



MARINE MAMMAL COMMISSION

27 March 2017

Ms. Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910-3225

Dear Ms. Harrison:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the National Marine Fisheries Service's (NMFS) 17 March 2017 notice (82 Fed. Reg. 14184) and the letter of authorization application submitted by the Monterey Bay National Marine Sanctuary (MBNMS) seeking issuance of regulations under section 101(a)(5)(A) of the Marine Mammal Protection Act. The taking would be incidental to permitting commercial firework displays within MBNMS waters in California during a five-year period.

MBNMS proposes to permit commercial firework displays within the Sanctuary, as it has since 1993. Pyrotechnic devices used during the displays would include aerial shells, low-level launch devices, and ground-mounted displays. NMFS preliminarily has determined that, at most, the proposed activities temporarily would modify the behavior of small numbers of harbor seals, California sea lions¹, and northern elephant seals. It also anticipates that any impact on the affected species and stocks would be negligible. NMFS does not anticipate any take of marine mammals by death or serious injury and believes that the potential for disturbance will be at the least practicable level because of the proposed mitigation measures. The mitigation, monitoring, and reporting measures include—

- prohibiting firework displays from 1 March until 30 June of each year to minimize harassment during the pupping season;
- establishing four conditional firework display areas (i.e., Half Moon Bay, Santa Cruz/Soquel, northeastern Monterey Peninsula, and Cambria) and prohibiting display areas along the remaining 95 percent of MBNMS coastal areas;
- limiting firework displays to a maximum of 10 per year and the frequency to one or fewer every two months in each of the four areas;
- limiting the timeframe for each firework display to no more than 30 minutes, except for two displays that could last up to 1 hour each;

¹ After discussions with the Commission, NMFS indicated it plans to increase the number of takes of California sea lions at Santa Cruz/Soquel from 190 to 363 based on the maximum number of sea lions observed during monitoring activities in 2016. The total number of takes of California sea lions would increase to 3,983.

- using ramp-up procedures (i.e., salute shells are not permitted within the first 5 minutes of the display);
- removing plastic and aluminum labels and wrappings from the devices prior to use;
- removing expended debris from the area on each of the two days after each firework display;
- using qualified observers to monitor for pinnipeds, to the maximum extent practicable, for 30 minutes immediately before² and for 30 minutes immediately after³ each firework display⁴;
- reporting injured and dead marine mammals to the National Marine Fisheries Service (NMFS) and the Southwest Regional Stranding Coordinator⁴; and
- submitting annual monitoring reports and a final monitoring report.

The Commission concurs with NMFS's preliminary finding and recommends that NMFS issue the final rule, subject to the inclusion of the proposed mitigation, monitoring, and reporting measures. Please contact me if you have questions regarding the Commission's recommendation.

Sincerely,



Rebecca J. Lent, Ph.D.
Executive Director

² If it is not possible to conduct the census immediately before the fireworks display, it would be conducted the day before the event, at or near the same time of the scheduled start of the display the following day.

³ If it is not possible to conduct the census immediately after the fireworks display, it would be completed no more than 24 hours following the display and at a similar tidal stage.

⁴ NMFS clarified that these details absent from the various measures stipulated in the proposed rule would be incorporated into the final rule.



**OCEAN
DEFENDERS
ALLIANCE**
Working for a debris free sea



**Friends of
the Earth**

April 17, 2017

Jolie Harrison
Chief, Permits and Conservation Division
Office of Protected Resources, National Marine Fisheries Service
1315 East West Highway
Silver Spring, MD 20910

Re: Comments re: Monterey Bay National Marine Sanctuary (MBNMS) request for authorization to take marine mammals incidental to commercial fireworks displays as required by the Marine Mammal Protection Act (MMPA). Docket No. 161216999-7232-01

Dear Ms. Jolie Harrison,

Thank you for the opportunity to submit comments on the proposed authorization of Monterey Bay National Marine Sanctuary to permit take of marine mammals incidental to commercial fireworks displays within the Sanctuary as permitted by the Marine Mammal Protection Act. These comments are submitted by Turtle Island Restoration Network, Ocean Defenders Alliance, and Friends of the Earth.

