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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 216

[Docket No. 080302361-6677-01]

RIN 0648-AU02

Protective Regulations for Hawaiian Spinner Dolphins under the Marine Mammal Protection Act

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

ACTION: Proposed rule; request for comments.

SUMMARY: We, the National Marine Fisheries Service (NMFS), propose regulations under the Marine Mammal Protection Act (MMPA) to prohibit swimming with and approaching a Hawaiian spinner dolphin within 50 yards (45.7 m) (for persons, vessels, and objects), including approach by interception. These proposed regulatory measures are intended to prevent take of Hawaiian spinner dolphins from occurring in marine areas where viewing pressures are most prevalent; prohibitions would apply in waters within 2 nautical miles (nm; 3.7 km) of the Hawaiian Islands and in the waters between the islands of Lanai, Maui, and Kahoolawe. This proposed rule to establish 50-yard swim-with and approach regulations would help ensure public compliance by providing clear notice of prohibited conduct that results in take, including harassment and disturbance.

Although unauthorized take of marine mammals, including harassment of spinner dolphins, already is and continues to be prohibited under the MMPA throughout their

range, the purpose of this regulation is to identify and prohibit specific human activities that result in take (including harassment) of spinner dolphins, and thus reduce disturbance and disruption of important Hawaiian spinner dolphin behaviors in areas where human-dolphin interactions are most likely to occur. These proposed regulations would reduce take of Hawaiian spinner dolphins and the impact of human viewing and interaction on these animals in the Main Hawaiian Islands (MHI). We developed this proposed rule after considering comments submitted in response to an Advance Notice of Proposed Rulemaking (ANPR), as well as information received during the public scoping period for the Draft Environmental Impact Statement (DEIS), from community meetings, and from a dedicated scientific research project.

Although not currently part of this proposal, we are also considering whether additional management measures may be necessary and appropriate to protect Hawaiian spinner dolphins from take, especially in essential daytime habitats that are regularly targeted by humans for dolphin-directed activities. Accordingly, we are soliciting public comment on the proposed swim-with and approach regulations, as well as alternative management options discussed in this rule and in detail in the DEIS.

DATES: Comments must be received no later than 5 p.m. on October 23, 2016.

Public meetings will provide the public with an opportunity to provide comments on any portion of the proposed rule or DEIS. These meetings are scheduled for:

September 7, 2016, 5:30-9:30 p.m. at Konawaena High School Cafeteria, 81-1043 Konawaena School Rd., Kealahou, HI 96750;

September 8, 2016, 5:30-9:30 p.m. at Kealahou High School Cafeteria, 74-5000 Puuhuluhuli St., Kailua Kona, HI, 96740;

September 21, 2016, 5:30-9:00 p.m. at Kauai High School Cafeteria, 3577 Lala Rd., Lihue, HI 96766;

September 22, 2016, 5:30-9:00 p.m. at the Hawaiian Islands Humpback Whale National Marine Sanctuary Visitor Center, 726 South Kihei Rd., Kihei, HI 96753;

September 27, 2016, 5:30-9:30 p.m. at Roosevelt High School Dining Hall, 1120 Nehoa Street, Honolulu, HI 96822; and

September 28, 2016, 5:30-9:30 p.m. at Waianae High School Cafeteria, 85-251 Farrington Hwy., Waianae, HI 96792.

ADDRESSES: You may submit comments, information, or data on this document, identified by NOAA–2005-0226, and on the DEIS by either of the following methods:

Electronic Submission: Submit all electronic comments via the Federal eRulemaking Portal. Go to www.regulations.gov/#!docketDetail;D=NOAA-2005-0226, click the “Comment Now!” icon, complete the required fields, and enter or attach your comments.

Mail: Submit written comments to Susan Pultz, Chief, Conservation Planning and Rulemaking Branch, Protected Resources Division, National Marine Fisheries Service, Pacific Islands Regional Office, 1845 Wasp Blvd., Bldg. 176, Honolulu, HI 96818, Attn: Hawaiian Spinner Dolphin Proposed Rule.

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

otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. We will accept anonymous comments (enter “N/A” in the required fields if you wish to remain anonymous).

The Draft Environmental Impact Statement (DEIS) and references can be found online at http://www.fpir.noaa.gov/PRD/prd_spinner_EIS.html. Additionally, copies of the DEIS are available in print at the following libraries:

Hilo Library, 300 Waianuenue Ave., Hilo, HI 96720;

Kailua-Kona Library, 75-138 Hualalai Rd., Kailua Kona, HI 96740;

Kealahou Library, 81-6619 Mamalahoa Hwy., Kealahou, HI 96750;

Pahoa Library, 15-3070 Pahoa-Kalapana Rd., Pahoa, HI 96778;

Kihei Library, 35 Waimahaihai St., Kihei, HI 96753;

Lahaina Library, 680 Wharf St., Lahaina, HI 96761;

Lanai Library, 555 Fraser Ave., Lanai City, HI 96763;

Hawaii State Library, 478 S. King St., Honolulu, HI 96813;

Molokai Public Library, 15 Ala Malama, Kaunakakai, HI 96748;

Waianae Library, 85-625 Farrington Hwy., Waianae, HI 96792; and

Lihue Library, 4344 Hardy St., Lihue, HI 96766;

or upon request from the Conservation Planning and Rulemaking Branch Chief (see **ADDRESSES**).

FOR FURTHER INFORMATION CONTACT: Susan Pultz, NMFS, Pacific Islands Region, Chief, Conservation Planning and Rulemaking Branch, 808-725-5150; or Trevor Spradlin, NMFS, Office of Protected Resources, Acting Chief, Marine Mammal and Sea Turtle Conservation Division, 301-427-8402.

SUPPLEMENTARY INFORMATION

Background

Viewing wild marine mammals in Hawaii has been a popular recreational activity for both tourists and residents over the past several decades. Historically, most marine mammal viewing focused on humpback whales (*Megaptera novaeangliae*) during the winter months when the whales migrate from their feeding grounds off the coast of Alaska to Hawaii's warm and protected waters to breed and calve. However, increased viewing has focused on small cetaceans, with a particular emphasis on Hawaiian spinner dolphins (*Stenella longirostris*), which can be predictably found close to shore in shallow waters throughout the MHI.

The number of commercial operators engaged in wild dolphin viewing has grown dramatically in Hawaii in recent years (O'Connor 2009), putting new pressures on easily accessible groups of resting Hawaiian spinner dolphins. In addition, a number of residents and visitors venture on their own, independent of commercial operators, to view and interact with spinner dolphins. The expectation for close interactions with wild dolphins has been encouraged by some operators and various media outlets, which routinely contradict established wildlife viewing guidelines by promoting close vessel or in-water encounters with the dolphins.

We have received many complaints that spinner dolphins are being routinely disturbed by people attempting to closely approach and interact with the dolphins by boat or other watercraft (*e.g.*, kayaks), or in the water (*e.g.*, snorkel or "swim-with-wild-dolphins" activities). In addition, concerns over human-dolphin interactions have been expressed by officials from the Hawaii Department of Land and Natural Resources

(DLNR) and the U.S. Marine Mammal Commission (MMC), as well as various members of the public, including representatives of the Native Hawaiian community, scientific researchers, wildlife conservation organizations, public display organizations, and some commercial tour operators.

In 2010, we recognized five island-associated stocks and one pelagic stock of Hawaiian spinner dolphins in our annual Stock Assessment Report, identifying genetic distinctions and site fidelity differences as reasons to separately manage stocks found in waters surrounding the Hawaiian Islands (Carretta *et al.* 2010). Three of the five island-associated stocks (the Kauai/Niihau stock, Oahu/4 Islands (*i.e.*, Maui County) stock, and Hawaii Island stock) are found near the MHI and are considered resident stocks. These three stocks reside in waters surrounding their namesake islands out to approximately 10 nm (18.5 km) (Hill *et al.* 2010), and population estimates for each stock are relatively small. Recent research indicates that the Hawaii Island stock, which is thought to be the largest stock, has an estimated 631 individuals (Coefficient of Variation (CV)=0.09) (Tyne *et al.* 2014, Carretta *et al.* 2016). Data for other stocks in the MHI is limited; however, using the best available information, the Kauai/Niihau and Oahu/4 Islands stocks are estimated to be around 601 (CV=0.20) and 355 (CV=0.09) individuals, respectively (Carretta *et al.* 2016).

Island-associated spinner dolphins, such as those found in the MHI, have complex social structures and behavioral patterns linked to specific habitats that support their high energetic demands. The rigid, cyclical, and patterned behavior of a Hawaiian spinner dolphin's day is well documented from decades of scientific research on spinner dolphins off the Kona coast on the island of Hawaii (Norris and Dohl 1980, Norris *et al.* 1994).

The daily pattern of Hawaiian spinner dolphins has been characterized as “working the night shift,” because the energetically demanding task of foraging is accomplished nightly when spinner dolphins move offshore in large groups to feed. Spinner dolphins feed on fish, shrimp, and squid found in the mesopelagic boundary community, part of the pelagic zone that extends from a depth of 200 to 1,000 m (~660 to 3,300 feet) below the ocean surface. Spinner dolphins maximize their foraging time by actively moving with, or tracking, the horizontal migration of the mesopelagic boundary community throughout the night, as it moves inshore until midnight and then offshore around sunrise (Benoit-Bird and Au 2003). Spinner dolphins are acoustically very active during foraging activities (Norris *et al.* 1994), working cooperatively in large groups using coordinated movements to maximize foraging potential (Benoit-Bird 2004).

During the day, spinner dolphins return in smaller groups to areas closer to shore to socialize, nurture their young, and rest in preparation for nightly foraging (Norris *et al.* 1994). These smaller groups visit specific habitats that are located along the coastlines of the MHI. These preferred daytime habitats of spinner dolphins are areas that provide space with optimal environmental conditions for resting, socializing, and nurturing young, and are referred to hereafter as “essential daytime habitats.” Spinner dolphins’ essential daytime habitats are located close to offshore feeding areas, which minimizes the energetic cost of nightly travel to these areas (Norris *et al.* 1994, Thorne *et al.* 2012). Additionally, essential daytime habitats have large patches of sand bottom habitat, which increases the dolphins’ ability to visually (instead of acoustically) detect predators while resting, and thus minimizes the energetic costs of vigilance (Norris *et al.* 1994). Throughout the day, spinner dolphins take advantage of the physical characteristics of

essential daytime habitats to engage in specific patterned resting behaviors to recuperate between foraging bouts. The physical characteristics of these essential daytime habitats, combined with specific patterned resting behaviors, play an important role in supporting the dolphins' activity and energetic budgets.

Essential daytime habitats have been targeted by commercial operators and individuals interested in viewing or interacting with Hawaiian spinner dolphins because encounters with dolphins in these areas are virtually guaranteed. At some locations, up to 13 tour boats have been observed jockeying for position on a single dolphin group, with up to 60 snorkelers in the water (Heenehan *et al.* 2014). Apart from commercial tour operations, people also swim, kayak, or paddle into essential daytime habitats to seek interactions with the dolphins (Sepez 2006). In addition, organized retreats centered on dolphin encounters, dolphin-assisted therapy, and dolphin-associated spiritual practices have flourished in certain areas, further increasing the intensity of dolphin-directed activities in nearshore areas and especially within essential daytime habitats (Sepez 2006).

There is a growing body of scientific evidence documenting the effects of dolphin-directed activities on spinner dolphins, especially activities that involve close approaches by humans. Peer-reviewed scientific literature documents disturbance of individual spinner dolphins as well as changes to spinner dolphin group behavioral patterns. Individual dolphin responses to these activities vary, and in some cases may not be apparent to an observer (*e.g.*, elevated heart rates or increased watchfulness). However, discernable responses may include aerial displays when closely approached by vessels and swimmers (Forest 2001, Courbis and Timmel 2008); avoidance behaviors,

including moving around and away from swimmers and vessels, or leaving the area in response to human pursuit (Ostman-Lind *et al.* 2004, Courbis 2004, Courbis and Timmel 2008); and aggressive behaviors directed at people, including charging or threat displays (Norris *et al.* 1985, Norris *et al.* 1994).

Effects have been documented in the form of changes over time to spinner dolphins' behavioral patterns in essential daytime habitats, where spinner dolphins' behavioral patterns are easily observed. Courbis and Timmel (2008) reported differences in peak aerial activity throughout the day in comparison with earlier studies (Forrest 2001) and noted that dolphins may have reduced aerial behavior when entering and exiting bays to avoid human notice and approaches. Timmel *et al.* (2008) noted the dolphins' direction of travel altered more frequently as the number of swimmers and/or vessels near to them increased. Symons (2013) found that spinner dolphins are less likely to rest when swimmers are present within 150 m. Numerous studies report changes in dolphin residence time within essential daytime habitats compared to earlier studies (Courbis 2004, Courbis and Timmel 2008, Ostman-Lind 2007, Forest 2001). In addition, human activities within essential daytime habitats may be affecting where spinner dolphins engage in their daytime behaviors within these areas. Courbis and Timmel (2008) reported changes in the location of resting spots within Kealakekua Bay from previous studies by Doty (1968) and Norris and Dohl (1980), and warned that changes in locations within the bay could be a precursor to abandonment of the bay with future increases in traffic.

Hawaiian spinner dolphin studies off the island of Oahu also demonstrate the effects of swimmers on dolphins' daily resting behavioral patterns. As the number of

swimmers increased in an essential daytime habitat off the west coast of Oahu, the dolphins departed the area at earlier times during the day, possibly indicating reduced rest periods in response to swimmer presence (Danil *et al.* 2005). Additionally, Danil *et al.* (2005) noted that on several occasions, smaller spinner dolphin groups (<25 animals) refrained from entering an essential daytime habitat when swimmer presence was high, suggesting that the observed spinner dolphin rest patterns were altered in order to accommodate and adapt to the swimmers' occurrence. The authors predicted that swimmer presence keeps the dolphins in a constant state of alertness and vigilance, and that delayed diving behavior (in the morning during swimmers' presence) may indicate a diminished quality of rest (Danil *et al.* 2005).

