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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 217

[Docket No. 120307157-2163-01]

RIN 0648-BB74

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

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) for authorization to take marine mammals incidental to authorizing professional fireworks displays within the MBNMS in California waters, over the course of 5 years. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is proposing regulations to govern that take and requests information, suggestions, and comments on these proposed regulations.

DATES: Comments and information must be received no later than [insert date 30 days after date of publication in the FEDERAL REGISTER].

ADDRESSES: You may submit comments, identified by 0648-BB74, by any one of the following methods:

• Electronic Submissions: Submit all electronic public comments via the Federal eRulemaking Portal: http://www.regulations.gov.

• Hand delivery or mailing of comments via paper or disc should be addressed to Michael Payne, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910.

Comments regarding any aspect of the collection of information requirement contained in this proposed rule should be sent to NMFS via one of the means stated here and to the Office of Information and Regulatory Affairs, NEOB-10202, Office of Management and Budget (OMB), Attn: Desk Office, Washington, DC 20503, OIRA@omb.eop.gov.

Instructions: All comments received are a part of the public record and will generally be posted to http://www.regulations.gov without change. All Personal Identifying Information (e.g., name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information.

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

A copy of MBNMS's application, and other supplemental documents, may be obtained by writing to the address specified above (see ADDRESSES), calling the contact listed above (see FOR FURTHER INFORMATION CONTACT), or visiting the internet at: http://www.nmfs.noaa.gov/pr/permits/incidental.htm.

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 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.

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 April 28, 2011, NMFS received a complete application from MBNMS requesting authorization for take of two species of marine mammals incidental to coastal fireworks displays

conducted at MBNMS under authorizations issued by MBNMS. 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 Letters of Authorization (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), which expires on July 3, 2012. The requested regulations would be valid from July 4, 2012 until July 3, 2017. Marine mammals would be exposed to elevated levels of sound as a result of authorized fireworks displays, as well as increased human activity associated with those displays. Because the specified activities have the potential to take marine mammals present within the action area, MBNMS requests authorization to take, by Level B harassment only, California sea lions (Zalophus californianus) and harbor seals (Phoca vitulina).

Background

The MBNMS adjoins 276 mi (444 km), or approximately 25 percent, of the central California coastline, and encompasses ocean waters from mean high tide to an average of 25 mi (40 km) offshore between Rocky Point in Marin County and Cambria in San Luis Obispo County. Fireworks displays have been conducted over current MBNMS 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. Many fireworks displays occur at the height of the dry season in central California, when area vegetation is particularly prone to ignition from sparks or embers.

In 1992, the MBNMS was the first national marine sanctuary (NMS) to be designated along urban shorelines and therefore has addressed many regulatory issues previously not encountered by the NMS program. Authorization of professional fireworks displays has required a steady refinement of policies and procedures related to this activity. Fireworks displays, and the attendant increase in human activity, are known to result in the behavioral disturbance of pinnipeds, typically in the form of temporary abandonment of haul-outs. As a result, pinnipeds hauled out in the vicinity of authorized fireworks displays may exhibit behavioral responses that indicate incidental take by Level B harassment under the MMPA. Numbers of California sea lions and harbor seals, the species that may be subject to harassment, have been recorded extensively at four regions where fireworks displays are authorized in MBNMS. Based on these data and MBNMS's estimated maximum number of fireworks displays, MBNMS is requesting authorization to incidentally harass up to 4,465 California sea lions and 270 harbor seals annually over the 5-year time span of the proposed rule, from July 4, 2012 to July 3, 2017.

Description of the Specified Activity

Since 1993, the MBNMS, a component of NOAA's Office of National Marine Sanctuaries, has processed requests for the professional display of fireworks that affect MBNMS. The MBNMS has determined that debris fallout (i.e., spent pyrotechnic materials) from fireworks events may constitute a discharge into the sanctuary and thus violate sanctuary regulations, unless an authorization is issued by the superintendent. Therefore, sponsors of fireworks displays conducted in the MBNMS are required to obtain sanctuary authorization prior to conducting such displays (see 15 CFR 922.132).

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 in

(5-30 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.

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 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) above ground level (AGL).

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 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.

Set piece or ground level 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.

Each display is unique, according to the type and number of shells, the pace and length of the show, the acoustic characteristics of the display site, and the weather and time of day. The vast majority (97 percent) of fireworks displays authorized in the Sanctuary between 1993 and 2005 were aerial displays that usually included simultaneous low-level displays, and this trend has continued. 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. Some fireworks displays are synchronized with musical broadcasts over loudspeakers and may incorporate other non-pyrotechnic sound and visual effects.

The MBNMS issued 87 authorizations for professional fireworks displays from 1993-2010. However, the MBNMS staff projects that as many as twenty coastal displays per year may be conducted in, or adjacent to, MBNMS boundaries in the future. Thus, the number of displays would be limited to not more than twenty events per year in four specific areas along 276 mi (444 km) of coastline. Fireworks displays would not exceed 30 minutes (with the exception of up to two displays per year, each not to exceed 1 hour) in duration and would occur with an average frequency of less than or equal to once every 2 months within each of the four prescribed display areas. NMFS believes – and extensive monitoring data indicates – that incidental take resulting from fireworks displays would be, at most, the short-term flushing and evacuation of non-breeding haul-out sites by California sea lions and harbor seals.

A more detailed description of the fireworks displays authorized by MBNMS may be found in MBNMS' application, in MBNMS' Assessment of Pyrotechnic Displays and Impacts within the MBNMS 1993-2001 (2001), or in the report of Marine Mammal Acoustic and Behavioral Monitoring for the MBNMS Fireworks Display, 4 July 2007 (2007), which are available at: http://www.nmfs.noaa.gov/pr/permits/incidental.htm.

Description of Fireworks Display Areas

The Monterey Bay area is located in the Oregonian province subdivision of the Eastern Pacific Boreal Region. The six types of habitats found in the bay area are: (1) submarine canyon habitat, (2) nearshore sublittoral habitat, (3) rocky intertidal habitat, (4) sandy beach intertidal habitat, (5) kelp forest habitat, and (6) estuarine/slough habitat. Monterey Bay supports a wide array of temperate cold-water species with occasional influxes of warm-water species, and this species diversity is directly related to the diversity of habitats.

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 only four general prescribed areas (with seven total sub-sites) within the sanctuary, while displays along the remaining 95 percent of sanctuary coastal waters 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 conditional display areas are located, from north to south, at Half Moon Bay, the Santa Cruz/Soquel area, the northeastern Monterey Peninsula, and Cambria (Santa Rosa Creek) (see Maps A-J in MBNMS' application). The number of displays would be limited to not more than 20 total events per year within these four specific areas combined, along the whole 276 mi (444 km) of coastline.

Half Moon Bay

This site, at Pillar Point Harbor, is typically used annually for a 20-minute, medium-sized Independence Day fireworks display on July 4. 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 harbor immediately adjacent to the impact area is home to a major commercial fishing fleet that operates at all times. The harbor also supports a considerable volume of recreational boat traffic. Half Moon Bay Airport is located adjacent to the harbor and approach and departure routes pass directly over the acute impact area. The airport is commonly used by general aviation pilots for training, with an annual average attendance of approximately fifteen

flights per day. On weekends, with good weather, the airport may accommodate as many as fifty flights per day. Beachgoers and water sports enthusiasts use the beaches to the south of the launch site. The impact area is also used by recreational fishermen, surfers, swimmers, boaters, and personal watercraft operators. To the north, around Pillar Point, is an area known as 'Mavericks', considered a world-class surfing destination. Surfing contests are held periodically at Mavericks. 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.

