Tetrabromobisphenol A with Cover Letter Dated 04/17/78. 0200479. 1978.
123. Eriksson, P., E. Jakobsson, and A. Fredriksson. Developmental Neurotoxicity of Brominated Flame Retardants, Polybrominated Diphenyl Ethers, and Tetrabromobisphenol A. Organohalogen Compounds, 35, 375–377. 1998.
124. Eriksson, P., E. Jakobsson, and A. Frederiksson. Brominated Flame Retardants: A Novel Class of Developmental Neurotoxicants in Our Environment? *Environmental Health Perspectives.* 109, 903–908. 2001.
125. Fukuda, N., Y. Ito, M. Yamaguchi, K. Mitumori, M. Koizumi, R. Hasegawa, E. Kamata, and M. Ema. Unexpected Nephrotoxicity Induced by Tetrabromobisphenol a in Newborn Rats. *Toxicology Letters.* 150, 145–155. 2004.
126. Kim, B., E. Colon, S. Chawla, L.N. Vandenberg, and A. Suvorov. Endocrine disruptors alter social behaviors and indirectly influence social hierarchies via changes in body weight. *Environmental health: A global access science source.* 14, 64. 2015.
127. Saegusa, Y., H. Fujimoto, G.H. Woo, K. Inoue, M. Takahashi, K. Mitsumori, A. Nishikawa, and M. Shibatani. Developmental Toxicity of Brominated Flame Retardants, Tetrabromobisphenol a and 1,2,5,6,9,10-Hexabromocyclododecane, in Rat Offspring after Maternal Exposure from Mid-Gestation through Lactation. *Reproductive Toxicology.* 28, 456–467. 2009.
128. Saegusa, Y., H. Fujimoto, G.H. Woo, T. Ohishi, L. Wang, K. Mitsumori, A. Nishikawa, and M. Shibutani. Transient Aberration of Neuronal Development in the Hippocampal Dentate Gyrus after Developmental Exposure to Brominated Flame Retardants in Rats. *Archives of Toxicology.* 86(9), 1431–1442. 2012.
129. Tada, Y., T. Fujitani, N. Yano, H. Takahashi, K. Yuzawa, H. Ando, Y. Kubo, A. Nagasawa, A. Ogata, and H. Kamimura. Effects of Tetrabromobisphenol a, a Brominated Flame Retardant, in ICR Mice after Prenatal and Postnatal Exposure. *Food and Chemical Toxicology.* 44(8), 1408–1413. 2006.
130. Viberg, H., and P. Eriksson. Differences in Neonatal Neurotoxicity of Brominated Flame Retardants, PBDE 99 and TBBPA, in Mice. *Toxicology.* 289(1), 59–65. 2011.
131. Kicinski, M., M.K. Viaene, E.D. Hond, G. Schoeters, A. Covaci, A.C. Dirtu, V. Nelen, L. Bruckers, K. Croes, I. Sioen, W. Baeyens, N. Van Larebeke, and T.S. Nawrot. 2012. Neurobehavioral Function and Low-Level Exposure to Brominated Flame Retardants in Adolescents: A Cross-Sectional Study. Environmental Health, 11, 1–12.
132. EPA. Larval amphibian growth and development assay (LAGDA) (OCSPP Test Guideline 890.2300). 2002.
133. ACC. HPV Data Summary and Test Plan for Phenol, 4,4′-Isopropylidenbis[2,6-Dibromo- (Tetrabromobisphenol a, TBBPA). Test plan revision/updates, revised test plan. Robust summaries & test plans: Phenol, 4,4′-isopropylidenbis[2,6-dibromo-. 2006. (retrieved in 2013) *http://www.epa.gov/chemrtk/pubs/summaries/phenolis/c13460rt3.pdf.*
134. Garber, E.A.E., G.L. Larsen, H. Hakk, and A. Bergman. Frog Embryo Teratogenic Assay: Xenopus (FETAX) Analysis of the Biological Activity of Tetrabromobisphenol a (TBBPA). Poster presentation at Second International Workshop on Brominated Flame Retardants, May 14–16, Stockholm University, Sweden. 2001.
135. Balch, G.C., and C.D. Metcalfe. *In Vivo* Toxicity Testing of PBDEs Using Early Life Stages of the Japanese Medaka and the Xenopus Tail Resorption Model. 3rd Annual Workshop on Brominated Flame Retardants in the Environment. Canada Centre for Inland Waters, August 23–24, pp. 59–60. 2001. (as cited in EC, 2006 and ACC, 2006).
136. Brown, D.D., Z. Wang, J.D. Furlow, A. Kanamori, R.A. Schawartzman, B.F. FRemo, and A. Pinder. The thyroid hormone-induced tail resorption program during *Xenopus laevis* metamorphosis. *Developmental Biology.* 93:1924–1929. 1996.
137. Hanada, H., K. Katsu, T. Kanno, E.F. Sato, A. Kashiwagi, J. Sasaki, M. Inoue, and K. Utsumi. Cyclosporin a Inhibits Thyroid Hormone-Induced Shortening of the Tadpole Tail through Membrane Permeability Transition. *Comparative Biochemistry and Physiology.* Part B, 135, 473–483. 2003.
138. Kashiwagi, A., H. Hanada, M. Yabuki, T. Kanno, R. Ishisaka, J. Sasaki, M. Inoue, and K. Utsumi. Thyroxine Enhancement and the Role of Reactive Oxygen Species in Tadpole Tail Apoptosis. *Free Radical Biology and Medicine.* 26(7/8), 1001–1009. 1999.
139. Veldhoen, N., A. Boggs, K. Walzak, and C.C. Helbing. Exosure to Tetrabromobisphenol-a Alters Th-Associated Gene Expression and Tadpole Metamorphosis in the Pacific Tree Frog Pseudacris regilla. *Aquatic Toxicology.* 78, 292–302. 2006.

List of Subjects in 40 CFR Chapter I

Environmental protection, Flame retardants, Hazardous substances, tetrabromobisphenol A.

Dated: March 10, 2017.

Wendy Cleland-Hamnett,

Acting Assistant Administrator, Office of Chemical Safety and Pollution Prevention.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 217

[Docket No. 161216999–7232–01]

RIN 0648–BG50

Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Commercial Fireworks Displays at Monterey Bay National Marine Sanctuary

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

ACTION: Proposed rule; request for comments.

SUMMARY: NMFS has received a request from the Monterey Bay National Marine Sanctuary (MBNMS or Sanctuary) for authorization to take marine mammals incidental to commercial fireworks displays permitted by the Sanctuary in California, over the course of five years (2017–2022). As required by the Marine Mammal Protection Act (MMPA), NMFS is proposing regulations to govern that take, and requests comments on the proposed regulations.

DATES: Comments and information must be received no later than April 17, 2017.

ADDRESSES: You may submit comments on this document, identified by NOAA–NMFS–2017–0017, by any of the following methods:

- *Electronic submission:* Submit all electronic public comments via the federal e-Rulemaking Portal. Go to *www.regulations.gov/#!docketDetail;D=NOAA-NMFS-2017-0017,* click the ''Comment Now!'' icon, complete the required fields, and enter or attach your comments.
- *Mail:* Submit written comments to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East West Highway, Silver Spring, MD 20910.

Instructions: Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by NMFS. All comments received are a part of the public record and will generally be posted for public viewing on *www.regulations.gov* without change. All personal identifying information (*e.g.,* name, address), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. NMFS will

accept anonymous comments (enter ''N/A'' in the required fields if you wish to remain anonymous). Attachments to electronic comments will be accepted in Microsoft Word, Excel, or Adobe PDF file formats only.

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

SUPPLEMENTARY INFORMATION:

Availability

An electronic copy of the MBNMS's application and supporting documents, as well as a list of the references cited in this document, may be obtained by visiting the Internet at: *www.nmfs.noaa.gov/pr/permits/incidental/research.htm.* In case of problems accessing these documents, please call the contact listed above (see **FOR FURTHER INFORMATION CONTACT**).

Executive Summary

These proposed regulations, under the MMPA (16 U.S.C. 1361 *et seq.*), establish frameworks for authorizing the take of marine mammals incidental to the commercial fireworks displays in four regions within the MBNMS: Half Moon Bay, Santa Cruz/Soquel, Monterey Peninsula, and Cambria.

Purpose and Need for This Regulatory Action

On October 18, 2016, NMFS received an adequate and complete application from the MBNMS requesting 5-year regulations authorizing the taking, by Level B harassment, of California sea lions (*Zalophus californianus*) and harbor seals (*Phoca vitulina richardii*) incidental to commercial fireworks displays permitted by the MBNMS. The Sanctuary's current incidental take authorization regulations expire July 3, 2017; therefore, the proposed regulations would be valid from July 4, 2017 through July 3, 2022.