When marine mammals respond to disturbance events, they incur a cost in the form of the energy expended to respond as well as the lost opportunity to engage in natural fitness-enhancing behavior. For example, spinner dolphins disturbed during rest may engage in avoidance or distress behaviors, which require energy, and disturbance detracts from the dolphins' abilities to recuperate from energetically demanding behaviors such as foraging, transiting to and from offshore foraging grounds, and nurturing their young. In this example, the lack of consistent, undisturbed resting periods can reduce the amount of energy available to forage and care for young.

The predictable patterns of MHI resident spinner dolphins' nearshore distribution and daytime behaviors result in concentrated daily viewing and interaction pressure on individual dolphins and groups over extended periods of time. In other small cetacean populations, chronic disturbance to natural behavioral patterns has been linked to biologically significant impacts such as habitat abandonment and reduced female

reproductive success (Bejder 2005; Bejder *et al.* 2006a, 2006b; Lusseau and Bejder 2007). Similarly, over time, chronic disturbance to the MHI's resident spinner dolphins could ultimately lead to habitat displacement and/or long term impacts to their individual fitness. These types of impacts may be amplified in resident, closed or isolated populations (local populations with barriers to gene flow) (Bejder 2005) because the impacts to multiple individuals' health and fitness are quickly reflected in the overall fitness of the population. Accordingly, the small resident spinner dolphin populations of the MHI may be more vulnerable to negative impacts from human disturbance.

Disturbances to dolphins' daily behavioral patterns may result in "take," as defined and prohibited under the MMPA and its implementing regulations, and the chronic nature of these problems in Hawaii and observed changes to spinner dolphin behavioral patterns over time are a cause for concern.

Current MMPA Prohibitions and NMFS Guidelines and Regulations

Under section 102 of the MMPA, 16 U.S.C. 1361 *et seq.*, it is unlawful for any person, vessel, or other conveyance to "take" any marine mammal in waters under the jurisdiction of the United States (16 U.S.C. 1372). The prohibition against take includes acts that "harass" marine mammals (16 U.S.C. 1362(13)). Harassment means any act of pursuit, torment, or annoyance which has the *potential to injure* a marine mammal in the wild (Level A Harassment), or has the *potential to disturb* a marine mammal in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B Harassment) (16 U.S.C. 1362 (18); *see also* 50 CFR 216.3).

In addition, NMFS' regulations implementing the MMPA further define the term "take" to include "the negligent or intentional operation of an aircraft or vessel, or the doing of any other negligent or intentional act which results in disturbing or molesting a marine mammal; and feeding or attempting to feed a marine mammal in the wild" (50 CFR 216.3).

Section 112 of the MMPA authorizes NOAA to implement regulations that are "necessary and appropriate to carry out the purpose" of the MMPA (16 U.S.C. 1382).

To date, NMFS has developed specific approach distance regulations for certain species of marine mammals listed under the Endangered Species Act (ESA) (16 U.S.C. 1531 *et seq.*). Each rule was based on the biology of the marine mammals and the best available scientific information on the nature of the threats. Examples of these types of regulations include a 100-yard (91.4 m) approach limit for humpback whales in Hawaii (60 FR 3775; January 19, 1995); a 100-yard approach limit for humpback whales in Alaska, which includes a speed restriction in the vicinity of the whale (66 FR 29502; May 31, 2001); a 500-yard (457.2 m) approach limit for North Atlantic right whales (62 FR 6729; February 13, 1997); size-specific vessel speed restrictions within specific areas in waters off the U.S. East Coast to protect North Atlantic right whales (73 FR 60173; October 10, 2008); and a 200-yard (182.9 m) approach limit for killer whales with prohibitions against vessels intercepting a killer whale or positioning the vessel in its path in the inland waters of Washington State (76 FR 20870; April 14, 2011).

In addition to the specific ESA regulations mentioned above, NMFS has developed guidelines for conducting responsible marine wildlife viewing to help the public avoid causing any take (harassment or disturbance) of protected wildlife species

(http://www.nmfs.noaa.gov/pr/pdfs/education/viewing_wildlife.pdf); these guidelines have been available since 2004. On human interactions with marine mammals in the wild, NMFS states the following: “The MMPA does not provide for a permit or other authorization to view or interact with wild marine mammals, except for specific listed purposes such as scientific research. Therefore, interacting with wild marine mammals should not be attempted and viewing marine mammals must be conducted in a manner that does not harass the animals. NMFS does not support, condone, approve, or authorize activities that involve closely approaching, interacting, or attempting to interact with whales, dolphins, porpoises, seals, or sea lions in the wild. This includes attempting to swim with, pet, touch, or elicit a reaction from the animals”

(<http://www.nmfs.noaa.gov/pr/dontfeedorharass.htm>).

In addition to the national guidelines, each of the five NMFS Regions has developed recommended viewing guidelines relevant to protected species within their region to assist the general public with information on how to responsibly view and act around these animals in the wild. The guidelines are aimed at assisting the public in meeting their obligations under the MMPA and ESA. Although some guidelines address activities that are prohibited under law, others address activities that are not expressly prohibited.

The NMFS Pacific Islands Regional Office’s viewing guidelines for Hawaii recommend that people view wild dolphins from a safe distance of at least 50 yards (45.7 m) and advise against trying to chase, closely approach, surround, swim with, or touch the animals. To support the guidelines in Hawaii, NMFS has partnered with the State of Hawaii and the Hawaiian Islands Humpback Whale National Marine Sanctuary over the

past several years to promote safe and responsible wildlife viewing practices through the development of outreach materials, training workshops, signage, and public service announcements. NMFS' education and outreach efforts have also been supported by a partnership with the Watchable Wildlife program, a consortium of Federal and State wildlife agencies and wildlife interest groups that encourages passive viewing of wildlife from a distance for the safety and well-being of both animals and people (Duda 1995, Oberbillig 2000, Clark 2006). In addition to the guidance provided to the general public on protected wildlife viewing, several tour industry-specific programs have been initiated in various NMFS regions to further support protection of marine mammals targeted for wildlife viewing. In Hawaii this includes administration of the voluntary Dolphin SMART program for commercial operators who pledge to comply with safe and responsible wildlife viewing practices.

Dolphin SMART is a model wildlife viewing stewardship program developed by NMFS and NOAA's Office of National Marine Sanctuaries in partnership with Whale and Dolphin Conservation, the Dolphin Ecology Project, local businesses, and members of the public, who have teamed up to support responsible viewing of wild dolphins. The program was launched in 2007 in Key West, Florida, was subsequently expanded to the Central and Southwest Florida coast, and established in Hawaii in 2011.

The NMFS Pacific Islands Regional Office developed the Dolphin SMART program in Hawaii to aid education and outreach efforts for Hawaiian spinner dolphin conservation and management. Three businesses on Oahu, one on Kauai, and two on Maui are currently recognized as Dolphin SMART participants.

The Dolphin SMART program goals are to minimize the potential of wild dolphin harassment caused by commercial viewing activities, reduce expectations of close interaction with wild dolphins in a manner that may cause harassment, address advertising that creates expectations of engaging in activities that may cause harassment, and promote responsible stewardship of dolphins in local coastal waterways. The “SMART” acronym stands for:

S – Stay back 50 yards from dolphins

M – Move cautiously away if dolphins show signs of disturbance

A – Always put your engine in neutral when dolphins are near

R – Refrain from feeding, touching, or swimming with wild dolphins

T – Teach others to be Dolphin SMART

More information on the Dolphin SMART program can be found at the following websites: www.dolphinSMART.org and www.facebook.com/OfficialDolphinSmart.

Need for Additional Action

Despite the prohibitions, guidelines, outreach, and stewardship efforts currently in place, close interactions between humans and spinner dolphins continue to occur in Hawaii’s waters and are especially prevalent in essential daytime habitats (see **Background**). In April 2000, the MMC released a literature review of scientific publications that evaluated the impacts of swimming with wild dolphins worldwide (Samuels *et al.* 2000). The authors of this review noted the prevalence of disturbances by tourist activities in areas critical to the animals’ well-being, and recommended that precautions be taken to protect the dolphins (Samuels *et al.* 2000).

The concerns about disturbance to spinner dolphins by boaters and swimmers prompted NMFS to raise the topic of enhancing protections for these animals in an Advanced Notice of Proposed Rulemaking (ANPR) (70 FR 73426, December 12, 2005). Public comments received in 2005 reiterated and reinforced the concerns expressed by the MMC. In the years since the 2000 Samuels *et al.* review, additional scientific evidence has documented disturbances or disruptions to spinner dolphins by boaters or swimmers (Forest 2001; Courbis 2004, 2007; Danil *et al.* 2005; Timmel 2005; Courbis and Timmel 2009; Ostman-Lind 2009; Symons 2013; Heenehan *et al.* 2014; Tyne *et al.* 2015). This problem is pronounced in essential daytime habitats that are targeted for dolphin-directed activities, and animals that use these areas are exposed to intense activity on a daily basis. For example, a recent study found that human activities took place within 100 m of spinner dolphins 83 percent of the time the animals were using four essential daytime habitats on the island of Hawaii (Tyne 2015).

Based on extensive review and analysis through internal scoping, external scoping via the ANPR, public scoping for the DEIS, and the best available scientific information, we have determined that the existing prohibitions, regulations, and guidelines need to be strengthened to protect Hawaiian spinner dolphins from various forms of take from human activities that cause harassment or disturbance. Dolphins' response to disturbance varies among individuals, but in most cases it includes a departure from natural behavioral patterns that support the animal's health and fitness, and chronic disturbance may result in negative impacts to the fitness of individuals and/or populations. We therefore deem it necessary and appropriate to adopt additional regulations to clarify

human activities that result in take of Hawaiian spinner dolphins, including harassment or other forms of disturbance as currently defined by statute and regulation.

Although unauthorized take of dolphins continues to be illegal wherever it occurs, we are focusing these regulations in nearshore areas, out 2 nm (3.7 km) from shore of the MHI and including designated waters between Lanai, Maui, and Kahoolawe (see Figures 1 and 2 in section 216.20(e) and *Geographic Area* section below), where the threat from dolphin-directed activities is concentrated and where spinner dolphins engage in daytime behaviors, including resting, socializing, nurturing, and traveling. These additional measures are intended to prevent “take” during important resting periods and allow Hawaiian spinner dolphins to engage in normal fitness-enhancing behaviors, thereby preventing long-term negative impacts to individuals and to the population.

Development of Proposed Regulations

In 2005, NMFS convened a Spinner Dolphin Working Group with representatives from the MMC, State and Federal agencies, and scientific researchers who work on spinner dolphin conservation concerns. The group evaluated the best available information at the time to understand the scope of the tourist and recreational activities targeting spinner dolphins. As noted above (**Need for Additional Action** section), in December 2005, we published an ANPR in the **Federal Register** (70 FR 73426, December 12, 2005) to solicit input from the public on potential ways to better enhance protections for spinner dolphins and mitigate activities of concern (*e.g.*, close approach and swim-with activities). This was followed by a Notice of Intent (NOI) to Prepare an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) (71 FR 57923; October 2, 2006), in which we identified a preliminary list of

potential regulations for future consideration and comment, which included partial time-area closures in certain spinner dolphin essential daytime habitats, a minimum distance limit for approaching dolphins in the wild, restrictions on certain human behaviors in NMFS-identified spinner dolphin resting areas, and complete closure of all known spinner dolphin resting areas in the MHI.

During the ANPR and the NOI comment periods, five public scoping meetings were held on the islands of Kauai, Oahu, Maui, and Hawaii, and oral statements were taken at each meeting. NMFS received a total of 4,641 public comments in response to the ANPR and the NOI (this includes all emails, letters, and public testimonies). Comments were submitted by concerned citizens, tour operators, scientific researchers, conservation and education groups, and Federal, State, and other government entities.

Comments received through both of the public comment periods varied widely and recommended numerous actions to consider, ranging from no regulations to permanent closure of areas used by the dolphins for rest and shelter. Additionally, public comments raised concerns about various topics that should be addressed in the EIS or proposed action. These concerns are grouped into various topics in the final scoping report, and include the following topics: Hawaiian spinner dolphin biology and behavior; cultural issues; cumulative effects; data/data gaps; direct and indirect effects; education/outreach; enforcement; the ESA; guidelines/solutions for other species or from other countries; human-dolphin interaction, medical benefits from swimming with dolphins; MMPA; monitoring; the NEPA; public and stakeholder involvement; regulatory regime; social and economic issues; spiritual and religious issues; take and harassment, traditional Hawaiian knowledge; and welfare of the dolphins. Although

comments varied greatly, a consistent theme that stood out under several topics was the need for effective and enforceable regulations.

As a result of stakeholder concerns expressed through these public comments, and for the preparation of this rule and associated DEIS, we made multiple site visits to areas where concerns have been raised regarding Hawaiian spinner dolphin disturbance in the MHI. During these visits, we met with concerned members of the public to gather information relevant to this analysis. Additionally, we coordinated with State and Federal agencies, and used the public comments generated from the ANPR and NOI to develop a range of actions and mitigation measures that are reflected in numerous alternatives under consideration for the proposed action.

Presentations made at the public scoping meetings, the April 2007 EIS public scoping summary report, a list of the attendees, the ANPR, public comments, and background materials are provided at http://www.fpir.noaa.gov/PRD/prd_spinner_EIS.html.

We relied on the public comments on the ANPR and the NOI, and on new scientific information to develop a range of regulatory and non-regulatory alternatives, including the alternative of not adopting regulations. We analyzed the environmental effects of these alternatives and considered options for mitigating effects. After a preliminary analysis of alternatives, we developed and analyzed the effects of the swim-with and 50-yard (45.7 m) approach regulations, which we chose as our preferred alternative, which includes no interception (*i.e.*, “leapfrogging” or placing a person or vessel in the path of dolphins for the purpose of interception). As more fully discussed

below, we specifically seek public comment on whether these proposed measures alone will provide sufficient protection to spinner dolphins from human interactions.

Although not currently proposed, we are considering whether other management measures also may be necessary and appropriate to protect Hawaiian spinner dolphins from take, especially in essential daytime habitats targeted by humans for dolphin-directed activities. Accordingly, we have also analyzed the effects of the alternative management measures of promulgating swim-with and approach regulations, while additionally creating either mandatory (see DEIS Alternative 4) or voluntary (see DEIS Alternative 5) time-area closures in five essential daytime habitats. The results of our analyses are contained in a DEIS. The DEIS is available for review and comment in association with this rulemaking (see **ADDRESSES**). A description of these alternatives is also included in the *Additional Measures Under Consideration* section of this proposed rule.