We oppose NMFS authorizing Monterey Bay National Marine Sanctuary take of marine mammals incidental to a commercial fireworks display. Monterey Bay National Marine Sanctuary (MBNMS or the Sanctuary) is a world class example of a marine protected area where thirty-four species of marine mammals regularly and safely thrive.¹ Authorization of commercial fireworks displays will harass resident marine life therefore undermining the protective goal of the marine sanctuary. Half Moon Bay and Monterey Bay are protected because they support a rich array of biodiversity. Authorizing take of marine mammals for a tourist attraction opens loopholes for greedy commercialization of one of the only true sanctuaries for endangered marine mammals in the world. Authorizing the Sanctuary permitted take of marine mammals incidental to commercial fireworks displays will be problematic (and Level B Harassment) for marine mammals unfortunate enough to try to occupy space proximate to the pollution that results.

Negative Environmental Impacts of Commercial Fireworks Displays

MBNMS previous commercial fireworks display contracts dictated that entertainment companies clean up after their shows. The contracts do not take into account the trash left by tens of thousands showing up to watch the show. Approval of MBNMS to take marine mammals in four public locations suggests litter is not a form of annoyance or torment to mammal populations. In 2016, the town of Tahoe reported 1,596 pounds of trash following their Fourth of

¹ Monterey Bay National Marine Sanctuary Overview <http://montereybay.noaa.gov/intro/welcome.html>

July fireworks show.² MBNMS is asking for permits to allow a similar crowd at four locations on a protected coastline. A large amount of trash left behind large public gatherings should classify as Level B harassment in that it has the potential to disrupt behavioral patterns including but not limited to migration, breathing, nursing, feed or sheltering. No animals willingly occupy a polluted environment. Indirect harassment brought about by large crowds viewing the fireworks displays would affect not only sea lions and harbor seals but also resident otters, whales, and dolphins.

The MBNMS should be required to take into account the cetaceans disturbed because of the “flotilla of recreational and commercial boats”³ that will impede resting, feeding or socializing marine mammals in the area. These disturbances have been found in long-term studies by the IUCN to possibly cause long-term problems for populations.⁴ A ten-year-old Environmental Assessment authored by the National Marine Fisheries Service (NMFS) and Monterey Bay National Marine Sanctuary reasons that the large amount of boat traffic accruing for a fireworks display drives off any cetaceans or dolphins in the area before the firework show begins. The Environmental Assessment draws a conclusion that because cetaceans and dolphins have never been observed during a commercial fireworks display, the marine mammals must not be in the area to be bothered. If the light and noise pollution do not bother marine mammals, then they cause indirect harassment by attracting a disturbing amount of boat traffic.

Loss of whale and dolphin habitat has already been directly linked to human activity around and within marine environments. The Sanctuary does not need to be adding more detrimental human activity to a protected marine environment. We know the sea lions and harbor seals are already harassed directly and indirectly by fireworks- is it a reasonable conclusion that the whales, dolphins, otters and countless other animals may be tormented as well.

Inconclusive Environmental Assessment

It is absurd the Environmental Assessment conducted on the Sanctuary has disregarded the potential harm to the five species of pinnipeds, Southern Sea Otters and twenty species of the order cetaceans potentially found in the impact zone³. The document makes inconclusive statements such as, “[i]t is therefore possible that select individual otters may have a higher tolerance level than others to fireworks displays” and “NMFS does not anticipate any impacts to cetaceans”.³ The study published in 2006 is being used to apply for a take permit valid through 2022. A permit for harassment should not be granted unless it is scientifically determined the other marine mammals occupying the area would not be negatively affected.

The Sanctuary cites in its Environmental Assessment that sea otters, being habituated to human activity, consequently are not bothered by an unsolicited fireworks display. Most dog owners would deem their pet as tormented by the fireworks, despite their pet being habituated to human activity. Humans try to ascribe emotions to animal behaviors similar to their own. The Sanctuary has deemed wild sea otters unanxious because some individuals of that population

² Keep Tahoe Blue Press Release <http://www.keeptahoeblue.org/news/press-releases/Hundreds-clean-Lake-Tahoe-beaches-after-holiday-weekend>

³ 2006 Environmental Assessment by NOAA, NMFS and MBNMS http://www.nmfs.noaa.gov/pr/permits/incidental/research/mbnms_ea_2006.pdf

⁴ 2002–2010 Conservation Action Plan for the World’s Cetaceans Randall R. Reeves, Brian D. Smith Enrique A. Crespo and Giuseppe Notarbartolo di Sciarra http://cpps.dyndns.info/cpps-docs-web/planaccion/docs2011/oct/turismo_biodiv/Doc.7.Dolphins_whales_porpoises.pdf

seem highly tolerant of human activity because they keep feeding. This sweeping assumption that entire sea otter population will not be bothered seems unlikely to be accurate.

