already unlikely potential for separation of mothers from pups and potential for injury during stampedes. While harbor seal pupping extends through June, harbor seals reach full size at approximately 2 months old, at which point they are less vulnerable to disturbances. In consideration of those facts and practicability concerns raised by USSF, this measure does not extend through the later portion of the harbor seal pupping season at VSFB.

For manned flight operations, aircraft must use approved routes for testing and evaluation. Manned aircraft must also remain outside of a 1,000-ft (305 m) buffer around pinniped rookeries and haul-out sites (except in emergencies such as law enforcement response or Search and Rescue operations, and with a reduced, 500-ft (152 m) buffer at Small Haul-out 1). As discussed earlier, use of these routes and implementation of the buffer would avoid behavioral disturbance of marine mammals from manned aircraft operations.

For UAS, UAS classes 0–2 must maintain a minimum altitude of 300 ft (91 m) over all known marine mammal haulouts when marine mammals are present, except at take-off and landing. Class 3 must maintain a minimum altitude of 500 ft (152 m), except at take-off and landing. UAS classes 4 and 5 only operate from the VSFB airfield and must maintain a minimum altitude of 1,000 ft (305 m) over marine mammal haulouts except at take-off and landing. USSF must not fly class 4 or 5 UAS below 1,000 ft (305 m) over haulouts.

While absorbing or reflecting the sound of sonic booms away from seals, as suggested by the commenter, could be an effective measure in theory, such technology does not currently exist.

In addition to the mitigation described above, USSF must conduct monitoring as suggested by the commenter. USSF must conduct routine, semi-monthly counts on all haul out sites on VSFB and launch-specific monitoring at VSFB and/or NCI when specific criteria are met. Please see the Monitoring and Reporting section of this final rule for additional details.

Comment 3: A commenter noted that the USSF has requested a 5-year ITA, but will continue rocket and missile launches that take pinnipeds beyond the 5-year expiration of an authorization, such that it will need to request subsequent authorization(s). The commenter stated that a 5-year request is ''redundant'' if it will continue to be requested.

Response: Under section 101(a)(5)(A) of the MMPA, incidental take authorizations are limited to periods of 5 years at a time for all non-commercial fishing activities except military readiness activities, for which incidental take authorizations can be effective for up to 7 years at a time. Accordingly, for applicants or authorization-holders that want MMPA incidental take authorization for activities that extend beyond 5 (or 7) years, it is necessary for them to request, and NMFS to analyze and potentially issue, a new authorization every 5 (or 7) years.

NMFS also received recommendations from the Marine Mammal Commission (MMC), which are noted in the next section, Changes from the Proposed to Final Rule.

Changes From the Proposed to Final Rule

NMFS made changes to multiple components in this final rule, in part due to additional discussions with USSF, and in part as a result of recommendations provided by the MMC. These changes are relatively minor and in many cases, are intended to further clarify the requirements of the rule. In table 9 and table 13 of the proposed rule (89 FR 5451, January 29, 2024), the 5-year take numbers reflect the addition of the unrounded annual take estimates for each year. Following the MMC's recommendation, NMFS updated table 5 and table 10 of this final rule such that the 5-year take estimates reflect the sum of the rounded annual take numbers. This resulted in a change to the 5-year take estimate for harbor seal and elephant seal in table 5, and for California sea lion and Guadalupe fur seal in table 10.

NMFS made some minor changes to the monitoring measures in this final rule. First, as recommended by the MMC, NMFS clarified 50 CFR 217.65(c) to state that, at VSFB, USSF must conduct marine mammal monitoring and take acoustic measurements (1) for all new rockets, (2) for rockets (existing and new) launched from new facilities, (3) for larger or louder rockets (including those with new launch proponents) than those that have been previously launched from VSFB during their first three launches, and (4) for the first three launches from any new facilities during March through July. This updated language did not change the intent of the proposed measure. (In the proposed rule, this measure stated ''at VSFB, USSF must conduct marine mammal monitoring and take acoustic measurements for all new rockets (for both existing and new launch proponents using the existing facilities) that are larger or louder than those that have been previously launched from VSFB during their first three launches and for the first three launches from any new facilities during March through July.'') Second, also in response to an MMC recommendation, NMFS updated 50 CFR 217.65(c)(2) and (h)(2) to clarify that USSF must conduct a minimum of four surveys per day during the 72 hours prior to a launch and during the 48 hours after a launch. (The proposed rule did not include a required minimum number of surveys, and instead stated that ''monitoring must include multiple surveys each day.'') Third, upon further consideration, NMFS' final rule requires monitoring of launches with a sonic boom expected to exceed 7 psf from January 1 through February 28. (The proposed rule did not require monitoring on the NCI from October 1 through February 28 each year, a portion of which overlaps with elephant seal pupping.) This change is intended to ensure that some monitoring is conducted during the majority of the period when elephant seal pups may be present on the NCI.

NMFS also updated several reporting requirements as recommended by the MMC. NMFS updated § 217.65(j)(1) to require reporting of the number(s), type(s), and location(s) of rockets/missiles launched. NMFS also added the description of responses that would constitute harassment from this activity to § 217.65(j)(3)(iv) of this final rule. NMFS also edited § 217.65(j)(3)(v) to require that USSF report the length of

time the animal(s) remained off the haulout. Lastly, NMFS updated § 217.65(j)(3)(vii) to specify that the recorded sound levels associated with the launch must be reported in sound exposure level (SEL), peak sound pressure level (SPLpeak), and root mean square sound pressure level (SPLrms), and psf if a sonic boom occurs. Additionally, USSF must report the estimated distance of the recorder to the launch site and the distance of the closest animals to the launch site.

The required reporting frequency for individual launches has also been updated. The proposed rule would have required USSF to submit a launch report to NMFS' West Coast Region and Office of Protected Resources within 90 days for each rocket or missile launch where monitoring is required. In coordination with USSF, NMFS updated this measure to require USSF to submit this information in its annual report, rather than separate, launch-specific reports. NMFS anticipates that submission of this information in an annual report will be administratively simpler for USSF, and it will also make the information easier for NMFS and the public to locate and consider. NMFS also updated § 217.65(k), related to reporting of mortality or injury of marine mammals. As suggested by the MMC in its informal comments, this measure now requires that if real-time monitoring during a launch shows that the activity identified in § 217.60(a) is reasonably likely to have resulted in the mortality or injury of any marine mammal, USSF must notify NMFS within 24 hours (or next business day). NMFS and USSF must then jointly review the launch procedure and the mitigation requirements and make appropriate changes through the adaptive management process, as necessary and before any subsequent launches of rockets and missiles with similar or greater sound fields and/or sonic boom pressure levels. (In the proposed rule, this measure required reporting of likely mortality or injury of any marine mammals within 48 hours of discovery, but it did not specify steps that would be taken after a report is made.)

Further, after publication of the proposed rule, USSF notified NMFS that United Launch Alliance (ULA) concluded its lease of the space launch complex (SLC)–6 site, and SpaceX plans to begin launches of its Falcon and Falcon Heavy rockets in late 2024/early 2025. This would include no more than five Falcon Heavy launches per year. The total number of rocket launches from VSFB would not exceed the 110 launches estimated in the proposed rule (89 FR 5451, January 29, 2024). Further, while some of these launches may result in a sonic boom exceeding 2.0 psf over the NCI, the total number of launches exceeding the 2.0 psf threshold over NCI would not increase from that described in the proposed rule (89 FR 5451, January 29, 2024). Therefore these changes did not affect our analysis and changes to the take estimates were not warranted.

Additionally, as described in the proposed rule (89 FR 5451, January 29, 2024), USSF's activity includes harbor operations (*e.g.,* vessel transits). While pinnipeds may occur around the harbor, NMFS generally expects that they would be habituated to these routine harbor operations and, while they may show brief reactions to these activities, such reactions are not expected to qualify as Level B harassment. Since publication of the proposed rule, USSF has informed NMFS that harbor operations will be more extensive than initially anticipated and described in the proposed rule (up to 200 small barge operations per year vs. 30 as described in the proposed rule). However, this change does not alter our assessment that take is not expected to result from harbor operations.

Lastly, since publication of the proposed rule (89 FR 5451, January 29, 2024), NMFS released the draft 2023 Stock Assessment Reports (SARs; available at *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports*). Therefore, in this final rule NMFS updated information on abundance and serious injury and mortality information for Steller sea lions, as reflected in the 2023 SARs (see table 1).

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the application summarize available information regarding status and trends, distribution and habitat preferences, and relevant behavior and life history of the potentially affected species. NMFS fully considered all of this information, and we refer the reader to these descriptions and to additional information regarding population trends and threats that may be found in NMFS' SARs; *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments*). More general information about these species (*e.g.,* physical and behavioral descriptions) may be found on NMFS' website (*https://www.fisheries.noaa.gov/find-species*).

Table 1 lists all species or stocks for which take is expected and authorized for this activity, and summarizes information related to the population or stock, including regulatory status under the MMPA and Endangered Species Act (ESA) and potential biological removal (PBR), where known. PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS' SARs). While no serious injury or mortality is anticipated or authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species or stocks and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS' stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprise that stock. We also refer to studies and onsite monitoring to inform abundance and distribution trends within the project area. For some species, such as the Guadalupe fur seal, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS' SARs. All values presented in table 1 are the most recent available at the time of publication and are available online at: *https://ww.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments.*

TABLE 1—MARINE MAMMAL SPECIES [1] LIKELY IMPACTED BY THE SPECIFIED ACTIVITIES

Common name	Scientific name	Stock	ESA/ MMPA status; strategic (Y/N) [2]	Stock abundance (CV, N_{min}, most recent abundance survey) [3]	PBR	Annual M/SI [4]
Order Carnivora—Pinnipedia						
Family Otariidae (eared seals and sea lions):						
California Sea Lion	*Zalophus californianus*	United States	-, -, N	257,606 (N/A, 233,515, 2014).	14,011	>321
Guadalupe Fur Seal	*Arctocephalus townsendi*	Mexico	T, D, Y	34,187 (N/A, 31,019, 2013).	1,062	≥3.8
Northern Fur Seal	*Callorhinus ursinus*	California	-, D, N	14,050 (N/A, 7,524, 2013).	451	1.8
Steller Sea Lion	*Eumetopias jubatus*	Eastern	-, -, N	36,308 [5] (N/A, 36,308, 2022).	2,178	93.2
Family Phocidae (earless seals):						
Harbor Seal	*Phoca vitulina*	California	-, -, N	30,968 (N/A, 27,348, 2012).	1,641	43
Northern Elephant Seal	*Mirounga angustirostris*	California Breeding	-, -, N	187,386 (N/A, 85,369, 2013).	5,122	13.7

[1] Information on the classification of marine mammal species can be found on the web page for The Society for Marine Mammalogy's Committee on Taxonomy (*https://marinemammalscience.org/science-and-publications/list-marine-mammal-species-subspecies/;* Committee on Taxonomy (2022)).

[2] Endangered Species Act (ESA) status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.

[3] NMFS marine mammal SARs online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports-region.* CV is the coefficient of variation; N_{min} is the minimum estimate of stock abundance.

[4] These values, found in NMFS's SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (*e.g.,* commercial fisheries, ship strike). Annual mortality and serious injury (M/SI) often cannot be determined precisely and is in some cases presented as a minimum value or range. A CV associated with estimated mortality due to commercial fisheries is presented in some cases.

[5] Best estimate of counts that have not been corrected for animals at sea during abundance surveys. Estimates provided are for the U.S. only.

