

Authorization (IHA) under section 101(a)(5)(D) and regulations governing authorizations for a five-year period under section 101(a)(5)(A) of the MMPA for the possible harassment of harbor seals (*Phoca vitulina*) and California sea lions (*Zalophus californianus*) incidental to coastal fireworks displays resulting from permitting commercial companies to hold firework events. This document serves as Notice of NMFS' proposal to issue the one-year IHA and notice of receipt of the application for regulations.

The MBNMS adjoins 276 miles (444 km) or 25 percent of the central California coastline, and encompasses ocean waters from mean high tide to an average of 25 miles (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 (such as Independence Day and municipal anniversaries), and to foster public use and enjoyment of the marine environment. The marine venue for this activity is the preferred setting for fireworks in central California 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 has addressed many regulatory issues previously not encountered by the NMS program. Authorization of professional firework displays has been an issue that has required a steady refinement of policies and procedures toward this activity as more has been learned about its impacts to the environment.

Project Description

Since 1983, the MBNMS, a component of NOAA, has processed requests for the professional display of commercial-grade fireworks in the atmosphere and at ground or sea level, and these displays affect the Sanctuary. Sponsors of fireworks displays conducted in the MBNMS are required to obtain authorization due to discharge of spent pyrotechnic materials into NMS waters (see 15 CFR 922.132).

Professional pyrotechnic devices used in firework displays can be grouped into three general categories: aerial shells, low-level devices, and set piece displays. Aerial shells are launched from mortars using black powder charges to altitudes of 200 to 1000 ft (61

to 305 m) where they explode and ignite internal burst charges and incendiary chemicals. The largest commercial aerial shells used within MBNMS reach a maximum altitude of 1000 ft (305 m) above ground level with a bursting radius of approx. 850 ft (260 m). Most of the incendiary elements and part of the shell casing burn up in the atmosphere; however, portions of the casings and some internal structural components and chemical residue fall back to the ground or water, depending on wind conditions. The bulk of debris will fall to the surface within a 0.5 statute mile (0.8 km) radius of the launch site. A unique type of aerial shell is known as a "salute" shell, the purpose of which is to produce a loud percussive audible effect which sounds similar to cannonfire when detonated. Low-level devices are similar to over-the-counter fireworks, which produce a fountain effect of light as burning particles shoot up out of a tube, producing a ball or trail of sparkling light. These fireworks are designed to produce effects between 0 and 200 ft (0 to 61 m) above ground level, and some may emit pulsing light patterns and/or sound effects. Some low-level devices may project small casings into the air, which will generally fall to the earth within a 600-ft (183-m) radius of the launch site. Set piece fireworks are mostly static in nature and remain close to the ground and are usually used in concert with low-level effects or aerial shells, typically employing bright flares, sparkling effects, and limited sound effects. These displays are designed to produce effects between 0 and 50 ft (0 to 15 m) above ground level. Depending on local conditions, fallout is generally confined within a 300-ft (91-m) radius of the launch site.

The MBNMS has issued 42 permits for professional fireworks displays since 1993, with a current average of 7 approvals per year. However, MBNMS projects that as many as 20 coastal displays per year may be conducted in, or adjacent to, MBNMS boundaries in the future. The number of displays will be limited to not more than 20 events per year in four specific areas along 276 mi (444 km) of coastline. In general, fireworks displays will not exceed 20 minutes in duration and will occur with an average frequency of less than or equal to once every two months within each of the four prescribed display areas. The vast majority (95 percent) of fireworks displays authorized in the MBNMS between 1993 and 2001 have been aerial displays that usually include simultaneous low-level displays. An average large display will last 20

minutes and include 700 aerial shells and 750 low-level effects. An average smaller display lasts approximately 7 minutes and includes 300 aerial shells and 550 low-level effects.

Initially, the MBNMS believed that it could minimize potential light, sound, and debris impacts to the NMS and marine mammals through permit conditions and has steadily refined conditions to limit the location, timing, and composition of professional fireworks events affecting the MBNMS. However, due to observations over the past several years and consultation with NMFS' Southwest Region, it appears that some fireworks displays result in incidental take of marine mammals by Level B harassment. NMFS believes that the nature of the incidental harassment will be the short-term flushing and evacuation of non-breeding haulout sites by California sea lions and Pacific harbor seals.

Description of Habitat and Marine Mammals Affected by the Activity

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. A description of MBNMS and its associated marine mammals can be found in the MBNMS application and Fireworks Assessment Report (2001), which are available upon request (see ADDRESSES).

Marine Mammal Impacts

The species of marine mammals that may be present in a fireworks display acute impact area (the area where sound, light, and debris effects have direct impacts on marine organisms and habitats) include the California sea lion, harbor seal, bottlenose dolphin (*Tursiops truncatus*), harbor porpoise (*Phocoena phocoena*), California gray whale (*Eschrichtius robustus*), and Southern sea otters (*Enhydra lutris neries*).

Marine mammals can be impacted by fireworks displays in three ways: light, sound, and debris. Pyrotechnic devices that operate at higher altitudes are more likely to have a larger impact area (such as aerial shells), while ground and low-level devices have more confined effects. Possible direct impacts to