FMCSA has decided to grant FCSG's exemption application. FMCSA encourages any party having information that motor carriers utilizing this exemption are not achieving the requisite level of safety immediately to notify the Agency. If safety is being compromised, or if the continuation of the exemption is not consistent with 49 U.S.C. 31315(b) and 31136(e), FMCSA will take immediate steps to revoke the exemption.

Terms and Conditions for the Exemption

Based on its evaluation of the application for an exemption, FMCSA has decided to grant FCSG's exemption application. The Agency believes that the level of safety that will be achieved using the pre-2004 cargo securement regulations to secure of rows of metal coils with eyes crosswise during the 2-year exemption period will likely be equivalent to, or greater than, the level of safety achieved without the exemption.

The Agency hereby grants the exemption for a two-year period, beginning April 12, 2011, and ending April 12, 2013.

During the temporary exemption period, motor carriers must meet the following requirements while still meeting the aggregate working load limit requirements of 49 CFR 393.106(d).

Coils with eyes crosswise: If coils are loaded to contact each other in the longitudinal direction, and relative motion between coils, and between coils and the vehicle, is prevented by tiedown assemblies and timbers:

(1) Only the foremost and rearmost coils must be secured with timbers having a nominal cross section of 4 x 4 inches or more and a length which is at least 75 percent of the width of the coil or row of coils, tightly placed against both the front and rear sides of the row of coils and restrained to prevent movement of the coils in the forward and rearward directions; and

(2) The first and last coils in a row of coils must be secured with a tiedown assembly restricting against forward and rearward motion, respectively. Each additional coil in the row of coils must be secured to the trailer using a tiedown assembly.

Interested parties possessing information that would demonstrate that motor carriers using the cargo securement exemption for rows of metal coils with eyes crosswise are not achieving the requisite statutory level of safety should provide that information to the Agency, which will place it in Docket No. FMCSA–2010–0177. We will evaluate any such information, and, if safety is being compromised or if the continuation of the exemption is not consistent with 49 U.S.C. 31315(b)(4) and 31136(e), will take immediate steps to revoke this exemption.

Preemption

During the period the exemption is in effect, no State shall enforce any law or regulation that conflicts with or is inconsistent with this exemption to allow the securement of metal coils loaded with eyes crosswise, grouped in rows, in which the coils are loaded to contact each other in the longitudinal direction with respect to a person operating under the exemption.

Issued on: April 5, 2011.

Anne S. Ferro,

Administrator.

[FR Doc. 2011–8563 Filed 4–13–11; 8:45 am]

BILLING CODE 4910–EX–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 224

[Docket No. 070821475–91169–02]

RIN 0648–AV15

Protective Regulations for Killer Whales in the Northwest Region Under the Endangered Species Act and Marine Mammal Protection Act

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

ACTION: Final rule.

SUMMARY: We, the National Marine Fisheries Service (NMFS), establish regulations under the Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA) to prohibit vessels from approaching killer whales within 200 yards (182.9 m) and from parking in the path of whales when in inland waters of Washington State. Certain vessels are exempt from the prohibitions. The purpose of this final rule is to protect killer whales from interference and noise associated with vessels. We identified disturbance and sound associated with vessels as a potential contributing factor in the recent decline of this population during the development of the final rule announcing the endangered listing of Southern Resident killer whales and the associated Recovery Plan for Southern Resident killer whales (Recovery Plan). The Recovery Plan calls for evaluating current guidelines and assessing the need for regulations and/or protected areas. To implement the actions in the Recovery Plan, we developed this final rule after considering comments submitted in response to an Advance Notice of Proposed Rulemaking (ANPR) and proposed rule, and preparing an environmental assessment (EA). This final rule does not include a seasonal no-go zone for vessels along the west side of San Juan Island that was in the proposed rule. We will continue to collect information on a no-go zone for consideration in a future rulemaking.

DATES: This final rule is effective May 16, 2011.

ADDRESSES: Copies of this rule and the Environmental Assessment, Regulatory Impact Review and Finding of No Significant Impact related to this rule can be obtained from the Web site *http://www.nwr.noaa.gov.* Written requests for copies of these documents should be addressed to Assistant Regional Administrator, Protected Resources Division, Northwest Regional Office, National Marine Fisheries Service, 7600 Sand Point Way NE., Seattle, WA 98115.

FOR FURTHER INFORMATION CONTACT: Lynne Barre, Northwest Regional Office, 206–526–4745; or Trevor Spradlin, Office of Protected Resources, 301–713–2322.

SUPPLEMENTARY INFORMATION:

Background

Viewing wild marine mammals is a popular recreational activity for both tourists and local residents. In Washington, killer whales (*Orcinus orca*) are the principal target species for the commercial whale watch industry (Hoyt 2001, O'Connor *et al.* 2009). Since monitoring of this population segment has begun, the number of whales peaked at 97 animals in the 1990s, and then declined to 79 in 2001. At the end of 2010 there were 86 whales. NMFS listed the Southern Resident killer whale distinct population segment (DPS) as endangered under the ESA on November 18, 2005 (70 FR 69903). In the final rule announcing the listing, NMFS identified vessel effects, including direct interference and sound, as a potential contributing factor in the recent decline of this population. Based on monitoring data regarding the large number of vessels in close proximity to the whales (*i.e.,* within ½ mile), research results regarding behavioral and acoustic impacts caused by vessels, and the risk of vessel strikes, NMFS is concerned that some whale watching activities may harm individual killer whales, potentially reducing their fitness and increasing the population's risk of extinction.

Killer whales in the eastern North Pacific have been classified into three forms, or ecotypes, termed residents, transients, and offshore whales. Resident killer whales live in family groups, eat salmon, and include the Southern Resident and Northern Resident communities. Transient killer whales have a different social structure, are found in smaller groups and eat marine mammals. Offshore killer whales are found in large groups and their diet is largely unknown. The Southern Resident killer whale population contains three pods—J, K, and L pods—and frequents inland waters of the Pacific Northwest. During the spring, summer, and fall, the Southern Residents' range includes the inland waterways of Puget Sound, Strait of Juan de Fuca, and Southern Strait of Georgia. Little is known about the winter movements and range of Southern Residents. Their occurrence in coastal waters extends from the coast of central California to the Queen Charlotte Islands in British Columbia. The home ranges of transients, offshore whales, and Northern Residents also include inland waters of Washington and overlap with the Southern Residents.

There is a growing body of evidence documenting effects from vessels on small cetaceans and other marine mammals. The variety of whale responses include stopping or reducing feeding, resting, and social interaction (Baker *et al.* 1983; Bauer and Herman 1986; Hall 1982; Krieger and Wing 1984; Lusseau 2003a; Constantine *et al.* 2004; Arcangeli and Crosti 2009; Christiansen *et al.* 2010); abandoning feeding, resting, and nursing areas (Jurasz and Jurasz 1979; Dean *et al.* 1985; Glockner-Ferrari and Ferrari 1985, 1990; Lusseau 2005; Norris *et al.* 1985; Salden 1988; Forest 2001; Morton and Symonds 2002; Courbis 2004; Bejder *et al.* 2006); altering travel patterns to avoid vessels (Constantine 2001; Nowacek *et al.* 2001; Lusseau 2003b, 2006; Timmel *et al.* 2008); relocating to other areas (Allen and Read 2000); changes in acoustic behavior (Van Parijs and Corkeron 2001); and masking communication signals (Jensen *et al.* 2009.) One study found that marine mammals exposed to human-generated noise released increased amounts of stress hormones that have the potential to harm their nervous and immune systems (Romano *et al.* 2004). In some studies, however, researchers have found that marine mammals display no reaction to vessels (Watkins 1986; Nowacek *et al.* 2003) or concluded that there is no correlation between vessel effects and survival or reproduction (Weinrich and Corbelli 2009).

Several scientific studies in the Pacific Northwest have documented disturbance of resident killer whales by vessels engaged in whale watching. Several researchers have reported short-term behavioral changes in Northern and Southern Resident killer whales in the presence of vessels (Kruse 1991; Kriete 2002; Williams *et al.* 2002a, 2002b, 2006, 2009; Foote *et al.* 2004; Bain *et al.* 2006, Holt *et al.* 2009, Lusseau *et al.* 2009, Wieland *et al.* 2010), although many studies do not address whether it is the presence and activity of the vessel, the sounds the vessel makes, or a combination of these factors that disturbs the animals. Individual animals can react in a variety of ways to nearby vessels, including swimming faster, adopting less predictable travel paths, making shorter or longer dives, moving into open water, and altering normal patterns of behavior (Kruse 1991; Williams *et al.* 2002a, 2009, 2010; Bain *et al.* 2006; Noren *et al.* 2007, 2009; Lusseau *et al.* 2009).

Some studies have looked at effects on behavior at specific vessel distances. In those studies, vessels were underway during active approaches or may have been parked in the path or stopped close to the whales as part of a leapfrogging sequence (*i.e.,* a vessel repeatedly speeds ahead of the whales, makes a 90 degree turn to intercept the path of the whales and waits for the whales to approach). Many of these studies included both motorized and non-motorized (*e.g.,* sail boats and kayaks) in assessing the impacts of vessels on the behavior of the whales.

Approaches within 100 yards (91.4 m): Research results indicate that killer whale behavior changes from vessel approaches within 100 yards (91.4 m) include changes in swimming patterns, changes in respiratory patterns, reduced time spent foraging, and increased surface active behaviors, such as tail slaps (Bain *et al.* 2006, Noren *et al.* 2007, 2009; Williams *et al.* 2002a, Lusseau *et al.* 2009). Noren *et al.* (2007, 2009) reported the highest frequency of surface active behaviors when the nearest vessel was within 75 to 99 meters in 2005. Lusseau *et al.* (2009) reported a significant decrease in overall time spent foraging and significant increase in overall time spent traveling when vessels were present within 100 yards (91.4 m). Williams *et al.* (2002a) found that experimental vessel approaches at 100 meters (about 100 yards (91.4 m)) resulted in whales covering 13 percent more distance along a less direct route than before the vessel approached. Foraging female whales swam 25 percent faster and changed direction more often when approached by the experimental boat as compared to the observations before the boat approached.

Approaches within 200 to 400 yards (182.9 to 365.8 m): Research results also indicate that killer whale behavior can be affected by approaches at distances greater than 100 yards (91.4 m) (Lusseau *et al.* 2009; Noren *et al.* 2007, 2009; Williams *et al.* 2009). One study reported similar types of effects (*i.e.,* increased direction changes, increased respiratory intervals and transitions between activity states) from vessels within 400 yards (365.8 m) of whales as compared to vessels within 100 yards (91.4 m), although to a lesser degree. This study did not report if the effects of vessels within 400 yards (365.8 m) were from vessels close to the 100-yard (91.4 m) distance (*i.e.,* at 101 yards), at a 200-yard (182.9 m) distance or further away (*i.e.,* 399 yards) (Bain *et al.* 2006). Lusseau *et al.* (2009) also reported a reduction in time spent foraging when vessels were within 400 yards (365.8 m). Noren *et al.* (2007, 2009) reported the highest frequency of surface active behaviors when the closest vessels were within 100 yards (91.4 m) in 2005 and the highest frequency of surface active behaviors when the closest vessel was within 125 to 149 yards (114.3 to 136.2 m) in 2006, as compared to situations when the closest vessel was further away.

The long term effects of these behavioral responses are less well known (Williams *et al.* 2006), although researchers have estimated the physiological consequences of behavioral responses by calculating the energetic costs of the behaviors observed when vessels are present. Williams *et al.* (2006) estimated that killer whales expended slightly more energy in the presence of all types of vessels. The behavior exhibited in the presence of vessels would require approximately 3 percent more energy than behavior in the absence of vessels. The increased energy expenditure may be less important than the reduced time spent feeding and the resulting likely reduction in prey consumption. From their observations, Williams *et al.* (2006) calculated that lost feeding opportunities could result in an 18 percent decrease in energy intake in the presence of all types of vessels compared to when vessels are absent.

In addition, researchers have also looked at the number of boats and how smaller or larger numbers of boats present affects the behavioral responses of killer whales (Williams and Ashe 2007; Giles and Cendak 2010). Giles and

Cendak (2010) analyzed killer whale behavior in high and low boat density conditions. Based on the distribution of number of vessels within 1,000 yards (914.4 m) of the focal group, low boat density was defined as five or fewer vessels within 1,000 yards (914.4 m) and high density was greater than five vessels within 1,000 yards (914.4 m). Whales spent significantly less time foraging in high boat density conditions (approximately 17 percent of time) compared to low boat density conditions (approximately 25 percent of time). Whales were also significantly more likely to remain foraging in low boat density conditions, indicating that the whales discontinued foraging when boat density was high. The effect of boat density was significant only when the whales were foraging, which may be the behavior state most susceptible to disturbance by high numbers of vessels.

Increased energetic costs from behavioral disturbance and reduced foraging can decrease the fitness of individuals (Lusseau and Bejder 2007). Increased energy expenditure or disruption of foraging could result in poor nutrition. Poor nutrition could lead to reproductive or immune effects or, if severe enough, to mortality (Dierauf and Gulland 2001; Trites and Donnelly 2003). Interference with foraging and nutritional stress can affect growth and development, which in turn can affect the age at which animals reach reproductive maturity, fecundity, and annual or lifetime reproductive success (Trites and Donnelly 2003). Vessels in the path of the whales can interfere with important social behaviors such as prey sharing (Ford and Ellis 2006) or with behaviors that generally occur in a forward path as the whales are moving, such as nursing (Kriete 2007). Interference with behaviors including prey sharing and communication could also change social cohesion and foraging efficiency and therefore the growth, reproduction, and fitness of individuals.

Killer whales generally have a range of hearing from 1 to 100 kHz (Szymanski *et al.* 1999) and this wide frequency range of hearing makes killer whales susceptible to effects from a wide range of sounds, including sound produced by vessels. Sound modeling has been used to estimate distances at which vessel sound would cause behavioral responses for killer whales (Erbe 2002). Erbe (2002) predicted that the sounds of fast boats (greater than 50 km/h [31 miles/hour]) would be audible to killer whales at distances of up to 16 kilometers (10 miles) and cause behavioral responses within 200 meters (0.12 miles or 219 yards). For boats moving at slow speeds (10 km/h [6.2 miles/hour]), sound would be audible within 1 kilometer (0.62 miles or 1,094 yards) and cause behavioral changes within 50 meters (55 yards).