The Sanctuary's anthropomorphization of marine mammal behavior assumes that because there is no documented reactionary behavior of marine mammals besides sea lions and seals to repetitive, continuous bangs, these animals are not bothered. The Sanctuary has decided that if animals are not exhibiting an explicit indication that they are bothered in the way humans would be, then the marine mammals must not be bothered. The Sanctuary may be able to definitively say that there are no whales in the area of the fireworks displays and that some sea otters do not move unless a boat is coming at their pod directly. The Sanctuary cannot definitively say these animals are not harassed.

Conclusion

Thank you again for the opportunity to comment. We would like to conclude that the authorization of marine mammal takes for a commercial fireworks display would be authorization of intentional pollution, habitat destruction and marine mammal molestation. The Marine Mammal Protection Act is in place to protect the thirty-four resident species in MBNMS and beyond from ploys to exploit their habitat. We oppose the authorization of Monterey Bay National Marine Sanctuary to take marine mammals incidental to commercial fireworks displays permitted by the Sanctuary in California.

Thank you for your time and consideration,

Cassie Burdyslaw, Advocacy & Policy Director
Turtle Island Restoration Network

Kurt Leiber, Executive Director
Ocean Defenders Alliance

Marcie Keever, Oceans & Vessels Program Director
Friends of the Earth

Comment from Naomi Anonymous

I must start by saying that humans are profoundly selfish. We have civilized Earth for such a small fraction of its existence, yet we are quickly exhausting all resources in such a hurry. This includes the disruption of wildlife, forests, climate, and so on. I'm not saying by any means that I am not thankful to live in such an amazing, advanced world, but we must band together and find the means to control ourselves and all our indulgences. After reading through this proposal, I do feel that the rules and grounds could make for a happy medium, to please both humans and prevent harm to wildlife. However, I believe that this should be highly regulated. If any animals are present during the fireworks show, it is not okay to proceed with the showing. Limiting the amount of time for the fireworks to be set off and the times of year during which they will be presented can be beneficial, but if an animal is present during the scheduled presentation, it could definitely cause stress and harm to the animal. Does it really matter if the taking is unintentional? It's almost like saying that it would be okay to set off fireworks when there is a child unknowingly near the beach at the same time. What kind of consequences would there be to the company presenting the show if a child was "unintentionally" harmed? Unfortunately, animals cannot fight nor could they recover as quickly from a traumatic experience as a human can. Please keep these things in mind when proceeding with this rule. Overall, I see no wrong in going forward with this proposed rule as long as each proposition is closely followed.

Comment from Anonymous

I think that this should not be allowed because the whales are not being relocated for their own benefit. Rather a company would like to use them for a firework show. Whales shouldn't be kept in captivity for five years so a company can have an awesome firework display. The company should do research on what how having whales in captivity for that long will do the whales.

Comment from Ashley Mason

Marine mammals are an important part of the ecosystem. I appreciate NOAA's concern with keeping the mammals unharmed. In regards to the regulation to allow firework displays after June 30th, I have some concerns about the health effects listed. There should be more justification or research before passing this regulation to define what the health effects to young and infant mammals would be. The U.S. holiday where more fireworks would be set off is on July 4th and that is only 4 days after the typical breeding season for the seals. I am concerned about the effects of the fireworks noise, light, and debris on newborn, young, or pregnant seals. This document seems to only list the observed effects on traditional adult seals. There needs to be justification or more observation to determine the effects on the vulnerable members of the species. If the traditional holiday in the U.S. was not on July 4th, would NOAA still consider June 30th as the cutoff date to ban fireworks during mating season? There has proven to be a large number of animals present during the firework shows so this cutoff date might be an issue. The document mentions adverse effects of harassment but does not go into further detail. I would like to know what the effects of the harassment are instead of the description of low or high harassment. I would also like a description of the signs and observations of permanent or

temporary threshold shifts. Did NOAA observe long term damage of threshold shifts instead of just the displayed damage immediately after the firework show? I know marine mammals are important to the ecosystem so I would like to ensure the government is protecting their species and habitats.