Concentrations of harbor seals are present to the north around Pillar Point and on the coast to the south of the launch site. It is possible that individual elephant seals (Mirounga angustirostris) may enter the area from breeding sites at Año Nuevo Island and the Farallon Islands, but breeding occurs in the winter and firework displays in Half Moon Bay are limited to summer. Gray whales (Eschrichtius robustus) typically migrate west of the reefs extending south from Pillar Point.

Santa Cruz/Soquel

Three separate fireworks display sites (Santa Cruz, Capitola, and Aptos, from west to east) are located within the Santa Cruz/Soquel area. The Santa Cruz launch site is typically used annually for City of Santa Cruz anniversary fireworks displays in early October. The launch site is on a sandy beach, adjacent to the Santa Cruz boardwalk and the San Lorenzo River and along the west bank. The aerial shells are aimed to the south.

The harbor immediately adjacent to the Santa Cruz impact area is home to a commercial fishing fleet that operates at all times. The harbor also supports a large volume of recreational boater traffic. The launch site is in the center of the shoreline of a major urban coastal city. The beaches to the west of the 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. The impact area is used by boaters, recreational fishermen, swimmers, surfers, and other recreational users. 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'. Surfing contests are routinely held at the site. During the period from sunset through the duration of 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.

The Capitola launch site has been used once since 1993 for a 50-year City of Capitola anniversary fireworks display, on May 23, 1999. This display was one of the largest volume fireworks displays conducted in the MBNMS, incorporating 1,700 aerial shells and 1,800 low-level effects and lasting 25 minutes. The launch site was on the Capitola Municipal Pier, adjacent to the City of Capitola. The aerial shells were aimed above the pier.

The Capitola impact area is immediately adjacent to a small urban community. The beaches to the east and west of the launch site are used daily by beachgoers and water sport enthusiasts from the regional area. The impact area is used by boaters, recreational fishermen, swimmers, surfers, and other recreational users. To the east of the pier is a mooring field and popular public beach.

The Aptos site, at Seacliff State Beach, is typically used annually for a large fundraiser, conducted by the Monte Foundation, for Aptos area schools in October. At the seaward end of the Aptos Pier is a historic 400-ft (122-m) cement vessel, which was purposefully grounded in its

current position as an extension of the pier, but which has since been restricted to public access. The exposed interior decks of the vessel have created convenient haul-out surfaces for harbor seals. In a 2000 survey, the MBNMS recorded as many as 45 harbor seals hauled out on the vessel in the month of October. The fireworks launch site is on the Aptos Pier and part of the cement vessel. The aerial shells are aimed above and to the south of the pier. The large aerial show typically lasts for approximately 20 minutes.

The Aptos impact area is immediately adjacent to a recreational beach. The beaches to the east and west of the launch site are used daily by beachgoers and water sport enthusiasts from the regional area. The impact area is used by boaters, recreational fishermen, swimmers, surfers, and other recreational users, but typically at moderate to light levels of activity. To the east and west of the pier are public use beach areas and private homes at the top of steep coastal bluffs. 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.

California sea lions routinely use the Santa Cruz Municipal Pier as a haul-out and resting site. Gray whales typically migrate along a southerly course, west of Point Santa Cruz and away from the pier.

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 aerial shells are aimed above and to the northeast. 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.

The Monterey fireworks 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). Commercial and recreational vessels operate at all hours from the adjacent harbor. A thirty-station mooring field lies within the acute impact area between the launch barge and Municipal Wharf II. The moorings are usually completely occupied during the annual fireworks event. Auto traffic and emergency vehicles are audible from Lighthouse and Del Monte Avenues, main transportation arteries along the adjacent shoreline. The impact area is heavily utilized by recreational users and harbor operations. 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 typically used for an annual ‘Feast of Lanterns’ fireworks display in late July. The Feast of Lanterns is a community event that has been celebrated in the

City of Pacific Grove for over 100 years. The fireworks launch site is at the top of a rocky coastal bluff adjacent to an urban recreation trail and public road. The aerial shells are aimed to the northeast. The small aerial display typically lasts approximately 20 minutes and is accompanied by music broadcasted from speakers at Lover's Cove. The fireworks are part of a traditional outdoor play that concludes the festival.

The Pacific Grove launch site is in the center of an urban shoreline, adjacent to a primary public beach in Pacific Grove. The shoreline to the east and west of the launch site is lined with residences and a public road and pedestrian trail. The impact area is used heavily by boaters and other recreational users. The center of the impact area is in a cove with 30-40 ft (9-12 m) coastal bluffs. Immediately north of the launch site is a popular day use beach area. At peak usage, the beach may support up to 500 visitors at any given time. Surfing activity is common immediately north of the site. 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.

The largest concentration of marine mammals near the Monterey impact area consists of California sea lions resting at the Monterey breakwater approximately 700 yd (640 m) northwest of the center of the impact area. Harbor seals routinely use offshore rocks and wash rocks for haul-outs and also forage in the area.

Cambria

The site is typically used annually for a 20-minute, small Independence Day fireworks display on July 4. The launch site is on a sandy beach at Shamel County Park, and the aerial shells are aimed to the west. Immediately north of the launch site is the mouth of Santa Rosa Creek and Lagoon. The impact area is immediately adjacent to a county park and recreational

beach. 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.

Low concentrations of harbor seals are typically present in the impact area. California sea lions are present in the impact area in moderate numbers. It is possible that individual elephant seals may enter the area from breeding sites to the north at Point Piedras Blancas, but breeding occurs in the winter and displays at Cambria are limited to the summer. Gray whales migrate along the coast in this area and may pass through the acute impact area, but displays typically occur outside of peak gray whale migration period.

Description of Marine Mammals in the Area of the Specified Activity

Twenty-six species of marine mammals are known from the Monterey Bay area. Only six of these species, however, are likely to be present in the acute impact area (the area where sound, light, and debris effects may have direct impacts on marine organisms and habitats) during a fireworks display. These species include the California sea lion, harbor seal, southern sea otter (Enhydra lutris), bottlenose dolphin (Tursiops truncatus), harbor porpoise (Phocoena phocoena), and gray whale. The northern elephant seal is rarely seen in the area.

Though the three aforementioned cetaceans are known to frequent nearshore areas within the sanctuary, they have never been reported in the vicinity of a fireworks display, nor have there been any reports to the MBNMS of stranding events or of injured/dead animals discovered after any display. Because sound attenuates rapidly across the air-water interface, these animals would likely not encounter the effects of fireworks except when surfacing for air. NMFS does not anticipate any take of cetaceans and they are not addressed further in this document.