As indicated above, all six species (with six managed stocks) temporally and spatially co-occur with the specified activity to the degree that take is reasonably likely to occur. In addition to the 6 species of pinniped expected to be affected by the specified activities, an additional 28 species of cetaceans are expected to occur or could occur in the waters near the project area. However, we have determined that the potential stressors associated with the specified activities that could result in take of marine mammals (*i.e.,* launch noise, sonic booms and disturbance from aircraft operations) only have the potential to result in harassment of marine mammals that are hauled out of the water. Noise from the specified activities is unlikely to ensonify subsurface waters to an extent that could result in take of cetaceans. Therefore, we have concluded that the likelihood of the planned activities resulting in the harassment of any cetacean to be so low as to be discountable. Accordingly, cetaceans are not considered further in this final rule. Further, only one live northern fur seal has been reported at VSFB in the past 25 years (SBMMC 2012), at least two deceased fur seals have been found on VSFB. Guadalupe fur seals have yet to be reported at VSFB. Therefore, it is extremely unlikely that any fur seals will be taken at that site. However as discussed below, NMFS anticipates that both species could be taken at NCI. Steller sea lions are not anticipated to occur at NCI, and therefore, are not expected to be taken at that site, but are likely to be taken at VSFB. Harbor seal, northern elephant seal, and California sea lion are likely to be taken at both NCI and VSFB.

California sea otters (*Enhydra lutris nereis*) may also be found in waters off of VSFB, which is near the southern extent of their range. However, California sea otters are managed by the U.S. Fish and Wildlife Service and are not considered further in this final rule.

A detailed description of the species likely to be affected by USSF's activities, including brief introductions to the species and relevant stocks as well as available information regarding population trends and threats, and information regarding local occurrence, were provided in the proposed rule (89 FR 5451, January 29, 2024); since that time, we are not aware of any changes in the status of these species and stocks; therefore, detailed descriptions are not provided here. Please refer to the proposed rule for these descriptions. Please also refer to NMFS' website (*https://www.fisheries.noaa.gov/find-species*) for generalized species accounts.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

The effects of noise from USSF's activities have the potential to result in behavioral harassment of marine mammals in the vicinity of VSFB and the NCI. The proposed rule (89 FR 5451, January 29, 2024) included a discussion of the effects of anthropogenic noise on marine mammals and the potential effects of noise from USSF's activities on marine mammals and their habitat. That information and analysis is referenced in this final rule and is not repeated here; please refer to the proposed rule (89 FR 5451, January 29, 2024).

Estimated Take of Marine Mammals

This section provides an estimate of the number of incidental takes authorized by this rule and LOA, which will inform both NMFS' consideration of ''small numbers'' and the negligible impact determinations.

Harassment is the only type of take expected to result from these activities. Except with respect to military readiness activities, 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 (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). As stated above, a relatively small portion of USSF's

activities are considered military readiness activities. For military readiness activities, the MMPA defines ''harassment'' as: (i) Any act that injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) Any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where the behavioral patterns are abandoned or significantly altered (Level B harassment). The take estimate methodology outlined below is considered appropriate for the quantification of take by Level B harassment based on either of the two definitions.

Authorized takes are by Level B harassment only, in the form of disruption of behavioral patterns for individual marine mammals resulting from exposure to launch related visual or auditory stimulus. Based on the nature of the activity and as shown in activity-specific studies (described below), Level A harassment is neither anticipated nor authorized. As described previously, no serious injury or mortality is anticipated or authorized for this activity. Below we describe how the authorized take numbers are estimated.

For acoustic impacts, generally speaking, we estimate take by considering: (1) acoustic thresholds above which NMFS believes the best available science indicates marine mammals will be behaviorally harassed or incur some degree of permanent hearing impairment; (2) the area that will be ensonified above these levels in a day; (3) the density or occurrence of marine mammals within these ensonified areas; and, (4) the number of days of activities. We note that while these factors can contribute to a basic calculation to provide an initial prediction of potential takes, additional information that can qualitatively inform take estimates is also sometimes available (*e.g.,* previous monitoring results or average group size). Below, we describe the factors considered here (which include thresholds for take from launches and UAS, considered in combination with pinniped survey data in the form of daily counts) in more detail and present the take estimates.

Acoustic Thresholds

For underwater sounds, NMFS recommends the use of acoustic thresholds that identify the received levels above which exposed marine mammals would be reasonably expected to be behaviorally harassed (equated to Level B harassment) or to incur permanent threshold shift (PTS) of some degree (equated to Level A harassment). Thresholds have also been developed identifying the received level of in-air sound above which exposed pinnipeds would likely be behaviorally harassed. Here, thresholds for behavioral disturbance from launch activities have been developed based on observations of pinniped responses before, during, and after launches and UAS activity. For rocket and missile launches at VSFB, given the sound levels and proximity, NMFS assumes that all rocket launches will behaviorally harass pinnipeds of any species hauled out at sites around the periphery of the base. For rocket launches from VSFB that transit over or near NCI, based on several years of onsite behavioral observations and monitoring data, NMFS predicts that those that create a sonic boom over 2.0 psf could behaviorally harass pinnipeds of any species hauled out on NCI. For UAS activity NMFS predicts that, given the potential variability of locations, routing and altitudes necessary to meet mission needs, classes 0–3 could behaviorally harass pinnipeds of any species hauled out at VSFB.

Regarding potential hearing impairment, the effects of launch noise on pinniped hearing were the subject of studies at the site in the past. In addition to monitoring pinniped haul-out sites before, during and after launches, researchers were previously required to capture harbor seals at nearby haulouts and Point Conception to test their sensitivity to launch noises. Auditory Brainstem Response (ABR) tests were performed under 5-year SRPs starting in 1997. The goal was to determine whether launch noise affected the hearing of pinnipeds (MMCG and SAIC 2012a). The low frequency sounds from launches can be intense, with the potential of causing a temporary threshold shift (TTS), in which part or all of an animal's hearing range is temporarily diminished. In some cases, this diminishment can last from minutes to days before hearing returns to normal. None of the seals tested in these studies over a span of 15 years showed signs of TTS or PTS, supporting a finding that launch noise at the levels tested is unlikely to cause PTS and that any occurrence of TTS may be of short duration.

Ensonified Area

Here, we describe operational and environmental parameters of the activity that are used in estimating the area ensonified above the acoustic thresholds, including source levels and transmission loss coefficient.

Because the haulouts at NCI are more distant from the rocket launch sites than those at VSFB, different methods are used to predict when launches are likely to impact pinnipeds at the two sites. As stated above, for rocket and missile launches at VSFB, NMFS conservatively assumes that all rocket launches will behaviorally harass pinnipeds of any species hauled out at sites around the periphery of the base. For rocket launches from VSFB that transit over or near NCI, NMFS predicts that those that are projected to create a sonic boom over 2 psf could behaviorally harass pinnipeds of any species hauled out on NCI. For UAS activity, NMFS predicts that classes 0–3 could behaviorally harass pinnipeds of any species hauled out at VSFB.

The USSF is not able to predict the exact areas that will be impacted by noise associated with the specified activities, including sonic booms, launch noise and UAS operations. Many different types of launch vehicle types are operated from VSFB. Different combinations of vehicles and launch sites create different sound profiles, and dynamic environmental conditions also bear on sound transmission. As such, the different haul-out sites around the periphery of the base are ensonified to varying degrees when launches and, when applicable, recoveries of first stage boosters occur. USSF is not able to predict the exact timing, types and trajectories of these future rocket launch programs. However, as described below, rocket launches are expected to behaviorally disturb pinnipeds at VSFB and some launches are also expected to disturb pinniped hauled out at NCI. Missiles are only expected to impact pinnipeds at Lion Rock (Point Sal), and UAS impacts are only expected to occur at Small Haulout 1 (in VSFB).

Therefore, for the purposes of estimating take, we conservatively estimate that all haulout sites at VSFB will be ensonified by rocket launch noise above the level expected to result in behavioral disturbance. Different space launch vehicles also have varying trajectories, which result in different sonic boom profiles, some of which are likely to affect areas on the NCI (San Miguel, Santa Rosa, Santa Cruz, and Anacapa). Based on several years of onsite monitoring data, harassment of marine mammals is unlikely to occur when the intensity of a sonic boom is below 2 psf. Santa Cruz and Anacapa Islands are not expected to be impacted by sonic booms in excess of 2 psf (USAF, 2018), therefore, USSF does not

anticipate take of marine mammals on these islands, and NMFS concurs. Sonic booms from VSFB launches or recoveries can impact haul out areas and may take marine mammals on San Miguel Island and occasionally on Santa Rosa Island. In order to accommodate the variability of possible launches and (when applicable) sonic booms over NCI, USSF estimates that 25 percent of pinniped haulouts on San Miguel and Santa Rosa Islands may be ensonified to a level above 2 psf. NMFS concurs, and we consider this to be a conservative assumption based on sonic boom models which show that areas predicted to be impacted by a sonic boom with peak overpressures of 2 psf and above are typically limited to isolated parts of a single island, and sonic boom model results tend to overestimate actual recorded sonic booms on the NCI (personal communication: R. Evans, USSF, to J. Carduner, NMFS, OPR).

Modeling has not been required for launches of currently deployed missiles because of their trajectories west of VSFB and north of San Miguel Island and the previously well-documented acoustic properties of the missiles. The anticipated Ground-Based Strategic Defense Program (GBSD) is expected to utilize approximately the same trajectories as the current intercontinental ballistic missile (ICBM), and the GBSD program will be required to model at least one representative launch. When missiles are launched in a generally western direction (they turn south several hundred miles from VSFB and at high altitude), there is no sonic boom impact on the NCI; thus take of pinnipeds on NCI is not anticipated from missile launches. Given flight characteristics and trajectories, take from missile launch is not anticipated for most species. However, given proximity and the generally western trajectory, noise from missile launches from North Base may take California sea lions that haul out at Lion Rock (Point Sal) near VSFB's northern boundary.

Marine Mammal Occurrence and Take Estimation

In this section, we bring together the information above and describe take from the three different activity types (rockets, missiles, and UAS) expected to occur at VSFB and NCI, the marine mammal occurrence data (based on two survey series specific to VSFB and NCI), species and location-specific data related the likelihood of either exposure (*e.g.,* tidal differences) or response (*e.g.,* proportion of previously recorded responses that qualify as take), and the amount of activity. We describe the calculations used to arrive at the take estimates for each activity, species, and location, and present the total estimated take in table 11.

NMFS uses a three-tiered scale to determine whether the response of a pinniped on land to stimuli is indicative of Level B harassment under the MMPA (table 2). NMFS considers the behaviors that meet the definitions of both movements and flushes in table 2 to qualify as Level B harassment. Thus a pinniped on land is considered by NMFS to have been taken by Level B harassment if it moves greater than two times its body length, or if the animal is already moving and changes direction and/or speed, or if the animal flushes from land into the water. Animals that become alert or stir without other movements indicative of disturbance are not considered harassed. Prior observations of pinniped responses to certain exposures may be used to predict future responses and assist in estimating take. Here, the levels of observed responses of particular species during monitoring are used to inform take estimate correction factors as described in the species and activity-specific sections below.

TABLE 2—LEVELS OF PINNIPED BEHAVIORAL DISTURBANCE ON LAND

Level	Type of response	Definition	Characterized as Level B harassment by NMFS
1	Alert	Seal head orientation or brief movement in response to disturbance, which may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, changing from a lying to a sitting position, or brief movement of less than twice the animal's body length.	No.
2	Movement	Movements in response to the source of disturbance, ranging from short withdrawals at least twice the animal's body length to longer retreats over the beach, or if already moving a change of direction of greater than 90 degrees.	Yes.
3	Flush	All retreats (flushes) to the water	Yes.

Data collected from marine mammal surveys, including monthly marine mammal surveys and launch-specific monitoring conducted by the USSF at VSFB, and observations collected by NMFS at NCI, represent the best available information on the occurrence of the six pinniped species expected to occur in the project area. Monthly marine mammal surveys at VSFB are conducted to document the abundance, distribution and status of pinnipeds at VSFB. When possible, these surveys are timed to coincide with the lowest afternoon tides of each month, when the greatest numbers of animals are usually hauled out. Data gathered during monthly surveys include: species, number, general behavior, presence of pups, age class, gender, reactions to natural or human-caused disturbances, and environmental conditions. Some species are observed regularly at VSFB and the NCI (*e.g.,* California sea lion), while other species are observed less frequently (*e.g.,* northern fur seals and Guadalupe fur seals).