Comment from Haydyn Johnson

As a lover of animals and the ocean I agree with this proposed regulation. I like that guidelines are set up for the length, timing, and location of each fireworks display. That the sea lions and harbor seals, specifically, will be monitored both before and after each display will help detect any changes in their behavior due to the disturbance in the form of sound, light, debris, and just human presence in general. While it is important to celebrate our traditions with fireworks, it is equally important to protect the habitats of all animals, especially those that are harmed by human actions and celebrations. I will admit the word "taking" confused me a little. Are the animals being taken somewhere in the haul-out sites to be monitored or are they just being observed? Are the haul-out sites regulated under this rule also? The proposed regulation discusses the four regions that will be monitored as well as the negligible impact analysis, but what happens to the mammal during the "taking?" How will it be monitored, by observance or through tests and such, which could adversely impact the animal just as much as the fireworks display itself could. Another concern I have is regarding the negligible impact analysis itself. The regulation says that the proposed monitoring would be managed adaptively, so if the animals become more than negligibly impacted because of the fireworks displays, what would happen? If the impact is unmitigable and adverse to the mammals specified, there must be another way to protect the marine mammals. I would like to see alternative solutions to protecting these mammals without compromising our traditions and celebrations. It says the coastline of the sanctuary is roughly 276 miles, but how far off the coast do the mammals need to be in order to be protected from the light, sound, and debris of the fireworks? I also enjoyed the tables and studies that were included, as it helped me visualize the effects of this proposed rule. My questions about this rule are more for clarification, than change itself. I think this rule is a good start to ensuring the protection of animals and their habitats.

Comment from Matthew Mercurio

While NFMS should take marine mammals incidental to commercial fireworks displays permitted by the Sanctuary in California, the implementation of this proposed rule would be somewhat of a waste of resources and man power. For example, to my knowledge, legal fireworks displays have been nonexistent in the Monterey Bay for many years. According to seemonterey.com, under 4th of July events, there is no mention of any pyrotechnic shows in the near future, as well as in the years past. Even the annual Feast of Lanterns in Pacific Grove and the First Night Festival in Monterey make no mention of any fireworks displays on their respective webpages. Since marine mammals are not being exposed to these nonexistent, dangerous displays, I see no reason to implement such a rule, and advise changing it. In addition, KSBW, the local news station, reported on 4th of July festivities in 2012, to inform viewers what events would be available. Under the events listed under Monterey, KSBW explicitly mentions that the city "will not have fireworks." As an alternative, they suggested attending the city's

laser-light show. Although this article was published five years ago, it provides a look into the city's past actions with fireworks displays. Because marine mammals in the Monterey Bay are not being exposed to pyrotechnic shows, I believe there is no reason for NFMS to remove impacted animals from their ecosystem. With a lack of fireworks displays, there should obviously be a lack of harmed marine mammals. The only reason I believe this proposed rule should be implemented, is if the City of Monterey decides to bring back its fireworks displays.

Comment from Emilio Martinez

The possibility of scaring away wildlife from the Monterey Bay and putting them in dangerous situations by using the fireworks is a key issue. A threat would be killer whales for example. Orca's are apex predators. They feed on sea birds, squid, octopuses, sharks, rays, fish, dugongs, seals, sea lions, and otters. These animals are key features to the Monterey bay aquarium. The Monterey bay aquarium is the 6th largest aquarium in the planet. The deep seas exhibit contains about 10 million gallons of water. Along with that, the aquarium is a top 10 ranked aquarium in the world. Because of this, I believe that the marine life and sea mammal safety should be a top priority in the Monterey bay. The aquarium is arguably one of the most lucrative tourist attractions in the Monterey bay and therefor should be taken care of ahead of all other attractions. An alternative to the rule could be to move the firework display farther away from the water in order not to disrupt the wildlife. This way, the public can still enjoy the display without affecting the mammals and forcing them into deep water where they can be put in danger by the threat of predators a such as orcas. Personally, I enjoy the Oceanside wildlife and enjoy seeing wild seals in the ocean whenever I visit the beach. Not seeing seals there anymore would be upsetting not only to me but all others who enjoy sea life like I do.