Past sanctuary observations have not detected any disturbance to sea otters as a result of the fireworks displays; however, past observations have not included specific surveys for this species. Sea otters do frequent all general display areas. Sea otters and other species may temporarily depart the area prior to the beginning of the fireworks display due to increased human activities. Some sea otters in Monterey harbor have become well-acclimated to very intense human activity, often continuing to feed undisturbed as boats pass simultaneously on either side and within 20 ft (6 m) of the otters. It is therefore possible that select individual otters may have a higher tolerance level than others to fireworks displays. Otters in residence within the Monterey harbor display a greater tolerance for intensive human activity than their counterparts in more remote locations. However, otters are not under NMFS' jurisdiction. The MBNMS consulted with the U.S. Fish and Wildlife Service (USFWS) pursuant to section 7 of the Endangered Species Act (ESA) regarding effects on southern sea otters. The USFWS issued a biological opinion on June 22, 2005, which concluded that the authorization of fireworks displays, as proposed, is not likely to jeopardize the continued existence of endangered and threatened species within the sanctuary or to destroy or adversely modify any listed critical habitat. The USFWS further found that MBNMS would be unlikely to take any southern sea otters, and therefore issued neither an incidental take statement under the ESA nor an IHA.

The northern elephant seal is seen so infrequently in the areas with fireworks displays that they are not likely to be impacted by fireworks displays. Therefore, the only species likely to be harassed by the fireworks displays are the California sea lion and the harbor seal. Information relevant to the distribution, abundance and behavior of the species that are most likely to be impacted by fireworks displays within the MBNMS is provided below.

California Sea Lion

The population of California sea lions ranges from southern Mexico to southwestern Canada (Carretta et al., 2007). In the United States, pupping typically occurs in late May to June. Most individuals of this species breed during July on the Channel Islands off southern California (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.

Since nearing extinction in the early 1900s, the California sea lion population has increased and is now robust and growing at a current rate of 5.6 to 6.5 percent per year (based on pup counts) with an estimated minimum population of 141,842 animals. The total population level is estimated at 238,000 animals. The population is not listed as endangered or threatened under the ESA, nor is this a depleted or strategic stock under the MMPA.

In any season, California sea lions are the most abundant pinniped in the area (Bonnell et al., 1983), primarily using the central California area to feed during the non-breeding season. After breeding farther south along the coast and migrating northward, populations peak in the Monterey Bay area in fall and winter and are at their lowest numbers in spring and early summer. A minimum of 12,000 California sea lions are probably present at any given time in the MBNMS region. Año Nuevo Island is the largest single haul-out site in the sanctuary, hosting as many as 9,000 California sea lions at times (Weise, 2000; Lowry, 2001). Stage structure of California sea lions within the sanctuary varies by location, but generally, the majority are adult and subadult males.

Harbor Seal

Harbor seals are distributed throughout the west coast of the United States, 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., 2006).

The population of the California stock of harbor seals is healthy and growing at a current rate of 3.5 percent per year with an estimated minimum population of 31,600 animals (Carretta et al., 2006). The total California population is estimated at 34,233 animals. The population is not listed as endangered or threatened under the ESA, nor is this a depleted or a strategic stock under the MMPA.

Harbor seals are residents in the MBNMS throughout the year, occurring mainly near the coast. They haul out at dozens of sites along the coast 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). The species does breed in the sanctuary; 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 (MBNMS, 1992). Nicholson (2000) studied harbor seals on the northeast Monterey Peninsula (an area with the largest single concentration of animals within the sanctuary) for 2 years. 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.

Potential Effects of the Specified Activity on Marine Mammals

Physiological Effects

Temporary (auditory) threshold shift (TTS) is the mildest form of hearing impairment that can occur during exposure to a strong sound (Kryter, 1985). When an animal experiences TTS, its hearing threshold rises and a sound must be stronger in order to be heard. TTS can last from minutes or hours to (in cases of strong TTS) days. Richardson et al. (1995) noted that the magnitude of TTS depends on the level and duration of noise exposure, among other considerations. For sound exposures at or somewhat above the TTS threshold, hearing sensitivity recovers rapidly after exposure to the noise ends.

Permanent (auditory) threshold shift (PTS) occurs when there is physical damage to the sound receptors in the ear. In some cases there can be total or partial deafness, while in other cases the animal has an impaired ability to hear sounds in specific frequency ranges. Although there is no specific evidence that exposure to fireworks can cause PTS in any marine mammals, physical damage to a mammal's ears can potentially occur if it is exposed to sound impulses that have very high peak pressures, especially if they have very short rise times (time required for sound pulse to reach peak pressure from the baseline pressure). Such damage can result in a permanent decrease in functional sensitivity of the hearing system at some or all frequencies.

Temporary or permanent hearing impairment is a possibility when marine mammals are exposed to very strong sounds, but there has been no specific documentation of this for marine mammals exposed to fireworks. Some factors that contribute to onset of PTS are as follows: (1) exposure to a single very intense noise, (2) repetitive exposure to intense sounds that individually

cause TTS but not PTS, and (3) recurrent ear infections or (in captive animals) exposure to certain drugs.

Based on current information, NMFS takes a precautionary approach in using an exposure threshold of 190 dB re 1 µPa (rms) for onset of Level A harassment (injury) for pinnipeds under water (NMFS 2000). This level would approximately equal an A-weighted airborne sound intensity level of 128 dB re 20 µPa. Precise exposure thresholds for airborne sounds have not been determined; however, monitoring of marine mammal reactions to rocket launches at Vandenberg Air Force Base (VAFB) has indicated that behavioral harassment may occur for harbor seals at received levels of 90 dB re 20 µPa, while similar reactions may occur at levels of 100 dB re 20 µPa for other pinniped species. In those studies, not all harbor seals left a haul-out during a launch unless the Sound Exposure Level (SEL) was 100 dB or above (which, in the case of the VAFB launch locations and durations, is equivalent to an SPL of 89 to 95 dB), and only short-term effects were detected.

In order to determine if harbor seals experience any change in their hearing sensitivity as a result of launch noise, researchers at VAFB conducted Auditory Brainstem Response (ABR) testing on ten harbor seals prior to and after the launches of three Titan IV rockets (one of the loudest launch vehicles used at VAFB). Detailed analysis of the changes in waveform latency and waveform replication of the ABR measurements showed that there were no detectable changes in the seals' hearing sensitivity as a result of the launch noise, an A-weighted SPL of approximately 111 dB and an A-weighted SEL from 96.6 to 103.6 dB (SRS Technologies, 2001).

In 2001, the MBNMS and USFWS conducted in-depth monitoring of the July 4 City of Monterey fireworks display. Monitors recorded species abundance before, during, and after the

event and measured the decibel level of exploding fireworks. A hand-held decibel meter was located aboard a vessel adjacent to the Monterey Breakwater, approximately one-half mile from the fireworks launch site. The highest sound pressure level (SPL) reading observed on the decibel meter during the fireworks display was 82 dB. The typical decibel levels for the display ranged from 70 to 78 dB, and no salute effects were used in the display. An ambient noise level of 58 dB was recorded at the survey site 30 minutes following the conclusion of the fireworks. MBNMS conducted additional in-depth acoustic and behavioral monitoring at the breakwater, where sea lions typically haul out, during the 2007 City of Monterey July 4 celebration. This effort is described later in this document (see Summary of Previous Monitoring).

Given the frequency, duration, and intensity of sounds (maximum measured 82 dB for larger aerial shells) that marine mammals may be exposed to, it is unlikely that they would sustain temporary, much less permanent, hearing impairment during fireworks displays.