Take estimates were calculated separately for each stock in each year that the regulations are valid (from 2024 to 2029), on both VSFB and the NCI, based on the number of animals assumed hauled out at each location that are expected to be behaviorally harassed by the stimuli associated with the specified activities (*i.e.,* launch, sonic boom, or UAS noise). First, the number of hauled out animals per month was estimated at both VSFB and the NCI for each stock, based on survey data and subject matter expert input. Second, we estimated the percentage of animals that would be taken by harassment from a launch at a given site, using the corrections and adjustments. In order to determine that percentage, we considered whether certain factors could result in fewer than

the total estimated number at a location being harassed. These factors include whether the extent of ensonification is expected to affect only a portion of the animals in an area, tidal inundation that displaces animals from affected areas and for species reactivity to launch noise, life history patterns and, where appropriate, seasonal dispersal patterns.

Launches covered in this authorization are not expected to produce a sonic boom over the mainland except that some first stage recoveries back to launch facilities on the base that may do so. Because first stage recoveries always occur within 10 minutes of the initial launch, a response from any given animal to both launch and recovery are considered to be one instance of take, even when both launch and recovery meet or exceed the 2 psf threshold for calculating take.

Vandenberg Space Force Base

As described above, rocket launches, missile launches, and UAS activities are expected to result in take of pinnipeds on VSFB at haul outs along the periphery of the base. Because the supporting information and/or methods are different for these three activity types, we describe them separately below. Launches from different launch facilities at VSFB create different degrees of ensonification at specific haul out sites, and further, USSF has limited ability to forecast which launch sites may be used for future launches. As described previously, some launches also involve the recovery of a booster component back to the launch site, or to an alternate offshore location.

As noted above, NMFS first estimated the number of hauled out animals per month at VSFB for each stock. NMFS used marine mammal counts collected by USSF during monthly marine mammal surveys to approximate haulout abundance. NMFS compared monthly counts for a given species from 2020 to 2022 and selected the highest count (sum across all haul out sites) for each month for each species, as indicated in table 3. NMFS then selected the highest monthly count for each species and used that as the estimated number of animals that would be hauled out at any given time during a launch. Because launches from different SLCs impact different haul-outs, we expect that using this highest monthly estimate will result in a conservative take estimate. Therefore, NMFS considers the 2020–2022 survey data relied upon to be the best data available.

As further indicated in the table 4, and described below, the predicted number of animals taken by each launch, by species, is adjusted as indicated to account for the fact that (1) for some species, animals are only hauled out and available to be taken during low tide and (2) years of monitoring reports showing that different species respond behaviorally to launches in a different manner.

TABLE 3—VSFB MAX COUNTS FROM MONTHLY SURVEYS, 2020–2022

Month	Pacific harbor seal	California sea lion	Steller sea lion	Northern elephant seal
Jan	61	11	None in USSF record 2020–2022	76
Feb	73	9	0	63
Mar	105	0	0	50
Apr	87	3	0	173
May	95	*112	0	*302
Jun	*149	72	0	78
Jul	61	26	0	20
Aug	60	1	0	11
Sept	54	16	0	82
Oct	59	2	0	228
Nov	65	28	0	251
Dec	51	16	0	122
			USSF Estimated Max: 5*	

Note: * indicates the highest monthly count for a given species.

Rocket Launches at VSFB

USSF assumes that all rocket launches will take, by Level B harassment, animals hauled out at sites around the periphery of the base. Some rocket launches create overpressure at time of launch, and some recoveries of first-stage boosters can create a sonic boom when they return to the launch pad. Some flights also transit over or near portions of the NCI, but potential impacts to marine mammals at the NCI are discussed separately, below.

Table 5 lists the authorized take by Level B harassment from rocket launch and recovery activities at VSFB, and below we describe how NMFS estimated take for each species. Note that northern fur seal and Guadalupe fur seal are not anticipated to occur at VSFB, and therefore, NMFS does not anticipate impacts to these species at VSFB.

Harbor Seals

Pacific harbor seals haul out regularly at more than ten sites on both north and south VSFB. They are the most widespread pinniped species on VSFB and have been seen in all months, with decades of successful pupping. Rocket launches from sites closer to the haulouts are more likely to cause disturbance, including noise and visual impacts. Many of their haulout sites are inundated during high tide, and NMFS anticipates that take of this species will only occur during low tides. Rocket launches from sites closer to the haulouts are more likely to cause disturbance, including noise and visual impacts. However, to capture variability, we assume that all rocket launches result in Level B harassment of 100 percent of the harbor seals at all VSFB haulouts.

To determine the number of animals that will be taken by Level B harassment, we multiplied the max count indicated in table 3 by the number of planned launches per year (table 5) for each year of the authorization. As noted in table 3, monitoring data show that, generally speaking, most if not all harbor seals exposed to launch noise exhibit a behavioral response to launch stimulus that equates to take by Level B harassment and, therefore, we predict that 100 percent of animals exposed to launch noise will be taken per launch. However, given that most haulout sites at VSFB are inundated at high tide, NMFS applied a 50 percent correction factor (table 4). Therefore, estimated

takes = max daily count (149) X tidal correction factor (0.5) X number of rocket launches in the area for each year for each year (40 in year 1, *etc.*), and the resulting take numbers NMFS is authorizing are listed in table 5.

California Sea Lion

California sea lions on VSFB only haul out regularly at Rocky Point (north and south) and Amphitheatre Cove. California sea lions are most abundant at the haul out in Zone G at Lion Rock (Point Sal). Rocket launches from SLC–6, SLC–8, and the future SLC–11, which are closest to North Rocky Point, will be the most likely to result in noise and visual impacts. Rocket launches from SLC–3E and SLC–4E, both farther inland and some four times the distance, are less likely to impact California sea lions at North Rocky Point. During very high tides and strong winds, when spray is heavy, the sea lions often leave this site or are unable to access it. Therefore, NMFS assumes that for any given rocket launch at VSFB, 50 percent of the maximum number of California sea lions that haul out at VSFB may be taken by Level B harassment.

To determine the number of animals that will be taken by Level B harassment, we multiplied the max count indicated in table 3 by the number of planned launches per year (table 5) for each year of the authorization. As noted in table 3, monitoring data show that, generally speaking, most if not all California sea lions hauled out at VSFB will exhibit a behavioral response to launch stimulus that equates to take by Level B harassment and, therefore, we predict that 100 percent of animals exposed to launch noise will be taken per launch. However, given that most haulout sites at VSFB are inundated at high tide, NMFS applied a 50 percent correction factor (table 4). Therefore, the number of estimated takes = max daily count (112) × tidal correction factor (0.5) × number of rocket launches in the area (40 in year 1, *etc.*), and the resulting take numbers NMFS is authorizing are listed in table 5.

Northern Elephant Seal

Northern elephant seals historically hauled out at VSFB only rarely, and most animals observed onsite were subadult males. In 2004, a record count of 188 animals was made, mostly newly weaned seals (MMCG and SAIC 2012a); these numbers continued to increase (unpublished data, however reported annually to NMFS). In November 2016, mature adults were observed in Amphitheatre Cove, and pupping was first documented in January 2017 with 18 pups born and weaned. In January 2018, a total of 25 pups were born and weaned; 26 in 2019, 34 in 2020, 33 in 2021 and 49 in 2022. Two pups were born and weaned at Boathouse Beach in both 2021 and 2022. We assume that this site, in addition to Amphitheater, will support pupping in future years. Pupping occurs from December through March, with peak breeding in mid-February.

To determine the number of animals that will be taken by Level B harassment, we multiplied the max count indicated in table 3 by the number of planned launches per year (table 5) for each year of the authorization. As noted in table 3, given elephant seals' known lack of sensitivity to noise, based on VSFB monitoring reports and the literature, NMFS predicts that only 15 percent of elephant seals exposed to the launch noise will respond in a manner that constitutes take by Level B harassment, and, therefore, a 15 percent correction factor was applied. We also note that, unlike for harbor seals and California sea lions, Northern elephant seal presence and numbers are not affected by tides. Therefore, the number of estimated takes = highest daily count (302) × behavioral harassment correction factor (0.15) × number of rocket launches in the area for each year (40 in year 1, *etc.*), and the resulting take numbers NMFS is authorizing are listed in table 5.

Steller Sea Lion

Steller sea lions have been observed at VSFB since April 2012 (MMCG and SAIC 2012c), though as indicated in table 3, they were not observed between 2020 and 2022. For purposes of estimating take, USSF estimates that up to five Steller sea lions may haul out at VSFB during any given launch. NMFS multiplied this number by the number of planned launches per year for each year of the authorization (table 5). NMFS assumes that all rocket launches result in behavioral disturbance (*i.e.,* Level B harassment) of 100 percent of the Steller sea lions hauled out at VSFB. Therefore, the number of estimated takes = 5 animals × number of rocket launches in the area (40 in year 1, *etc.*), and the resulting take numbers NMFS is authorizing are listed in table 5.

TABLE 4—CORRECTIONS AND ADJUSTMENTS BY STOCK AT VSFB [1] [2]

Stock	VSFB, tidal inundation correction (percent)	VSFB, behavioral disturbance correction (percent)
Harbor seal (California)	50	100
California sea lion (California)	50	100
Northern elephant seal (CA Breeding)	N/A	15
Steller sea lion (eastern)	N/A	100

[1] Northern elephant seals and Steller sea lion takes are adjusted to reflect observed species-specific reactivity to launch stimulus.
[2] "N/A" indicates that no tidal adjustment was made.

TABLE 5—AUTHORIZED ANNUAL AND 5-YEAR INSTANCES OF INCIDENTAL TAKE FROM ROCKET LAUNCH AND RECOVERY ACTIVITIES AT VSFB

	2024	2025	2026	2027	2028	5 year total estimated takes
Number of Rocket Launches	40	55	75	100	110	
Pacific harbor seal (CA)	2,980	4,098	5,588	7,450	8,195	28,311
California sea lion (U.S.)	2,240	3,080	4,200	5,600	6,160	21,280
Northern elephant seal (CA breeding)	1,812	2,492	3,398	4,530	4,983	17,215
Steller sea lion (Eastern)	200	275	375	500	550	1,900

UAS at VSFB

As stated in the Description of Proposed Activity section of the proposed rule (89 FR 5451, January 29, 2024), while harassment of hauled out pinnipeds from UAS classes 0–2 is unlikely to occur at altitudes of 200 ft (61 m) and above (Erbe *et al.,* 2017; Pomeroy *et al.,* 2015; Sweeney *et al.,* 2016; Sweeney and Gelatt, 2017), USSF conservatively assumes that UAS classes 0–3 operations will take, by Level B harassment, some animals hauled out at Small Haul-Out 1 at VSFB. Aircraft are required to maintain a 1,000-ft (305 m) buffer around pinniped haul-out and rookery areas except in emergency circumstances, such as Search and Rescue. However, Small Haul-Out 1, has a reduced 500-ft (152 m) buffer because pinnipeds using this particular site have acclimated to the activity. Therefore, a small number of takes by Level B harassment may result from UAS activity at Small Haul-Out 1, only. Table 6 lists the authorized take by Level B harassment at VSFB from UAS activities, and below, we describe how NMFS estimated take for each species. Note that northern fur seal and Guadalupe fur seal are not anticipated to occur at VSFB, and therefore, NMFS does not anticipate impacts to these species at VSFB. While Northern elephant seals have been observed on nearby beaches, only Pacific harbor seals and California sea lions are known to use Small Haul-Out 1, and therefore, these are the only species anticipated to be taken by UAS activities.

Pacific Harbor Seal

Pacific harbor seals are the most common species at Small Haul-Out 1. USSF estimates that up to six harbor seals may be taken by Level B harassment at Small Haul-Out 1 during any given UAS activity, based upon previous monitoring data at Small Haul-Out site 1. NMFS concurs, and multiplied this number by the number of planned UAS class 0–3 activities per year (100). Therefore, the number of estimated takes per year = 6 animals × 100 UAS activities, and the resulting take numbers NMFS is authorizing are listed in table 6.