Human-generated sounds may mask or compete with and effectively drown out clicks, calls, and whistles made by killer whales, including echolocation (signals sent by the whales that bounce off objects in the water and provide information to the whales) used to locate prey and other signals the whales rely upon for communication and navigation. High frequency sound generated from recreational and commercial vessels moving at high speed in the vicinity of whales may mask echolocation and other signals the species rely on for foraging (Erbe 2002; Holt 2009), communication (Foote *et al.* 2004, Weiland *et al.* 2010), and navigation. Sounds directly in front of the whale (*i.e.,* in their path) would have the greatest impact on the whales ability to hear important sounds. Masking of echolocation would reduce foraging efficiency (Holt 2009), which may be particularly problematic if prey resources are limited. Holt (2009) reviewed the current knowledge and data gaps regarding sound exposure in Southern Resident killer whales. The review provides an overview of acoustic concepts, killer whale sound production, ambient sound levels in Haro Strait (Veirs and Veirs 2006), sound propagation in killer whale habitats, effects of sound exposure, and assessment of likely acoustic impacts on the Southern Residents. Holt used data on ambient sound and characteristics and sound levels of several different types of vessels (Hildebrand *et al.* 2006) to analyze impacts on the effective range of killer whale echolocation in detecting a salmon. The vessel sounds were recorded at idle, when powering up, and at cruise speeds (17 to 31 knots). The review concluded that vessel noise was predicted to significantly reduce the range at which echolocating killer whales could detect salmon in the water column. Holt (2009) reported that the detection range for a killer whale echolocating on a Chinook salmon could be reduced 88 to 100 percent by the presence of a moving vessel within 100 yards (91.4 m) of the whale. The detection range was reduced 38 to 90 percent when different vessels were operating at different speeds 200 and 400 yards (182.9 and 365.8 m) from the whales. Reduction in detection ranges decreased with greater distance from the whales and this was the case for both fast (cruise) and slower (powering up) vessels.

Additionally, prey sharing has recently been identified as an important feature of Northern Resident killer whale foraging (Ford and Ellis 2005). Masking sound from vessels could affect the ability of whales to coordinate their feeding activities, including searching for prey and prey sharing. A study by Foote *et al.* (2004) on Southern Resident killer whales in the San Juan Islands identified that all three pods increased the duration of their primary communication call when vessels were present. This appears to be a recent development, which Foote *et al.* (2004) attributed to increased vessel traffic and subsequent engine noise reaching a threshold above which whales compensated with longer duration of calls to overcome the vessel noise (Foote *et al.* 2004). Wieland *et al.* (2010) also reported increased call durations, but for a larger number of call types (16 out of 21 calls) in a similar comparison. Holt *et al.* (2009) found that killer whales increase their call amplitude in response to vessel noise.

Killer whales may also be injured or killed by collisions with passing ships and powerboats, primarily from being struck by the turning propeller blades (Visser 1999, Ford *et al.* 2000, Visser and Fertl 2000, Baird 2001, Carretta *et al.* 2001, 2004; Van Waerebeek *et al.* 2007). Some animals with severe injuries eventually make full recoveries, such as a female described by Ford *et al.* (2000) that showed healed wounds extending almost to her backbone. A 2005 collision of a Southern Resident with a commercial whale watch vessel in Haro Strait resulted in a minor injury to the whale, which subsequently healed. From the 1960s to 1990s (Baird 2002) only one resident whale mortality from a vessel collision was reported for Washington and British Columbia. However, additional mortalities have been reported since then. In March of 2006, the lone Southern Resident killer whale, L98, residing in Nootka Sound for several years, was killed by a tug boat. While L98 exhibited unusual behavior and often interacted with vessels, his death demonstrates the risk of vessel accidents. Several mortalities of resident killer whales in British Columbia in recent years have been attributed to vessel collisions (Gaydos and Raverty 2007).

Vessel effects were identified as a factor in the ESA listing of the Southern Residents (70 FR 69903; November 18, 2005) and are addressed in the Recovery Plan (73 FR 4176; January 24, 2008), which is available on our Web page at *http://www.nwr.noaa.gov/.*

Current MMPA and ESA Prohibitions and NMFS Guidelines and Regulations

The Marine Mammal Protection Act (MMPA), 16 U.S.C. 1361 *et seq.,* contains a general prohibition on take of marine mammals. Section 3(13) of the MMPA defines the term take as "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal." Except with respect to military readiness activities and certain scientific research activities, the MMPA defines the term harassment as "any act of pursuit, torment, or annoyance which—(i) Has the potential to injure a marine mammal or marine mammal stock in the wild, [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment]."

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).

The MMPA provides limited exceptions to the prohibition on take for activities such as scientific research, public display, and incidental take in commercial fisheries. Such activities require a permit or authorization, which may be issued only after agency review.

The ESA, 16 U.S.C. 1531–1543, prohibits the take of endangered species. Section 3(18) of the ESA defines take to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Both the ESA and MMPA require wildlife viewing to be conducted in a manner that does not cause take.

NMFS has developed specific regulations under the MMPA and ESA for certain marine mammal species in particular locations. Each rule was based on the biology of the marine mammals and available information on the nature of the threats. NMFS has regulated close vessel approaches to large whales in Hawaii, Alaska, and the North Atlantic and created buffer zones to protect Steller sea lions and has experience enforcing these regulations. There are exceptions to each of these rules.

In 1995, NMFS published a final rule to establish a 100 yard (91.4 m) approach limit for endangered humpback whales in Hawaii (60 FR 3775, January 19, 1995). While available scientific information did not provide precise information on a single distance at which vessels disturbed the whales, NMFS established the 100 yard approach regulation based on its experience enforcing the prohibition of harassment (*i.e.,* activities that were initiated or occurred within 100 yards (91.4 m) of a whale had a high probability of causing harassment). In 2001, NMFS published a final rule (66 FR 29502, May 31, 2001) to establish a 100 yard (91.4 m) approach limit for endangered humpback whales in Alaska that included a speed limit when a vessel is near a whale. The approach regulations included approach, by any means, including interception of the path of the whales. NMFS adopted the 100 yard distance to maintain consistency with the published guidelines and with the regulations that existed for viewing humpback whales in Hawaii. NMFS considered some form of speed restrictions to reduce the likelihood of mortality or injury to a whale in the event of a vessel/whale collision. For practical and enforcement reasons, NMFS included a slow safe speed standard, rather than a strict nautical mile-per-hour standard, in the rule.

In 1997, NMFS published an interim final rule to prohibit approaching endangered North Atlantic right whales closer than 500 yards (457.2 m) (62 FR 6729, February 13, 1997). The purpose of the 500-yard (457.2 m) approach regulation was to reduce the current level of disturbance and the potential for vessel interaction and to reduce the risk of collisions. In addition to collision injuries or mortalities, NMFS listed other vessel impacts, including displacing cow/calf pairs from nearshore waters, expending increased energy when feeding is disrupted or migratory paths rerouted, and turbulence associated with vessel traffic, which may indirectly affect right whales by breaking up the dense surface zooplankton patches in certain whale feeding areas. To further reduce impacts to North Atlantic right whales from collisions with ships, NMFS recently published a final rule to implement speed restrictions of no more than 10 knots applying to all vessels, except those operated by or under contract to Federal agencies, 65 ft (19.8 m) or greater in overall length in certain locations, and at certain times of the year along the east coast of the U.S. Atlantic seaboard (73 FR 60173; October 10, 2008).

On November 26, 1990 (55 FR 49204), NMFS listed Steller sea lions as "threatened" under the ESA and the listing included regulations prohibiting vessels from operating within buffer zones 3 nautical miles around the principal Steller sea lion rookeries in the Gulf of Alaska and the Aleutian Islands. The regulations prohibit vessels from operating within the 3-mile buffer zones, with certain exceptions. Similarly, people are prohibited from approaching on land closer than ½ mile or within sight of a listed Steller sea lion rookery. NMFS created the buffer zones to (1) Restrict the opportunities for individuals to shoot at sea lions; (2) facilitate enforcement of this restriction; (3) reduce the likelihood of interactions with sea lions, such as accidents or incidental takings in these areas where concentrations of the animals are expected to be high; (4) minimize disturbances and interference with sea lion behavior, especially at pupping and breeding sites; and (5) avoid or minimize other related adverse effects.

In addition to these specific regulations, NMFS has provided general guidance for wildlife viewing so that the activities are not likely to cause take. This is consistent with the philosophy of responsible wildlife viewing advocated by many federal and state agencies to allow the public to observe the natural behavior of wild animals in their habitats without causing disturbance (see *http://www.watchablewildlife.org/* and *http://www.watchablewildlife.org/publications/marine_wildlife_viewing_guidelines.htm*).

Each of the six NMFS Regions has developed recommended viewing guidelines to educate the public on how to responsibly view marine mammals in the wild and avoid causing a take. These guidelines are available on line at: *http://www.nmfs.noaa.gov/prot_res/MMWatch/MMViewing.htm.* The "Be Whale Wise" guidelines developed for marine mammals by the NMFS Northwest Regional Office and partners are also available at: *http://www.bewhalewise.org/guidelines/.*

Be Whale Wise is a transboundary effort to develop and update guidelines for viewing marine wildlife. NMFS has partnered with monitoring groups, commercial operators, whale advocacy groups, U.S. and Canadian government agencies and enforcement divisions over the past several years to promote safe and responsible wildlife viewing practices through the development of outreach materials, training workshops, on-water education and public service announcements. The 2009 version of the Be Whale Wise guidelines recommends that boaters parallel whales no closer than 100 yards (91.4 m), approach animals slowly from the side rather than

from the front or rear, and avoid putting the vessel within 400 yards (365.8 m) in front of or behind the whales. The guidelines also recommend vessels reduce their speed to less than 7 knots within 400 yards (365.8 m) of the whales, and to remain on the outer side of the whales near shore. In 2008 a state law with similar language to the current approach and "park in the path" guidelines (RCW 15.77.740) was enacted to protect Southern Resident killer whales in Washington State waters.

San Juan County, Washington, identifies two voluntary no-boat areas off San Juan Island on their Marine Stewardship Area maps, although this is separate from the Be Whale Wise guidelines. The first is a ½ mile (~800 m)-wide zone along a 1.8 mile (3 km) stretch of shore centered on the Lime Kiln lighthouse on the west coast of San Juan Island. The second is a ¼ mile (~400 m)-wide zone along much of the west coast of San Juan Island from Eagle Point to Mitchell Point. These areas, totaling approximately 3.8 square miles, facilitate shore-based viewing and reduce vessel presence in an area used by the whales for feeding, traveling, and resting.

NMFS supports the Soundwatch boater education program, an on-water stewardship and monitoring group, to help develop and promote the Be Whale Wise guidelines and monitor vessel activities in the vicinity of whales. Soundwatch reports incidents when the guidelines are not followed and there is the potential for disturbance of the whales (Koski 2004, 2006, 2007, 2008, 2009, 2010a, 2010b). Soundwatch reported that the mean number of vessels following a given group of whales increased from five boats in 1990 to an average of about 15 to 20 boats within ½ mile of the whales during May through September, for the years 1998 through 2010 (Osborne *et al.* 1999; Baird 2001; Erbe 2002; Marine Mammal Monitoring Project 2002; Koski 2004, 2006, 2007, 2008, 2009, 2010a, 2010b), with a peak of 22 vessels around the whales in 1998 and 2003 and a steady decline from 22 vessels in 2003 to an average of 14 vessels in 2010. Soundwatch identified potential reasons for the decline in average number of boats, including economic conditions and fewer opportunities for fishing, as well as a pattern of groups of whales that are spread out in the action area so that vessels are also spread out. Soundwatch remains with one group of whales and records vessel counts around the group and therefore would not count all boats spread out with multiple groups of whales (Koski 2010b).

At any one time, the observed numbers of commercial and recreational whale watch boats around killer whales can be much higher than the mean number of vessels. For example, sources other than Soundwatch have reported that 107 vessels followed one Southern Resident pod (Lien 2000); 76 boats simultaneously positioned around a group of 18 whales from K pod (Baird 2002); and local media reported up to 500 vessels came out on the weekends to view a group of whales from L pod in Dyes Inlet during the fall of 1997. Although the average number of whale watch vessels within ½ mile is lower than what was observed in these three cases, the extreme nature of these events illustrates the degree to which killer whales can captivate the public's interest in the Pacific Northwest and the level of vessel effects that may occur.

Over the last several years, the whale watch season has extended in length, with vessels accompanying whales for more hours of the day and more days of the year. It is not uncommon for Southern Residents or transient killer whales to be accompanied by many boats throughout much or all of the day with peak numbers of attending vessels in late morning and mid-afternoon during the busiest whale watching months of July and August (Koski 2007). In recent years, U.S. and Canadian commercial whale watch vessels have made up from 24 percent (2010) to over 50 percent (2004) of the vessels observed within a ½-mile radius of the whales (Koski 2006, 2007, 2010b).

Soundwatch observers also report incidents when recreational and commercial whale watching vessels, as well as other types of vessels, are not adhering to the guidelines. From 2006 through 2010, there were between 1,085 (2007) and 2,527 (2009) incidents per year of vessels not following the guidelines reported during the time the observers were present. Soundwatch effort (estimated observation time) has fluctuated in recent years and trends in incident data can be difficult to interpret. There was an increasing trend in the number of incidents from 1998 to 2006, which is not based only on increasing hours of observation time (Industrial Economics, Incorporated 2010). An average of 1.2 incidents was observed per hour in 2003, while an average of 6.02 incidents were observed per hour in 2009.

As in the past several years, the most common Soundwatch observed vessel incident categories in 2010 were:

(1) Vessels parking in the path within 100–400 yards (365.8 m) of whales (Parked in path) at 23 percent of all incidents,

(2) Vessels motoring inshore of whales (Inshore of whales) at 17 percent,

(3) Vessels motoring within 100 yards (91.4 m) of whales (Under power within 100 yards (91.4 m) of whales) at 12 percent, and

(4) Vessels motoring fast (greater than 7 knots) within 400 yards (365.8 m) of whales (fast within ¼ mile of whales) at 13 percent of all incidents.

In 2009 there were 2,527 incidents; the majority of these were committed by private boaters (72 percent) and Canadian commercial operators (8 percent). Of the 1,067 incidents in 2010, the majority were committed by private boaters (64 percent) and Canadian commercial operators (10 percent). The most common incidents also reflect this pattern and are most often committed by private boaters and Canadian commercial whale watch vessels.

In both 2009 and 2010, 4 percent of incidents observed were committed by kayaks. Of the 1,067 incidents in 2010, 41 incidents (22 commercial and 19 private kayakers) specific to kayaks were observed, including parking in the path (20 percent of kayak incidents in 2010). Soundwatch has reported that they likely underestimate kayak incidents because the Soundwatch observation vessel remains outside of the current voluntary no-go zone where considerable kayak activity takes place (Dismukes 2010). In 2010, Soundwatch collected new information regarding kayaks from land-based observation points. They observed over 2,100 kayaks with the whales from June to September along the west side of San Juan Island with up to 41 kayaks with the whales at one time. Of the kayaks observed with whales, 74 percent were part of commercial kayaking groups (Koski 2010b). Observers reported a total of 594 incidents of kayakers not following guidelines including 171 incidents of kayaks within 100 yards (91.4 m) of the whales and 88 incidents of kayaks parked within the path of the whales. In most cases when the kayakers made an effort to follow the guidelines they were able to comply with the 100 yard and park in the path guidelines (Koski 2010b).