Behavioral Disturbance

In some display locations, marine mammals may 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 (e.g., noise, boating, kayaking, fishing, diving, swimming, surfing, picnicking, beach combing, tidepooling), and as a fireworks presentation progresses, most marine mammals generally evacuate the impact area. 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. 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.

Sea lions have been observed evacuating haul-out areas upon initial detonation of fireworks, and then returning to the haul-out sites within 4 to 15 hours following the end of the fireworks display. Harbor seals have been seen to remain in the water after initial fireworks detonation around the haul-out site. Sea lions in general are more tolerant of noise and visual disturbances than harbor seals. Adult sea lions have likely habituated to many sources of disturbance and are therefore much more tolerant of nearby human activities. For both pinniped species, pups and juveniles are more likely to be harassed when exposed to disturbance than older animals.

NMFS and MBNMS found no peer-reviewed literature that specifically investigates the response of California sea lions and harbor seals to commercial fireworks displays. However, as described previously, extensive studies have been conducted at VAFB to determine responses by pinnipeds to the effects of periodic rocket launches, the light and sound effects of which would be roughly similar to the effects of pyrotechnic displays, but of greater intensity. This scientific research program was conducted to determine the long-term cumulative impacts of space vehicle launches on the haul-out behavior, population dynamics and hearing acuity of harbor seals at VAFB. In addition, on some occasions, the effects of sonic booms on pinniped populations in the northern Channel Islands have been studied.

The response of harbor seals to rocket launch noise at VAFB depended on the intensity of the noise (size of the vehicle and its proximity) and the age of the seal (SRS Technologies, 2001). The highest noise levels are typically from launch vehicles with launch pads closest to the haul-out sites. The percentage of seals leaving the haul-out increases with noise levels up to approximately 100 dB A-weighted SEL, after which almost all seals leave, although recent data has shown that an increasing percentage of seals have remained on shore, and those that remain

are adults. Given the high degree of site fidelity among harbor seals, it is likely that those seals that remained on the haul-out site during rocket launches had previously been exposed to launches; that is, it is possible that adult seals have become acclimated to the launch noise and react differently than the younger inexperienced seals. Of the twenty seals tagged at VAFB, eight (40 percent) were exposed to at least one launch disturbance but continued to return to the same haul-out site. Three of those seals were exposed to two or more launch disturbances. Most of the seals exposed to launch noise appeared to remain in the water adjacent to the haul-out site and then returned to shore within 2 to 22 minutes after the launch disturbance. Of the two remaining seals that left the haul-out after the launch disturbance, both had been on shore for at least 6 hours and returned to the haul-out site on the following day (SRS Technologies, 2001).

The launches at VAFB do not appear to have had long-term effects on the harbor seal population in this area. The total population of harbor seals at VAFB has been estimated to be 1,040 animals, increasing at an annual rate of 12.6 percent. 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 (SRS Technologies, 2001). Harbor seals will temporarily leave their haul-out when exposed to launch noise; however, they generally return to the haul-out within one hour.

On San Miguel Island, when California sea lions and elephant seals were exposed to sonic booms from vehicles launched at VAFB, sea lion pups were observed to enter the water, but usually remained playing in the water for a considerable period of time. Some adults approached the water, while elephant seals showed little to no reaction. This short-term disturbance to sea lion pups does not appear to carry the possibility of any long-term effects to the population. The conclusions of the 5-year VAFB study are almost identical to the MBNMS

observations of pinniped response to commercial fireworks displays. Observed impacts have been limited to short-term disturbance only.

Effects of Sound and Light

The primary causes of disturbance are sound effects and light flashes from exploding fireworks. Pyrotechnic devices that operate at higher altitudes (e.g., aerial shells) are more likely to have a larger acute impact area, while ground and low-level devices have more confined effects. Acute impact area is defined as the area where sound, light, and debris effects may have direct impacts on marine organisms and habitats. Direct impacts include, but are not limited to, immediate physical and physiological impacts such as abrupt changes in behavior, flight response, diving, evading, flushing, cessation of feeding, and physical impairment or mortality.

The largest commercial aerial shells used within the Sanctuary are 10-12 in (25-30 cm) in diameter and reach a maximum altitude of 1,000 ft (305 m) AGL. The bursting radius of the largest shells is approximately 850 ft (259 m). The acute impact area can extend from 1-2 mi (1.6-3.2 km) from the center of the detonation point, depending on the size of the shell, height and type of the explosions, wind direction, atmospheric conditions, and local topography.

Aerial shells produce flashes of light that can be brilliant (exceeding 30,000 candela) and can occur in rapid succession. Loud explosive and crackling sound effects stem primarily from salutes and bursting charges at altitude. Humans and wildlife on the ground and on the surface of the water may feel the sound waves and the accompanying rapid shift of ambient atmospheric pressure. Sound propagates further from high altitude shells than low altitude shells, thus ensonifying more surface area on the ground and water, as they are not blocked significantly by buildings and landforms. The sound from the lifting charge detonation is vectored upward through the mortar tube opening and reports as a dull thump to bystanders on the ground, far less

conspicuous than the high-level aerial bursts. The intensity of an aerial show can be amplified by increasing the number of shells used, the pace of the barrage, and the length of the display.

Low-level devices reach a maximum altitude of 200 ft (61 m) AGL. The acute impact area can extend to 1 mi (1.6 km) from the center of the ignition point depending on the size and flight patterns of projectiles, maximum altitude of projectiles, the type of special effects, wind direction, atmospheric conditions, and local structures and topography. Low-level devices also produce brilliant flashes and fountains of light and sparks accompanied by small explosions, popping, and crackling sounds. Since they are lower in altitude than aerial shells, sound and light effects impact a smaller area. Low-level devices do not typically employ large black powder charges as do aerial shells, but are often used in large numbers in concert with one another and in rapid succession, producing intense localized effects.

Set pieces are stationary, do not launch any encased effects into the air, and produce effects between 0 and 50 ft (15 m) AGL. Small pellets of a pyrotechnic composition, such as those from sparklers or roman candles, may be expelled a short distance into the air. Loud, but not explosive, noises (e.g., crackling, popping, whistling) may emanate from a set piece, though they are usually used in concert with low-level effects and aerial displays. Depending on the size and height of the structure, the number and type of effects, wind direction, and local topography, the acute impact area can extend up to 0.5 mi (0.8 km) from the center of the ignition point, though fallout is generally confined within a 300 ft (91 m) radius. Residue may include smoke, airborne particulates, fine solids, and slag.

The primary impact noted in past observations is disturbance of marine mammals from the light and sound effects of the exploding aerial shells. The loud sound bursts and pressure waves created by the exploding shells appear to cause more wildlife disturbance than the

illumination effects. In particular, the percussive aerial salute shells have been observed to elicit a strong flight response in California sea lions in the vicinity of the impact area (within 0.45 mi (0.72 km) of the launch site).

Increased Boat Traffic

Increased boat traffic is often an indirect effect of fireworks displays as boaters move in to observe the event. The more boats there are in the area, the larger the chance that a boat could potentially collide with a marine mammal or other marine wildlife. The number of boats present at any one event is largely dependent upon weather, sea state, distance of the display from safe harbors, and season. At the MBNMS, some events have virtually no boat traffic, while there may more typically be anywhere from 20 to 70 boats present, ranging in size from 10 to 65 ft (3 to 20 m) in length.