Comment from Jack Fling

I support this because sea mammals have sensitive hearing due to their use of sound waves (whales and dolphins) for communication. The loud bangs and extreme noises from fireworks could scare, if not damage those animals hearing and could seriously impair their ability to function normally. To understand this, you only need to look at basic physics principles that sound waves travel much faster and further in water than air so while fireworks don't hurt your ears on land and in the air, it is not the same case underwater. The fight against this proposition is most likely from a group hoping to preform shows and bring in money and attention to the Bay. And while there haven't been any fireworks displays in the past 5 years and this is not a ongoing problem, it is a good thing for the future of our marine mammal populations. While this is a good thing for the economy it isn't good for our marine mammals. So I believe this should be enacted, maybe just to a lesser degree, instead of banning the fireworks, there could be a proposition to limit their use, or limit the amount of decibels the fireworks may be allowed to admit. This rule is necessary to protect the marine mammals in our Bay and I do hope to preserve our marine mammal population. However I myself do not like take away anyone privileges so once again perhaps regulation instead of banning it completely.

Comment from Kyler Crone

I do not support the rule regarding taking marine mammals incidental to commercial fireworks displays at Monterey Bay National Marine Sanctuary. In this proposition, it suggests allowing the fireworks to scare the mammals away, which is considered class B harassment. If this level of harassment was performed by a citizen, it would result in a fine of up to \$11,000 or a year in prison. In performing this, the natural ecosystem, habitat, and way of life of these animals are drastically interfered with. After flushing out, these animals are not likely to return. These animals are forced into a new way of life in a different part of the ocean, unfamiliar to them. This will impact the Monterey Bay community as well. Many people come from around the world to the Monterey Peninsula to see the harbor ing seals, sea lions, and otters. If these animals were not as great in number, fewer tourists may come to the peninsula, which would hurt the economy as it greatly relies on this tourism. In an attempt to save the animals and the economy of the Peninsula, the obvious course of action would be to completely rid the area of firework shows. Although this may not be a solution accepted by all, it is one that would benefit the community in the long run. Another, less severe course of action, would be to perform these shows over an area that is not water or does not have marine mammals present. Either of these two would be positive measures for this issue.

Comment from Darius Fullmer

I am opposed to any discharge of fireworks which may cause harm to marine mammals or environmental impacts within the Monterey Bay National Marine Sanctuary.

Comment from Aymee Laurain

The protection of marine mammals is a serious issue. There's no reason to disrupt their natural environment for the sake of something as trivial as fireworks which could easily be relocated to areas that would not result in pollution. Regardless of how negligible the pollution is it only adds to other existing threats. These protections should be respected.

Robert W. Croll
200Turtle Lane
Seguin, TX 78155

April 17, 2017

Jolie Harrison
Chief, Permits and Conservation
Office of Protected Resources
National Marine Fisheries Service
1315 East West Highway
Silver Spring, MD 20910

RE: Docket No. 161216999-7232-01; NOAA-NMFS-2017-0017

Dear Chief Harrison:

I respectfully submit comment to the National Marine Fisheries Service on the proposed rule entitled **Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Commercial Fireworks at Monterey Bay National Marine Sanctuary**. My comments are based on nearly twenty years of training and experience in marine law enforcement with the Pennsylvania Fish and Boat Commission, Bureau of Law Enforcement and specific training and research regarding the Marine Mammal Protection Act, Endangered Species Act and the affected marine mammal species. During my career I reviewed and approved Special Activities Permits and participated in or coordinated law enforcement activities for commercial firework events on the Delaware and Schuylkill Rivers in Philadelphia, Susquehanna River in Harrisburg, and Three Rivers in Pittsburgh. From 1997 to 2012 I was commissioned as a Deputy Special Agent with the US Fish and Wildlife Service and received specialized training in the enforcement of both the Marine Mammal Protection Act (16 USC, Chapter 31) and the Endangered Species Act (16 USC, Chapter 35). In addition to the above experience and training I possess a Bachelor of Science in Environmental Studies from Northland College and am currently pursuing a Master of Environmental Law and Policy (MELP) from Vermont Law School.