In addition to monitoring, the Soundwatch program includes an education component, providing information on the viewing guidelines to boaters that are approaching areas with whales. Despite the regulations, guidelines and outreach efforts, interactions between vessels and killer whales continue to occur in the waters of Puget Sound and the Georgia Basin. Advertisements on the Internet and in local media in the Pacific Northwest

promote activities that appear inconsistent with what is recommended in the Be Whale Wise guidelines. NMFS has received letters from the Marine Mammal Commission, members of the scientific research community, environmental groups, and members of the general public expressing the view that some types of interactions with killer whales have the potential to harass and/or disturb the animals by causing injury or disruption of normal behavior patterns. Soundwatch reports high numbers of incidents when vessels are not following the guidelines to avoid harassment (Koski 2004, 2006, 2007, 2008, 2009, 2010a, 2010b). Violations of current ESA and MMPA take prohibitions are routinely reported to NOAA's Office for Law Enforcement; however, the current prohibitions are difficult to enforce. The current prohibition against harassment may require demonstration of changes in the whales' behavior or an injury caused by a specific action which often includes expert testimony regarding behavioral response. NMFS has also received inquiries from members of the public and commercial tour operators requesting clarification of NMFS' policy on what activities constitute harassment.

In 2002, NMFS published an ANPR requesting comments from the public on what types of regulations and other measures would be appropriate to prevent harassment of marine mammals in the wild caused by human activities directed at the animals (67 FR 4379, January 30, 2002). The 2002 ANPR was national in scope and covered all species of marine mammals under NMFS' jurisdiction (whales, dolphins, porpoises, seals and sea lions), and requested comments on ways to address concerns about the public and commercial operators closely approaching, swimming with, touching or otherwise interacting with marine mammals in the wild. Several potential options were presented for consideration and comment, including: (1) Codifying the current NMFS Regional marine mammal viewing guidelines into regulations; (2) codifying the guidelines into regulations with additional improvements; (3) establishing minimum approach regulations similar to the ones for humpback whales in Hawaii and Alaska and North Atlantic right whales; and (4) restricting activities of concern similar to the MMPA regulation prohibiting the public from feeding or attempting to feed wild marine mammals. The 2002 ANPR specifically mentioned the complaints received from researchers and members of the public concerning close vessel approaches to killer whales in the Northwest. NMFS received over 500 comments on the 2002 ANPR regarding human interactions with wild marine mammals in United States waters and along the nation's coastlines.

NMFS has determined that existing prohibitions, regulations, and guidelines described above do not provide sufficient protection of killer whales from vessel impacts. We considered information developed through internal scoping, public and agency comments on the 2002 nation-wide ANPR, a 2007 killer whale-specific ANPR and the 2009 proposed rule (described below), monitoring reports, and scientific information. Monitoring groups continue to report high numbers of vessels around the whales and high numbers of vessel incidents that may disturb or harm the whales. Vessel effects may limit the ability of the endangered Southern Resident killer whales to recover and may impact other killer whales in inland waters of Washington. We therefore deem it necessary and advisable to adopt regulations to protect killer whales from vessel impacts, which will support recovery of Southern Resident killer whales. NMFS' determination that regulations are needed is described in detail in the Rationale for Regulations section below.

Development of Proposed Regulations

In March 2007, we published an ANPR (72 FR 13464; March 22, 2007) to gather public input on whether and what type of regulation might be necessary to reduce vessel effects on Southern Residents. The ANPR requested comments on a preliminary list of potential regulations including codifying the Be Whale Wise guidelines, establishing a minimum approach rule, prohibiting particular vessel activities of concern, establishing time-area closures, and creating operator permit or certification programs. During the ANPR public comment period, we received a total of 84 comments via letter, e-mail and on the Federal e-rulemaking portal. Comments were submitted by concerned citizens, whale watch operators, research, conservation and education groups, federal, state and local government entities, and various industry associations. The majority of comments explicitly stated that regulations were needed to protect killer whales from vessels. Most other comments generally supported protection of the whales. Six comments explicitly stated that no regulations were needed. There was support for each of the options in the preliminary list of alternatives published in the ANPR, and many comments supported multiple approaches. Some additional alternatives were also suggested. A full summary of the comments and NMFS' responses are contained in the proposed rule.

Proposed Rule

In July 2009, NMFS proposed regulations that would prohibit motorized, non-motorized, and self-propelled vessels in inland waters of Washington from (1) Causing a vessel to approach within 200 yards (182.9 m) of any killer whale; (2) entering a restricted zone along the west coast of San Juan Island during a specified season, and (3) intercepting the path of any killer whale in inland waters of Washington (74 FR 3764, July 29, 2009). The proposed regulations included exemptions for certain vessels and activities. As described in the proposed rule and draft EA, we based the proposed regulations on the best available data on vessels and whales, and public comments on the ANPR.

NMFS published the proposed rule in the **Federal Register** and requested public comment on the proposed regulations, the draft EA and supporting documents, such as the Draft Regulatory Impact Review (IEC 2008). To develop the draft EA, we relied on the public comments on the ANPR, the Recovery Plan, Soundwatch data, and other scientific information to develop a range of alternatives to the regulations, including the alternative of not adopting regulations. We analyzed the environmental effects of these alternative regulations and considered options for mitigating effects. After a preliminary analysis of the alternative regulations, we developed an alternative that combined three separate provisions into a single package—a 200-yard (182.9 m) approach restriction, a no-go zone along the west side of San Juan Island from May–September, and a prohibition on parking in the whales' path. We analyzed the effects of that package in the draft EA.

Comments and Responses to Comments on the Proposed Rule

NMFS published proposed regulations to protect killer whales on July 29, 2009, and announced two public meetings. In response to requests, NMFS added a third public meeting (74 FR 47779, September 17, 2009) and extended the comment period to January 15, 2010 (74 FR 53454, October 19, 2009). The public meetings were well attended and over 160 people provided recorded oral comments on the proposed rule. During the public

comment period, 704 unique written comments were submitted via letter, e-mail and the Federal e-rulemaking portal. Comments were submitted by concerned citizens; whale watch operators and naturalists; research, conservation and education groups; federal, state and local government entities; and various industry and other associations. NMFS posted all written comments received during the comment period on the NMFS Northwest Regional Web page: *http://www.nwr.noaa.gov/Marine-Mammals/Whales-Dolphins-Porpoise/Killer-Whales/Recovery-Implement/Orca-Vessel-Regs.cfm.* In addition to unique comments, over 2,400 form letters were submitted. There were 15 different form letters with the number of copies for each ranging from four to over 1,500. Additionally, we received five petitions that ranged from 100 to 740 signatures each and totaled over 1,300 names and signatures.

Many of the oral and written comments from individual members of the public were short general statements that: (1) Supported the proposed regulations and killer whale conservation in general, (2) disagreed with the proposed regulations, or (3) disagreed only with the proposed no-go zone. Other individual public comments and comments from organizations and government agencies included substantive information, such as specific suggestions to alter the proposed regulations, new information, or additional alternatives to consider. The Marine Mammal Commission made several recommendations in their comments on the proposed rule that are addressed below in response to Comments 4, 6, 7, 14, 16 and 17. The following is a summary of the comments received on both the proposed rule and the draft EA. The proposed rule included almost all of the information in the draft EA and most commenters directed their comments toward the proposed rule. We have grouped and summarized similar comments and recommendations, and responded to issues that directly relate to this rulemaking. Responses to the comments also include descriptions of changes made to the proposed regulations.

Comment 1: Mandatory regulations versus voluntary guidelines. Several commenters supported adoption of mandatory regulations, while other commenters stated that voluntary guidelines are adequate to protect the whales.

Response: Monitoring of vessel activity around the whales reveals that many vessels violate the current voluntary guidelines, the number of violations appears to be increasing, and one of the most serious violations—parking in the path of the whales—was committed primarily by commercial whale watch operators, with a recent increase in parking in the path by recreational boaters. Approaching within 100 yards (91.4 m) of the whales is primarily committed by recreational boaters. In the EA, we examined the available evidence and concluded that mandatory regulations are likely to reduce the number of incidents of vessels disturbing and potentially harming the whales and that this reduction would improve the whales' chances for recovery. We expect both commercial and recreational whale watchers to increase compliance with mandatory regulations compared to the current voluntary guidelines. Commercial whale watchers, in particular, will be aware of the new regulations and can serve as an example of lawful viewing for other boaters. Accordingly, we are adopting mandatory regulations governing vessel activity around the whales.

Comment 2: Enforce state law and maintain current guidelines. Several commenters suggested the current state law, prohibiting approach within 300 feet, should be enforced to increase compliance and that with the current state law and Be Whale Wise guidelines in place, no additional Federal regulations were necessary. One commenter suggested making it unlawful to fail to disengage the transmission of a vessel when within 300 feet of a Southern Resident killer whale similar to the state law.

Response: A state law requiring vessels to stay 300 feet (100 yards (91.4 m)) from Southern Resident killer whales went into effect in June 2008. The Washington Department of Fish and Wildlife (WDFW) has enforced this law since 2008, issuing several violations and many warnings. While NMFS agrees that enforcement of state law has likely improved conditions for the endangered whales, our analysis revealed that vessels at 100 yards (91.4 m) can have harmful effects on whales (see Comment 3: Approach regulation). This final regulation prohibits approaches closer than 200 yards (182.9 m), providing greater protection than the state's 100-yard (91.4 m) law. WDFW supported the 200-yard (182.9 m) approach rule in its comments on NMFS's proposed regulations. NMFS has not included a requirement to disengage the transmission of the vessel when within a certain distance of the whales. The Be Whale Wise guidelines include a recommendation to place engines in neutral and allow whales to pass if your vessel in not in compliance with the 100-yard (91.4 m) approach guideline. NMFS will continue to work with the Be Whale Wise partners to discuss maintaining this recommendation in the guidelines and evaluate the effectiveness of the final regulations to determine if any modifications are needed.

Comment 3: Approach regulation. Some commenters supported an approach limit of 100 yards (91.4 m) (current guideline and state law), and others suggested that an approach limit of 150, 200, 200–400, 1,000 yards (137.1, 182.9, 182.9–365.8, 914.4 m) or several miles would better protect the whales. Commenters noted that an approach regulation could limit the potential for vessels to disturb or collide with whales and for vessel noise to mask the whale's auditory signals, interfering with their ability to communicate and forage. Several whale watch operators raised concerns about how viewing from a distance of 200 yards (182.9 m) would impact their businesses. In addition, they provided comments that viewing from 200 yards (182.9 m) would reduce their ability to educate customers and affect the example they set for other boaters.

Response: In the final EA we fully analyzed the effects of both a 100- and 200-yard (182.9 m) approach regulation. Based on the best available information we concluded that a 100-yard (91.4 m) approach regulation is not sufficient to protect the whales. Researchers have documented behavioral disturbance and estimated the considerable potential for masking from vessels at 100 yards (91.4 m) and as far away as 400 yards (365.8 m). Researchers have modeled the potential for vessel noise to mask the whales' auditory signals and concluded that at 100 yards (91.4 m) there is likely to be up to 100 percent masking, while at 400 yards (365.8 m) the masking has substantially decreased. Even at 200 yards (182.9 m) the models show auditory masking of 75 to 95 percent. We expect the 200-yard (182.9 m) approach limit in the final regulation to significantly reduce the risk of vessel strikes, the degree of behavioral disruption, and the amount of noise that masks echolocation and communication, compared to a 100-yard (91.4 m) approach regulation. An approach regulation greater than 200 yards (182.9 m) would reduce vessel effects even more, but could diminish both the experience of whale watching and opportunities to participate in whale watching. We recognize that whale watching educates the public about whales and fosters stewardship. While it is difficult to quantify the

conservation benefits of public education, the Recovery Plan for Southern Resident Killer Whales identifies education and outreach actions as an essential part of the overall conservation program for the whales (NMFS 2008). We believe that a 200-yard (182.9 m) limit strikes an appropriate balance between the need to reduce vessel interactions with Southern Residents and the public interest in whale watching and observation.

Many whale watch operators expressed concern that their business will decrease if they are required to stay 200 yards (182.9 m) away from whales. Several operators conducted informal surveys of their customers to support their assertion that a 200-yard (182.9 m) approach regulation would diminish the experience and make customers less likely to go on whale watching tours. The best available information, however, supports our conclusion that a 200-yard (182.9 m) approach regulation is unlikely to affect the numbers of people who go on whale watching tours or the price they are willing to pay for the experience (see Comment 11: Economic Analysis).

First, observational data from third-party observers reveals that many operators already regularly view whales from 200 yards (182.9 m) or greater. In 2007–2008 a new research program collected detailed information on the distance of vessels from the whales using an integrated range finder, GPS and compass. This study measured the distance between all vessels and the nearest whale and reported that for all vessels within 400 yards (365.8 m) of the whale (likely engaged in whale watching), 74 percent were greater than 200 yards (182.9 m) from the whales. For all vessels within 800 yards (likely includes both whale oriented and transiting vessels), 88 percent of vessels were greater than 200 yards (182.9 m) from the whales (Giles and Cendak 2010).

In addition, the EA accompanying the final rule describes peer-reviewed studies of customer attitudes that identify the features of the whale watching experience that are most valuable to customers. Several studies focused on killer whales in the Pacific Northwest have assessed the value that whale watching participants have for wildlife viewing and provide data on the factors that lead to an enjoyable or memorable whale watching trip, and how satisfied participants are with various aspects of their trip (Dufus and Deardon 1993; Andersen 2004; Andersen and Miller 2006; Malcolm 2004). Survey results of whale watch participants indicate that proximity to the whales is not the most important part of the whale watchers' experience and that seeing whales and whale behavior was much more important (Andersen 2004; Malcolm 2004). In addition, Malcolm (2004) found participants were most satisfied with the respect their vessels gave the whales. The number of whales, whale behavior, and learning also received higher satisfaction than the distance from which whales were observed. The participants also strongly agreed with statements related to protection of the whales. Economic research also indicates that the general public places a high value on the continued existence of species such as the Southern Residents, such that actions necessary for the species' recovery have broad and lasting economic benefits. The Endangered Species Act protects species that are in danger of or threatened with extinction and states that "these species are of esthetic, ecological, educational, historical, recreational and scientific value to the Nation and its people." Independent research also demonstrates the value that the public places on protection and recovery of endangered species including marine mammals (Loomis and Larson 1994).

While many whale watch operators referenced informal surveys of their customers, these surveys were not scientifically designed and there was no control in their administration. In addition to the evidence described above, we received comments from the public that support the conclusion that a 200-yard (182.9 m) approach regulation will not reduce the public education value of whale watching. These comments highlight the value and effectiveness of educational programs that take place at great distances from the whales, even off the water away from whales, such as in classroom programs.