Prior to and during fireworks displays at the MBNMS, boats typically enter the observation area at slow speed (less than 8 kn (15 km/hr)) due to the presence of other vessels and limited visibility (i.e., most fireworks displays occur at night). The USCG and/or other federal agency vessels are on site to enforce safe boating laws and keep vessels out of the debris fallout area during the display. Most boaters anchor prior to the display, while others drift with engines in neutral for convenient repositioning.

MBNMS staff have observed boat traffic during several fireworks displays and generally found that boaters are using good boating and safety practices. They have also never witnessed the harassment, injury, or death of marine mammals or other wildlife as a result of vessels making way at these events. In general, as human activity increases and concentrates in the viewing areas leading up to the display, wildlife avoid or gradually evacuate the area. As noted before, the fireworks venues are marine areas with some of the highest ambient levels of human

activity in the MBNMS. Many resident animals are accustomed to stimuli (e.g., emergency sirens, vehicle and crowd noise, marine and beach recreation). Due to the gradual nature of the increase in boat traffic, its infrequent occurrence and short duration, and the slow speed of the boats, NMFS does not believe the increased boat traffic is likely to significantly impact marine mammals.

Anticipated Effects on Habitat

Debris

The fallout area for the aerial debris is determined by local wind conditions. In coastal regions with prevailing winds, the fallout area can often be projected in advance. This information is calculated by pyrotechnicians and fire department personnel in selection of the launch site to abate fire and public safety hazards. Mortar tubes are often angled to direct shells over a prescribed fallout area, away from spectators and property. Generally, the bulk of the debris will fall to the surface within a 0.5-mi (0.8-km) radius of the launch site. In addition, 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 ocean waters.

Some low-level devices may project small casings into the air (such as small cardboard tubes used to house flaming whistle and firecracker type devices). These casings will generally fall to earth within a 200-yd (183-m) radius of the launch site, because they do not attain altitudes sufficient for significant lateral transport by winds. The acute impact area for set piece devices is typically within 300 ft (91 m), but can extend to a 0.5 mi (0.8 km) radius from the

center of the ignition point depending 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. Like aerial shells, low-level pyrotechnics and mortars are often covered with aluminum foil to protect them from weather and errant sparks, pieces of which are shredded during the course of the show and initially deposited near the launch site.

The explosion in a firework separates the cardboard and paper casing and compartments, scattering some of the shell's structural pieces clear of the blast while burning others. Some pieces are immediately incinerated, while others burn totally or partially on their way to the ground. Many shell casings part into two halves or into quarters when the burst charge detonates and are projected clear of the explosion. However, during the course of a display, some devices will fail to detonate after launch (duds) and fall back to earth/sea as an intact sphere or cylinder. Aside from post display surveys and recovery, there is no way to account for these misfires. 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 harm. Whether such duds pose a threat to wildlife once adrift is unknown. After soaking in the sea for a period of time, the likelihood of detonation rapidly declines, and it is unlikely that any animal would attempt to consume such a device. 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.

The MBNMS has conducted surveys of solid debris on surface waters, beaches, and subtidal habitat and has discovered no visual evidence of acute or chronic impacts to the

environment or wildlife. Aerial displays generally produce a larger volume of solid debris than low-level displays. The MBNMS fireworks authorizations require the entity conducting the display to clean area beaches of fireworks debris for up to 2 days following the display. In some cases, debris has been found in considerable quantity on beaches the morning following the display.

The MBNMS staff has recovered many substantial uncharred casing remnants on ocean waters immediately after marine displays. 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 other cases, virtually no fireworks debris was detected. This variance is likely due to several factors, such as type of display, tide state, sea state, and currents. In either case, due to the requirement for clean up following the displays, NMFS does not believe the small amount of remaining debris is likely to significantly impact the environment, including marine mammals or their habitat.

Chemical Residue

Possible indirect impacts to marine mammals and other marine organisms include those resulting from chemical residue or physical debris emitted into the water. When an aerial shell detonates, its chemical components burn at high temperatures and are efficiently incinerated. Pyrotechnic vendors have stated that the chemical components are incinerated upon successful detonation of the shell. However, by design, the chemical components within a shell are scattered by the burst charge, separating them from the casing and internal shell compartments.

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 (DeBusk et al., 1992) indicates that chemical residues (fireworks decomposition products) do result from fireworks displays and can be measured under certain circumstances. 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." A report author hypothesized, via personal communication with MBNMS staff, that had the same study been conducted in California, the elevated metal concentrations in the lake would not have been detectable against natural background concentrations of those same metals, due to naturally higher metal concentrations in the western United States. Based on the findings of this report and the lack of any evidence that fireworks displays within the Sanctuary have degraded water

quality, it is likely that chemical residue from fireworks does not pose a significant risk to the marine environment. No negative impacts to water quality have been detected.

Summary of Previous Monitoring

The MBNMS has monitored commercial fireworks displays for potential impacts to marine life and habitats since 1993. In July 1993, the MBNMS performed its initial field observations of professional fireworks at the annual Independence Day fireworks display conducted by the City of Monterey. Subsequent 'documented' field observations were conducted in Monterey by the MBNMS staff in July 1994, July 1995, July 1998, March 1998, October 2000, July 2001, and July 2002. MBNMS staff has observed additional displays at Monterey, Pacific Grove, Capitola, and Santa Cruz, but those observations were primarily for compliance purposes, and written assessments of environmental impacts were not generated. Documented field observations were also made at Aptos each October from 2000 to 2005, and have been made for all authorized fireworks under NMFS-issued MMPA authorizations, beginning in 2005. Though monitoring techniques and intensity have varied over the years and visual monitoring of wildlife abundance and behavioral responses to nighttime displays is challenging, observed impacts have been consistent. Wildlife activity nearest to disturbance areas returns to normal (pre-display species distribution, abundance, and activity patterns) within 12-15 hours, and no signs of wildlife injury or mortality have ever been discovered as a result of managed fireworks displays.

Sea lions in general are more tolerant to noise and visual disturbances than harbor seals. In addition, pups and juveniles of either species are more likely to be harassed when exposed to disturbance than are older animals. Adult sea lions have likely habituated to many sources of disturbance and are therefore much more tolerant of human activities nearby. Of all the display

sites in the sanctuary, California sea lions are only present in significant concentrations at Monterey. The following is an excerpt from a 1998 MBNMS staff report on the reaction of sea lions to a large aerial fireworks display in Monterey: "In the first seconds of the display, the sea lion colony becomes very quiet, vocalizations cease, and younger sea lions and all marine birds evacuate the breakwater. The departing sea lions swim quickly toward the open sea. Most of the colony remains intact until the older bulls evacuate, usually after a salvo of overhead bursts in short succession. Once the bulls depart, the entire colony follows suit, swimming rapidly in large groups toward the open sea. A select few of the largest bulls may sometimes remain on the breakwater. Sea lions have been observed attempting to haul out onto the breakwater during the fireworks display, but most are frightened away by the continuing aerial bursts.