SAPPHIRE Project

During the initial scoping period for the Spinner Dolphin Human Interaction EIS, we received comments that recommended gathering additional information on Hawaiian spinner dolphins, including monitoring local populations to determine impacts to numbers and overall health of the MHI resident spinner dolphins. In response to this recommendation and to inform this rulemaking effort, NMFS internal grant funding was awarded to the “Spinner Dolphin Acoustics, Population Parameters, and Human Impact Research” (SAPPHIRE) program, conducted jointly by Duke University and Murdoch University. The SAPPHIRE project’s objective was to provide baseline data on the local abundance, distribution, and behavior of spinner dolphins in Kealakekua Bay, Honaunau

Bay, Kauhako Bay, and Makako Bay off of the island of Hawaii, as well as in nearshore, shallow-water environments near these resting bays. This intensive study integrated a suite of visual and acoustic sampling techniques, using boat-based and land-based surveys, as well as acoustic recording devices, to assess the following: spinner dolphin daytime habitat use and resting behavior in study areas and surrounding waters; residency and fidelity patterns of spinner dolphins during the day in nearshore habitats in both the study areas and surrounding waters; spinner dolphin exposure to human activities within the studied resting bays and surrounding waters; and spinner dolphin demographic response to human activities within resting bays and surrounding waters.

Research in the four bays and nearshore waters of the island of Hawaii began in August 2010 and was completed in May 2013. Results from this study provided robust population estimates for the Hawaii Island stock (see **Background**), as well as additional information about spinner dolphin habitat use and the pressure that this resident stock faces from dolphin-directed human activities. Many of these studies have been published in scientific literature and scientific reports and were used to inform this rulemaking process (Thorne *et al.* 2012, Johnson *et al.* 2013, Heenehan *et al.* 2014, Tyne *et al.* 2014, Tyne 2015, Tyne *et al.* 2015). Below we describe information gained from several of these studies.

Early researchers (Norris and Dohl 1980, Norris *et al.* 1994) hypothesized that essential daytime habitats have specific environmental characteristics making them more favorable to the dolphins in supporting resting behaviors, such as shallow, calm, flat, protected, sandy-bottomed bays that provide easy access to nearby deep-water foraging areas. Thorne *et al.* (2012) used dolphin surveys and predictive habitat modeling to test a

suite of these environmental factors that may make spinner dolphins favor these areas. The study found that proximity to deep-water foraging areas, depth, the proportion of bays with shallow depths, and low rugosity (indicating low substrate roughness, *i.e.*, sand) were important predictors of spinner dolphin habitat. The strongest predictors of spinner dolphin resting habitat were distance to the 100-m depth contour (foraging habitat) and depth of the resting areas, with spinner dolphin resting habitat generally occurring in the shallow depths (<50 m) within a bay that was close to the 100-m depth contour and thus, their offshore foraging grounds (Thorne *et al.* 2012). In tests of these characteristics across the MHI, the bays that were predicted by the model to be optimal resting habitats were consistent with spinner dolphin resting habitats that are recognized as preferred from various observations and identified in the DEIS.

Tyne *et al.* (2015) further examined key ecological characteristics and spinner dolphin behavior to see which characteristics support resting behavior. The most important factor contributing to the likelihood of rest was the dolphins' presence within a bay, meaning that they were most likely to rest when they were inside a bay (Tyne *et al.* 2015). Another important factor was the presence of sand substrate. In general, spinner dolphins spent disproportionately more time over sandy substrates in and out of bays; however, outside of bays, spinner dolphins were observed mostly travelling over sandy substrates. This supports the finding that the bays themselves are the most important factor for resting behaviors, because even sandy substrate outside of the bays did not significantly predict resting behavior. This work highlights the role that habitat areas play in supporting important fitness enhancing behaviors, specifically rest.

Johnson *et al.* (2013) assessed the influence of human activity on the energy budget of Hawaiian spinner dolphins using a theoretical model and comparing predictions from the model to empirical data collected in Kealakekua Bay on spinner dolphin behavior. Under the model, individual dolphins needed to spend at least 60 percent of their time inshore in a resting state to be in a positive energetic balance. Given this assumption, direct observations of spinner dolphins suggest that these animals are currently spending adequate amounts of time engaged in resting behaviors to meet their energetic requirements; however, researchers cautioned that individuals with high energetic demands could be at a deficit. For example, nursing mothers and juveniles generally have a much higher energetic demand and these individuals could be at risk of an energetic deficit. This study also evaluated the likelihood of spinner dolphins resting, given various human activities occurring at different distances. Researchers found that the presence of swimmers within 150 m significantly decreased the likelihood of resting. Interestingly, the likelihood of dolphins resting was higher when vessels were present between 50 and 150 m, creating the appearance of a positive relationship between resting behavior and vessel presence at this distance. These results may demonstrate a difference in dolphins' perceived risk between swimmers and vessels, or a lack of perceived risk associated with vessels. However, this positive relationship between resting behavior and vessels may also be influenced by the high frequency of observations with vessels present between 50-300 m and few observations with no vessels present (Johnson *et al.* 2013).

Tyne (2015) similarly noted that spinner dolphins off the west coast of the island of Hawaii are exposed to a high rate of human activities and that this rate of exposure may obscure researchers' ability to distinguish disturbance effects associated with intense

viewing pressures. In his evaluations, Tyne (2015) found that spinner dolphins were exposed to human activities within 100 m over 80 percent of the time that the dolphins were using essential daytime habitat. Evaluations between control conditions, *i.e.*, no vessels or people within 100 m of dolphins, and exposure conditions, *i.e.*, vessels or people within 100 m of dolphins, suggested that human activities did not have a significant effect on the probability of spinner dolphins engaging in resting, socializing, or traveling. However, control conditions did not occur often (less than 18 percent of the time) or for long periods of time (median duration of 10 minutes), preventing a robust comparison for the purposes of measuring effects. With so little control data and with short durations between exposures to human activity, Tyne (2015) questioned whether the observed data were representative of true or deep resting behavior, or whether observed resting behavior may only be “light” rest. In this case, observing behavior alone may not be a reliable indicator for measuring disturbance effects, because observed resting behavior may not represent behavior that provides restorative benefits for these animals. The rate of exposure to human activities off the west coast of the island of Hawaii is 25 percent higher than reported for other dolphins studied for behavioral response to human activities in other areas of the world (Tyne 2015). This rate of exposure may place resident stocks at risk and long-term disturbance could result in habitat displacement or reduced fitness as seen in other dolphin populations (Bejder *et al.* 2006a, 2006b; Lusseau and Bejder 2007).

Proposed Rulemaking

The swim-with and approach prohibitions described in this proposed rule are designed to protect spinner dolphins from take, including harassment and disturbance,

caused by dolphin-directed activities that are concentrated in coastal waters (within 2 nm (3.7 km) of shore and in designated waters between Lanai, Maui, and Kahoolawe) and reduce the impact of increased viewing and interaction pressures. Although we stress that unauthorized take of spinner dolphins or any marine mammals already is and continues to be prohibited by the MMPA in any location, we believe that specific regulations aimed at identified human activities that result in take of Hawaiian spinner dolphins is warranted because of the chronic disturbance that is currently taking place in nearshore waters. NMFS is proposing these regulations pursuant to its rulemaking authority under MMPA sections 112 (a) (16 U.S.C. 1382(a)) and 102 (16 U.S.C. 1372).

Although not included in this proposed rule, we are also considering whether additional management measures may be necessary and appropriate to protect Hawaiian spinner dolphins from take, especially in essential daytime habitats targeted by humans for dolphin-directed activities. The *Additional Measures Under Consideration, Time-Area Closures* section below discusses both mandatory and voluntary time-area closures as two alternative management options that may enhance protections for Hawaiian spinner dolphins beyond the proposed swim-with and approach rule.

Scope and Applicability

Applications to all Hawaiian Spinner Dolphins

The proposed rule's swim-with and approach prohibitions would apply to all Hawaiian spinner dolphins found in the action area (see *Geographic Action Area* section below).

Geographic Action Area

The action area for this rule is limited to waters within 2 nm (3.7 km) of each of the MHI and in designated waters between the islands of Lanai, Maui, and Kahoolawe (see Figures 1 and 2 in section 216.20(e)). The latter designated waters include all water areas enclosed by three line segments that connect points at the 2-nm boundary between the islands as follows: the rhumb line between (A1) 20°32'51"N/156°43'50"W and (A2) 20°42'4"N/156°55'34" W between Kahoolawe and Lanai; the rhumb line between (B1) 20°51'1"N/156°54'0"W and (B2) 20°59'48"N/156°42'28"W between Lanai and Maui; and the rhumb line between (C1) 20°33'55"N/156°26'43"W and (C2) 20°32'15"N/156°29'51"W between Maui and Kahoolawe. Throughout this rule, all coordinates are referenced to the World Geodetic System of 1984 (WGS84).

This is inclusive of the majority of the nearshore habitats where MHI resident stocks of spinner dolphins engage in daytime behaviors and where dolphin-directed human activities that may result in take are known to occur (see **Rationale** section below).

Applications to all Forms of Swimming and Approach

The regulations apply to all forms of swim-with and approach activities in water and air. Forms of approaching spinner dolphins include, but are not limited to, operating a manned or unmanned motorized, non-motorized, self-propelled, human-powered, or submersible vessel; operating an unmanned aircraft system (UAS) or drone; and swimming at the water surface or underwater (*i.e.*, SCUBA or free diving).

Requirements of the Proposed Rule

Swim-with and Approach Regulations

The proposed rule would prohibit people from engaging in the following activities around Hawaiian spinner dolphins:

- (1) Approaching or remaining within 50 yards (45.7 m);
- (2) Swimming or attempting to swim within 50 yards;
- (3) Causing a vessel, person, or object to approach or remain within 50 yards; and
- (4) Intercepting, or placing a vessel, person, or other object on a path of a spinner dolphin so that the dolphin approaches within 50 yards of the vessel, person, or object.

Exceptions

NMFS considered specific categories that should be exempt from the regulations, which are proposed below:

- (1) Any person who inadvertently comes within 50 yards (45.7 m) of a Hawaiian spinner dolphin or is approached by a spinner dolphin, provided the person makes no effort to engage or pursue the animal and takes immediate steps to move away from the animal;
- (2) Any vessel that is underway and is approached by a spinner dolphin, provided the vessel continues normal navigation and makes no effort to engage or pursue the animal;
- (3) Any vessel transiting to or from a port, harbor, or in a restricted channel when a 50-yard distance will not allow the vessel to maintain safe navigation;
- (4) Vessel operations necessary to avoid an imminent and serious threat to a person or vessel;
- (5) Activities authorized through a permit or authorization issued by the NMFS to take spinner dolphins; and

(6) Federal, State, or local government vessels, aircraft, personnel, and assets when necessary in the course of performing official duties.

The exception for vessels transiting to or from ports, harbors, or restricted channels is necessary to allow continuation of safe navigation when approaching spinner dolphins closer than 50 yards is unavoidable. For these cases, the vessel should continue normal navigation to reduce the likelihood that close interactions result in disturbances for an appreciable period of time. The exception for vessel operations necessary to avoid an imminent and serious threat to a person or vessel is needed for the safety of human life and property, and to allow for compliance with applicable navigation rules. The exception for government vessels, aircraft, personnel, and assets operating in the course of official duties is intended to avoid disruption of essential government missions, including enforcement and national security activities. The exception for vessels or persons engaged in an activity authorized through a permit or other authorization issued by the NMFS to take spinner dolphins is necessary to ensure the continued availability of scientific research and biological data necessary to inform management and conservation decisions related to the dolphins. We anticipate that compliance with relevant permit terms and conditions will help minimize the potential impacts to dolphins.

Rationale

Proposed Action – Swim-with and Approach Regulations

Hawaiian spinner dolphins resident to the MHI are made up of small, genetically isolated stocks that exhibit a specialized behavioral ecology that makes them easy to access in coastal environments during their daytime resting hours. This leaves these resident stocks vulnerable to human-caused disturbance and its effects such as habitat

abandonment or declines in reproductive success (Norris *et al.* 1994, Andrews *et al.* 2010, Tyne *et al.* 2014). In the MHI, dolphin-directed activities have increased in recent years and the public's expectation of close interactions has placed increased pressure on resident stocks of Hawaiian spinner dolphins and the habitats that support these stocks (see **Background** above). Despite outreach, guidelines, and current prohibitions, observations in the field indicate that MHI resident Hawaiian spinner dolphins' natural behaviors are disrupted by activities that include approach by both swimmers and vessels (Ostman-Lind *et al.* 2004, Danil *et al.* 2005, Courbis 2004, Courbis and Timmel 2008), and overarching spinner dolphin group behavioral patterns may be changing in essential daytime habitats as a result of these pressures (Norris *et al.* 1994, Forest 2001, Courbis 2004, Courbis and Timmel 2008).

Observed individual dolphin responses to disturbance events when closely approached by people and vessels include charging or threat displays, aerial displays, and avoidance behaviors such as moving around and away from people and vessels, or leaving the bay in response to human pursuit (Norris *et al.* 1985, Norris *et al.* 1994, Forest 2001, Ostman-Lind *et al.* 2004, Courbis 2004, Courbis and Timmel 2008). Additionally, researchers have observed changes to behavioral patterns in essential daytime habitats, including differences in aerial activity (Courbis and Timmel 2008) and changes in dolphin residence time and distribution within essential daytime habitats, that may be linked to the intensity of human activity (Forest 2001; Danil *et al.* 2005; Courbis 2004, 2007; Courbis and Timmel 2008; Ostman-Lind 2007).

Chronic disturbance can disrupt natural behavioral patterns associated with feeding, resting, nurturing, and socializing, and diminish the animals' ability to utilize the

benefits of important habitat, ultimately resulting in negative impacts to the fitness of individuals and resident populations. For example, disturbance while spinner dolphins are resting detracts from the dolphins' abilities to recuperate from energetically demanding behaviors such as foraging, transiting to and from offshore foraging grounds, and nurturing their young. If these disturbances happen chronically, the lack of consistent, undisturbed resting periods can reduce the amount of energy available to forage and care for young. In other small cetacean populations, chronic human disturbances have been linked to biologically significant impacts such as reduced female reproductive success (Bejder 2005, Lusseau and Bejder 2007).