As stated in the above listed Notice of Proposed Rulemaking, commercial fireworks displays do serve to attract attention to and foster public use and enjoyment of the Monterey Bay National Marine Sanctuary (MBNMS).¹ However, large commercial fireworks displays have the potential to negatively impact the animals and environment protected at MBNMS. While I am generally in favor of the proposed rulemaking, the current restrictions on commercial fireworks displays within MBNMS, and the proposed mitigation measures, I have concerns with several issues used to quantify the "negligible impact" of commercial fireworks displays on California sea lions (*Zalophus californianus*) and Harbor seals (*Phoca vitulina richardii*). As stated in the Notice of Proposed Rulemaking, NMFS shall grant an

¹ Taking and Importing Marine Mammals, Taking Marine Mammals Incidental to Commercial Fireworks Displays at Monterey Bay Marine Sanctuary, NMFS-2017-017, 82 Federal Register 51 (3/17/2017), p. 14186

authorization for incidental takings if the taking will have a negligible impact on the species or stock(s).² NMFS defines "negligible impact" as "an impact resulting from the specified activity that cannot reasonably be expected to, and is not reasonably likely to, adversely affect the species or stock through annual rates of recruitment or survival."³ This comment considers whether the direct and indirect impacts to marine mammals through commercial fireworks displays in the MBNMS can, in fact, be considered negligible based on the above definition and offers recommendations for additional mitigation requirements to further limit the impact to the affected species.

Major Concerns

- NMFS failed to fully consider the potential for impact to marine mammals as a result of increased boat traffic and boater behavior at commercial fireworks displays.
- NMFS failed to fully consider the behavioral changes in harbor seals as a result of mating and molting when authorizing commercial fireworks displays during the months of July and August.

Boat Traffic and Boater Behavior at Commercial Firework Events

The Notice of Proposed Rulemaking identified above relies on outdated data regarding the numbers of boats that gather to watch commercial fireworks displays within the Monterey Bay Marine Sanctuary. NMFS has restricted commercial fireworks displays to four display areas (Half Moon Bay, Santa Cruz/Soquel, Monterey Peninsula and Cambria). There are two launch locations at the Santa Cruz/Soquel display area (Santa Cruz and Aptos). There are two launch sites at the Monterey Peninsula display area (City of Monterey and Pacific Grove). The current Notice of Proposed Rulemaking contains no data regarding boat traffic at the Half Moon Bay launch site during fireworks displays, estimates of 40-70 vessels congregating at the Santa Cruz site, 30-40 at Aptos, 20-30 at City of Monterey, 10-20 at Pacific Grove and no estimate of boat numbers at Cambria.⁴

To accurately determine the direct and indirect impact of boating activity prior to, during and after large marine events such as commercial fireworks displays NMFS relies on data collected between 1993 and 2001 and published in 2002 in a report entitled *Assessment of Pyrotechnic Displays and Impacts Within the Monterey Bay National Marine Sanctuary 1993 – 2001*. The current Notice of Proposed Rulemaking contains the data above, taken verbatim from this report, indicating that NMFS is relying on data that is now between fifteen and twenty-two years old and may no longer reflect the current numbers of boats travelling to and from and congregating at firework displays in the MBNMS.⁵

NMFS is promoting a narrative of boating activity and boater behavior that do not accurately describe typical activity and behavior at commercial fireworks displays and other marine events. The Environmental Assessment (EA) prepared by NOAA, NMFS and MBNMS in 2006 prior to the issuance of the 2007-2011 regulation, which the NMFS is currently relying on for the latest proposed rulemaking, describes boater behavior at commercial firework events stating that boaters typically enter the observation area at slow speed due to the presence of other vessels and limited visibility. The EA states that MBNMS staff have monitored boat activity at "several fireworks events" and found boaters

² 16 USC §1361(a)(5)(A) or (D)

³ 50 CFR 216.103

⁴ 82 Federal Register 51 (3/17/2017), pp. 14186-14187

⁵ Assessment of Pyrotechnic Displays and Impacts within Monterey Bay Marine Sanctuary 1993-2001, February 2002, National Oceanic and Atmospheric Administration, pp. 15-22.