Legal Authority for the Regulatory Action

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request, the incidental but not intentional taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if, after notice and public comment, the agency makes certain findings and issue regulations. These proposed regulations contain mitigation, monitoring, and reporting requirements. Section 101(a)(5)(A) of the MMPA and the implementing regulations at 50 CFR part 216, subpart I provide the legal basis for issuing the five-year regulations and any subsequent Letters of Authorization (LOAs).

Summary of Major Provisions Within the Proposed Regulations

The following provides a summary of some of the major provisions within this proposed rulemaking for MBNMS fireworks in the four display areas. We have preliminarily determined that the MBNMS's adherence to the proposed mitigation, monitoring, and reporting measures listed below would achieve the least practicable adverse impact on the affected marine mammals. They include:

- Fireworks will not be authorized during the primary spring breeding season for marine wildlife (March 1 to June 30);
- Up to two shows per year can be an hour in length but all other fireworks displays will not exceed thirty minutes in duration and will occur with an average frequency less than or equal to once every two months;
- Delay of aerial ''salute'' effects until five minutes after the commencement of any fireworks display;
- Remove all plastic and aluminum labels and wrappings from pyrotechnic devices prior to use and required recovery of all fireworks-related debris from the launch site and afflicted beaches; and
- Required monitoring and reporting of marine mammals at the fireworks site prior to and after each display.

Background

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

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

Except with respect to certain activities not pertinent here, the MMPA defines ''harassment'' as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Summary of Request

On October 18, 2016, NMFS received a complete application from the MBNMS requesting authorization to take, by Level B harassment, two species of marine mammals incidental to commercial fireworks displays conducted under sanctuary authorization permits issued by the MBNMS. Marine mammals within the sanctuary would be exposed to elevated levels of sound and light as a result of authorized fireworks displays. The MBNMS has monitored individual displays over the years to improve its understanding of their characteristics and potential impacts to sanctuary resources. When exposed to lights and noise from fireworks, hauled-out sea lions and seals may exhibit signs of disturbance such as flushing, cessation of vocalizations, and a delay in returning to a haul-out. NMFS considers these types of responses to constitute take, by Level B harassment; therefore, the MBNMS has requested regulations governing that take. NMFS proposes to issue the requested regulations and 5-year LOA. On November 10, 2016 (81 FR 78993), we published a notice of receipt of MBNMS's application in the **Federal Register**, requesting comments and information related to the request for 30 days. We did not receive any comments.

The MBNMS was designated as the ninth national marine sanctuary (NMS) in the United States on September 18, 1992. Managed by the Office of National Marine Sanctuaries (ONMS) within NOAA, the Sanctuary adjoins 240 nautical miles (nmi) of central California's outer coastline (overlaying 25 percent of state coastal waters), and encompasses 4,601 square nmi of ocean waters from mean high tide to an average of 26 nmi offshore between Rocky Point in Marin County and Cambria in San Luis Obispo County.

The MBNMS has authorized fireworks displays over Sanctuary waters for many years as part of national and community celebrations (*e.g.,* Independence Day, municipal anniversaries), and to foster public use and enjoyment of the marine environment. In central California, marine venues are the preferred setting for fireworks in order to optimize public access and avoid the fire hazard associated with terrestrial display sites.

NMFS has issued incidental take authorizations under section 101(a)(5)(A or D) of the MMPA to MBNMS for the specified activity since 2005. NMFS first issued an incidental harassment authorization (IHA) under section 101(a)(5)(D) of the MMPA to MBNMS on July 4, 2005 (70 FR 39235; July 7, 2005), and subsequently issued 5-year regulations governing the annual issuance of LOAs under section 101(a)(5)(A) of the MMPA (71 FR 40928; July 19, 2006). Upon expiration of those regulations, NMFS issued MBNMS an IHA (76 FR 29196; May 20, 2011), and subsequent 5-year regulations and LOA which expire on July 3, 2017 (77 FR 31537; May 29, 2012).

Per previous IHAs, regulations, and LOAs, the MBNMS has monitored California sea lions and harbor seals at the four regions where fireworks displays are authorized. Based on these and other data combined with the MBNMS's estimated maximum number of annual fireworks displays, MBNMS is requesting authorization to incidentally harass up to 3,810 California sea lions and 570 harbor seals, annually.

Description of the Specified Activity

Overview

Sponsors of fireworks displays conducted in the MBNMS are required to obtain sanctuary authorization prior to conducting such displays (see 15 CFR 922.132). Since the MBNMS began issuing permits for fireworks discharge in 1993, it has received a total of 102 requests for professional fireworks displays, the majority of which have been associated with large community events such as Independence Day and municipal festivals. MBNMS has permitted, on average, approximately five fireworks displays per year; however, only 2 to 4 displays were hosted annually between 2009 and 2015. However, economic conditions or other factors could result in more requests. Therefore, the MBNMS anticipates authorizing a maximum of 10 fireworks displays, annually, in 4 display areas along 276 mi (444 km) of coastline during the effective period of these proposed regulations.

Dates and Duration

The specified activity may occur from July 1 through February 28, annually, for the effective period of the proposed regulations (July 4, 2017 through July 3, 2022). Each display will be limited to 30 minutes in duration with the exception of two events per year lasting up to one hour each. Events throughout the year will occur with an average frequency of less than or equal to once every two months within each of the four prescribed display areas. The MBNMS does not authorize fireworks from March 1 through June 30, annually, to avoid overlap with primary reproductive periods; therefore, no takes of marine mammals incidental to the specified activity would occur during this moratorium period.

Specific Geographic Region

Pyrotechnic displays within the sanctuary are conducted from a variety of coastal launch sites (*e.g.,* beaches, bluff tops, piers, offshore barges, golf courses). Authorized fireworks displays would be confined to four prescribed areas (with seven total sub-sites) within the sanctuary, while displays along the remaining 95 percent of sanctuary coastline would be prohibited. These sites were approved for fireworks events based on their proximity to urban areas and pre-existing high human use patterns, seasonal considerations such as the abundance and distribution of marine wildlife, and the acclimation of wildlife to human activities and elevated ambient noise levels in the area.

The four display areas are located, from north to south, at Half Moon Bay, the Santa Cruz/Soquel area, the northeastern Monterey Peninsula (Pacific Grove/North and South Monterey), and Cambria (Santa Rosa Creek) (see Figure 1 in MBNMS's application). The number of displays is not expected to exceed 10 total events per year across all four areas. Detailed descriptions of each display area are available in the 2006 *Environmental Assessment of the Issuance of a Small Take Regulations and LOAs and the Issuance of National Marine Sanctuary Authorizations for Coastal Commercial Fireworks Displays within Monterey Bay National Marine Sanctuary, CA* (available online at *http://www.nmfs.noaa.gov/pr/permits/incidental/research.htm*).

Half Moon Bay

Half Moon Bay is a bay of the Pacific Ocean on the coast of San Mateo County, California. Surrounding coastal towns include Princeton-by-the-Sea, Miramar, El Granada, and the city of Half Moon Bay which is located approximately 25 mi (40 km) south of San Francisco, 10 mi (16 km) west of San Mateo, and 45 mi (72 km) north of Santa Cruz. This site has been used annually for a medium-sized Independence Day fireworks display on July 4, which lasts about 20 minutes. The launch site is on a sandy beach inside and adjacent to the east outer breakwater, upon which the aerial shells are launched and aimed to the southwest. The marine venue adjacent to Pillar Point Harbor is preferred for optimal public access and to avoid the fire hazard associated with terrestrial display sites.

Half Moon Bay and specifically Pillar Point Harbor is heavily used by the public in multiple ways, including, but not limited to, commercial fishing, recreational water and beach use, and air and automobile travel. The harbor supports a commercial fishing fleet and a considerable volume of recreational boat traffic. Pillar Point is also known as ''Mavericks'' which is a world-class surfing destination; therefore, surfers and swimmers are also prevalent. Half Moon Bay Airport is located adjacent to the harbor and approach and departure routes pass directly over the acute impact area. On weekends, with good weather, the airport may accommodate as many as fifty flights per day. The impact area is also subjected to daily traffic noise from California Highway 1, which runs along the coast and is the primary travel route through the area.

Santa Cruz/Soquel

Two separate fireworks display sites are located within the Santa Cruz/Soquel area: Santa Cruz and Aptos. The launch site in Soquel is on a sandy beach on the west bank of the San Lorenzo River adjacent to the Santa Cruz Boardwalk. This site is used during October, annually, for the City of Santa Cruz anniversary fireworks displays. During the fireworks display, 40–70 vessels may anchor within the acute impact area to view the fireworks, with vessels moving throughout the waters south of the launch site to take up position. In addition, U.S. Coast Guard (USCG) and harbor patrol vessels motor through the impact area to maintain a safety zone around the launch site.