Sea lions begin returning to the breakwater within 30 minutes following the conclusion of the display but have been observed to remain quiet for some time. The colony usually reestablishes itself on the breakwater within 2-3 hours following the conclusion of the display, during which vocalization activity returns. 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 seems to be intact and functioning with no visible sign of abnormal behavior."

In the 2001 Monterey survey (discussed previously in this document), most animals were observed to evacuate haul-out areas upon the initial report from detonated fireworks. Surveys continued for 4.5 hours after the initial disturbance and numbers of returning California sea lions remained at less than 1 percent of pre-fireworks numbers. When surveys resumed the next morning (13 hours after the initial disturbance), sea lion numbers on the breakwater equaled or exceeded pre-fireworks levels. Nearly 2 decades of observing sea lions at the City of Monterey's

Fourth of July celebration gives the following general observations: sea lions (1) begin leaving the breakwater as soon as the fireworks begin; (2) clear completely off after an aerial salute or quick succession of loud effects; (3) usually begin returning within a few hours of the end of the display; and (4) are present on the breakwater at pre-firework numbers by the following morning.

Up to 15 harbor seals may typically be present on rocks in the outer Monterey harbor in early July. The seal haul-out area is approximately 2,100 ft (640 m) from the impact zone for the aerial pyrotechnic display. Only two harbor seals were observed on and near the rocks adjacent to Fisherman's Wharf prior to the 2001 display. Neither were observed to haul out after the initial fireworks detonation, but remained in the water around the haul-out. The haul-out site was only surveyed until the conclusion of the fireworks display; therefore, no animal return data is available from the 2001 study. However, the behavior of the seals after the initial disturbance and during the fireworks display is similar to the response behavior of seals during the VAFB rocket launches, where they loitered in the water adjacent to their haul-out site during the launch and returned to shore within 2 to 22 minutes after the launch disturbance.

A private environmental consultant monitored the Aptos fireworks display each October from 2001 through 2005 (per California Coastal Commission permit conditions) and concluded that harbor seal activity returned to normal at the site by the day following the display. Surveys have detected no evidence of injury or mortality in harbor seals as a result of the annual 30-minute fireworks display at the site.

Since harbor seals have a smaller profile than sea lions and are less vocal, their movements and behavior are often more difficult to observe at night. 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 acute impact area during fireworks displays, though they may loiter in adjacent surface waters until the fireworks have concluded.

In 2007, MBNMS conducted acoustic monitoring in conjunction with in-depth behavioral monitoring for the City of Monterey Independence Day fireworks display. MBNMS was required to: (1) conduct counts of marine mammals present within the fireworks impact area immediately before and one day after the event; (2) conduct behavioral observations of marine mammals present during the display; and (3) conduct NMFS-approved acoustic monitoring of sound levels for the duration of the event. The full report (Marine Mammal Acoustic and Behavioral Monitoring for the Monterey Bay National Marine Sanctuary Fireworks Display 4 July 2007) is available at http://www.nmfs.noaa.gov/pr/permits/incidental.htm.

Two separate systems for monitoring sound levels – with one customized for recording low frequency sounds associated with impulsive noise, such as explosions – were placed at the east end of the USCG pier, approximately 800 m from the fireworks launch site. Acoustic monitoring began approximately 3 hours prior to the beginning of the fireworks display. During those 3 hours, the average 1-hour sound level (L_{eq} 1 hour) was approximately 59 dB, and included sea lion vocalizations, private fireworks in the local area, and recreational boat traffic.

The fireworks display began with two sets of fireworks detonations and ended with a grand finale of multiple explosions after 20 minutes. The average sound level measured during the hour containing the fireworks display was 72.9 dB, approximately 14 dB greater than ambient levels recorded before the display. The loudest sound recorded during the event was associated with the detonation of a 10-in shell, and was measured at 133.9 dB re: 20 μPa (peak). The detonation of the 10-in shell had an unweighted SEL of 105 dB re: 20 μPa^2-s. The second

loudest sound recorded was associated with detonation of an 8-in shell, measured at 127 dB re: 20 µPa (peak) with an unweighted SEL of 90.1 dB re: 20 μPa^2-s. Overall, sound generated during the display was low- to mid-frequency and ranged from 97 to 107 dB re: 20 µPa, while the majority of the fireworks detonations ranged from 112 to 124 dB re: 20 µPa.

A marine mammal observer conducted observations aboard a MBNMS vessel in the vicinity of the southern side of the jetty and the western end of Monterey Harbor. The observer used binoculars during the daytime and night vision goggles after dark and counted species present, including location, age, class, and gender of the species. Visual monitoring was conducted from approximately 5 hours prior to the display until approximately 2 hours after the conclusion of the fireworks display. The weather and harbor state provided optimal conditions for observations.

Pre-event behavioral monitoring showed a total of 258 sea lions located on the north and south sides of the jetty and underneath the USCG pier. Most were yearlings or juveniles, though two subadult males were also observed and appeared to be practicing holding territory in the water. With the exception of the subadult males, the observer was unable to determine gender. The number of sea lions hauled out was relatively constant until approximately 30 minutes prior to the beginning of the display, when several recreational vessels passed nearby and shot off their own, unauthorized fireworks and firecrackers, causing approximately one-third of the sea lions to enter the water. During pre-event monitoring, eight harbor seals were hauled out on exposed rocks just offshore of the western end of the harbor. Because it was high tide (0.8 m), there were few places for harbor seals to haul out. Approximately 30 minutes prior to the display, the observer recorded four harbor seals hauled out and two harbor seals in the water.

By the time the fireworks display commenced, the majority of sea lions had already fled the haul-out areas due to recreational vessels in the area and individuals shooting private fireworks in the area. Six sea lions remaining under the USCG pier entered the water during the display. This last flush is likely correlated with detonation of the 8-in shell described previously. Despite the detonations, the observer noted that the sea lions entered the water at a relatively slow rate, and without apparent injury. There were 18 different instances of sea lion vocalizations recorded throughout the fireworks display, indicating that, although sea lions flushed into the water, at least some individuals remained in the harbor during the fireworks display. The observer reported that all of the remaining harbor seals at the western end of the harbor had flushed at the beginning of the fireworks display after hearing the first set of detonations.

The first sea lion (a subadult male) returned to the jetty approximately 20 minutes after the conclusion of the fireworks, and was reported to be practicing holding a territory at the end of the jetty. Three additional sea lions returned after approximately 1 hour. No harbor seals were observed during post-event monitoring. A census was conducted the morning following the display, and revealed approximately 291 California sea lions and 31 harbor seals at their respective haul-out sites. No injured or dead animals were observed. These data indicate that California sea lions and harbor seals were only temporarily displaced from haul-out sites during the fireworks display. This monitoring event indicates that a majority of individuals will flush prior to the beginning of a fireworks display, due to the presence and associated noise of recreational boaters and private, unauthorized fireworks, and that any remaining individuals will likely flee the haul-out at the start of the display. In conclusion, fireworks displays likely result in temporary displacement from haul-outs, constituting a short-term disruption in behavior, and

pinnipeds are likely to resume normal behavior and full utilization of haul-outs within approximately 12 hours.