In other locations globally, intense dolphin-directed human activities have resulted in changes to targeted dolphin populations' habitat use and even caused habitat abandonment (Bejder *et al.* 2006a, 2006b; Gannier and Petiau 2006; Nature Conservation Sector 2006; Lusseau and Bejder 2007; Notarbartolo-di-Sciara *et al.* 2009). For example, in a bay in Tahiti, spinner dolphin residence times were negatively influenced by boat presence. Spinner dolphins often left the bays earlier when there was an increase in boat presence, and this increased boat disturbance may have deterred dolphins from entering the bay the next day (Gannier and Petiau 2006). Additionally, in Samadai Reef, Egypt, spinner dolphins were reported as noticeably distressed from excessive numbers of visitors and people attempting to interact with the dolphins (Notarbartolo-di-Sciara *et al.* 2009). The spinner dolphin group abandoned this preferred resting area, presumably to avoid the disturbance from vessels and visitors (Nature Conservation Sector 2006), and did not return to the site until after management measures were put in place. Management measures included prohibiting human entry into the core resting area, and

restricting certain activities in areas surrounding the core resting area to prevent further disturbance (Nature Conservation Sector 2006, Notarbartolo-di-Sciara *et al.* 2009).

Chronic disturbance of spinner dolphins in the MHI could negatively affect the habitat use or health of resident populations. Additionally, disturbance effects may be amplified in the MHI's resident stocks, which exhibit high site fidelity and restricted gene flow, because the impacts to multiple individuals' health and fitness are quickly reflected in the overall fitness of these small populations (Bejder 2005).

The 50-yard (45.7 m) approach regulation, including prohibiting swimming with dolphins, is intended to reduce the degree of behavioral disruption from close approaches by vessels and swimmers, while allowing for meaningful dolphin watching opportunities. Research indicates that spinner dolphins exhibit changes and disruptions to natural behaviors from close approach by swimmers (Danil *et al.* 2005, Courbis and Timmel 2008) and that swimmer presence within 150 m reduces the likelihood of spinner dolphins being in a resting state (Symons 2013, Johnston *et al.* 2014). Approach by vessels and watercraft have also been shown to disrupt and alter spinner dolphin behavior (Ross 2001, Forest 2001, Timmel *et al.* 2008). In the MHI, several studies note that close approach by vessels disrupt dolphin behaviors at various distances ranging from 10 m to 300 m (Forest 2001, Timmel *et al.* 2008). At Midway Atoll in the Northwestern Hawaiian Islands, Ross (2001) found that spinner dolphins were affected by vessel presence at distances as great as 500 m and that the effects increased as the distance decreased. Although Johnson *et al.*'s (2013) work in the MHI found the likelihood that dolphins were resting was higher when vessels were present between 50 and 150 m, they

noted that these results may be influenced by the fact that vessels were present in proximity to the dolphins most of the time.

We have considered multiple distances that may provide protections for spinner dolphins from human activities that result in take (such as swimming with and approaching dolphins), including 50 yards, 100 yards (91.4 m), or even greater distances. NMFS believes that 50 yards is the minimum distance that will prevent most forms of take, while also providing the public with sufficient opportunity to tailor their conduct to avoid disruptive encounters with spinner dolphins. We already recommend this distance (50 yards) in our wildlife viewing guidelines and request that people do not swim-with wild dolphins to reduce the risk of behavioral disruption from close encounters. These guidelines are recognized by tour operators and are used by some (*e.g.*, Dolphin SMART operators) to help ensure that spinner dolphins are viewed responsibly.

A 100-yard approach restriction exists for humpback whales and this distance was also considered for reducing take of spinner dolphins. Spinner dolphins are fast-moving, small cetaceans and groups of dolphins may move through areas changing directions throughout the day. A distance restriction of 100 yards provides more space for these animals to move back and forth, and helps ensure that people and vessels have sufficient opportunity to maintain an appropriate distance to avoid take. A 100-yard approach restriction might also be easier for vessel operators to recognize and achieve, as this distance applies to humpback whales. However, approach regulations at a distance greater than 50 yards may be difficult for recreational swimmers to recognize and achieve in the water. Based on the best scientific information available, it is difficult to determine a precise distance beyond which human activity does not have the potential to cause

disturbance by disrupting natural behaviors. However, we recognize that not all approaches within 100 yards result in take, and we are concerned that such a prohibition may unnecessarily burden the public, without necessarily achieving the purposes of this rulemaking. Further, this greater distance may diminish both the experience of dolphin watching and opportunities to participate in dolphin watching, because these animals are small and may be difficult to spot at a distance. NMFS recognizes that the dolphin watching industry is important to Hawaii's economy, and that these tours have the ability to inform the public about dolphins and to foster stewardship. To reduce the threat of take occurring (including harassment and disturbance) when swimmers and vessels closely approach dolphins, to remain consistent with the current recommended approach guideline for the region, and to allow for continued dolphin watching opportunities at safe distances, NMFS is proposing a distance of 50 yards for swim-with and approach restrictions.

The proposed swim-with and approach regulations prevent a range of human activities that occur in close proximity to Hawaiian spinner dolphins. This includes swimming-with spinner dolphins, touching or attempting to touch spinner dolphins; corralling or herding spinner dolphins into small areas; and leap-frogging, all of which have the potential to disturb the dolphins and result in take. Implementation of these prohibitions would include enforcement by NMFS and DLNR Division of Conservation and Resource Enforcement (DOCARE) personnel, and outreach by NMFS staff and volunteers who would assist with an informational campaign about the new regulation and the scientific information on which it is based. This proposed rule provides new tools for enforcement that are measurable, easy to understand, and based on the best available

science regarding human impacts on spinner dolphins. To limit some potential impacts to the public from these regulations, we propose exceptions that are designed to allow for transit into and out of ports, harbors, and restricted channels; public safety measures; avoidance of penalties when the animal has closely approached a boat or person; and continuation of essential government and permitted activities (see *Exceptions* section above). The DEIS contains a full analysis of a No Action Alternative, other alternatives, and the Preferred Alternative.

The costs of implementing human and vessel regulations to protect the dolphins are expected to be low. Some will be borne by the commercial dolphin watch and dolphin swim industry, dolphin-associated spiritual retreats, and other generalized nature tours (see the DEIS and the *Regulatory Flexibility Act* section below for more information). While some dolphin watch companies and community members have suggested that restricting swimming with the dolphins or closely approaching them may affect revenue, surveys of tour participants indicate that close approach of the dolphins may not be the most important aspect for the dolphin watching participants, and that participants will support viewing these animals in a manner that reduces the potential for disruptive encounters with dolphins (Wiener 2015). Other impacts to boaters, swimmers, kayakers, and others who are not engaged in dolphin-directed activities are expected to be minor and include slight changes to operations to comply with the proposed regulations.

The reduction in disturbance to Hawaiian spinner dolphins, as addressed through each element of the rule as described above, provides a benefit to the dolphins as well as to members of the public who value the dolphins. Reducing threats to the dolphins also supports the long-term sustainability of the responsible dolphin watching industry.

Geographic Scope (Distance from Shore)

The proposed regulations are designed to address dolphin-directed activities that are resulting in various forms of take of Hawaiian spinner dolphins. NMFS selected 2 nm (3.7 km) from shore around the MHI as well as designated waters between the islands of Lanai, Maui, and Kahoolawe as the boundary for the proposed prohibitions because this range encompasses the areas where current and best available information indicates that most dolphin-directed activities are likely to be concentrated. NMFS gathered information from scientific literature about Hawaiian spinner dolphin daytime habitat preferences and information from over 400 sightings of spinner dolphins collected around the MHI since 1992 from various members of the Pacific Islands Photo Identification Network (PIPIN) to determine where resident spinner dolphins are likely to occur during the day. Dolphin-directed activities in Hawaii are concentrated in the nearshore portion of the island-associated Hawaiian spinner dolphin stocks' ranges because these stocks are easily accessed in coastal waters during the day when most people seek out marine recreational activities.

Daytime habitat for Hawaiian spinner dolphins varies across the MHI, because the bathymetry, or depths and shapes of underwater terrain, is different for each island, and spinner dolphins seek out areas with physical and biological characteristics that support their ecological needs (see **Background** section). On Hawaii Island, Norris *et al.* (1994) indicate that spinner dolphins generally prefer areas with depths of less than 50 m for engaging in resting activities, and Thorne *et al.* (2013) note that resting habitats generally occur in close proximity to the 100-m contour (close to the inshore extent of prey species at night). Spinner dolphins are also known to transit along Hawaii Island's coastline,

moving between resting areas during the day. Lammers *et al.* (2004) indicate that Oahu's spinner dolphins show a strong affinity for the 10-fathom isobath (18.3 m), and note that approximately 93 percent of sightings off Waianae and 81 percent of sightings off the south shore of Oahu occurred at depths shallower than 17 fathoms (31.1 m). Lammers *et al.* (2004) also note that foraging activities begin by evening around the 100-fathom isobath (182.9 m) off Oahu. Information received from PIPIN indicates that approximately 89 percent of spinner sightings across the MHI were in waters within the 100-m depth contour and that 95 percent were in waters within the 200-m depth contour, although spinner dolphins have been observed in waters during the day where depths are as great as 3,000 m (NMFS 2016).

In reviewing this information, we determined that selecting a boundary based on depth in any particular area may be difficult for people to identify without having access to proper instrumentation (which would be especially difficult for kayakers, standup paddleboarders, and swimmers), and that the distance from shore may provide a more easily discerned boundary. In addition, although spinner dolphin daytime habitat may be located at different distances from the shoreline of different islands, establishing different prohibitions based on the location of these daytime habitats (*e.g.*, having restrictions out to 1 nm (1.9 km) or 2 nm depending on the island) could subject the public to inconsistent and confusing requirements, and complicate both enforcement of and compliance with these regulations. This could be particularly difficult in areas where multiple islands are visible and the restricted distances differ around different islands. Therefore, we evaluated consistent distances from shore across the MHI.

We reviewed the habitat preferences and sighting information as it relates to distance from shore to identify a boundary that would be easy for people to recognize and would incorporate the best available information about spinner dolphin habitat preferences and sighting information. Along the west coast of Hawaii Island, habitats that are 50 m or less in depth and where dolphin-directed activities are prevalent, are encompassed within 1–1.5 nm (1.9-2.8 km) from shore. Habitats within 100 m depth fall almost entirely within 2 nm of shore, and at 3 nm (5.6 km) these areas are entirely included. Off the west coast of Oahu, where most dolphin-directed activities on this island occur, the 10-fathom (18.3 m) isobath is largely captured within 1 nm of shore, while 17 fathoms (31.1 m) is largely captured within 1.5 nm. Habitats of these depths extend out farther on the south shore where spinner dolphins are also known to rest; these habitats are largely captured within 1.5 and 2 nm from shore respectively. The 100-fathom (182.9 m) contour is largely captured within 1.5 nm on the west side of the island, but extends out past 3 nm on the south shore. Little information is available from the other MHIs regarding specific depth preferences, although there are areas where the 50- and 100-m depth contours extend past 4 nm (7.4 km). Off most of the MHI, a large majority of the PIPIN sighting information is captured within 2 nm from shore.

A key area for spinner dolphin sightings during the day, where the depth contour extends out past 4 nm, is between the islands of Lanai, Maui, and Kahoolawe. This area is traversed by many recreational and commercial tour vessels in search of marine mammal viewing opportunities throughout the day. Consequently, spinner dolphins also require protections in this area. To ensure that dolphins are protected throughout the day where they may transit between islands and encounter dolphin-directed activities, we

delineated an area around all three islands that includes the 2-nm buffer around the outside of each island and the channels and waters between these islands. This delineated area includes 96 percent of all PIPIN sighting information across the MHI.

We are proposing this action to reduce the threat of take of Hawaiian spinner dolphins (including harassment and disturbance) caused by dolphin-directed activities that are concentrated in coastal waters of the MHI and to reduce the impact of increased viewing and interactions pressures on MHI resident stocks. We do not expect that these same pressures are prevalent in the outer portions of the MHI stocks' ranges, because these spinner dolphins are not easily accessed when they are offshore. Therefore, the proposed rule applies to an area within 2 nm of the MHI and in designated waters between the islands of Lanai, Maui, and Kahoolawe. This area encompasses the majority of the resident stocks' daytime habitat, thereby incorporating the area where spinner dolphins are easily accessed and where take of Hawaiian spinner dolphins is most likely to occur.

Additional Measures Under Consideration: Time-Area Closures

Although not currently proposed, we are also considering and seeking public comment on whether additional management measures (beyond swim-with and approach regulations) may be necessary and appropriate to protect Hawaiian spinner dolphins from take, especially in essential daytime habitats targeted by humans for dolphin-directed activities. At this time, we believe that the swim-with and approach regulations alone will provide sufficient protection to Hawaiian spinner dolphins, by reducing close encounters between spinner dolphins and humans that result in take. We also expect that the swim-with and approach regulations will reduce the intensity of activities within essential

daytime habitats that are targeted by people for dolphin-directed activities to some degree. However, NMFS recognizes that the intensity of activity in some of these areas is high and that additional measures could be necessary.

Area closures have been shown to be an effective management tool for addressing the intensity of wildlife viewing and interaction in other areas globally (Notarbartolo-di-Sciara *et al.* 2009, Nature Conservation Sector 2006). Area closures provide members of the public with precise boundaries so that they may readily tailor their conduct accordingly. However, area closures can also carry undesired costs, such as by imposing a burden on the public when spinner dolphins are not present. We are mindful of this potential and believe a careful approach is warranted. By first implementing swim-with and approach regulations, we expect to reduce take of Hawaiian spinner dolphins resulting from interactions with swimmers and vessels. We also expect to gather additional information about the effectiveness of these measures. Should this action's swim-with and approach regulations provide insufficient protection for Hawaiian spinner dolphins using essential daytime habitats, we would consider additional conservation and management measures, including time-area closures, to reduce take in high intensity areas. Below we discuss two management options that are analyzed in the DEIS. We invite public comment about whether and at what point these management options or others may be necessary and appropriate to protect Hawaiian spinner dolphins from take.