Similar to Half Moon Bay, this area is heavily urbanized. The harbor immediately adjacent to the Santa Cruz impact area is home to a commercial fishing fleet and supports a large volume of recreational boater traffic. The beaches to the west of the Soquel launch site are adjacent to a large

coastal amusement park complex and are used extensively by beachgoers and water sport enthusiasts from the local area as well as San Jose and San Francisco. Immediately southwest of the launch site is a mooring field and the Santa Cruz Municipal Pier which is lined with retail shops, restaurants, and offices. To the west of the pier is a popular local surfing destination known as 'Steamer Lane'.

The Aptos site is located at Seacliff State Beach off Highway 1 and is typically used by the Monte Foundation each October for a large fundraiser supporting Aptos area schools. At the seaward end of the Aptos Pier is a historic 400-feet (ft) (122-meters (m)) cement vessel, which was purposefully grounded in its current position as an extension of the pier, but to which public access has since been restricted. The exposed interior decks of the vessel have created convenient haul-out surfaces for harbor seals. During the period from sunset through the duration of the fireworks display, 30–40 vessels anchor within the acute impact area to view the fireworks, typically traveling throughout the waters seaward of the cement vessel to take up position. In addition, USCG and State Park Lifeguard vessels motor through the impact area to maintain a safety zone around the launch site.

Monterey Peninsula

Two separate fireworks display sites (City of Monterey and Pacific Grove) are located within the Monterey Peninsula area. For Independence Day, the City of Monterey typically launches approximately 750 shells and an equal number of low-level effects from a barge anchored approximately 1,000 ft (305 m) east of Municipal Wharf II and 1,000 ft north of Del Monte Beach. The City's display typically lasts approximately 20 minutes and is accompanied by music broadcasted from speakers on Wharf II. A Monterey New Year's festival has at times used the City's launch barge for an annual fireworks display. This medium-size aerial display typically lasts approximately 8 minutes, when it occurs. In addition, several private displays have been authorized from a launch site on Del Monte Beach, including an aerial display and low-level displays, lasting approximately 7 minutes.

As with all other sites, this region is heavily urbanized. Here, the impact area lies directly under the approach/departure flight path for Monterey Peninsula Airport and is commonly exposed to noise and exhaust from general aviation, commercial, and military aircraft at approximately 500 ft (152 m) altitude. The airport supports approximately 280 landings/takeoffs per day in addition to touch-and-goes (landing and takeoff training). Auto traffic and emergency vehicles are audible from Lighthouse and Del Monte Avenues, main transportation arteries along the adjacent shoreline. On the water, commercial and recreational vessels operate at all hours from the adjacent harbor. A thirty-station mooring field lies between the launch barge and Municipal Wharf II. The moorings are usually completely occupied during the annual fireworks event. During the period from sunset through the duration of the fireworks display, 20–30 vessels anchor within the acute impact area to view the fireworks, with vessels transiting through the waters south of the launch site to take up position. In addition, USCG and harbor patrol vessels motor through the impact area to maintain a safety zone around the launch site.

The Pacific Grove site is in the center of an urban shoreline adjacent to a public beach. The shoreline to the east and west of the launch site is lined with residences and a public road and pedestrian trail. The launch site is at the top of a rocky coastal bluff adjacent to an urban recreation trail and public road. At peak usage, the beach may support up to 500 visitors at any given time. Surfing, swimming and boating activity is common.

This Pacific Grove site is typically used for an annual 'Feast of Lanterns' fireworks display in late July which is part of a community event that has been celebrated in the City of Pacific Grove for over 100 years. The fireworks are part of a traditional outdoor play that concludes the festival. The small aerial display typically lasts approximately 20 minutes and is accompanied by music broadcasted from speakers at Lover's Cove. During the period from sunset through the duration of the fireworks display, 10–20 vessels anchor within the acute impact area to view the fireworks. A USCG vessel motors through the impact area to maintain a safety zone seaward of the launch site.

Cambria

The Cambria site is a public sandy beach at Shamel County Park. Immediately north of the launch site is the mouth of Santa Rosa Creek and Lagoon. The impact area is used by boaters, recreational fishermen, swimmers, surfers, and beachgoers. The shoreline south of the launch site is lined with hotels, abuts a residential neighborhood, and is part of San Simeon State Beach. This site is typically used each year for a 20-minute Independence Day fireworks display on July 4.

Detailed Description of the Specified Activity

Professional pyrotechnic devices used in fireworks displays can be grouped into three general categories: Aerial shells (paper and cardboard spheres or cylinders ranging from 2–12 inch (in) (5–30 centimeter (cm)) in diameter and filled with incendiary materials), low-level comet and multi-shot devices similar to over-the-counter fireworks (*e.g.,* roman candles), and ground-mounted set piece displays that are mostly static in nature. Each display is unique according to the type and number of shells, the pace of the show, the length of the show, the acoustic qualities of the display site, and even the weather and time of day. An average large display will last 20 minutes and include 700 aerial shells and 750 low-level effects. An average smaller display lasts approximately seven minutes and includes 300 aerial shells and 550 low-level effects.

Aerial Shells

Aerial shells are launched from tubes (*i.e.,* mortars), using black powder charges, to altitudes of 200 to 1,000 ft (61 to 305 m) where they explode and ignite internal burst charges and incendiary chemicals. Most of the incendiary elements and shell casings burn up in the atmosphere; however, portions of the casings and some internal structural components and chemical residue may fall back to the ground or water, depending on prevailing winds. An aerial shell casing is constructed of paper/cardboard or plastic and may include some plastic or paper internal components used to compartmentalize chemicals within the shell. Within the shell casing is a burst charge (usually black powder) and a recipe of various chemical pellets (*i.e.,* stars) that emit colored light (up to 30,000 candela) when ignited. Chemicals commonly used in the manufacturing of pyrotechnic devices include: Potassium chlorate, potassium perchlorate, potassium nitrate, sodium benzoate, sodium oxalate, ammonium, perchlorate, strontium nitrate, strontium carbonate, sulfur, charcoal, copper oxide, polyvinyl chloride, iron, titanium, shellac, dextrine, phenolic resin, and aluminum. Manufacturers consider the amount and composition of chemicals within a given shell to be proprietary information and only release aggregate descriptions of internal shell components. The arrangement and packing of stars and burst charges

within the shell determine the type of effect produced upon detonation.

Attached to the bottom of an aerial shell is a lift charge of black powder. The lift charge and shell are placed at the bottom of a mortar that has been buried in earth/sand or affixed to a wooden rack. After a fuse attached to the lift charge is ignited with an electric charge or heat source, the lift charge explodes and propels the shell through the mortar tube and into the air to a height determined by the amount of powder in the lift charge and the weight of the shell. As the shell travels skyward, a time-delay secondary fuse ignites the burst charge within the shell at peak altitude. The burst charge then detonates, igniting and scattering the stars, which may, in turn, produce small secondary explosions. Shells can be launched one at a time or in a barrage of simultaneous or quick succession launches. They are designed to detonate between 200 and 1,000 ft (61 to 305 m) above ground level.

In addition to color shells (also known as designer or starburst shells), a typical fireworks show will usually include a number of aerial 'salute' shells. The primary purpose of salute shells is to signify the beginning and end of the show and produce a loud percussive audible effect. These shells are typically 2–3 in (5–7 cm) in diameter and packed with black powder to produce a punctuated explosive burst at high altitude. From a distance, these shells sound similar to cannon fire when detonated.

Low-Level Comet and Multi-Shot Devices

Low-level devices consist of stars packed linearly within a tube which, when ignited, exit the tube in succession producing a fountain effect of single or multi-colored light as the stars incinerate during the course of their flight. Typically, the stars burn rather than explode, thus producing a ball or trail of sparkling light to a prescribed altitude where they extinguish. Sometimes they may terminate with a small explosion similar to a firecracker. Other low-level devices emit a projected hail of colored sparks or perform erratic low-level flight while emitting a high-pitched whistle, or emit a pulsing light pattern or crackling or popping sound effects. In general, low-level launch devices and encasements remain on the ground or attached to a fixed structure and can be removed upon completion of the display. Common low-level devices are multi-shot devices, mines, comets, meteors, candles, strobe pots and gerbs. They are designed to produce effects between 0 and 200 ft (61 m) AGL.

Ground Level Fireworks

Ground level or set-piece fireworks are primarily static in nature and remain close to the ground. They are usually attached to a framework that may be crafted in the design of a logo or familiar shape, illuminated by pyrotechnic devices such as flares, sparklers and strobes. These fireworks typically employ bright flares and sparkling effects that may also emit limited sound effects such as cracking, popping, or whistling. Set pieces are usually used in concert with low-level effects or an aerial show and sometimes act as a centerpiece for the display. They may have some moving parts, but typically do not launch devices into the air. Set piece displays are designed to produce effects between 0 and 50 ft (15 m) AGL.