"generally using good and safe boating practices" and that no marine mammal harassment, injury or death was observed.⁶

From personal experience during over twenty years permitting, patrolling and observing commercial fireworks events in Pennsylvania and on Lake Superior in Wisconsin I can attest that the above narrative is often only partially correct. Boaters do typically filter into an observation area slowly over a period of time, with many arriving prior to low light conditions, to anchor where they can get the best view. Prior to and during these events there is often a significant amount of alcohol and recreational drug use. Boaters often set off personal fireworks prior to and after the event. NMFS acknowledges the use of personal fireworks in the current Notice of Proposed Rulemaking.⁷ After the fireworks display is finished there is often a "mad rush" back to dock space, mooring areas or boat ramps. Boat collisions and boating under the influence arrests are commonplace after commercial fireworks displays in Pennsylvania. Based on my experience and training I have no reason to believe that boaters in California behave any differently at firework events in MBNMS.

NMFS may be underestimating the direct impact to marine mammals via boat strike. Regardless of state or federal requirements to report boat collisions boat operators often fail to report. Similarly, it is likely that a boat operator striking even a relatively large marine mammal, such as a sea lion, in the dark, at high speed may either fail to notice or fail to report the strike. Research indicates that many marine mammals killed in boat strikes do not wash ashore and therefore would not be accounted for in post firework assessments.⁸

NMFS may be underestimating the harassment impact to marine mammals as a result of boater behavior prior to and after firework events. As noted above NMFS has acknowledged boater use of personal fireworks at commercial events. During the 2007 City of Monterey Fourth of July fireworks at the Monterey Peninsula display site cited in both the current Notice and the 2007 Acoustic and Behavioral Monitoring Report sea lions and harbor seals flushed from haul out sites prior to the start of the commercial fireworks as a result of boaters shooting off personal fireworks.⁹ This results in the animals stressing earlier and spending additional time away from haul outs or pursuing other undisturbed behavior.

⁶ *Environmental Assessment of the Issuance of Small Take Regulations and Letters of Authorization and the Issuance of National Marine Sanctuary Authorizations For Coastal Commercial Fireworks Displays Within The Monterey Bay National Marine Sanctuary, California*, June, 2006, National Oceanic and Atmospheric Administration, National Marine Fisheries Service and Monterey Bay National Marine Sanctuary, p. 32

⁷ 82 Federal Register 51 (3/17/2017), p. 14190

⁸ *Nomination for Listing a Key Threatening Process Under the EPBC Act*, Australian Government, Department of the Environment, pp. 1-2 retrieved from: <https://www.environment.gov.au/system/files/pages/87ef6ac7-da62-4a45-90ec-0d473863f3e6/files/nomination-boat-strike-2007.pdf>

⁹ 82 Federal Register 51 (3/17/2017), p. 14191 and Thorson, P. and E. Berg. 2007. *Marine Mammal Acoustic and Behavioral Monitoring for the Monterey Bay National Marine Sanctuary Fireworks Display 4 July 2007*. Final Report.

Recommendations

- NMFS should consider banning private vessels from congregating to observe fireworks in and near the impact area of commercial firework events or consider a limitation on number of private vessels in and near the impact area to prevent direct and indirect impact on marine mammals.
- NMFS should consider prohibiting the use of private fireworks in MBNMS and should aggressively enforce this prohibition prior to and after commercial fireworks events to prevent intentional or unintentional boater harassment of marine mammals.

Harbor Seal Molt

Inconsistency in data regarding the time period in which Harbor seals molt in MBNMS may lead NMFS to underestimate the impact of commercial firework events on harbor seals. NMFS has indicated that 36-45% of commercial fireworks displays in MBNMS occur in July. The current Notice of Proposed Rulemaking indicates that Harbor seals molt in May and June and the current prohibition on commercial firework events (March 1 – June 30) is timed to coincide with both peak molt and peak reproductive events.¹⁰ These dates are consistent with the information contained in the 2006 EA and appear to be sourced from the MBNMS Final Environmental Impact Statement, dated 1992.¹¹ However, the Request for Incidental Take Authorization submitted by MBNMS on October 18, 2016 which initiated the current rulemaking process is not consistent with the above time period and shows Harbor seal mating and molting on the Central California coast occurring in July and August. This timeframe was sourced to "seasonsinthesea.com" and was dated 9/13/2016.¹² An additional search of "seasonsinthesea.com" indicated that molting harbor seals are observed in July and August at Elkhorn Slough, which is located within the MBNMS midway between the Santa Cruz/Soquel and the Monterey Peninsula fireworks display areas.¹³ In addition, Oxman (1995) noted that peak Harbor seal abundance at Elkhorn Slough occurs in July and corresponds with the annual molt.¹⁴