Two possible management options evaluated in the DEIS would create either mandatory (see Alternative 4 in the DEIS) or voluntary (see Alternative 5 in the DEIS) time-area closures in five essential daytime habitats, in addition to the swim-with and approach regulations. We selected the five areas for potential time-area closures using a

step-down process. In this approach, we identified important habitats that might benefit from additional protection, and then considered additional factors that may promote or obstruct the effectiveness of the closure. (See Appendix A of the DEIS for more detail.) The five sites are essential daytime habitats where human activities are largely Hawaiian spinner dolphin-directed, where closures are logistically feasible, and where regulatory measures can be balanced most effectively with human ocean use to protect these dolphins. Once the sites were selected for time-area closures, we delineated core areas within each of the five sites where spinner dolphins are most often engaged in resting activities. The core areas would be subject to closure, while leaving other areas of the bays open in order to minimize impacts on other human activities (*e.g.*, snorkeling, surfing).

As noted in the **SAPPHIRE Project** section above, essential daytime habitats are particularly important to island-associated spinner dolphins because the habitats provide environmental characteristics that support the dolphins' ability to minimize travel to offshore food sources and to detect predators (Norris and Dohl 1980, Norris *et al.* 1994, Thorne *et al.* 2012). Tyne *et al.* (2014) reported that spinner dolphins off the island of Hawaii are most likely to rest while inside these habitats that support predator detection and noted that dolphins using these areas off the west coast of Hawaii are experiencing human activities within 100 m over 80 percent of the time. Chronic wildlife disturbance within important habitats may lead to habitat abandonment and/or negatively impact the health of individual dolphins, ultimately leading to population level impacts (Frid and Dill 2002, Bejder 2006). Additional management in these areas may be important to ensure that Hawaiian spinner dolphins are given sufficient space for groups to engage in

deep resting behaviors that allow dolphins to recuperate from other energy demanding activities, such as foraging.

For time-area closures we are considering a closure time of 6 a.m. to 3 p.m. This time-period would allow spinner dolphins to enter essential daytime habitats without disturbance and remain in these areas undisturbed during peak resting hours, while allowing for human activities to occur (at a distance greater than 50 yards (45.7 m) in accordance with the approach regulations) after 3 p.m. Historic spinner dolphin resting times (before human interactions were likely a major factor in the dolphins' resting patterns) were observed to occur between dawn and dusk (Norris and Dohl 1980), and research indicates that Hawaiian spinner dolphin resting behavior still occurs throughout daytime hours (generally 6 a.m. to 6 p.m.) with the highest resting activity occurring between 10 a.m. and 2 p.m. (Tyne *et al.* 2015). Nevertheless, some Hawaiian spinner dolphin groups have been deterred from entering their essential daytime habitat if human presence in the area was too high early in the day (Danil *et al.* 2005). Preventing disturbance in these habitats during early morning hours is important to support spinner dolphins' arrival to the essential daytime habitat and their descent into rest. The late afternoon hours are considered a time of transition and described as a time when the dolphins rally together and engage in zig zag movements as they are waking from their deep rest, prior to moving offshore to their foraging grounds (Norris *et al.* 1994). However, the afternoon hours are also a popular time for human recreational use. Because the swim-with and approach regulations would provide a measure of protection for spinner dolphins as they increase activity toward the end of their resting period, we would end the closure time at 3 p.m. Swim-with and approach regulations would

continue to provide a buffer of protection to the dolphins at the end of their peak resting times, while also allowing some of these human activities to occur for a limited time period.

For either mandatory or voluntary closure options, the closure areas would be marked using buoys, sight-line markers, and landmarks from shore, and explanations of the closure's purpose and effective hours would be provided by signs on land and through other public outreach efforts. The intent of both mandatory and voluntary closures would be to prevent take by eliminating the intense human activity within essential daytime habitats during important resting times. These closures would allow for increased opportunities for spinner dolphins to engage in fitness-enhancing behaviors in the absence of vessels and people.

The bays identified for the mandatory and voluntary time-area closure options are (1) Makako Bay, (2) Kealakekua Bay, (3) Honaunau Bay, and (4) Kauhako Bay on the island of Hawaii, and (5) La Perouse Bay on the island of Maui. Below we describe the areas delineated for the time-area closures; these areas are also depicted in Figures 1-5 of this preamble.

Makako Bay. The lines between points A, B, C, and D shown in Figure 1 illustrate the marine boundaries for the time-area closure for Makako Bay; the shoreline boundary is at the mean lower low water line (meaning activities could occur in the intertidal zone) between points A and D. The following geographic coordinates provide the approximate location for each point in Figure 1: A) 19°44'21.61"N, 156°3'16.37"W; B) 19°44'25.18"N, 156°3'26.07"W; C) 19°44'2.16"N, 156°3'35.51"W; and D) 19°43'57.31"N, 156°3'23.04"W. Two buoy markers would be placed at points B and C

aligned with site line markers on shore at points A and D to delineate the closure area (Figure 1). The closure encompasses approximately 0.14 mi² (0.36 km²) of essential daytime habitat used by Hawaiian spinner dolphins. These coordinates, and coordinates for the other time-area closures, are considered approximate because the exact locations would not be specified until the buoy anchoring system is identified and an underwater survey is completed.

No public access point from shore is identified by the County of Hawaii for Makako Bay. The closest access points are identified south at Wawaloli Beach, with another access point identified North at Keahole Point.

Kealakekua Bay. The lines between points A, B, C, and D shown in Figure 2 illustrate the time-area closure for Kealakekua Bay. The following geographic coordinates provide the approximate location for each point in Figure 2: A) 19°28'37.82"N, 155°55'15.03"W; B) 19°28'54.23"N, 155°55'44.90"W; C) 19°28'48.42"N, 155°55'49.04"W; and D) 19°28'32.19"N, 155°55'19.20"W. The closure area would be delineated by means of six marker buoys – one located at each corner and one located at the middle of each of the lengthwise boundaries. Informational signs would be placed on shore to inform the public of the closure areas. The closure encompasses approximately 0.08 mi² (0.21 km²) of essential daytime habitat used by Hawaiian spinner dolphins.

The County of Hawaii identifies two public access points on Boulder Beach and Napoopoo Landing at Kealakekua Bay; both points would remain open for access. Additionally, the route used by kayakers to access the Captain Cook Monument at

Kaawaloa from Napoopoo Pier is located outside of the closure area. A line on the map going across the bay depicts this route.

Honaunau Bay. The lines between points A, B, and C shown in Figure 3 illustrate the marine boundaries for the time-area closure for Honaunau Bay; the shoreline boundary is at the mean lower low water line (meaning activities could occur in the intertidal zone) between points A and C. The following geographic coordinates provide the approximate location for each point in Figure 3: A) 19°25'27.13"N, 155°54'41.65"W; B) 19°25'21.41"N, 155°54'58.17"W; and C) 19°25'31.99"N, 155°54'58.24"W. The closure site at Honaunau would be delineated by means of a single marker buoy at point B to accommodate local native Hawaiians' requests to honor the sacred nature of this cultural site, and would be aligned with site line markers on shore at points A and C (Figure 3). Informational signs would be placed on shore to inform the public of the closure areas. The closure encompasses approximately 0.04 mi² (0.10 km²) of essential daytime habitat used by Hawaiian spinner dolphins.

The County of Hawaii identifies Honaunau Bay boat ramp as a public access area for this bay. The boat ramp and the popular access point for swimming and snorkeling known as Two-Step are located outside of the closure area, and would remain open for everyday use.

Kauhako Bay. The lines between points A, B, and C shown in Figure 4 illustrate the marine boundaries for the time-area closure for Kauhako Bay; the shoreline boundary is at the mean lower low water line (meaning activities could occur in the intertidal zone) between points A and B. The following geographic coordinates provide the approximate location for each point in Figure 4: A) 19°37'86.15"N, 155°89'68.10"W; B)

19°37'91.79"N, 155°89'95.98"W; and C) 19°37'04.02"N, 155°89'70.41"W. A single marker buoy would be placed approximately 35 m from shore to delineate the inner bay closure boundary. Sight line markers at each of the points A, B and C (Figure 4), and two buoys placed along the offshore boundary (line B-C) would delineate the closure area at this bay. Informational signs would be placed on shore to inform the public of the closure areas. The closure encompasses approximately 0.087 mi² (0.18 km²) of essential daytime habitat used by Hawaiian spinner dolphins.

The County of Hawaii identifies Hookena Beach Park as a public access point for this area. The nearshore area located inshore of the line between points A and B would be open for everyday use, including swimming, snorkeling, and freediving.

La Perouse Bay. The lines between points A, B, C and D shown in Figure 5 illustrate the marine boundaries for the time-area closure for La Perouse Bay; the shoreline boundary is at the mean lower low water line (meaning activities could occur in the intertidal zone) between points A and C, and between B and D. The following geographic coordinates provide the approximate location for each point in Figure 5: A) 20°35'56.90"N, 156°25'17.04"W; B) 20°35'25.68"N, 156°24'44.72"W; C) 20°35'39.30"N, 156°25'33.85"W; and D) 20°35'10.98"N, 156°24'50.90"W. A single marker buoy would be placed approximately 100 m offshore of the most popular snorkeling entry point to delineate the nearshore boundary line, with three buoys placed along the offshore boundary line (line C-D) to delineate the outer closure boundary. Shore-based markers at points A, B, C, and D would provide a sightline. Informational signs would be placed on shore to inform the public of the closure areas. The closure

encompasses approximately 0.32 mi² (0.83 km²) of resting habitat used by Hawaiian spinner dolphins.

Maui County identifies La Perouse as a public access point for this area (coordinates: 20°36'09.66"N, 156°25'22.48"W). The area inshore of the line between A and B, which includes this access point, would remain open for everyday uses such as surfing, snorkeling, and freediving.

Activities occurring in the intertidal zone (the area that is above water at low tide and under water at high tide), such as shore-based fishing and subsistence gathering, would be able to continue during any time of day in either type of closure.