The vast majority of fireworks displays authorized by the Sanctuary have been aerial displays that usually included simultaneous low-level displays. An average large display may last 20 minutes and include approximately 700 aerial shells and 750 low-level effects. An average smaller display may last approximately seven minutes and include 300 aerial shells and 550 low-level effects. Recent displays have shown a declining trend in the total number of shells used in aerial displays, likely due to increasing shell costs and/or fixed entertainment budgets. Low-level displays sometimes compensate for the absence of an aerial show by squeezing a larger number of effects into a shorter timeframe. This results in a dramatic and rapid burst of light and sound effects at low level. A large low-level display may expend 4,900 effects within a 7-minute period, and a small display will use an average of 1,800 effects within the same timeframe.

Fireworks Noise Levels

The MBNMS has conducted acoustic monitoring of select fireworks displays within the Sanctuary. In this document, all sound levels, unless otherwise noted, are referenced to re: 20 μPa to represent in-air levels. During a July 4, 2007 display within Monterey Bay harbor, average ambient sound levels prior to and after fireworks displays ranged from 58.8 to 59 decibels (dB). Sound levels from the show averaged 70–124 dB approximately 800 m from launch site with peaks up to 133 dB (Thorson and Berg, 2007).

Description of Marine Mammals in the Area of the Specified Activity

Twenty-six species of marine mammals are known to occur within Sanctuary boundaries. Twenty of these are cetaceans (whales and dolphins) which are not expected to be taken, by harassment, via aerial fireworks because sound attenuates rapidly across the air-water interface; therefore, they are not discussed further in this document. One species, the sea otter (*Enhydra lutris nereis*), is under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS); therefore, this species is also not considered further in this document. The five remaining species are pinnipeds (seals and sea lions).

The species of pinnipeds present within the Sanctuary include the California sea lion, Pacific harbor seal, Northern elephant seal (*Mirounga angustirostris),* Guadalupe fur seal (*Arctocephalus townsendi*), and Northern fur seal (*Callorhinus ursinus*). The Northern elephant seal does not overlap temporally with the proposed fireworks displays and therefore are not likely to be impacted by the specified activity. There is also no known temporal or spatial overlap between the display areas and Northern and Guadalupe fur seals. Therefore, based on scientific surveys investigating distribution and abundance of marine mammals throughout the Sanctuary and previous monitoring reports submitted in compliance with previous incidental take authorizations, NMFS has determined the only species likely to be harassed by the fireworks displays are the California sea lion and harbor seal.

California Sea Lion

The U.S. population of California sea lions ranges from southern Mexico to southwestern Canada (Carretta *et al.,* 2007). Pupping typically occurs in late May to June. Most individuals of this species breed during July on the Channel Islands off southern California which is approximately 100 mi (161 km) south of the MBNMS, and off Baja and mainland Mexico (Odell 1981), although a few pups have been born on Año Nuevo Island (Keith *et al.,* 1984). Following the breeding season on the Channel Islands, most adult and sub-adult males migrate northward to central and northern California and to the Pacific Northwest, while most females and young animals either remain on or near the breeding grounds throughout the year or move southward or northward, as far as Monterey Bay.

The greatest concentration of California sea lions in the MBNMS occur on Año Nuevo Island and

Monterey breakwater. Año Nuevo Island is the largest single haul-out site in the sanctuary, hosting as many as 9,000 California sea lions at times (Lowry2001). Stage structure of California sea lions within the Sanctuary varies by location, but generally, the majority of animals are adult and subadult males, primarily using the central California area to feed during the non-breeding season and are most common in the MBNMS during fall and spring migrations between southern breeding areas and northern feeding areas. Though males are generally most common, females may comprise 34 to 37 percent of juvenile individuals on the Monterey breakwater during El Niño events (Nicholson 1986).

Since nearing extinction in the early 1900s, the California sea lion population has increased dramatically; however, oceanographic conditions (*e.g.,* El Niño) influence how many are found in the Sanctuary on any given year. Population trends are based on pup counts which have increased from approximately 12,000 in 1975 to 61,943 in 2011 (Carretta *et al.,* 2016) although there is a strong correlation to decreased pup counts and increased mortality during El Nino years. The minimum population size for this stock is 153,337 with a best estimate of 296,750 individuals (Carretta *et al.,* 2016). The potential biological removal (PBR) level for this stock is 9,200 animals (Carretta *et al.,* 2016). The population is not listed as endangered or threatened under the ESA, nor is this a depleted or strategic stock under the MMPA.

Harbor Seal

Harbor seals are distributed throughout the west coast of the U.S., inhabiting near-shore coastal and estuarine areas from Baja California, Mexico, to the Pribilof Islands in Alaska. They generally do not migrate but have been known to travel extensive distances to find food or suitable breeding areas (Carretta *et al.,* 2006). In California, approximately 400–600 harbor seal haul-out sites are widely distributed along the mainland and on offshore islands (Carretta *et al.,* 2007).

Harbor seals are residents in the MBNMS throughout the year. This species inhabits offshore rocks, sand and mudflats in estuaries and bays, and isolated beaches. They haul out at dozens of sites from Point Sur to Año Nuevo. Within MBNMS, tagged harbor seals have been documented to move substantial distances (10–20 km (3.9–7.8 mi)) to foraging areas each night (Oxman 1995; Trumble 1995). Overall, radio-tagged individuals have moved total distances of 480 km (Allen *et al.,* 1987). The greatest concentration of harbor seals occurs on the northeast Monterey Peninsula. Using mark-recapture methods based on re-sightings of recognizable individuals, Nicholson (2000) estimated an approximate stage structure in the study area of 38 percent adult females, 15 percent adult males, 34 percent subadults, and 13 percent yearlings or juveniles in this area.

Pupping within the Sanctuary occurs primarily during March and April, followed by a molt during May and June. Peak abundance on land within the Sanctuary is reached in late spring and early summer when harbor seals haul out to breed, give birth to pups, and molt. Fireworks would not be authorized from March 1 through June 30, annually, to avoid peak reproductive periods.

Counts of harbor seals in California increased from 1981 to 2004 when the statewide maximum count was recorded. However, subsequent surveys conducted in 2009 and 2012 have been lower than the 2004 maximum count. The minimum population estimate is 27,348 with a best estimate of 30,968 individuals (Carretta *et al.,* 2016). PBR is 1,641 animals per year (Carretta *et al.,* 2016). The population is not listed as endangered or threatened under the ESA, nor is this a depleted or strategic stock under the MMPA.

Potential Effects of the Specific Activity on Marine Mammals and Their Habitat

This section includes a summary and discussion of the ways that components of the specified activity, including mitigation, may impact marine mammals and their habitat. The ''Estimated Take by Incidental Harassment'' section later in this document will include a quantitative analysis of the number of individuals that are expected to be taken by this activity. The ''Negligible Impact Analysis'' section will include the analysis of how this specific activity will impact marine mammals and will consider the content of this section, the ''Estimated Take by Incidental Harassment'' section and the ''Proposed Mitigation'' section to draw conclusions regarding the likely impacts of this activity on the reproductive success or survivorship of individuals and, from that, on the affected marine mammal populations or stocks.

Marine mammals can be impacted by fireworks displays in four ways: sound, light, debris, and human presence. The primary causes of disturbance to pinnipeds not already disturbed by the gathering of people and/or vessels are light flashes and sound effects from exploding fireworks. Pyrotechnic devices that operate at higher altitudes (such as aerial shells) are more likely to have a larger impact area, while ground and low-level devices have more confined effects. The impact area is defined as the area where sound, light, and debris may have direct impacts on marine mammals. Impacts include, but are not limited to, abrupt changes in behavior such as cessation of vocalizations, flushing, and diving. These impacts have been described in detail in multiple documents associated with previous incidental take authorizations, including, but not limited to, NMFS *Environmental Assessment (EA) on the Issuance of Small Take Regulations and LOAs and the Issuance of National Marine Sanctuary Authorizations for Coastal Commercial Fireworks Displays Within the Monterey Bay National Marine Sanctuary* (2006), Read and Reynolds (2001), MBNMS (2002), and Thorson and Berg (2007). Here, we provide relevant information from those sources to describe the potential impacts of fireworks displays on pinnipeds within the impact area.

Auditory Effects

Marine Mammal Hearing

To review hearing capabilities of the two species of pinnipeds potentially taken incidental to the specified activity, it is necessary to break them down into their respective families: Phocidae (harbor seals) and Otariidae (California sea lions). As reviewed in NMFS (2016), phocid ears are anatomically distinct from otariid ears in that phocids have larger, more dense middle ear ossicles, inflated auditory bullae, and larger sections of the inner ear (*i.e.,* tympanic membrane, oval window, and round window. However, Southall *et al.,* (2007) discusses that, in air, pinniped ears work very much like other terrestrial mammals and estimates pinnipeds auditory bandwidth between 70 hertz (Hz) and 30 kilohertz (kHz).