Harbor seals may be more likely to be significantly impacted by commercial fireworks displays in July and August than NMFS estimates. Harbor seals "haul out" between 7-12 hours per day for the purpose of thermal regulation; when molting, seals "catastrophically" lose all their hair and need to spend considerably more time on land.¹⁵ NMFS notes in all sources that Harbor seals are more timid and easily

¹⁰ 82 Federal Register 51 (3/17/2017), p. 14189

¹¹ *Environmental Assessment of the Issuance of Small Take Regulations and Letters of Authorization and the Issuance of National Marine Sanctuary Authorizations For Coastal Commercial Fireworks Displays Within The Monterey Bay National Marine Sanctuary, California*, June, 2006, National Oceanic and Atmospheric Administration, National Marine Fisheries Service and Monterey Bay National Marine Sanctuary, p. 16.

¹² *Request for Incidental Take Authorization Pursuant to the Marine Mammal Protection Act*, dated October 18, 2016, submitted by Monterey Bay National Marine Sanctuary, p. 10

¹³ <http://www.seasonsinthesea.com/jul/mammals.shtml> and <http://www.seasonsinthesea.com/aug/mammals.shtml> accessed on 4/17/2017

¹⁴ Oxman, Dion S., 1995, *Seasonal Abundance, Movements, and Food Habits of Harbor Seals (Phoca vitulina richardsii)* in Elkhorn Slough, California, California State University Stanislaus and Moss Landing Marine Laboratory.

¹⁵ Harbor Seal Facts, <http://sealconservancy.org/harbor-seal-facts/>, accessed on 4/17/2017

disturbed than sea lions and therefore should be expected to flush earlier and remain off the haul out longer than sea lions when disturbed by light, noise and increased boat traffic. In addition, as pupping occurs prior to the molt significant numbers of pups may be in the area of fireworks displays and could be more affected than adults which may be habituated to human activity. As discussed above, Harbor seal carcasses, particularly pups which have less blubber, may be likely to sink rather than wash ashore and therefore not be accounted for in post firework assessments.

Recommendations

- Currently MBNMS allows public Independence Day fireworks at the Half Moon Bay, City of Monterey and Cambria display sites. NMFS should consider reducing the number of public Independence Day displays within the MBNMS.
- NMFS should consider eliminating private fireworks displays during the months of July and August at all display sites.

Incidental Concerns and Recommendations

- NMFS notes in the 2002 Pyrotechnic Displays & Impacts report that the most significant impact to marine mammals result from the loud sound bursts and pressure waves created by large aerial shells. NMFS should consider limiting or eliminating the use of large aerial shells within MBNMS.
- NMFS indicates that little significant observation of fireworks impact on Southern sea otters has taken place and that sea otters are under the jurisdiction of the USFWS. Consultation with USFWS as required under §7 of the Endangered Species Act took place in 2001 and USFWS issued a Biological Opinion in 2005. While §7 exemptions effectively do not expire, NMFS and USFWS should consider reevaluating the effect of commercial fireworks on Southern sea otters within MBNMS based on the decrease in their population in the sanctuary.¹⁶

In conclusion, while I feel that NMFS and MBNMS are effectively protecting the marine mammals discussed in the Notice of Proposed Rulemaking from significant harm due to commercial fireworks displays I believe that the comment and recommendations above will add additional protection and NMFS should consider them before finalizing the amendment to 50 CFR Part 217.

Thank you for consideration of these comments.

Sincerely,



Robert W. Croll
Captain, Ret.

Pennsylvania Fish and Boat Commission
Bureau of Law Enforcement

¹⁶ Request for Incidental Take Authorization, 2016, p. 9

CRUC
208 TURTLE LN
SEGUIN, TX 78155

SAN ANTONIO TX 780
RIO GRANDE DISTRICT
22 APR 2017 PM 4 L



JOLIE HARRISON
CHIEF, PERMITS AND CONSERVATION
OFFICE OF PROTECTED RESOURCES
NATIONAL MARINE FISHERIES SERVICE
1315 EAST WEST HIGHWAY
SILVER SPRING, MD 20910

20910-623399