California Sea Lion

California sea lions haul out at Small Haul-Out 1, though they are less abundant than Pacific harbor seals at that site. USSF estimates that up to one California sea lion may be taken by Level B harassment at Small Haul-Out 1 during any given UAS activity, based upon previous monitoring data at Small Haul-Out site 1. NMFS concurs, and multiplied this number by the number of planned UAS class 0–3 activities per year (100). Therefore, the number of estimated takes per year = 1 animal × 100 UAS activities, and the resulting take numbers NMFS is authorizing are listed in table 6.

TABLE 6—TAKE BY LEVEL B HARASSMENT OF PINNIPEDS FROM UAS ACTIVITY

Species	Annual take by Level B harassment	5-Year total take by Level B harassment
Pacific harbor seal	600	3,000
California sea lion	100	500

Missiles at VSFB

USSF oversees missile launches from seven locations on VSFB. The launches occur on a routine basis up to 15 times per year. In addition to originating from different locations than rockets, missile trajectories are also different. All missile launches tend in north-westerly direction, and missiles in flight transition to a near-horizontal profile shortly after launch. USSF's application describes that missile launches are not anticipated to result in take of pinnipeds at south VSFB, as they do not create a ''boom.'' However, USSF anticipates, and NMFS concurs, that missile launches from sites in North Base could take California sea lions at Lion Rock (Point Sal), an off-base location. Lion Rock (Point Sal) is the only site at which USSF anticipates that take of pinnipeds may occur during missile activities, and NMFS concurs. Lowry *et al.* (2021) provides marine mammal occurrence data at Lion Rock (Point Sal) for July 2016 and July 2017. While NMFS used more recent data (2020 to 2022) to estimate take of pinnipeds during rocket launch and UAS activities (described above), those surveys did not include Lion Rock (Point Sal), and therefore, NMFS has relied on the Lowry *et al.* (2021) data for missile launch impacts.

For purposes of estimating take, NMFS conservatively estimates that up to 518 California sea lions may haul out at Lion Rock (Point Sal) during any given missile launch. This is the higher count of California sea lions at the site from 2016 (Lowry *et al.* 2021). NMFS multiplied this number by the number of planned launches per year (15 launches). NMFS conservatively assumes that all California sea lions at the site will be taken by Level B harassment during any given missile launch, though it is relatively unlikely that all 15 launches will fly close enough to this site to cause Level B harassment. Therefore, the number of estimated takes = 518 animals × number of missile launches in the area in a given year (15), and NMFS proposes to authorize 7,770 takes by Level B harassment of California sea lion annually (38,850 over the duration of the authorization) from missile launches at VSFB, as indicated in table 7.

TABLE 7—AUTHORIZED INSTANCES OF INCIDENTAL TAKE FROM MISSILE LAUNCHES (MILITARY READINESS ACTIVITY) AT VSFB

Species	Location	High count	Launches/year	Annual takes	5 year total takes [1]
California sea lion	Lion Rock, Point Sal	518 (2019)	15	7,770	38,850

[1] Annual take * 5 years.

NCI

While USSF does not propose launching rockets from NCI, as noted previously, a subset of VSFB rocket launches transit over or near NCI, and a subset of those may create a sonic boom that affects some portion of pinniped haulouts on NCI (San Miguel and Santa Rosa). No take of pinnipeds on NCI is expected to result from missile launches or UAS activities. To estimate take of marine mammals at NCI resulting from rocket launches at VSFB, NMFS first estimated the number of hauled out animals per species across all potentially affected haulouts on San Miguel and Santa Rosa Islands. NMFS selected the high count from San Miguel and Santa Rosa Islands between 2017 and 2019 (NOAA Technical Memorandum SWFSC–656 (Lowry *et al.,* 2021) and summed the high counts from each site (table 7). NMFS then applied a correction factor to this estimate to account for whether a given species is expected to be hauled out in the area during all or a portion of the year (table 9). This is referred to as Step 1 below.

Next, NMFS determined the approximate number of sonic booms over 2 psf anticipated to occur over the NCI (28 over 5 years, as reflected in USSF's application). USSF's application indicates that during previous monitoring of pinnipeds on NCI during rocket launches, few to no behavioral reactions that would qualify as Level B harassment using the 3-point scale (table 5) were observed during sonic booms of less than 2 psf. Therefore, in estimating take herein, NMFS assumes that take of marine mammals will only occur during sonic booms of 2 psf or greater. Summarizing 20 years of sonic boom modeling (MMCG and SAIC, 2012a), we anticipate that no more than 25 percent of space launches will produce a sonic boom greater than 2 psf over the NCI (estimated to be 28 launches over 5 years). On one occasion, pinnipeds on one side of San Miguel Island reacted to a boom, while animals 4 miles (6 km) away on the other did not react, nor was the boom detected there by acoustic instruments (MMCG and SAIC, 2012a). Therefore, NMFS multiplied the number of annual booms (table 10) by a 0.25 correction factor for all species and rounded each year up to the next whole number. This is referred to as step 2 below.

Next, NMFS multiplied the number of animals anticipated to be at a haulout during a launch (calculated in step 1) by the number of annual launches anticipated to affect animals at the haulouts (calculated in step 2), and then multiplied the product by the likelihood of a given species responding in a manner that would be considered take by Level B harassment (table 10). NMFS describes the calculations in further detail for each species, below.

TABLE 8—NCI, HIGH COUNT 2017–2019 FROM SWFSC–656

[Lowry et al. (2021)]

	2017	2019	High count from 2017 and 2019
Pacific harbor seal:			
San Miguel	230	254	254 (2019)
Santa Rosa	266	148	266 (2017)
Sum	.....	.....	520
California sea lion:			
San Miguel	49,252	60,277	60,277 (2019)
Santa Rosa	2,692	1,618	2,692 (2017)
Sum	.....	.....	62,969
Northern elephant seal:			
San Miguel	2,327	2,791	2,791 (2019)
Santa Rosa	1,169	1,015	1,169 (2017)
Sum	.....	.....	3,960
Northern fur seal:			
San Miguel	4,520	4,377	4,520 (2017)
Santa Rosa	N/R	N/R	N/R
Sum	.....	.....	4,520
Guadalupe fur seal:			
San Miguel	N/R	N/R	N/R
Santa Rosa	N/R	N/R	N/R
Sum	.....	.....	5
Steller sea lion:			
San Miguel	N/R	N/R	N/R
Santa Rosa	N/R	N/R	N/R
Sum	.....	.....	N/R

Note: N/R: No sightings recorded.

Harbor Seals

For harbor seal, the sum of the high counts at the San Miguel and Santa Rosa haulouts during 2017 and 2019 is 520. NMFS expects Pacific harbor seals to occur at the haulouts year round, and therefore did not apply a correction for seasonal occurrence. NMFS multiplied the harbor seal haulout abundance (520) by the number of booms anticipated to overlap the haulouts (table 10, calculated in step 2 above). Based on years of monitoring reports showing the responses of harbor seals at NCI (which is farther from the launch sites than the VSFB sites) to launches, NMFS anticipates that 50 percent of harbor

seals exposed to a sonic boom overlapping a haulout will be taken by Level B harassment. Therefore, for each year, the number of estimated takes = 520 animals × number of sonic booms over 2 psf × 0.5, and the resulting take numbers NMFS is authorizing are listed in table 10.

California Sea Lions

For California sea lion, the sum of the high counts at the San Miguel and Santa Rosa haulouts during 2017 and 2019 is 62,969. While some California sea lions remain in the general vicinity of southern California throughout the year and may haul out onshore, the use of haulout sites at NCI is principally for breeding during peak summer months. Given the fact that most male sea lions and a substantial portion of all sea lions are not onshore at NCI outside of the breeding season, we applied a 50 percent correction factor to better relate instances of take to the number of individuals that may be hauled out and subject to acoustic effects of launches. NMFS multiplied the California sea lion haulout abundance (62,969) by the number of booms anticipated to overlap the haulouts (table 10, calculated in Step 2 above). Based on years of monitoring reports showing the responses of California sea lions at NCI to launches, NMFS anticipates that 25 percent of California sea lions exposed to a sonic boom overlapping a haulout will be taken by Level B harassment. Therefore, for each year, the number of estimated takes = 62,969 animals × number of sonic booms over 2 psf × 0.25, and the resulting take numbers NMFS is authorizing are listed in table 10.

Northern Elephant Seals

For Northern elephant seal, the sum of the high counts at the San Miguel and Santa Rosa haulouts during 2017 and 2019 is 3,960. NMFS expects Northern elephant seals to occur at the haulouts year round, and therefore did not apply a correction for seasonal occurrence. NMFS multiplied the Northern elephant seal haulout abundance (3,960) by the number of booms anticipated to overlap the haulouts (table 10, calculated in step 2 above). Based on years of monitoring reports showing the responses of Northern elephant seals at NCI to launches, NMFS anticipates that 5 percent of Northern elephant seals exposed to a sonic boom overlapping a haulout will be taken by Level B harassment. Therefore, for each year, the number of estimated takes = 3,960 animals × number of sonic booms over 2.0 psf × 0.05, and the resulting take numbers NMFS is authorizing are listed in table 10.

Northern Fur Seal

For Northern fur seal, the sum of the high counts at the San Miguel and Santa Rosa haulouts during 2017 and 2019 is 4,377. Northern fur seals spend approximately 80 percent of the year at sea, generally well offshore (Carretta *et al.,* 2011; Caretta *et al.,* 2012). To account for that seasonal occurrence, NMFS applied a conservative seasonal correction factor of 60 percent. NMFS multiplied the Northern fur seal haulout abundance (4,377) by the number of booms anticipated to overlap the haulouts (table 10, calculated in step 2 above). Based on years of monitoring reports showing the responses of Northern fur seals at NCI to launches, NMFS anticipates that 5 percent of Northern fur seals exposed to a sonic boom overlapping a haulout will be taken by Level B harassment. Therefore, for each year, the number of estimated takes = 4,377 animals × number of sonic booms over 2 psf × 0.05, and the resulting take numbers NMFS is authorizing are listed in table 10.

Guadalupe Fur Seal

For Guadalupe fur seal, the sum of the high counts at the San Miguel and Santa Rosa haulouts during 2017 and 2019 is conservatively assumed to be five, despite them having not been recorded there, as noted in table 8. NMFS estimates the potential for Guadalupe fur seals to occur at the haulouts to be comparable throughout the year and, therefore, did not apply a correction for seasonal occurrence. NMFS multiplied the Guadalupe fur seal haulout abundance (five) by the number of booms anticipated to overlap the haulouts (table 10, calculated in step 2 above). Based on years of monitoring reports showing the responses of Guadalupe fur seals at NCI to launches, NMFS anticipates that 50 percent of Guadalupe fur seals exposed to a sonic boom overlapping a haulout will be taken by Level B harassment. Therefore, for each year, the number of estimated takes = five animals × number of sonic booms over 2 psf × 0.5, and the resulting take numbers NMFS is authorizing are listed in table 10.

TABLE 9—CORRECTIONS AND ADJUSTMENTS BY STOCK AT NCI [1] [2]

Species	Species response to sonic boom (percent)	Seasonal occurrence (percent of year)
Harbor seal	50	100
California sea lion	25	50
Northern elephant seal	5	100
Northern fur seal	25	[3] 60
Guadalupe fur seal	50	[4] N/A

[1] Northern elephant seals and Steller sea lion takes are adjusted to reflect observed species-specific reactivity to launch stimulus.
[2] "N/A" indicates that a species is not expected to occur at the location.
[3] Of note, from November to May, there are approximately 125 individuals at the NCI (S. Melin, 2019), further supporting a seasonal correction factor.
[4] Guadalupe fur seal are generally not expected to occur on the NCI. However, as described herein, given that they have occasionally been sighted on the NCI, NMFS is conservatively authorizing take of Guadalupe fur seal as described herein.