Threshold Shift

When marine mammals are exposed to elevated noise levels, they can experience a threshold shift (TS). NMFS defines a noise-induced threshold shift (TS) as ''a change, usually an increase, in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level'' (NMFS 2016). The amount of threshold shift is customarily expressed in decibels (ANSI 1995; Yost 2007). A TS can be permanent (PTS) or temporary (TTS). As described in NMFS (2016), there are numerous factors to consider

when examining the potential for a noise-induced TS, including, but not limited to, the signal characteristics (*e.g.,* impulsive or non-impulsive), exposure duration, level and frequency, recovery time (seconds to minutes or hours to days), and general overlap between sound source and species (*e.g.,* spatial, temporal, and spectral), including the hearing and vocalization frequency range of the exposed species relative to the signal's frequency spectrum (*i.e.,* how animal uses sound within the frequency band of the signal; *e.g.,* Kastelein *et al.,* 2014).

There are two types of physiological auditory impacts NMFS considers when marine mammals could be exposed to elevated sounds from a specified activity: PTS and TTS. PTS is defined as a permanent, irreversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS 2016). Available data from humans and other terrestrial mammals indicate that a 40 dB threshold shift approximates PTS onset (see Ward *et al.,* 1958, 1959; Ward 1960; Kryter *et al.,* 1966; Miller 1974; Ahroon *et al.,* 1996; Henderson *et al.,* 2008). NMFS considers PTS to constitute Level A harassment.

TTS is the mildest form of hearing impairment that can occur during exposure to a strong sound (Kryter 1985). NMFS defines TTS as a temporary, reversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS 2016). A TTS of 6 dB is considered the minimum threshold shift clearly larger than any day-to-day or session-to-session variation in a subject's normal hearing ability (as reviewed in NMFS 2016). TTS can last from minutes or hours to (in cases of strong TTS) days. For sound exposures at or somewhat above the TTS threshold, hearing sensitivity recovers rapidly after exposure to the noise ends. Richardson *et al.* (1995) noted the magnitude of TTS depends on the level and duration of noise exposure, among other considerations.

There are no direct data on pinniped hearing impacts from fireworks; however, researchers at Vandenberg Air Force Base (VAFB) conducted auditory brainstem response (ABR) testing on harbor seals prior to and after launches of four Titan IV rockets (which result in sonic booms), one Taurus launch, and two Delta IV launches in accordance with issued scientific research permits (MSRS 2009). Detailed analysis of the changes in waveform latency and waveform replication of the ABR measurements for the 14 seals showed no detectable changes in the seals' hearing sensitivity as a result of exposure to the launch noise. One seal had substantial decreased acuity to the 8 kilohertz (kHz) tone-burst stimuli prior to the launch. The cause of this hearing loss was unknown but was most likely congenital or from infection. Another seal had a great deal of variability in waveform latencies in response to identical stimuli. This animal moved repeatedly during testing, which may have reduced the sensitivity of the ABR testing on this animal for both the click and 8 kHz tone burst stimuli. More detail regarding these tests can be found in NMFS proposed rule prepared for VAFB's rocket launches (78 FR 7379; December 9, 2013).

Monitoring reports indicate sea lion vocalizations can continue throughout a display (MBNMS 2007) or a colony can reduce or cease auditory communication (MBNMS 2002). Harbor seals are more likely to cease vocalization than sea lions (NMFS 2006). In either case, within hours of a display ending, marine mammals have been documented as vocalizing and behaving normally (MBNMS 1998, 2002; NMFS 2006). As described above, sound level approximately 800 m from a fireworks barge (which is representative of distances between sources and haul-outs) averaged 70–124 dB and did not exceed 133 dB (peak). For comparison, Southall *et al.* (2000) recommended injury criteria for pinnipeds in-air be established at 149 dB (peak). Based on these data, NMFS believes it is unlikely sea lions and seals would sustain temporary, much less permanent, hearing impairment during fireworks displays.

Behavioral Disturbance

Fireworks displays are limited to urban areas and, as such, pinnipeds potentially impacted are exposed to every day anthropogenic disturbances such as human presence, boating, airplanes, etc. However, fireworks are known to acutely disturb animals due to elevated noise levels and visual stimulation. NMFS anticipates some sea lions and seals will avoid or temporarily depart the impact area during the hours immediately prior to the beginning of the fireworks display due to increased human recreational activities associated with the overall celebration event. In particular, a flotilla of recreational and commercial boats usually gathers in a semi-circle within the impact area to view the fireworks display from the water. Some boaters also set off their own personal fireworks. From sunset until the start of the display, security vessels of the USCG and/or other government agencies often patrol throughout the waters of the impact area to keep vessels a safe distance from the launch site.

In general, upon detonation of the first few fireworks, California sea lions and harbor seals will flush from usual and accustomed haul-out sites for as little as 15 minutes to as much as 15 hours following any fireworks event. Some animals may remain in the water near the haul-out site while others may leave the immediate area. Below are summaries of accounts from detailed observations made by sanctuary staff over an 8-year period (1993–2001), in-depth surveys conducted in 2001 and 2007, and pre- and post-event monitoring conducted under MMPA authorizations from 2005–2015.

California Sea Lions

Of all the display sites in the Sanctuary, California sea lions are only present in significant concentration at Monterey. No signs of long-term behavioral impacts have been detected as a result of fireworks displays. However, acute behavioral impacts have been documented and NMFS expects sea lions to react in a similar manner as described here. In the first seconds of a 2001 fireworks display at Monterey Bay, the sea lion colony became very quiet, vocalizations ceased, and younger sea lions evacuated the haul out. Most of the colony remained intact until the older bulls evacuated, usually after a salvo of overhead bursts in short succession. Once the bulls departed, the entire colony followed suit, swimming toward the open sea. Some sea lions attempted to haul-out again but returned to the water during subsequent fireworks bursts. After the show, many sea lions returned to the breakwater within 30 minutes following the conclusion of the display but have been observed to remain quiet for some time. The colony reestablished itself on the breakwater within 2–3 hours following the conclusion of the display, during which vocalization activity returned. Typically, the older bulls are the first to renew vocalization behavior (within the first hour), followed by the younger animals. By the next morning, the entire colony is expected to be intact and functioning with no visible sign of abnormal behavior.

Another detailed account of reactions of sea lions to fireworks is found within Thorson and Berg (2007) which reports marine mammal and acoustic monitoring data from the July 4, 2007 fireworks at the Monterey Bay

breakwater. The methods used during the event were as follows: Counts of marine mammals were conducted by an approved marine mammal observer, using high quality binoculars during daytime observations or when there was sufficient ambient light. Night vision goggles were used during night time hours. Observations were made from an MBNMS vessel. Counts were made approximately every hour beginning at 16:27 on July 4, 2007, and continued through 23:05. Counts were concentrated along the jetty where the majority of sea lions were hauled out. Sea lions were also counted along the USCG pier and on several buoys in the harbor. During each count, the time, area observed, the species present, group composition when possible (age class and gender), general behavior (*e.g.,* resting, interacting), and other disturbances (vessels, aircraft etc.) were recorded. Environmental conditions were also recorded and included air temperature, tide, wind speed and swell height (outside of the harbor). The response of pinnipeds to the fireworks (head lifts, flush or movements), behavior in the water (milling, interacting with conspecifics, swimming or leaving the area) and the time to return to the haul-out, if animals flush, were recorded. Counts were continued for 1.5 hours after the fireworks ended. Counts were also made on the following day (July 5) from 08:10 to 09:12.

California sea lions were the most numerous of the marine mammal species with up to 291 sea lions observed. Most sea lions were yearlings or juveniles (2–4 years old). Two sub adult males (approximately 5–6 years old) were also observed and appeared to be practicing holding a water territory. The majority of sea lions hauled out on the jetty during the day (up to 90 percent) appeared to be resting.

The number of sea lions was steady until approximately 20:45 when several boats passed by the end of the jetty and shot off their own fireworks causing a number of sea lions to enter the water. At the beginning of the fireworks display, there were only six sea lions hauled out at the end of the USCG pier. By the fourth fireworks detonation, the last of the sea lions had entered the water. The fireworks ended at 21:37, and the first sea lion hauled back out at 21:55. The first sea lion to return was a sub adult male that had been at the end of the jetty. By the time observations ended at 23:05, four sea lions had hauled out on the jetty. On July 5, two counts were made of the sea lions along the jetty and USCG pier. Both counts were higher than the previous day.

Harbor Seals

In general, harbor seals are more timid and easily disturbed than California sea lions. Thus, based on past observations of sea lion disturbance thresholds and behavior, it is very likely that harbor seals evacuate exposed haul outs in the impact area during fireworks displays, though they may loiter in adjacent surface waters until the fireworks have concluded (MBNMS). The following describes observations during the same July 4, 2007, fireworks event referenced above: Harbor seals were observed hauled out on exposed rocks just offshore of the western end of the harbor from 18:50 to 20:38; however the tide was high and only 8 harbor seals were hauled out resting, while 1 to 2 animals were seen resting in the water. Because the primary purpose of the monitoring was to document sea lion reactions to the fireworks, observations during the display were at a location not conducive to monitoring harbor seals. At 70 minutes after the end of the fireworks, there were no harbor seals hauled out. On the day after the fireworks and with a lower tide (0.8 vs. 0.0 m), there were 31 harbor seals hauled out at the west end of the harbor. These observations (*i.e.,* flushing followed by full recolonization by the next day) are consistent with other monitoring reports.