From 2006-2010, under the regulations in effect from July 4, 2006, through July 3, 2011 (71 FR 40928; July 19, 2006), twenty fireworks events were authorized in the MBNMS. For each display, observers conducted a pre-event census to document abundance of marine mammals and post-event surveys to record any injured or dead wildlife species. Pre-event censuses were assumed to be a reasonable proxy for the number of incidental takes, as all animals present within the vicinity of the display area would be expected to temporarily abandon haul-outs prior to or during fireworks displays. Table 1 summarizes these monitoring efforts. In all cases, no pinnipeds other than those authorized for taking were observed, and post-event monitoring revealed no injured or dead marine mammals.

Table 1. Incidental take of marine mammals during MBNMS-authorized fireworks displays, 2006-2010

Event	Location	Date	California sea lions	Harbor seals
Independence Day	Cambria	7/4/2006	0	0
Independence Day	Monterey	7/4/2006	61	9
Feast of Lanterns	Pacific Grove	7/30/2006	0	0
Monte Foundation	Aptos	10/14/2006	0	4
Independence Day	Cambria	7/4/2007	0	0
Independence Day	Monterey	7/4/2007	258	8
Independence Day	Half Moon Bay	7/4/2007	0	1
Feast of Lanterns	Pacific Grove	7/28/2007	0	8
Monte Foundation	Aptos	10/13/2007	0	4
Independence Day	Cambria	7/4/2008	0	0
Independence Day	Monterey	7/4/2008	394	10
Independence Day	Half Moon Bay	7/4/2008	0	2
Feast of Lanterns	Pacific Grove	7/26/2008	0	0
Monte Foundation	Aptos	10/11/2008	24	2
Independence Day	Cambria	7/4/2009	0	0
Independence Day	Half Moon Bay	7/4/2009	45	5
Feast of Lanterns	Pacific Grove	7/25/2009	4	7
Monte Foundation	Aptos	10/3/2009	35	11
Independence Day	Cambria	7/4/2010	0	0
Monte Foundation	Aptos	10/8/2010	0	18
Total	**-**	**-**	**821**	**89**

Proposed Mitigation

In order to issue an incidental take authorization under section 101(a)(5)(A) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to the specified

activity, and other means of effecting the least practicable impact on each species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of each species or stock for taking for certain subsistence uses (where relevant). 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 NMFS-issued ITAs from 2005-2011, include four broad approaches for managing fireworks displays:

- 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, i.e., the primary reproductive season for pinnipeds.

- Establish four conditional display areas and prohibit displays along the remaining 95 percent of sanctuary coastal areas. Traditional display areas are located adjacent to urban centers where wildlife has often become habituated 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).

- Create a per-annum limit on the number of displays allowed in each display area. If properly managed, a limited number of fireworks displays conducted in areas already heavily impacted by human activity can occur with sufficient safeguards to prevent any long-term or chronic impacts upon local natural resources. There is a per-annum limit of twenty displays along the entire sanctuary coastline in order to prevent cumulative negative environmental

effects from fireworks proliferation. Additionally, displays would be authorized at a frequency equal to or less than one every 2 months in each area.

- Retain authorization requirements and general and special restrictions for each event. Fireworks displays would not exceed 30 minutes with the exception of two longer displays per year that will not exceed 1 hour. Standard requirements include the use of a ramp-up period, wherein salutes are not allowed in the first 5 minutes of the display; the removal of plastic and aluminum labels and wrappings; and post-show reporting and cleanup. The sanctuary would continue to assess displays and restrict the number of aerial salute effects on a case-by-case basis, and would implement general and special restrictions unique to each fireworks event as necessary.

These 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 5 percent of the coast, and impose a sanctuary-wide seasonal prohibition on all fireworks displays. These measures were developed in order to assure that protected species and habitats are not jeopardized by fireworks activities. They have been well received by local fireworks sponsors who have pledged their cooperation in protecting sanctuary resources.

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 and their efficacy over the past 6 years of authorizing fireworks, NMFS has preliminarily determined that the proposed mitigation measures provide the means of effecting the least practicable impact on marine mammal species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

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.

In order to continue the long-term understanding of the effects of fireworks displays on pinnipeds, described previously in Summary of Previous Monitoring, as well as to estimate levels of incidental take and ensure compliance with MMPA authorizations, MBNMS will require its applicants to conduct a pre-event census of local marine mammal populations within the acute fireworks impact area. Each applicant will also be required to conduct post-event monitoring in the acute fireworks impact area to record injured or dead marine mammals.

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 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 report. In addition, the MBNMS will continue to make its information available to other marine mammal researchers upon request.

Estimated Take by Incidental Harassment

With respect to the activities described 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. The proposed mitigation and monitoring measures are expected to minimize the possibility of injurious or lethal takes such that take by Level A harassment, serious injury or mortality is considered remote. However, as noted earlier, there is no specific information demonstrating that injurious or lethal takes would occur even in the absence of the planned mitigation and monitoring measures.

As discussed previously, the two marine mammal species likely to be taken by Level B harassment incidental to fireworks displays authorized within the sanctuary are the California sea lion and the harbor seal, due to the temporary evacuation of usual and accustomed haul-out sites. Both of these species are protected under the MMPA, while neither is listed under the ESA.

Numbers of animals that may be taken by Level B harassment are expected to vary due to factors such as tidal state, seasonality, shifting prey stocks, climatic phenomenon (such as El Niño events), and the number, timing, and location of future displays. The estimated take of sea lions and harbor seals was determined using the monitoring data from 2006-2010, presented earlier in this document, except as described in the footnotes to Table 2. Numbers of animals that may be present were analyzed for the four prescribed areas described previously in this document: Half Moon Bay (HMB), Santa Cruz/Soquel (SC; including Capitola and Aptos), Monterey Bay (MB; including Pacific Grove), and Cambria (C). Please see Table 2 for more information.

Table 2. Estimated Potential Incidental Take Per Year by Display Area

Display Location	**Time of Year**	**Estimated maximum number of events per year**	**Estimated maximum number of animals present per event (total)**	
			California sea lions	**Harbor seals**
HMB	July	4	45 (180)	5 (20)
SC	October	5	35 (175)	18 (90)
SC[1]	May	1	190	50
MB	July	5	394 (2420)	10 (50)
MB[1]	January	1	1500	60
Cambria[2]	July	4	0	0
Total		**20**	**4,465**	**270**

[1] From 2006-10, no authorized fireworks events occurred at SC during May or at MB during January. However, authorized events have occurred at these locations at these times and could occur again during the life of this proposed rule. Given the lack of monitoring data available, potential take is conservatively estimated for these events on the basis of unpublished data gathered by MBNMS biologists at the specific display sites, unpublished aerial survey data gathered by NMFS from Point Piedras Blancas to Bodega Rock, results of independent surveys conducted in the MBNMS and personal communication with those researchers, and population estimates from surveys covering larger geographic areas.

[2] From 2006-10, no pinnipeds have been observed during monitoring associated with authorized fireworks displays at Cambria.

At all four designated display sites combined, twenty fireworks events per year could likely disturb an estimated maximum total of 4,465 California sea lions out of a total estimated population of 238,000. This number is small relative to the population size (1.9 percent). For harbor seals, an estimated maximum of 270 animals out of a total estimated population of 34,233 could be disturbed within the sanctuary as a result of twenty fireworks events per year at all four

designated display sites combined. These numbers are small relative to the population size (0.8 percent).