Figure 1. Time-Area Closure Depiction, Makako Bay

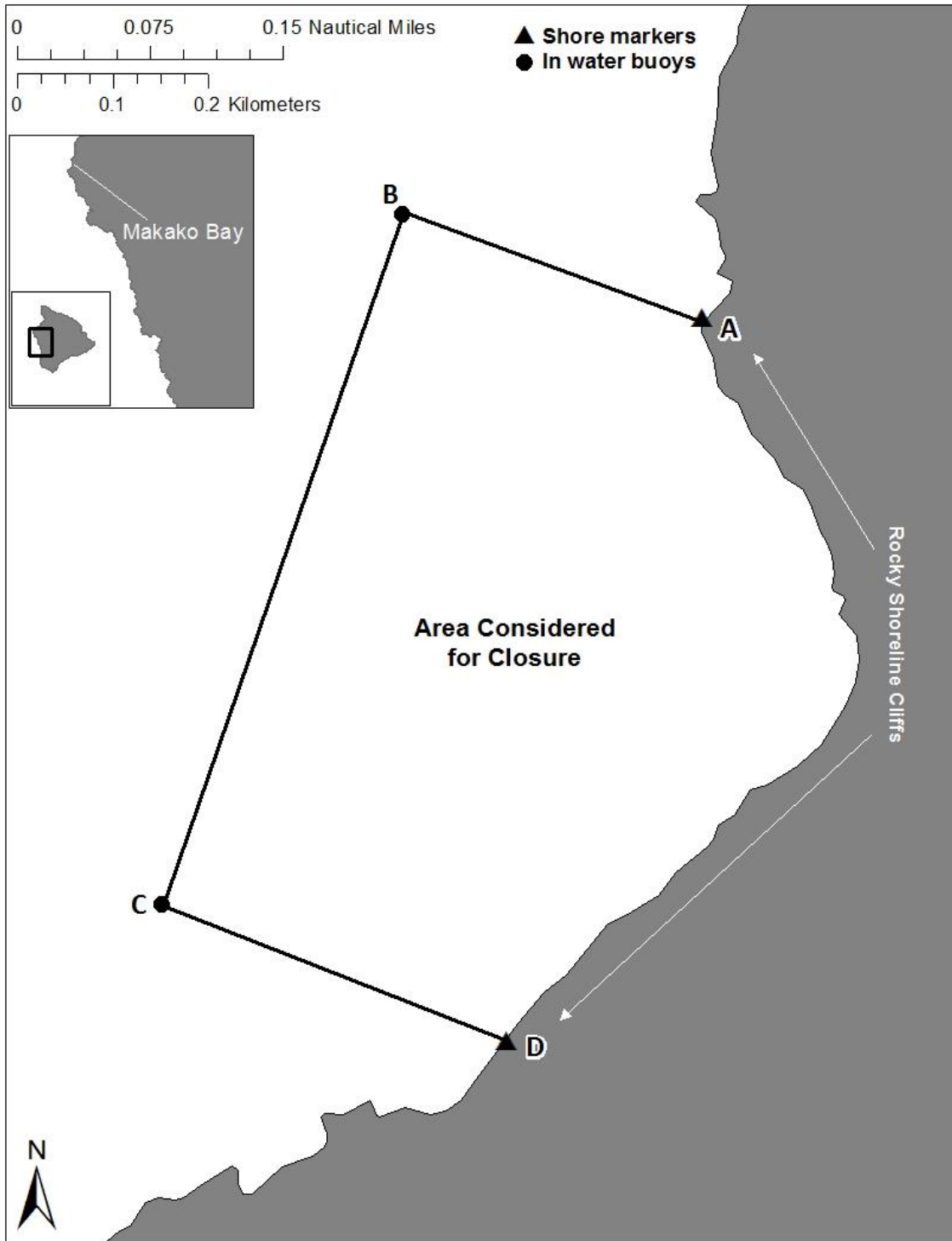


Figure 2. Time-Area Closure Depiction, Kealakekua Bay

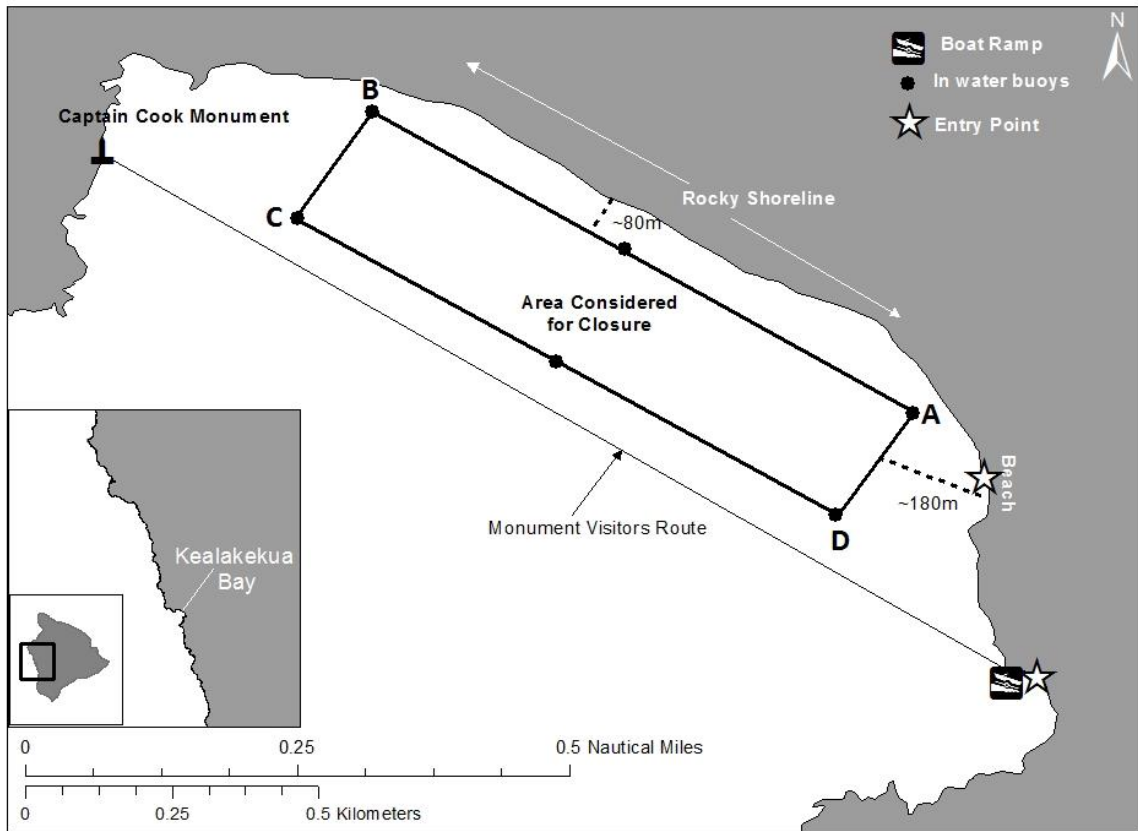


Figure 3. Time-Area Closure Depiction, Honaunau Bay

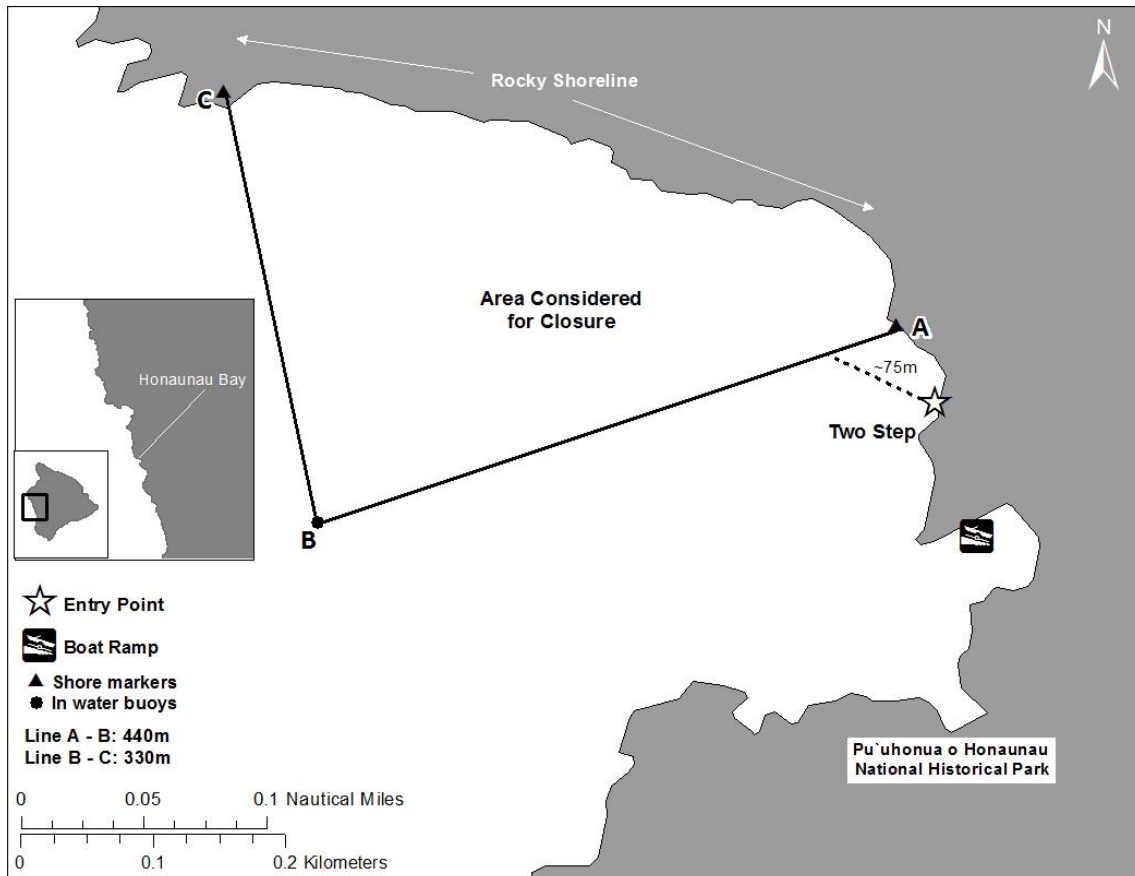


Figure 4. Time-Area Closure Depiction, Kauhako Bay

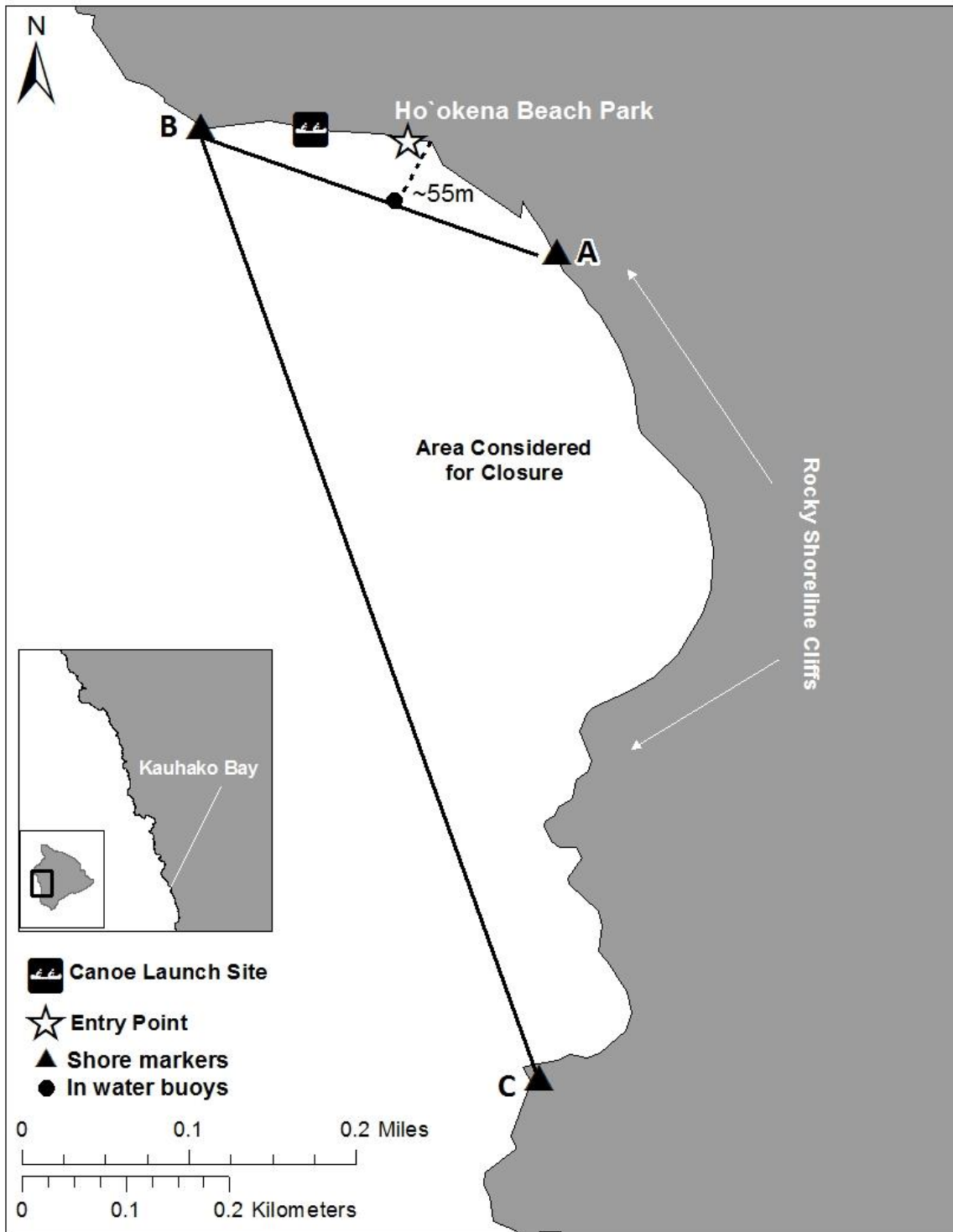
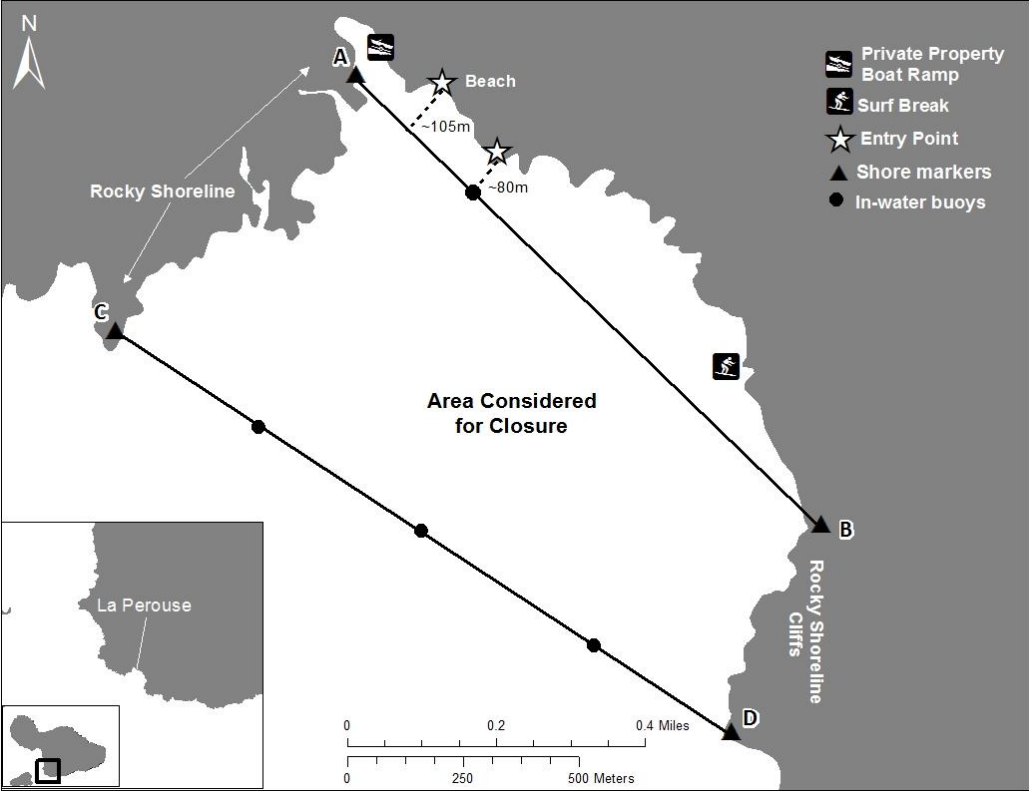


Figure 5. Time-Area Closure Depiction, La Perouse Bay



Mandatory Time-Area Closures and Swim-with and Approach Regulations

Although not currently proposed, if we were to implement mandatory time-area closures in addition to promulgating swim-with and approach regulations (described under Alternative 4 in the DEIS), we would create the time-area closures (depicted in Figures 1-5 above) and promulgate regulations that prohibit use of waters within the five delineated areas from 6 a.m. to 3 p.m.. All *Exceptions* (see section above) described for the proposed swim-with and approach regulations would apply to this alternative, and the following three additional exceptions would also apply to the mandatory time-area closures:

1) Vessels that transit the time-area closure for the sole purpose of ingress and egress to privately-owned shoreline residential property located immediately adjacent to the time-area closure;

2) Vessels participating in organized community-based outrigger canoe races that transit straight through a time-area closure; and

3) Vessels that transit straight through the time-area closure for the purpose of traditional subsistence fishing where harvested resources are intended for personal, family, or community consumption or traditional use and not for commercial market sale.

Entering mandatory time-area closures during closed periods would result in a violation unless an exception to the rule applies.

Mandatory time-area closures would prevent take within these important areas and ensure that spinner dolphins are provided space to achieve deep rest during the day. Additionally, regulations to impose these closures would provide a strong tool for enforcement that is measurable and easy to understand, promoting both enforcement and

compliance. Under this management option, swim-with and approach regulations would reduce disturbance to Hawaiian spinner dolphins from close approach activities throughout nearshore areas, and mandatory time-area closures would provide additional protection by reducing the intensity of viewing pressure in five essential daytime habitats.

Voluntary Time-Area Closures and Swim-with and Approach Regulations

Although not currently proposed, if we were to implement voluntary time-area closures in addition to promulgating swim-with and approach regulations (Alternative 5 in the DEIS), we would demarcate the same five areas for voluntary time-area closures as are described for the mandatory closures (see *Mandatory Time-Area Closures with Swim-with and Approach Regulation* above). Through outreach, we would ask the public to refrain from using waters within the five delineated areas from 6 a.m. to 3 p.m.