In addition to fireworks events, harbor seals have been monitored at VAFB in response to rocket launches. Since 1997, there have been five to seven space vehicle launches per year and there appears to be only short-term disturbance effects to harbor seals as a result of launch noise. Harbor seals will temporarily leave their haul-out when exposed to launch noise; however, they generally return to the haul-out within one hour. Harbor seals also typically leave the haul-out site and enter the water due to the noise created by launch vehicles during launch operations. The percentage of seals leaving the haul-out increases with noise level up to approximately 100 dB ASEL, after which almost all seals leave, although data have shown that some percentage of seals (all adults) have remained on shore during launches. The louder the launch noise, the longer it took for seals to begin returning to the haul-out site and for the numbers to return to pre-launch levels. Seals may begin to return to the haul-out site within 2–55 minutes of the launch disturbance, and the haul-out site usually returned to pre-launch levels within 45–120 minutes. In contrast, noise levels from an Atlas launch and several Titan II launches had ASELs ranging from 86.7 to 95.7 dB at the closest haul-out, and seals began to return to the haul-out site within 2–8 minutes post-launch. More detail regarding VAFB monitoring results can be found in NMFS proposed rule for VAFB's rocket launches (78 FR 7379; December 9, 2013).

Anticipated Effects on Marine Mammal Habitat

Regarding impacts to marine mammal habitat, debris and chemical residue from fireworks can fall upon land and waters near a fireworks detonation site. The tops of the mortars and other devices are usually covered with aluminum foil to prevent premature ignition from sparks during the display and to protect them from moisture. The shells and stars easily punch through the aluminum foil when ignited, scattering pieces of aluminum in the vicinity of the launch site. Through various means, the aluminum debris and garbage generated during preparation of the display may be swept into the ocean. Some pieces are immediately incinerated, while others burn totally or partially on their way to the ground. However, some devices will fail to detonate after launch (duds) and fall back to earth/sea as an intact sphere or cylinder. The freefalling projectile could pose a physical risk to any wildlife within the fallout area, but the general avoidance of the area by wildlife during the display and the low odds for such a strike likely present a negligible potential for a direct hit. At times, some shells explode in the mortar tube (referred to as a flower pot) or far below their designed detonation altitude. It is highly unlikely that mobile organisms would remain close enough to the launch site during a fireworks display to be within the effective danger zone for such an explosion.

Generally, the bulk of the debris will fall to the surface within a 0.5-mi (0.8-km) radius of the launch site; however, small casings from low-level devices (*e.g.,* small cardboard tubes) fall to earth within 200 yards (183 m) from launch site because they do not attain altitudes for greater lateral wind transport. The acute impact area from the center of the ignition point depends on the size and height of the fixed structure, the number and type of special effects, wind direction, atmospheric conditions, and local structures and topography.

The MBNMS has conducted surveys of solid debris on surface waters, beaches, and subtidal habitat after numerous fireworks displays. They also typically recover substantial uncharred casing remnants on ocean waters immediately after the display. Other items found in the acute impact area are

cardboard cylinders, disks, and shell case fragments; paper strips and wadding; plastic wadding, disks, and tubes; aluminum foil; cotton string; and even whole unexploded shells (duds or misfires). In some cases, virtually no fireworks debris is detected. This variance is likely due to several factors, such as type of display, tide state, sea state, and currents and has discovered no visual evidence of acute or chronic impacts to the environment or wildlife. In accordance with permits issued by the MBNMS, the entity conducting fireworks displays are required to clean area beaches for up to 2 days following the display.

Chemical residue is produced in the form of smoke, airborne particulates, fine solids, and slag (spent chemical waste material that drips from the deployment canister/launcher and cools to a solid form). The fallout area for chemical residue is unknown, but is probably similar to that for solid debris. Similar to aerial shells, the chemical components of low-level devices produce chemical residue that can migrate to ocean waters as a result of fallout. The point of entry would likely be within a small radius (about 300 ft (91 m)) of the launch site. The MBNMS has found only one scientific study directed specifically at the potential impacts of chemical residue from fireworks upon the environment. That study indicates that chemical residues (fireworks decomposition products) do result from fireworks displays and can be measured under certain circumstances (DeBusk *et al.,* 1992). The report, prepared for the Walt Disney Corporation, presented the results of a 10-year study of the impacts of fireworks decomposition products upon an aquatic environment. Researchers studied a small lake in Florida subjected to 2,000 fireworks displays over a 10-year period to measure key chemical levels in the lake. The report concluded that detectable amounts of barium, strontium, and antimony had increased in the lake but not to levels considered harmful to aquatic biota. The report further suggested that ''environmental impacts from fireworks decomposition products typically will be negligible in locations that conduct fireworks displays infrequently'' and that ''the infrequence of fireworks displays at most locations, coupled with a wide dispersion of constituents, make detection of fireworks decomposition products difficult.''

In summary, debris and chemical residue from fireworks displays authorized by the MBNMS could enter marine mammal habitat. However, the volume at which this would occur, coupled with clean-up requirements, is negligible. As such, NMFS does not anticipate the specified activity would have negative impacts on marine mammal habitat.

Estimated Take by Incidental Harassment

Except with respect to certain activities not pertinent here, the MMPA defines 'harassment' as: ''any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).''

All anticipated takes would be by Level B harassment, involving temporary changes in behavior such as flushing and cessation of vocalization. The risk of injury, serious injury, and mortality is considered negligible considering the nature of the specified activity and proposed mitigation measures; therefore, no take by Level A harassment is requested by the MBNMS or proposed by NMFS in these regulations.

The MBNMS anticipates permitting up to 10 fireworks events annually. Based on previous monitoring data and unpublished aerial survey data from the NMFS Southwest Fisheries Science Center (Lowry 2001, 2012, 2013), the maximum count of marine mammals, by species, was used for each site to identify potential take numbers; therefore, the amount of proposed take is considered conservative. In total, 10 fireworks displays could take up to 3810 California sea lions and 570 harbor seals, annually.

TABLE 1—ESTIMATED POTENTIAL INCIDENTAL TAKE PER YEAR BY DISPLAY AREA BASED ON DATA COLLECTED DURING PREVIOUS MONITORING EVENTS

Display location	Time of year	Estimated maximum number of events per year	Maximum number of animals present per event (total)	
			California sea lions	Harbor seals
Half Moon Bay	July	1	100	65
Santa Cruz/Soquel	October	1	190	5
Santa Cruz/Seacliff State Beach	May	1	5	50
North Monterey Bay	July	1	190	50
South Monterey Bay	January	1	800	60
South Monterey Bay	July	1	1500	60
South Monterey Bay	variable	1	800	60
Pacific Grove	July	1	150	100
Cambria (Public)	July	1	50	60
Cambria (Private)	July	1	25	60
Total		10	3810	570

Proposed Mitigation

Under section 101(a)(5)(D) of the MMPA, NMFS shall prescribe the ''permissible methods of taking by harassment pursuant to such activity, and other means of effecting the least practicable adverse impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for subsistence uses.''

To ensure that the ''least practicable adverse impact'' will be achieved, NMFS evaluates mitigation measures in consideration of the following factors in

relation to one another: 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, their habitat, and their availability for subsistence uses (latter where relevant); the proven or likely efficacy of the measures; and the practicability of the measures for applicant implementation.

The MBNMS and NMFS worked to craft a set of mitigation measures designed to minimize fireworks impacts on the marine environment, as well as to outline the locations, frequency, and conditions under which the MBNMS would authorize marine fireworks displays. These mitigation measures, which were successfully implemented under previous NMFS-issued ITAs, include four broad approaches for managing fireworks displays. Note previous ITAs allowed for take incidental to 20 fireworks displays per year while this rule anticipates only 10 firework displays would occur annually.

- Establish a sanctuary-wide seasonal prohibition to safeguard pinniped reproductive periods. Fireworks events would not be authorized between March 1 and June 30 of any year when the primary reproductive season for pinnipeds occurs.
- Establish four conditional display areas and prohibit displays along the remaining 95 percent of sanctuary coastal areas. Display areas are located adjacent to urban centers where wildlife is often subject to frequent human disturbances. Remote areas and areas where professional fireworks have not traditionally been conducted would not be considered for fireworks approval. The conditional display areas (described previously in this document) are located at Half Moon Bay, the Santa Cruz/Soquel area, the northeastern Monterey Peninsula, and Cambria (Santa Rosa Creek).
- Displays would be authorized at a frequency equal to or less than one every 2 months in each area with a maximum of 10 displays per year.
- Fireworks displays would not exceed 30 minutes with the exception of two longer displays per year that will not exceed 1 hour.
- Implement a ramp-up period, wherein salutes are not allowed in the first 5 minutes of the display;
- Conduct a post-show debris cleanup for up to two days whereby all debris from the event is removed.