For the reasons described above and in contrast to the public comments submitted by the commercial whale watching industry, we do not anticipate a reduction in the willingness of customers to participate in commercial whale watch trips or the ability of the whale watching industry to provide an educational and meaningful experience for their customers viewing whales at a distance of 200 yards (182.9 m). In adopting a 200-yard (182.9 m) approach regulation, we evaluated all of the available information on the potential costs to whale watch business. In addition, we balanced the competing conservation benefits to killer whales of reduced vessel interference against continued public education through on-water whale watching opportunities. We consider the viability of the whale watch business to be an integral part of public education. We will continue to study the impact of both motorized and non-motorized vehicle distance limits on whale behavior, and the impact of the newly established regulations on the viability of the whale watch business. NMFS will conduct this analysis alongside the additional consideration of a no-go area discussed in more detail below. If subsequent analysis suggests either a disproportionate impact on segments of the business, or that certain kinds of whale watching, such as the non-motorized business, has less of an effect on whale behavior, we will consider modifying or relaxing restrictions. We will conduct such analysis as the new rulemaking requirements are being implemented over the next two whale watching seasons.

Comment 4: No-go zone. There were a large number of oral and written comments from the public, recreational fishing community, whale watch operators and kayakers in opposition to the proposed no-go zone. Some reasons expressed for opposition to the no-go zone included concerns about setting a precedent for closing additional areas to fishing, impacts to commercial and recreational fishing, elimination of kayaking opportunities, and safety concerns. A number of comments suggested creation of a go-slow zone in the place of a proposed no-go zone. We also received comments supporting the proposed seasonal no-go zone (May–September), as well as suggestions to create a larger no-go zone along the west side of San Juan Island, to include other shoreline areas, and to identify the no-go zone based on feeding "hot spots."

Additional comments on the proposed no-go zone included support for more or fewer exceptions. Several commenters opposed the proposed exception for treaty fishing. Suggestions for additional exceptions were for recreational and commercial fishing, and a corridor near shore in the zone to allow for kayakers, and property owners using the zone for recreational purposes.

Both oral and written commenters expressed concern that NMFS underestimated the economic impacts in the assessment of the proposed no-go zone. One specific concern was that the economic analysis did not adequately address impacts to the recreational and commercial fishing communities and impacts would be greater that what was considered in the EA.

Several commenters suggested creating a public process to receive additional feedback on the concept of

the no-go zone and engage the community in developing an appropriate protected area. Others commented that NMFS should select the site based on the best available science and should consider use of areas by the three separate pods of Southern Resident killer whales.

We received several comments specific to the status of the boat launch at the San Juan County Park (within the proposed no-go zone) as a resource supported by grants from the Washington Recreation and Conservation Office and whether it would be "converted" to uses other than those for which it was funded if the no-go zone was implemented.

Response: Public comments on the no-go zone raised several suggested alternatives that we had not fully analyzed in the draft EA. In addition, we recognize that to be effective, regulations must be understood by the public and have a degree of public acceptance. Because of the many alternatives suggested by the public, and because of the degree of public opposition, we have decided to gather additional information and conduct further analysis and public outreach on the concept of a no-go zone. Therefore, the final rule does not adopt a no-go zone. We will pursue this additional work expeditiously because the best available information indicates there would be a significant conservation benefit to the whales if they were free of all vessel disturbance in their core foraging area.

Comment 5: Park in the path. Some commenters supported adoption of a regulation that all vessels must keep clear of the whales' path. Others commented that a prohibition on parking in the path of the whales would be difficult to enforce and raised questions about situations where whales approach vessels. Commenters also suggested that a single approach distance would be easier for boaters to understand compared to a combination of a 200 yard approach distance and a parking in the path prohibition out to 400 yards.

Response: The risks of both vessel strikes and acoustic masking are both most severe when vessels are directly in front of the whales. In addition researchers have reported behavioral responses from vessels out to 400 yards (365.8 m) and beyond and have expressed concern about impacts to important behaviors, such as prey sharing and nursing that occur as the whales move forward. The final regulations include a prohibition on parking in the path because it provides the best management tool for reducing these risks. Increasing the overall approach distance to mitigate for the specific impacts that can occur from vessels in the whales' path (*i.e.,* a 300 or 400 yard (274.3 or 365.8 m) approach rule) would increase the viewing distance for all whale watchers and could impact the experience of whale watchers and potentially the whale watch businesses (see Comment 3: Approach Regulation). NMFS believes that a 200 yard approach distance in combination with a prohibition on parking in the path of the whales within 400 yards (365.8 m) provides for meaningful and economically viable whale watching and provides additional protection from vessels out in front of the whales. We acknowledge that enforcement of the prohibition on parking in the path of the whales will be challenging and recognize that whales can be unpredictable and can approach vessels unexpectedly. A regulation prohibiting parking in the path of killer whales will be clear to whale watch operators and is consistent with the current guidelines. These operators would likely know about such a regulation and would have some experience in judging the travel path of the whales and estimating a 400 yard (365.8 m) distance. Under certain conditions, however, whale movements can be unpredictable (*i.e.,* foraging whale pod spread out over a large area) even for experienced whale watchers. The prohibition on parking in the path is intended to address specific situations observed by monitoring groups where operators repeatedly position themselves to intercept the whales and do not get out of the way, rather than unexpected situations where whales are moving erratically and boaters find themselves in the path unexpectedly.

Comment 6: Speed restriction. There were comments in support of codifying the current guideline, which suggests a speed of less than 7 knots when within 400 yards (365.8 m) of the nearest whale. There was also support for go-slow zones in combination with or instead of the proposed no-go zone.

Response: The draft EA concluded that risks of vessel strikes and acoustic masking would be reduced if vessels traveled at a slow speed within 400 yards (365.8 m) of the whales, consistent with the current guidelines. We have not included such a provision in the final regulation because it would be difficult to enforce. We will continue to work with partners on the Be Whale Wise campaign to promote a speed guideline and encourage voluntary compliance to reduce impacts from fast moving vessels in close proximity to the whales. We will also consider go-slow zones when we further evaluate a no-go zone as described above under Comment 4: No-go zone.

Comment 7: Other suggested alternatives. Similar to comments we received in response to the ANPR, comments on the proposed rule included a variety of alternatives to the proposed regulations and the alternatives analyzed in the EA. The suggested alternatives included: Permit programs, stand-by zones, time limits for whale watching, time off from whale watching (days of the week or hours of the day), and a prohibition on whale watching during unsafe weather conditions. Comments suggesting variations on the alternatives fully analyzed have been addressed in Comments 3 through 6.

Response: Some of the alternatives suggested during the public comment period on the proposed rule were similar to alternatives suggested in response to the ANPR and these were considered, but not fully analyzed in the draft EA. The comments on stand-by zones and prohibiting whale watching under certain weather conditions were two new suggestions which were not included in the draft EA. The two new alternatives have been included in the alternatives considered but not analyzed in detail in the final EA. There were several reasons why we did not fully analyze or further consider a number of the alternatives suggested in public comments, including difficulties in enforcing them, changes to infrastructure needed to implement them, or a lack of sufficient science to support them. Alternatives considered but not analyzed in detail in the final EA include: (1) Permit or certification program. A permit or certification program, including stand-by zones, was not fully analyzed because it would require a large infrastructure to administer, monitor and enforce. There would also be equity issues in determining who is permitted or certified and who is not. (2) Moratorium on vessel-based whale watching. A moratorium on all vessel-based whale watching, or protected areas along all shorelines, would be challenging to enforce and are not supported by available scientific information. Both commercial and recreational vessels engage in a variety of wildlife and scenic viewing and other activities on the water and it would be difficult to determine at what point they were engaged in prohibited whale watching. (3) Shipping lane or vessel noise regulations. Regulatory options, such as rerouting shipping lanes or imposing noise level standards would have large

economic impacts and unnecessarily restrict some types of vessels rarely in close proximity to the whales. (4) Time limits. It would be difficult to determine when vessels were engaged in whale watching to enforce limits on viewing time, such as the 30 minute limit suggested in the Be Whale Wise guidelines or a time of day restriction on whale watching. (5) Aircraft regulations. Aircraft regulations are beyond the scope of minimizing impacts from vessels as identified in the EA. (6) No whale watching during poor weather conditions. It would be difficult to educate recreational boaters regarding specific weather conditions and when they could or could not watch whales and what vessel activities constitute "whale watching." There is currently no infrastructure to monitor weather conditions with respect to whale watching and to broadcast the information to alert boaters that particular weather conditions in a certain area trigger a prohibition on whale watching.

Comment 8: Scope and Applicability. NMFS received a variety of comments on the scope and applicability of the regulations including the geographic area, the species covered by the regulation and the types of vessels subject to the regulations. Several commenters suggested applying the proposed regulations throughout the range of the Southern Resident killer whales, rather than limiting the scope to inland waters of Washington. Other comments supported regulations that would apply to other species of whales and marine mammals in addition to killer whales. We received many comments on the types of vessels to which the regulations should apply. Commenters suggested that the regulations should only apply to whale watching vessels and that the regulations should not apply to kayaks. Commenters also identified additional exceptions for certain vessels and these are addressed below under Comment 9: Exceptions.

Response: Establishing regulations in coastal waters is an alternative that was considered, but not fully analyzed in the final EA. Most whale watching occurs in inland waters of Washington, with whale watching vessels originating from nearby ports in the United States and Canada. The presence of Southern Residents and other killer whales in inland waters is predictable and reliable, which is the basis for the success of the local commercial whale watch industry. The presence of the whales and proximity of the whale watching industry in inland waters of Washington concentrates whale watch activity in particular areas. Monitoring groups report a high number of incidents of vessels not following the current viewing guidelines in these waters, particularly along the west side of San Juan Island. There are no monitoring groups observing whale watching activities with killer whales in coastal waters, nor does there appear to be extensive whale watching activity in coastal waters, as we have limited sightings of the whales along the coast, and their presence is not reliable enough to support an active killer whale watching industry. If new information in the future indicates that whale watching poses a threat to the whales in coastal waters, we will consider the need for additional protections.

The final vessel regulation applies to all killer whales. It would be difficult for boaters, especially recreational boaters without expertise and experience with killer whales, to identify Southern Residents or even to identify killer whales to ecotype (resident, transient, offshore). Requiring boaters to know which killer whales they are observing is not feasible. In addition, providing protection to all killer whales in inland waters of Washington is appropriate under the MMPA. Including other whale or marine mammal species is outside the scope of this regulation, which is focused on protecting killer whales and, in particular, supporting recovery of endangered Southern Resident killer whales. Wildlife viewing in inland waters of Washington targets Southern Resident killer whales and while other marine mammal species are the subject of opportunistic viewing, particularly when killer whales are not present, vessel impacts have not been identified as a major threat for other marine mammals in inland waters of Washington. While the regulations do not apply to other marine species, we anticipate that other species may benefit as boaters aware of the regulations may be more likely to know about their potential impacts and keep their distance from all wildlife.

The regulations are designed to reduce the impact from vessels including the risk of vessel strikes, behavioral disturbance, and acoustic masking. Available data on vessel activities indicates that private and commercial whale watch vessels are most often in close proximity to the whales, and that other vessels such as government vessels, commercial and tribal fishing boats, cargo ships, tankers, tug boats, and ferries represent a small proportion (typically 5–7 percent in most years) of the vessels that are within one-quarter mile of the whales. Although not the primary focus of the regulations, vessels conducting activities other than whale watching (*i.e.,* transport, fishing, etc.) can impact the whales and are also subject to the regulations with some exceptions (*i.e.,* shipping lanes, safety). Because these vessels do not target the whales and are not often in close proximity, NMFS expects the impacts from adjusting course to avoid getting within 200 yards (182.9 m) of the whales or to stay out of their path will be minimal. We have not included exemptions for Washington State Ferries or vessels associated with oil spill preparedness or training based on the expectation that the vessels will rarely have to adjust their course to comply with the regulations and that the adjustments will be relatively easy to achieve, short-term and minimal. For example, Washington State Ferries already adhere to the 100-yard (91.4 m) guideline and should similarly be able to adhere to a 200-yard (182.9 m) regulation.

Several commenters stated that kayaks do not disturb whales and should be exempt from the regulations. While kayaks are small and quiet, they have the potential to disturb whales as obstacles on the surface. In both 2009 and 2010, 4 percent of incidents observed were committed by kayaks. Of the 1,067 incidents in 2010, 41 incidents (22 commercial and 19 private kayakers) specific to kayaks were observed including parking in the path (20 percent of kayak incidents in 2010). Soundwatch has reported that they likely underestimate kayak incidents because the Soundwatch observation vessel remains outside of the current voluntary no-go zone where considerable kayak activity takes place (Dismukes 2010). New information collected and analyzed in 2010 provides a better assessment of the potential for kayak disturbance and the cumulative effects of large numbers of kayaks in the vicinity of the whales.

For the summer of 2010, Soundwatch's Kayak Education and Leadership Program (KELP), San Juan County Parks, and the San Juan Island Kayak Association worked together to update and refine a Kayaker Code of Conduct as part of KELP. In 2010, the San Juan County Park implemented a required launch permit for boaters using the park boat launch. Before boaters could obtain a permit, they had to attend a required Code of Conduct Training conducted by KELP educators. Commercial operators were required to have all their guides trained by KELP educators and have their guests sign statements acknowledging that they had been trained on the Code of Conduct by

their guides. The code of conduct includes information about the Washington State law prohibiting approach within 100 yards (91.4 m) of Southern Resident killer whales, the Be Whale Wise guidelines, and additional guidelines such as staying close together (rafting) when whales approach, avoiding stopping at headlands to remain out of the whales path, stopping paddling if whales are within 100 yards (91.4 m) (91.4 meters), and suggestions for assessing their position and remaining outside of the path of the whales by moving offshore or inshore.

In addition to providing the guidelines and training for kayakers through the KELP education program, Soundwatch also monitored kayak activity and compliance of kayakers with the recommendations in the code of conduct to augment the Soundwatch vessel monitoring program. From June through September 2010, 594 total incidents were observed (66 percent commercial and 28 percent private) when kayakers did not follow all guidelines, with 171 incidents when kayaks were within 100 yards (91.4 m) of the whales. The most common incidents were kayaks not rafted, parked on headland or within kelp bed, parked in the path of whales and stopped within 100 yards (91.4 m) of whales (Koski 2010b).

Williams *et al.* (2010) analyzed impacts of kayaks on Northern Resident killer whales and reported that kayaks can have a significant impact on killer whale behavior. Killer whales exhibited increased probability of traveling behavior, which indicates an avoidance tactic, and decreased feeding activities when kayaks were present (Williams *et al.* 2010). For additional information on the scientific assessment of kayak impacts on killer whales see Comment 10: Scientific basis for regulations. Based on the best available information, the final regulations will apply to all vessels including kayaks to reduce impacts to the whales.