TABLE 10—AUTHORIZED TAKE BY LEVEL B HARASSMENT AT NCI

[San Miguel and Santa Rosa]

	2024	2025	2026	2027	2028	5-Year total take
Maximum number of sonic booms	5	12	24	30	33	
Maximum number of sonic booms over 2.0 psf	2	3	6	8	9	

TABLE 10—AUTHORIZED TAKE BY LEVEL B HARASSMENT AT NCI—Continued

[San Miguel and Santa Rosa]

	2024	2025	2026	2027	2028	5-Year total take
Pacific harbor seal	520	780	1,560	2,080	2,340	7,280
California sea lion	15,742	23,613	47,227	62,969	70,840	220,391
Northern elephant seal	396	594	2,970	3,960	4,455	12,375
Northern fur seal	1,313	1,970	3,939	5,252	5,909	18,383
Guadalupe fur seal	5	8	15	20	23	71

Total Authorized Take

Table 11 sums the take estimates described above for VSFB (rocket launches, missile launches, and UAS) and NCI (rocket launches only). These takes represent the number of instances of harassment of pinnipeds following exposure to the indicated activities. However, every take does not necessarily, and in this case is not expected to, represent a separate individual. Rather, given the known repeated use of haulouts by pinnipeds of all species, it is reasonable to expect that some subset of the calculated takes represent repeated takes of the same individuals, which means that the number of individuals taken is expected to be significantly smaller than the number of instances of take.

TABLE 11—TOTAL AUTHORIZED ANNUAL TAKE [1]

Species	2024	2025	2026	2027	2028	Highest 1-year take estimated	Stock abundance	Highest annual instances of take as percent of stock abundance
Pacific harbor seal	4,100	5,478	7,748	10,130	11,135	11,135	30,968	36
California sea lion	25,852	34,563	59,297	76,439	84,870	84,870	257,606	33
Northern elephant seal	2,208	3,086	6,368	8,490	9,438	9,438	187,386	5
Steller sea lion	200	275	375	500	550	550	36,308	2
Northern fur seal	1,313	1,970	3,939	5,252	5,909	5,909	14,050	42
Guadalupe fur seal	5	8	15	20	23	23	34,187	0

[1] Given the known repeated use of haulouts by pinnipeds of all species, it is reasonable to expect that some subset of the calculated takes represent repeated takes of the same individuals, which means that the number of individuals taken is expected to be significantly smaller than the number of instances of take.

Mitigation

In order to issue regulations and an LOA under section 101(a)(5)(A) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to the activity, and other means of effecting the least practicable impact on the species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stock for taking for certain subsistence uses (latter not applicable for this action). NMFS regulations require applicants to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting the activity or other means of effecting the least practicable adverse impact upon the affected species or stocks, and their habitat (50 CFR 216.104(a)(11)). The NDAA for Fiscal Year 2004 amended the MMPA as it relates to military readiness activities and the incidental take authorization process such that ''least practicable impact'' shall include consideration of personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses where applicable, NMFS considers two primary factors:

(1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (probability implemented as planned), and;

(2) The practicability of the measures for applicant implementation, which may consider such things as cost and impact on operations, and, in the case of a military readiness activity, personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

Below, we describe the required mitigation measures for launches (rocket and missile), manned aircraft, and UAS.

Launches (Rocket and Missile)

USSF must provide pupping information to launch proponents at the earliest possible stage in the launch planning process to maximize their ability to schedule launches to minimize pinniped disturbance during pupping seasons on VSFB from 1 March to 30 April and on the Northern Channel Islands from 1 June–31 July. If practicable, rocket launches predicted to produce a sonic boom on the Northern Channel Islands >3 psf from 1 June–31 July will be scheduled to coincide with tides in excess of +1.0 ft (0.3 m), with an objective to do so at least 50 percent of the time. USSF will provide a detailed plan to NMFS for approval that outlines how this measure will be implemented. This measure will minimize occurrence of launches during low tides when harbor seals and California sea lions are anticipated to haul out in the greatest numbers during times of year when pupping may be occurring, therefore further reducing the

already unlikely potential for separation of mothers from pups and potential for injury during stampedes. While harbor seal pupping extends through June, harbor seals reach full size at approximately 2 months old, at which point they are less vulnerable to disturbances. In consideration of that and practicability concerns raised by USSF, this measure does not extend through the later portion of the harbor seal pupping season at VSFB.

Manned Aircraft

For manned flight operations, aircraft must use approved routes for testing and evaluation. Manned aircraft must also remain outside of a 1,000-ft (305 m) buffer around pinniped rookeries and haul-out sites (except in emergencies such as law enforcement response or Search and Rescue operations, and with a reduced, 500-ft (152 m) buffer at Small Haul-out 1). As discussed earlier, use of these routes and implementation of the buffer will avoid behavioral disturbance of marine mammals from manned aircraft operations.

UAS

UAS classes 0–2 must maintain a minimum altitude of 300 ft (91 m) over all known marine mammal haulouts when marine mammals are present, except at take-off and landing. Class 3 must maintain a minimum altitude of 500 ft (152 m), except at take-off and landing. UAS classes 4 and 5 only operate from the VSFB airfield and must maintain a minimum altitude of 1,000 ft (305 m) over marine mammal haulouts except at take-off and landing. USSF must not fly class 4 or 5 UAS below 1,000 ft (305 m) over haulouts.

Based on our evaluation of the applicant's proposed measures, NMFS has determined that the required mitigation measures provide the means of effecting the least practicable adverse impact on the affected 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 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 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 while conducting the activities. Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should contribute to improved understanding of one or more of the following:

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.,* presence, abundance, distribution, density);
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) action or environment (*e.g.,* source characterization, propagation, ambient noise); (2) affected species (*e.g.,* life history, dive patterns); (3) co-occurrence of marine mammal species with the activity; or (4) biological or behavioral context of exposure (*e.g.,* age, calving or feeding areas);
- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors;
- How anticipated responses to stressors impact either: (1) long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks;
- Effects on marine mammal habitat (*e.g.,* marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat); and,
- Mitigation and monitoring effectiveness.

The USSF proposed a suite of monitoring measures on both VSFB and the NCI to document impacts of the specified activities on marine mammals. These monitoring measures include both routine, semi-monthly counts at all haul out sites on VSFB, and launch-specific monitoring at VSFB and/or NCI when specific criteria are met. For monitoring at VSFB and NCI, monitoring must be conducted by at least one NMFS-approved protected species observer (PSO) trained in marine mammal science. PSOs must have demonstrated proficiency in the identification of all age and sex classes of both common and uncommon pinniped species found at VSFB and the NCI. They must be knowledgeable of approved count methodology and have experience in observing pinniped behavior, especially that due to human disturbances, to document pinniped activity at the monitoring site(s) and to record marine mammal response to base operations. Specific requirements for monitoring locations at VSFB and NCI respectively, are described in additional detail below. In the event that the requirement for PSO monitoring cannot be met (such as when access is prohibited due to safety concerns), daylight or night-time video monitoring may be used in lieu of PSO monitoring. In certain circumstances where the daylight or nighttime video monitoring is not possible (*e.g.,* USSF is unable to access a monitoring site due to road conditions or human safety concerns), USSF must notify NMFS.

Rocket Launch Monitoring at VSFB

At VSFB, USSF must conduct marine mammal monitoring and take acoustic measurements for all new rockets, for rockets (existing and new) launched from new facilities, and for larger or louder rockets (including those with new launch proponents) than those that have been previously launched from VSFB during their first three launches, and for the first three launches from any new facilities during March through July (*i.e.,* the period during which harbor seals are pupping occurs and California sea lions are present).

For the purposes of establishing monitoring criteria for VSFB haulouts, computer software is used to model sound pressure levels anticipated to occur for a given launch and/or recovery. Sonic boom modeling will be performed prior to the first three small or medium rocket launches from new launch proponents or at new launch facilities, and all heavy or super-heavy rocket launches. PCBoom, a commercially available modeling program, or an acceptable substitute, will be used to model sonic booms from new vehicles.

Launch parameters specific to each launch will be incorporated into each model run, including: launch direction and trajectory, rocket weight, length, engine thrust, engine plume drag, and launch profile (vehicle position versus time from launch to first-stage burnout), among other aspects. Various weather scenarios will be analyzed from NOAA weather records for the region, then run through the model. Among other factors, these will include the presence or absence of the jet stream, and if present, its direction, altitude and velocity. The type, altitude, and density of clouds will also be considered. From these data, the models will predict peak amplitudes and impacted locations. As described below, this approach is also used to assess whether thresholds (table 12) for marine mammal monitoring on NCI could be exceeded or not, and whether

marine mammal monitoring will be necessary for animals hauled out at NCI.

In general, on both VSFB and NCI, event-specific monitoring typically involves four to six observations of each significant haul-out area each day, over a period of 3 to 5 hours. For launches that occur during the harbor seal pupping season (March 1 through June 30) or when higher numbers of California sea lions are present (June 1 through July 31), monitoring will be conducted by at least one NMFS-approved PSO trained in marine mammal science. Authorized PSOs shall have demonstrated proficiency in the identification of all age and sex classes of all marine mammal species that occur at VSFB. They shall be knowledgeable of approved count methodology and have experience in observing pinniped behavior, especially that due to human disturbances.

When launch monitoring is required, monitoring will begin at least 72 hours prior to the launch and continue through at least 48 hours after the launch. USSF will conduct a minimum of four surveys per day during these windows. For launches within the harbor seal pupping season, a 2-week follow-up pup survey will be required to ensure that there were no adverse effects to pups. During daylight monitoring, time-lapse video recordings will be made to capture the reactions of pinnipeds to each launch, and during nighttime monitoring, USSF will employ night video monitoring, when feasible. Monitoring will include multiple surveys each day. When possible, PSOs will record: species, number, general behavior, presence of pups, age class, gender, and reaction to launch noise, or to natural or other human-caused disturbances. They will also record environmental conditions, including visibility, air temperature, clouds, wind speed and direction, tides, and swell height and direction.

NCI Launch Monitoring

USSF will conduct marine mammal monitoring and take acoustic measurements at the NCI if the sonic boom model indicates that pressures from a boom will reach or exceed the psf level detailed in table 12 during the indicated date range. These dates were determined to be appropriate to account for sensitive seasons, primarily pupping, for the various pinniped species.

TABLE 12—NCI SONIC BOOM LEVEL REQUIRING MONITORING, BY DATE

Dates	Sonic boom level
1 January–28 February	>7 psf.
1 March–31 July	>5 psf.
1 August–30 September ...	>7 psf.
1 October–31 December ..	no monitoring.

USSF will use specialized acoustic instruments to record sonic booms generated by launches from VSFB and resulting overflights or recoveries predicted to affect NCI haul out sites. VSFB will analyze the recordings to determine the intensity, duration, and frequency of sonic booms and resulting marine mammal responses in order to compare monitoring results with levels considered potentially harmful to marine mammals. The analysis can also be used to validate the efficacy of the model.

Monitoring locations on NCI will be selected based upon the model results, prioritizing a significant haulout site on one of the islands where the maximum sound pressures are expected to occur. Currently, monitoring the reactions of northern fur seals and Pacific harbor seals to sonic booms is of a higher priority than monitoring of California sea lions and northern elephant seals, for which more data is currently available (table 5). Monitoring the reactions of mother-pup pairs of any species is also a high priority.

Considering the large numbers of pinnipeds (sometimes thousands) that occur on some NCI beaches, while estimates of the entire beach population will be made and their reactions to the launch noise noted, more focused and detailed monitoring will be conducted on a smaller subset or focal group. Photos and/or video recordings will be collected for daylight launches when feasible, and if the launch occurs in darkness night vision equipment will be used. Potential impediments to effective use of photographic and video equipment include periods of reduced visibility, terrain that obscures animals from view from one observation point, severe glare and fog that can occur, and/or other factors.