Participation in the time-area closures would be voluntary, and no penalties would apply to people or vessels that enter the areas during designated spinner dolphin resting times. The voluntary time-area closures would not apply to any activity that falls within the *Exceptions* (see above) described for the swim-with and approach regulations, or the three additional exceptions described for the mandatory time-area closures option (see three exceptions in the *Mandatory Time-Area Closures and Swim-with and Approach Regulations* section above). Under this alternative, compliance with the time-area closure would be voluntary.

Success with voluntary measures requires strong community engagement and support. Ideally, conservation benefits for Hawaiian spinner dolphins would be the same for mandatory and voluntary closures because both management measures demarcate space for Hawaiian spinner dolphins to engage in resting behaviors. However, we expect

that compliance with voluntary measures would be generally lower than compliance with regulations that are enforced (May 2005), and within the five bays, resource users are diverse and have varying motivations and beliefs with regard to Hawaiian spinner dolphin conservation. The lack of a common understanding about the value of these conservation measures may make it difficult to achieve voluntary compliance for the closures. Further, inconsistent compliance with voluntary measures could lead to increased tension between resource user groups that have conflicting views about Hawaiian spinner dolphin conservation.

Additional Measures Eliminated from Consideration

NMFS did not propose some of the regulatory options suggested in the ANPR and in public comments for several reasons, including the measures' inability to meet the purpose and need for this rulemaking (see the DEIS for more detail), difficulties in enforcing them, changes to infrastructure needed to implement them, lack of effectiveness of the measures, lack of resources available to institute them, and the complexity associated with complying with the measures. For example, a permit certification program for all marine operators that engage in some form of dolphin viewing would be inappropriate for addressing chronic and concentrated viewing practices, would require a large processing infrastructure to implement throughout the Hawaiian Islands, and would not address disturbance caused by vessels that are not conducting dolphin tours (*e.g.*, recreational vessels or kayaks). Another suggestion, implementing full closures of all identified resting habitats throughout the Hawaiian Islands, would create many restrictions on activities that are not dolphin-directed, obstruct some harbors, be costly, and require a larger infrastructure to institute and

enforce. We discuss these and other regulatory options suggested in public comments in the DEIS for this action.

Public Comments

We are soliciting comments on any aspect of these proposed swim-with and 50-yard (45.7 m) approach regulations. As explained above, NMFS does not propose to implement mandatory or voluntary time-area closures as part of this rulemaking. At this time, NMFS believes that the proposed swim-with and approach regulations will provide adequate protection to spinner dolphins against take, including harassment and disturbances. Should NMFS determine that swim-with and approach regulations provide insufficient protection for Hawaiian spinner dolphins using essential daytime habitats, we would consider additional conservation and management measures, including time-area closures to reduce take in high intensity areas, in a separate rulemaking.

We are particularly interested in comments concerning the following: (1) effects of the increasing number of human interactions with Hawaiian spinner dolphins; (2) proposed prohibited and exempted activities; (3) whether 50 yards is the most appropriate distance for swim-with and approach restrictions to reduce take of spinner dolphins; (4) whether 100 yards (91.4 m) or another distance is the most appropriate distance for swim-with and approach restrictions to reduce take of spinner dolphins; (5) research recommendations and priorities for better understanding how human disturbance affects Hawaiian spinner dolphins; (6) information on responsible viewing of marine mammals; (7) additional information on spinner dolphin behaviors; (8) other human activities affected by the proposed rule that were not discussed; (9) the temporal and geographic scope (*i.e.*, 2 nm from shore) of the approach regulation; (10) whether the area where the

approach regulation is proposed in the Lanai- Maui-Kahoolawe triangle is adequate and appropriate; (11) whether time-area closures are necessary to address the intensity of Hawaiian spinner dolphin-directed activities in some areas; (12) the effectiveness of mandatory versus voluntary closures; (13) the bays and times of day identified for time-area closures; (14) information about other areas where Hawaiian spinner dolphins may face pressures from human viewing and interaction; and (5) suggestions on other areas that should be considered for time-area closures.

Please be aware that all comments received are a part of the public record and will generally be posted for public viewing on www.regulations.gov without change. All personal identifying information (*e.g.*, name, address, etc.) submitted voluntarily by the sender will 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).

References Cited

A complete list of all references cited in this proposed rule can be found on our website at: http://www.fpir.noaa.gov/PRD/prd_spinner_EIS.html, or at www.regulations.gov, and is available upon request from the NMFS office in Honolulu, Hawaii (see **ADDRESSES**).

Classification

National Environmental Policy Act (NEPA) and Regulatory Impact Review (RIR)

NMFS has prepared a DEIS and an RIR pursuant to NEPA (42 U.S.C. 4321 *et seq.*) and Executive Order (E.O.) 12866, to support this proposed rule. The DEIS/RIR contains a full analysis of a No Action Alternative, five action alternatives, and the

Preferred Alternative that we are proposing. There are a number of elements that were common to all of the action alternatives analyzed, including the preferred alternative proposed in this notice, and a number of exceptions that would apply to these alternatives. The DEIS/RIR and supporting documents are available for review and comment and can be found on the NMFS Pacific Islands Region website at http://www.fpir.noaa.gov/PRD/prd_spinner_EIS.html.

Regulatory Flexibility Act

Under the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*) as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996, whenever an agency publishes a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a Regulatory Flexibility Analysis describing the effects of the rule on small entities, *i.e.*, small businesses, small organizations, and small government jurisdictions.

Pursuant to the RFA, NMFS prepared the following Initial Regulatory Flexibility Analysis (IRFA). A description of the action, why it is being considered, and the legal basis for this action are contained in the preamble to this proposed rule. This proposed rule does not duplicate, overlap, or conflict with other Federal rules. The analysis contains a description of and, where feasible, an estimate of the number of, small entities to which the proposed rule will apply. The Small Business Administration (SBA) establishes criteria for defining a “small entity” for purposes of the RFA. This IRFA analyzes the proposed alternatives and other alternatives described in the preamble to the rule, and does not address alternatives previously considered and subsequently dismissed

in the DEIS. There are no record-keeping or reporting requirements associated with this proposed rule.

Description and Estimate of the Number of Small Entities to Which the Proposed Rule Applies

There are several types of industries directly affected by this proposed rulemaking: swim-with-wild-dolphins tour operators; dolphin watch tour operators; non-motorized vessel ocean wildlife viewing tour operators; and generalized commercial boat tour operators. This analysis uses size standards prescribed by the SBA. Specifically, for scenic and sightseeing water transportation operators (North American Industry Classification System Code 487210), the SBA size standard for a small business is average annual receipts of \$7.5 million or less. Much of the background information for potentially affected entities is based on a 2007 report that summarized surveys and other information collected in 2006 with regard to participants within these industries that potentially interact with Hawaiian spinner dolphins to varying degrees in the MHI (Impact Assessment 2007). The report provides information that suggests that all businesses operating in the swim-with-wild-dolphins tour and the kayak tour industries operating in 2006 could be considered small entities, and all but one of the generalized commercial boat tour operators were assumed to be small entities (Impact Assessment 2007). This is the most recent information available to NMFS regarding revenue information, but NMFS notes that the composition of these vessel-based tour industries, including the number which can be considered small entities and the total number, may have changed since the report was written.

Swim-with-wild-dolphins tour operators are those that bring clientele into close proximity with spinner dolphins. This includes health and/or spiritual retreat operations as well as dolphin-oriented swim tours. Health and spiritually-linked businesses provide opportunities for persons wishing to interact with spinner dolphins for perceived physical, mental, and/or spiritual well-being enhancement. Spiritually-linked tour operations may charter vessels through other established dolphin-swim companies to transport customers as part of an overall per-person package consisting of lodging, swimming with dolphins, and other activities. For spiritual retreats that offer dolphin swims, the number of businesses is estimated to be as follows: Hawaii (22), Maui (7), Oahu (1), and Kauai (2+).

Dolphin-oriented swim tours operate by transporting passengers by boat or having them swim from shore to areas in which dolphins are known to be present during daytime hours. Customers may also be provided with facemasks, fins, floatation devices, and snorkels to enhance viewing. Recent information compiled by NMFS suggests that the number of swim-with-dolphins tour companies is as follows: Hawaii (22), Maui (2), Oahu (10), and Kauai (1). All are believed to be small entities.

Dolphin-watch tour operators involve taking clients out specifically to view wild dolphins. These companies tend to operate smaller boats than the more generalized commercial boat tours described below, and are more likely to view dolphins at a closer range. Revenue information for this specific business category is not available. NMFS estimates the number of dolphin watch tour businesses to be as follows: Hawaii (3), Maui (21), Oahu (3), and Kauai (11).

More generalized commercial boat tours offer a range of ocean activities, which may include sightseeing, snorkeling, diving, viewing various forms of sea life from a vantage point in and/or above the water, or just generally spending time on the ocean. The majority of the general tour boats derive revenue from whale watching and sightseeing operations, while a number of the dive/snorkel vessels offer snorkeling or diving trips. Based on recent information collected by NMFS, the estimated number of generalized commercial boat tour businesses reportedly involving indirect dolphin interaction is estimated as follows: Hawaii (10), Maui (19), Oahu (36), and Kauai (12). NMFS believes that most, but not all, would be considered small entities.

Non-motorized vessel ocean wildlife viewing tour operators, specifically kayak tour businesses around the MHI, provide a general wildlife viewing experience, with a very small number of operators advertising direct or intentional interactions with dolphins. The number of kayak tour operators who advertise the opportunity to directly interact with wild dolphins is not available. NMFS estimates the numbers of companies that either operate kayak tours or rent out kayaks to be as follows: Hawaii (6), Maui (9), Oahu (6), and Kauai (13).

The estimated numbers of small entities directly affected by the proposed rulemaking, by industry, on the MHI are as follows: 67 swim-with-wild-dolphins tour operators (including health and/or spiritual retreats enabling opportunities to swim with wild dolphins), 77 generalized commercial boat tour operators (one or more of which are likely to be considered large entities), and 34 kayak tour and rental companies.

Economic Impacts to Small Entities Resulting from the Proposed Action (Swim-with and 50-Yard Approach Regulations)

The preferred alternative would restrict all activities associated with close approach to Hawaiian spinner dolphins, including swimming with dolphins and close approach by vessel. These prohibitions would be applicable within 2 nm (3.7 km) of each of the MHI and in designated waters between the islands of Lanai, Maui, and Kahoolawe.

The proposed action to ban swimming and approaching within 50 yards (45.7 m) of Hawaiian spinner dolphins, has the potential to eliminate all commercial activities that result in take of spinner dolphins (*e.g.*, swim-with-wild-dolphins) at a close distance. Therefore, implementing this proposed action would require operators that currently offer the opportunity to swim with spinner dolphins to cease this specific activity, although they may choose to continue to provide other services among their menu of options. For example, a spiritual retreat that offers a menu of other activities along with swim-with-wild-dolphins activities may continue to offer the other activities. In addition, swim-with-wild-dolphins tour operators may choose to transition to operate as a dolphin-watching or generalized tour vessel operation. For these businesses, eliminating opportunities to swim with wild spinner dolphins within 50 yards is likely to result in a reduction in revenue in the short term and potentially in the long term. The decrease in revenue could come from the reduction in the number of customers, specifically those who seek the experience of swimming with spinner dolphins, and/or reduced trip or package prices with a reduced menu of options available for each trip. The loss in overall revenue to individual businesses and the industry as a whole that rely on close approach with spinner dolphins by any means for revenue is uncertain. The same is true with regard to the number of businesses that would be still be able to remain in operation if the proposed regulation is implemented.

Commercial wildlife boat tour operators, including generalized commercial boat tour operators, dolphin watch tour operators, and non-motorized vessel tour operators, would no longer be able to take customers to view Hawaiian spinner dolphins from closer than 50 yards. Restricting operators from approaching within 50 yards of spinner dolphins may reduce demand for vessel-based tours among customers who specifically hope to view dolphins from a vessel at a closer range, although there will be no options other than not taking a tour at all, as no boats in Hawaii would be able to offer tours closer than 50 yards. Some tour operators may be able to offer alternative recreational opportunities or amenities as part of a tour to help offset any loss in demand for tours. For generalized tour boat operators with a clientele base that does not have a specific goal of viewing spinner dolphins, the direct economic impact of the proposed action is likely to be minimal.

NMFS concludes that there would be disproportionate impacts to the swim-with-wild-dolphin tour operators from implementation of this preferred alternative relative to all other general wildlife viewing tour operators. Similarly, because of the focus of activities, it is also likely that the dolphin watch tour industry will face greater impacts than the generalized wildlife tour companies. As a result, dolphin-watch tour entities may face disproportionate impacts relative to the generalized commercial boat tour companies, which are likely to incur few direct economic impacts from the proposed action. We note that dolphin watch tour entities are all believed to be small entities, and most of the generalized commercial boat tour companies are as well, although a few might be considered large entities with revenues exceeding \$7.5 million.

NMFS considered other alternatives in addition to the swim-with and 50-yard approach regulations in this proposed rule (*i.e.*, Alternative 3a). These include 1) no action; 2) swim-with regulations; 3b) swim-with and 100-yard (91.4 m) approach regulations; 4) mandatory time-area closures and swim-with and approach regulations; and 5) voluntary time-area closures and swim-with and approach regulations. As is the case for this proposed action, Alternatives 2, 3b, 4, and 5 would all be applicable within 2 nm of each MHI and in designated waters between the islands of Lanai, Maui, and Kahoolawe. Among the non-selected action alternatives, only Alternative 2 (no swimming with Hawaiian spinner dolphins) would result in a lower direct economic impact to small entities. While the restriction on swimming with dolphins would address one threat to Hawaiian spinner dolphin population, this alternative would not address the remaining documented threats to dolphin populations caused by close approach by vessels and other craft. Section 4.2.2 of the DEIS provides more detail. The remaining non-selected action alternatives would most likely result in a higher economic impact to individual small entities and the dolphin-viewing industry as a whole, relative to the preferred alternative of this proposed action. NMFS has determined that the proposed action meets the goals and objective of reducing human-caused disturbances that Hawaiian spinner dolphins are facing in their natural habitat, and helps protect against declines in the fitness of the population over time.