Comment 9: Exceptions. Commenters provided a range of suggestions for additional exceptions (*i.e.,* kayaks and sail boats, Washington State Ferries, all vessels except whale watching) and expressed disagreement with some of the exceptions in the proposed rule (vessels actively engaged in fishing). Almost all of these comments were specific to the proposed no-go zone. An exception for kayaks to all regulations is discussed under Comment 8: Scope and Applicability. Several commenters suggested wording changes regarding the exception for ships in the shipping lanes and their support vessels, and the exception for vessels actively engaged in fishing activities, and other suggested exempting ferries and vessel engaged in oil spill preparedness and training.

Response: Almost all of the suggestions for additional exceptions or fewer exceptions to the rule were specific to the no-go zone. While the no-go zone is not part of this final rule, NMFS will consider the information on exceptions and other aspects of a no-go zone (see Comment 4: No-go zone) and respond at a later date. NMFS has made changes to the description of the exception for vessels in the established shipping lanes, known as the Traffic Separation Scheme, to clarify when and how it applies to certain vessels. NMFS has also amended the language regarding exceptions for vessels actively engaged in fishing to include transfer of catch, however, vessels transiting to or from or scouting fishing areas are not exempt from the regulations. We expect impacts to these activities associated with fishing to occur in close proximity to whales only rarely and expect any impacts from changing course to maintain 200 yards (182.9 m) or to stay out of the whales' path to be minimal (IEC 2010).

Ferries and vessels associated with oil spill preparedness and training do not target the whales and are not often in close proximity, therefore, NMFS expects the impacts from adjusting course to avoid getting within 200 yards (182.9 m) of the whales and to stay out of their path on rare occasions will be minimal. We have not included exemptions for Washington State Ferries or vessels associated with oil spill preparedness or training based on the expectation that these vessels will rarely have to adjust their course to comply with the regulations and that the adjustments will be relatively easy to achieve, minimal and short-term. For example, Washington State Ferries already adhere to the 100-yard (91.4 m) guideline and should similarly be able to adhere to a 200-yard (182.9 m) regulation. Support vessels associated with booming activities required for fuel transfer or emergency pollution response would be exempt from the regulations based on the exemption for safe operation; we amended the safety exception to include these vessels.

Comment 10: Scientific basis for regulations. Commenters raised questions about the scientific information used to support the vessel regulations. Scientific information on the vessel impacts to whales was called biased, inconclusive, questionable, or wrong. Commenters placed a higher value on their personal observations than on the results from published studies and asserted that they have not seen the whales changing their behavior in response to vessels. Commenters raised concerns that scientists conducting scientific studies on killer whale were biased against the whale watch industry. Some commenters highlighted that results were not conclusive and challenged the interpretation of specific research results, questioning that increased energy expenditure form avoiding vessels or engaging in high energy surface active behaviors, like breaching and tail slapping, would result in a negative impact on the whales. Other commenters questioned the use of models to estimate the potential impact of vessel sound on the whales' ability to use echolocation to find prey in their habitat. Several commenters questioned the science used to demonstrate the potential for kayaks to impact killer whales primarily because it referred to studies on species other than killer whales in other geographic locations.

Response: NMFS relied on the best available data to develop the proposed and final regulations. The majority of the information came from peer reviewed scientific publications. To a lesser extent, unpublished data, personal accounts and other anecdotal information also informed development of the regulations. We gave greater weight to sound peer reviewed studies published in scientific journals than to personal observation and interpretation. These scientific studies use established scientific methods, test hypotheses, employ statistical analysis, and have been peer reviewed and published in scientific journals. These steps in the scientific process reduce the potential for bias in results. We reviewed all of the best available information from multiple independent scientists which also limits the concerns about potential bias related to one individual researcher.

Several independent scientists have reported behavioral changes in whale swimming patterns, changes in respiratory patterns, reduced time spent foraging/feeding, and increased surface active behaviors in the presence of vessels. These studies provide multiple lines of evidence regarding the nature and degree of vessel impacts on the behavior of killer whales. The data from these studies have been rigorously analyzed and the results are statistically significant. Some of the reported behavioral changes may not be obvious to casual observers.

We acknowledge that there is some uncertainty involved in interpretation of the results in the peer reviewed published papers. While we evaluated the quality, applicability and

uncertainty in the scientific information, we also relied on a conservative approach in weighing the severity and likelihood of impacts from vessels in light of the whales' status as an endangered species. The Noren *et al.* (2009) study reported increased energetically expensive surface active behaviors in the presence of vessels, and we considered the uncertainty regarding the conclusions. For example, the function of surface active behaviors is not known for certain. Noren *et al.* (2009) suggest these behaviors may serve a role in communication to promote group coordination, while several commenters speculated that it was play or that the whales enjoyed showing off for whale watch boats. Noren *et al.* (2009) also acknowledged uncertainty based on the limits of the study to provide details on all of the variables that determine whether vessel presence elicits a response in the whales. Even with the uncertainty about the function of the behaviors and some of the conclusions, we did consider the increased energy expenditure as an important result. We were conservative in assuming that increased energy expenditure likely has a negative impact on the whales, particularly in light of the concerns regarding reduced prey for the whales and other studies that found short-term behavioral responses can have long-term consequences for individuals and populations (Lusseau and Bejder 2007).

With field studies of wild animals there will always be some uncertainties because it is not possible to control for all of the variables. In addition, there are some hypotheses that cannot be tested with wild animals in the field. We routinely use models with inherent assumptions to help fill these data gaps and inform our decisions. For example, there is no direct data to measure a reduction in the efficiency of echolocation in the presence of vessel sound. Instead, we relied on a model created to estimate the vessel sound under varying conditions and calculate a reduction in echolocation efficiency. This model is based on data collected on the whales' hearing capabilities, sound recordings of vessels, sound propagation models, and some assumptions about the whales' ability to detect a salmon in the water column. We believe these assumptions are justified by the available information.

In the case of assessing the impact of kayaks on killer whales, we relied on studies done on similar species in other locations and research results that indicated trends, but were not conclusive. Several commenters questioned our reliance on studies of the effects of kayaks on dolphins to support a conclusion that kayaks have the potential to disturb killer whales. Although we believe the dolphin studies give insight into effects on killer whales (the largest member of the dolphin family), in response to these comments, we secured additional analysis of available data on Northern Resident killer whales. Williams *et al.* (2010) assessed the effects of kayak presence on Northern Resident killer whales and reported that kayaks can have a significant impact on killer whale behavior. In previous studies, Williams *et al.* (2006) reported changes to killer whale behavior from boat presence, pooling kayaks and motorized vessels together. In their recent study, the presence of both types of vessels was analyzed separately for data from 1995–2004. In the presence of only kayaks, the probability that the whales will shift to travel behavior from other behavior states (including feeding) significantly increased compared to situations with no vessels present, which indicates an avoidance tactic. As a result, the whales spent significantly more time traveling when in the presence of kayaks than they did under no-boat conditions (11 percent increase in time spent traveling). Consistent with previous studies, killer whales significantly reduced overall time spent feeding in the presence of kayaks and powerboats compared to no-boat conditions (30 percent decrease in time spent feeding). With respect to both kayaks and motorized vessels, the duration of feeding decreased and the overall proportion of time spent feeding decreased when vessels were present, regardless of the type of vessel. One model suggested that the effect of kayaks on feeding activity was perhaps less pronounced than the effect of powerboats on feeding activity. The types of effects vessels have on foraging activities seem to be similar whether the boats involved are kayaks or other types of vessels, but the whales may use different avoidance tactics to deal with the two types of vessels (Williams *et al.* 2010).

Comment 11: Economic analysis. Comments from individuals, commercial whale watch and other industry associations focused on the economic analysis and disagreed with some conclusions in the EA. Commenters believed that NMFS did not adequately evaluate potential economic impacts from new vessel regulations to whale watching businesses, kayak companies, recreational and commercial fishing communities, and the local economy in the San Juan Islands. In addition, several people providing oral comments were concerned that the economic analysis was conducted by a contractor outside of the Puget Sound area. Other commenters suggested that the proposed regulations would have a positive economic impact by protecting the whales, which draw large numbers of people to the area.

Response: In comments on the ANPR and on the proposed rule, whale watch operators expressed concerns regarding the economic impacts to their business from reduced participation in commercial whale watch trips conducted at 200 yards (182.9 m) from the whales. In the Pacific Whale Watch Association comments on the proposed rule, they suggested that at least one company would go out of business and estimated a 30 percent reduction in the number of companies participating in the industry over three years and a drop in revenue for the remaining 70 percent. No commenters provided data to support this assertion. The comments summarized information from informal surveys of customers indicating that they would not book a trip if they would be watching from 200 yards (182.9 m). The whale watch association also asserted that one of their most frequently asked questions is "How close can we get?" and 5 percent of bookings are lost when they answer "100 yards (91.4 m)." In the comments, the whale watch association acknowledged that their informal communications with customers were admittedly not "scientifically accurate surveys". The information from the informal customer surveys also contradicts information from published, peer reviewed, scientifically conducted surveys about the important features of trips for customers. Our analysis of the likely impacts to the whale watch industry relied on the published, peer reviewed, and scientifically conducted surveys using accepted statistical methods rather than the anecdotal information provided by the industry. As part of implementation of new regulations, NMFS will monitor to evaluate effectiveness of the regulations, as well as identify any unanticipated impacts in order to inform adaptive changes to the regulation.

To analyze economic impacts of alternative regulations, NMFS contracted with Industrial Economics, Incorporated (IEC), which has its headquarters in Massachusetts. IEC also has employees located in the Pacific Northwest. IEC has extensive expertise conducting economic analyses regarding actions taking place in Washington State waters, including Puget Sound. IEC has

gathered data and worked on multiple projects in the area, including salmon and killer whale critical habitat designations. In response to concerns raised in public comments about IEC's lack of local knowledge, IEC identified local economics experts from the University of Washington to review the draft economics analysis, help identify additional data, and contribute to the final economic analysis. The local economics experts reviewed the data sources, analysis methods, and assumptions about the study area. They supported the data and methods used. The local experts provided suggestions for clarifications of some assumptions, more detailed descriptions of data sources and methods, and inclusion of additional information on the positive impacts of protecting the whales (*i.e.,* existence values.) They did not identify any additional data sources to inform the analysis. IEC incorporated the results of this additional local review into the final economic analysis.

The economic analysis considers the potential that the Southern Resident killer whales could go extinct without regulatory protection and, therefore, reduce the value of the whale watching industry and contributions to the local economy. The economic analysis also indicates that the continued existence of rare species, including marine mammals, has a broad-based economic benefit separate from the viability of the whale-watching industry. The Endangered Species Act protects species that are in danger of or threatened with extinction and states that "these species are of esthetic, ecological, educational, historical, recreational and scientific value to the Nation and its people." Independent research also demonstrates the value that the public places on protection and recovery of endangered species including marine mammals (Loomis and Larson 1994).

Comment 12: Legal issues. Several comments included concerns regarding the legality of NMFS regulating vessel traffic in the transboundary area of Haro Strait with respect to the Treaty of 1846 between the United States and the United Kingdom [Canada] regarding maritime boundaries and rights of navigation. There were also comments suggesting that all whale watching activity is illegal because it involves "pursuit," which is prohibited under the Endangered Species Act. Some comments also questioned our compliance with Executive Order 12866 and the Regulatory Flexibility Act.

Response: Neither the proposed nor the final regulations violate the 1846 Treaty. NMFS has the authority to establish vessel regulations (including the proposed no-go zone) to protect killer whales from vessels in United States waters and related activities under various domestic laws including the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). Both the proposed and the final vessel regulations are reasonable and consistent with a coastal nation's ability to regulate the navigation of vessels in its territorial seas and internal waters under international law.

The ESA prohibits the "take" of endangered species, which it defines to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct." The statute does not define the term "pursue" nor have we adopted regulations defining pursuit. Under both the ESA and MMPA, there are no exceptions to the take prohibition for whale watching; therefore wildlife viewing must be conducted in a manner that does not cause take. To promote responsible and sustainable marine animal viewing that avoids take, NMFS has worked with a variety of whale watch industries in multiple regions to develop numerous education programs, viewing guidelines and regulations. The agency believes that whale watching enhances marine mammal conservation by increasing education and fostering stewardship. The Recovery Plan for Southern Resident killer whales describes the educational benefits of whale watching and identifies actions such as supporting naturalist trainings (NMFS 2008). This is also the case for other species. The Recovery Plan for North Atlantic Right Whales includes a section on whale watching and includes actions regarding educating vessel operators about regulations and guidelines as well as training whale watch naturalists and including conservation messages to whale watchers (NMFS 2005). For this reason, we have not sought to curtail responsible viewing by applying an expansive interpretation to the prohibition on "pursuit." For additional information on NMFS' nationwide efforts to promote responsible wildlife viewing, please visit *http://www.nmfs.noaa.gov/pr/education/viewing.htm.*

We conducted a Regulatory Impact Review/Regulatory Impact Assessment (RIR/RIA) in accordance with Executive Order 12866 and the Regulatory Flexibility Act. We incorporate this assessment and the Final Regulatory Flexibility Analysis into the final EA as Chapter 6. The RIR/RIA summarizes the costs and benefits of alternative regulations, including the No-action Alternative of not promulgating regulations. The final EA, including RIR/RIA analysis, and separate economic analysis (IEC 2010) contain all the elements required of a RIR/RIA. The RIR/RIA also serves as a basis for our determination on whether the proposed action is a "significant regulatory action" under the criteria provided in Executive Order 12866.

Comment 13: NMFS should address other threats. Many oral and public comments cited the threats of pollution and contamination and insufficient salmon prey for the whales. A small number of comments raised concerns about use of Navy sonar. Some commenters suggested we should focus on these threats rather than vessel regulations, while other commenters supported the regulations and encouraged NMFS to also address the other threats.

Response: Promulgation of vessel regulations to protect Southern Resident killer whales is just one part of a comprehensive recovery program to address all of the major threats to the whales. The Recovery Plan for Southern Resident Killer Whales includes actions to address each of the threats and there are many ongoing efforts in the region to restore depleted salmon populations, clean up the Puget Sound ecosystem, develop a response plan for oil spills, use existing MMPA and ESA mechanisms to address sounds like Navy sonar, conduct education and outreach activities, and implement other actions in the plan (NMFS 2008). For more information on implementation of the recovery plan, please visit *http://www.nwr.noaa.gov/Marine-Mammals/Whales-Dolphins-Porpoise/Killer-Whales/Recovery-Implement/index.cfm.* For specific information on salmon recovery, please visit *http://www.salmonrecovery.gov* and for more information on efforts to address pollution and contaminants, please visit *http://www.psp.wa.gov/.* To the extent that actions authorized, funded, or carried out by a Federal agency may affect species listed under the ESA, the agency is required to consult with NMFS pursuant to ESA section 7, 16 U.S.C. 1536, and its implementing regulations.

Comment 14: Education about regulations. A number of commenters suggested that for new regulations to be effective it was essential to have a strong educational component.