Monitoring will be conducted by at least one NMFS-approved PSO who is trained in marine mammal science. Another person will accompany the monitor for safety reasons. Monitoring will commence at least 72 hours prior to the launch, during the launch and at least 48 hours after the launch, unless no sonic boom is detected by the monitors and/or by the acoustic recording equipment, at which time monitoring will be stopped. If the launch occurs in darkness, night vision equipment will be used. Monitoring for each launch will include multiple surveys each day that record, when possible: species, number, general behavior, presence of pups, age class, gender, and reaction to sonic booms or natural or human-caused disturbances. Photos and/or video recordings will be taken when feasible. Environmental conditions will also be recorded, including visibility, air temperature, clouds, wind speed and direction, tides, and swell height and direction.

USSF will continue to test equipment and emerging technologies, including but not limited to night vision cameras, newer models of remote video cameras and other means of remote monitoring at both VSFB and on the NCI. UAS-based or space-based technologies that may become available will be evaluated for suitability and practicability, and for any advantage that remote sensing may provide to existing monitoring approaches, including ensuring coverage when scheduling constraints or other factors impede onsite monitoring at NCI.

Missile Launch Monitoring

Multiple years of monitoring indicates that missile launches do not result in significant take (*i.e.,* only a subset of pinnipeds, in the vicinity of the launch trajectory, respond in a manner that would qualify as a take, and the impacts appear comparatively minor and of short duration). Therefore, monitoring of marine mammals is only required for the first three launches of the missiles for the new GBSD during the months of March through July (*i.e.,* the period during which harbor seals are pupping and California sea lions are present) across the 5-year duration of this rule.

When missile launch monitoring is required, monitoring will include multiple surveys each day. When possible, PSOs will record: species, number, general behavior, presence of pups, age class, gender, and reaction to launch noise, or to natural or other human-caused disturbances. They will also record environmental conditions, including visibility, air temperature, clouds, wind speed and direction, tides, and swell height and direction.

USSF Semi-Monthly Sentinel Surveys

USSF conducts marine mammal surveys on a regular basis in addition to the monitoring that is required based on launch characteristics and sound pressure thresholds, described above. These regular surveys help characterize onsite trends in pinniped presence and abundance and, over the longer term, provide important context for

interpreting seasonal trends and launch-specific monitoring results. The current monthly surveys have allowed researchers to assess haul-out patterns and relative abundance over time, presenting a better picture of pinniped population trends at VSFB and whether USSF operations are resulting in cumulative impacts. For the period of this LOA, and in conjunction with changes of monitoring criteria for launches, the applicant will change the frequency of sentinel surveys from monthly to semi-monthly (two surveys per month).

Past surveys have captured important data including novel occurrences (such as unsuccessful California sea lion pupping on VSFB in 2003 and northern elephant seal pupping in 2017) and emerging or fleeting trends (such as greater numbers of northern elephant seals hauling out in 2004, and a temporary increase in California sea lions onsite in 2018 and 2019). These results, in conjunction with anticipated changes in launch activity and environmental factors underscore the value of consistent surveys collected on a regular basis, to provide sound context for launch-specific monitoring results.

USSF will conduct semi-monthly surveys (two surveys per month, rather than the current monthly surveys) to monitor the abundance, distribution, and status of pinnipeds at VSFB. Whenever possible, these surveys will be timed to coincide with the lowest afternoon tides of each month when the greatest numbers of animals are usually hauled out. South VSFB surveys start about two hours before the low tide and end two hours afterward. North VSFB surveys are either conducted by a separate surveyor on the same day as south VSFB, or on the day before/after south VSFB surveys. North VSFB surveys require approximately 90 minutes. Monitoring during nighttime low tides is not possible because of the dangerously unstable nature of the bluffs overlooking many of the observation points. Occasional VSFB or area closures also sometimes preclude monitoring on a given day, in which case the next best day will be selected.

NMFS-approved PSOs will gather the following data at each site: species, number, general behavior, presence of pups, age class, gender, and any reactions to natural or human-caused disturbances. They will also record environmental conditions, including visibility, air temperature, clouds, wind speed and direction, tides, and swell height and direction.

Adaptive Management

The regulations governing the take of marine mammals incidental to launches and supporting activities at VSFB contain an adaptive management component. Our understanding of the effects of launches and supporting activities (*e.g.,* acoustic and visual stressors) on marine mammals continues to evolve, which makes the inclusion of an adaptive management component both valuable and necessary within the context of 5-year regulations.

The reporting requirements associated with this rule are designed to provide NMFS with monitoring data from the previous year to allow NMFS to consider whether any changes to existing mitigation, monitoring or reporting requirements are warranted. The use of adaptive management also allows NMFS to consider new information from different sources to determine (with input from the USSF regarding practicability) on an annual or biennial basis if mitigation or monitoring measures should be modified (including additions or deletions). Mitigation measures could be modified if new data suggests that such modifications will have a reasonable likelihood of more effectively accomplishing the goals of the mitigation and monitoring and if the measures are practicable. If the modifications to the mitigation, monitoring, or reporting measures are more than minor, NMFS will publish a notice of the planned LOA in the **Federal Register** and solicit public comment.

Reporting

USSF is required to submit annual reports as well as a 5-year comprehensive report. USSF is not required to submit launch-specific reports within 90 days after each rocket launch where monitoring is required as was described in the proposed rule (89 FR 5451, January 29, 2024).

USSF must submit an annual report to NMFS on March 1st of each year that describes all activities and monitoring for the specified activities during that year. This includes launch monitoring information for each launch where monitoring is required or conducted, including the specific information described below in this section. The annual reports must also include a summary of the documented numbers of instances of harassment incidental to the specified activities, including non-launch activities (*e.g.,* takes incidental to aircraft or helicopter operations observed during the semi-monthly surveys). Annual reports must also include the results of the semi-monthly sentinel marine mammal monitoring.

Launch monitoring information in the annual reports must include the following:

- Date(s) and time(s) of the launch (and sonic boom, if applicable);
- Number(s), type(s), and location(s) of rockets or missiles launched;
- Monitoring program design; and
- Results of the monitoring program, including, but not necessarily limited to:
  - Date(s) and location(s) of marine mammal monitoring;
  - Number of animals observed, by species, on the haulout prior to commencement of the launch or recovery;
  - General behavior and, if possible, age (including presence of pups) and sex class of pinnipeds hauled out prior to the launch or recovery;
  - Number of animals, by species, age, and sex class, that responded at a level indicative of harassment;
  - Number of animals, by species, age, and sex class that entered the water, the length of time the animal(s) remained off the haulout, and any behavioral responses by pinnipeds that were likely in response to the specified activities, including in response to launch noise or a sonic boom;
  - Environmental conditions including visibility, air temperature, clouds, wind speed and direction, tides, and swell height and direction; and
  - Results of acoustic monitoring, including the following
    - Recorded sound levels associated with the launch (in SEL, SPL_{peak}, and SPL_{rms});
    - Recorded sound levels associated with the sonic boom (if applicable), in psf;
    - The estimated distance of the recorder to the launch site and the distance of the closest animals to the launch site.

USSF must submit a final comprehensive 5-year report no later than 180 days prior to expiration of these regulations. This report must summarize the findings made in all previous reports and assess both the impacts at each of the major rookeries and assess any cumulative impacts on marine mammals from the specified activities.

If real-time monitoring during a launch shows that the activity identified in § 217.60(a) is reasonably likely to have resulted in the mortality or injury of any marine mammal, USSF must notify NMFS within 24 hours (or next business day). NMFS and USSF must then jointly review the launch procedure and the mitigation

requirements and make appropriate changes through the adaptive management process, as necessary and before any subsequent launches of rockets and missiles with similar or greater sound fields and/or sonic boom pressure levels.

Negligible Impact Analysis and Determination

NMFS has defined negligible impact 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 (50 CFR 216.103). 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 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 harassment, NMFS considers other factors, such as the likely nature of any impacts or responses (*e.g.,* intensity, duration), the context of any impacts or responses (*e.g.,* critical reproductive time or location, foraging impacts affecting energetics), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS' implementing regulations (54 FR 40338, September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the baseline (*e.g.,* as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

To avoid repetition, this introductory discussion of our analysis applies to all the species listed in table 4, given that many of the anticipated effects of this project on different marine mammal stocks are expected to be relatively similar in nature. Where there are meaningful differences between species or stocks, or groups of species, in anticipated individual responses to activities, impact of expected take on the population due to differences in population status, or impacts on habitat, they are described independently in the analysis below.

USSF's activities, as outlined previously, have the potential to disturb and temporarily displace marine mammals. Specifically, the specified activities may result in take, in the form of Level B harassment only, from airborne sounds resulting from launches and recoveries, including sonic booms from certain launches and sound or visual stimuli from UAS operations. Based on the best available information, including monitoring reports from similar activities conducted at the site, the Level B harassment of pinnipeds will likely be limited to reactions such as moving a short distance, with some hauled out animals moving toward or flushing into the water for a period of time following the disturbance.

As mentioned previously, different species of marine mammals and different conditions at haul out sites can result in different degrees of response from the animals. Sufficient data collected onsite can be used to characterize the relative tendency of species to react to acoustic disturbance and, specifically, to noise from VSFB launches and operations. These distinctions in species response are discussed above in the Potential Effects of Specified Activities on Marine Mammals and Their Habitat section, and correction factors for species sensitivity are applied to the take estimates provided in this document.

As discussed earlier, Level B harassment of pinnipeds from rocket and missile launch activities or UAS exposure is primarily expected to be of relatively short duration, in the form of changing position, direction, or location on the haulout or, on a subset of occasions, flushing into the water for some amount of time (up to a few hours). UAS flights will be conducted in accordance with minimum altitude requirements designed to minimize impacts over haulouts and planning measures are in place to minimize launch effects to pinnipeds on beaches where pupping is occurring. Given the potential for seasonal site fidelity, it is likely that some individuals will be taken multiple times during the course of the year as a result of exposure to multiple launches, and potentially UAS overflights. However, given the intermittency of the launches and the fact that they do not all originate from the same location, these repeated exposures are not expected to result in prolonged exposures over multiple days. Thus, even repeated instances of Level B harassment of some small subset of an overall stock is unlikely to result in any significant realized decrease in fitness of those individuals, and thus will not result in any adverse impact to the stock as a whole. Level B harassment will be minimized through use of mitigation measures described above.

As discussed earlier, some of the beaches that may be impacted by launch activities and UAS overflights support pupping in some months, specifically for harbor seals (March through June on VSFB and NCI), California sea lions (May through August on NCI), elephant seals (January through March on VSFB and December through March on NCI), and northern fur seals (June through August on San Miguel Island, NCI).

Broadly speaking, flushing of pinnipeds into the water has the potential to result in mother-pup separation, or in extreme circumstances could result in a stampede, either of which could potentially result in serious injury or mortality. However, based on the best available information, including reports from over 20 years of monitoring pinniped response to launch noise at VSFB and the NCI, no serious injury or mortality of marine mammals is anticipated as a result of the activities. USSF is required to provide pupping information to launch proponents at the earliest possible stage in the launch planning process, to maximize their ability to schedule launches to minimize pinniped disturbance during Pacific harbor seal pupping on Vandenberg SFB (1 March to 30 April) and California sea lion pupping on the Northern Channel Islands (1 June–31 July of each year). If practicable, rocket launches predicted to produce a sonic boom on the Northern Channel Islands >5 psf during the California sea lion pupping season will be scheduled to coincide with tides in excess of +1.0 ft (0.3 m), with an objective to achieve such avoidance at least 50 percent of the time, which is expected to minimize the impacts at places and times where pupping could be occurring. Even in the instances of pinnipeds being harassed by sonic booms from rocket launches at VSFB, no evidence of abnormal behavior, injuries or mortalities, or pup abandonment as a result of sonic booms (SAIC 2013; CEMML, 2018) has been presented. These findings are supported by more than two decades of surveys at VSFB and the NCI (MMCG and SAIC, 2012). Post-launch monitoring generally reveals a return to normal behavioral patterns within minutes up to an hour or two of each launch, regardless of species. Of note, research on abundance and fecundity has been conducted at San Miguel Island (recognized as an important pinniped rookery) for decades. This research, as well as SARs, support a conclusion that operations at VSFB have not had significant impacts on the numbers of animals observed at

San Miguel Island rookeries and haulouts (SAIC, 2012). In addition, northern elephant seal pupping was documented on VSFB for the first time in 2017 and continued into 2022, further indicating that the effects of ongoing launch activities do not preempt new marine mammal activity and are unlikely to have impacted annual rates of recruitment or survival among affected species.