With the incorporation of mitigation measures proposed previously in this document, only Level B incidental harassment associated with the proposed authorized coastal fireworks displays is likely to occur, and these events are unlikely to result in any detectable impact on marine mammal species or stocks or their habitats.

Negligible Impact and Small Numbers Analysis and Preliminary Determination

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." In making a negligible impact determination, NMFS considers a variety of factors, including but not limited to: (1) the number of anticipated mortalities; (2) the number and nature of anticipated injuries; (3) the number, nature, intensity, and duration of Level B harassment; and (4) the context in which the take occurs.

Past monitoring by the MBNMS has identified at most only a short-term behavioral disturbance of animals by fireworks displays, with the primary causes of disturbance being sound effects and light flashes from exploding fireworks. Additionally, the VAFB study of the effects of rocket-launch noise, which is more intense than fireworks noise, on California sea lions and harbor seals indicated only short-term behavioral impacts. With the mitigation measures proposed below, 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. This information is based on 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 2005-2010. Empirical observations have focused on impacts to water quality and selected marine mammals in the vicinity of the displays.

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 mitigation and monitoring measures, NMFS preliminarily finds that MBNMS' authorization of coastal fireworks displays will result in the incidental take of small numbers of marine mammals,

by Level B harassment only, and that the total taking from coastal fireworks displays will have a negligible impact on the affected species or stocks.

Impact on Availability of Affected Species or Stock for Taking for Subsistence Uses

There are no relevant subsistence uses of marine mammals implicated by this action.

Endangered Species Act (ESA)

As mentioned earlier, the Steller sea lion and several species of ESA-listed cetaceans may be present at MBNMS at different times of the year and could potentially swim through the fireworks impact area during a display. In a 2001 consultation with MBNMS, NMFS concluded that this action is not likely to adversely affect ESA-listed species under NMFS' jurisdiction. There is no designated critical habitat in the area. This action will not have effects beyond those analyzed in that consultation.

The USFWS is responsible for regulating incidental take of the southern sea otter. The MBNMS consulted with the USFWS pursuant to section 7 of the ESA regarding impacts to that species. The USFWS issued a biological opinion on June 22, 2005, which concluded that the authorization of fireworks displays, as proposed, is not likely to jeopardize the continued existence of endangered and threatened species within the sanctuary or to destroy or adversely modify any listed critical habitat. The USFWS further found that MBNMS would be unlikely to take any southern sea otters, and therefore issued neither an incidental take statement under the ESA nor an IHA.

National Environmental Policy Act

In compliance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), as implemented by the regulations published by the Council on Environmental Quality (40 CFR parts 1500-1508), and NOAA Administrative Order 216-6, NMFS and MBNMS prepared

an Environmental Assessment (EA) on the Issuance of Regulations Authorizing Incidental Take of Marine Mammals and Issuance of National Marine Sanctuary Authorizations for Coastal Commercial Fireworks Displays within the Monterey Bay National Marine Sanctuary, to consider the direct, indirect and cumulative effects to the human environment resulting from issuance of sanctuary authorizations for fireworks displays and issuance of an IHA to MBNMS. NMFS signed a Finding of No Significant Impact (FONSI) on June 21, 2006. NMFS has reviewed MBNMS's application and determined that there are no substantial changes to the proposed action and that there are no new direct, indirect, or cumulative effects to the human environment resulting from issuance of an IHA to MBNMS. Therefore, NMFS has determined that a new or supplemental EA or Environmental Impact Statement is unnecessary, and reaffirms the existing FONSI for this action. The existing EA and FONSI for this action are available for review at http://www.nmfs.noaa.gov/pr/permits/incidental.htm.

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).

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. The SBA defines small

entity as a small business, small organization, or a small governmental jurisdiction. Applying this definition, there are no small entities that are impacted by this proposed rule. This proposed rule impacts only the activities of MBNMS, which has submitted a request for authorization to take marine mammals incidental to authorizing professional fireworks displays within the sanctuary in California waters, over the course of 5 years. MBNMS is a component of the Office of National Marine Sanctuaries within NOAA, which is a federal agency. MBNMS is not considered to be small governmental jurisdiction under the RFA's definition. Under the RFA, governmental jurisdictions are considered to be small if they are "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000, unless an agency establishes, after opportunity for public comment, one or more definitions of such term which are appropriate to the activities of the agency and which are based on such factors as location in rural or sparsely populated areas or limited revenues due to the population of such jurisdiction, and publishes such definition(s) in the Federal Register." Because this proposed rule impacts only the activities of MBNMS, which is not considered to be a small entity within SBA's definition, the Chief Counsel for Regulation certified that this proposed rule will not have a significant economic impact on a substantial number of small entities. As a result 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 contains collection-of-information requirements subject to the provisions of the PRA. These requirements have been

approved by OMB under control number 0648-0151 and include applications for regulations, subsequent LOAs, and reports. Send comments regarding any aspect of this data collection, including suggestions for reducing the burden, to NMFS and the OMB Desk Officer (see ADDRESSES).

List of Subjects in 50 CFR part 217

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

Dated: March 27, 2012.

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Alan D. Risenhoover,

Acting Deputy Assistant Administrator for Regulatory Programs,

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.

2. Subpart B is added to part 217 to read as follows:

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

Sec.

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

§ 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 waters of the MBNMS.

§ 217.12 Effective dates.

Regulations in this subpart are effective from July 4, 2012, through July 3, 2017.

§ 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) The incidental take of marine mammals under the activities identified in § 217.11(a) of this chapter is limited to the following species and is limited to Level B Harassment:

(1) Harbor seal (Phoca vitulina) – 1,350 (an average of 270 annually)

(2) California sea lion (Zalophus californianus) – 22,325 (an average of 4,465 annually)

§ 217.14 Prohibitions.

Notwithstanding takings contemplated in § 217.11 of this chapter and authorized by a 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) Take any marine mammal not specified in § 217.12(b) of this chapter;

(b) Take any marine mammal specified in § 217.13(b) of this chapter other than by incidental, unintentional Level B harassment;

(c) Take a marine mammal specified in § 217.13(b) of this chapter if such taking results in more than a negligible impact on the species or stocks of such marine mammal; or

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

§ 217.15 Mitigation.

(a) The activity identified in § 217.11(a) of this chapter must be conducted in a manner that minimizes, to the greatest extent practicable, adverse impacts on marine mammals and their habitats. When conducting the activities identified in § 217.11(a) of this chapter, the mitigation measures contained in the 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 twenty total displays per year and no more than one fireworks display every 2 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 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 5 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) The mitigation measures that the individuals conducting the fireworks are responsible for will be included as a requirement in fireworks display authorizations issued by MBNMS to the individual entities.

§ 217.16 Requirements for monitoring and reporting.

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

(1) Counts of pinnipeds in the impact area prior to all displays, 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, CRC must apply for and obtain a LOA.

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

(c) If an LOA expires prior to the expiration date of these regulations, CRC must apply for and obtain a renewal of the LOA.

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

(e) 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.

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

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

§ 217.18 Renewals and Modifications of Letters of Authorization.

(a) A 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) A 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 CRC 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 CRC'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 § 217.13(b) of this chapter, an LOA may be modified without prior notice or opportunity for public comment. Notice would be published in the Federal Register within 30 days of the action.

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