Response: We agree that educating the public and industry is essential to promote compliance with any new regulations and achieve a reduction in vessel impacts to the whales. We recognize that adopting regulations that are different from the current voluntary

guidelines and State law may present some challenges. The new regulations, however, are largely extensions or expansions of the existing guidelines and Washington law. Additionally, the current infrastructure includes enforcement, monitoring, and stewardship groups, who will be available to assist with an education campaign to inform boaters about the new regulations and the scientific information on which they are based. We have developed an implementation plan for the new regulations that includes an active education program with our many partners including WDFW, the U.S. Coast Guard, Soundwatch, Straitwatch, and the Department of Fisheries and Oceans Canada. As part of an education program we will continue to work with partners on guidelines for safe operating procedures in the vicinity of whales.

Comment 15: Enforcement. Many commenters stressed the importance of enforcement for any new regulations to be effective. While some comments suggested that enforcing current guidelines and the state law would be sufficient to protect the whales, others supported the proposed regulations if there were sufficient resources to enforce new regulations.

Response: We agree that enforcement is essential to promote compliance with any new regulations and achieve a reduction in vessel impacts to the whales. Vessel operators are more likely to adhere to mandatory specific regulations than to the current voluntary guidelines. This likelihood for any particular rule would be affected by the clarity of the rules, motivations to comply, and the level of monitoring and enforcement. It is reasonable to assume that commercial operators would know about mandatory regulations, for the same reasons that they are familiar with the current specific voluntary guidelines, and would have strong incentives to comply to protect their business reputation. Recreational boaters are also more likely to comply with mandatory regulations, although they may be less likely to know the details of mandatory regulations than are commercial operators. Regulations with specific distances to the whales provide new tools for enforcement, so that cases are more straightforward and based on an objective criteria, like distance, rather than demonstrating changes in the behavior of the whales with respect to a specific action. Distance regulations are in place for other marine mammals and the NOAA Office for Law Enforcement has experience enforcing this type of regulations. In general, promulgation of specific mandatory regulations is likely to increase enforcement capability and compliance, which will result in fewer incidents between vessels and whales than occurs under the current regime. We have developed an implementation plan for the new regulations that includes an active education program with our many partners including WDFW, the U.S. Coast Guard, Soundwatch, Straitwatch, and the Department of Fisheries and Oceans Canada. See above Comment 1: Mandatory regulations versus voluntary guidelines and Comment 2: Enforce state law and maintain current guidelines, for additional information describing the current guidelines and regulations and our determination regarding the need for these new Federal regulations to protect the whales.

Comment 16: Monitoring effectiveness of regulations. Several commenters who supported the vessel regulations suggested that monitoring the effectiveness of regulations would be an important step to assess compliance and the benefit to the whales and identify and needed changes in the future. Several commenters expressed concern about the regulations, but were more supportive if there was a periodic review in place to evaluate the regulations.

Response: We agree that monitoring effectiveness of the regulations is an important part of an adaptive management process to ensure the regulations are effective in protecting the whales and to identify any unforeseen impacts to local communities. The success of a regulatory program to address vessel impacts is vital to recovery of the Southern Resident killer whales. Therefore, we will monitor the effectiveness of the final regulations and consider altering the measures or implementing additional measures if appropriate. We will continue to collect data on vessel activities in the vicinity of the whales to assess the anticipated increase in compliance with mandatory regulations and reduction in impacts to the whales. As described above (see Comment 3: Approach regulation, Comment 4: No-go zone, and Comment 11: Economic analysis) we will also continue to gather information and further consider the proposed no-go zone as an additional measure to protect the whales.

Comment 17: Consistent regulations in the United States and Canada. Several commenters supported consistent regulations in both United States and Canadian waters to assist with educating boaters and provide adequate protection for the whales.

Response: Southern and Northern Resident killer whales are listed as endangered and threatened, respectively, under the Species at Risk Act in Canada. We have coordinated for several years with the Canadian Department of Fisheries and Oceans to develop consistent guidelines for boaters operating in the waters of both countries. We will continue coordinating on guidelines and provide support for any efforts in Canada to also consider 200-yard (182.9 m) approach guidelines or regulations to maintain consistency and provide a benefit to the whales. Even without similar regulations in Canada, this rulemaking will provide substantial benefits to the Southern Residents because the whales spend considerable time in United States waters.

Comment 18: Technical changes. Several commenters including the U.S. Coast Guard suggested technical wording changes to ensure accuracy with other regulations or improve clarity of the rule.

Response: NMFS agreed with a number of the suggestions for small technical changes and made appropriate changes to the final rule and EA to ensure accuracy and improve clarity. In some cases we eliminated wording to simplify the regulations, such as removing the second sentence describing the 200-yard (182.9 m) approach prohibition.

Final Rule

Current efforts to reduce vessel impacts have not been sufficient to address vessel interactions that have the potential to harass and/or disturb killer whales by causing injury or disruption of normal behavior patterns (See Need for New Regulations). These regulatory measures are designed to protect killer whales from vessel impacts and will support recovery of Southern Resident killer whales. We are issuing these regulations pursuant to our rulemaking authority under MMPA section 112(a) (16 U.S.C. 1382(a)), and ESA 11(f) (16 U.S.C. 1540(f)). These final regulations also are consistent with the purpose of the ESA "to provide a program for the conservation of [* * *] endangered species" and "the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species [* * *] and shall utilize their authorities in furtherance of the purposes of [the ESA]." 16 U.S.C. 1531(b), (c).

As part of the rulemaking process, we first published an ANPR and then a proposed rule that included proposed

regulations with three elements that would prohibit motorized, non-motorized, and self-propelled vessels in inland waters of Washington from: (1) Causing a vessel to approach within 200 yards (182.9 m) of any killer whale; (2) entering a restricted zone along the west coast of San Juan Island during a specified season, and (3) intercepting the path of any killer whale in inland waters of Washington. Based on public comments we are issuing final regulations with only two of the elements that were in the proposed rule.

Public comments on the no-go zone raised several suggested alternatives that we had not fully analyzed in the draft EA. In addition, we recognize that to be effective, regulations must be understood by the public and have a degree of public acceptance. Because of the many alternatives suggested by the public, and because of the degree of public opposition, we have decided to gather additional information and conduct further analysis and public outreach on the concept of a no-go zone. Therefore, the final rule does not adopt a no-go zone. We will pursue this additional work expeditiously because the best available information indicates there would be a significant conservation benefit to the whales if they were free of all vessel disturbance in their core foraging area.

The following sections pertain to the final regulations prohibiting motorized, non-motorized, and self-propelled vessels in inland waters of Washington from: (1) Causing a vessel to approach, in any manner, within 200 yards (182.9 m) of any killer whale, and (2) intercepting the path of any killer whale in inland waters of Washington. Below we describe the scope and applicability, requirements and rationale for the final regulations.

Scope and Applicability

Application to All Killer Whales: Under the MMPA and ESA the final regulations will apply to all killer whales. Although killer whales are individually identifiable through photo-identification, individual identification requires scientific expertise and resources (*i.e.,* use of a catalog) and cannot always be done immediately at the time of the sighting. It would be difficult for boaters, especially recreational boaters without expertise and experience with killer whales, to identify the individuals in the ESA-listed Southern Resident DPS or even to identify killer whales to ecotype (resident, transient, offshore). Requiring boaters to know which killer whales they are observing is not feasible. Section 11(f) of the ESA provides NMFS with broad rulemaking authority to enforce the provisions of the ESA. In addition, section 112(a) of the MMPA provides NMFS with broad authority to prescribe regulations that are necessary to carry out the purposes of the statute. Providing protection for all killer whales is a practical consideration because boaters cannot tell different types of killer whales apart and will also reduce the risk of disturbance or injury for all types of killer whales which is consistent with the purpose of the MMPA.

Geographic Area: Regulations will apply to vessels in inland waters of Washington under U. S. jurisdiction. Inland waters include a core summer area for the whales around the San Juan Islands, as well as a fall foraging area in Puget Sound and transit corridor along the Strait of Juan de Fuca. These three areas make up over 2,500 square miles and were designated as critical habitat for Southern Resident killer whales (71 FR 69054; November 29, 2006). These regulations will apply to an area similar to designated critical habitat, including inland waters of the United States east of a line connecting Cape Flattery, Washington (48°23′10″ N./124°43′32″ W.), Tatoosh Island, Washington (48°23′30″ N./124°44′12″ W.), and Bonilla Point, British Columbia (48°35′30″ N./124°43′00″ W.) and south of the U.S./Canada international boundary. The shoreline boundary is the charted mean high water line cutting across the mouths of all rivers and streams.

Vessels Subject to Final Rule: The regulations apply to all motorized and non-motorized vessels in the inland waters of the United States described above. All vessels in U.S. waters, including foreign flag vessels, and persons not citizens of the United States are subject to the jurisdiction of the United States to the extent consistent with recognized principles of international law, including treaties and international agreements to which the United States is signatory. Commercial and recreational whale watch vessels include both motorized and non-motorized vessels (*i.e.,* kayaks and sail boats), both of which can cause disturbances to whales. While kayaks are small and quiet, they have the potential to disturb whales as obstacles on the surface. Kayaks may startle marine mammals by approaching them without being heard (Mathews 2000). Data indicate that substantial numbers of kayakers failed to follow existing voluntary guidelines, and in a study of sea lions, Mathews (2000) found that kayakers were significantly more likely to approach wildlife closely. Kayakers may approach wildlife more closely because they may be more apt to overestimate distance because of their low aspect on the water, and to assume they are less likely to disturb wildlife than other vessels (Mathews 2000). In studies comparing effects of motorized and non-motorized vessels on dolphins, the type of vessel did not matter as much as the manner in which the boat moved with respect to the dolphins (Lusseau 2003b). Some dolphins' responses to vessels were specific to kayaks or were greater for kayaks than for motorized vessels (Lusseau 2006, Gregory and Rowden 2001, Duran and Valiente 2008). Several studies that have documented changes in behavior of dolphins and killer whales in the presence of vessels include both motorized and non-motorized vessels in their analysis (Lusseau 2003b, Nichols *et al.* 2001, Trites *et al.* 2007, Noren *et al.* 2007, 2009).

In response to public comments regarding our reliance on studies of kayak impacts involving other species, NMFS secured additional analysis of available data on Northern Resident killer whales and behavioral responses to kayaks. Williams *et al.* (2010) analyzed the effects of kayak presence on Northern Resident killer whales and reported that kayaks can have a significant impact on killer whale behavior. In previous studies, Williams *et al.* (2006) reported changes to killer whale behavior from boat presence, pooling kayaks and motorized vessels together. In their recent study, the presence of both types of vessels was analyzed separately for data from 1995–2004. In the presence of only kayaks, the probability that the whales will shift to travel behavior from other behavior states (including feeding) significantly increased compared to no-boat conditions, which indicates an avoidance tactic. As a result, the whales spent significantly more time traveling when in the presence of kayaks than they did under no-boat conditions (11 percent increase in time spent traveling). Consistent with previous studies, killer whales significantly reduced overall time spent feeding in the presence of kayaks and powerboats compared to no-boat conditions (30 percent decrease in time spent feeding). With respect to both kayaks and motorized vessels, the duration of feeding decreased and the overall proportion of time spent feeding decreased when vessels were present, regardless of the type of vessel. One model suggested that the effect of kayaks on feeding activity was perhaps less pronounced than the effect of

powerboats on feeding activity. The types of effects vessels have on foraging activities seem to be similar whether the boats involved are kayaks or other types of vessels, but the whales may use different avoidance tactics to deal with the two types of vessels (Williams *et al.* 2010).

While the specific information on impacts to killer whales from kayaks is preliminary at this time, we have taken a conservative approach in assessing this information in light of the endangered status of the Southern Residents. We have considered the information with respect to cumulative impacts as well as the other threats to killer whale survival and recovery. Even if the effects are small for individual kayakers, there are large numbers of kayakers targeting the whales and the cumulative impacts of both kayaks and other types of vessels are significant. In June to September 2010, Soundwatch monitored zones out to ½ mile from shore and observed over 2,100 kayaks in the monitoring zones with the whales and up to 41 kayaks with the whales at one time. Soundwatch observed 594 incidents of kayakers not following recommended guidelines. The cumulative impact of kayaks and all vessels and their effect on feeding behavior is particularly important because we are concerned about the whales' ability to get sufficient prey to maintain their health. Based on all of the information available and a conservative approach to protect endangered Southern Residents, NMFS' final regulations protect killer whales from both motorized and non-motorized vessels.

Exceptions: Five specific categories of vessels will be exempt from the vessel regulations: (1) Government vessels, (2) cargo vessels transiting in the shipping lanes, (3) research vessels, (4) fishing vessels actively engaged in fishing, and (5) vessels limited in their ability to maneuver safely. These exceptions are based on the likelihood of certain categories of vessels having impacts on the whales and the potential adverse effects involved in regulating certain vessels or activities.

Available data on vessel effects on whales from Soundwatch (Koski 2007, 2008, 2009, 2010a), Bain (2007) and Giles and Cendak (2010) indicate that commercial and recreational whale watch vessels are more likely to affect killer whales. This is because operators of whale watching vessels are focused on the whales, track the whales' movements, spend extended time with the whales, and are therefore most often in close proximity to the whales. Other vessels such as government vessels, commercial and tribal fishing boats, cargo ships, tankers, tug boats, and ferries do not target whales in their normal course of business. Soundwatch (Koski 2007, 2008, 2009, 2010a) and Bain (2007) report that these types of vessels combined comprise only 6 percent or less of vessels within ½ mile of the whales from 2006–2009. In 2010 there was a higher percent of commercial fishing vessels observed within ½ mile of the whales which was likely due to increased fishery openings coinciding with presence of whales (Koski 2010b). In 2007–2008, Giles and Cendak (2010) recorded the distance of vessels from the whales using an integrated GPS, range finder and compass and reported only 21 ferries and 22 shipping vessels out of 11,710 vessels observed within 1,000 yards of the whales (0.4 percent). In addition, these vessels generally move slowly and usually in a predictable straight path, which reduces the risk of strikes to whales. While NMFS recognizes that sound from large vessels has the potential to affect whales even at great distances, the primary concern based on available information is the sound from small, fast moving vessels moving in close proximity to the whales and targeting the whales.

Ferries and vessels associated with oil spill preparedness and training do not target the whales and are not often in close proximity; therefore, NMFS expects the impacts from adjusting course to avoid getting within 200 yards (182.9 m) of the whales and to stay out of their path on rare occasions will be minimal. We have not included exemptions for Washington State Ferries, other publicly operated ferries, or vessels associated with oil spill preparedness or training based on the expectation that these vessels will rarely have to adjust their course to comply with the regulations and that the adjustments will be relatively easy to achieve, minimal and short-term. For example, Washington State Ferries already adhere to the 100-yard (91.4 m) guideline and should similarly be able to adhere to a 200-yard (182.9 m) regulation.