In summary and as described above, the following factors primarily support our determination that the impacts resulting from this activity are not expected to adversely affect the species or stock through effects on annual rates of recruitment or survival:

- No injury, serious injury, or mortality are anticipated or authorized;
- The anticipated instances of Level B harassment are expected to consist of, at worst, temporary modifications in behavior (*i.e.,* short distance movements and occasional flushing into the water with return to haulouts within approximately 60–120 minutes), which are not expected to adversely affect the fitness of any individuals;
- The planned activities are expected to result in no long-term changes in the use by pinnipeds of rookeries and haulouts in the project area, based on over 20 years of monitoring data; and
- The presumed efficacy of planned mitigation measures in reducing the effects of the specified activity.

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 required monitoring and mitigation measures, NMFS finds that the total marine mammal take from the planned activity will have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

As noted previously, only take of small numbers of marine mammals may be authorized under sections 101(a)(5)(A) and (D) of the MMPA for specified activities other than military readiness activities. Here, a small portion of the activities (missile launches only) are considered military readiness activities, but we have conducted the assessment considering the totality of the take considered for this final rule. The MMPA does not define small numbers and so, in practice, where estimated numbers are available, NMFS compares the maximum number of individuals taken in any year to the most appropriate estimation of abundance of the relevant species or stock in our determination of whether an authorization is limited to small numbers of marine mammals. Generally, if the predicted annual number of individuals to be taken is fewer than one-third of the species or stock abundance for each year of the period of an authorization, the take is considered to be of small numbers. See 86 FR 5438–5440, January 19, 2021. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities. Here, we considered the tendency to show site fidelity among affected species, their seasonal distribution trends and the likelihood of individual animals being disturbed repeatedly (*i.e.,* taken by multiple launches across multiple days within a year), rather than treating each instance of take as though it was affecting a different individual.

For every year, the instances of take authorized of northern elephant seal, Steller sea lion, and Guadalupe fur seal comprise less than one-third of the best available population abundances respectively (table 11). The number of animals authorized to be taken from these stocks is considered small relative to the relevant stock's abundances even if each estimated instance of take accrued to a different individual, which is an unlikely scenario.

For harbor seals and California sea lions (years 4 and 5 only), and Northern fur seals (years 3, 4, and 5 only), the highest annual estimated instances of take are greater than or equal to one-third of the best available stock abundance (36, 33, and 42 percent, respectively). However, as noted previously, the number of expected instances of take does not always fairly represent the number of individual animals expected to be taken. The same individual can incur multiple takes by Level B harassment over the course of an activity that occurs multiple times in the same area (such as the USSF's planned activity), especially where species have documented site fidelity to a location within the project area, as is the case here. Additionally, due to the nature of the specified activity—launch activities affecting animals at specific haul out locations, rather than a mobile activity occurring throughout the much larger stock range—a much smaller portion of the stock is expected to be impacted. Thus, while we considered and authorize the instances of incidental take of these species shown in table 11, the number of individuals that would be incidentally taken by the planned activities will, in fact, be substantially lower than the authorized instances of take, and less than one third of the stock abundance for each of these species. We base the small numbers determination on the number of individuals taken versus the number of instances of take, as is appropriate when the information is available.

Based on the analysis contained herein of the planned activity (including the required mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS finds that small numbers of marine mammals will be taken relative to the population size of the affected species or stocks.

Unmitigable Adverse Impact Analysis and Determination

There are no relevant subsistence uses of the affected marine mammal stocks or species implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks will not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Classification

Endangered Species Act

Section 7(a)(2) of the ESA of 1973 (ESA; 16 U.S.C. 1531 *et seq.*) requires that each Federal agency insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance for the issuance of ITAs, NMFS consults internally whenever we propose to authorize take for endangered or threatened species, in this case with the NMFS West Coast Region.

NMFS is authorizing a limited amount of take, by Level B harassment (5–23 annually, 70 over the course of the 5-year rule), of Guadalupe fur seals, which are listed as Threatened under the ESA. On December 20, 2023, NMFS' West Coast Regional Office concurred with OPR's determination that USSF's planned activities are consistent with those addressed by the region's February 15, 2019, letter of concurrence for the current LOA, and are not likely to adversely affect the Guadalupe fur seal.

National Marine Sanctuaries Act

Federal agency actions that are likely to injure national marine sanctuary resources are subject to consultation with the Office of National Marine Sanctuaries (ONMS) under section 304(d) of the National Marine Sanctuaries Act (NMSA). While rocket and missile launches do not occur in national marine sanctuary waters,

depending on the direction of a given launch, rockets and missiles may cross over the Channel Islands National Marine Sanctuary. NMFS, in coordination with NOAA's Office of National Marine Sanctuaries, determined that consultation under the NMSA is not warranted.

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216–6A, NMFS must evaluate our proposed action (*i.e.,* the promulgation of regulations and subsequent issuance of incidental take authorization) and alternatives with respect to potential impacts on the human environment.

This action is consistent with categories of activities identified in Categorical Exclusion B4 of the Companion Manual for NAO 216–6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has determined that this action qualifies to be categorically excluded from further NEPA review.

Executive Order 12866

The Office of Management and Budget has determined that this rule is not significant for purposes of Executive Order 12866.

Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), the Chief Counsel for Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration during the proposed rule stage that this action would not have a significant economic impact on a substantial number of small entities. The factual basis for the certification was published in the proposed rule and is not repeated here. No comments were received regarding this certification. As a result, a regulatory flexibility analysis was not required and none was prepared.

Waiver of Delay in Effective Date

The Assistant Administrator for Fisheries has determined that there is a sufficient basis under the Administrative Procedure Act (APA) to waive the 30-day delay in the effective date of the measures contained in the final rule. Section 553 of the APA provides that the required publication or service of a substantive rule shall be made not less than 30 days before its effective date with certain exceptions, including (1) for a substantive rule that relieves a restriction or (2) when the agency finds and provides good cause for foregoing delayed effectiveness (5 U.S.C 553(d)(1), (d)(3)). Here, the issuance of regulations under section 101(a)(5)(A) of the MMPA relieves the statutory prohibition on the taking of marine mammals, specifically, the incidental taking of marine mammals associated with USSF's launches and supporting activities.

The waiver of the 30-day delay of the effective date of the final rule will ensure that the MMPA final rule and LOAs are in place by the time the current authorizations expire. Any delay in effectiveness of the final rule would result in either: (1) A suspension of planned launches and supporting activities, some of which are military readiness activities; or (2) the USSF's non-compliance with the MMPA (should the USSF conduct launches and supporting activities without LOAs, resulting in unauthorized takes of marine mammals). Moreover, USSF is ready to implement the regulations immediately. For these reasons, NMFS finds good cause to waive the 30-day delay in the effective date. In addition, the rule together with the LOA authorizes incidental take of marine mammals that would otherwise be prohibited under the statute. Therefore, by granting an exception to the USSF, the rule relieves restrictions under the MMPA, which provides a separate basis for waiving the 30-day effective date for the rule under section 553(d)(1) of the APA.

List of Subjects in 50 CFR Part 217

Exports, Fish, Imports, Marine mammals, Reporting and recordkeeping requirements, Transportation.

Dated: April 4, 2024.

Samuel D. Rauch III,

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

For the reasons set out in the preamble, NOAA amends 50 CFR part 217 as follows:

PART 217—REGULATIONS GOVERNING THE TAKE OF MARINE MAMMALS INCIDENTAL TO SPECIFIED ACTIVITIES

■ 1. The authority citation for part 217 continues to read as follows:

Authority: 16 U.S.C. 1361 *et seq.,* unless otherwise noted.

■ 2. Revise subpart G to read as follows:

Subpart G—Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to U.S. Space Force Launches and Operations at Vandenberg Space Force Base, California

Sec.

§ 217.60 Specified activity and specified geographical region.

(a) Regulations in this subpart apply only to the United States Space Force (USSF) and those persons it authorizes to conduct activities on its behalf, for the taking of marine mammals that occurs in the areas outlined in paragraph (b) of this section incidental to rocket and missile launches and supporting operations.

(b) The incidental taking of marine mammals under this subpart may be authorized in a Letter of Authorization (LOA) only for activities originating at Vandenberg Space Force Base (VSFB).

§ 217.61 Effective dates.

(a) Regulations in this subpart are effective from April 10, 2024, through April 10, 2029.

(b) [Reserved]

§ 217.62 Permissible methods of taking.

(a) Under an LOA issued pursuant to § 216.106 of this chapter and § 217.66 or § 217.67, the Holder (hereinafter the USSF) may incidentally, but not intentionally, take marine mammals by Level B harassment, as described in § 217.60(a) and (b), provided the activity is in compliance with all terms, conditions, and requirements of the regulations in this subpart and the appropriate LOA.

(b) The incidental take of marine mammals by the activities listed in § 217.60 is limited to the following species and stocks:

TABLE 1 TO § 217.62(b)

Species	Stock
California sea lion	United States.
Northern fur seal	California.
Guadalupe fur seal ...	Mexico.
Steller sea lion	Eastern.
Harbor seal	California.
Northern elephant seal.	California Breeding.

§ 217.63 Prohibitions.

(a) Except for takings contemplated in § 217.62 and authorized by a LOA issued under § 216.106 of this chapter and §§ 217.66 and 217.67, it shall be unlawful for any person to do any of the following in connection with the activities listed in § 217.60:

(1) Violate, or fail to comply with, the terms, conditions, and requirements of this subpart or a LOA issued under § 216.106 of this chapter and § 217.66 or § 217.67;

(2) Take any marine mammal species or stock not specified in this subpart or such LOAs;

(3) Take any marine mammal specified in this subpart or such LOAs in any manner other than as specified; or

(4) Take a marine mammal specified in this subpart or such LOAs if NMFS determines after notice and comment that the taking allowed for one or more activities under 16 U.S.C. 1371(a)(5)(A) is having or may have more than a negligible impact on the species or stocks of such marine mammal.

(b) [Reserved]

§ 217.64 Mitigation requirements.

(a) When conducting the activities identified in § 217.60(a) and (b), the mitigation measures contained in any LOA issued under § 216.106 of this chapter and § 217.66 or § 217.67 must be implemented. These mitigation measures include (but are not limited to):

(1) USSF must provide pupping information to launch proponents at the earliest possible stage in the launch planning process and direct launch proponents to, if practicable, avoid scheduling launches during pupping seasons on VSFB from 1 March to 30 April and on the Northern Channel Islands from 1 June–31 July. If practicable, rocket launches predicted to produce a sonic boom on the Northern Channel Islands >3 pounds per square foot (psf) from 1 June–31 July will be scheduled to coincide with tides in excess of +1.0 ft (0.3 m), with an objective to do so at least 50 percent of the time.

(2) For manned flight operations, aircraft must use approved routes for testing and evaluation. Manned aircraft must also remain outside of a 1,000-ft (305 m) buffer around pinniped rookeries and haul-out sites (except in emergencies such as law enforcement response or Search and Rescue operations, and with a reduced, 500-ft (152 m) buffer at Small Haul-out 1).

(3) Unscrewed aerial systems (UAS) classes 0–2 must maintain a minimum altitude of 300 ft (91 m) over all known marine mammal haulouts when marine mammals are present, except at take-off and landing. Class 3 must maintain a minimum altitude of 500 ft (152 m), except at take-off and landing. UAS classes 4 and 5 only operate from the VSFB airfield and must maintain a minimum altitude of 1,000 ft (305 m) over marine mammal haulouts except at take-off and landing. USSF must not fly class 4 or 5 UAS below 1,000 ft (305 m) over haulouts.