These mitigation measures are designed to prevent an incremental proliferation of fireworks displays and disturbance throughout the sanctuary and minimize area of impact by confining displays to primary traditional use areas. They also effectively remove fireworks impacts from 95 percent of the Sanctuary's coastal areas, place an annual quota and multiple conditions on the displays authorized within the remaining five percent of the coast, and impose a sanctuary-wide seasonal prohibition on all fireworks displays. These measures were developed to assure the least practicable adverse impact to marine mammals and their habitat.

Mitigation Conclusions

NMFS has carefully evaluated the applicant's proposed mitigation measures in the context of ensuring that NMFS prescribes the means of effecting the least practicable impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included consideration of the following factors in relation to one another: (1) The manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals; (2) the proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and (3) the practicability of the measure for applicant implementation.

Based on our evaluation of the applicant's proposed measures, as well as other measures considered by NMFS, NMFS has preliminarily determined that the proposed mitigation measures provide the means of effecting the least practicable impact on marine mammals species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Proposed Monitoring and Reporting

In order to issue an ITA for an activity, section 101(a)(5)(A) of the MMPA states that NMFS must, where applicable, 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 ITAs must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area.

Monitoring measures prescribed by NMFS should accomplish one or more of the following general goals:

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

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

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

- Behavioral observations in the presence of stimuli compared to observations in the absence of stimuli (need to be able to accurately predict received level, distance from source, and other pertinent information);
- Physiological measurements in the presence of stimuli compared to observations in the absence of stimuli (need to be able to accurately predict received level, distance from source, and other pertinent information);
- Distribution and/or abundance comparisons in times or areas with concentrated stimuli versus times or areas without stimuli;

4. An increased knowledge of the affected species; and

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

The MBNMS will conduct a pre-event and post-event census of local marine mammal populations within the fireworks detonation area, including a report identifying if any injured or dead marine mammals are observed during the post-event census. NMFS has worked with the MBNMS to develop an observer reporting form so that data are standardized across events. Reported data include number of individuals, by species, observed prior to display, behavioral observations (if observed during display), number of individuals, by species, after the fireworks event, any observed injured or dead animals, and fireworks event details (*e.g.,* start and end time).

The MBNMS must submit a draft annual monitoring report to NMFS within 60 days after the conclusion of the calendar year. MBNMS must submit a final annual monitoring report to NMFS within 30 days after receiving comments from NMFS on the draft report. If NMFS has no comments, the draft report will be considered to be the final report. In addition, the MBNMS will continue to make its information

available to other marine mammal researchers upon request.

Summary of Previous Monitoring

A detailed description of marine mammal and acoustic monitoring from 2006–2010 can be found in the Sanctuary's previous proposed incidental take authorization rulemaking (74 FR 19976, April 3, 2012). Here we provide a summary of marine mammals observed during monitoring from 2011–2016 conducted in accordance with the required monitoring and reporting measures contained within that rule and associated LOA.

TABLE 2—INCIDENTAL TAKE OF CALIFORNIA SEA LIONS DURING MBNMS-AUTHORIZED FIREWORKS DISPLAYS, 2011–2016

Site	California Sea Lion Counts					
	2011	2012	2013	2014	2015	2016
Half Moon Bay	0	no event ..	no event ...	no event ...	no event ..	no event.
Aptos	0	0	no event ..	no event ...	no event ...	no event.
Monterey	no event ...	no event ..	no event ...	no event ...	no event ..	no event.
Pacific Grove	0	0	0	0	0	1
Cambria	0	0	0	0	no event ..	0
Capitola	no event ...	no event ..	no event ...	0	0	0
City of Santa Cruz	no event ..	no event ...	no event ...	130	no event ...	363
Total	0	0	0	130	0	364

TABLE 3—INCIDENTAL TAKE OF HARBOR SEALS DURING MBNMS-AUTHORIZED FIREWORKS DISPLAYS, 2011–2016

Site	Harbor Seal Counts					
	2011	2012	2013	2014	2015	2016
Half Moon Bay	0	no event ..	no event ...	no event ...	no event ..	no event.
Aptos	0	0	no event ..	no event ...	no event ...	no event.
Monterey	no event ...	no event ..	no event ...	no event ...	no event ..	no event.
Pacific Grove	2	8	11	2	5	18
Cambria	0	0	0	0	no event ..	0
Capitola	no event ...	no event ..	no event ...	1	0	1
City of Santa Cruz	no event ..	no event ...	no event ...	2	no event ...	0
Total	2	8	11	5	5	19

Negligible Impact Analysis and Determination

NMFS has defined egligible 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 the authorized number of marine mammals that might be ''taken'' through harassment, NMFS considers other factors, such as the likely nature of any responses (*e.g.,* intensity, duration), the context of any responses (*e.g.,* critical reproductive time or location, migration, etc.), as well as effects on habitat, the status of the affected stocks, and the likely effectiveness of the mitigation. Consistent with the 1989 preamble for NMFS's implementing regulations (54 FR 40338; September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into these analyses via their impacts on the environmental 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).

Past monitoring by the MBNMS has identified at most only a short-term behavioral disturbance of animals by fireworks displays, with the causes of disturbance being sound effects and light flashes from exploding fireworks. Any takes would be limited to the temporary incidental harassment of California sea lions and harbor seals due to evacuation of usual and accustomed haul-out sites for as little as 15 minutes and as much as 15 hours following any fireworks event. Most animals depart affected haul-out areas at the beginning of the display and return to previous levels of abundance within 4 to 15 hours following the event.

NMFS has preliminarily determined that the fireworks displays, as described in this document and in MBNMS' application, will result in no more than Level B harassment of small numbers of California sea lions and harbor seals. The effects of coastal fireworks displays are typically limited to short term and localized changes in behavior, including temporary departures from haul-outs to avoid the sight and sound of commercial fireworks. Fireworks displays are limited in duration by MBNMS authorization requirements and would not occur on consecutive days at any fireworks site in the sanctuary. The mitigation measures proposed by MBNMS—and implemented as a component of NMFS' incidental take authorizations since 2005—would further reduce potential impacts. As described previously, these measures ensure that authorized fireworks displays avoid times of importance for breeding, as well as limiting displays to 5 percent of sanctuary coastline that is already heavily used by humans, and generally limiting the overall amount and intensity of activity. No take by injury, serious injury, or mortality is anticipated, and takes by Level B harassment would be at the lowest level practicable due to incorporation of the

mitigation measures described previously in this document.

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

Small Numbers

As noted above, only small numbers of incidental take may be authorized under Section 101(a)(5)(D) of the MMPA for specified activities other than military readiness activities. The MMPA does not define small numbers and so, in practice, NMFS compares the number of individuals taken to the most appropriate estimation of the relevant species or stock size in our determination of whether an authorization is limited to small numbers of marine mammals.

Here, NMFS proposes to authorize the take of up to 3,810 California sea lion and 570 harbor seal, annually, incidental to fireworks displays permitted by the MBNMS. As described in the ''*Description of Marine Mammals in the Area of the Specified Activity*'' section, the population estimate for the California sea lions is 296,750 individuals while the harbor seal population estimate is 30,968 individuals. Therefore, the proposed taking represents 1.2 and 1.8 percent of each stock, respectively.

Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS preliminarily 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 marine mammals implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Adaptive Management

The regulations governing the take of marine mammals incidental to commercial fireworks authorized by the MBNMS would contain an adaptive management component.

The reporting requirements associated with this proposed rule are designed to provide NMFS with monitoring data from the previous year to allow consideration of whether any changes are appropriate. The use of adaptive management allows NMFS to consider new information from different sources to determine (with input from the MBNMS 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 would have a reasonable likelihood of reducing adverse effects to marine mammals and if the measures are practicable.

The MBNMS's monitoring program (see ''Proposed Monitoring and Reporting'') would be managed adaptively. Changes to the proposed monitoring program may be adopted if they are reasonably likely to better accomplish the MMPA monitoring goals described previously or may better answer the specific questions associated with the MBNMS's monitoring plan.

The following are some of the possible sources of applicable data to be considered through the adaptive management process: (1) Results from monitoring reports, as required by MMPA authorizations; (2) results from general marine mammal and sound research; and (3) any information which reveals that marine mammals may have been taken in a manner, extent, or number not authorized by these regulations or subsequent LOAs.

Endangered Species Act (ESA)

The MBNMS has not requested, nor is NMFS proposing to authorize, take of marine mammals listed as threatened or endangered under the ESA in these proposed regulations. Therefore, we have determined that section 7 consultation under the ESA is not required.

National Environmental Policy Act

In compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*), we have made a preliminary determination that the activity proposed is categorically excluded from the requirement to prepare an environmental assessment or environmental impact statement.