Vessels engaged in scientific research do closely approach killer whales to obtain photographs, collect a variety of samples, and observe behavior. Researchers must obtain permission from NMFS before they may legally closely approach the whales. Before permitting research, NMFS evaluates the potential effects of these activities under both the ESA and MMPA. Expertise of researchers, operating procedures, and permit terms and conditions reduce the potential impacts to whales. In issuing permits, NMFS weighs the benefit of the research to the whales' survival and recovery against the harmful impacts of close approaches.

Regulating some categories of vessels could cause adverse impacts. Government vessels are often critical to safety missions, such as search and rescue operations, enforcement, pollution response and activities critical to national security. The movement of large commercial vessels in U.S. and Canadian waters in the area are managed by the Puget Sound Vessel Traffic Service and the Cooperative Vessel Traffic Service, which are designed to efficiently and safely manage vessel transits in the shared waters of the U.S. and Canada. U.S. regulations require power-driven vessels 40 meters or greater in length, while navigating or towing vessels eight or more meters in length, and vessels certificated to carry 50 or more passengers for hire when engaged in trade to participate in the Vessel Movement Reporting System (VMRS) (Navigation and Navigable Waters, 33 CFR 161). These ships generally follow well-defined navigation lanes established by the International Maritime Organization (IMO), known as Traffic Separation Schemes (TSS) (rules for vessel conduct is established by U.S. Coast Guard Navigation Rule 10). If large ships following traffic lanes or making their way to or from the lanes were required to make sudden or unpredictable movements to avoid close approaches to whales, it may impact the good order and predictability of maritime traffic, as well as adversely affect navigation safety, thus increasing the risk of collision and groundings. For the safety of vessel navigation, large ships are sometimes escorted or assisted by smaller vessels such as tug boats, which sometimes navigate just outside the designated lanes. Sudden or unpredictable movements by these escort vessels, in order to avoid close approaches to whales, could also increase the risk of collisions and pose safety hazards. Support vessels associated with booming activities required for fuel transfer or emergency pollution response would also be exempt from the regulations based on the exemption for safe operation.

Commercial fishing vessels, in which the fish harvested are intended to enter commerce, when actively engaged in fishing are exempt from the new regulatory requirements. If they were required to follow regulations while actively engaged in fishing, it could compromise gear or catch. Also, treaty Indian fishing vessels actively engaged

in fishing are exempt from the new regulatory requirements. Exempting treaty Indian fishing vessels is consistent with treaty fishing rights and use of Usual and Accustomed fishing areas. NMFS is also exempting vessels from any regulations if the exemption is required for the safe operation of a vessel to avoid adverse effects to public safety.

Based on these considerations, NMFS' final regulations include several exceptions. The burden would be on the vessel operator to prove the exception applies, and vessel operators would not be exempt from the take prohibitions under the MMPA or ESA. Federal government vessels would not be exempt from consultation requirements under Section 7 of the ESA. The following exceptions apply to all regulations:

(1) The regulations would not apply to Federal Government vessels operating in the course of official duty or to state and local government vessels engaged in official duties involving law enforcement, search and rescue, or public safety.

(2) The regulations would not apply to vessels participating with a Vessel Traffic Service (VTS) and following a Traffic Separation Scheme or complying with a VTS Measure of Direction. This also includes boats escorting vessels in the traffic lanes, such as tug boats.

(3) The regulations would not apply to activities, such as scientific research, authorized through a permit issued by the National Marine Fisheries Service under part 222, subpart C, of this chapter (General Permit Procedures) or through a similar National Marine Fisheries Service authorization.

(4) The regulations would not apply to treaty Indian and commercial fishing vessels lawfully engaged in actively setting, retrieving, or closely tending fishing gear or transferring catch. (Note: The regulations would apply to all fishing vessels, including treaty Indian and non-treaty vessels, transiting to or from fishing areas.)

(5) The regulations would not apply to vessel operations necessary for safety to avoid an imminent and serious threat to a person or vessel, including when necessary for overall safety of navigation, to comply with the Navigation Rules, or in direct support of environmental protection.

Requirements

Approach Restrictions: The final regulations prohibit vessels from approaching any killer whale in the inland waters of Washington closer than 200 yards (182.9 m). This includes approaching, in any manner, including by interception (*i.e.,* placing a vessel in the path of an oncoming killer whale, so that the whale surfaces within 200 yards (182.9 m) of the vessel, or positioning a vessel so that wind or currents carry the vessel to within 200 yards (182.9 m) of a whale).

Prohibition against parking in the whales' path: The final regulations require vessels to keep clear of the whales' path within 400 yards (365.8 m) of the whales. Parking in the path includes interception (positioning a vessel so that whales surface within 200 yards (182.9 m) of the vessel, or so that wind or water currents carry the vessel into the path of the whales).

Rationale for Regulations

The endangered Southern Resident killer whales are a small population with only 86 whales in the population at the end of 2010. The Southern Residents underwent an almost 20 percent decline from 1996 to 2001, and while there were several years of population increases following 2001, there have also been recent years with declines.

Our listing decision and the Recovery Plan for Southern Resident killer whales identified three major threats to their continued existence, all of which likely act in concert—prey availability, contaminants, and vessel effects and sound. While we and others in the region are working to restore salmon runs and minimize contamination in Puget Sound, these efforts will likely take many years to provide benefits for killer whales. In contrast, the threats posed by vessels can be reduced quickly by regulating vessel activities. The primary objective of promulgating these regulations is to manage the threats to killer whales from vessels, in support of the recovery of Southern Residents.

Monitoring groups such as Soundwatch have reported that the mean number of vessels following a given group of whales within ½ mile increased from five boats in 1990 to an average of about 15–20 boats during May through September, for the years 1998 through 2010 (Osborne *et al.* 1999; Baird 2001; Erbe 2002; Marine Mammal Monitoring Project 2002; Koski 2004, 2006, 2007, 2008, 2009, 2010a, 2010b). At any one time, the observed numbers of commercial and recreational whale watch boats around killer whales can be much higher. Monitoring groups have collected several years of data on incidents when vessels are not adhering to the guidelines and the whales may be disturbed. From 2006–2010, there were between 1,085 (2007) and 2,527 (2009) reported incidents per year where vessels did not follow the guidelines during the time the observers were present (Koski 2007, 2008, 2009, 2010a, 2010b). Since observers were not present during all days and all hours, it is likely that there were more incidents than those reported. In 2009, there were 2,527 incidents, and the majority were committed by private boaters (72 percent) and Canadian commercial operators (8 percent). Of the 1,067 incidents in 2010, the majority were committed by private boaters (64 percent) and Canadian commercial operators (10 percent) (Koski 2010a, 2010b). The most common incidents also reflect this pattern and are most often committed by private boaters and Canadian commercial whale watch vessels. The four most commonly observed incidents in 2010, and for the last several years, were parking in the path, vessels motoring inshore of whales, vessels motoring within 100 yards (91.4 m) of whales, and vessels motoring fast within 400 yards (365.8 m) of the whales (Koski 2008, 2009, 2010a, 2010b).

For the summer of 2010, Soundwatch's Kayak Education and Leadership Program (KELP), San Juan County Parks, and the San Juan Island Kayak Association worked together to update and refine a Kayaker Code of Conduct as part of KELP. In addition to providing the guidelines and training for kayakers through the KELP education program, Soundwatch also monitored kayak activity and compliance of kayakers with the recommendations in the code of conduct to augment the Soundwatch vessel monitoring program. From June through September 2010, 594 incidents were observed (66 percent commercial and 28 percent private) and the most common incidents were kayaks not rafted, parked on headland or within kelp bed, parked in the path of whales and stopped within 100 yards (91.4 m) of whales.

The specific threats from these vessel incidents include (1) risk of strikes, which can result in injury or mortality, (2) behavioral disturbance, which increases energy expenditure and reduces foraging opportunities, and (3) acoustic masking, which interferes with echolocation and foraging, as well as communication. Southern and Northern Resident killer whales have been injured or killed by collisions with vessels. Some whales have sustained injuries from propeller blades and have eventually recovered, one was instantly killed, and several mortalities of stranded animals have been attributed to vessel strikes in recent years (Visser 1999; Ford *et al.* 2000; Visser and Fertl

2000; Baird 2001; Carretta *et al.* 2001, 2004, Gaydos and Raverty 2007).

As described in the background section of this final rule and in the EA, it is well documented that killer whales in the Pacific Northwest respond to vessels engaged in whale watching (including kayaks) with short-term behavioral changes. Examples of short-term behavioral responses include increases in direction changes, respiratory intervals, and surface active behaviors, all of which can increase energy expenditure (Bain *et al.* 2006; Noren *et al.* 2007, 2009; Williams *et al.* 2009). Southern Residents also spend less time foraging in the presence of vessels (Bain *et al.* 2006, Lusseau *et al.* 2009; Giles and Cendak 2010; Williams *et al.* 2010). Williams *et al.* (2006) estimated that increased energy expenditure may be less important than the reduced time spent feeding and the resulting likely reduction in prey consumption in the presence of vessels. Vessels in the path of the whales can interfere with important social behaviors such as prey sharing (Ford and Ellis 2006) or with behaviors that generally occur in a forward path as the whales are moving, such as nursing (Kriete 2007).

Vessel sounds may mask or compete with and effectively drown out calls made by killer whales, including echolocation used to locate prey and other signals the whales rely upon for communication and navigation. Masking of echolocation reduces foraging efficiency (Holt 2009), which may be particularly problematic if prey resources are limited. Vessel noise was predicted to significantly reduce the range at which echolocating killer whales could detect salmon in the water column. Holt (2009) reported that the detection range for a killer whale echolocating on a Chinook salmon could be reduced 88 to 100 percent by the presence of a moving vessel within 100 yards (91.4 m) of the whale. Masking sound from vessels could affect the ability of whales to coordinate their feeding activities, including searching for prey and prey sharing. Foote *et al.* (2004) attributed increased duration of primary communication calls to increased vessel traffic and a recent study also found similar increased durations for a larger number of calls (Wieland *et al.* 2010). Holt *et al.* (2009) found that killer whales increase their call amplitude in response to vessel noise.

Energetic costs from increased behavioral disturbance and reduced foraging can decrease the fitness of individuals (Lusseau and Bejder 2007). Energy expenditure or disruption of foraging could result in poor nutrition. Poor nutrition could lead to reproductive or immune effects, or, if severe enough, to mortality. Interference with foraging can affect growth and development, which in turn can affect the age at which animals reach reproductive maturity, fecundity, and annual or lifetime reproductive success. Interference with essential behaviors, including prey sharing and communication, could also reduce social cohesion and foraging efficiency for Southern Resident killer whales, and, therefore, the growth, reproduction, and fitness of individuals. Injuries from vessel strikes could also affect the health and fitness of individuals. Any injury to or reduction in fitness of a single member of the Southern Resident killer whale population is serious because of the small population size.

To reduce the risk of vessel strikes, behavioral disturbance, and acoustic masking, and to manage effectively the threat from vessels, regulations must reduce the current number of harmful vessel incidents. Monitoring demonstrates that there are numerous incidents in which the current voluntary guidelines are not observed. Researchers in other regions have also reported low compliance with voluntary guidelines designed to protect other endangered whales (Wiley *et al.* 2008). Research suggests that vessel operators are more likely to comply with mandatory regulations than with voluntary guidelines (May 2005). In addition, level of compliance is likely to depend on how easy the regulations are to understand, follow and enforce. We therefore expect that clear mandatory regulations will reduce the number of incidents, compared to the current voluntary guidelines.

After analyzing a range of alternative regulations, we concluded that the most appropriate measures to protect the whales are a combination of an approach regulation and a prohibition on parking in the path. We recognize that adopting regulations that are different from the current voluntary guidelines and State law may present some challenges. The current infrastructure, however, includes enforcement, monitoring, and stewardship groups, who will be available to assist with an education campaign to inform boaters about the new regulations and the scientific information on which they are based. The combination of two measures as part of the regulation package provides multiple tools for enforcement that are measurable, easy for the public to understand, and based on the best available science regarding vessel impacts. The final EA contains a full analysis of a No-action alternative, six individual alternatives, the proposed regulations combining three elements and the final regulation combining two elements, described below.

200-yard (182.9 m) approach regulation. A regulation prohibiting approaches closer than 200 yards (182.9 m) will be clear to whale watch operators. These operators will likely know about such a regulation and be able to accurately judge the distance of their vessels from whales, as indicated by their current high levels of compliance with the current 100-yard (91.4 m) guideline. Recreational boaters would be less likely to know about such a regulation, though over time it is reasonable to expect that familiarity with the regulation would increase, particularly with education and publicity about any prosecutions. Some recreational boaters may also follow the example of commercial operators to determine the proper viewing distance.

The 200-yard (182.9 m) approach regulation is intended to reduce the risk of vessel strikes, the degree of behavioral disruption, and the amount of noise that masks echolocation and communication. Current research results have documented behavioral disturbance and estimated a considerable potential for masking from vessels at 100 yards (91.4 m). These effects are reduced at 200 yards (182.9 m) and greater distances. Some effects are observed up to 400 yards (365.8 m) from the whales. While an approach regulation at a distance greater than 200 yards (182.9 m) would further reduce vessel effects, this could diminish both the experience of whale watching and opportunities to participate in whale watching. We recognize that whale watching educates the public about whales and fosters stewardship. We balanced the benefits to killer whales of a greater approach distance regulation and continued whale watching opportunities, and we arrived at the 200-yard (182.9 m) approach regulation.

Parking in the path prohibition. As described above, parking in the path of a whale is a common violation of the current guidelines by commercial whale watch operators and an increasing number of private boaters. It also carries one of the greatest risks, since it increases the chance of vessel strike. This regulation is consistent with the current guidelines and therefore already understood by commercial whale watch operators. A prohibition on parking in the path complements the approach regulation, which prohibits approaching within 200 yards (182.9 m) of the

whales, including by interception. The path regulation provides the best management tool for improving compliance and reducing the risk of vessel strikes and masking from vessels directly in front of the whales. The risk of vessel strikes and masking are both most severe when vessels are directly in front of the whales. By instituting a mandatory regulation in place of a voluntary guideline, we expect increased compliance, particularly by the commercial operators who are most often in the path of the whales.

The final regulations for killer whales differ from protective regulations promulgated to protect other marine mammal species in other locations. In each case the development of regulations was based on the biology of the marine mammal species and available information on the nature of the threats. For the Southern Resident killer whales, we have detailed information on killer whale biology, vessel activities around the whales, and vessel effects on the whales' behavior and acoustic foraging activities that informed the selection of the final rule.