No additional reporting, record keeping, and other compliance requirements are anticipated for small businesses. NMFS has identified no Federal rules that may duplicate, overlap, or conflict with the action alternatives.

Executive Order 12866

This proposed rule was determined to be not significant for purposes of E.O. 12866.

Paperwork Reduction Act

The purpose of the Paperwork Reduction Act is to minimize the paperwork burden for individuals, small businesses, educational and nonprofit institutions, and other persons resulting from the collection of information by or for the Federal government. The preferred alternative includes no new collection of information, so further analysis is not required.

National Historic Preservation Act (NHPA)

The goal of the National Historical Preservation Act (NHPA; 16 U.S.C. 470 *et seq.*) is to have Federal agencies act as responsible stewards of our nation's resources when their actions affect historic properties. Section 106 of the NHPA requires Federal agencies to take into account the effects of undertakings they carry out, assist, fund, or permit on historic properties. Federal agencies meet this requirement by completing the section 106 process set forth in the implementing regulations, "Protection of Historic Properties," 36 CFR part 800. The goal of the section 106 process is to identify and consider historic properties (or sites eligible for listing) that might be affected by an undertaking, and to attempt to resolve any adverse effects through consultation. The process provides for participation by State Historic Preservation Officers, Tribal Historic Preservation Officers, tribal, state and local governments, Indian tribes and Native Hawaiian organizations, applicants for Federal assistance, permits, or licenses, representatives from interested organizations, private citizens, and other members of the public. Federal agencies and consulting parties strive to reach agreement on measures to

avoid, minimize, and mitigate adverse effects on historic properties and to find a balance between project goals and preservation objectives.

Under the NHPA, an “effect” means an alteration to the characteristics of a historic property qualifying it for inclusion or eligibility for the National Register. The proposed swim-with and approach regulations for Hawaiian spinner dolphins, if finalized, would not have the potential to cause effects on or alterations to the characteristics of historic properties. Therefore, section 106 consultation is not required.

Coastal Zone Management Act

Section 307(c)(1) of the Federal Coastal Zone Management Act of 1972 requires that all Federal activities that affect any land or water use or natural resource of the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. We have determined that these proposed swim-with and approach regulations are consistent to the maximum extent practicable with the enforceable policies of the approved Coastal Zone Management Program of Hawaii. This determination, a copy of this document, and the DEIS will be submitted for review by the Hawaii Coastal Zone Management Program.

Executive Order 13132, Federalism

E.O. 13132 requires agencies to take into account any federalism impacts of regulations under development. It includes specific consultation directives for situations in which a regulation may preempt state law or impose substantial direct compliance costs on state and local governments (unless required by statute). NMFS has determined that the proposed swim-with and approach regulations do not have federalism implications.

Information Quality Act (IQA)

Pursuant to Section 515 of Public Law 106-554 (the Information Quality Act), this information product has undergone a pre-dissemination review by NMFS. The signed Pre-dissemination Review and Documentation Form is on file with the NMFS Pacific Islands Regional Office (see **FOR FURTHER INFORMATION CONTACT**).

List of Subjects in 50 CFR Part 216

Administrative practice and procedure, Marine mammals.

Dated: August 19, 2016

Samuel D. Rauch III,
Deputy Assistant Administrator for Regulatory Programs,
National Marine Fisheries Service.

For the reasons set out in the preamble, 50 CFR part 216 is proposed to be amended as follows:

**PART 216- REGULATIONS GOVERNING THE TAKING AND IMPORTING OF
MARINE MAMMALS**

1. The authority citation for part 216 continues to read as follows:

Authority: 16 U.S.C. 1361 *et seq.*

2. Add § 216.20 to subpart B to read as follows:

§ 216.20 Special restrictions for Hawaiian spinner dolphins.

(a) *Applicability.* The following special restrictions designed to protect Hawaiian Spinner Dolphins apply:

(1) In all waters within 2 nautical miles of the main Hawaiian Islands, and

(2) In all waters located between the islands of Lanai, Maui, and Kahoolawe enclosed by three line segments that connect points on the 2-nautical mile boundary between the islands as follows: the straight line between 20°32'51"N/156°43'50"W and 20°42'4"N/156°55'34"W between Kahoolawe and Lanai, the straight line between 20°51'1"N/156°54'0"W and 20°59'48"N/156°42'28"W between Lanai and Maui, and the straight line between 20°33'55"N/156°26'43"W and 20°32'15"N/156°29'51"W between Maui and Kahoolawe (all coordinates referenced to The World Geodetic System of 1984 (WGS 84)).

(b) *Prohibitions.* Except as noted in paragraph (c) of this section, it is unlawful for any person subject to the jurisdiction of the United States to commit, to attempt to commit, to solicit another to commit, or to cause to be committed any of the following:

(1) Approach or remain within 50 yards of a Hawaiian spinner dolphin by any means;

(2) Swim within 50 yards of a Hawaiian spinner dolphin;

(3) Cause a vessel, person, or other object to approach or remain within 50 yards of a Hawaiian spinner dolphin; or

(4) Intercept or place a vessel, person, or other object on the path of a Hawaiian spinner dolphin so that the dolphin approaches within 50 yards of the vessel, person, or object.

(c) *Exceptions.* The prohibitions of paragraph (b) of this section do not apply to:

(1) Any person who inadvertently comes within 50 yards of a Hawaiian spinner dolphin or is approached by a spinner dolphin, provided the person makes no effort to engage or pursue the animal and takes immediate steps to move away from the animal;

(2) Any vessel that is underway and is approached by a Hawaiian spinner dolphin, provided the vessel continues normal navigation and makes no effort to engage or pursue the animal;

(3) Any vessel transiting to or from a port, harbor, or in a restricted channel when a 50-yard distance will not allow the vessel to maintain safe navigation;

(4) Vessel operations necessary to avoid an imminent and serious threat to a person or vessel;

(5) Activities authorized through a permit or authorization issued by the National Marine Fisheries Service to take Hawaiian spinner dolphins; and

(6) Federal, State, or local government vessels, aircraft, personnel, and assets when necessary in the course of performing official duties.

(d) *Affirmative defense.* In connection with any action alleging a violation of this section, any person claiming the benefit of any exemption, exception, or permit listed in paragraph (c) of this section has the burden of proving that the exemption or exception is applicable, or that the permit was granted and was valid and in force at the time of the alleged violation.

(e) *Maps of areas for Hawaiian spinner dolphin special restrictions.* The following are overview maps and a table with corresponding coordinate data for the areas for Hawaiian spinner dolphin special restrictions.

Figure 1. Overview of Area of Proposed Spinner Dolphin Protections

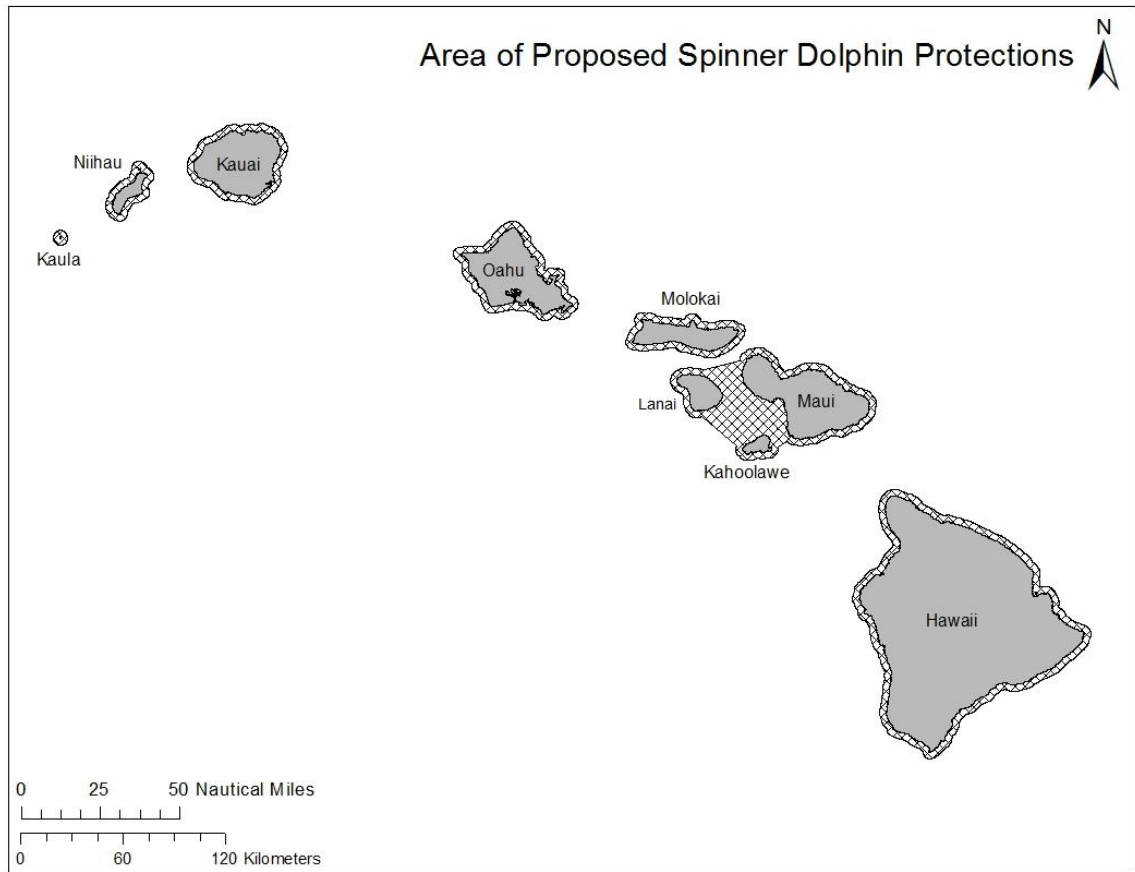


Figure 2. Overview of Designated Waters Between Lanai, Maui, and Kahoolawe for Proposed Spinner Dolphin Protections. See Table 1 for coordinates.

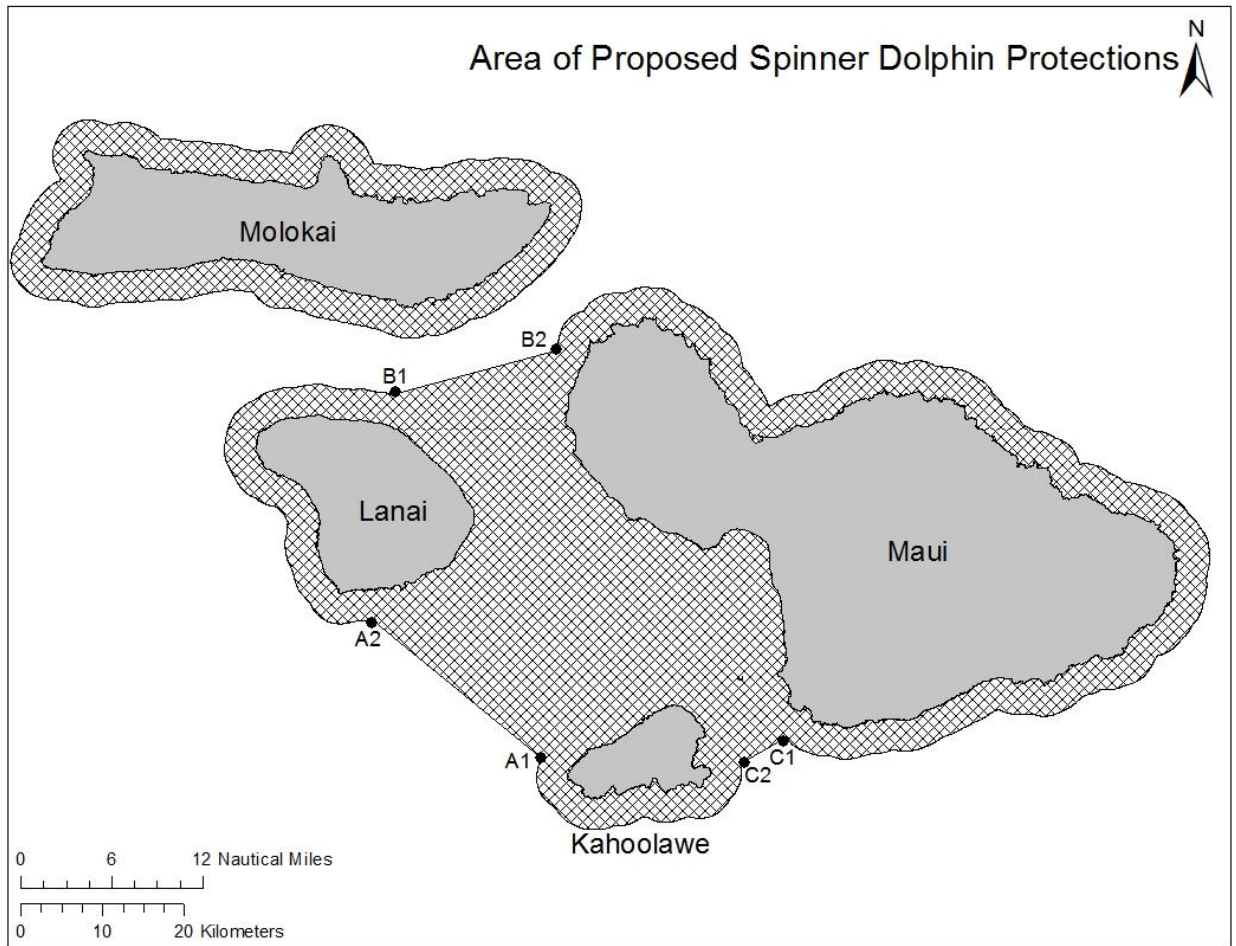


Table 1. Coordinates for the Extent of the Designated Waters between Lanai, Maui, and Kahoolawe (see Figure 2). (All coordinates referenced to The World Geodetic

System of 1984 (WGS 84).)

Line Segment Between Islands	Figure 2 Label	Latitude	Longitude
Kahoolawe and Lanai	A1	20° 32' 51" N	156° 43' 50" W
	A2	20° 42' 4" N	156° 55' 34" W
Lanai and Maui	B1	20° 51' 1" N	156° 54' 0" W
	B2	20° 59' 48" N	156° 42' 28" W
Maui and Kahoolawe	C1	20° 33' 55" N	156° 26' 43" W
	C2	20° 32' 15" N	156° 29' 51" W

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