(b) [Reserved]

§ 217.65 Requirements for monitoring and reporting.

(a) Monitoring at VSFB and NCI must be conducted by at least one NMFS-approved Protected Species Observer (PSO) trained in marine mammal science. PSOs must have demonstrated proficiency in the identification of all age and sex classes of all marine mammal species that occur at VSFB and on Northern Channel Islands (NCI). They must be knowledgeable of approved count methodology and have experience in observing pinniped behavior, especially that due to human disturbances.

(b) In the event that the PSO requirements described in paragraph (a) of this section cannot be met (*e.g.,* access is prohibited due to safety concerns), daylight or nighttime video monitoring must be used in lieu of PSO monitoring. In certain circumstances where the daylight or nighttime video monitoring is also not possible (*e.g.,* USSF is unable to access a monitoring site due to road conditions or human safety concerns), USSF must notify NMFS.

(c) At VSFB, USSF must conduct marine mammal monitoring and take acoustic measurements for all new rockets, for rockets (existing and new) launched from new facilities, and for larger or louder rockets (including those with new launch proponents) than those that have been previously launched from VSFB during their first three launches and for the first three launches from any new facilities during March through July.

(1) For launches that occur during the harbor seal pupping season (March 1 through June 30) or when higher numbers of California sea lions are present (June 1 through July 31), monitoring must be conducted by at least one NMFS-approved PSO trained in marine mammal science.

(2) When launch monitoring is required, monitoring must begin at least 72 hours prior to the launch and continue through at least 48 hours after the launch. Monitoring must include multiple surveys each day, with a minimum of four surveys per day.

(3) For launches within the harbor seal pupping season, USSF must conduct a follow-up survey of pups.

(4) For launches that occur during daylight, USSF must make time-lapse video recordings to capture the reactions of pinnipeds to each launch. For launches that occur at night, USSF must employ night video monitoring, when feasible.

(5) When possible, PSOs must record: species, number, general behavior, presence and number of pups, age class, gender, and reaction to launch noise, or to natural or other human-caused disturbances. PSOs must also record environmental conditions, including visibility, air temperature, clouds, wind speed and direction, tides, and swell height and direction.

(d) USSF must conduct sonic boom modeling prior to the first three small or medium rocket launches from new launch proponents or at new launch facilities, and all heavy or super-heavy rocket launches.

(e) USSF must conduct marine mammal monitoring and take acoustic measurements at the NCI if the sonic boom model indicates that pressures from a boom will reach or exceed 7 psf from 1 January through 28 February, 5 psf from 1 March through 31 July, or 7 psf from 1 August through 30 September. No monitoring is required on NCI from 1 October through 31 December.

(1) The monitoring site must be selected based upon the model results, prioritizing a significant haulout site on one of the islands where the maximum sound pressures are expected to occur.

(2) USSF must estimate the number of animals on the monitored beach and record their reactions to the launch noise and conduct more focused monitoring on a smaller subset or focal group.

(3) Monitoring must commence at least 72 hours prior to the launch, during the launch and at least 48 hours after the launch, unless no sonic boom is detected by the monitors and/or by the acoustic recording equipment, at which time monitoring may be stopped.

(4) For launches that occur in darkness, USSF must use night vision equipment.

(5) Monitoring for each launch must include multiple surveys each day that record, when possible: species, number, general behavior, presence of pups, age class, gender, and reaction to sonic booms or natural or human-caused disturbances.

(6) USSF must collect photo and/or video recordings for daylight launches

when feasible, and if the launch occurs in darkness night vision equipment will be used.

(7) USSF must record environmental conditions, including visibility, air temperature, clouds, wind speed and direction, tides, and swell height and direction.

(f) USSF must continue to test equipment and emerging technologies, including but not limited to night vision cameras, newer models of remote video cameras and other means of remote monitoring at both VSFB and on the NCI.

(g) USSF must evaluate UAS based or space-based technologies that become available for suitability, practicability, and for any advantage that remote sensing may provide to existing monitoring approaches.

(h) USSF must monitor marine mammals during the first three launches of the missiles for the new Ground Based Strategic Defense program during the months of March through July across the 5-year duration of this subpart.

(1) When launch monitoring is required, monitoring must include multiple surveys each day, with a minimum of four surveys per day.

(2) When possible, PSOs must record: species, number, general behavior, presence and number of pups, age class, gender, and reaction to launch noise, or to natural or other human-caused disturbances. PSOs must also record environmental conditions, including visibility, air temperature, clouds, wind speed and direction, tides, and swell height and direction.

(i) USSF must conduct semi-monthly surveys (two surveys per month) to monitor the abundance, distribution, and status of pinnipeds at VSFB. Whenever possible, these surveys will be timed to coincide with the lowest afternoon tides of each month when the greatest numbers of animals are usually hauled out. If a VSFB or area closure precludes monitoring on a given day, USSF must monitor on the next best day.

(1) PSOs must gather the following data at each site: species, number, general behavior, presence and number of pups, age class, gender, and any reactions to natural or human-caused disturbances. PSOs must also record environmental conditions, including visibility, air temperature, clouds, wind speed and direction, tides, and swell height and direction.

(2) [Reserved]

(j) USSF must submit an annual report each year to NMFS Office of Protected Resources and West Coast Region on March 1st of each year that describes all activities and monitoring for the specified activities during that year. This includes launch monitoring information in paragraphs (j)(1) through (3) of this section for each launch where monitoring is required or conducted. The annual reports must also include a summary of the documented numbers of instances of harassment incidental to the specified activities, including non-launch activities (*e.g.,* takes incidental to aircraft or helicopter operations observed during the semi-monthly surveys). Annual reports must also include the results of the semi-monthly sentinel marine mammal monitoring described in paragraph (i) of this section.

(1) Launch information, including:

(i) Date(s) and time(s) of the launch (and sonic boom, if applicable); and

(ii) Number(s), type(s), and location(s) of rockets or missiles launched;

(2) Monitoring program design; and

(3) Results of the monitoring program, including, but not necessarily limited to:

(i) Date(s) and location(s) of marine mammal monitoring;

(ii) Number of animals observed, by species, on the haulout prior to commencement of the launch or recovery;

(iii) General behavior and, if possible, age (including presence and number of pups) and sex class of pinnipeds hauled out prior to the launch or recovery;

(iv) Number of animals, by species, age, and sex class that responded at a level indicative of harassment. Harassment is characterized by:

(A) Movements in response to the source of disturbance, ranging from short withdrawals at least twice the animal's body length to longer retreats over the beach, or if already moving a change of direction of greater than 90 degrees; or

(B) All retreats (flushes) to the water;

(v) Number of animals, by species, age, and sex class that entered the water, the length of time the animal(s) remained off the haulout, and any behavioral responses by pinnipeds that were likely in response to the specified activities, including in response to launch noise or a sonic boom;

(vi) Environmental conditions including visibility, air temperature, clouds, wind speed and direction, tides, and swell height and direction; and

(vii) Results of acoustic monitoring, including the following:

(A) Recorded sound levels associated with the launch (in SEL, SPL_{peak}, and SPL_{rms});

(B) Recorded sound levels associated with the sonic boom (if applicable), in psf; and

(C) The estimated distance of the recorder to the launch site and the distance of the closest animals to the launch site.

(k) USSF must submit a final, comprehensive 5-year report to NMFS Office of Protected Resources. This report must:

(1) Summarize the activities undertaken and the results reported in all annual reports;

(2) Assess the impacts at each of the major rookeries; and

(3) Assess the cumulative impacts on pinnipeds and other marine mammals from the activities specified in § 217.60(a) and (b).

(l) If the activity identified in § 217.60(a) likely resulted in the take of marine mammals not identified in § 217.62, then the USSF must notify the NMFS Office of Protected Resources and the NMFS West Coast Region stranding coordinator within 24 hours of the discovery of the take.

(m) If real-time monitoring during a launch shows that the activity identified in § 217.60(a) is reasonably likely to have resulted in the mortality or injury of any marine mammal, USSF must notify NMFS within 24 hours (or next business day). NMFS and USSF must then jointly review the launch procedure and the mitigation requirements and make appropriate changes through the adaptive management process, as necessary and before any subsequent launches of rockets and missiles with similar or greater sound fields and/or sonic boom pressure levels.

§ 217.66 Letters of Authorization.

(a) To incidentally take marine mammals pursuant to this subpart, the USSF must apply for and obtain an LOA in accordance with § 216.106 of this chapter.

(b) An LOA, unless suspended or revoked, may be effective for a period of time not to exceed expiration of this subpart.

(c) If an LOA expires prior to the expiration date of this subpart, the USSF may apply for and obtain a renewal LOA.

(d) In the event of projected changes to the activity or to mitigation, monitoring, or reporting (excluding changes made pursuant to the adaptive management provision of § 217.67(c)(1) required by an LOA, USSF must apply for and obtain a modification of the LOA as described in § 217.67.

(e) Each LOA will set forth:

(1) Permissible methods of incidental taking;

(2) Means of effecting the least practicable adverse impact (*i.e.,* mitigation) on the species and its habitat; and

(3) Requirements for monitoring and reporting.

(f) Issuance of the LOA shall be based on a determination that the level of taking will be consistent with the findings made for the total taking allowable under this subpart.

(g) Notice of issuance or denial of a LOA shall be published in the **Federal Register** within 30 days of a determination.

§ 217.67 Renewals and modifications of Letter of Authorization.

(a) A LOA issued under § 216.106 of this chapter and § 217.66 for the activity identified in § 217.60(a) and (b) shall be modified upon request by USSF, provided that:

(1) The specified activity and mitigation, monitoring, and reporting measures, as well as the anticipated impacts, are the same as those described and analyzed for this subpart (excluding changes made pursuant to the adaptive management provision in paragraph (c)(1) of this section); and

(2) NMFS determines that the mitigation, monitoring, and reporting measures required by the previous LOA under this subpart were implemented.

(b) For LOA modification or renewal requests by the applicant that include changes to the activity or the mitigation, monitoring, or reporting measures (excluding changes made pursuant to the adaptive management provision in paragraph (c)(1) of this section) that do not change the findings made for this subpart or that result in no more than a minor change in the total estimated number of takes (or distribution by species or stock or years), NMFS may publish a notice of proposed changes to the LOA in the **Federal Register**, including the associated analysis of the change, and solicit public comment before issuing the LOA.

(c) An LOA issued under § 216.106 of this chapter and § 217.66 for the activity identified in § 217.60(a) and (b) may be modified by NMFS under the following circumstances:

(1) After consulting with the USSF regarding the practicability of the modifications, NMFS, through adaptive management, may modify (including adding or removing measures) the existing mitigation, monitoring, or reporting measures if doing so creates a reasonable likelihood of more effectively accomplishing the goals of the mitigation and monitoring.

(i) Possible sources of data that could contribute to the decision to modify the mitigation, monitoring, or reporting measures in an LOA include:

(A) Results from the USSF's monitoring from the previous year(s);

(B) Results from other marine mammal and/or sound research or studies; or

(C) Any information that reveals marine mammals may have been taken in a manner, extent or number not authorized by this subpart or a subsequent LOA.

(ii) If, through adaptive management, the modifications to the mitigation, monitoring, or reporting measures are more than minor, NMFS will publish a notice of the proposed changes to the LOA in the **Federal Register** and solicit public comment.

(2) If NMFS determines that an emergency exists that poses a significant risk to the well-being of the species or stocks of marine mammals specified in LOAs issued pursuant to § 216.106 of this chapter and § 217.62, an LOA may be modified without prior notice or opportunity for public comment. Notice would be published in the **Federal Register** within 30 days of the action.

§§ 217.68–217.69 [Reserved]

[FR Doc. 2024–07559 Filed 4–9–24; 8:45 am]

BILLING CODE 3510–22–P