We did not propose some of the regulatory options suggested in the ANPR and in public comments on the proposed rule for several reasons, including, difficulties in enforcing them, changes to infrastructure needed to implement them, or a lack of sufficient science to support them. For example, a speed limit within a certain distance of the whales (*i.e.,* less than 7 knots within 400 yards (365.8 m) of the whales) would be difficult to implement and enforce without vessel tracking technology. A permit or certification program would require a large infrastructure to implement. There would also be equity issues in determining who is permitted or certified and who is not. A moratorium on all vessel-based whale watching, or protected areas along all shorelines, would be challenging to enforce and is not supported by available scientific information. Some comments suggested regulatory options such as rerouting shipping lanes or imposing noise level standards, which would unnecessarily restrict some types of vessels rarely in close proximity to the whales.

We considered both benefits and costs in selecting the final regulation. The reduction in threats for each element of the regulation package as described above provides a benefit to the whales, as well as to the public who value the whales. Reducing threats to the whales also supports the long-term sustainability of the whale watching industry. The regulations also provide benefits to some land-based viewing and may provide benefits to other marine species. In addition to the benefits, we also considered the potential costs of the proposed regulations. To limit some potential costs to vessels or industries rarely in close proximity to the whales, we have included several exemptions to the regulations (*i.e.,* ships in shipping lanes, fishing vessels). The exemptions also prevent other potential costs by protecting public safety, allowing for critical government and permitted activities to continue, and allowing us to fulfill our treaty trust responsibilities.

The costs of implementing vessel regulations to protect the whales will likely be greatest for the commercial whale watch industry and recreational whale watchers. One cost of the proposed regulations is to increase viewing distance, which may affect the quality of whale watching experiences. An increased viewing distance affects the experience of the whale watch participants and not necessarily the revenue of the industry or companies. While some commercial whale watch operators have suggested that increased viewing distance will affect their revenue, there is information indicating that proximity to the whales is not the most important aspect of whale watching, and that participants value viewing in a manner that respects the whales. We do not anticipate any loss of business or reduction in the number of opportunities for participating in whale watching activities. Other impacts to boaters are expected to be minor and include slight deviations of a vessel's path in order to comply with the regulations. Additionally, due to the need for these regulations to facilitate recovery of the Southern Resident population, we anticipate that the continued recovery of the population will result in broad-based benefit to the general public.

In developing these regulations, we have determined that current regulations and guidelines are not sufficient to protect endangered Southern Resident killer whales and that additional regulations are necessary to reduce the risk of extinction. While we cannot quantify the reduction in risk of extinction, the perilous status of the Southern Residents makes it appropriate to take all reasonable actions to improve their chances of survival and recovery. We are issuing appropriate final regulations to reduce threats posed by vessels, limit costs, and maintain opportunities for the public to participate in whale watching. Of the alternatives considered, we chose a combination of two which provide benefits. All of the options have relatively low socioeconomic and recreation costs. In contrast, the cost of extinction of Southern Residents is incalculable. The final regulations will have a net benefit to the whales and the public who value the whales.

Evaluation of the Effectiveness of the Measures

The success of this program is vital to the recovery of the species. Therefore, NMFS will monitor the effectiveness of the final regulations and consider altering the measures or implementing additional measures if appropriate.

References Cited

A complete list of all references cited in this proposed rule can be found on our Web site at *http://www.nwr.noaa.gov/* and is available upon request from the NMFS office in Seattle, Washington (see **ADDRESSES**).

National Environmental Policy Act and Regulatory Flexibility Act

NMFS has prepared a final EA and Finding of No Significant Impact (FONSI) pursuant to NEPA to support this final rule. NMFS was the lead agency for the analysis and the U.S. Coast Guard, Washington Department of Fish and Wildlife, and the Department of Fisheries and Oceans, Canada were cooperating agencies. The final EA also includes a Regulatory Impact Review. An economic report and Regulatory Impact Review, including an analysis under the Regulatory Flexibility Act, were prepared to support the regulation. The Final Regulatory Flexibility Analysis (FRFA) is included in Chapter 6 of the final EA.

IEC (2010) identified a total of 283 small business entities that may be affected by the vessel regulations to protect killer whales implemented by this final rule. This includes 23 small businesses in the whale watching industry, 248 in fishing related industry, and 12 in freight transportation. NMFS considered 9 alternatives for this rulemaking, which are:

Alternative 1: No-action;

Alternative 2: 100–Yard (91.4 m) Approach Regulation;

Alternative 3: 200–Yard (182.9 m) Approach Regulation;

Alternative 4: Protected Area—Current Voluntary No-go Zone;

Alternative 5: Protected Area—Expanded No-go Zone;

Alternative 6: Speed Limit of 7 Knots Within 400 Yards (365.8 m) of Killer Whales;

Alternative 7: Keep Clear of the Whales' Path;

Alternative 8: Proposed Action (Package of Alternatives 3, 5, and 7); and

Alternative 9: Preferred Alternative (Package of Alternatives 3 and 7).

Chapter 2 of the final EA describes each of the 9 alternatives that were analyzed. A summary of the impacts of each of the 9 alternatives is provided below. For detailed information on the costs of each alternative, see Chapter 4 of the final EA. For a summary of the costs and benefits of each alternative, see Table 6–1 found in Chapter 6 of the final EA. The cost of the No Action Alternative is the potential loss of the whale watch industry based on an increased extinction risk for the whales. While operations of the whale watch industry may be affected to different degrees by Alternatives 2 through 9, it is the customers and not necessarily the whale watching companies (*i.e.,* small entities for the purposes of RFA) who may bear impacts. The economic analysis (IEC 2010) projects no change in revenue for whale watching operations or other industries, but rather the potential diminished value of the customers' experience as a result of greater viewing distances and displacement of vessels.

The economic analysis and final EA quantify the number of trips and participating individuals for different types of vessels (commercial whale watch, private whale watching, kayaking, and fishing) that would be potentially affected by Alternatives 2 through 9. A small number of commercial and private whale watching trips, kayak and fishing trips would have to adjust their operations to comply with Alternative 2 (a 100-yard (91.4 m) Approach Regulation). Under Alternative 3 (a 200-yard (182.9 m) Approach Regulation) there was a range of estimated trips and individuals that would experience greater viewing distance which included up to all participants in commercial and private whale watching trips. There was some uncertainty regarding the potential effects of Alternatives 4 and 5 (Current and Expanded No-go Zones), which included increased viewing distances for a small percent of all commercial and private whale watching trips and displacement of a large number of commercial and recreational kayaks from the San Juan County boat launch and a smaller number of commercial fishing vessels from the no-go zone. A small number of commercial and private whale watching trips, kayak and fishing trips would be affected by having to comply with Alternative 6 (a Speed Limit of 7 Knots Within 400 Yards (365.8 m) of Killer Whales) similar to the numbers for Alternative 2 (the 100–Yard (91.4 m) Approach Regulation). A larger number of commercial whale watching trips and similar small number of private whale watching trips would be affected by Alternative 7 (Keep Clear the Whales' Path) compared to Alternatives 2 and 6. Alternative 8 is a combination of Alternatives 3, 5 and 7 and would have the greatest impacts of all the action alternatives. Alternative 9 is a combination of Alternatives 3 and 7 and would have fewer impacts than Alternative 8, but greater impacts than the individual alternatives (Alternatives 2 through 7).

The benefits of two alternatives, Alternatives 3 and 7, are high and Alternative 9 combines these individual regulations into an action with high benefit. The expected costs are minimal for each alternative. The costs associated with Alternatives 2 through 9, as estimated by the number of commercial and recreational trips and passengers affected vary, and in some cases the overall number of trips and passengers affected are small (Alternatives 2, 4, 6, and 7). For other alternatives (Alternatives 3, 5, 8 and 9) there is some uncertainty as to the number of trips and passengers affected. Even if all participants in recreational and commercial whale watching are affected, the impact itself (based on an increased viewing distance) is small. Alternative 8 with the highest benefit and small costs provides the highest net benefit. Alternative 9 also has a high benefit and small costs, providing a net benefit. Alternative 9 does not include Alternative 5 (the Expanded No-go Zone). However, NMFS recognizes the increased benefit to the whales of reducing vessel impacts in a core foraging area and will collect additional information and seek public input to further evaluate the concept of a no-go zone. While there may be some economic cost to various industry groups under Alternative 9, particularly commercial whale watching, overall this cost is likely to be minimal and outweighed by the conservation benefits of regulations. NMFS does not expect any small entity to cease operation as a result of any of the alternatives, including the Preferred Alternative (Alternative 9). The primary costs under the Preferred Alternative (Alternative 9) are a diminished value to individuals engaged in whale watching at greater distances and would not be borne by these small entities. Additional information on selection of the Preferred Alternative (Alternative 9) is included in the Rationale for Regulations section of this final rule. The final EA including the FONSI and FRFA, Regulatory Impact Review, and supporting documents are available for review and can be found on the NMFS Northwest Region Web site at *http://www.nwr.noaa.gov/.*

Clarity of This Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(1) Be logically organized;

(2) Use the active voice to address readers directly;

(3) Use clear language rather than jargon;

(4) Be divided into short sections and sentences; and

(5) Use lists and tables wherever possible.

If you believe that we have not met these requirements, send us comments (see **ADDRESSES** section). To better help us revise rules in the future, your comments should be as specific as possible.

Required Determinations

Paperwork Reduction Act

This final rule will not impose any new requirements for collection of information that requires approval by the Office of Management and Budget under the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*) This rule will not impose new recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations.

Executive Order (E.O.) 12866—Regulatory Planning and Review

This Final Rule was determined to be significant for purposes of E.O. 12866. It was reviewed by the Office of Management and Budget and other interested Federal agencies.

E.O. 12988—Civil Justice Reform

We have determined that this final rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of E.O. 12988. We issue protective regulations pursuant to provisions in the ESA and MMPA using an existing approach that improves the clarity of the regulations and minimizes the regulatory burden of managing ESA listings while retaining necessary and advisable protections to provide for the conservation of threatened and endangered species.

E.O. 13175—Consultation and Coordination With Indian Tribal Governments

The longstanding and distinctive relationship between the Federal and

tribal governments is defined by treaties, statutes, executive orders, judicial decisions, and co-management agreements. These differentiate tribal governments from the other entities that deal with, or are affected by, the Federal Government. This relationship has given rise to a special Federal trust responsibility involving the legal responsibilities and obligations of the United States toward Indian Tribes and the application of fiduciary standards of due care with respect to Indian lands, tribal trust resources, and the exercise of tribal rights. E.O. 13175 outlines the responsibilities of the Federal Government in matters affecting tribal interests. During our scoping process we provided the opportunity for all interested tribes to comment on the need for regulations and discuss any concerns they may have. The Lummi Tribe and the Northwest Indian Fisheries Commission provided comments on the proposed rule regarding the exception for treaty Indian fishing vessels. In response to the comments, NMFS included additional clarification regarding the specific treaty fishing activities to which the exception applies. See Comment 9: Exceptions. We will continue to coordinate with the tribes on management and conservation actions related to this species.

E.O. 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 where a regulation will preempt state law, or impose substantial direct compliance costs on state and local governments (unless required by statute). The Washington Department of Fish and Wildlife (WDFW) was a cooperating agency on the NEPA analysis to support development of proposed regulations. A Federal regulation under the MMPA and ESA prohibiting approach within 200 yards (182.9 m) of killer whales is more protective than the state law (RCW 15.77.740), which prohibits approach within 100 yards (91.4 m) of Southern Resident killer whales in state waters, and therefore may preempt the state law. In their comments on the proposed rule, WDFW supported federal regulations prohibiting approach within 200 yards (182.9 m) of killer whales. Inclusion of the WDFW as a cooperating agency satisfies the consultation requirements of E.O. 13132.

E.O. 13211—Energy Supply, Distribution, or Use

E.O. 13211 requires agencies to prepare a statement of energy effects when undertaking certain actions. According to E.O. 13211, "significant energy action" means any action by an agency that is expected to lead to the promulgation of a final rule or regulation that is a significant regulatory action under E.O. 12866 and is likely to have a significant adverse effect on the supply, distribution, or use of energy. We have determined that the energy effects of this final rule are unlikely to exceed the energy impact thresholds identified in E.O. 13211 and that this rulemaking is, therefore, not a significant energy action. No statement of energy effects is required.

List of Subjects in 50 CFR Part 224

Endangered marine and anadromous species.

Dated: April 8, 2011.

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 224 is amended as follows:

PART 224—ENDANGERED MARINE AND ANADROMOUS SPECIES

■ 1. The authority citation for 50 CFR part 224 continues to read as follows:

Authority: 16 U.S.C. 1531–1543 and 16 U.S.C. 1361 *et seq.*

■ 2. In § 224.103, a new paragraph (e) is added to read as follows:

§ 224.103 Special prohibitions for endangered marine mammals.

* * * * *

(e) *Protective regulations for killer whales in Washington*—(1) *Applicability.* The following restrictions apply to all motorized and non-motorized vessels in inland waters of the United States east of a line connecting Cape Flattery, Washington (48°23′10″ N./124°43′32″ W.), Tatoosh Island, Washington (48°23′30″ N./124°44′12″ W.), and Bonilla Point, British Columbia (48°35′30″ N./124°43′00″ W.) and south of the U.S./Canada international boundary. The shoreline boundary is the charted mean high water line cutting across the mouths of all rivers and streams.

(2) *Prohibitions.* Except as provided in paragraph (e)(3) of this section, it is unlawful for any person subject to the jurisdiction of the United States to:

(i) Cause a vessel to approach, in any manner, within 200 yards (182.9 m) of any killer whale.

(ii) Position a vessel to be in the path of any killer whale at any point located within 400 yards (365.8 m) of the whale. This includes intercepting a killer whale by positioning a vessel so that the prevailing wind or water current carries the vessel into the path of the whale.

(3) *Exceptions.* The following exceptions apply to this section:

(i) The prohibitions of paragraph (e)(2) of this section do not apply to

(A) Federal Government vessels operating in the course of their official duty or state and local government vessels when engaged in official duties involving law enforcement, search and rescue, or public safety.

(B) Vessels participating with a Vessel Traffic Service (VTS) and following a Traffic Separation Scheme or complying with a VTS Measure of Direction. This also includes support vessels escorting ships in the traffic lanes, such as tug boats.

(C) Vessels engaged in an activity, such as scientific research, authorized through a permit issued by the National Marine Fisheries Service under part 222, subpart C, of this chapter (General Permit Procedures) or through a similar National Marine Fisheries Service authorization.

(D) Vessels lawfully engaged in commercial or treaty Indian fishing that are actively setting, retrieving, or closely tending fishing gear.

(E) Vessel operations necessary to avoid an imminent and serious threat to a person, vessel or the environment, including when necessary for overall safety of navigation and to comply with the Navigation Rules.

(ii) [Reserved]

(4) *Affirmative defense.* In connection with any action alleging a violation of the prohibitions of paragraph (e)(2) of this section, any person claiming the benefit of any exception listed in paragraph (e)(3) of this section has the burden of raising, pleading, and proving such affirmative defense.

(b) [Reserved]

[FR Doc. 2011–9034 Filed 4–13–11; 8:45 am]

BILLING CODE 3510–22–P