Information Solicited

NMFS requests interested persons to submit comments, information, and suggestions concerning the request and the content of the proposed regulations to authorize the taking described herein (see **ADDRESSES**). All comments will be reviewed and evaluated as we prepare the final rule and make final determinations on whether to issue the requested authorizations. This notice and referenced documents provide all environmental information relating to our proposed action for public review.

Classification

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

Pursuant to section 605(b) of the Regulatory Flexibility Act (RFA), the Chief Counsel for Regulation of the Department of Commerce has certified to the Chief Counsel for Advocacy of the Small Business Administration that this proposed rule, if adopted, would not have a significant economic impact on a substantial number of small entities. MBNMS is the sole entity that would be subject to the requirements in these proposed regulations, and the MBNMS is not a small governmental jurisdiction, small organization, or small business, as defined by the RFA. Because of this certification, a regulatory flexibility analysis is not required and none has been prepared.

Notwithstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act (PRA) unless that collection of information displays a currently valid OMB control number. This proposed rule does not contain a collection-of-information requirement subject to the provisions of the PRA because the applicant is a Federal agency.

List of Subjects in 50 CFR Part 217

Exports, Fish, Imports, Indians, Labeling, Marine mammals, Penalties, Reporting and recordkeeping requirements, Seafood, Transportation.

Dated: March 10, 2017.

Samuel D. Rauch, III,

Acting Assistant Administrator for Fisheries, National Marine Fisheries Service.

For reasons set forth in the preamble, 50 CFR part 217 is proposed to be amended 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 B is to read as follows:

Subpart B—Taking of Marine Mammals Incidental to Commercial Fireworks Displays at Monterey Bay National Marine Sanctuary, CA

Sec.
217.11 Specified activity and specified geographical region.
217.12 Effective dates.
217.13 Permissible methods of taking.
217.14 Prohibitions.
217.15 Mitigation.
217.16 Requirements for monitoring and reporting.
217.17 Letters of Authorization.
217.18 Renewals and Modifications of Letters of Authorization.

§ 217.11 Specified activity and specified geographical region.

(a) Regulations in this subpart apply only to the Monterey Bay National Marine Sanctuary (MBNMS) and those persons it authorizes to display fireworks within the MBNMS for the taking of marine mammals that occurs in the area described in paragraph (b) of this section and that occurs incidental to authorization of commercial fireworks displays.

(b) The taking of marine mammals by MBNMS may be authorized in a Letter of Authorization (LOA) only if it occurs in the MBNMS.

§ 217.12 Effective dates.

Regulations in this subpart are effective from July 4, 2017, through July 3, 2022.

§ 217.13 Permissible methods of taking.

(a) Under LOAs issued pursuant to § 216.106 and § 217.17 of this chapter, the Holder of the LOA (hereinafter ''MBNMS'') may incidentally, but not intentionally, take marine mammals within the area described in § 217.11(b) of this chapter, provided the activity is in compliance with all terms, conditions, and requirements of the regulations in this subpart and the appropriate LOA.

(b) Reserved.

§ 217.14 Prohibitions.

Notwithstanding takings contemplated in § 217.11 of this chapter and authorized by an LOA issued under § 216.106 and § 217.17 of this chapter, no person in connection with the activities described in § 217.11 of this chapter may:

(a) Violate, or fail to comply with, the terms, conditions, and requirements of this subpart or an LOA issued under § 216.106 and § 217.17 of this chapter;

(b) Take any marine mammal not specified in such LOAs;

(c) Take any marine mammal specified in such LOAs other than by incidental, unintentional Level B harassment;

(d) Take a marine mammal specified in such LOAs if such taking results in more than a negligible impact on the species or stocks of such marine mammal; or

(e) Take a marine mammal specified in such LOAs if such taking results in an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

§ 217.15 Mitigation.

(a) When conducting the activities identified in § 217.11(a) of this chapter, the mitigation measures contained in any LOA issued under § 216.106 and § 217.17 of this chapter must be implemented. These mitigation measures include but are not limited to:

(1) Limiting the location of the authorized fireworks displays to the four specifically designated areas at Half Moon Bay, the Santa Cruz/Soquel area, the northeastern Monterey Breakwater, and Cambria (Santa Rosa Creek);

(2) Limiting the frequency of authorized fireworks displays to no more than an average frequency less than or equal to once every two months in each of the four prescribed areas;

(3) Limiting the duration of authorized individual fireworks displays to no longer than 30 minutes each, with the exception of two longer shows per year not to exceed 1 hour;

(4) Prohibiting fireworks displays at MBNMS between March 1 and June 30 of any year; and

(5) Continuing to implement authorization requirements and general and special restrictions for each event, as determined by MBNMS. Standard requirements include, but are not limited to, the use of a ramp-up period, wherein salutes are not allowed in the first five minutes of the display; the removal of plastic and aluminum labels and wrappings; and post-show reporting and cleanup. MBNMS shall continue to assess displays and restrict the number of aerial salute effects on a case-by-case basis, and shall implement general and special restrictions unique to each fireworks event as necessary.

(b) [Reserved]

§ 217.16 Requirements for monitoring and reporting.

(a) MBNMS is responsible for ensuring that all monitoring required under an LOA is conducted appropriately, including, but not limited to:

(1) Counts of pinnipeds in the impact area prior to and after all displays (counts should be made as close to the start of the display as possible but no sooner than 24 hours before the display and at comparable tide stage as the fireworks display), and

(2) Reporting to NMFS of all marine mammal injury, serious injury, or mortality encountered during debris cleanup the morning after each fireworks display.

(b) Unless specified otherwise in the LOA, MBNMS must submit a draft annual monitoring report to the Director, Office of Protected Resources, NMFS, no later than 60 days after the conclusion of each calendar year. This report must contain:

(1) An estimate of the number of marine mammals disturbed by the authorized activities,

(2) Results of the monitoring required in § 217.16(a) of this chapter, and any additional information required by the LOA. A final annual monitoring report must be submitted to NMFS within 30 days after receiving comments from NMFS on the draft report. If no comments are received from NMFS, the draft report will be considered to be the final annual monitoring report.

(c) A draft comprehensive monitoring report on all marine mammal monitoring conducted during the period of these regulations must be submitted to the Director, Office of Protected Resources, NMFS at least 120 days prior to expiration of these regulations. A final comprehensive monitoring report must be submitted to the NMFS within 30 days after receiving comments from NMFS on the draft report. If no comments are received from NMFS, the draft report will be considered to be the final comprehensive monitoring report.

§ 217.17 Letters of Authorization.

(a) To incidentally take marine mammals pursuant to these regulations, the MBNMS must apply for and obtain an LOA.

(b) An LOA, unless suspended or revoked, may be effective for a period of time not to exceed the expiration date of these regulations.

(c) In the event of projected changes to the activity or to mitigation and monitoring measures required by an LOA, the MBNMS must apply for and obtain a modification of the LOA as described in § 217.18 of this chapter.

(d) The LOA shall set forth:

(1) Permissible methods of incidental taking;

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

(3) Requirements for monitoring and reporting.

(e) 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 these regulations.

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

§ 217.18 Renewals and Modifications of Letters of Authorization.

(a) An LOA issued under § 216.106 and § 217.17 of this chapter for the activity identified in § 217.11(a) of this chapter shall be renewed or modified upon request by the applicant, provided that: (1) The proposed specified activity and mitigation, monitoring, and reporting measures, as well as the anticipated impacts, are the same as those described and analyzed for these regulations (excluding changes made pursuant to the adaptive management provision in § 217.18(c)(1) of this chapter), and (2) NMFS determines that the mitigation, monitoring, and reporting measures required by the previous LOA under these regulations were implemented.

(b) For LOA modification or renewal requests by the applicant that include changes to the activity or the mitigation, monitoring, or reporting (excluding changes made pursuant to the adaptive management provision in § 217.18(c)(1) of this chapter) that do not change the findings made for the regulations or result in no more than a minor change in the total estimated number of takes (or distribution by species or years), NMFS may publish a notice of proposed LOA in the **Federal Register**, including the associated analysis illustrating the change, and solicit public comment before issuing the LOA .

(c) An LOA issued under § 217.106 and § 217.17 of this chapter for the activity identified in § 217.11(a) of this chapter may be modified by NMFS under the following circumstances:

(1) Adaptive Management—NMFS may modify (including augment) the existing mitigation, monitoring, or reporting measures (after consulting with MBNMS regarding the practicability of the modifications) if doing so creates a reasonable likelihood of more effectively accomplishing the goals of the mitigation and monitoring set forth in the preamble for these regulations.

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

(A) Results from the MBNMS's monitoring from the previous year(s).

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

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

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

(2) Emergencies—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 an LOA issued pursuant to §§ 216.106 and 217.17 of this chapter, an LOA may be modified without prior notice or opportunity for public comment. The Notice would be published in the **Federal Register** within 30 days of the action.

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